

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	12B-1;10B-2	ILLINOIS	32	1

* FAU ROUTE 9909 & FAS ROUTE 1911 FOR UNION & JACKSON

DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

F.A.U. ROUTE 9909 & F.A.S. ROUTE 1911 (OLD US 51) SECTION 12B-1;10B-2 PROJECT STP-IGHB(869) BOX CULVERT REPLACEMENTS UNION & JACKSON COUNTY

C-99-068-15

FOR INDEX OF SHEETS, SEE SHEET NO. 2 FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 4 - 8

TRAFFIC DATA

SN 091-7055 (E) 2015 ADT = 3,950 WITH 4.2% TRUCKS SPEED LIMIT: 35 MPH

SN 039-7077 (E) 2012 ADT = 1,050 WITH 2.2% TRUCKS SPEED LIMIT: 55 MPH

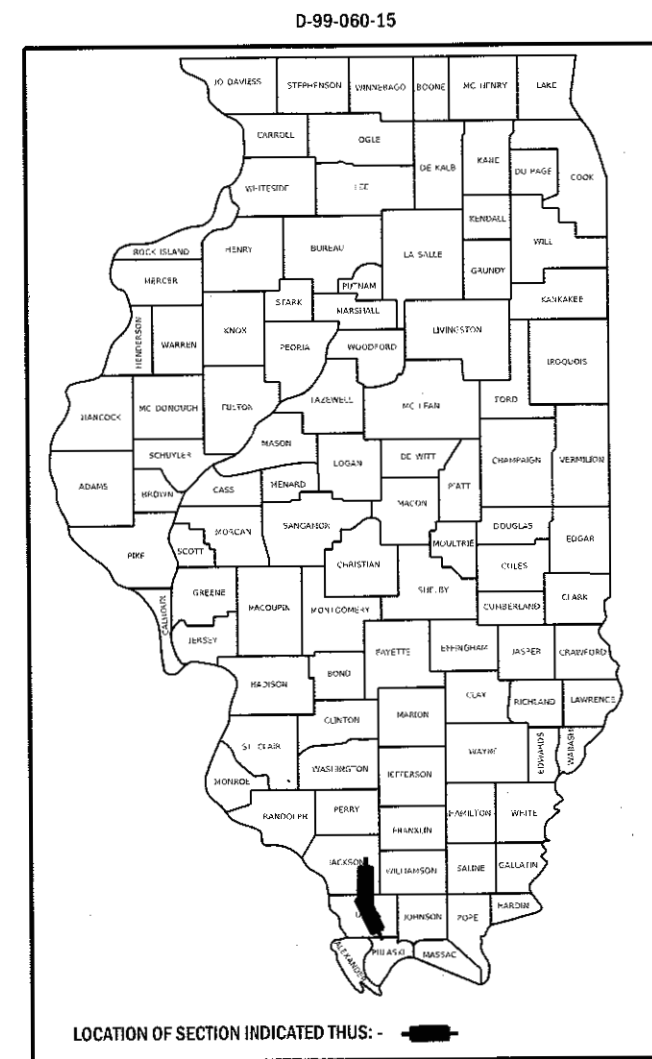
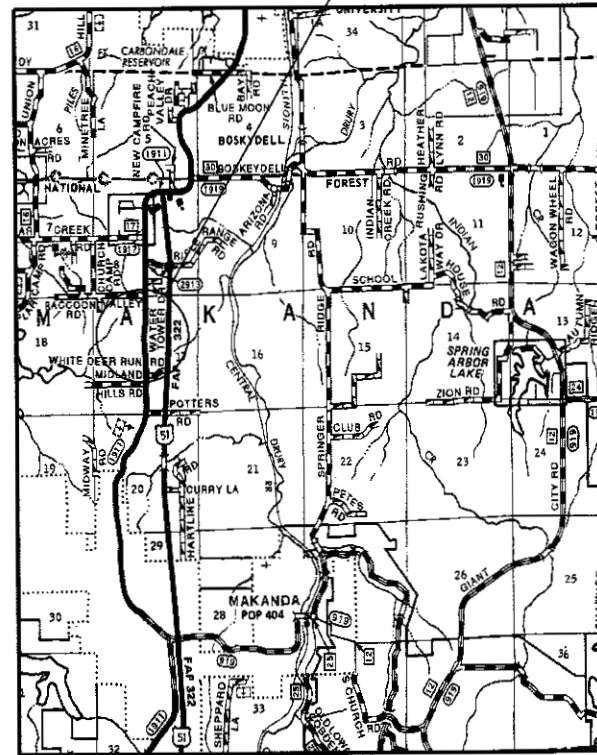
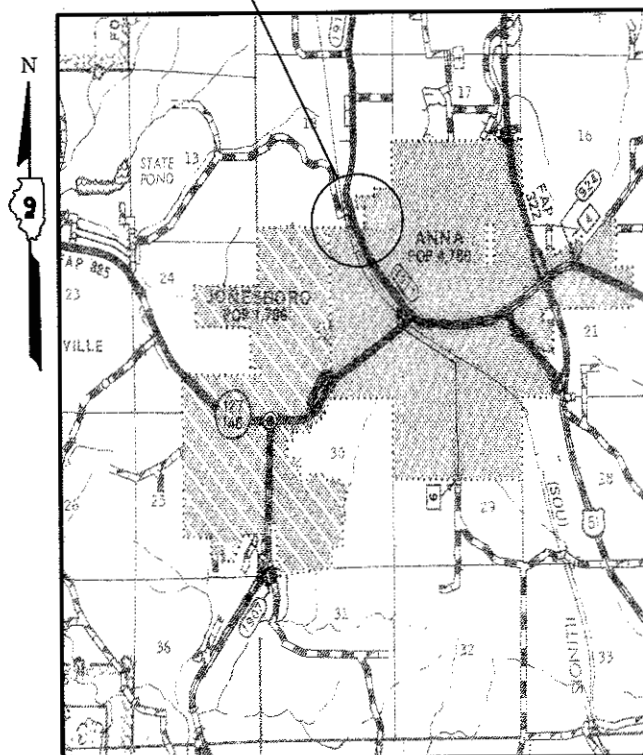
TOWNSHIP

SN 091-7055 (E) UNION COUNTY UNIT ROAD DISTRICT

SN 039-7077 (E) MAKANDA

IMPROVEMENT LOCATION STRUCTURE 091-7055 (E) STRUCTURE 091-7091 (P) OLD US 51 OVER STORM DRAINAGE SECTION 19, TOWNSHIP 12S, RANGE 1W, OF THE 3RD P.M.

IMPROVEMENT LOCATION STRUCTURE 039-7077 (E) STRUCTURE 039-7119 (P) OLD US 51 OVER CREEK SECTION 17, TOWNSHIP 10S, RANGE 1W, OF THE 3RD P.M.



LOCATION OF SECTION INDICATED THIS: -

DESIGN DESIGNATION - N/A ILLINOIS COORDINATE SYSTEM: WEST ZONE DESIGN SPEED: 55 MPH

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

PROJECT ENGINEER: DAVID PICHE (618) 351-5227 DESIGN ENGINEER: ADRIAN ADAMS (618) 351-5262

GROSS LENGTH = 85 FT. = 0.02 MILE NET LENGTH = 85 FT. = 0.02 MILE

CONTRACT NO. 78500

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION SUBMITTED June 22 2017 Jeffrey L Keen REGION FIVE ENGINEER Aug 18 2017 Harrison M. Addis PE ENGINEER OF DESIGN AND ENVIRONMENT Aug 18 2017 Director of Program Development

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GENERAL NOTES

- 1) THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIX ASPHALT MIXTURE IS PLACED.
- 2) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU YD
ALL AGGREGATE	2.05 TONS/CU YD
RIPRAP	1.50 TONS/CU YD
EARTH	110 LBS/CU FT
- 3) AT ALL LOCATIONS WHERE EXISTING HOT-MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT-MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
- 4) A CALCIUM CHLORIDE ACCELERATOR WILL BE ALLOWED FOR THE PCC PAVEMENT, 10''. THE CONCRETE SHALL BE CLASS PP-1 OR PP-2 PER ARTICLE 1020 OF THE STANDARD SPECS.
- 5) REMOVAL OF EXISTING AGGREGATE SHOULDERS SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- 6) PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.
- 7) CONNECTING OF NEW STORM SEWER TO NEW INLETS OR MANHOLES SHALL BE MADE IN A MANNER WHICH RESULTS IN A NEAT AND WATERTIGHT JOINT. WHEN PLACED THROUGH THE WALL OF AN INLET OR BOX CULVERT CELL, STORM SEWER PIPE SHALL BE OR CUT FLUSH WITH THE FACE OF THE WALL AND DRESSED WITH MORTAR TO PROVIDE A SMOOTH ROUNDED OR BEVELED EDGE. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES OF THE STORM SEWERS OR BOX CULVERTS INVOLVED.
- 8) THERE ARE NO AVAILABLE WASTE SITES ON THE EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS. DISPOSAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.
- 9) A CALCIUM CHLORIDE ACCELERATOR WILL BE ALLOWED IN THE PCC PAVEMENT 10'', THE CONCRETE SHALL BE CLASS PP-1 OR PP-2 PER ARTICLE 1020 OF THE STANDARD SPECIFICATIONS.

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-08	PAVEMENT JOINTS
420601-06	24' PCC PAVEMENT
420701-03	PAVEMENT WELDED WIRE REINFORCEMENT
602306-03	INLET - TYPE B
602601-04	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604006-05	FRAME AND GRATE TYPE 3
630301-07	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701316-11	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS ≥ 45 MPH
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701901-06	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
862001-01	UNINTERRUPTIBLE POWER SUPPLY (UPS)
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

INDEX OF SHEETS

1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS, STANDARDS, & MIXTURE REQUIREMENTS
3	SIGNATURE SHEET
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10	GEOPAK ELEMENTS IDENTIFICATION SHEET
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12	FINAL SECTION SN 091-7091 (P)
13	LIMITS OF POROUS GRANULAR EMBANKMENT AND TYPICAL SECTION WITHIN PAVEMENT REMOVAL SN 091-7091 (P)
14	R-99-012-12 RIGHT OF WAY PLANS
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19	BICYCLE RAILING SN 091-7091 (P)
20	GENERAL PLAN SN 039-7119 (P)
21	TEMPORARY AND FINAL SECTIONS SN 039-7119 (P)
22	LIMITS OF POROUS GRANULAR EMBANKMENT AND SECTION WITHIN PAVEMENT REMOVAL SN 039-7119 (P)
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31A	CULVERT TIE DETAILS SN 039-7119 (P)
32	DISTRICT STANDARDS

MIXTURE REQUIREMENTS

LOCATIONS	HOT-MIX ASPHALT SHOULDERS (TOP LEFT)
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS, N30, IL-9.5L
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5L
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SO YD/IN
QUALITY MANAGEMENT PROGRAM:	OC/OA
SUBLOT SIZE:	NA

LOCATIONS	HOT-MIX ASPHALT SHOULDERS (LOWER LEFTS)
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS, N30, IL-19.0L
AC/PG:	PG64-22
ABR % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0L
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHT:	112 LBS/SO YD/IN
QUALITY MANAGEMENT PROGRAM:	OC/OA
SUBLOT SIZE:	NA

COMMITMENTS

THE FOLLOWING SHALL BE CONTACTED 3 WEEKS PRIOR TO ANY WORK INVOLVING TRAFFIC CONTROL AND PROTECTION THAT AFFECTS THE PUBLIC AND PRIOR TO THE 21 DAY NOTIFICATION SIGNING:

JACKSON COUNTY SHERIFF
ROBERT BURNS
618-687-3822

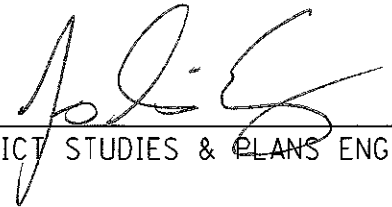
UNION COUNTY SHERIFF
SCOTT HARVEL
618-833-5500

NO TREE CLEARING SHALL BE PERMITTED FROM APRIL 1 TO NOVEMBER 15.

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

07/16/2017
 11:44 AM
 128-1:10B-2

Prepared By:



DISTRICT STUDIES & PLANS ENGINEER

Examined By:

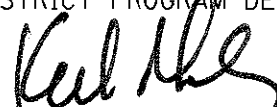
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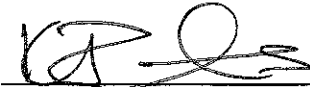
DISTRICT PROGRAM DEVELOPMENT ENGINEER

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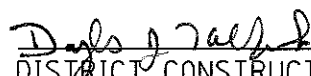
DISTRICT OPERATIONS ENGINEER

Examined By:



DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:



DISTRICT CONSTRUCTION ENGINEER

Examined By:



DISTRICT MATERIALS ENGINEER

FILE NAME =	USER NAME = adamsm	DESIGNED - _____	REVISED - _____
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	PLOT DATE = 6/16/2017		

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4	128-1:10B-2	--	30	3
SCALE: _____ SHEET _____ OF _____ SHEETS STA _____ TO STA _____			ILLINOIS FED. AID PROJECT CONTRACT NO. 78500	

SUMMARY OF QUANTITIES

2231

2232

COUNTY:	✓ UNION	✓ JACKSON
ROUTE:	FAU9909 / FAS1911, OLD US 51	FAU9909 / FAS1911, OLD US 51
FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
LOCATION:	✓ URBAN	✓ RURAL
	ROADWAY	ROADWAY
	0004	0004

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	ROADWAY	ROADWAY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	52	35	17
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	67	48	19
20200100	EARTH EXCAVATION	CU YD	666	262	404
20700220	POROUS GRANULAR EMBANKMENT	CU YD	509	216	293
20800150	TRENCH BACKFILL	CU YD	46	46	
25000200	SEEDING, CLASS 2	ACRE	0.25	0.10	0.15
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23	9	14
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23	9	14
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23	9	14
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.5	0.2	0.3
25100630	EROSION CONTROL BLANKET	SQ YD	700	90	610
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	25	10	15

SUMMARY OF QUANTITIES - CONT

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	UNION	JACKSON
				ROUTE:	FAU9909 / FAS1911, OLD US 51	FAU9909 / FAS1911, OLD US 51
				FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
LOCATION:	URBAN	RURAL				
				ROADWAY	ROADWAY	
				0004	0004	
28000400	PERIMETER EROSION BARRIER	FOOT	632		125	507
28100107	STONE RIPRAP, CLASS A4	SQ YD	124		49	75
28200200	FILTER FABRIC	SQ YD	124		49	75
42000060	WELDED WIRE REINFORCEMENT	SQ YD	227		120	107
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	227		120	107
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	250		250	
44000100	PAVEMENT REMOVAL	SQ YD	209		120	89
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	45		45	
44000600	SIDEWALK REMOVAL	SQ FT	180		180	
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	20		20	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	441			441
50102400	CONCRETE REMOVAL	CU YD	111.5		37.7	73.8

SUMMARY OF QUANTITIES - CONT

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	UNION	JACKSON
				ROUTE:	FAU9909 / FAS1911, OLD US 51	FAU9909 / FAS1911, OLD US 51
				FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				LOCATION:	URBAN	RURAL
				ROADWAY	ROADWAY	
				0004	0004	
50105220	PIPE CULVERT REMOVAL	FOOT	38		38	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,450			1,450
50901720	BICYCLE RAILING	FOOT	20		20	
52200700	PRECAST MODULAR RETAINING WALL	SQ FT	158		158	
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	1		1	
54003000	CONCRETE BOX CULVERTS	CU YD	28.7			28.7
54010504	PRECAST CONCRETE BOX CULVERTS 5' X 4'	FOOT	52		52	
54010908	PRECAST CONCRETE BOX CULVERTS 9' X 8'	FOOT	48			48
542A1063	PIPE CULVERTS, CLASS A, TYPE 2 18"	FOOT	22		22	
542A1066	PIPE CULVERTS, CLASS A, TYPE 2 21"	FOOT	12		12	
54248510	CONCRETE COLLAR	CU YD	0.4		0.4	
60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	1		1	

12

SUMMARY OF QUANTITIES - CONT

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	UNION	JACKSON
				ROUTE:	FAU9909 / FAS1911, OLD US 51	FAU9909 / FAS1911, OLD US 51
				FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
				LOCATION:	URBAN	RURAL
					ROADWAY	ROADWAY
					0004	0004
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	45		45	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	200			200
* 63000030	STRONG POST GUARDRAIL ATTACHED TO CULVERT	FOOT	50			50
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4			4
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	12		4	8
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2		1	1
67100100	MOBILIZATION	LSUM	1		0.5	0.5
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1			1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1		0.5	0.5
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	LSUM	1		0.5	0.5
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1			1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4			4

* SPECIALTY ITEM

FILE NAME = PLOT SCALE = 94.4444' / in. PLOT DATE = 6/30/2017	USFR NAME = adamson DESIGNED - CHECKED - DATE -	REVISIONS REVISIONS REVISIONS REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
			SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 78500

SUMMARY OF QUANTITIES - CONT

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	UNION		JACKSON	
				ROADWAY	OODH	ROADWAY	OODH
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	240		100		140
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8				8
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2		1		1
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1				1
X0322128	MEMBRANE WATERPROOFING FOR BURIED STRUCTURES	SQ YD	112		45		67
X0326519	STEEL RAILING REMOVAL	FOOT	18		18		
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	80		33		47
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	96		48		48

* SPECIALTY ITEM

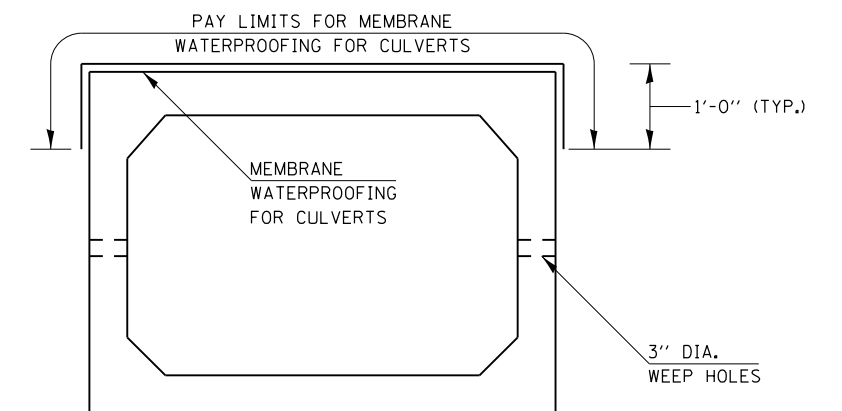
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PLOT SCALE = 34.4444' / in. PLOT DATE = 6/30/2017	CHECKED - DATE -	REVISIONS REVISIONS REVISIONS	SCALE:	SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 78500				

PAVEMENT MARKING SCHEDULE						
STATION		NOTES		PAINT PAVEMENT MARKING - LINE 4"		
				SOLID WHITE	YELLOW SKIP DASH	SOLID YELLOW
				FOOT	FOOT	FOOT
UNION COUNTY						
1042+44.41	RT	TO	1042+89.41	RT		
1042+44.41		TO	1042+89.41		ALONG CENTERLINE	
1042+44.41	LT	TO	1042+89.41	LT		
JACKSON COUNTY						
267+10	RT	TO	267+50	RT		
267+10		TO	267+50		ALONG CENTERLINE	
267+10	LT	TO	267+50	LT		
SUBTOTAL						
TOTAL						

