1-20-2012 LETTING ITEM 164

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 72B55		

D-96-011-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 614 (IL 78)
SECTION 144 (B-4); 144 (B-5)
PROJECT ACF-0614(032)
CASS COUNTY
C-96-011-08

CULVERT REPLACEMENT AND BRIDGE REPLACEMENT OVER PANTHER CREEK AND OVERFLOW, SW SIDE OF CHANDLERVILLE

FOR INDEX OF SHEETS, SEE SHEET NO. 2

MICHAEL P. WALTON 062-049145 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS

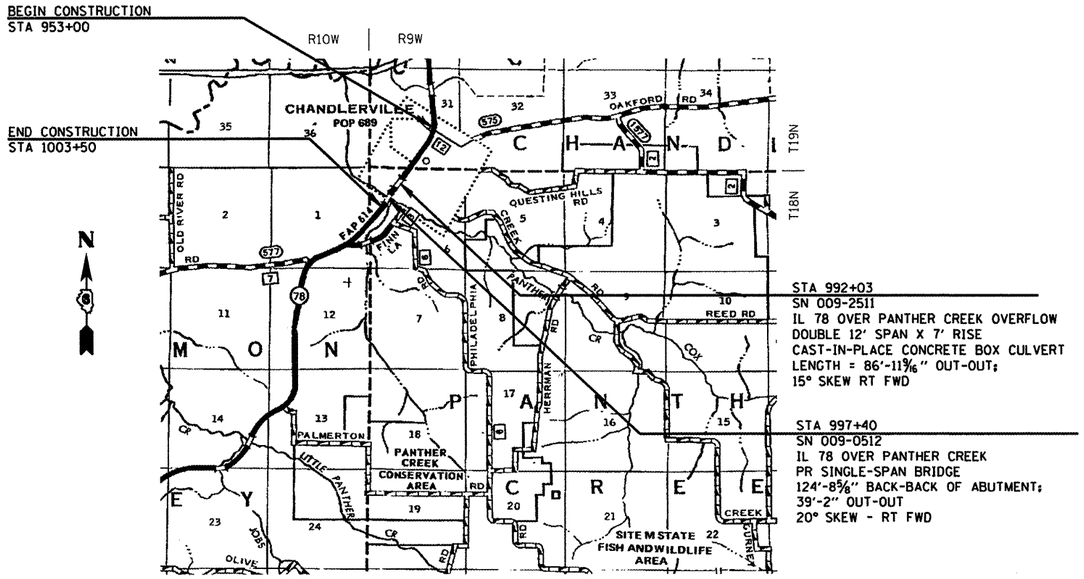
MICHAEL WALTON 08/26/11 DATE
LICENSE EXPIRES 11/30/2011
SHEET RANGE 1-44, 74-97

LICENSED STRUCTURAL ENGINEER MARY COOMBE BLOXDORF 4859 SPRINGFIELD STATE OF ILLINOIS

MARY COOMBE BLOXDORF DATE 8-28-11
LICENSE EXPIRES 11/30/2012
SHEET RANGE 45-53

MARC BACCHETTI 081-005240 LICENSED STRUCTURAL ENGINEER ST. LOUIS, MO STATE OF ILLINOIS

MARC BACCHETTI 8-26-11 DATE
LICENSE EXPIRES 11/30/2012
SHEET RANGE 54-73



STA 992+03
SN 009-2511
IL 78 OVER PANTHER CREEK OVERFLOW
DOUBLE 12' SPAN X 7' RISE
CAST-IN-PLACE CONCRETE BOX CULVERT
LENGTH = 86'-11 3/16" OUT-OUT;
15° SKEW RT FWD

STA 997+40
SN 009-0512
IL 78 OVER PANTHER CREEK
PR SINGLE-SPAN BRIDGE
124'-8 5/16" BACK-BACK OF ABUTMENT;
39'-2" OUT-OUT
20° SKEW - RT FWD

LOCATION OF SECTION INDICATED THUS:

AVERAGE DAILY TRAFFIC
1,900 (2007)
PV = 79.0% SU = 14.4% MU = 6.6%

0 100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

GROSS LENGTH:	5050.00 FEET =	0.956 MILES
NET LENGTH:	5050.00 FEET =	0.956 MILES

0 .5 1 2
SCALE IN MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Sept 1 20 11
Roger D Pinkey
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 9 20 11
Scott E. Stitt, P.E. for
acting ENGINEER OF DESIGN AND ENVIRONMENT
December 9 20 11
William R. Frey for
Interim DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

SR. TEAM ENGINEER – JAY EDWARDS (217)785-5321
TEAM ENGINEER – VINCE MADONIA (217)785-9046

CONTRACT NO. 72B55

The VOLKERT/DMA Joint Venture

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

GENERAL NOTES

1. ANY REFERENCE TO THE STANDARDS THROUGH OUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE DEPARTMENT AS INCLUDED IN THE PLANS.

