

06-14-2024 LETTING ITEM 046

FOR INDEX OF SHEETS, SEE SHEET NO. 3

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(1-3)	HAMILTON	32	1
		ILLINOIS	CONTRACT NO. 78376	

D-99-045-13



**PROPOSED  
HIGHWAY PLANS**

FAP 853 (IL 14)  
SECTION 9(1-3)  
PROJECT STP-ICTB(133)  
BRIDGE REMOVAL /DEMOLITION,  
VERTICAL REALIGNMENT  
HAMILTON COUNTY



**TRAFFIC DATA**

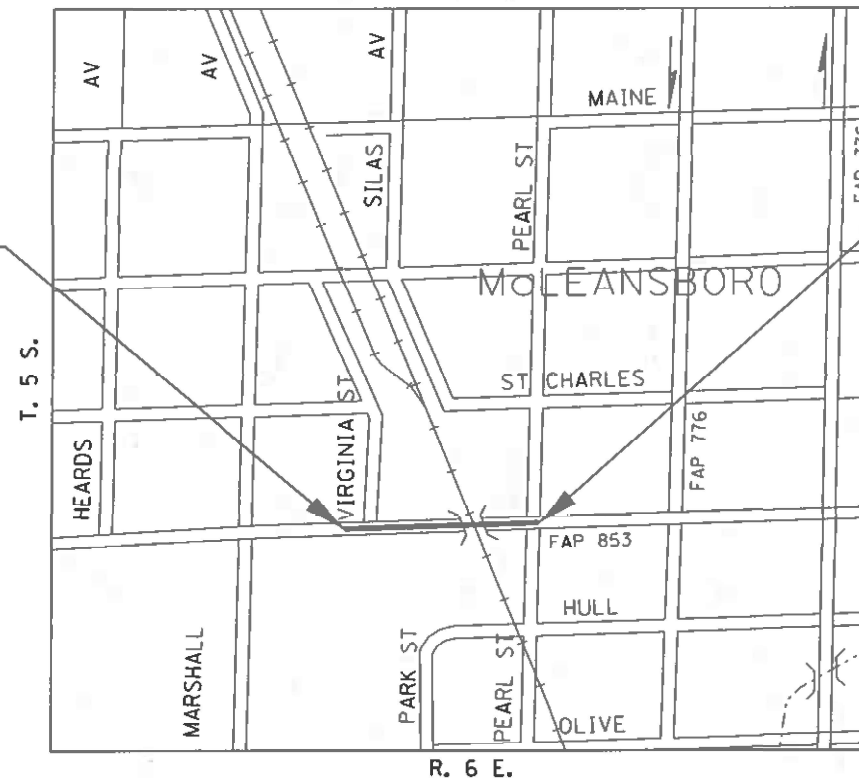
	2021	2024	2034	2044
PV	4395	4525	5005	5520
SU	225	230	255	285
MU	130	135	150	165
ADT	4750	4890	5410	5970

C-99-048-13

R. 6 E.

**TOWNSHIPS  
MCLEANSBORO**

IL 14 IMPROVEMENT ENDS  
STA 171+67.48



IL 14 IMPROVEMENT BEGINS  
STA 167+20.37

COORDINATE SYSTEM : COORDINATE SYSTEM : EPSG: 102671  
NAD 1983 STATE PLANE ILLINOIS EAST FIPS 1201 FEET

POSTED SPEED : 30 MPH

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

PROJECT ENGINEER VALERIE ROLLA - (618) 351-5214  
PROJECT DESIGNER JOHN A. BRANDON - (618) 351-5319

CONTRACT NO. 78376

GROSS LENGTH = 447.11 FT. = 0.085 MILES  
NET LENGTH = 447.11 FT. = 0.085 MILES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 22 20 24  
Kirk H. Brouwer  
REGION FIVE ENGINEER

May 10, 2024 [Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT

May 10, 2024 [Signature]  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

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Prepared By: Susan Poe  
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Nancy Lee  
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Car Nelson  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: R. C. [Signature]  
DISTRICT OPERATIONS ENGINEER

Examined By: Daryl [Signature]  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: Daryl [Signature]  
DISTRICT CONSTRUCTION ENGINEER

Examined By: Ann Wang  
DISTRICT MATERIALS ENGINEER

USER NAME = valerie.rolla	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/15/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>SIGNATURE SHEET</b>	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 2
ILLINOIS FED. AID PROJECT				



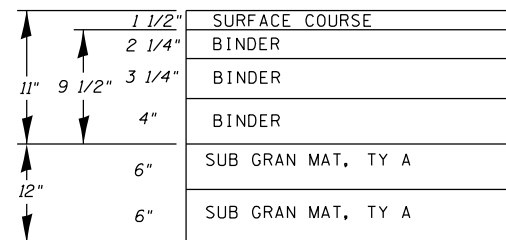
# HMA MIXTURE REQUIREMENTS TABLES

The following HMA mixture requirements are applicable for this project

Locations	Hot-Mix Asphalt Surface Course IL 14 and Side roads
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix D, N70
PG:	PG64-22
Design Air Voids:	4.0 %, 70 Gyration Design
Mixture Composition: (Mixture Gradation)	IL-9.5mm
Friction Aggregate:	Mix D
Mixture Weight:	112 lbs/Sq Yd/in
Quality Management Program:	QCQA
Sublot Size:	NA
Material Transfer Device	No

Locations	Hot_Mix Asphalt Binder Course (IL-14)
Mixture Use(s):	Hot-Mix Asphalt Binder Course, N70
PG:	PG64-22
Design Air Voids:	4.0 %, 70 Gyration Design
Mixture Composition: (Mixture Gradation)	IL-19 L
Friction Aggregate:	None
Mixture Weight:	112 lbs/Sq Yd/in
Quality Management Program:	QCQA
Sublot Size:	NA
Material Transfer Device	No

HOT-MIX ASPHALT PAVING LIFT DIAGRAMS  
11" FULL DEPTH PAVEMENT



HOT-MIX ASPHALT PAVING LIFT DIAGRAMS

NOTE: 1. SURFACE COURSE AND TOP LIFT BINDER DEPTHS ARE MINIMUMS.

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	USER NAME = Melissa.Cole	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>HMA MIXTURE REQUIREMENT TABLES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -			853	9(I-3)	HAMILTON	32	4	
	PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 78376					
	PLOT DATE = 3/22/2024	DATE -	REVISED -			SCALE:		SHEET OF SHEETS		STA. TO STA.	
ILLINOIS FED. AID PROJECT											



# SUMMARY OF QUANTITIES

HAMILTON
IL 14
80% FEDERAL 20% STATE
RURAL
ROADWAY
0004

CODE NUMBER	ITEM DESCRIPTION	UNIT	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	426
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	228
20200100	EARTH EXCAVATION	CU YD	1545
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	488
20400800	FURNISHED EXCAVATION	CU YD	530.47
20800150	TRENCH BACKFILL	CU YD	695
25000210	SEEDING, CLASS 2A	ACRE	0.33
25000350	SEEDING, CLASS 7	ACRE	0.33
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	60.06
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	30.03
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	30.03
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.67

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# SUMMARY OF QUANTITIES - CONT

HAMILTON
IL 14
80% FEDERAL 20% STATE
RURAL
ROADWAY
0004

CODE NUMBER	ITEM DESCRIPTION	UNIT	
550A0090	STORM SEWERS, CLASS A, TYPE 1 18"	FOOT	138
550A0120	STORM SEWERS, CLASS A, TYPE 1 24"	FOOT	334.7
55100700	STORM SEWER REMOVAL 15"	FOOT	101
55100900	STORM SEWER REMOVAL 18"	FOOT	113
55101200	STORM SEWER REMOVAL 24"	FOOT	342
55102100	STORM SEWER REMOVAL 60"	FOOT	216
60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	4
60219000	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 8 GRATE	EACH	1
60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1
60221200	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	2
60224454	MANHOLES, TYPE A, 8'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	2
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	3

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	DRAWN -	REVISED -
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PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE:      SHEET      OF      SHEETS      STA.      TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	8
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

# SUMMARY OF QUANTITIES - CONT

HAMILTON
IL 14
80% FEDERAL 20% STATE
RURAL
ROADWAY
0004

CODE NUMBER	ITEM DESCRIPTION	UNIT	
60500060	REMOVING INLETS	EACH	12
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	104
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	40
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1
* 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1
* 66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1
* 66901006	REGULATED SUBSTANCES MONITORING	CAL DA	2
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	11
67100100	MOBILIZATION	L SUM	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28
70300221	TEMPORARY PAVEMENT MARKING - LINE 4"- PAINT	FOOT	112
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	112

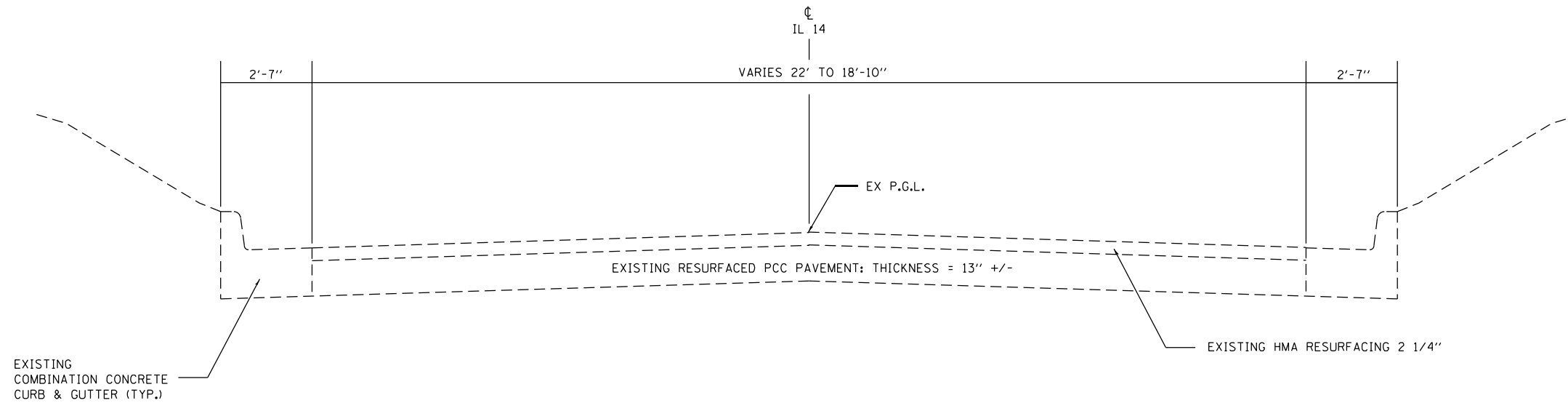
\* SPECIALTY ITEM

REV. - MS

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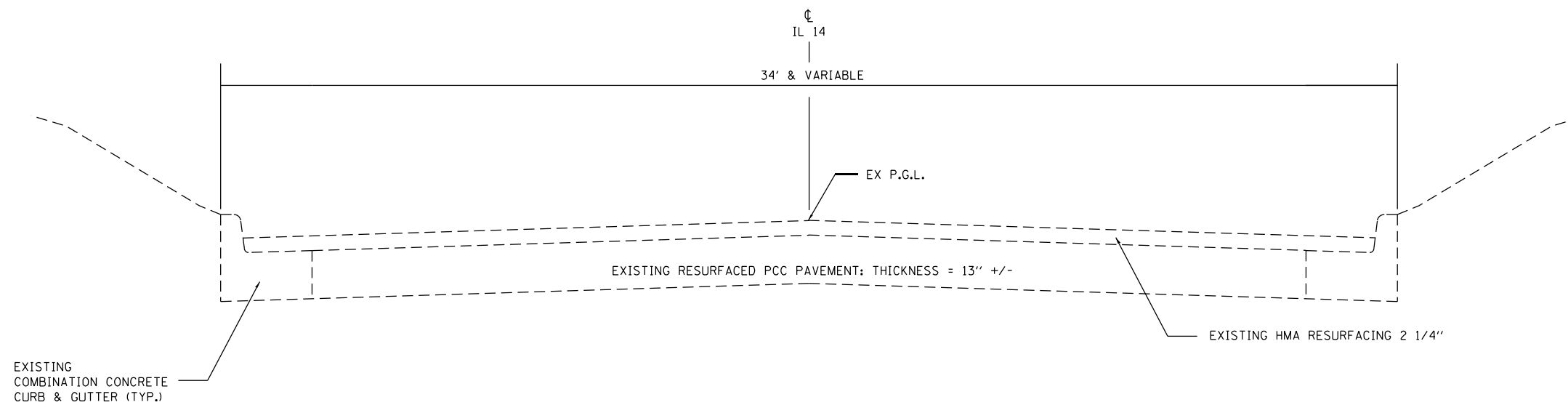
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.																	
853	9(I-3)	HAMILTON	32	9																	
CONTRACT NO. 78376																					
ILLINOIS   FED. AID PROJECT																					