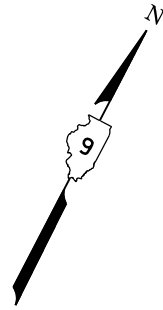
TREE REMOVAL			
UNION COUNTY			
LOCATION	OFFSET	6 TO 15 UNITS	OVER 15 UNITS
1042+48	32' LT	8	
1042+50	38' LT	8	
1042+69	28' LT	10	
1042+73	40' LT	9	
1042+87	22' LT		48
TOTAL		35	48
JACKSON COUNTY			
LOCATION	OFFSET	6 TO 15 UNITS	OVER 15 UNITS
267+35	39' LT	8	
267+35	39' LT		19
267+40	39' LT	9	
TOTAL		17	19

PRECAST BOX CULVERT SCHEDULE (ASTM C 1577)							
STATION		SIZE	SKEW	DESIGN FILL (FT.)		PGE BACKFILL REQUIRED	
				EDGE OF SHLD. (MIN)	MAXIMUM		
UNION COUNTY							
1042+56.41	TO	1042+62.41	5' X 4'	0	± 3.0'	± 3.6'	206 CU YD
JACKSON COUNTY							
267+24.75	TO	267+35.25	9' X 8'	0	± 1.6'	± 2.2'	310 CU YD

GUARDRAIL SCHEDULE								
STATION		TRAFFIC BARRIER TERMINAL, TY 1 SPL TANGENT	TERMINAL MARKER DIRECT APPLIED	STEEL PLATE BEAM GUARDRAIL	STRONG POST GUARDRAIL ATTACHED TO CULVERT			
		EACH	EACH	FOOT	FOOT			
JACKSON COUNTY								
266+67.50	LT	TO	267+17.50	LT	1			
267+17.50	LT	TO	267+42.50	LT		25		
267+42.50	LT	TO	268+42.50	LT		100		
268+42.50	LT	TO	268+92.50	LT	1			
JACKSON COUNTY								
265+67.50	RT	TO	266+17.50	RT	1			
266+17.50	RT	TO	267+17.50	RT		25		
267+17.50	RT	TO	267+42.50	RT		100		
267+42.50	RT	TO	267+92.50	RT	1			
TOTALS					4	4	200	50



PRECAST CONCRETE
BOX CULVERT



1041

1042

1043

1044

CHAIN: OLD_US51

SN 091-7055 (E)
SN 091-7091 (P)



5+00

266

267

268

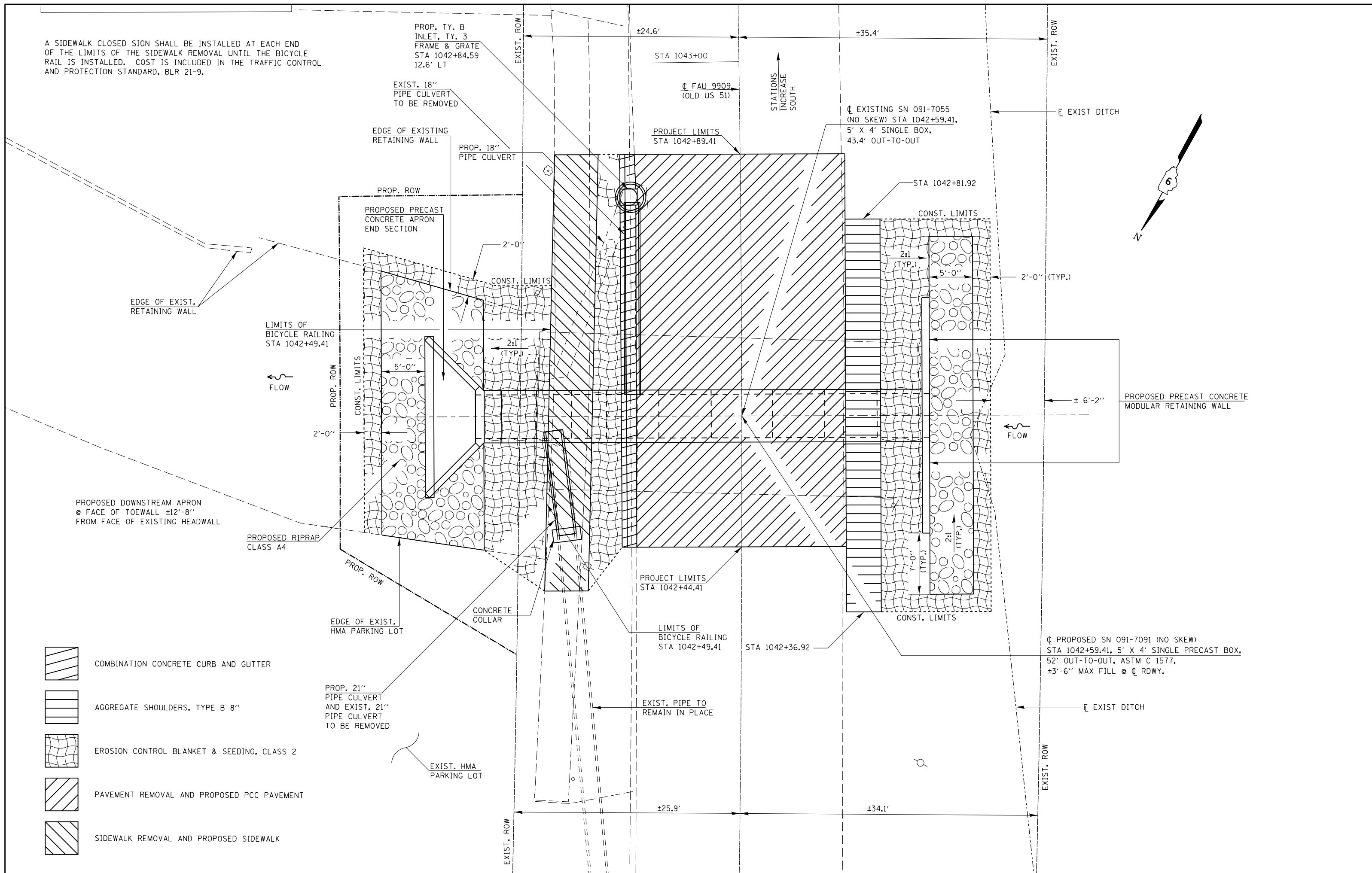
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



CHAIN: OLD51S

SN 039-7077 (E)
SN 039-7119 (P)

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GEOPAK ELEMENTS IDENTIFICATION SHEET		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT				
							* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON				

A SIDEWALK CLOSED SIGN SHALL BE INSTALLED AT EACH END OF THE LIMITS OF THE SIDEWALK REMOVAL UNTIL THE BICYCLE RAIL IS INSTALLED. COST IS INCLUDED IN THE TRAFFIC CONTROL AND PROTECTION STANDARD, BLR 21-9.



-  COMBINATION CONCRETE CURB AND GUTTER
-  AGGREGATE SHOULDERS, TYPE B 8"
-  EROSION CONTROL BLANKET & SEEDING, CLASS 2
-  PAVEMENT REMOVAL AND PROPOSED PCC PAVEMENT
-  SIDEWALK REMOVAL AND PROPOSED SIDEWALK

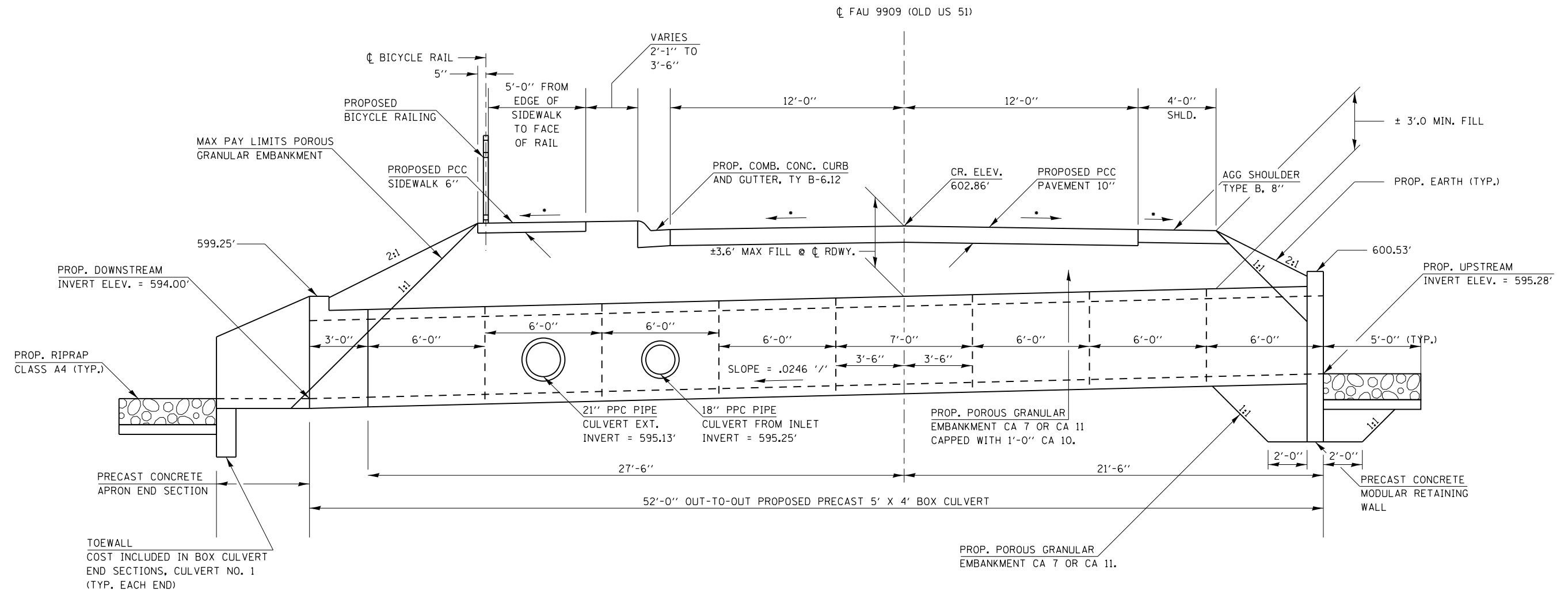
FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN SN 091-7091 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
						SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	
						CONTRACT NO. 78500						

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

HYDRAULIC DATA
 DRAINAGE AREA = 0.10 SQ MI
 DESIGN WATERWAY OPENING = 20 SQ FT
 DESIGN DISCHARGE = 179 CFS
 DESIGN HEADWATER ELEVATION = 601.97 FT
 100 YEAR DISCHARGE = 207 CFS
 100 YEAR HEADWATER ELEVATION = 602.33 FT

FINAL SECTION

* MATCH EXISTING CROSS SLOPES
 ** THE REMOVAL OF THE EXISTING BOX CULVERT IS TO BE INCLUDED IN THE COST OF CONCRETE REMOVAL.

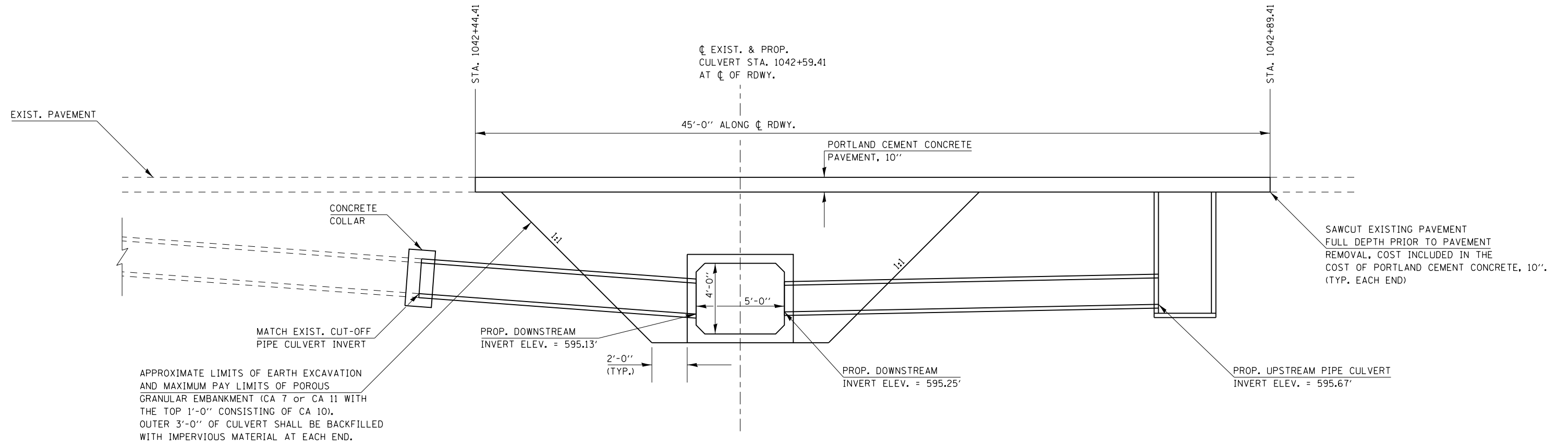


ELEVATION
 (LOOKING SOUTH)

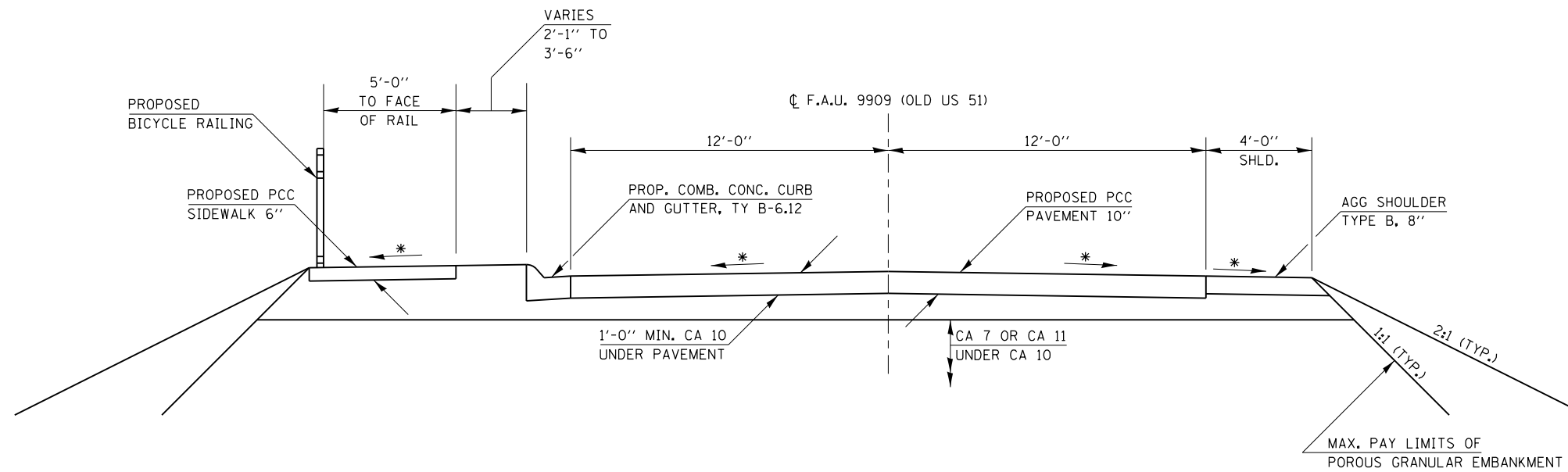
PRECAST BOX LOADING HL-93.
 ASTM C 1577

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FINAL SECTION SN 091-7091 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\JL084EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\78500\CADDData\CAD\Drawings\12B-1\10B-2.dgn	PLOT SCALE = 5.6667' / in.	CHECKED -	REVISED -			*	12B-1:10B-2	**	32	12
Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		
* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON										

LIMITS OF POROUS GRANULAR EMBANKMENT



SECTION WITHIN PAVEMENT REMOVAL



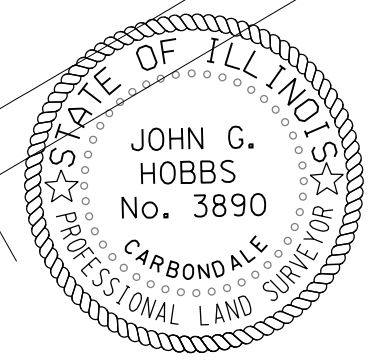
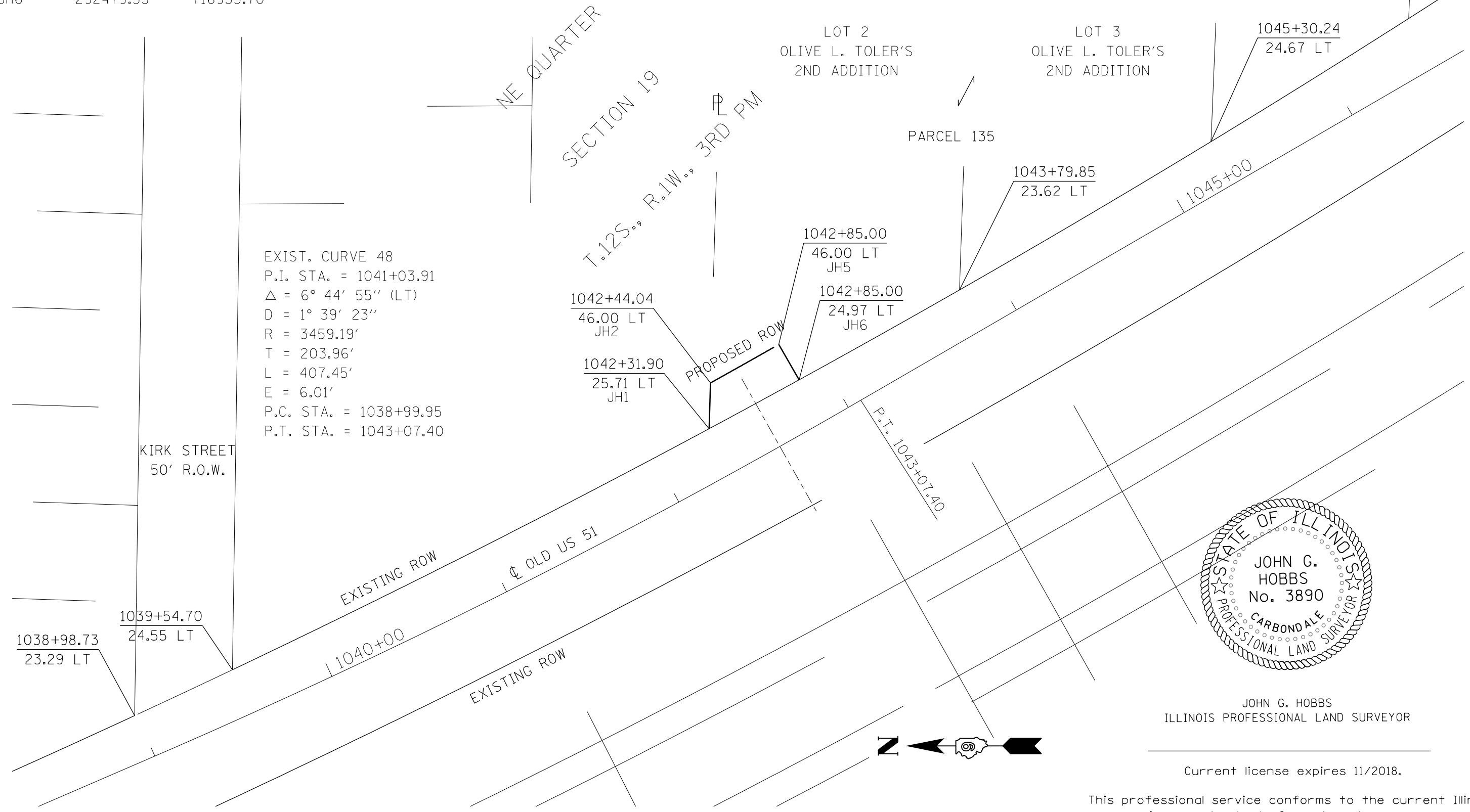
• MATCH EXISTING CROSS SLOPES