2. THE FOLLOWING APPLICATION RATES WERE USED FOR QUANTITY CALCULATIONS:

HMA SURFACE	0.056 T/SY•IN
HMA BINDER	0.056 T/SY•IN
HMA SHOULDER	0.056 T/SY•IN
PRIME COAT - BIT (PAVEMENT)	0.00038 T/SY
PRIME COAT - BIT (ENTRANCES)	0.001425 T/SY
PRIME COAT - AGG	0.002 T/SY
AGG SHOULDERS, TYPE B	2.05 T/CY

3. ACTUAL SIZE AND LOCATIONS OF PATCHES , IF ANY, WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

4. IN ADDITION TO FIELD SURVEYS AND AERIAL SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.

5. THE LOCATION OF ANY NO PASSING ZONES WILL BE NOTED PRIOR TO RESURFACING. NOTIFY THE BUREAU OF OPERATIONS TWO WEEKS PRIOR TO STRIPING SO NO PASSING ZONES CAN BE FIELD VERIFIED.

6. ALL UNSURFACED AREAS WITHIN THE R.O.W. AND EASEMENTS SHALL BE SEEDED, FERTILIZED, AND MULCHED. AS DIRECTED BY THE ENGINEER. SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION.

7. IN ACCORDANCE WITH STATE OF ILLINOIS P.A. 86-0674, THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES NOT MORE THAN 14 DAYS NOR LESS THEN 48 HOURS (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS) IN ADVANCE OF THE START OF EXCAVATION OR DEMOLITION.

   J.U.L.I.E. TELEPHONE NUMBER
   1-800-892-0123

8. EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO COMPENSATION WILL BE ALLOWED.

9. ALL SAW CUTS NECCESSARY TO COMPLETE THE WORK DETAILED IN THESE PLANS, SHALL BE INCLUDED IN THE COST FOR THE VARIOUS PAY ITEMS INVOLVED. THE MINIMUM SAW CUT DEPTH IN THE PAVEMENT SHALL BE 1 1/2" UNLESS OTHERWISE SPECIFIED IN A DETAIL SHOWN IN THE PLANS.

10. ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNERS WITH A COPY TO THE ENGINEER FOR SHORT TERM CLOSURES.

11. ALL UTILITIES TO BE RELOCATED BY OTHERS.

12. SHORT-TERM PAVEMENT MARKING SHALL BE APPLIED TO THE MILLED, PRIMED, AND FINAL SURFACE AS NECESSARY PRIOR TO APPLICATION OF TEMPORARY OR PERMANENT PAVEMENT MARKING. ONLY THE REMOVAL OF THE FINAL SURFACE APPLICATION WILL BE PAID FOR (WORK ZONE PAVEMENT MARKING REMOVAL - SQ FT). TEMPORARY PAVEMENT MARKING SHALL BE USED FOR STAGING AS QUANTIFIED IN THE TEMPORARY STRIPING SCHEDULE. AN ADDITIONAL QUANTITY FOR TEMPORARY PAVEMENT MARKING EQUAL TO THE AMOUNT OF PERMANENT HAS ALSO BEEN ADDED TO THE SUMMARY OF QUANTITIES.

COMMITMENTS

1. THE FIELD/RESIDENT ENGINEER SHALL CONTACT DISTRICT 6 STUDIES AND PLANS AT (217) 782-6990 CONCERNING ANY MAJOR PLAN CHANGES TO MAKE SURE ANY PREVIOUS COMMITMENTS (NOT LISTED) WERE MADE AFFECTING THE DESIGN, AND TO ALLOW IMPROVEMENTS TO THE DESIGN FOR FUTURE PROJECTS.

2. STORM WATER POLLUTION PREVENTION PLAN REQUIRED FOR NPDES PERMIT.

INDEX OF SHEETS

LIST OF STANDARDS

000001-05
280001-05
420401-08
515001-03
542301-03
542401-01
602301-03
604036-02
609001-05
609006-05
630001-09
630101-08
635006-03
635011-02
666001-01
701011-02
701201-04
701301-04
701306-03
701311-03
701321-11
701326-04
701901-01
704001-06
780001-02
781001-03
601101-01

DISTRICT SIX

EXAMINED August 19 20 11

OPERATIONS ENGINEER

EXAMINED August 15 20 11

PROJECT IMPLEMENTATION ENGINEER

EXAMINED August 23 20 11

PROGRAM DEVELOPMENT ENGINEER

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

MIXTURE USES	HMA SURFACE	HMA BINDER COURSE	HMA LEVELING BINDER	HMA BSE CSE WID. 10"	HMA SHOULDERS, 6 1/2"	HMA SHOULDERS TOP LIFT
AC/PG	PG 64-22	PG 64-22	PG 64-22	PG 64-22	PG 58-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50	2.0% @ N30	4.0% @ N50
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5	IL 19.0	IL 9.5	IL 19.0	BAM	IL 9.5 OR 12.5
FRICTION AGGREGATE	MIX C	N/A	N/A	N/A	N/A	MIX C