**TYPICAL SECTION (EXISTING)**

STA 166+98 TO STA 169+71



**TYPICAL SECTION (EXISTING)**

STA 169+71 TO STA 171+46

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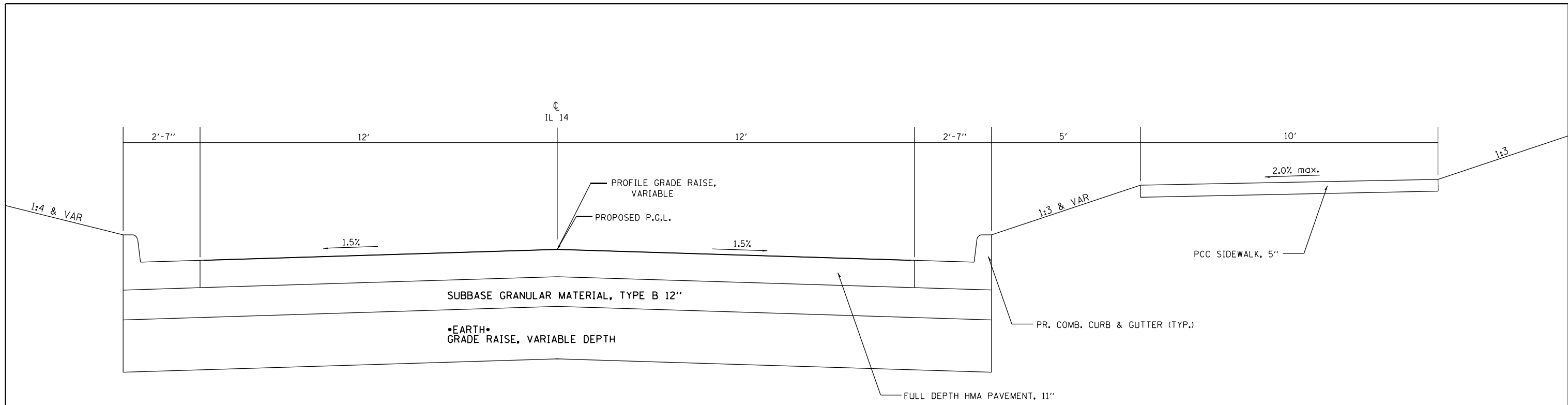
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>TYPICAL SECTIONS IL 14 - EXISTING</b>	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 11
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78376	





**TYPICAL SECTION (PROPOSED)**

STA 167+20.37 TO STA 171+67.48

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	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>TYPICAL SECTIONS IL 14 - PROPOSED</b>	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 12
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

## PAVEMENT SCHEDULE

LOCATION STATION TO STATION	LENGTH (INFO ONLY)	EXIST WIDTH (INFO ONLY)	PROP WIDTH (INFO ONLY)	BIT MAT (PRIME COAT)	BIT MAT TACK COAT	SUBBASE GRANULAR MAT., TYPE A 12"	HMA PAVMNT FULL DEPTH 11"	HMA SURFACE COURSE, 1 1/2"	LONGI- TUDINAL JOINT SEALANT	HMA SURFACE REMOVAL, 1 1/2"	PAVEMENT REMOVAL	COMMENTS	
	FOOT	FOOT	FOOT	POUND	POUND	SQ YD	SQ YD	TON	FOOT	SQ YD	SQ YD		
<b>IL 14</b>													
167+20.37 TO 167+97.70	77.3	22	24	565	140	251	207		78		190		
167+97.70 TO 169+71.00	173.3	22	24	1266	312	562	463		174				
169+71.00 TO 170+61.40	90.4	24	24	660	163	293	242		91				
170+61.40 TO 171+67.48	106.1	24	24	775	191	344	283		107		283		
<b>N. PEARL ST.</b>													
10+12.4 TO 10+31.6	294.7				15			3		33		AREA MEASURED IN MICROSTATION	
<b>S. PEARL ST.</b>													
19+63.1 TO 19+88	264.2				14			3		30		AREA MEASURED IN MICROSTATION	
<b>N. VIRGINIA ST.</b>													
30+12 TO 30+45	400.4				21			4		45		AREA MEASURED IN MICROSTATION	
<b>TOTAL</b>					3266	856	1450	1195	10	450	108	473	

## GUTTER AND SIDEWALK SCHEDULE

LOCATION STATION TO STATION		LENGTH (INFO ONLY)	COMB. CC&G, REMOVAL	COMB. CC&G, TY B 6.24	PORTLAND CEMENT CONCRETE SIDEWALK, 5"	DETECTABLE WARNINGS
<b>IL 14</b>						
167+34.00 TO 171+55.00	RT	421.0			4210	
167+33.50 TO 167+51.30	SE QUAD	27.9	28	28		20
167+36.80 TO 167+51.30	NE QUAD	33.1	34	34		
171+62.00 TO 171+67.48	SW QUAD	41.9	42	42		20
			104	104	4210	40

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	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT AND GUTTER & SIDEWALK SCHEDULES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	13
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

## DRAINAGE STRUCTURES SHEDULE

POINT	STATION	OFFSET	INLETS, TY B, TY 3 FRAME & GRATE	MANHOLES, TY A, 4', TY 3 FRAME & GRATE	MANHOLES, TY A, 4', TY 8 GRATE	MANHOLES, TY A, 5', TY 3 FRAME & GRATE	MANHOLES, TY A, 5', TY 1 FRAME, OPEN LID	MANHOLES, TY A, 8', TY 3 FRAME & GRATE	DESCRIPTION	CL	EOP	FLOW- LINE	TOP OF CASTING	TOP OF LID (INLET/ MH)	INLET INVERT
			EACH	EACH	EACH	EACH	EACH	EACH							
1	167+30.00	12' RT					1			441.49	441.31	-	441.31	440.56	437.09
2	167+55.00	12' RT				1				440.81	440.63	440.51	441.01	439.83	435.25
3	167+55.00	12' LT		1						440.81	440.63	440.51	441.01	439.83	436.97
4	168+50.00	12' RT				1				439.62	439.44	439.32	439.82	438.64	432.72
5	168+50.00	12' LT	1							439.62	439.44	439.32	439.82	438.64	433.98
6	169+12.00	12' RT		1						439.43	439.25	439.13	439.63	438.45	431.81
8	169+56.00	12' RT		1						439.30	439.12	439.00	439.50	438.32	432.61
9	169+56.00	12' LT						1		439.30	439.12	439.00	439.50	438.32	430.63
10	170+88.00	12' RT	1						low point	438.92	438.74	438.62	439.12	437.94	434.00
11	170+88.00	12' LT	1						low point	438.92	438.74	438.62	439.12	437.94	434.50
12	169+07.00	41.5' RT			1					439.45	439.27	439.15		441.32	437.20
14	171+30.00	12' RT						1		439.16	438.98	438.86	439.36	438.18	434.86
15	171+50.00	16.5' RT		1						439.44	439.76	439.64	440.14	438.96	434.95
TOTALS			3	4	1	2	1	2							

## STORM SEWER SCHEDULE

POINT	STA	OFFSET	TO	STA	OFFSET	LENGTH	STORM SEWERS, CL A, TY1, 15"	STORM SEWERS, CL A, TY1, 18"	STORM SEWERS, CL A, TY1, 24"	PIPE CULVERT S, CL A, TY 1, 60"	PRECAST CONCRETE BOX CULVERTS, 4'x2'	TRENCH BACKFILL
							FT	FT	FT	FT	FT	CU YD
EXIST 7A-3	167+17.00	12' LT	TO	167+55.00	12' LT	38.0	38.0					6.3
1-2	167+30.00	12' RT	TO	167+55.00	12' RT	25.0		25.0				8.3
3-2	167+55.00	12' LT	TO	167+55.00	12' RT	24.0	24.0					5.1
2-4	167+55.00	12' RT	TO	168+50.00	12' RT	95.0		95.0				31.5
5-4	168+50.00	12' LT	TO	168+50.00	12' RT	24.0	24.0					15.4
4-6	168+50.00	12' RT	TO	169+12.00	12' RT	62.0			62.0			57.5
6-9	169+12.00	12' RT	TO	169+56.00	12' LT	50.2			50.2			52.7
8-9	169+56.00	12' RT	TO	169+56.00	12' LT	24.0	24.0					21.2
9-OUTLET	169+56.00	12' LT	TO	170+35.00	215' LT	217.8				217.8		328.9
11-10	170+88.00	12' LT	TO	170+88.00	12' RT	24.0	24.0					5.7
10-8	170+88.00	12' RT	TO	169+56.00	12' RT	132.0	132.0					49.5
12-14	169+07.00	41.5' RT	TO	170+33.00	12' RT	222.5			222.5			85.2
15-14	171+50.00	16.5' RT	TO	171+30.00	12' RT	18.0		18.0				13.0
14-OUTLET	171+30.00	12' RT	TO	171+30.00	23' LT	35.0					35.0	14.5
TOTAL							266.0	138.0	334.7	217.8	35.0	695.0

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USER NAME = Melissa.Cole	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE STRUCTURES AND  
STORM SEWER SCHEDULES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	14
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