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIMITS OF POROUS GRANULAR EMBANKMENT AND SECTION WITHIN PAVEMENT REMOVAL SN 091-7091 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			CONTRACT NO. 78500		ILLINOIS FED. AID PROJECT			
						SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

COORDINATE DATA		
PT#	NORTHING	EASTING
JH1	292525.87	716910.53
JH2	292525.19	716934.10
JH5	292489.99	716953.95
JH6	292479.55	716935.70

PARCEL	PROPERTY OWNER	PURPOSE	ACREAGE
135	JOHN D. & DENEILLE MCMAHAN	R.O.W.	0.022



JOHN G. HOBBS
ILLINOIS PROFESSIONAL LAND SURVEYOR

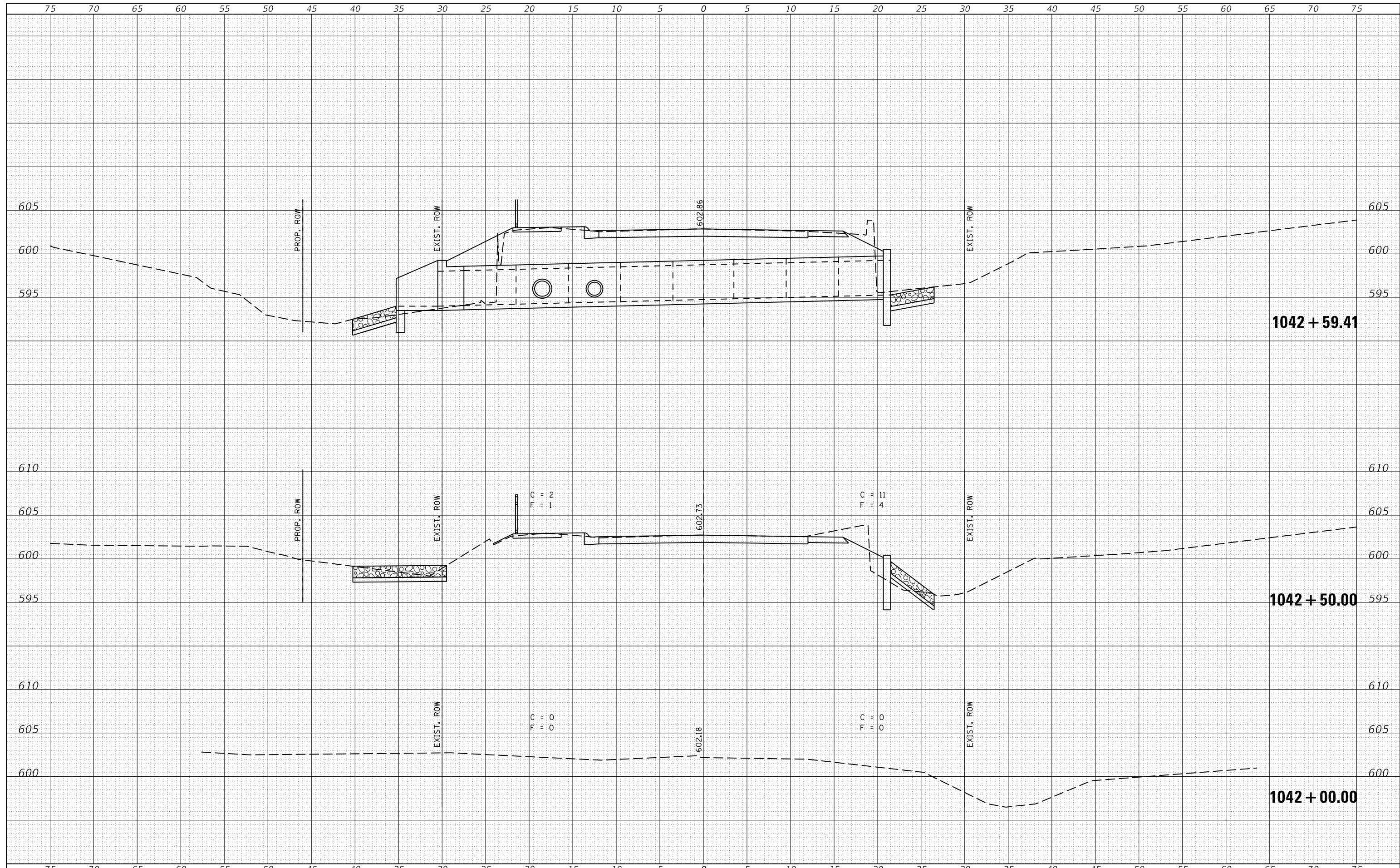
Current license expires 11/2018.

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

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RIGHT OF WAY PLAN OLD US 51 091-7055		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default	PLOT SCALE = 50.0000 ' / in.	DATE -	REVISED -		TO STA. 1039+00	TO STA. 1046+00	CONTRACT NO. 78500					
	PLOT DATE = 6/30/2017						R-99-012-12	ILLINOIS FED. AID PROJECT				

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

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

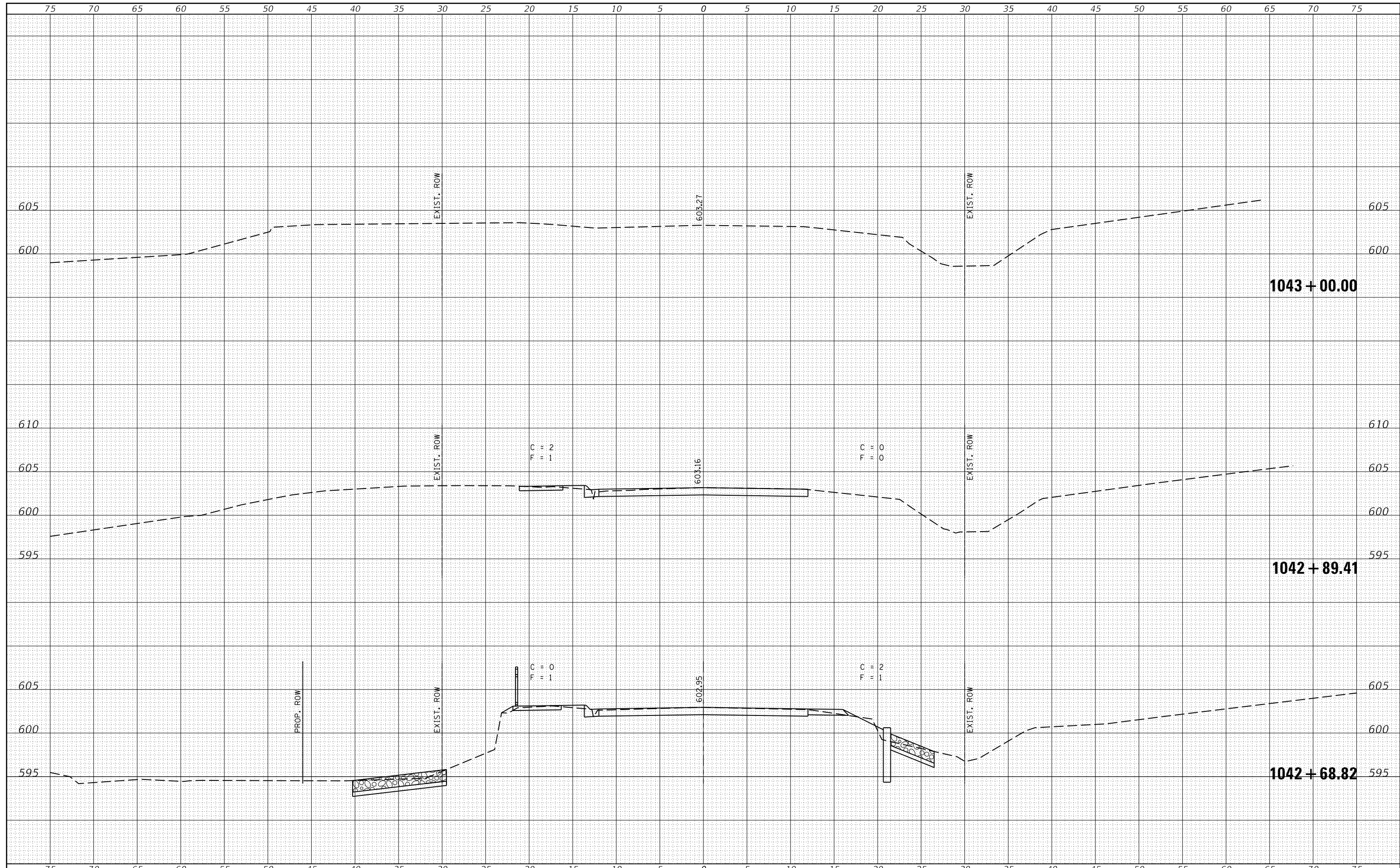


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Default	PLOT SCALE = 10.0000' / in.	CHECKED -	REVISOR -			CONTRACT NO. 78500					
	PLOT DATE = 6/30/2017	DATE -	REVISOR -			ILLINOIS FED. AID PROJECT					

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

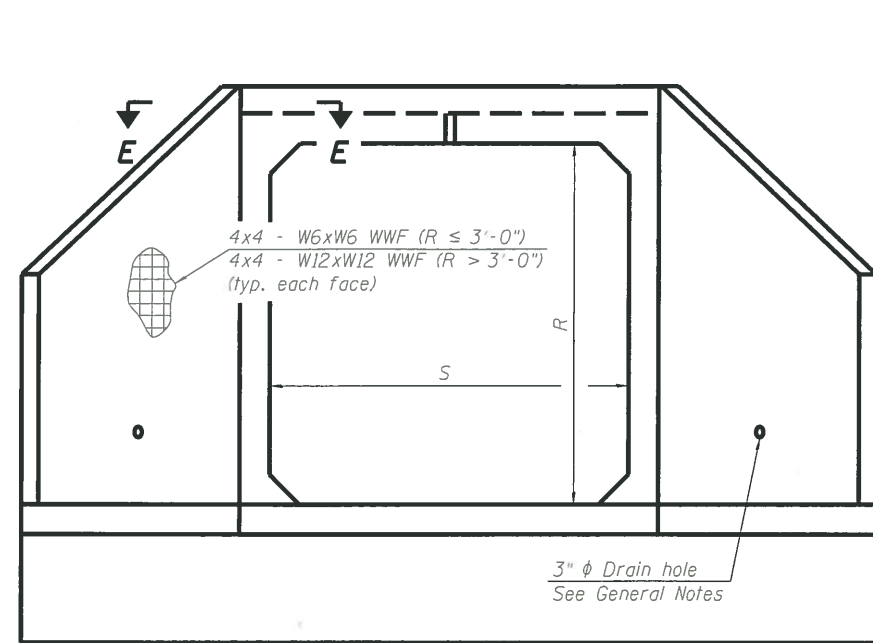
FINAL SURVEY NO.	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

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

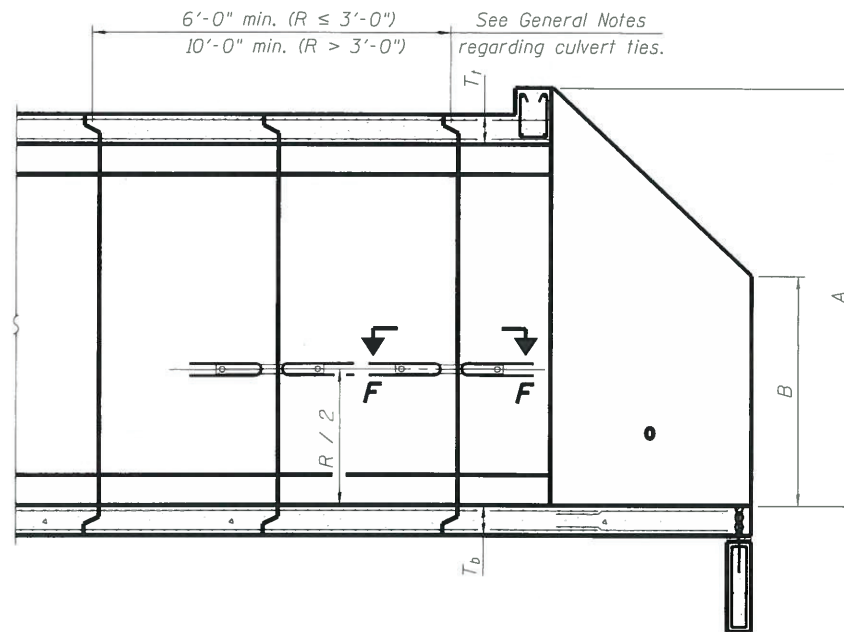


FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 091-7091 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default		CHECKED -	REVISIED -			CONTRACT NO. 78500					
		DATE -	REVISIED -			ILLINOIS FED. AID PROJECT					

SCALE: SHEET OF SHEETS STA. 1042+68.66 TO STA. 1043+00.00 * FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON



END VIEW



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.

All exposed concrete edges shall be chamfered 3/4" unless noted otherwise.

The Contractor may use reinforcement bars in lieu of welded wire fabric (WWF). 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 WWF. Minimum lap lengths detailed herein are applicable to WWF and reinforcement bars.

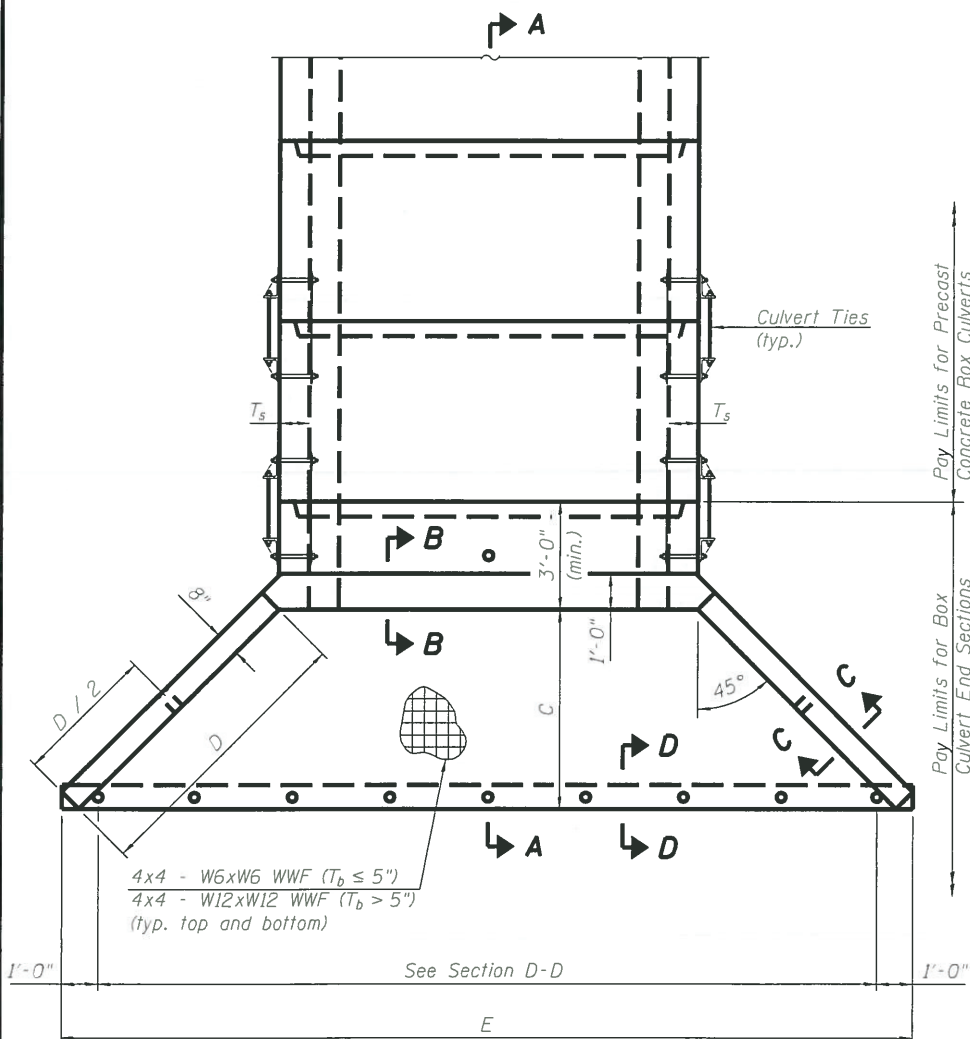
Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end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

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Reinforcement bars designated (E) shall be epoxy coated.

Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.

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.



PLAN

APRON END SECTION DIMENSIONS

Span (S)	Rise (R)	T ₁	T ₂	T ₃	A	B	C	D	E	Concrete Cu. Yd.	Culvert Ties Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-10 ⁵ / ₈ "	4'-1"	10'-4 ⁵ / ₈ "	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-7 ⁷ / ₈ "	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-10 ⁵ / ₈ "	5'-6"	12'-4 ⁵ / ₈ "	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-7 ⁷ / ₈ "	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-4 ¹ / ₂ "	2'-2 ¹ / ₂ "	2'-11 ³ / ₈ "	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-8 ¹ / ₂ "	3'-10"	11'-2 ³ / ₈ "	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-4 ¹ / ₂ "	2'-8 ¹ / ₂ "	3'-11 ³ / ₈ "	5'-7"	13'-8 ¹ / ₈ "	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-8 ¹ / ₂ "	5'-3"	13'-2 ³ / ₈ "	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 ¹ / ₂ "	3'-2 ¹ / ₂ "	4'-11 ³ / ₈ "	7'-0"	15'-8 ¹ / ₈ "	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-8 ⁵ / ₈ "	6'-8"	15'-2 ¹ / ₂ "	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-11 ³ / ₈ "	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-7 ¹ / ₄ "	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-11 ³ / ₈ "	5'-7"	14'-10 ¹ / ₈ "	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-7 ¹ / ₄ "	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-11 ³ / ₈ "	7'-0"	16'-10 ¹ / ₈ "	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-9 ¹ / ₄ "	6'-9"	16'-5 ⁷ / ₈ "	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-11 ³ / ₈ "	8'-5"	18'-10 ¹ / ₈ "	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-9 ¹ / ₄ "	8'-2"	18'-5 ⁷ / ₈ "	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-11 ³ / ₈ "	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-10 ⁵ / ₈ "	4'-1"	13'-10 ⁵ / ₈ "	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-11 ³ / ₈ "	5'-7"	16'-0 ¹ / ₈ "	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-10 ⁵ / ₈ "	5'-6"	15'-10 ⁵ / ₈ "	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-11 ³ / ₈ "	7'-0"	18'-0 ¹ / ₈ "	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-10 ³ / ₄ "	6'-11"	17'-10 ³ / ₄ "	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-11 ³ / ₈ "	8'-5"	20'-0 ¹ / ₈ "	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-10 ³ / ₄ "	8'-4"	19'-10 ³ / ₄ "	7.8	Yes
6'-0"	6'-0"	8"	7"	7"	7'-5"	4'-3"	6'-11 ¹ / ₂ "	9'-10"	22'-0 ¹ / ₄ "	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-10 ³ / ₄ "	9'-9"	21'-10 ³ / ₄ "	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 ³ / ₈ "	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 ³ / ₈ "	5'-7"	17'-2 ¹ / ₈ "	6.1	Yes
7'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 ³ / ₈ "	7'-0"	19'-2 ¹ / ₈ "	7.4	Yes
7'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 ³ / ₈ "	8'-5"	21'-2 ¹ / ₈ "	8.9	Yes
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 ¹ / ₂ "	9'-10"	23'-2 ¹ / ₄ "	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 ³ / ₈ "	4'-2"	16'-2"	5.3	Yes
8'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 ³ / ₈ "	5'-7"	18'-2 ¹ / ₈ "	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 ³ / ₈ "	7'-0"	20'-2 ¹ / ₈ "	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 ³ / ₈ "	8'-5"	22'-2 ¹ / ₈ "	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 ¹ / ₂ "	9'-10"	24'-2 ¹ / ₄ "	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-0 ³ / ₄ "	4'-4"	17'-6 ⁷ / ₈ "	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-0 ³ / ₄ "	5'-9"	19'-6 ⁷ / ₈ "	7.5	Yes
9'-0"	4'-0"	9"	9"	9"	5'-6"	3'-3"	5'-0 ³ / ₄ "	7'-2"	21'-6 ⁷ / ₈ "	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-0 ³ / ₄ "	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-0 ³ / ₄ "	9'-11"	25'-5 ⁵ / ₈ "	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-1 ¹ / ₂ "	4'-5"	18'-10 ¹ / ₄ "	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-1 ¹ / ₂ "	5'-10"	20'-10 ¹ / ₄ "	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-1 ¹ / ₂ "	7'-3"	22'-10 ³ / ₈ "	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-1 ¹ / ₂ "	8'-8"	24'-10 ³ / ₈ "	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4"	7'-1 ¹ / ₂ "	10'-1"	26'-10 ³ / ₈ "	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-2 ⁷ / ₈ "	4'-7"	20'-3 ¹ / ₈ "	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-2 ⁷ / ₈ "	6'-0"	22'-3 ¹ / ₈ "	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-2 ¹ / ₄ "	7'-4"	24'-1 ³ / ₄ "	11.5	Yes
11'-0"	6'-0"	11"	11"	11"	7'-8"	4'-4"	7'-2 ¹ / ₄ "	10'-2"	28'-1 ⁷ / ₈ "	15.5	Yes
12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-3 ⁵ / ₈ "	4'-8"	21'-6 ¹ / ₂ "	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-3 ⁵ / ₈ "	6'-1"	23'-6 ¹ / ₂ "	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-3 ⁵ / ₈ "	7'-6"	25'-6 ⁵ / ₈ "	13.0	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-3 ⁵ / ₈ "	10'-4"	29'-6 ⁵ / ₈ "	17.4	Yes