80% FED. 20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0004 ROADWAY	CONSTRUCTION TYPE CODE 0011 STRUCTURE No. 009-2511	CONSTRUCTION TYPE CODE 0011 STRUCTURE No. 009-0512
20200100	EARTH EXCAVATION	CU YD	3373	3373		
20200500	EARTH EXCAVATION (WIDENING)	CU YD	463	463		
20300100	CHANNEL EXCAVATION	CU YD	2266	2266		
20800150	TRENCH BACKFILL	CU YD	30	30		
25000200	SEEDING, CLASS 2	ACRE	3.4	3.4		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	308	308		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	308	308		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	308	308		
25100115	MULCH, METHOD 2	ACRE	3.4	3.4		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	684	684		
28000400	PERIMETER EROSION BARRIER	FOOT	540	540		
28000500	INLET AND PIPE PROTECTION	EACH	6	6		
28001000	AGGREGATE (EROSION CONTROL)	TON	30	30		
28100107	STONE RIPRAP, CLASS A4	SQ YD	2948	647	111	2190
28200200	FILTER FABRIC	SQ YD	2,948	647	111	2,190
31100100	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	805	805		
35101400	AGGREGATE BASE COURSE, TYPE B	TON	43	43		
35650500	BASE COURSE WIDENING 10"	SQ YD	1733	1733		
35800100	PREPARATION OF BASE	SQ YD	1146	1146		
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	199	199		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	50	50		
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	4.6	4.6		
40600300	AGGREGATE (PRIME COAT)	TON	24	24		
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	506	506		
40600895	CONSTRUCTING TEST STRIP	EACH	1	1		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160	160		
40600990	TEMPORARY RAMP	SQ YD	240	240		
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	3296	3296		
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	1278	1278		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	194	194		
42001500	P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT	SQ YD	28	28		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	62	62		
44004250	PAVED SHOULDER REMOVAL	SQ YD	1752	1752		
48101200	AGGREGATE SHOULDERS, TYPE B	TON	342	342		
48203023	HOT-MIX ASPHALT SHOULDERS, 6 1/2"	SQ YD	3144	3144		
48203100	HOT-MIX ASPHALT SHOULDERS	TON	197	197		
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1	
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1			1

80% FED 20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0004 ROADWAY	CONSTRUCTION TYPE CODE 0011 STRUCTURE No. 009-2511	CONSTRUCTION TYPE CODE 0011 STRUCTURE No. 009-0512
50105220	PIPE CULVERT REMOVAL	FOOT	147	147		
50200100	STRUCTURE EXCAVATION	CU YD	124			124
50300225	CONCRETE STRUCTURES	CU YD	69.6			69.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	298.6			298.6
50300260	BRIDGE DECK GROOVING	SQ YD	805			805
50300280	CONCRETE ENCASEMENT	CU YD	5.6			5.6
50300300	PROTECTIVE COAT	SQ YD	932			932
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1			1
50500505	STUD SHEAR CONNECTORS	EACH	3312			3,312
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	136,726		51340	85,386
50800515	BAR SPLICERS	EACH	914		125	789
51201600	FURNISHING STEEL PILES HP12X53	FOOT	700			700
51202305	DRIVING PILES	FOOT	700			700
51203600	TEST PILE STEEL HP12X53	EACH	2			2
52100520	ANCHOR BOLTS, 1"	EACH	24			24
51500100	NAME PLATES	EACH	2		1	1
54003000	CONCRETE BOX CULVERTS	CU YD	218.1		218.1	
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	2	2		
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	4	4		
54215553	METAL END SECTIONS 18"	EACH	2	2		
542A0217	PIPE CULVERTS, CLASS A, TYPE 1 12"	FOOT	44	44		
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	90	90		
542D1063	PIPE CULVERTS, CLASS D, TYPE 2 18"	FOOT	110	110		
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	189	189		
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	120			120
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	1	1		
60801018	FLAP GATE 18"	EACH	1	1		
60900215	TYPE C INLET BOX, STANDARD 609001	EACH	4	4		
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	500.0	500.0		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	861	861		
66500105	WOVEN WIRE FENCE, 4'	FOOT	100	100		
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	17	17		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		

* SPECIALTY ITEM

FILE NAME = c:\pw_work\pwidot\sparksgv\d0279949\D672855-sht-SOQ.dgn	USER NAME = sparksgv	DESIGNED - DRH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	PLOT SCALE = 100.0000 ' / in.	DRAWN - DRH	REVISED -	
	PLOT DATE = Aug-31-2011 09:34:46AM	CHECKED - VAM	REVISED -	
		DATE - 8/26/2011	REVISED -	