# STORM SEWER REMOVAL

STA	OFFSET	TO	STA	OFFSET	STORM SEWER REMOVAL 15"	STORM SEWER REMOVAL 18"	STORM SEWER REMOVAL 24"	STORM SEWER REMOVAL 60"	REMOVAL OF EXISTING STRUCTURE NO 2	REMOVING INLETS
					FOOT	FOOT	FOOT	FOOT	EACH	EACH
167+17.	13.3' LT	TO	167+56.	12.5' LT	33.0					
167+56.	12.5' LT									1
167+30.	12.5' RT	TO	167+56.	10.8' RT		22.0				
167+56.	10.8' RT									1
167+56.	12.5' LT	TO	167+56.	10.8' RT	22.0					
167+56.	10.8' RT	TO	168+51.	9.6' RT		91.0				
168+51.	9.6' RT									1
168+51.	11' LT	TO	168+51.	9.6' RT	19.0					
168+51.	11' RT									1
168+51.	9.6' RT	TO	169+11.	9' RT			58.0			
169+11.	9' RT									1
169+11.	9' RT	TO	169+53.	12.8' LT			44.0			
169+53.	12.8' LT									1
169+50.	11.3' RT	TO	169+55.	11.3' RT	5.0					
169+50.	11.3' RT									1
169+55.	11.3' RT									1
169+55.	11.3' RT	TO	169+53.	12.8' LT	22.0			216.0		
169+53.	12.8' LT	TO	170+35.	215.2' LT						
169+06.	42.5' RT	TO	170+33.	24.2' RT			126.0			
169+06.	42.5' RT									1
170+33.	24.2' RT									1
170+33.	24.2' RT	TO	171+30.	16' RT			96.0			
171+30.	16' RT									1
171+50.	22' RT	TO	171+30.	16' RT			18.0			
171+50.	22' RT									1
171+30.	16' RT	TO	171+30.	15.3' LT					1	
<b>TOTALS</b>					101	113	342	216	1	12

# EARTHWORK SCHEDULE

LOCATION			EARTH EXCAVATION	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	AVERAGE SHRINKAGE FACTOR	EARTH EXCAVATION (ADJUSTED)	EMBANKMENT	EARTHWORK BALANCE		FURNISHED EXCAVATION *	REMARKS
								EXCAVATION REQUIRED TO COMPLETE	EXCESS EXCAVATION		
STA.	TO	STA.	CU YD	CU YD	%	CU YD	CU YD	CU YD	CU YD	CU YD	
162+20.37		171+50.71	1545	488	15%	898	1348	450	0	530	STA 169+00 TO STA 169+50
<b>TOTALS</b>			<b>1545</b>	<b>488</b>						<b>530</b>	

\* FURNISHED EXCAVATION QUANTITY = EXCAVATION REQUIRED x 1.18

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USER NAME = Melissa.Cole	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**REMOVAL, STORM SEWER REMOVAL, AND EARTHWORK SCHEDULES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	15
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

## SEEDING SCHEDULE

LOCATION IL 14			SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2	TEMPORARY EROSION CONTROL SEEDING
STATION	TO	STATION	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE	POUND
167+00.00	TO	172+00.00	0.3	0.3	60	30	30	0.7	0.7	100
<b>TOTAL</b>			0.3	0.3	60	30	30	0.7	0.7	100

## EROSION CONTROL SCHEDULE

LOCATION STATION TO STATION				PERIMETER EROSION BARRIER	INLET AND PIPE PROTECTION	STONE DUMPED RIPRAP, CLASS A4
				FOOT	EACH	SQ YD
<b>IL 14</b>						
167+20.37	TO	171+67.48	LT	440		
167+21.37	TO	171+68.48	RT	440		
		170+30.00	215' LT		1.00	
		171+30.00	23' LT			4
<b>TOTAL</b>				880	1	4

## PAVEMENT MARKING SCHEDULE

STATION TO STATION			LENGTH	TEMP PVT MK LINE 4	PAINT PVT MARKING LINE 4 IN	PVT MK REM - GRINDING	RAISED REF PVT MK
				FOOT	FOOT	SQ FT	EACH
167+20.00	TO	171+68.00	448.0	112	112	38	12
<b>TOTAL</b>				112	112	38	12

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USER NAME = valerie.zolla	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 5/8/2024	DATE -	REVISED -

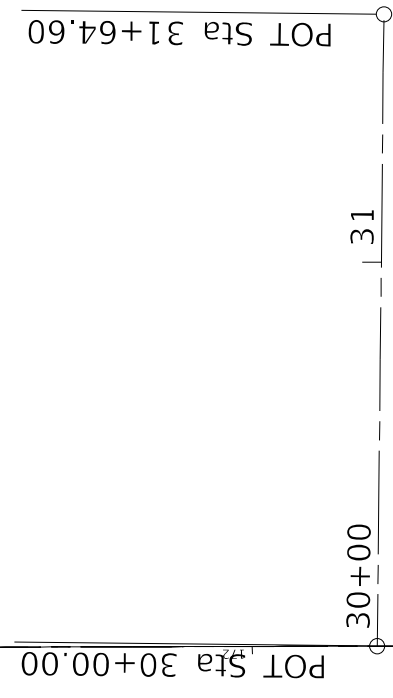
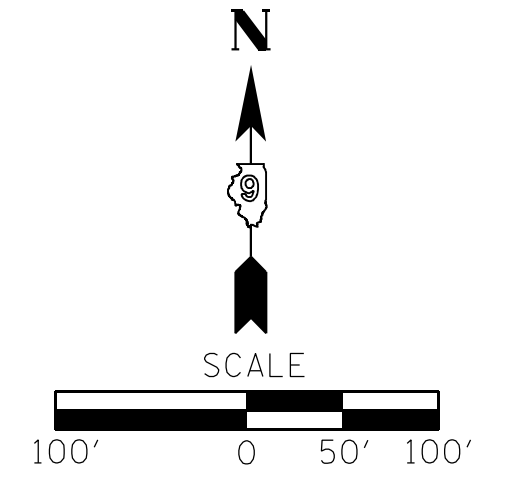
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SEEDING, EROSION CONTROL, AND  
PAVEMENT MARKING SCHEDULES**

SCALE: SHEET OF SHEETS STA. TO STA.

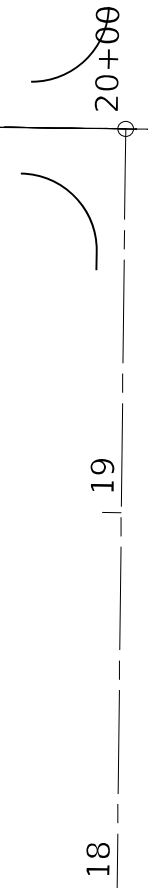
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	16
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

PROP. CURVE IL14\_3  
 PI STA. = 170+18.37  
 $\Delta = 1^\circ 36' 18''$  (LT)  
 $D = 0^\circ 12' 21''$   
 $R = 27,846.77'$   
 $T = 390.04'$   
 $L = 780.03'$   
 $E = 2.73'$   
 $e = \underline{\hspace{1cm}}$   
 $T.R. = \underline{\hspace{1cm}}$   
 $S.E. RUN = \underline{\hspace{1cm}}$   
 $P.C. STA. = 166+33.12$   
 $P.T. STA. = 174+13.15$



CHAIN - PROPSMAIN  
 PRIL14 PROtry

$\text{C IL 14}$



P.C. Sta 166+33.12

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USER NAME = Melissa.Cole	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ALIGNMENTS LAYOUT AND**  
**GEOPAK ELEMENT IDENTIFICATION**

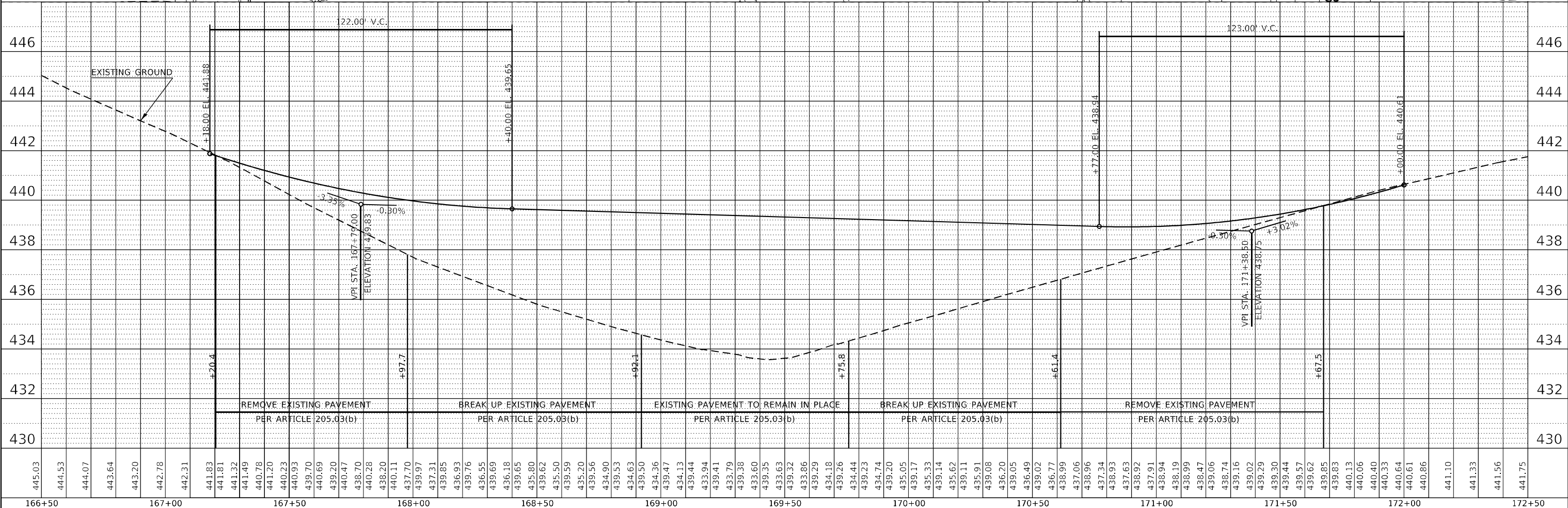
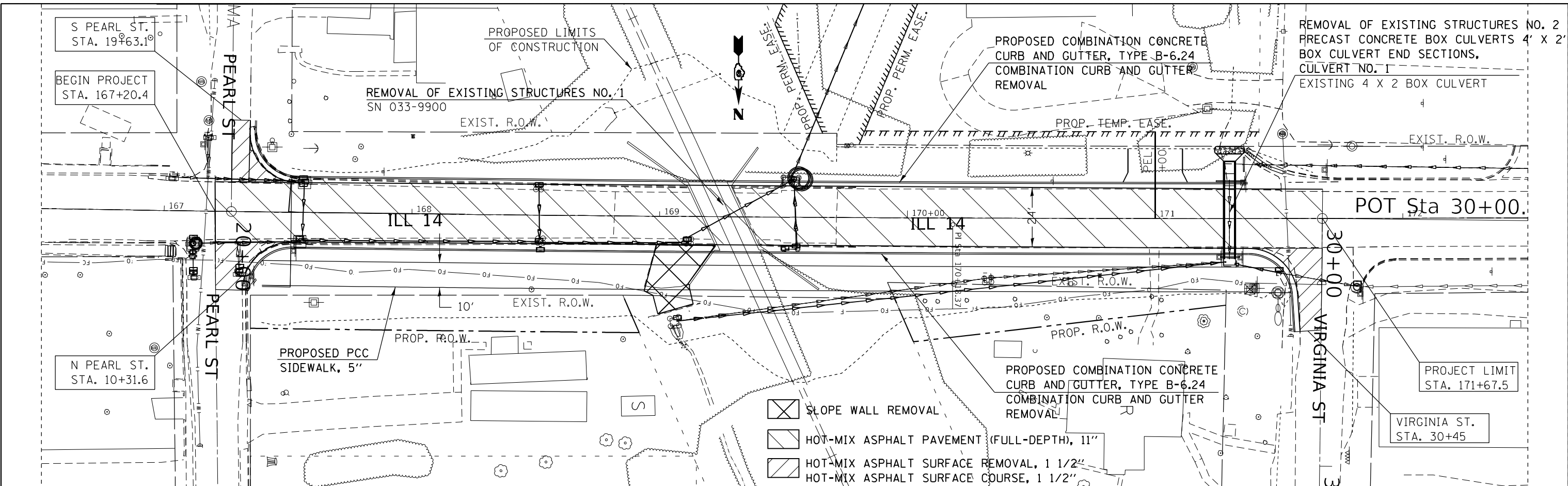
F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 17
ILLINOIS FED. AID PROJECT				

SCALE: SHEET OF SHEETS STA. TO STA.