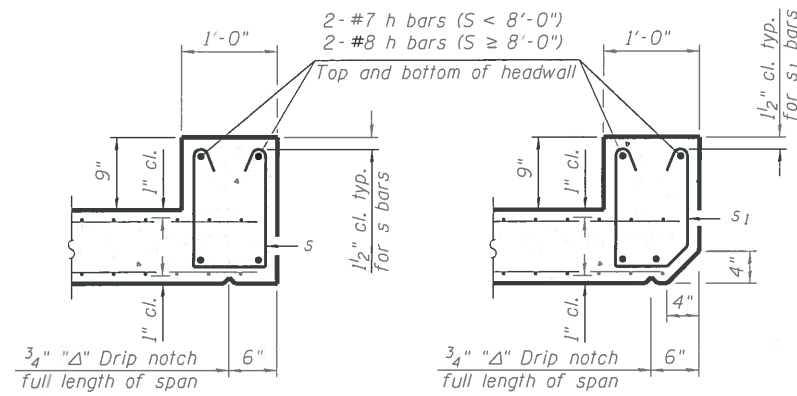
Note: Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft.

SCB-AES-1

11-5-13

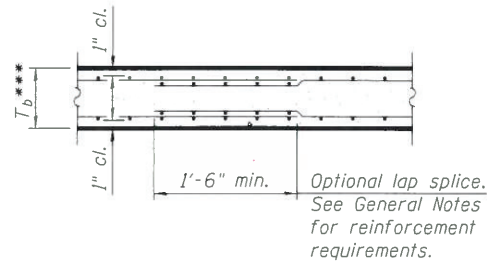
(Sheet 1 of 2)

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS		F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL084EBID\INTEG\Illinois.gov\PWIDOT\Documents\SDOT\District 9\Projects\78500\CADDData\CAD\SCB-AES-1.sht.dgn	DATE = 8/16/2017	CHECKED -	REVISED -					12B-1;10B-2	**	32	17	
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -	SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 78500		ILLINOIS FED. AID PROJECT		* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON		



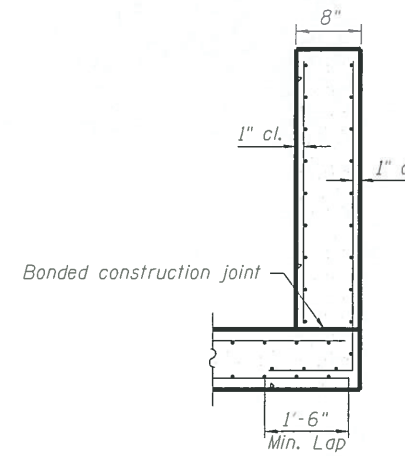
SECTION B-B
(Top slab at downstream end)

SECTION B-B
(Top slab at upstream end)

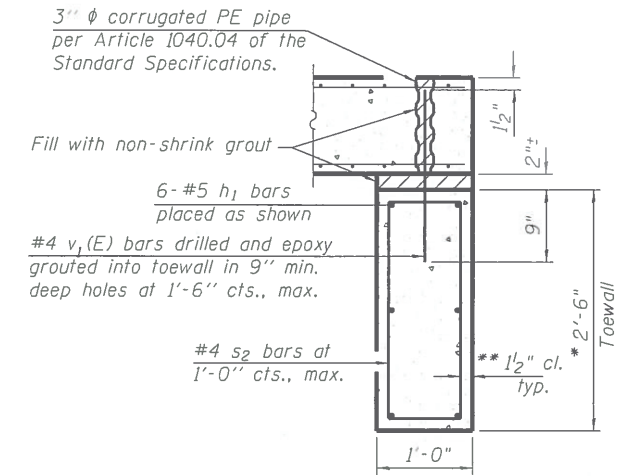


SECTION B-B
(Bottom Slab)

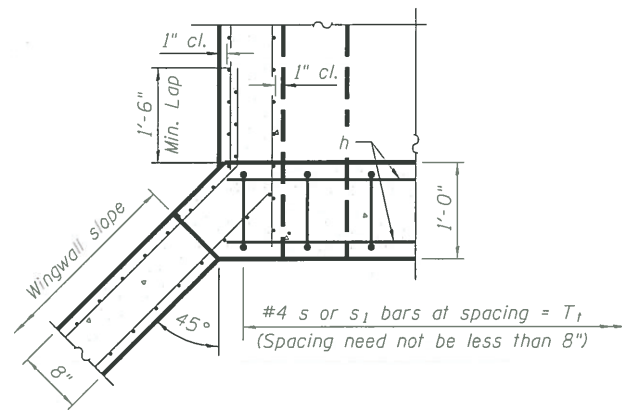
*** This dimension shall be increased by 2" for CIP construction.



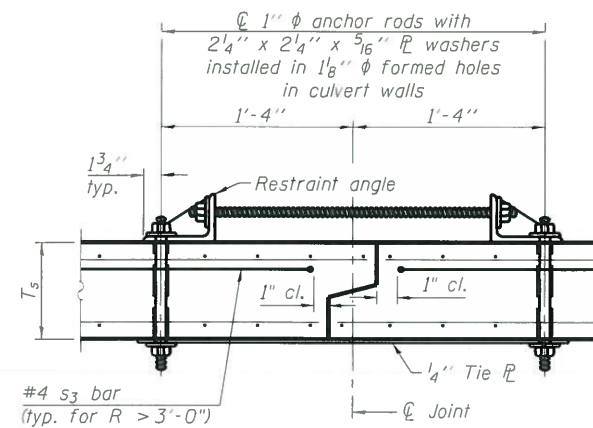
SECTION C-C



SECTION D-D



SECTION E-E



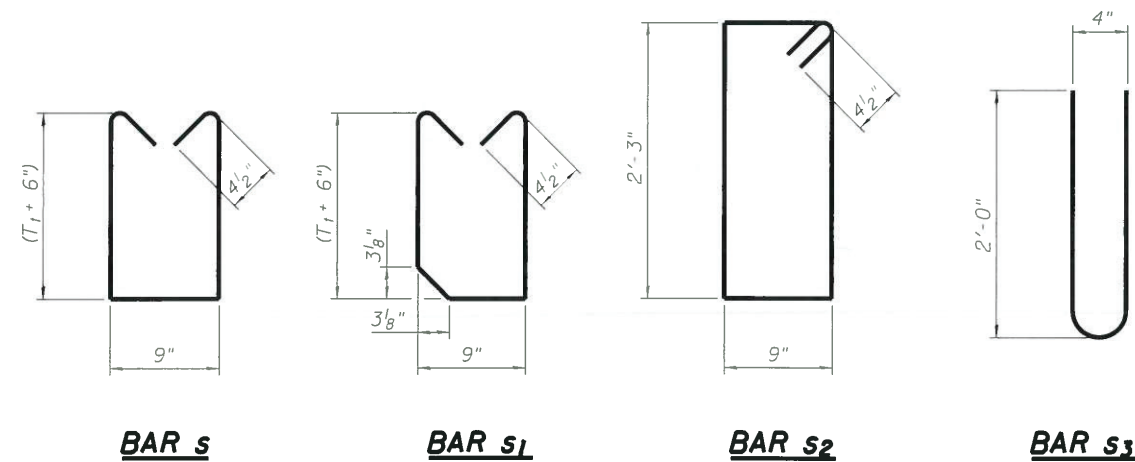
SECTION F-F
(Showing culvert tie details)

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.

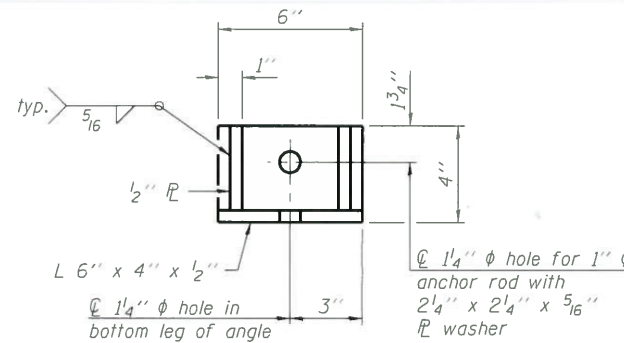


BAR s

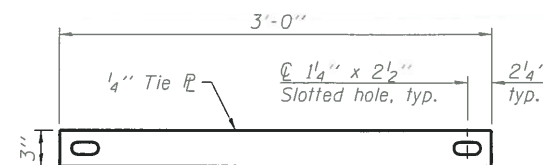
BAR s₁

BAR s₂

BAR s₃



RESTRAINT ANGLE DETAIL



TIE PLATE DETAIL

Notes:

1" φ 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.

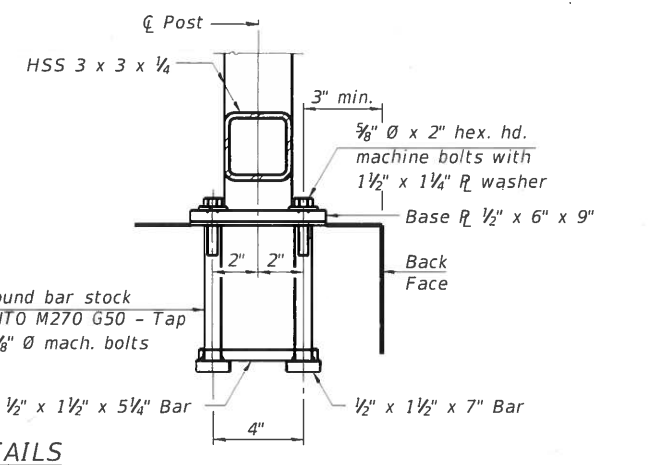
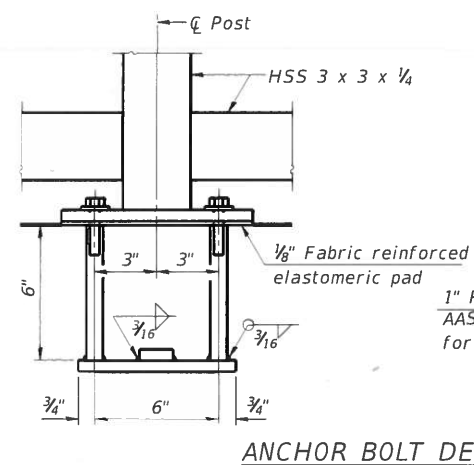
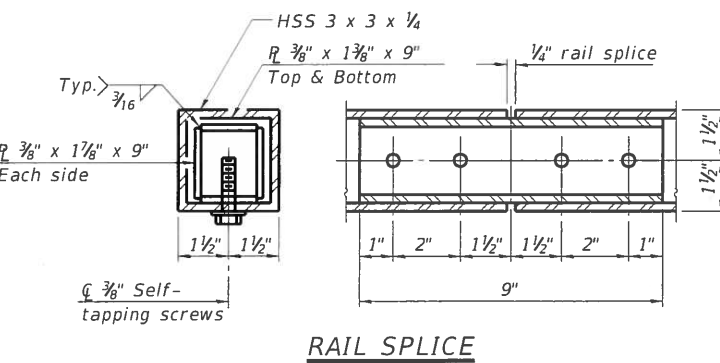
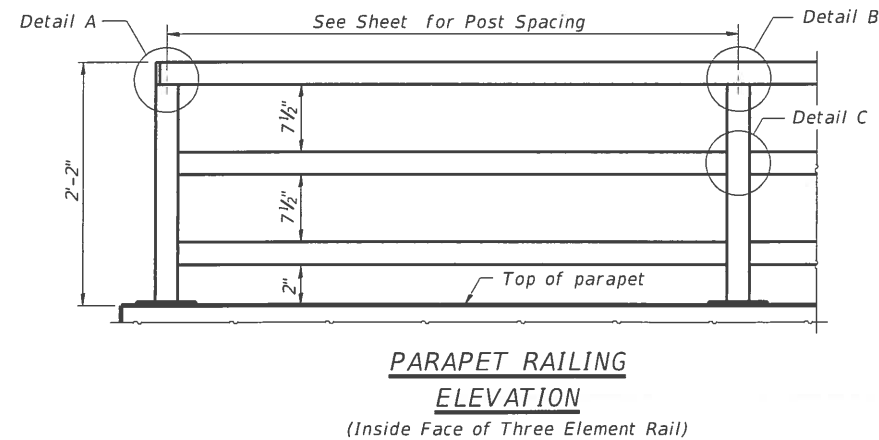
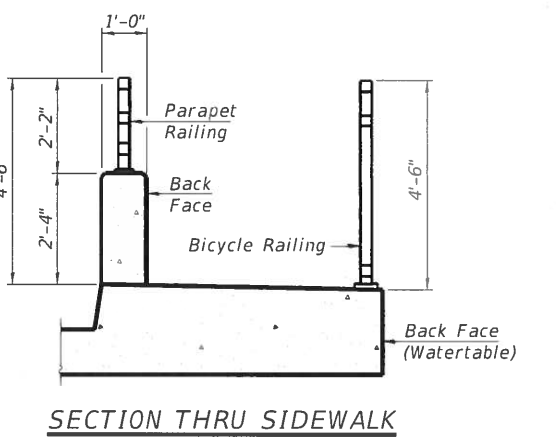
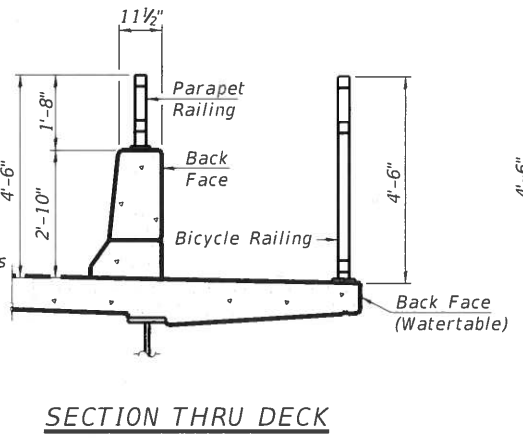
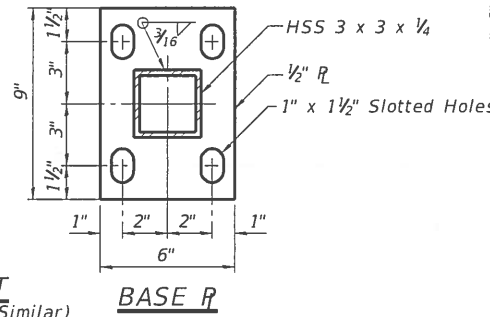
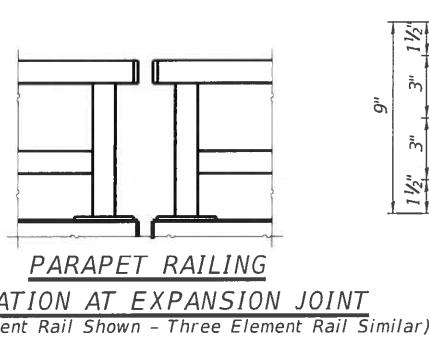
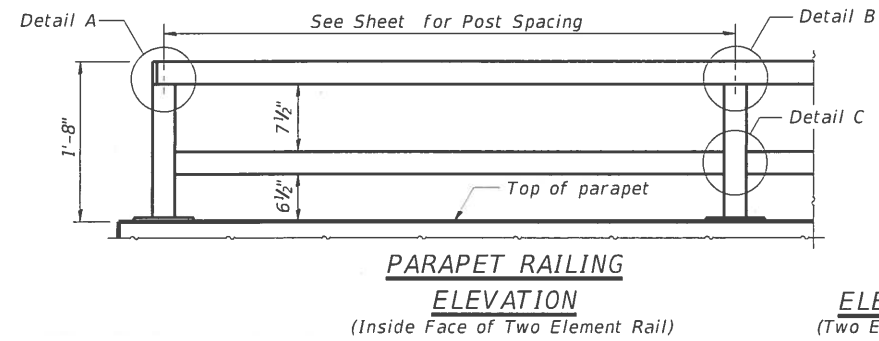
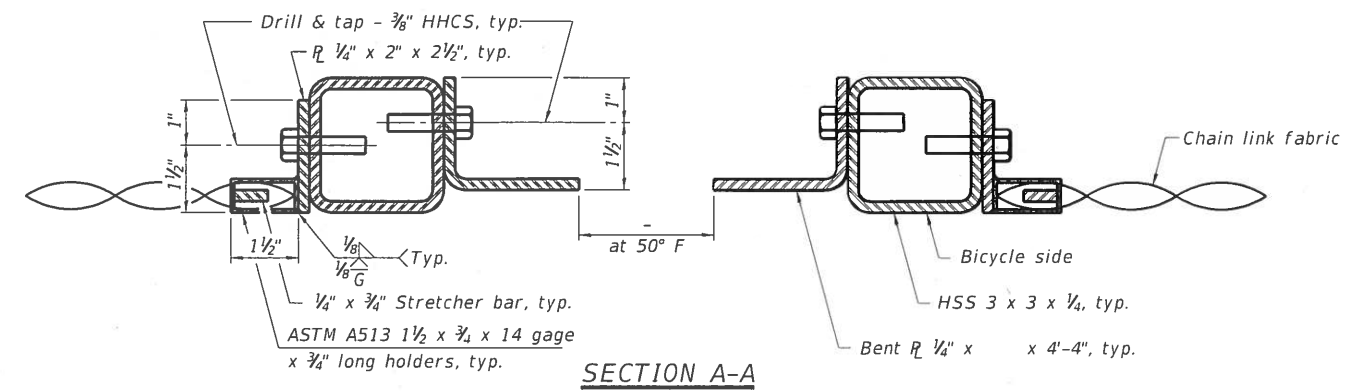
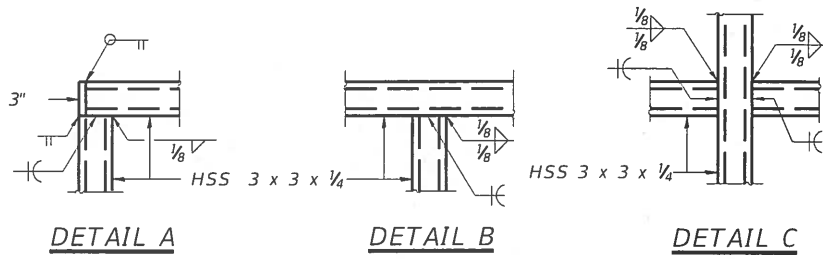
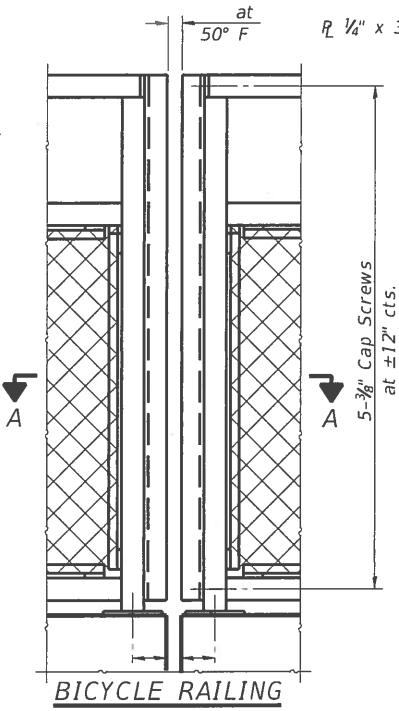
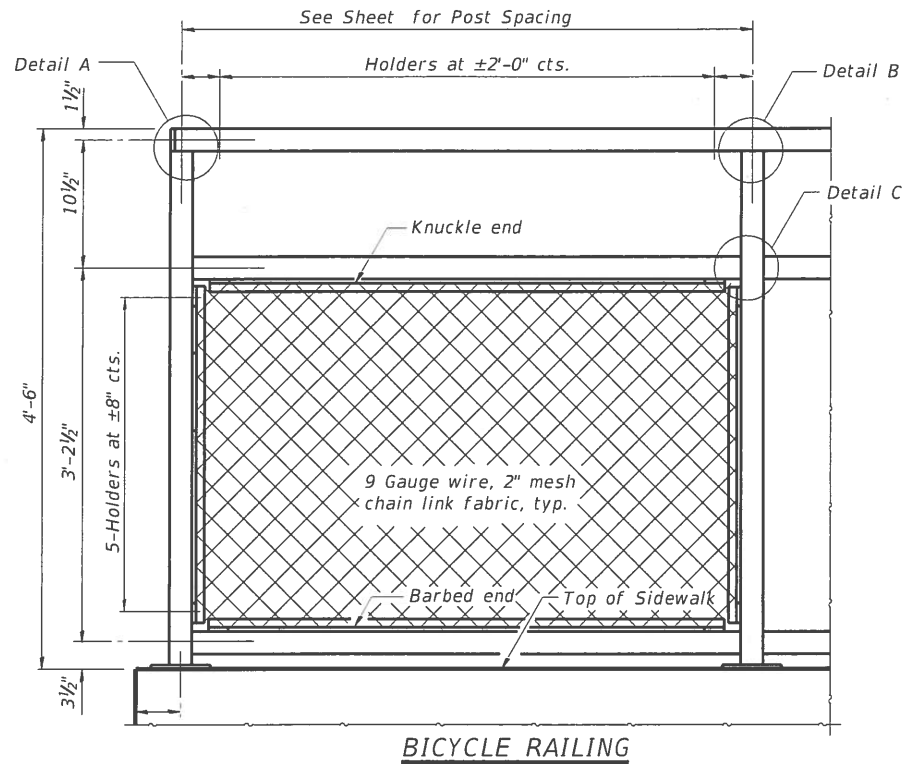
SCB-AES-2