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET NO. 1 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	3
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0004 ROADWAY	CONSTRUCTION TYPE CODE 0011 STRUCTURE No. 009-2511	CONSTRUCTION TYPE CODE 0011 STRUCTURE No. 009-0512
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	2549	2549		
70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	11363	11363		
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	60	60		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	3390	3390		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1200	1200		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1175	1175		
70500500	TEMPORARY STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	25		25	
78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	11363	11363		
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	74	74		
78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16		
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1825	1825		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	74	74		
Z0004552	APPROACH SLAB REMOVAL	SQYD	151			151
Z0007601	BUILDING REMOVAL NO. 1	L SUM	1	1		
Z0007602	BUILDING REMOVAL NO. 2	L SUM	1	1		
Z0007603	BUILDING REMOVAL NO. 3	L SUM	1	1		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0023602	GRANULAR CULVERT BACKFILL	CU YD	278		278	
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	44			44
Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
Z0030330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	125			125
Z0049902	REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 2	L SUM	1	1		
Z0054517	ROCK FILL FOUNDATION	TON	363		363	
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1,423		223	1,200
X0504200	CONCRETE HEADWALL	EACH	2	2		
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	489			489
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	8678	8678		
* X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1		
20100500	TREE REMOVAL, ACRES	ACRE	5.8	5.8		

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		

*SPECIALTY ITEM

FILE NAME = c:\pw_work\pwidot\sparksgr\d0279949\D672B55-sht-500.dgn	USER NAME = sparksgr	DESIGNED - DRH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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	PLOT DATE = Aug-31-2011 09:40:30AM	CHECKED - VAM	REVISED -	SUMMARY OF QUANTITIES
		DATE - 8/26/2011	REVISED -	SCALE: N/A SHEET NO. 2 OF 2 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	4
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEEDING SCHEDULE

LOCATION	SEEDING, CLASS 2 (ACRE)	NITROGEN FERTILIZER NUTRIENT (POUND)	PHOSPHORUS FERTILIZER NUTRIENT (POUND)	POTASSIUM FERTILIZER NUTRIENT (POUND)	MULCH, METHOD 2 (ACRE)
IL 78					
STA 986+50 TO 991+63 - RT	0.31	28	28	28	0.31
STA 986+55 TO 988+22 - LT	0.07	6	6	6	0.07
STA 988+38 TO 989+71 - LT	0.06	5	5	5	0.06
STA 989+78 TO 991+28 - LT	0.12	11	11	11	0.12
STA 991+38 TO 991+85 - LT	0.03	3	3	3	0.03
STA 991+71 TO 991+99 - RT	0.02	2	2	2	0.02
STA 992+07 TO 996+87 - LT	0.52	47	47	47	0.52
STA 992+21 TO 992+90 - RT	0.07	6	6	6	0.07
STA 993+04 TO 996+78 - RT	0.27	24	24	24	0.27
STA 997+75 TO 1000+28 - LT	0.15	14	14	14	0.15
STA 998+30 TO 1003+50 - RT	0.48	43	43	43	0.48
STA 1000+36 TO 1001+98 - LT	0.08	7	7	7	0.08
STA 1002+14 TO 1003+50 - LT	0.05	5	5	5	0.05
PROPOSED WATERWAY					
STA 6+75 TO 19+22	1.19	107	107	107	1.19
TOTAL	3.4	308	308	308	3.4

RIGHT-OF-WAY MARKERS SCHEDULE

STATION	OFFSET	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS (EACH)
986+00.00	40.00' RT	1
989+50.00	40.00' LT	1
990+00.00	90.00' LT	1
991+00.00	65.00' RT	1
991+50.00	100.00' RT	1
991+58.58	177.86' RT	1
993+28.28	60.00' RT	1
995+50.00	60.00' RT	1
996+50.00	100.00' RT	1
998+50.00	100.00' RT	1
998+50.00	90.00' LT	1
999+00.00	60.00' LT	1
999+00.00	80.00' RT	1
1000+50.00	60.00' LT	1
1001+50.00	40.00' LT	1
1003+00.00	60.00' RT	1
1004+00.00	40.00' RT	1
TOTAL		17

RIPRAP & FILTER FABRIC SCHEDULE

LOCATION	STONE RIPRAP CLASS, A4 (SQ YD)	FILTER FABRIC (SQ YD)
IL 78		
STA 991+50 TO 992+25 - LT	172	172
STA 991+80 TO 992+50 - RT	292	292
PROPOSED WATERWAY		
STA 6+75 TO 7+40	183	183
TOTAL	647	647

TREE REMOVAL SCHEDULE

STATION	OFFSET	TREE REMOVAL (6 TO 15 UNITS DIAMETER) (UNIT)	TREE REMOVAL (OVER 15 UNITS DIAMETER) (UNIT)
IL 78			
989+22	34' LT	15	
989+24	32' LT	15	
991+76	46' LT		20
992+01	51' RT		17
992+01	56' RT	12	
992+03	55' RT	6	
992+06	52' RT	12	
992+08	46' LT		18
993+97	48' LT	6	
994+46	37' LT	14	
994+87	36' LT	12	
998+76	37' LT		30
999+98	45' LT		20
TOTAL		*92	*105

THIS SCHEDULE IS PROVIDED TO GIVE THE CONTRACTOR AN ESTIMATE OF TREE REMOVAL REQUIRED IN THIS PROJECT THIS SURVEY IS BELIEVED TO BE ACCURATE AT THE TIME OF THE SURVEY, AND IT IS UP TO THE CONTRACTOR TO VERIFY CURRENT CONDITIONS. TREE REMOVAL WILL BE PAID FOR IN ACRES, WHICH SHALL INCLUDE ALL AREA ROW TO ROW IN THE AREA WHERE TREE REMOVAL IS ANTICIPATED. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR TREE REMOVAL.