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	PLOTTED	
	ALIGNMENT CHECKED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	CADD FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	CADD FILE NAME	

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USER NAME = valerie.rola	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/21/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>IL 14 PLAN &amp; PROFILE</b>			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 18
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				



① REMOVING INLETS  
MANHOLES, TY A, 5',  
TYPE 1 FRAME OPEN LID  
STA 167+30, 12' RT  
INVERT 437.09  
TOP OF LID 440.56

⑥ REMOVING INLETS  
MANHOLES, TY A, 4',  
TYPE 3 FRAME & GRATE  
STA 169+12, 12' RT  
INVERT 431.81  
TOP OF LID 438.45

⑪ INLETS TY B,  
TYPE 3 FRAME & GRATE  
STA 170+88, 12' LT  
INVERT 434.50  
TOP OF LID 437.94

② REMOVING INLETS  
MANHOLES, TY A, 5',  
TYPE 3 FRAME & GRATE  
STA 167+55, 12' RT  
INVERT 435.25  
TOP OF LID 439.83

⑦ REMOVING INLETS

⑫ REMOVING INLETS  
MANHOLES, TY A, 4',  
TYPE 8 GRATE  
STA 169+07, 41.5' RT  
INVERT 437.20  
TOP OF LID 441.32

③ REMOVING INLETS  
MANHOLES, TY A, 4',  
TYPE 3 FRAME & GRATE  
STA 167+55, 12' LT  
INVERT 436.97  
TOP OF LID 439.83

⑧ REMOVING INLETS  
MANHOLES, TY A, 4',  
TYPE 3 FRAME & GRATE  
STA 169+56, 12' RT  
INVERT 432.61  
TOP OF LID 438.32

⑬ REMOVING INLETS

④ REMOVING INLETS  
MANHOLES, TY A, 5',  
TYPE 3 FRAME & GRATE  
STA 168+50, 12' RT  
INVERT 432.72  
TOP OF LID 438.64

⑨ REMOVING INLETS  
MANHOLES, TY A, 8',  
TYPE 3 FRAME & GRATE  
STA 169+56, 12' LT  
INVERT 430.63  
TOP OF LID 438.32

⑭ REMOVING INLETS  
MANHOLES, TY A, 8',  
TYPE 3 FRAME & GRATE  
STA 171+30, 12' RT  
INVERT 434.86  
TOP OF LID 438.18

⑤ REMOVING INLETS  
INLETS, TY B,  
TYPE 3 FRAME & GRATE  
STA 168+50, 12' LT  
INVERT 433.98  
TOP OF LID 438.64

⑩ INLETS, TY B,  
TYPE 3 FRAME & GRATE  
STA 170+88, 12' RT  
INVERT 434.00  
TOP OF LID 437.94

⑮ REMOVING INLETS  
MANHOLES, TY A, 4',  
TYPE 3 FRAME & GRATE  
STA 171+50, 16.5' RT  
INVERT 434.95  
TOP OF LID 438.96

**A**  
STORM SEWERS, CL A, TY 1, 15"  
STA 167+17, 12' LT TO 167+55, 12' LT  
USFL ME  
DSFL 437.25

**E**  
STORM SEWERS, CL A, TY 1, 15"  
STA 168+50, 12' LT TO 168+50, 12' RT  
USFL 434.17  
DSFL 433.50

**I**  
STORM SEWERS, CL A, TY 1, 15"  
STA 169+56, 12' RT TO 169+56, 12' LT  
USFL 432.80  
DSFL 431.50

**M**  
STORM SEWERS, CL A, TY 1, 24"  
STA 169+07, 41.5' RT TO 170+33, 12' RT  
USFL 437.50  
DSFL 435.11

**B**  
STORM SEWERS, CL A, TY 1, 15"  
STA 167+55, 12' LT TO 167+55, 12' RT  
USFL 437.16  
DSFL 436.50

**F**  
STORM SEWERS, CL A, TY 1, 24"  
STA 168+50, 12' RT TO 169+12, 12' RT  
USFL 432.97  
DSFL 432.08

**J**  
STORM SEWERS, CL A, TY 1, 60"  
STA 169+56, 12' LT TO 170+35, 215' LT  
USFL 431.13  
DSFL 428.01

**C**  
STORM SEWERS, CL A, TY 1, 18"  
STA 167+30, 12' RT TO 167+55, 12' RT  
USFL 437.30  
DSFL 436.50

**G**  
STORM SEWERS, CL A, TY 1, 24"  
STA 169+12, 12' RT TO 169+56, 12' LT  
USFL 432.06  
DSFL 431.00

**K**  
STORM SEWERS, CL A, TY 1, 15"  
STA 170+88, 12' LT TO 170+88, 12' RT  
USFL 435.25  
DSFL 434.50

**O**  
STORM SEWERS, CL A, TY 1, 18"  
STA 171+50, 16.5' RT TO 171+30, 12' RT  
USFL 435.16  
DSFL 434.90

**D**  
STORM SEWERS, CL A, TY 1, 18"  
STA 167+55, 12' RT TO 168+50, 12' RT  
USFL 435.46  
DSFL 434.00

**L**  
STORM SEWERS, CL A, TY 1, 15"  
STA 170+88, 12' RT TO 169+56, 12' RT  
USFL 434.25  
DSFL 433.00

**P**  
PRECAST CONCRETE BOX CULVERTS 4'X2'  
STA 171+30, 12' RT TO 171+30, 23' LT  
USFL 434.86  
DSFL 434.22

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	DRAWN -	REVISED -
PLOT SCALE = 40,0000 */ in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 14 DRAINAGE**

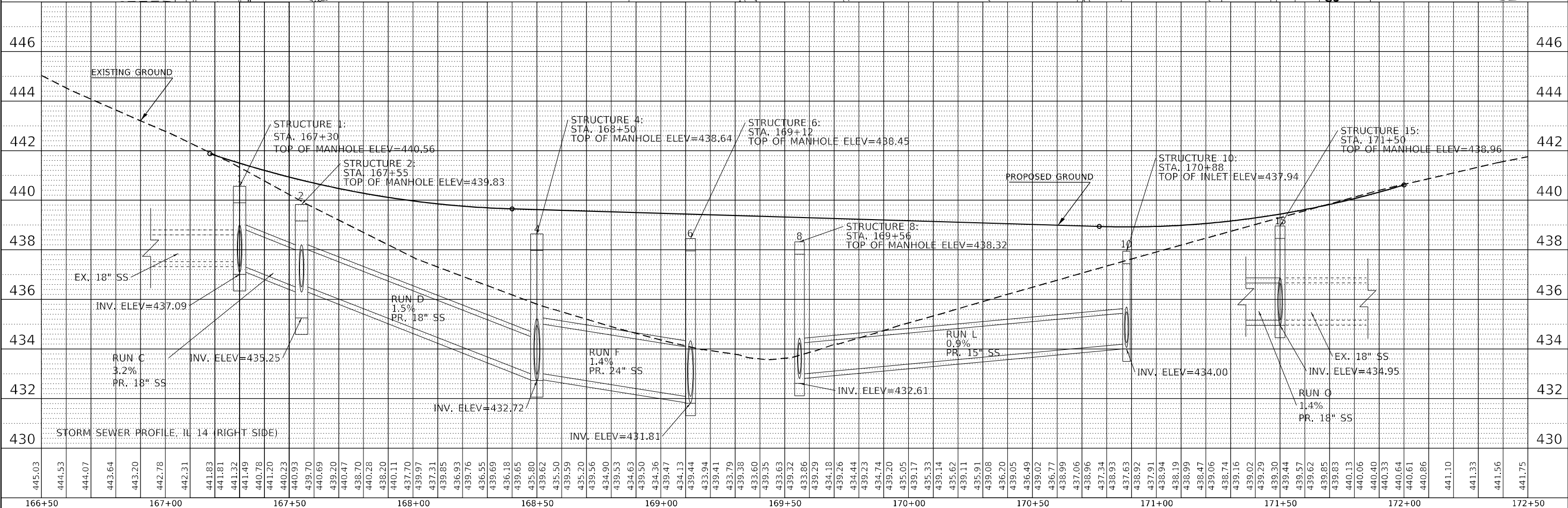
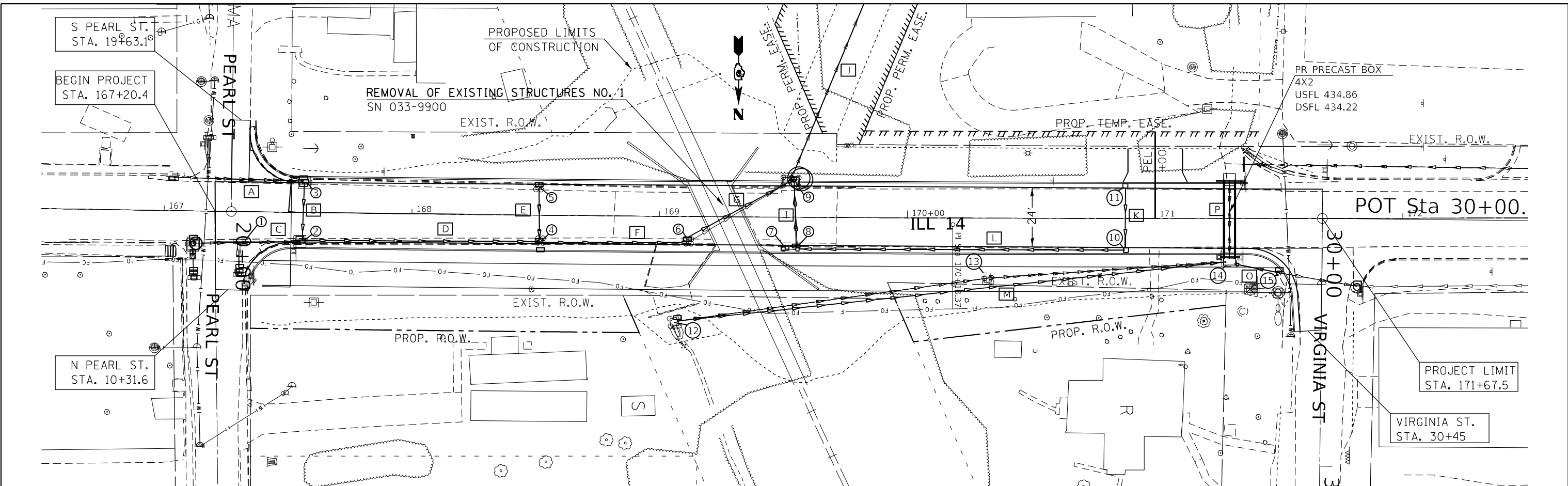
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	19
			CONTRACT NO. 78376	
		ILLINOIS	FED. AID PROJECT	

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	CHECKED
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		FILE NAME