11-5-13

(Sheet 2 of 2)

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\ILL084EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT\Projects\78500\CADData\CAD\DR78500.sht.dgn	SIDOT Offices\District 9\Projects\78500\CADData\CAD\DR78500.sht.dgn	CHECKED -	REVISED -			12B-1;10B-2	**	32	18	
PLOT SCALE = 100.0000' / in.	DATE -	REVISED -	CONTRACT NO. 78500			ILLINOIS FED. AID PROJECT				
PLOT DATE = 8/16/2017	DATE -	REVISED -	SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____			* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON				

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" Ø anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

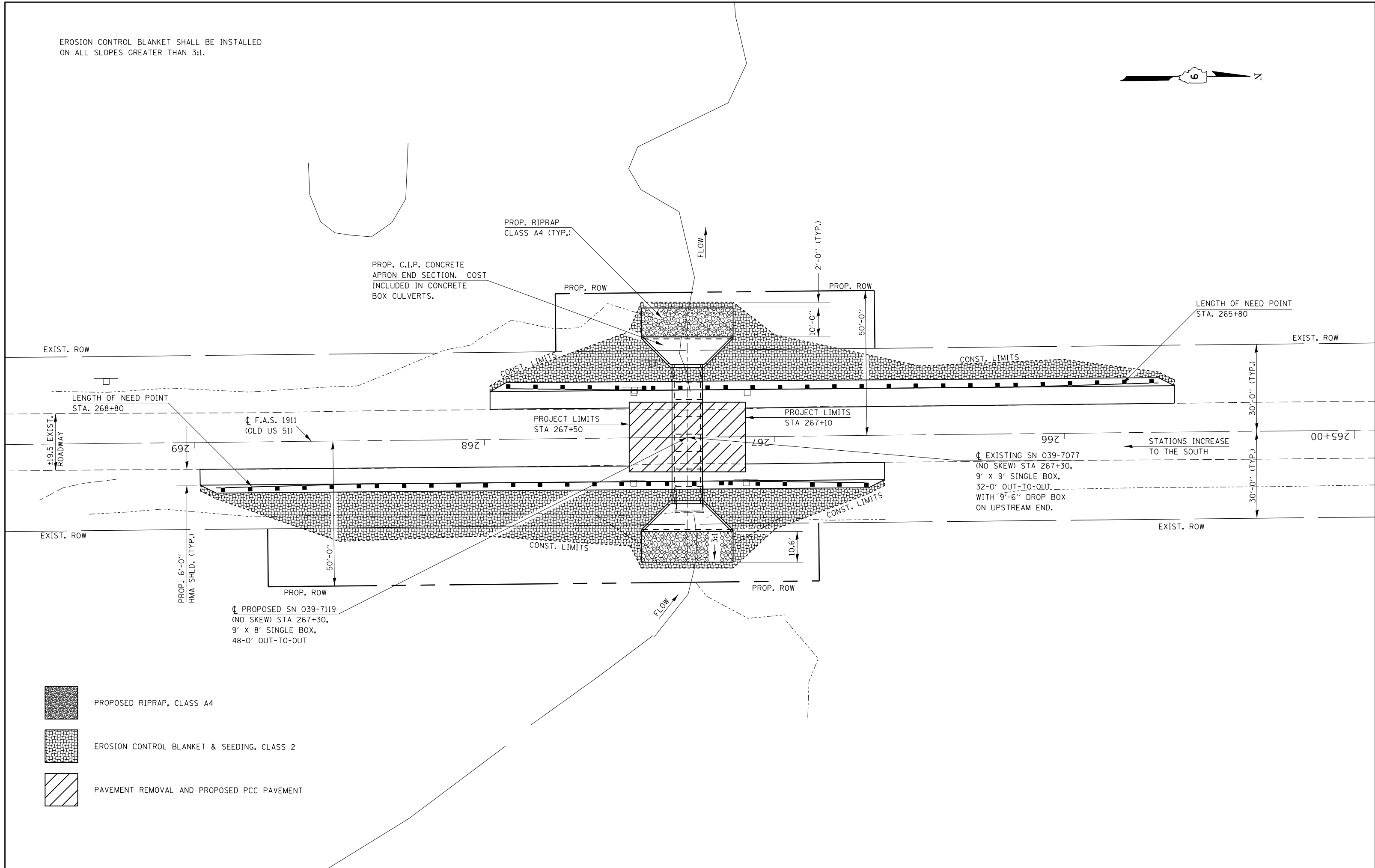
Notes:
 All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications. CVN testing may be omitted for the Bicycle Railing.




BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	20

R-29 2-17-2017 (10'-0" Maximum Post Spacing)

EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL SLOPES GREATER THAN 3:1.



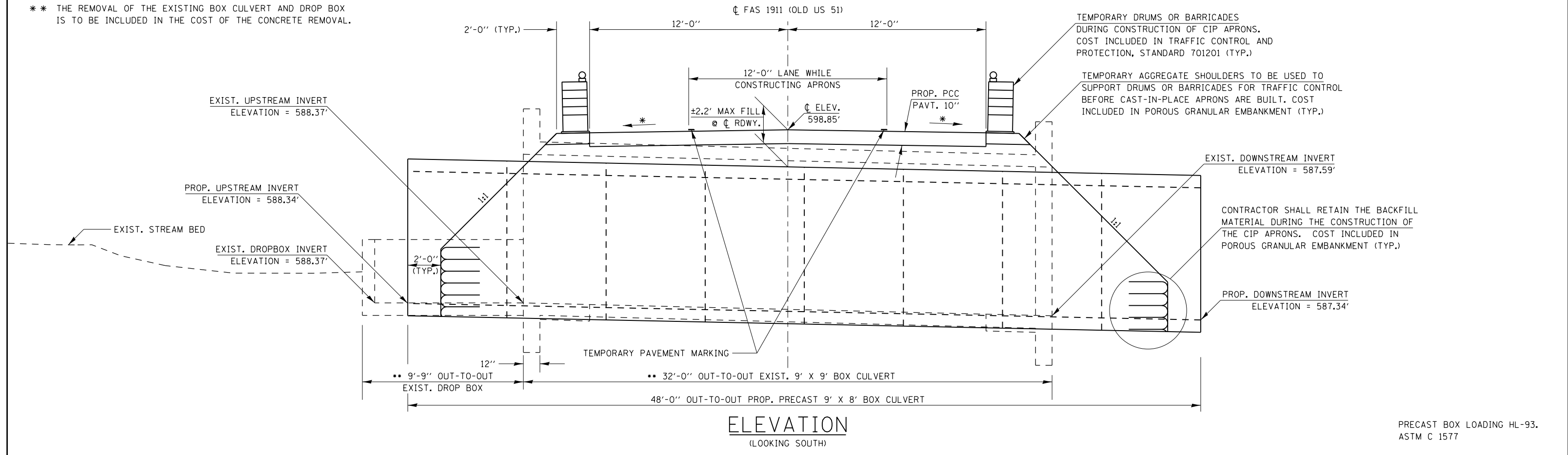
-  PROPOSED RIPRAP, CLASS A4
-  EROSION CONTROL BLANKET & SEEDING, CLASS 2
-  PAVEMENT REMOVAL AND PROPOSED PCC PAVEMENT

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN SN 039-7119 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\UL084EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\78500\CADData\CAD\$DRW\shl.dgn	PLOT SCALE = 28.3333' / in.	CHECKED -	REVISED -			*	12B-1;10B-2	**	32	20	
Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						CONTRACT NO. 78500					

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

* MATCH EXISTING CROSS SLOPES
 ** THE REMOVAL OF THE EXISTING BOX CULVERT AND DROP BOX IS TO BE INCLUDED IN THE COST OF THE CONCRETE REMOVAL.

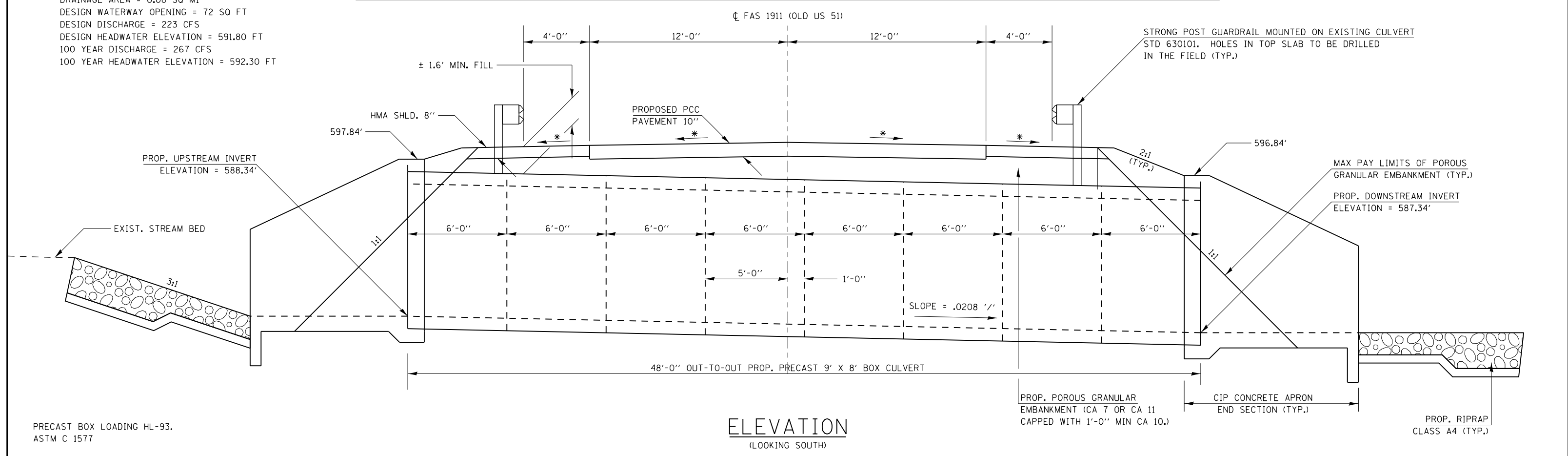
TEMPORARY SECTION PRIOR TO CONSTRUCTION OF CAST-IN-PLACE APRONS



HYDRAULIC DATA
 DRAINAGE AREA = 0.08 SQ MI
 DESIGN WATERWAY OPENING = 72 SQ FT
 DESIGN DISCHARGE = 223 CFS
 DESIGN HEADWATER ELEVATION = 591.80 FT
 100 YEAR DISCHARGE = 267 CFS
 100 YEAR HEADWATER ELEVATION = 592.30 FT

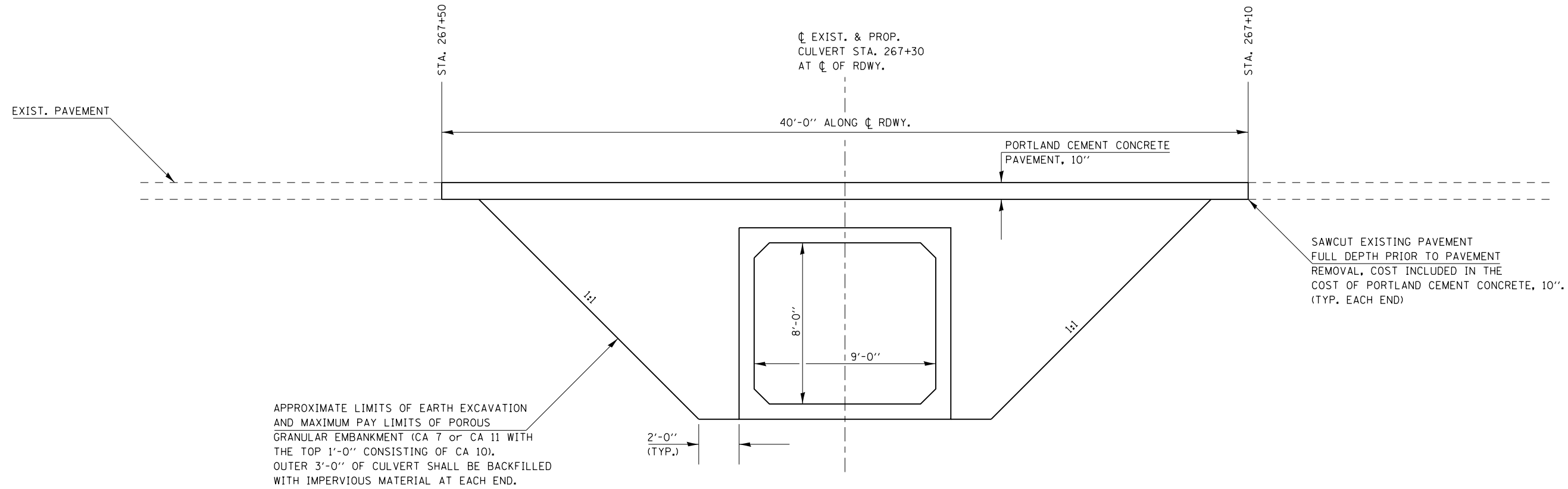
TEMPORARY SECTION PRIOR TO CONSTRUCTION OF CAST-IN-PLACE APRONS

* MATCH EXISTING CROSS SLOPES

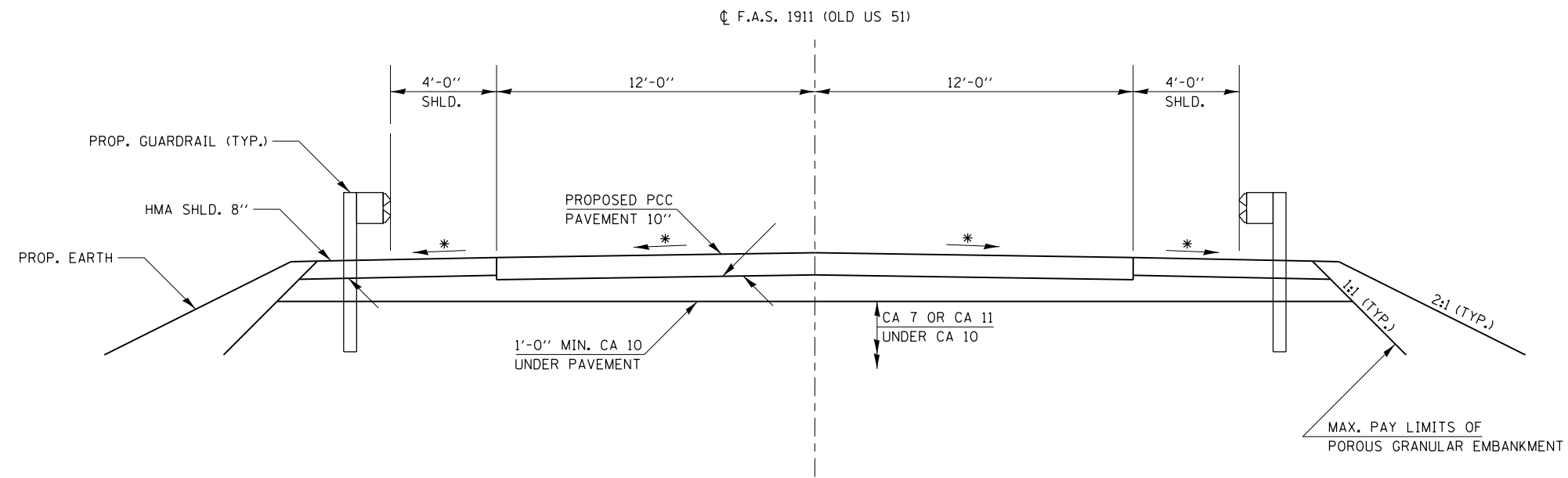


FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY AND FINAL SECTIONS SN 039-7119 (P)			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\084EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\78500\CADData\CAD\Drawn_sht.dgn		DRAWN -	REVISED -					*	12B-1;10B-2	**	32	21
		CHECKED -	REVISED -					CONTRACT NO. 78500			ILLINOIS FED. AID PROJECT	
Default		DATE -	REVISED -					SCALE:	SHEET	OF	SHEETS	STA.