INLET AND PIPE PROTECTION SCHEDULE

STATION	OFFSET	INLET AND PIPE PROTECTION (EACH)
988+01	32' LT	1
989+50	34' LT	1
991+01	50' LT	1
998+57	63' RT	1
1000+55	41' LT	1
1002+29	34' LT	1
TOTAL		6

The VOLKERT/DMA Joint Venture

USER NAME = sparksgv	DESIGNED - DRH	REVISED -	
FILE NAME =	DRAWN - DRH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:40:34AM	DATE - 8/26/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: N/A | SHEET NO. 1 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	5
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (CY)	EARTH EXCAVATION (WIDENING) (CY)	CHANNEL EXCAVATION (CY YD)	EXCAVATION ADJUSTED FOR SHRINKAGE (CY)	EMBANKMENT (CY)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CY)
FAP 614						
PRE STAGE 1						
986+00.00 TO 996+78.00	790	169		719	928	-209
998+02.00 TO 1004+00.00	722	75		598	459	139
STAGE 1						
986+00.00 TO 996+78.00	1639	158		1348	1399	-51
998+02.00 TO 1004+00.00	222	61		213	548	-336
STAGE 2						
986+00.00 TO 996+78.00					337	-337
998+02.00 TO 1004+00.00					39	-39
STAGE 3						
986+00.00 TO 996+78.00					57	-57
998+02.00 TO 1004+00.00					83	-83
WATERWAY						
6+75.00 TO 19+00.00			2266	1699	94	1606
TOTALS	3373	463	2266	4576	3944	632

DRAINAGE SCHEDULE

UPSTREAM STRUCTURE/ INVERT	DOWNSTREAM STRUCTURE/ INVERT	PRC FL END SEC 15" (EA)	T-C INLET (EA)	PRC FL END SEC. 12" (EA)	METAL END SECTION, 18" (EA)	R.C. HEADWALL (EA)	FLAP GATE, 18" (EA)	T-A INLET W/T-8G (EA)	PIPE CULVERT, CL A, TY 1, 12" (FT)	PIPE CULVERT, CL D, TY 1, 15" (FT)	PIPE CULVERT, CL D, TY 2, 18" (FT)	STORM SEWERS, CL A TY 1, 15" (FT)	TRENCH BACKFILL (CY)
FAP 614													
988+00.00, 32.3' LT	989+50.00, 33.8' LT	1						1				144	5
989+50.00, 33.8' LT	990+00.00, 45.1' LT	1										45	
991+00.00, 49.8' LT	991+55.80, 54.7' LT				1	1					54		14
996+34.28, 13.5' LT	996+34.28, 32.1' LT		1	1					14				
996+41.57, 13.5' RT	996+41.57, 30.1' RT		1	1					12				
998+00.00, 72.0' RT	998+57.11, 62.7' RT				1	1	1				56		
998+33.60, 15.5' LT	998+33.60, 28.9' LT		1	1					9				
998+47.69, 15.5' RT	998+47.69, 29.7' RT		1	1					9				
1000+54.91, 41.5' LT	1000+09.00, 44.0' LT									46			7
1002+29.28, 33.6' LT	1001+85.31, 35.0' LT									44			4
TOTALS		2	4	4	2	2	1	1	44	90	110	189	30

PAVEMENT SCHEDULE

LOCATION	HMA SURFACE COURSE, MIX C, N50, 1.5" (TON)	LEVELING BINDER (MACHINE METHOD), 3/4" AND VARIABLE (TON)	PR HMA BINDER COURSE (TON)	BASE COURSE WIDENING, 10" (SQ YD)	AGGREGATE SHOULDERS, TYPE B (TON)	HMA SHOULDERS (TON)	HMA SHOULDERS, 6 1/2" (SQ YD)	SUB-BASE GRANULAR MATERIAL, TYPE A (TON)	BITUMINOUS MATERIALS (PRIME COAT) (TON)	AGGREGATE (PRIME COAT) (TON)	INCIDENTAL HMA SURFACING (TON)	AGGREGATE BASE COURSE, TYPE B (TON)	AGGREGATE SURFACE COURSE, TYPE B (TON)	AGGREGATE FOR TEMPORARY ACCESS (TON)	P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT (SQ YD)
FAP 614															
953+00.00 TO 986+50.00	938	344			191		2978		3.11	16.4	119		38	50	
986+50.00 TO 996+49.71	215	99	2373						0.90	4.7					
995+72.00 TO 996+78.00								473							
998+02.00 TO 998+90.00								332							
998+29.57 TO 1003+50.00	125	63	923						0.57	3.0					
RT SHLD															
986+50.00 TO 988+50.00							96								
986+50.00 TO 991+51.17					25										
988+00.00 TO 996+51.49				737											
988+50.00 TO 996+49.71						75									16
991+75.17 TO 992+83.85					6										
993+07.85 TO 996+51.49					22										
998+38.84 TO 1001+50.00				181											12
998+38.84 TO 1001+68.75						20									
998+40.63 TO 1003+50.00					24										
LT SHLD															
986+50.00 TO 988+10.00							70								
986+50.00 TO 988+13.50					7										
988+06.00 TO 996+41.87						81									
988+06.00 to 996+00.00				640											
988+41.49 TO 991+22.11					15										
991+46.11 TO 996+40.09					30										
998+26.37 TO 1000+23.93					11										
998+29.57 TO 1001+68.75						21									
998+50.00 TO 1001+50.00				175											
1000+48.02 TO 1001+87.71					8										
1002+25.16 TO 1003+50.00					3										
ENTRANCES															
988+30.00									0.02	0.1	8	18	18		
991+33.00													28		
991+67.00													26		
992+97.00													41		
1000+35.00									0.03	0.1	67	25	25		
1002+07.00													23		
TOTAL	1278	506	3296	1733	342	197	3144	805	4.6	24	194	43	199	50	28