PROFILE	SURVEYED	DATE
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	STRUCTURE	NOTARIS
		FILE NAME

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

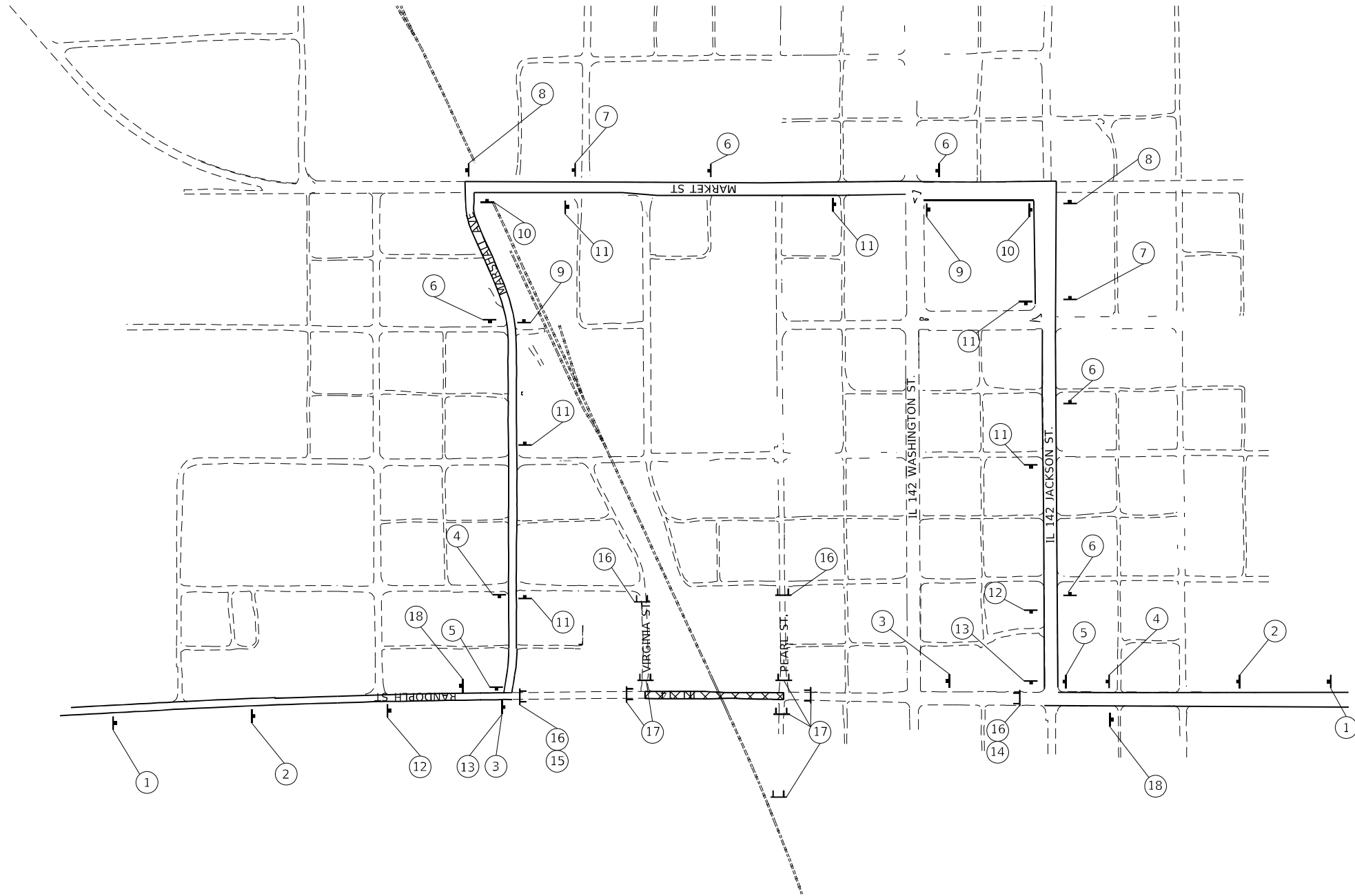
<b>IL 14 DRAINAGE PLAN &amp; PROFILE</b>			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	20
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				









①		W20-3	⑧		M4-8 M3-3 M1-1100.2 M5-1R	⑬		M4-8 M3-3 M1-1100.2 M5-1R
②		W20-2	⑨		M4-8 M3-3 M1-1100.2 M5-1R	⑭		M4-10L
③		W20-3	⑩		M4-8 M3-3 M1-1100.2 M5-1R	⑮		M4-10R
④		M4-8 M3-3 M1-1100.2 M5-1R	⑪		M4-8 M3-3 M1-1100.2 M5-1R	⑯		R11-4
⑤		M4-8 M3-3 M1-1100.2 M5-1R	⑫		M4-8 M3-3 M1-1100.2 M5-1R	⑰		R11-2
⑥		M4-8 M3-3 M1-1100.2 M5-1R	⑬		M4-8 M3-3 M1-1100.2 M5-1R	⑱		M4-8a
⑦		M4-8 M3-3 M1-1100.2 M5-1R						

**LEGEND**

	TYPE III BARRICADE WITH FLASHING LIGHT
	SIGN
	DETOUR ROUTE
	WORK ZONE
	CHANGEABLE MESSAGE SIGN

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DRAWN -	REVISOR -	REVISION -
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PLOT DATE = 3/22/2024	DATE -	REVISION -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PROPOSED DETOUR IL 14**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(1-3)	HAMILTON	32	24
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				

POINT#	STATION	NORTHING	EASTING
IL141	163+00.00	518153.97	925769.15
P.C.3	166+33.12	518159.87	925436.08
P.T.3	174+03.57	518162.84	924665.67

CURVE DATA  
 $\Delta = 01^\circ 35' 07''$  (LT)  
 $D = 00^\circ 12' 21''$   
 $T = 385.25'$   
 $L = 770.45'$   
 $R = 27,846.77'$   
 BEARING = S  $89^\circ 25' 43''$  W

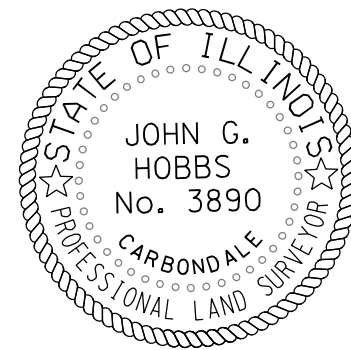
PARCEL#	OWNERS NAME	PURPOSE	ACREAGE
031	LIFE ESTATE IN PATRICIA A. AYDT	R.O.W.	0.046AC±
033	PAM & MARK H. PAYNE	R.O.W.	0.050AC±
043	BRUCE & BONNIE PAGE	T.E./P.E.	0.021/0.187AC±
049	SHERRY MITCHELL	P.E.	0.037AC±

PT#	NORTHING	EASTING
JH20	518193.16	924940.55
JH21	518189.99	925077.24
JH22	518196.58	925074.37
JH25	518213.95	925066.79
JH28	518199.23	924940.69
JH45	518160.28	925098.61

PT#	NORTHING	EASTING
JH29	518195.12	925184.09
JH30	518195.12	925334.45
JH36	518210.25	925177.50
JH48	518208.49	925334.45

PT#	NORTHING	EASTING
JH3	518129.48	925212.70
JH5	518129.12	925317.70

PT#	NORTHING	EASTING
JH7	518085.72	925122.69
JH8	517935.39	925060.22
JH9	518134.30	925097.79
JH10	518129.88	925097.66
JH11	518134.37	925088.77
JH12	518129.86	925103.45
JH13	517935.22	925006.00
JH14	518017.11	925094.18
JH17	518128.86	925086.47
JH18	518129.22	924927.36
JH19	518135.13	924927.43



JOHN G. HOBBS  
 ILLINOIS PROFESSIONAL LAND SURVEYOR

Current license expires 11/2024.

This professional service conforms to the current Illinois minimum standards for a boundary survey.

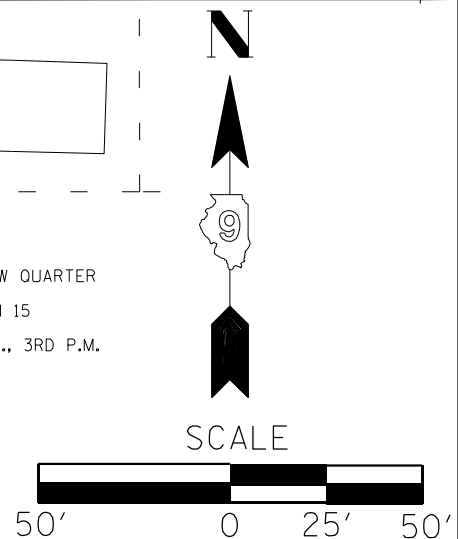
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY SHEET  
 CITY OF MCLEANSBORO

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 166+00.00 TO STA. 173+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	25

ILLINOIS ROUTE 14 CONTRACT NO. 78376  
 R-99-005-22 ILLINOIS FED. AID PROJECT

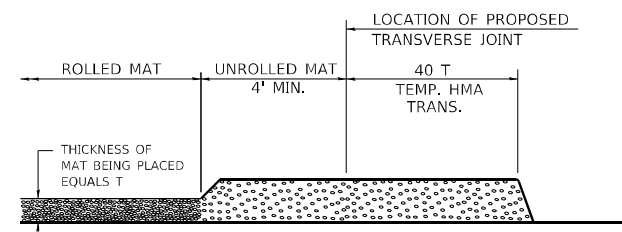


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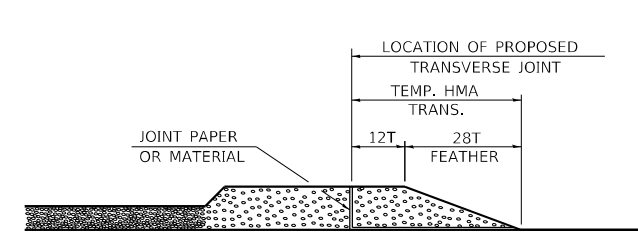


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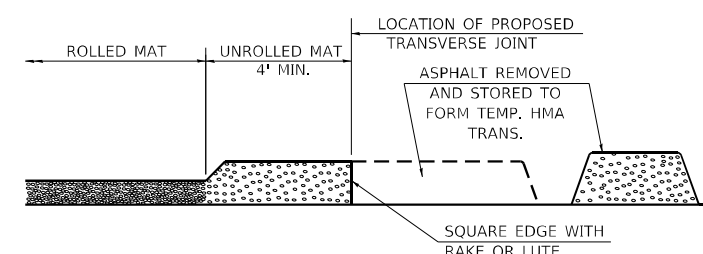
## TEMPORARY HOT-MIX ASPHALT TRANSITIONS



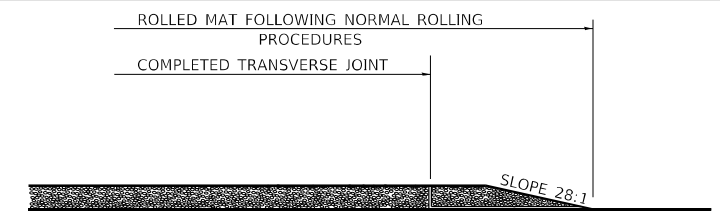
- STEP I**
1. PLACE HOT-MIX ASPHALT MAT, LENGTH 40 TIMES THE THICKNESS OF THE MAT BEING PLACED PAST THE PROPOSED TRANSVERSE JOINT LOCATION USING NORMAL OPERATING PROCEDURES.
  2. EXTREME CARE SHOULD BE TAKEN TO MAINTAIN ENOUGH MATERIAL IN FRONT OF THE SCREED TO MAINTAIN REQUIRED PAVING DEPTH.