LIMITS OF POROUS GRANULAR EMBANKMENT



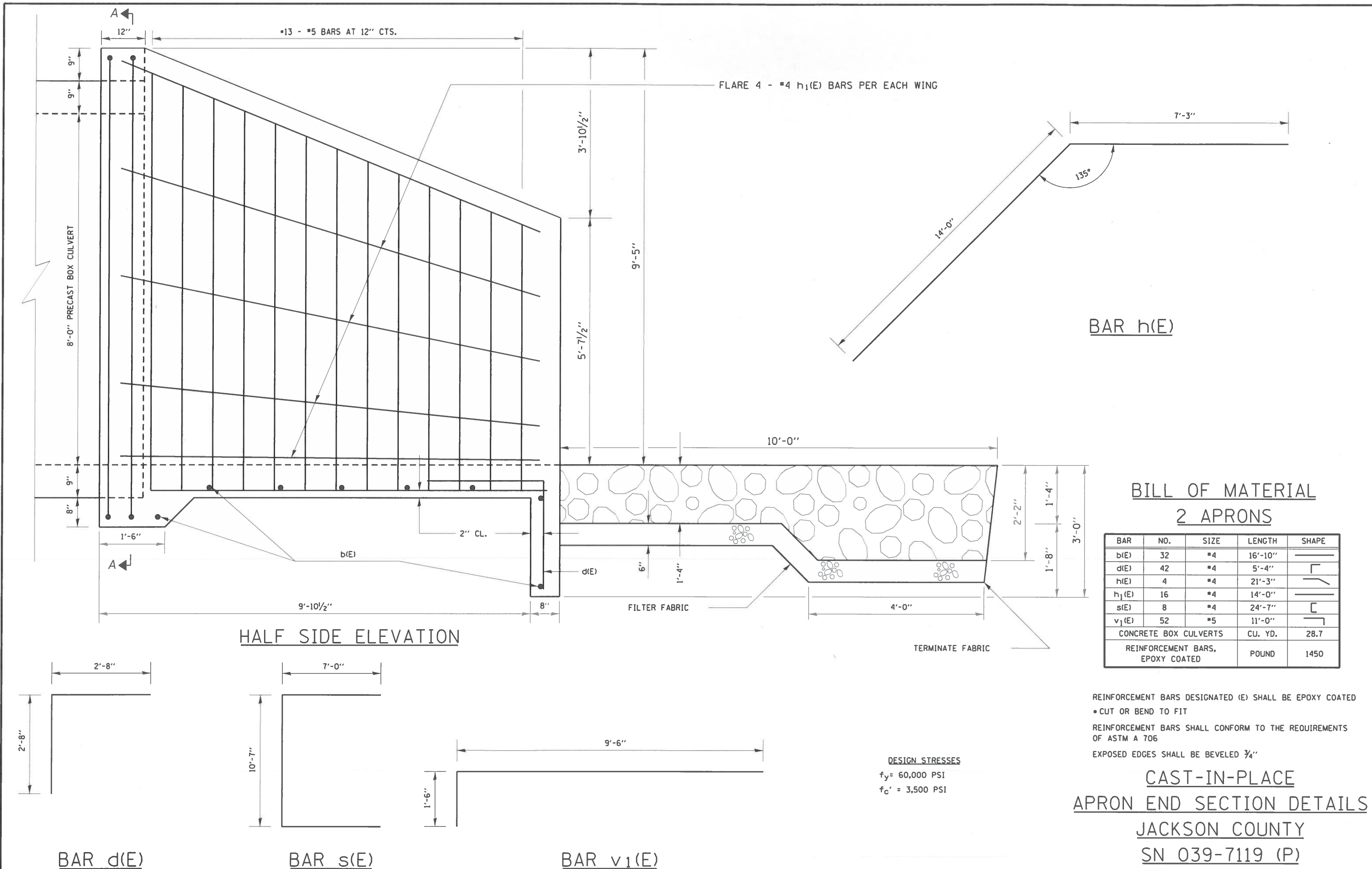
SECTION WITHIN PAVEMENT REMOVAL



• MATCH EXISTING CROSS SLOPES

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIMITS OF POROUS GRANULAR EMBANKMENT AND SECTION WITHIN PAVEMENT REMOVAL SN 039-7119 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\JL084EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\78500\CADData\CADsets\DRAWN_sht.dgn	PLOT SCALE = 5.6667' / in.	CHECKED -	REVISED -			*	12B-1:10B-2	**	32	22	
Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			CONTRACT NO. 78500		ILLINOIS FED. AID PROJECT			
						SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON



BAR h(E)

**BILL OF MATERIAL
2 APRONS**

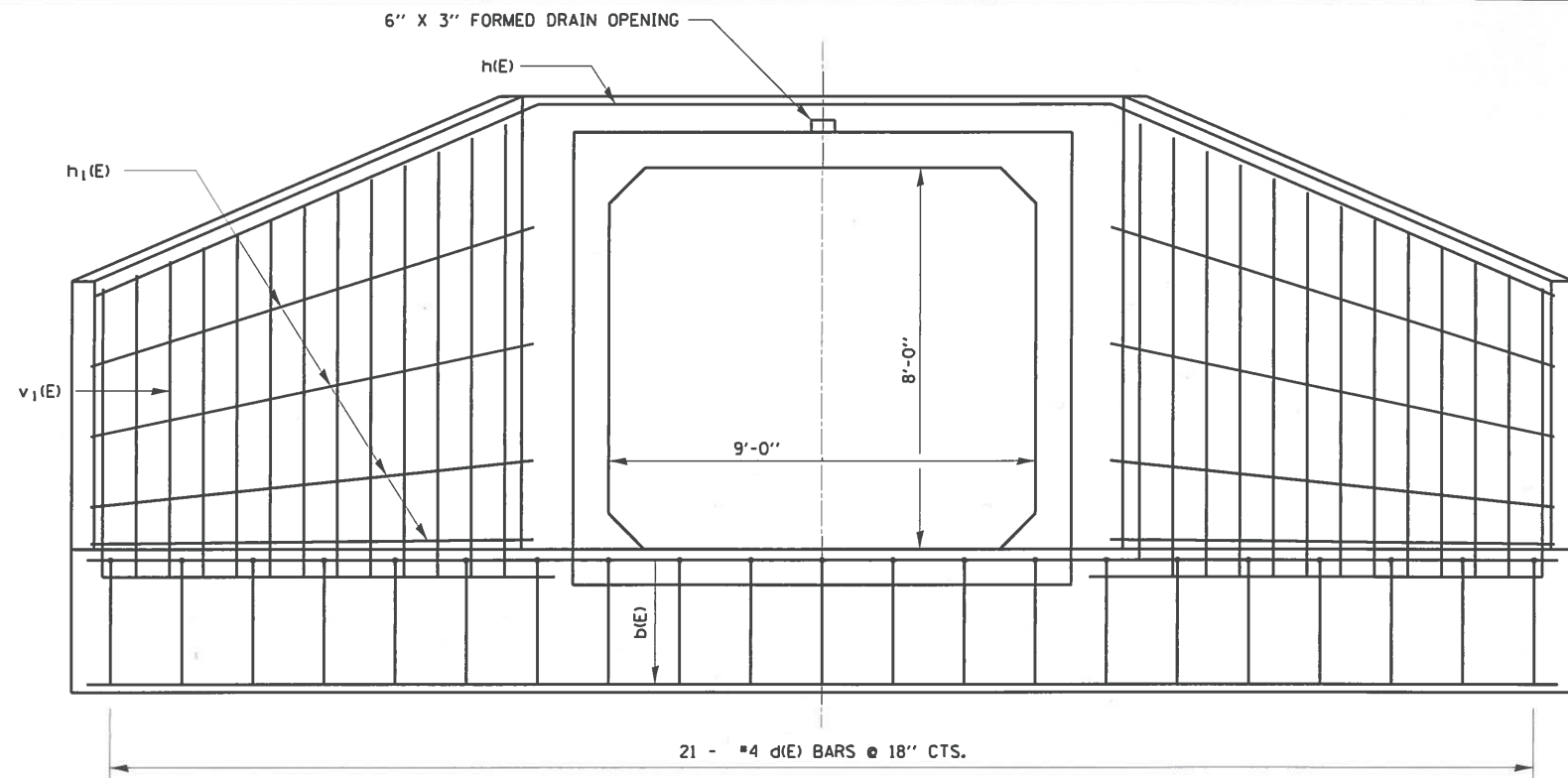
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	32	#4	16'-10"	—
d(E)	42	#4	5'-4"	└
h(E)	4	#4	21'-3"	—
h ₁ (E)	16	#4	14'-0"	—
s(E)	8	#4	24'-7"	└
v ₁ (E)	52	#5	11'-0"	└
CONCRETE BOX CULVERTS			CU. YD.	28.7
REINFORCEMENT BARS, EPOXY COATED			POUND	1450

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
 • CUT OR BEND TO FIT
 REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706
 EXPOSED EDGES SHALL BE BEVELED 3/4"

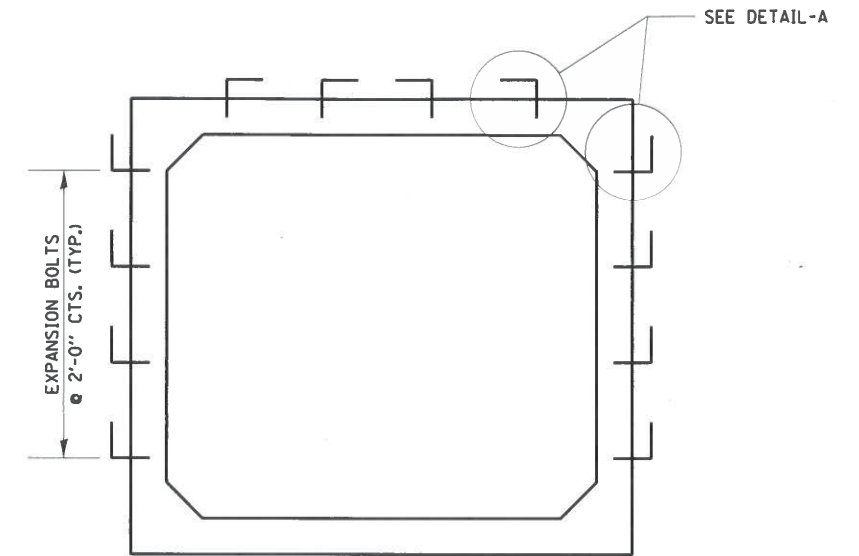
DESIGN STRESSES
 f_y = 60,000 PSI
 f_c' = 3,500 PSI

**CAST-IN-PLACE
APRON END SECTION DETAILS
JACKSON COUNTY
SN 039-7119 (P)**

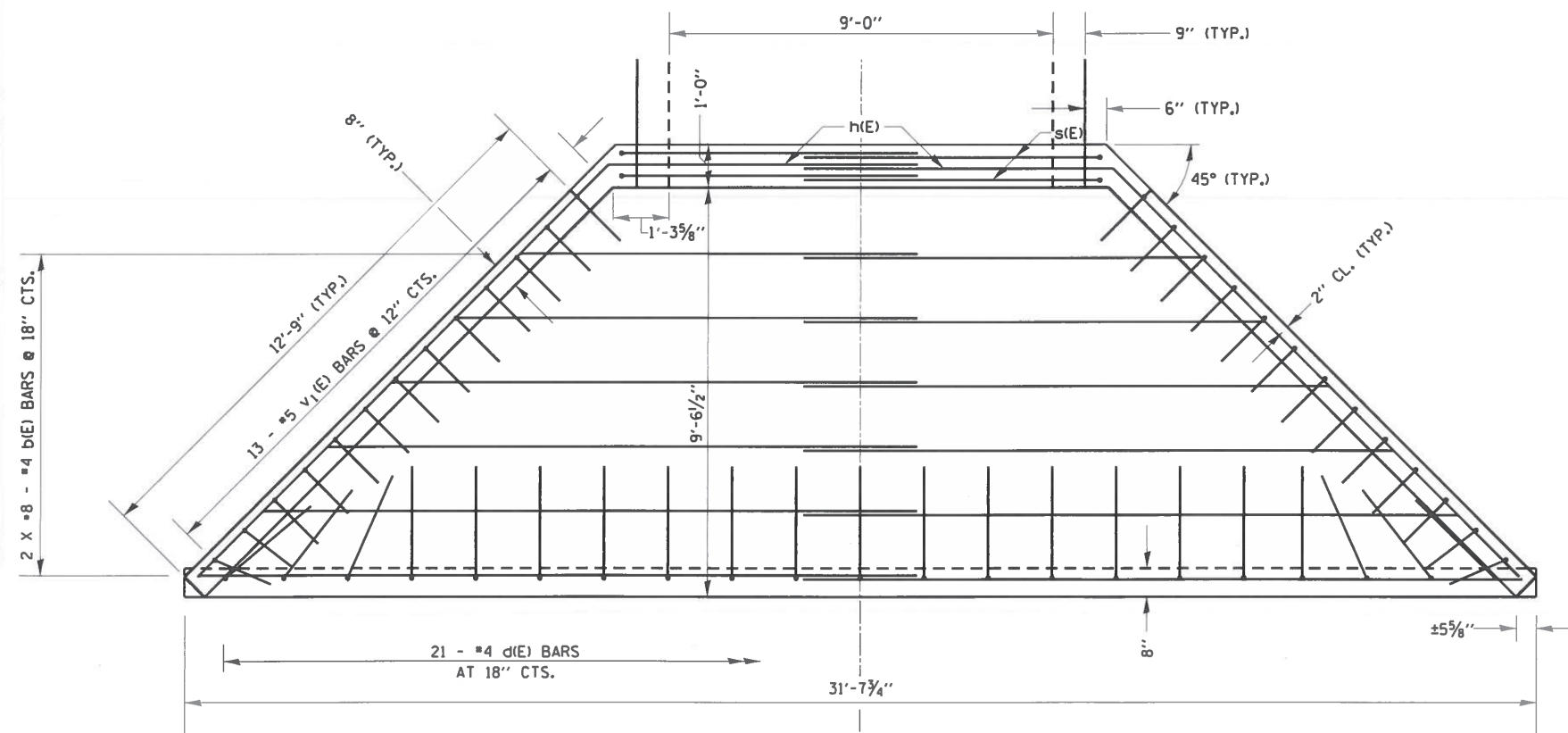
FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CAST-IN-PLACE APRON END SECTION DETAILS SN 039-7119 (P)		F.A. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =
pw:\IL084EBIDINTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 9\Projects\78500\CADData\CAD\2017\080717\080717.sht.dgn		CHECKED -	REVISED -		SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	12B-1:108-2	**	32	23
PLOT SCALE = 2.0000' / in.		DATE -	REVISED -					CONTRACT NO. 78500		ILLINOIS FED. AID PROJECT	
Default								ILUNOIS FED. AID PROJECT		* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON	



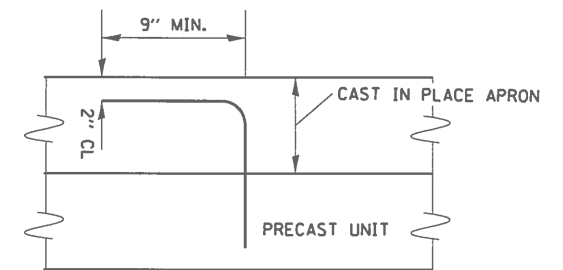
END ELEVATION



SECTION A-A



PLAN



DETAIL-A

NOTE: THE CAST-IN-PLACE APRON END SECTION SHALL BE TIED TO THE PRECAST BARREL AT EACH END USING EXPANSION BOLTS SPACED AT 2' CENTERS AS SHOWN IN SECTION A-A. EXPANSION BOLTS SHALL BE 3/4" DIAMETER HOOKED BOLTS. THE HOOKS SHALL BE AS SHOWN IN DETAIL A AND SHALL BE BENT IN THE FIELD AS NEEDED. COST INCLUDED IN PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED IN THE PLANS.

THE LAST TWO PRECAST BARREL SECTIONS AT EACH END SHALL BE TIED TOGETHER USING CULVERT TIES AS SHOWN ON PAGE 31A OF 32. COST INCLUDED IN PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED IN THE PLANS.

MIN. BAR LAP
#4 - 2'-7"

• CUT OR BEND TO FIT
WORK THIS SHEET WITH SHEET 23 of 32.