GUARDRAIL SCHEDULE

LOCATION	SIDE	TYPE A SPBGR, 6 FT POSTS (FT)	TBT, TYPE 6 (EA)	TBT, TYPE 1 SPECIAL (TANGENT) (EA)	TERMINAL MARKER DIRECT APPLIED (EA)	GUARDRAIL MARKERS, TYPE A (EA)
FAP 614						
993+50.00 TO 996+67.77	RT	162.5	1	1	1	4
995+74.02 TO 996+53.81	LT	112.5	1	1	1	4
998+12.23 TO 1000+18.62	LT	112.5	1	1	1	4
998+26.19 TO 1000+36.99	RT	112.5	1	1	1	4
TOTALS		500.0	4	4	4	16

TEMPORARY RAMP AND BUTT JOINT SCHEDULE

LOCATION (LIMITS OF PAY ITEM)	TEMPORARY RAMP (SQ YD)	HMA SURFACE REMOVAL BUTT JOINT (SQ YD)
FAP 614		
953+00 TO 953+30		73
953+00 TO 953+45	110	
1003+05 TO 1003+50	130	
1003+20 TO 1003+50		87
TOTALS	240	160

PAVEMENT MARKING SCHEDULE

LOCATION	SIDE	DESCRIPTION	PAINT PAVEMENT MARKING LINE, 5" (FT)		PAVEMENT MARKING REMOVAL (SQ FT)	RAISED REFLECTIVE PAVEMENT MARKERS	RAISED REFLECTIVE PAVEMENT MARKERS REMOVAL (EA)
			YELLOW	WHITE		2-WAY AMBER	
FAP 614							
953+00 to 986+50			838	6700		52	52
986+50 to 1003+50	LT	EDGE LINE		1700			
	CL	SKIP DASH	425		495	22	22
	RT	EDGE LINE		1700	1330		
TOTALS			11363		1825	74	74

TEMPORARY STRIPING SCHEDULE

LOCATION	TEMPORARY PAVEMENT MARKING (FT)			WORK ZONE PAVEMENT MARKING REMOVAL (SQ FT)
	5" LINE SOLID WHITE	5" LINE SKIP DASH YELLOW	24" LINE SOLID WHITE	
FAP 614				
953+00 TO 986+60	6720	840	12	0
STAGE 1	3707		24	1593
STAGE 2	3693		24	1587
TOTALS	*11363		60	**3180

*A QUANTITY EQUAL TO THAT OF THE FINAL PAVEMENT MARKING SHALL BE USED FOR TEMPORARY PAVEMENT PER TRAFFIC AND CONTROL PROTECTION STANDARD 701321

**TOTAL "WORK ZONE PAVEMENT MARKING REMOVAL" QUANTITIY IN THE S.O.Q. INCLUDES THE LAST LIFT OF "SHORT TERM PAVEMENT MARKING", THEREFORE 3180 SQ FT +210 SQ FT=3390 SQ FT.

REMOVAL SCHEDULE

LOCATION	SIDE	GUARDRAIL REMOVAL (FT)	DRIVEWAY PAVEMENT REMOVAL (SQ FT)	HMA SURFACE REMOVAL, VARIABLE DEPTH (SQ YD)	PAVED SHOULDER REMOVAL (SQ YD)	PIPE CULVERT REMOVAL (FT)
FAP 614						
953+00.00 TO 986+50.00				8189		
986+50.00 TO 988+13.87				440		
988+13.87 TO 988+41.21	LT			49		28
989+75.00	LT		559			20
991+12.67 TO 991+56.69	LT					50
993+70.31 TO 996+67.23	LT				920	
994+97.45 TO 999+21.21	RT	424				
995+66.83 TO 1000+03.39	LT	437				
995+90.35 TO 996+95.92	RT				293	
997+90.06 TO 998+99.93	RT				332	
998+09.80 TO 998+86.39	LT				207	
1000+25.10 TO 1000+46.86	LT					22
1001+94.92 TO 1002+21.57	LT					27
TOTALS		861	559	8678	1752	147