- STEP III**
1. JOINT PAPER OR OTHER PRESELECTED JOINT MATERIAL IS THEN PLACED IN THE CLEARED AREA AND THE EXCESS ASPHALT USED TO HAND FORM A TRANSITION TO THE DIMENSIONS SHOWN ABOVE.
  2. NOTE THAT IN CONSTRUCTING THE TRANSITION, THE MAT DEPTH IS CONTINUED AS PART OF THE TRANSITION BEFORE FORMING THE FEATHER.



- STEP II**
1. MOVE THE PAVER OUT OF THE WAY AND REMOVE THE ASPHALT FROM THE AREA OF THE PROPOSED TEMPORARY HOT-MIX ASPHALT TRANSITION.
  2. SQUARE UP THE END OF THE MAT WITH A RAKE OR LUTE.
  3. NOTE THAT THE MAT WITHIN 4' OF THE END OF JOINT IS NOT TO BE ROLLED AT THIS TIME.



- STEP IV**
1. COMPLETE TEMPORARY TRANSITION BY ROLLING.
  2. TO RESUME PAVING, AT THE JOINT, REMOVE TEMPORARY TRANSITION AND DISPOSE OF THE MATERIAL ACCORDING TO ART. 202.03 OF THE STD. SPECS. (COST INCLUDED IN THE CONTRACT).
  3. CONSTRUCTING THE TEMPORARY TRANSITIONS WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH ARTICLE 406.14 OF THE STANDARD SPECIFICATIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-16-94
REVISED	01-09-07
RESIZED	05-8-08
REVISED	05-16-13
REVISED	10-21-21

STD. 9-26

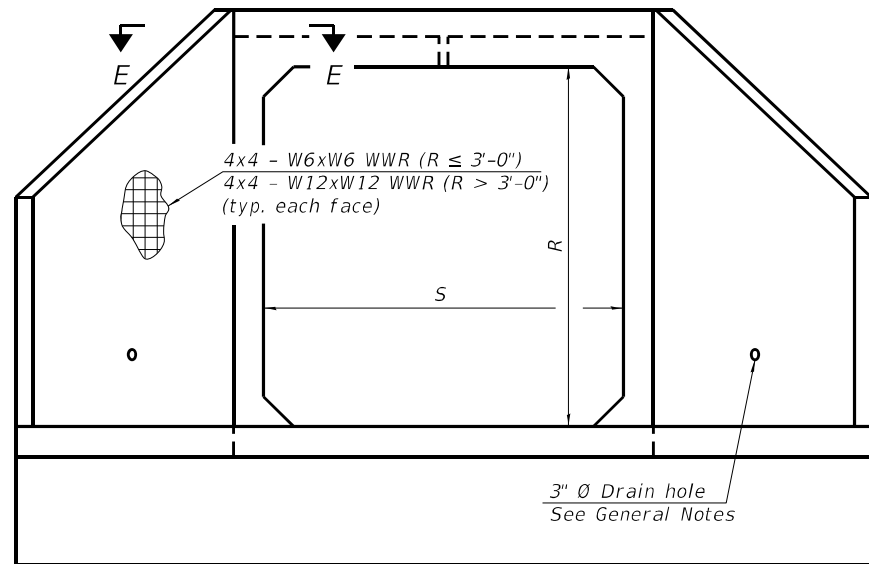
USER NAME = Melissa.Cole	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

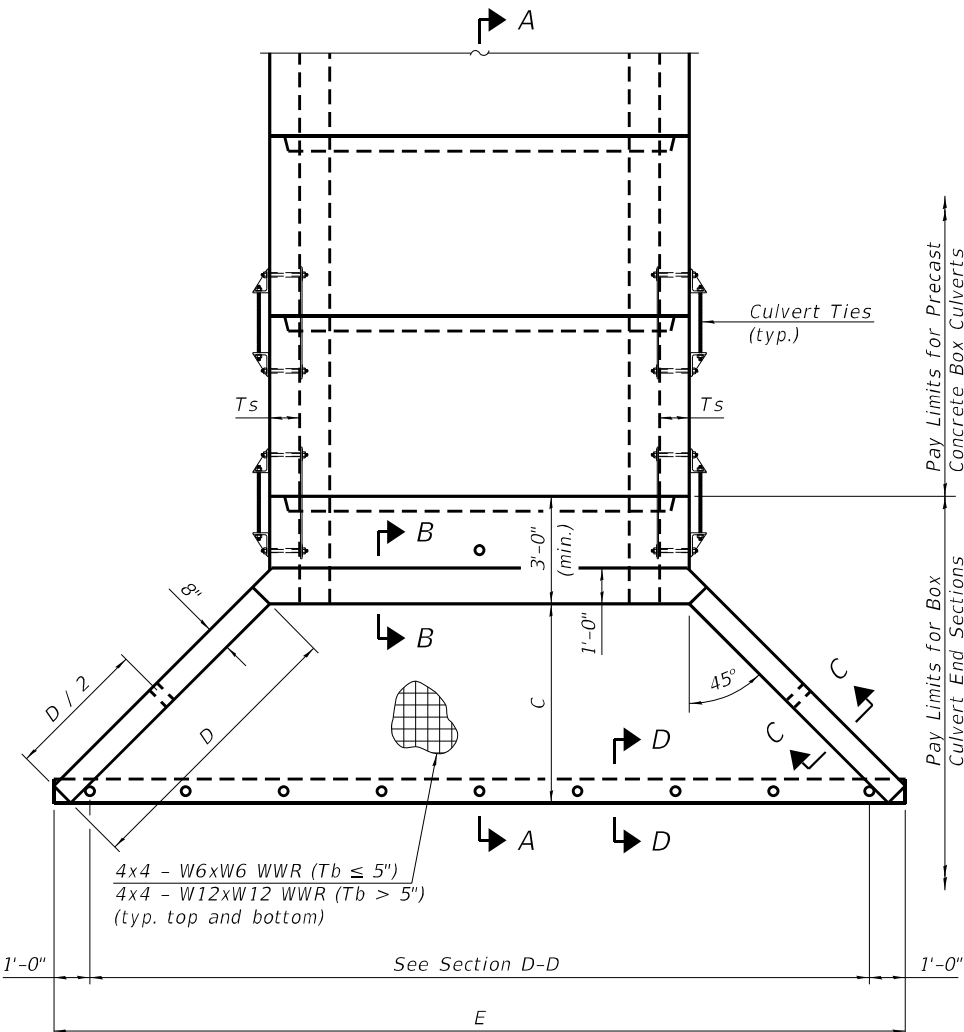
**TEMPORARY HOT-MIX ASPHALT  
TRANSITIONS DETAIL**

SCALE: SHEET OF SHEETS STA. TO STA.

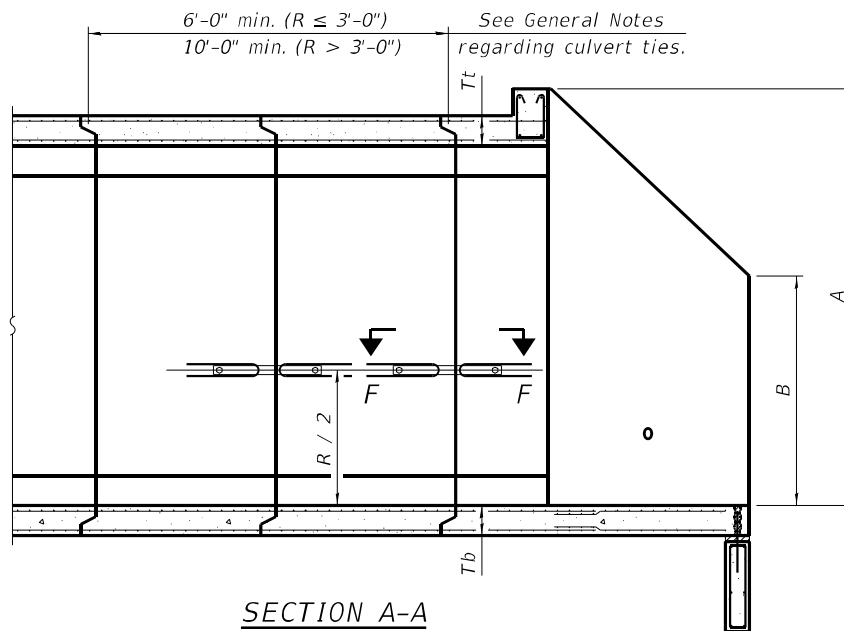
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	26
			CONTRACT NO. 78376	
		ILLINOIS	FED. AID PROJECT	



END VIEW



PLAN



SECTION A-A

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be increased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the unit price for Box Culvert End Sections of the culvert number specified.

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than 1/2" nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included on the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