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -
pw:\IL084EBIDINTEG\illinois.gov\FWIDOT\Documents\IDOT Offices\District 9\Projects\78500\CADData\CAD\084EBIDINTEG\084EBIDINTEG.dgn		CHECKED -	REVISED -
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Default	PLOT DATE = 8/16/2017		

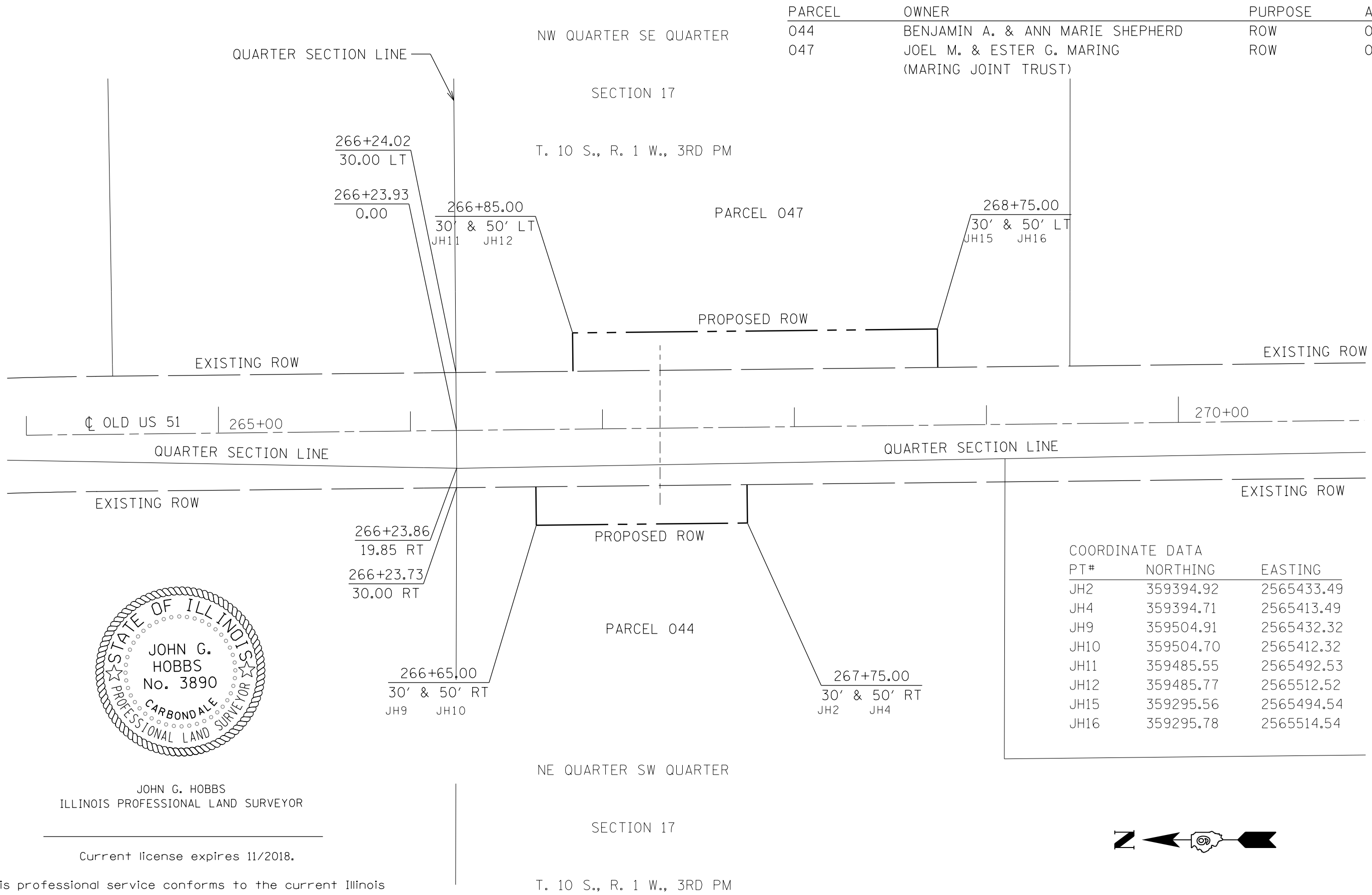
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CAST-IN-PLACE APRON END SECTION DETAILS
SN 039-7119 (P)

SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

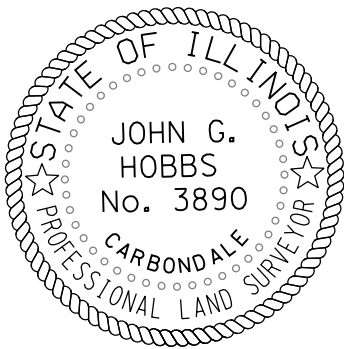
F.A. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	12B-1;10B-2	**	32	24
			CONTRACT NO. 78500	
ILLINOIS FED. AID PROJECT				

PARCEL	OWNER	PURPOSE	ACREAGE
044	BENJAMIN A. & ANN MARIE SHEPHERD	ROW	0.051
047	JOEL M. & ESTER G. MARING (MARING JOINT TRUST)	ROW	0.087



COORDINATE DATA

PT#	NORTHING	EASTING
JH2	359394.92	2565433.49
JH4	359394.71	2565413.49
JH9	359504.91	2565432.32
JH10	359504.70	2565412.32
JH11	359485.55	2565492.53
JH12	359485.77	2565512.52
JH15	359295.56	2565494.54
JH16	359295.78	2565514.54



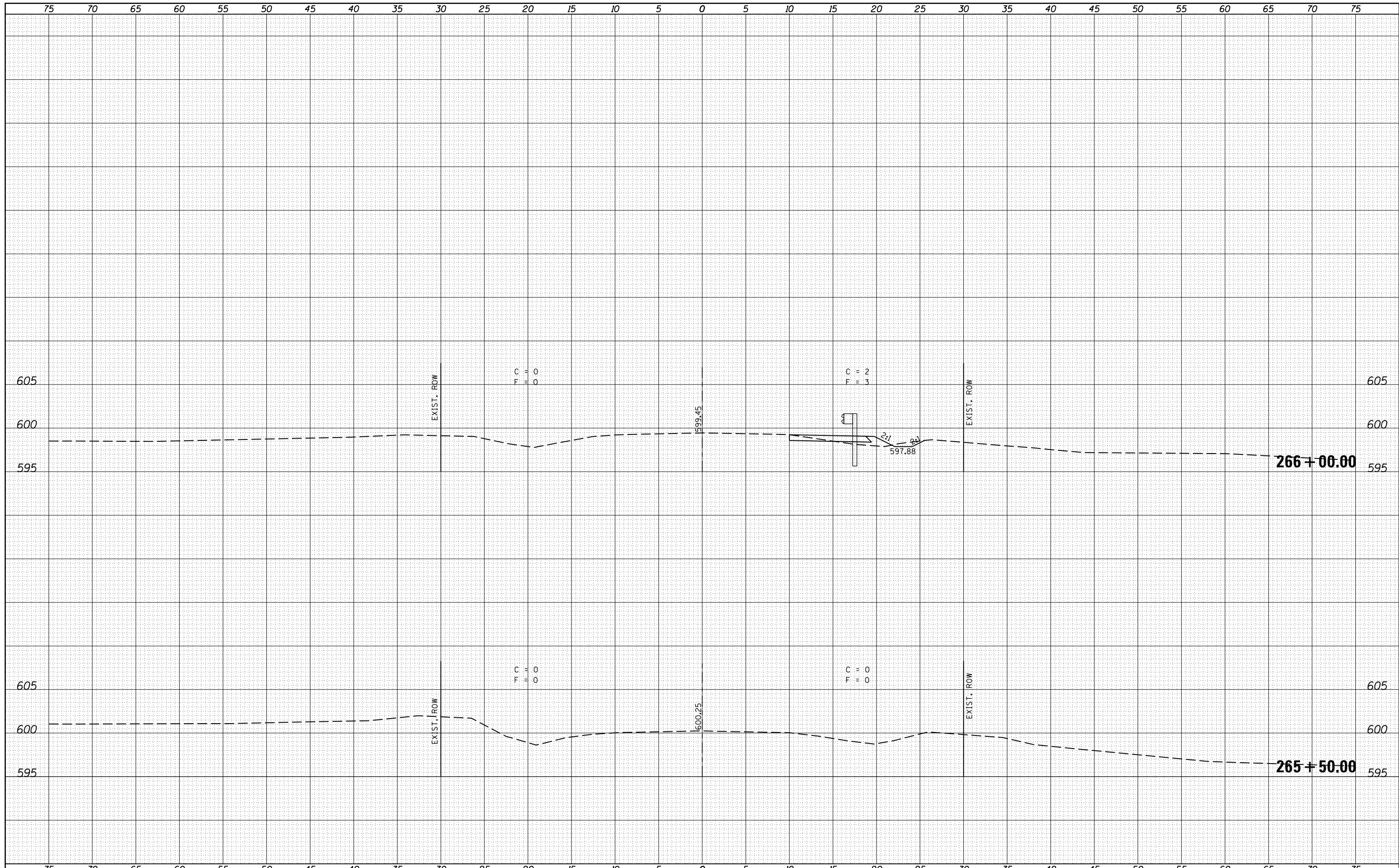
JOHN G. HOBBS
ILLINOIS PROFESSIONAL LAND SURVEYOR
Current license expires 11/2018.

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



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

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

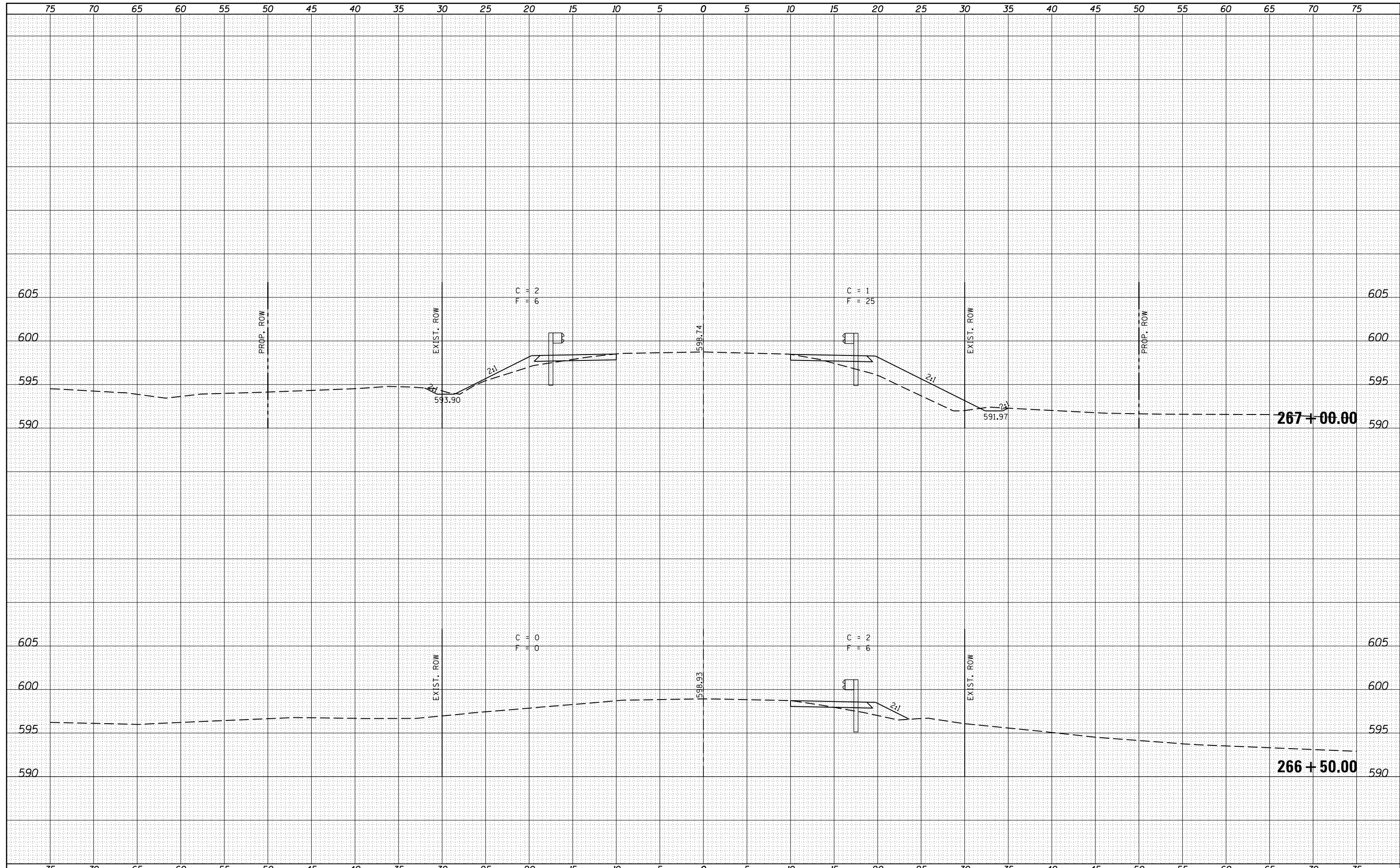


FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISOR -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 039-7119 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pwa:\llo84EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT	Offices\District 9\Projects\78500\CADData\CADsheets\78500	DRAWN	REVISOR -			*	12B-1;10B-2	**	32	26	
Default	PLOT SCALE = 10.0000' / in.	CHECKED -	REVISOR -			CONTRACT NO. 78500					
	PLOT DATE = 6/30/2017	DATE -	REVISOR -			SCALE:	SHEET	OF	SHEETS	STA. 265+50.00	TO STA. 266+00.00

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

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

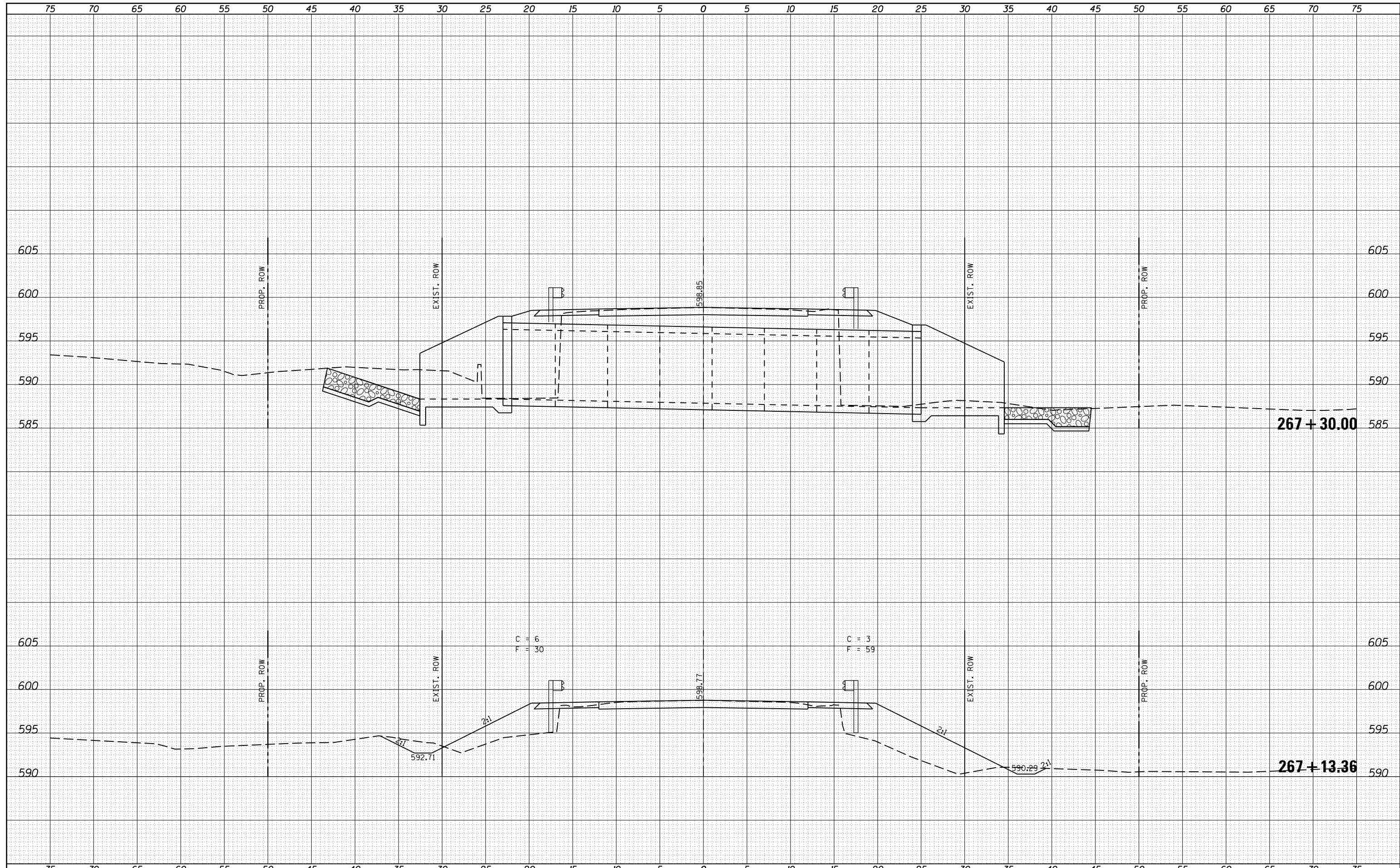
ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	



FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 039-7119 (P)			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pwa:\llo84EBID\INTEG.illinois.gov\PWIDOT\Documents\DOT	Offices\District 9\Projects\78500\CADData\CADsheets\78500	DRAWN -	REVISIED -					*	12B-1;10B-2	**	32	27	
Default		PLOT SCALE = 10.0000' / in.	CHECKED -					REVISIED -	CONTRACT NO. 78500			ILLINOIS	FED. AID PROJECT
		PLOT DATE = 6/30/2017	DATE -					REVISIED -	SCALE: SHEET OF SHEETS STA. 266+50.00 TO STA. 267+00.00			* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON	

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

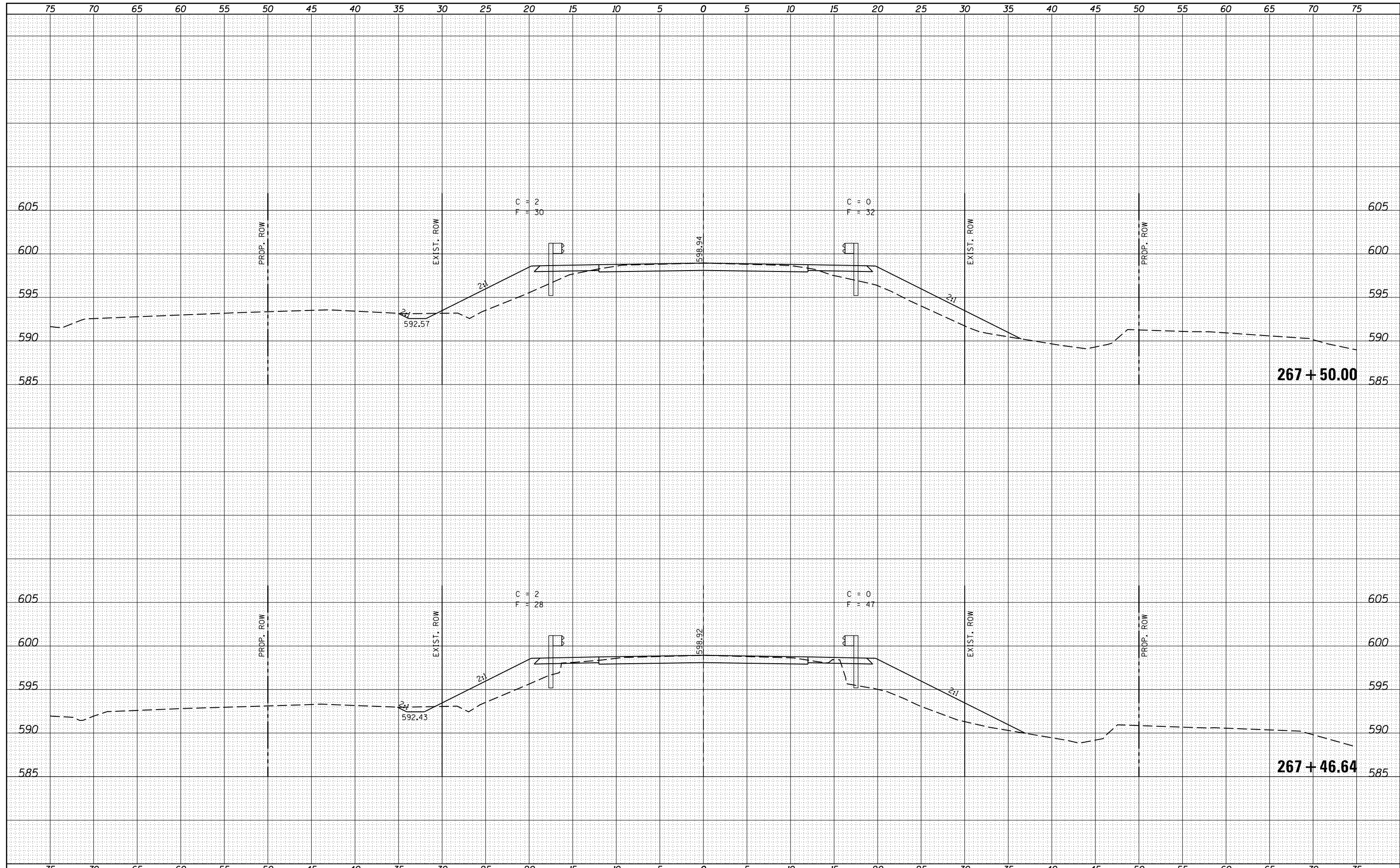
ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	



FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISOR -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 039-7119 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default		CHECKED -	REVISOR -			CONTRACT NO. 78500			ILLINOIS FED. AID PROJECT	
		DATE -	REVISOR -			SCALE: SHEET OF SHEETS STA. 267+13.36 TO STA. 267+30.00		* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON		