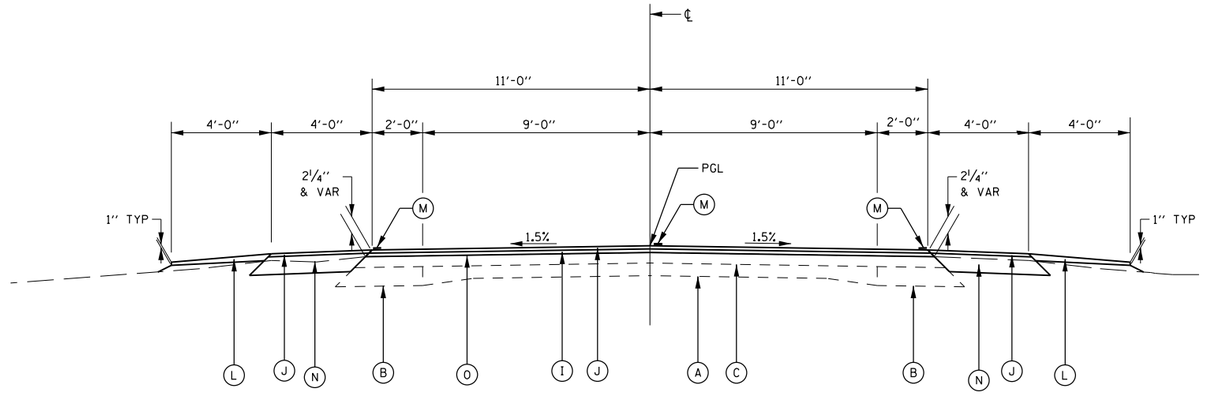
STAGING SCHEDULE

LOCATION	TEMPORARY CONCRETE BARRIER (FT)	RELOCATE TEMPORARY CONCRETE BARRIER (FT)	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3 (EA)	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3 (EA)
FAP 614				
STAGE 1	1175		2	
STAGE 2	25	1175		2
TOTALS	1200	1175	2	2

ENTRANCE IMPROVEMENT SCHEDULE

LOCATION		TYPE OF ENTRANCE	EX MATERIAL TYPE	WIDTH	LENGTH (FROM EDGE OF PVT/ BIT SHLD TO LIMITS OF IMPROVEMENT)	PR BIT. CONC. THICKNESS	PREPARATION OF BASE	AGGREGATE SURFACE COURSE, TYPE B	INCIDENTAL HMA SURFACE
(LT / RT)	(STA)	(FE / PE / CE / MB) (RURAL / URBAN)	(EARTH / AGG. / BIT. / P.C.C.)	FOOT	FOOT	INCH	SQ. YD.	TON	TON
RT	955+10	SR	BIT	26	10	2	40	0	4.5
LT	955+21	SR	BIT	45	10	2	61	0	6.8
LT	962+11	SR	BIT	44	10	2	60	0	6.7
LT	964+20	CE	BIT	66	19	2	96	5	9.5
LT	966+89	CE	BIT	35	19	2	61	3	5.6
LT	967+54	CE	AGG	20	19	3.5	44	2	6.5
LT	967+89	SR	BIT	57	10	2	74	0	8.3
LT	974+95	SR	BIT	44	10	2	60	0	6.8
RT	974+96	SR	BIT	28	10	2	42	0	4.8
LT	976+34	MB	BIT	27	15	2	41	0	4.6
LT	976+57	CE	BIT	22	19	2	47	2	4.0
RT	977+00	PE	BIT	22	19	2	39	3	4.0
RT	978+34	PE	BIT	22	19	2	39	3	4.0
RT	979+17	CE	BIT	34	19	2	60	3	5.5
LT	979+81	MB	BIT	16	13	2	29	0	3.2
LT	979+97	PE	BIT	18	19	2	36	2	3.5
LT	980+79	PE	BIT	18	19	2	36	2	3.5
LT	982+55	PE	BIT	22	19	2	39	3	4.0
LT	983+77	CE	BIT	48	19	2	76	4	7.2
LT	984+50	CE	BIT	46	19	2	73	4	7.0
LT	985+94	CE	BIT	64	19	2	93	5	9.2
TOTALS							1146	*38	*119

*THE QUANTITY FOR "AGGREGATE SUFACE COURSE, TYPE B" AND "INCIDENTAL HOT-MIX ASPHALT SURFACING" HAS BEEN ADDED TO THE PAVEMENT SCHEDULE ON SHEET 6.