APRON END SECTION DIMENSIONS

Span (S)	Rise (R)	Tt	Tb	Ts	A	B	C	D	E	Concrete Cu. Yd.	Culvert Ties Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-10 <sup>5</sup> / <sub>8</sub> "	4'-1"	10'-4 <sup>5</sup> / <sub>8</sub> "	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-7 <sup>1</sup> / <sub>8</sub> "	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-10 <sup>3</sup> / <sub>8</sub> "	5'-6"	12'-4 <sup>3</sup> / <sub>8</sub> "	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-7 <sup>1</sup> / <sub>8</sub> "	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-4 <sup>1</sup> / <sub>2</sub> "	2'-2 <sup>1</sup> / <sub>2</sub> "	2'-8 <sup>1</sup> / <sub>2</sub> "	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-8 <sup>1</sup> / <sub>2</sub> "	3'-10"	11'-2 <sup>3</sup> / <sub>8</sub> "	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-4 <sup>1</sup> / <sub>2</sub> "	2'-8 <sup>1</sup> / <sub>2</sub> "	3'-11 <sup>3</sup> / <sub>8</sub> "	5'-7"	13'-8 <sup>1</sup> / <sub>8</sub> "	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-8 <sup>1</sup> / <sub>2</sub> "	5'-3"	13'-2 <sup>3</sup> / <sub>8</sub> "	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 <sup>1</sup> / <sub>2</sub> "	3'-2 <sup>1</sup> / <sub>2</sub> "	4'-11 <sup>3</sup> / <sub>8</sub> "	7'-0"	15'-8 <sup>1</sup> / <sub>8</sub> "	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-8 <sup>3</sup> / <sub>8</sub> "	6'-8"	15'-2 <sup>1</sup> / <sub>2</sub> "	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-11 <sup>3</sup> / <sub>8</sub> "	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-7 <sup>1</sup> / <sub>4</sub> "	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-11 <sup>3</sup> / <sub>8</sub> "	5'-7"	14'-10 <sup>1</sup> / <sub>8</sub> "	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-7 <sup>1</sup> / <sub>4</sub> "	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-11 <sup>3</sup> / <sub>8</sub> "	7'-0"	16'-10 <sup>1</sup> / <sub>8</sub> "	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-9 <sup>1</sup> / <sub>4</sub> "	6'-9"	16'-5 <sup>7</sup> / <sub>8</sub> "	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-11 <sup>3</sup> / <sub>8</sub> "	8'-5"	18'-10 <sup>1</sup> / <sub>8</sub> "	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-9 <sup>1</sup> / <sub>4</sub> "	8'-2"	18'-5 <sup>7</sup> / <sub>8</sub> "	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-11 <sup>3</sup> / <sub>8</sub> "	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-10 <sup>3</sup> / <sub>8</sub> "	4'-1"	13'-10 <sup>3</sup> / <sub>8</sub> "	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-11 <sup>3</sup> / <sub>8</sub> "	5'-7"	16'-0 <sup>1</sup> / <sub>8</sub> "	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-10 <sup>3</sup> / <sub>8</sub> "	5'-6"	15'-10 <sup>3</sup> / <sub>8</sub> "	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-11 <sup>3</sup> / <sub>8</sub> "	7'-0"	18'-0 <sup>1</sup> / <sub>8</sub> "	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-10 <sup>3</sup> / <sub>4</sub> "	6'-11"	17'-10 <sup>3</sup> / <sub>4</sub> "	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-11 <sup>3</sup> / <sub>8</sub> "	8'-5"	20'-0 <sup>1</sup> / <sub>8</sub> "	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-10 <sup>3</sup> / <sub>4</sub> "	8'-4"	19'-10 <sup>3</sup> / <sub>4</sub> "	7.8	Yes
6'-0"	6'-0"	8"	7"	7"	7'-5"	4'-3"	6'-11 <sup>1</sup> / <sub>2</sub> "	9'-10"	22'-0 <sup>1</sup> / <sub>4</sub> "	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-10 <sup>3</sup> / <sub>4</sub> "	9'-9"	21'-10 <sup>3</sup> / <sub>4</sub> "	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 <sup>3</sup> / <sub>8</sub> "	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 <sup>3</sup> / <sub>8</sub> "	5'-7"	17'-2 <sup>1</sup> / <sub>2</sub> "	6.1	Yes
7'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 <sup>3</sup> / <sub>8</sub> "	7'-0"	19'-2 <sup>1</sup> / <sub>8</sub> "	7.4	Yes
7'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 <sup>3</sup> / <sub>8</sub> "	8'-5"	21'-2 <sup>1</sup> / <sub>8</sub> "	8.9	Yes
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 <sup>3</sup> / <sub>8</sub> "	9'-10"	23'-2 <sup>1</sup> / <sub>4</sub> "	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 <sup>3</sup> / <sub>8</sub> "	4'-2"	16'-2"	5.3	Yes
8'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 <sup>3</sup> / <sub>8</sub> "	5'-7"	18'-2 <sup>1</sup> / <sub>8</sub> "	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 <sup>3</sup> / <sub>8</sub> "	7'-0"	20'-2 <sup>1</sup> / <sub>8</sub> "	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 <sup>3</sup> / <sub>8</sub> "	8'-5"	22'-2 <sup>1</sup> / <sub>8</sub> "	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 <sup>1</sup> / <sub>2</sub> "	9'-10"	24'-2 <sup>1</sup> / <sub>4</sub> "	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-0 <sup>3</sup> / <sub>4</sub> "	4'-4"	17'-6 <sup>3</sup> / <sub>8</sub> "	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-0 <sup>3</sup> / <sub>4</sub> "	5'-9"	19'-6 <sup>3</sup> / <sub>8</sub> "	7.5	Yes
9'-0"	4'-0"	9"	9"	9"	5'-6"	3'-3"	5'-0 <sup>3</sup> / <sub>4</sub> "	7'-2"	21'-6 <sup>3</sup> / <sub>8</sub> "	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-0 <sup>3</sup> / <sub>4</sub> "	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-0 <sup>3</sup> / <sub>4</sub> "	9'-11"	25'-5 <sup>3</sup> / <sub>8</sub> "	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-1 <sup>1</sup> / <sub>2</sub> "	4'-5"	18'-10 <sup>1</sup> / <sub>4</sub> "	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-1 <sup>1</sup> / <sub>2</sub> "	5'-10"	20'-10 <sup>1</sup> / <sub>4</sub> "	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-1 <sup>1</sup> / <sub>2</sub> "	7'-3"	22'-10 <sup>3</sup> / <sub>8</sub> "	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-1 <sup>1</sup> / <sub>2</sub> "	8'-8"	24'-10 <sup>3</sup> / <sub>8</sub> "	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4"	7'-1 <sup>1</sup> / <sub>2</sub> "	10'-1"	26'-10 <sup>3</sup> / <sub>8</sub> "	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-2 <sup>1</sup> / <sub>8</sub> "	4'-7"	20'-3 <sup>1</sup> / <sub>8</sub> "	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-2 <sup>1</sup> / <sub>8</sub> "	6'-0"	22'-3 <sup>1</sup> / <sub>8</sub> "	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-2 <sup>1</sup> / <sub>4</sub> "	7'-4"	24'-1 <sup>3</sup> / <sub>4</sub> "	11.5	Yes
11'-0"	5'-0"	11"	11"	11"	6'-8"	3'-10"	6'-2 <sup>1</sup> / <sub>4</sub> "	8'-9"	26'-1 <sup>3</sup> / <sub>4</sub> "	13.3	Yes
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12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-3 <sup>5</sup> / <sub>8</sub> "	4'-8"	21'-6 <sup>1</sup> / <sub>2</sub> "	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-3 <sup>5</sup> / <sub>8</sub> "	6'-1"	23'-6 <sup>1</sup> / <sub>2</sub> "	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-3 <sup>5</sup> / <sub>8</sub> "	7'-6"	25'-6 <sup>3</sup> / <sub>8</sub> "	13.0	Yes
12'-0"	5'-0"	12"	12"	12"	6'-9"	3'-11"	6'-3 <sup>5</sup> / <sub>8</sub> "	8'-11"	27'-6 <sup>3</sup> / <sub>8</sub> "	14.1	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-3 <sup>5</sup> / <sub>8</sub> "	10'-4"	29'-6 <sup>3</sup> / <sub>8</sub> "	17.4	Yes

Note:  
Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft. (Sheet 1 of 2)

SCB-AES

2-17-2017

USER NAME = Melissa.Cole	DESIGNED -	REVISED -
DRAWN -	REVISED -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

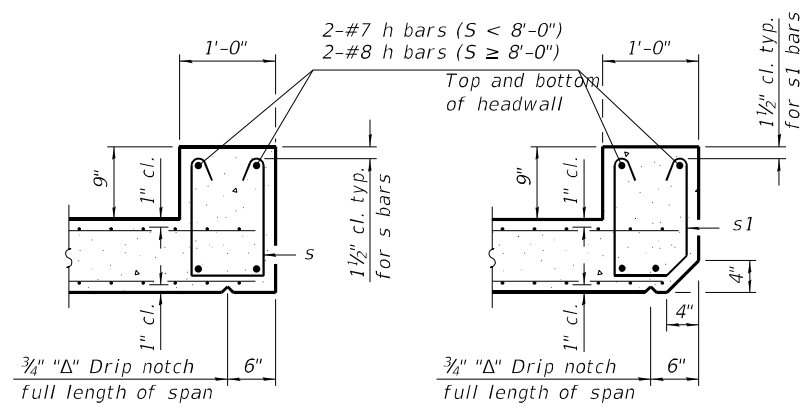
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END  
SECTION DETAILS - STRUCTURE NO. 1

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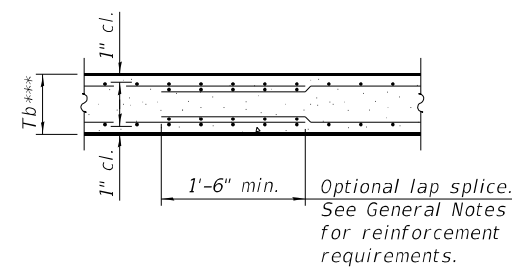
F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 27
ILLINOIS FED. AID PROJECT CONTRACT NO. 78376				

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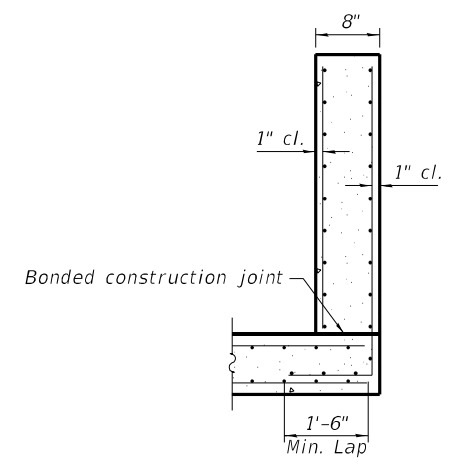
**SECTION B-B**  
(Top slab at downstream end)

**SECTION B-B**  
(Top slab at upstream end)

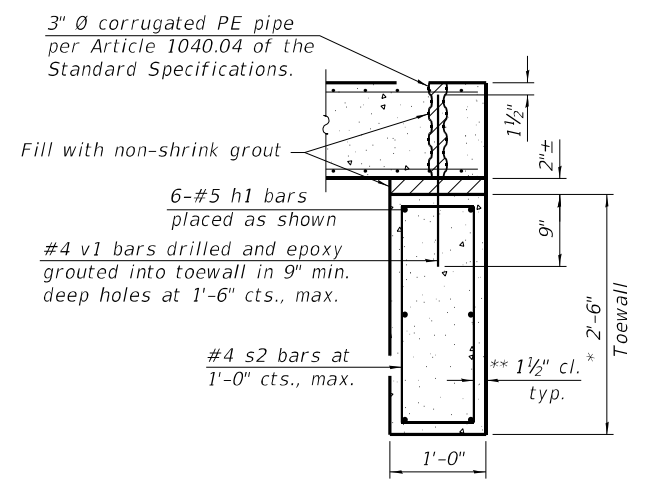


**SECTION B-B**  
(Bottom Slab)

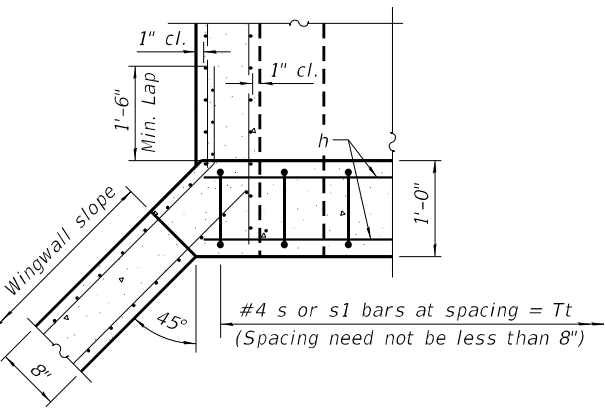
\*\*\* This dimension shall be increased by 2" for CIP construction.



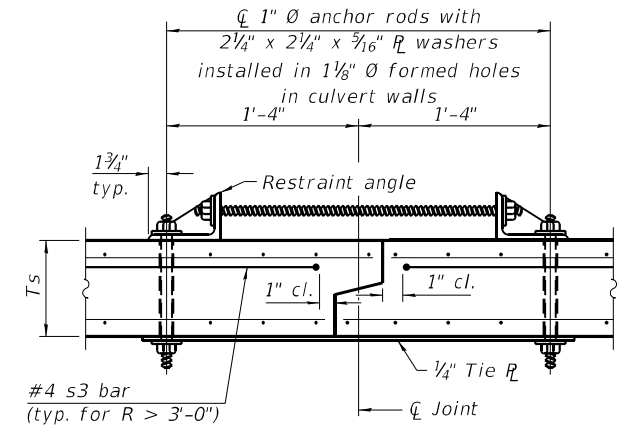
**SECTION C-C**



**SECTION D-D**



**SECTION E-E**



**SECTION F-F**  
(Showing culvert tie details)

**TOEWALL CONSTRUCTION SEQUENCE**

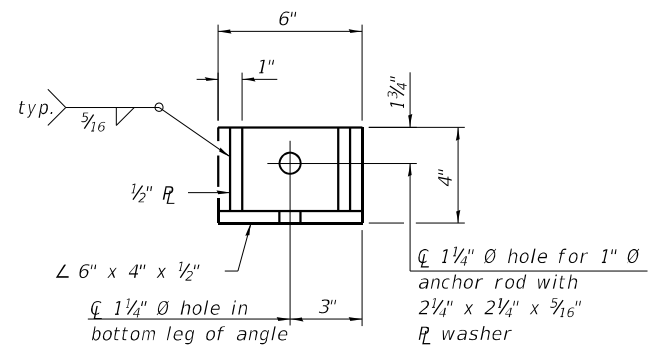
1. Perform excavation and construct toewall.
2. Backfill accordingly and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

\* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling method.