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

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

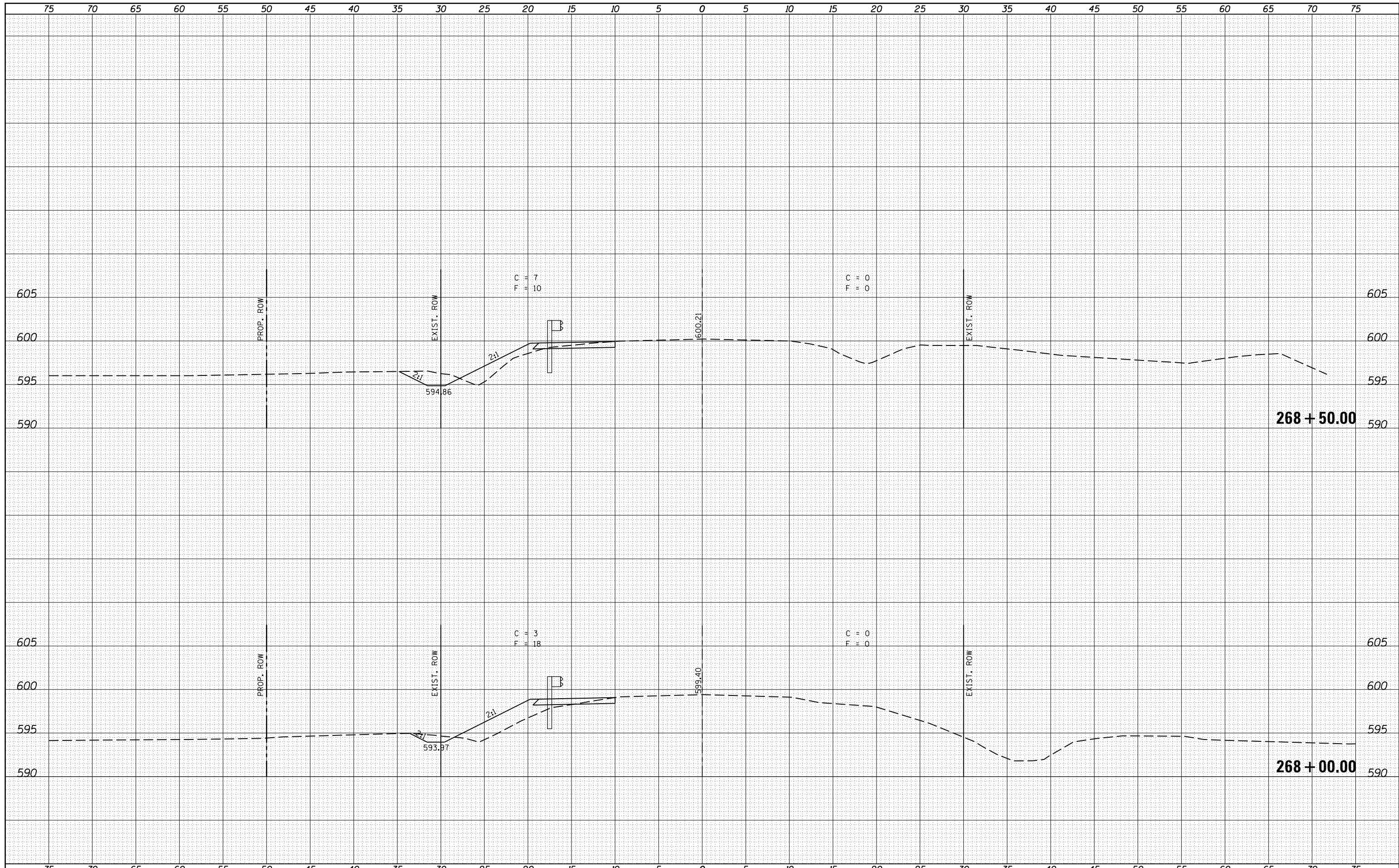


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Default		PLOT SCALE = 10.0000' / in.	CHECKED -			REVISOR -	CONTRACT NO. 78500				
		PLOT DATE = 6/30/2017	DATE -			REVISOR -	ILLINOIS FED. AID PROJECT				

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

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

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



FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -
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Default		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
SN 039-7119 (P)**

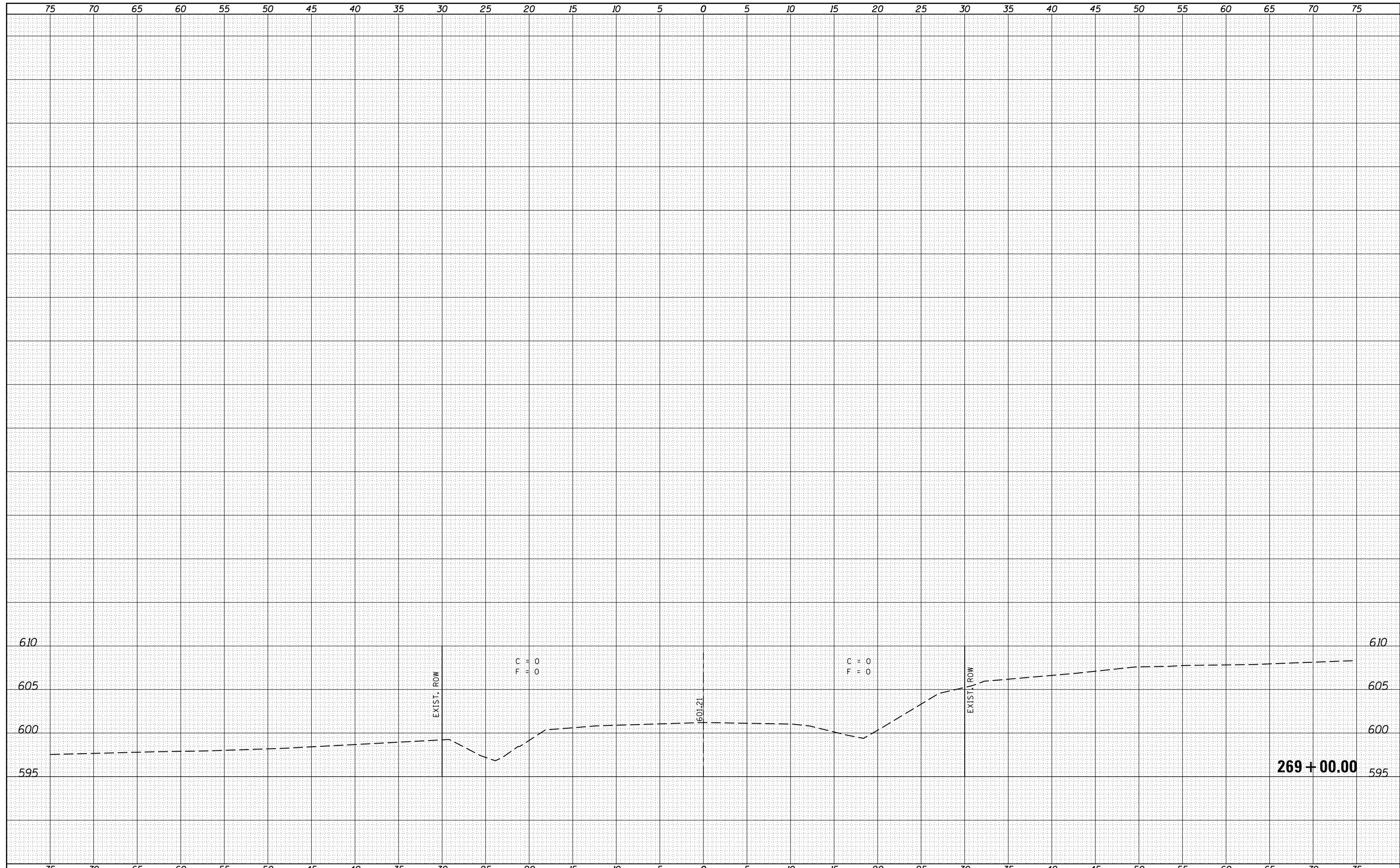
SCALE: SHEET OF SHEETS STA. 268+00.00 TO STA. 268+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	12B-1;10B-2	**	32	30
CONTRACT NO. 78500				

* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON

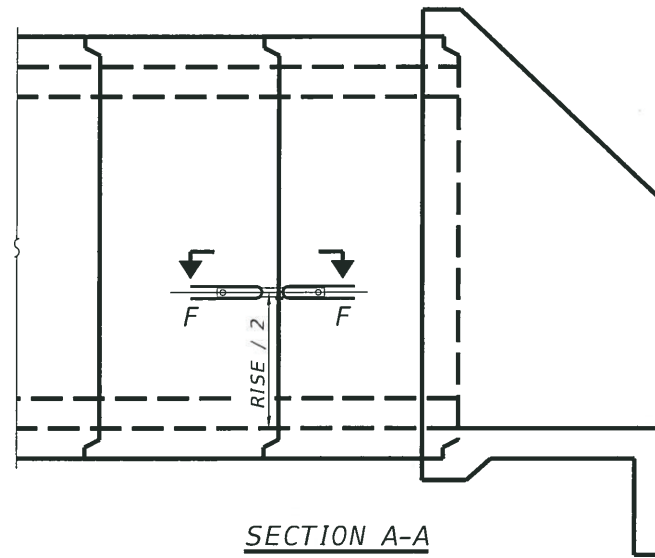
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NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

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

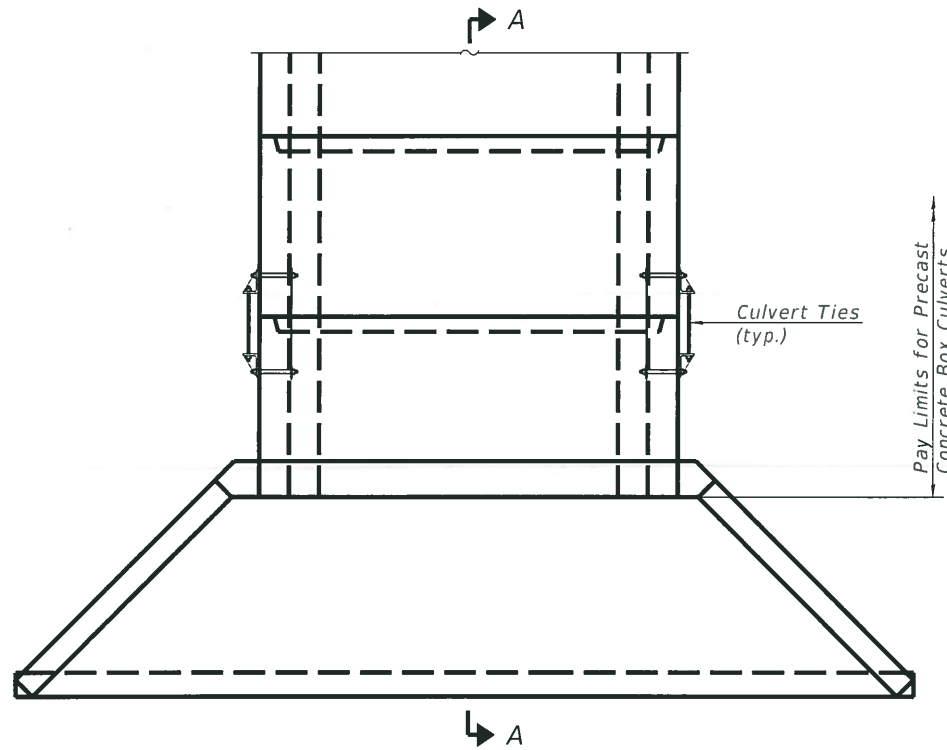


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Default	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78500					
	PLOT DATE = 6/30/2017	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA. 269+00.00	TO STA. 269+00.00

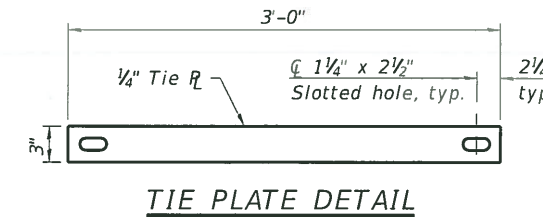
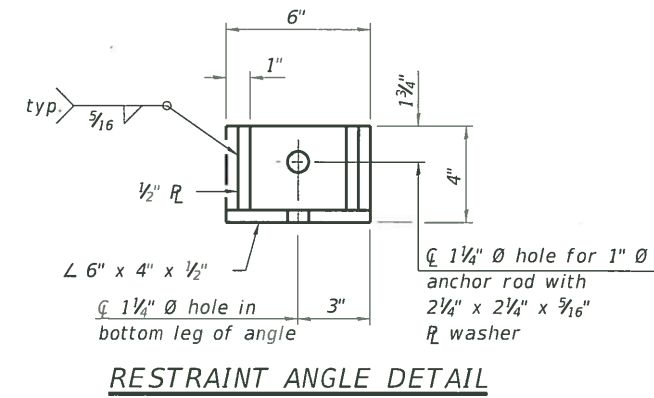
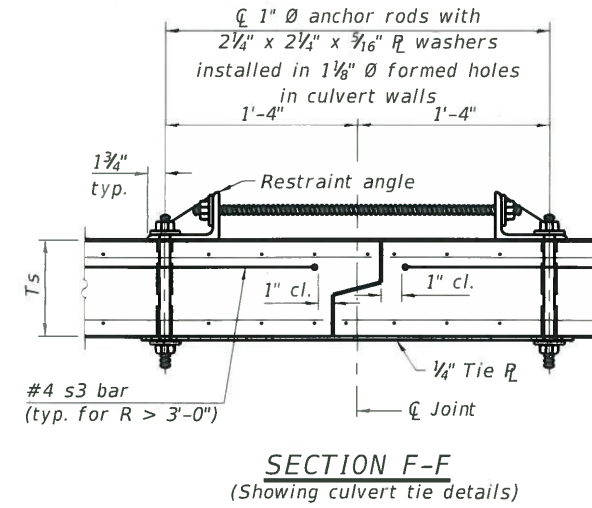
* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON



SECTION A-A



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.

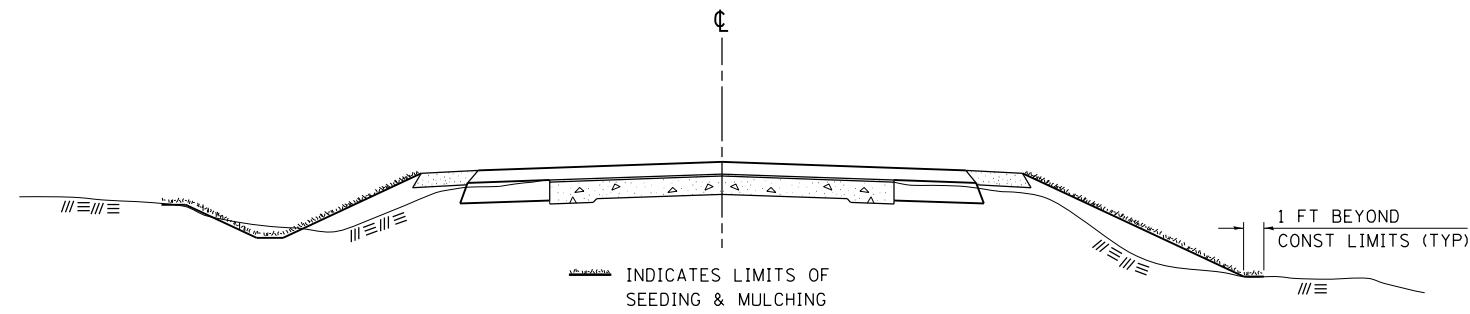


Notes:

1" \varnothing 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. $2\frac{1}{4} \times 2\frac{1}{4} \times \frac{7}{16}$ 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 $\frac{1}{2}$ 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.

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CULVERT TIE DETAILS SN 039-7119 (P)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\IL084EB\INTEG\Illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\78500\CADDData\CAD\084EB\039-7119.sht.dgn	PLotted	CHECKED -	REVISIONS -			*	12B-1:10B-2	**	32	31A	
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISIONS -			CONTRACT NO. 78500					
	PLOT DATE = 8/16/2017					ILLINOIS FED. AID PROJECT					

SEEDING & MULCHING



GENERAL NOTES

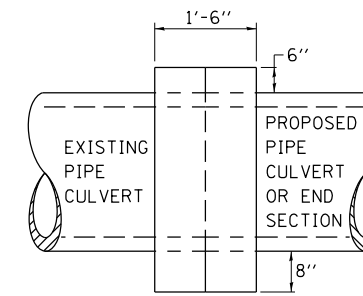
IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS. FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS. THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS. SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

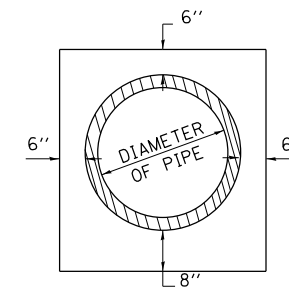
STD. 9-12

CONCRETE COLLAR

PIPE TO PIPE



SIDE VIEW



END VIEW

TABULATION

DIAMETER OF PIPE	CL SI CONC CU YDS EST
12"	0.24
15"	0.29
18"	0.32
24"	0.44
30"	0.56
36"	0.66
42"	0.80
48"	0.93
54"	1.07
60"	1.22
72"	1.55

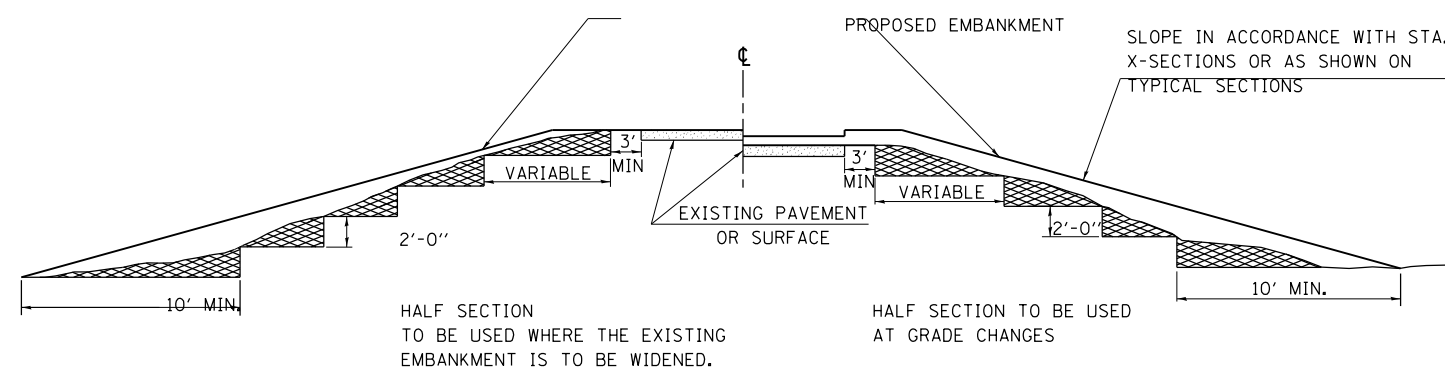
THE CONCRETE COLLAR SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR **CONCRETE COLLAR**, AS SHOWN ON THE PLANS, WHICH PRICE SHALL INCLUDE THE REMOVAL OF SUCH PORTIONS THE EXISTING HEADWALLS AS MAY BE REQUIRED.


CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

REVISIONS	
DRAWN	7-13-90
REVISED	8-22-94
REVISED	3-26-08
REVISED	5-17-13

STD. 9-79

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



 MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

STD. 9-16

FILE NAME =	USER NAME = adamsam	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT STANDARDS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			CONTRACT NO. 78500		ILLINOIS FED. AID PROJECT			
SCALE: SHEET OF SHEETS STA. TO STA.						* FAU ROUTE 9909 & FAS ROUTE 1911 ** UNION & JACKSON					