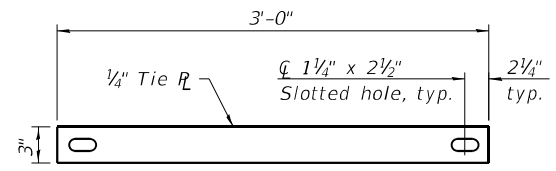
\*\* If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.

**Notes:**

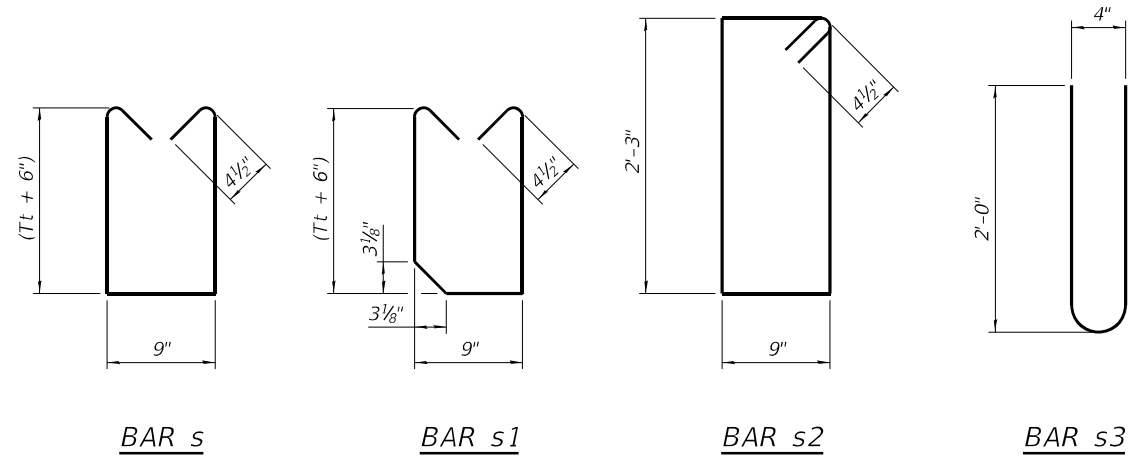
1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 5/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.



**RESTRAINT ANGLE DETAIL**



**TIE PLATE DETAIL**



**SCB-AES** 2-17-2017

(Sheet 2 of 2)

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	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE BOX CULVERT APRON END  
SECTION DETAILS - STRUCTURE NO. 1**

SCALE: SHEET OF SHEETS STA. TO STA.

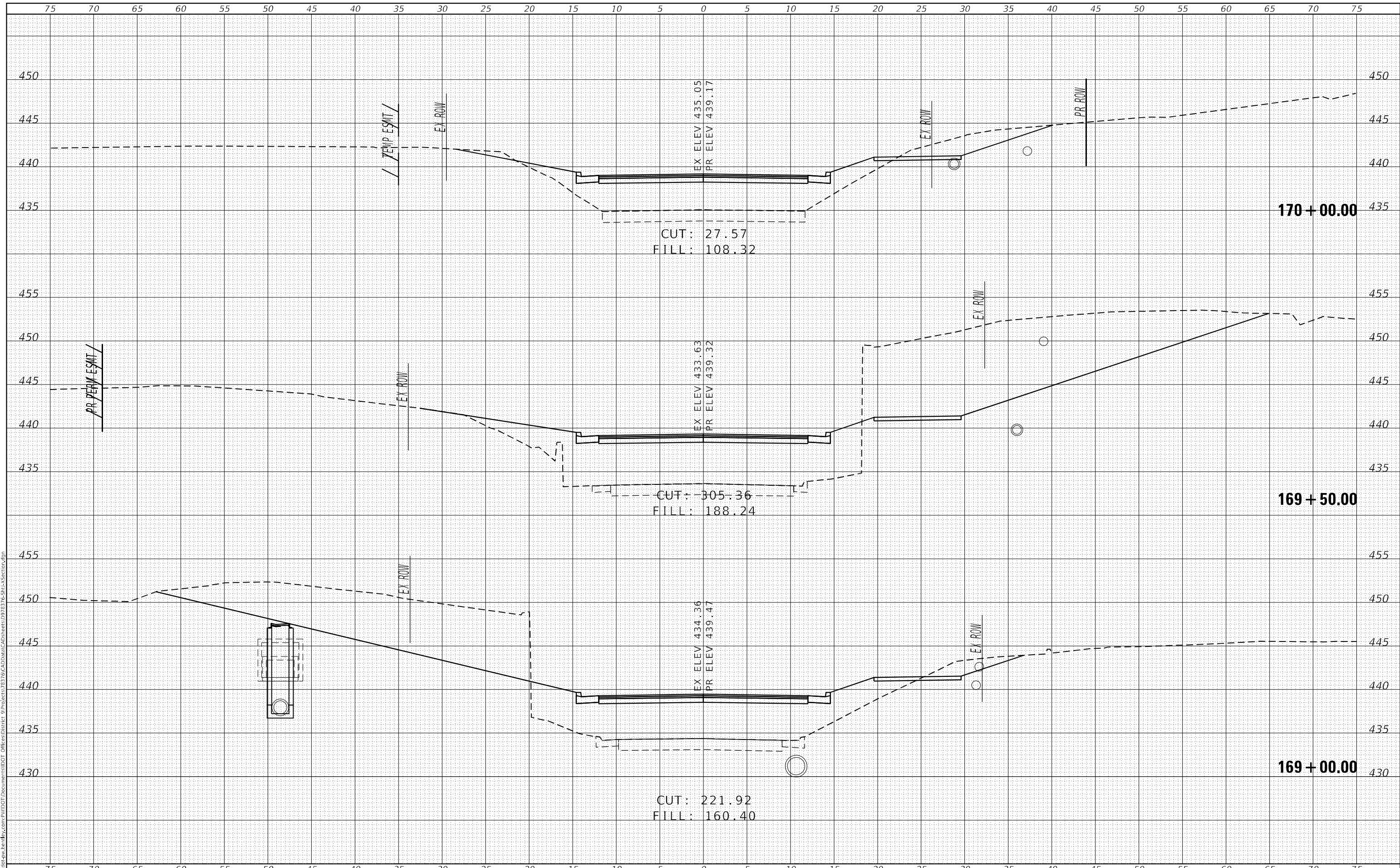
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	9(I-3)	HAMILTON	32	28
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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USER NAME = Melissa.Cole	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 10,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

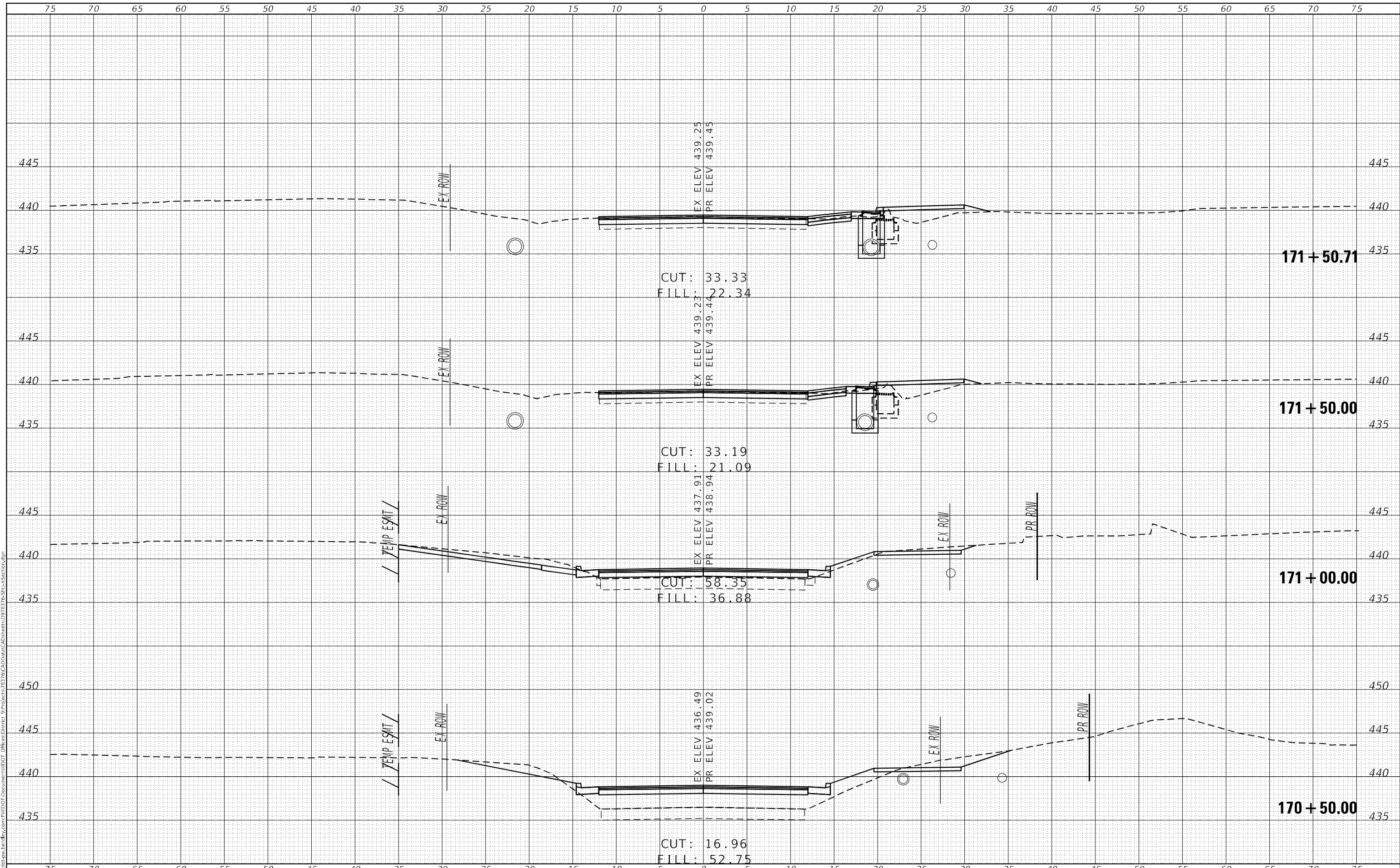
SCALE: SHEET OF SHEETS STA. 169+00.00 TO STA. 170+00.00

F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 30
			CONTRACT NO. 78376	
			ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

MODEL: D:\infra\...  
 FILE NAME: D:\infra\...  
 PROJECT: 170+50.00 TO 171+50.00



USER NAME = Melissa.Cole	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 10,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2024	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE:		SHEET	OF	SHEETS	STA. 170+50.00	TO STA. 171+67.48
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**CROSS SECTIONS**

F.A.P. RTE. 853	SECTION 9(I-3)	COUNTY HAMILTON	TOTAL SHEETS 32	SHEET NO. 31
CONTRACT NO. 78376				
ILLINOIS FED. AID PROJECT				