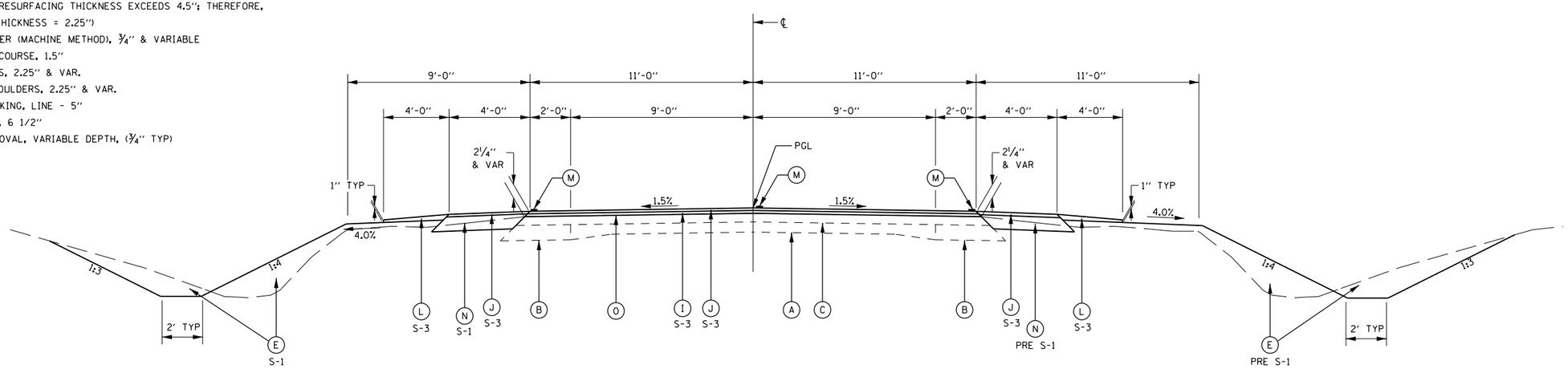


FAP 614 - TYPICAL CROSS SECTION NO. 1

STA 953+00 TO STA 986+50

LEGEND

- (A) EX PCC PAVEMENT 9 - 6 - 9
- (B) EX HMA BASE CSE WIDENING 9"
- (C) EX HMA RESURFACING, 6"±
- (D) EX HMA SHOULDERS / WIDENING, 12"+ (TO BE REMOVED)
- (E) PR EARTHWORK (EARTH EXCAVATION & EMBANKMENT)
- (F) PR BASE CSE / WIDENING, 10"
- (G) PR SUB-BASE GRANULAR MATERIAL, TYPE A, VAR. DEPTH, 6" MIN.
- (H) PR HMA BINDER COURSE, VAR. DEPTH (USED ONLY IN LOCATIONS WHERE TOTAL PR RESURFACING THICKNESS EXCEEDS 4.5"; THEREFORE, MINIMUM BINDER THICKNESS = 2.25")
- (I) PR LEVELING BINDER (MACHINE METHOD), ¾" & VARIABLE
- (J) PR HMA SURFACE COURSE, 1.5"
- (K) PR HMA SHOULDERS, 2.25" & VAR.
- (L) PR AGGREGATE SHOULDERS, 2.25" & VAR.
- (M) PR PAVEMENT MARKING, LINE - 5"
- (N) PR HMA SHOULDER, 6 1/2"
- (O) HMA SURFACE REMOVAL, VARIABLE DEPTH, (¾" TYP)



FAP 614 - TYPICAL CROSS SECTION NO. 2

STA 986+50.00 TO STA 988+06.00
RT STA 988+06.00 TO RT STA 988+50.00

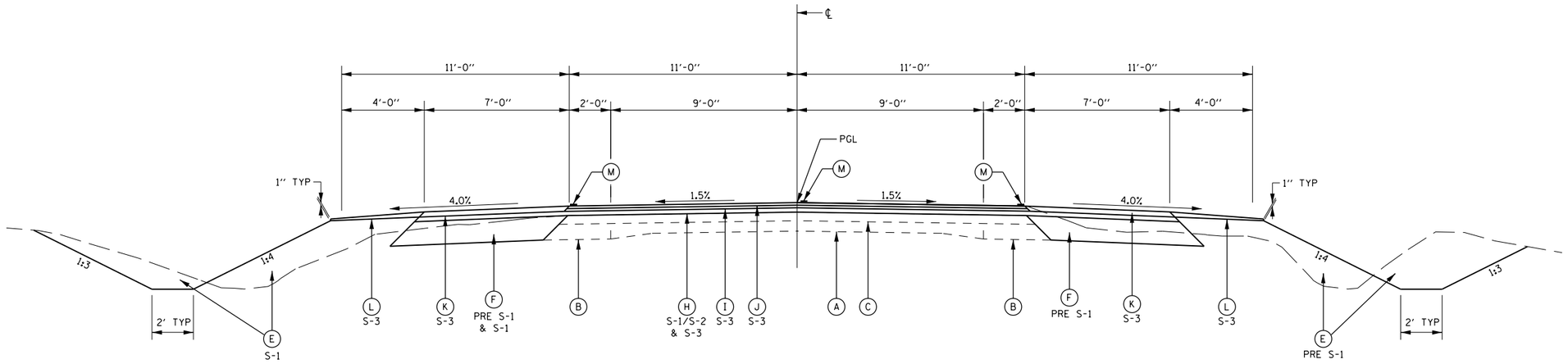
The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 19.6850 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:40AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS – IL 78

SCALE: NTS | SHEET NO. 1 OF 4 SHEETS | STA. 953+00.00 TO STA. 988+06.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	8
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



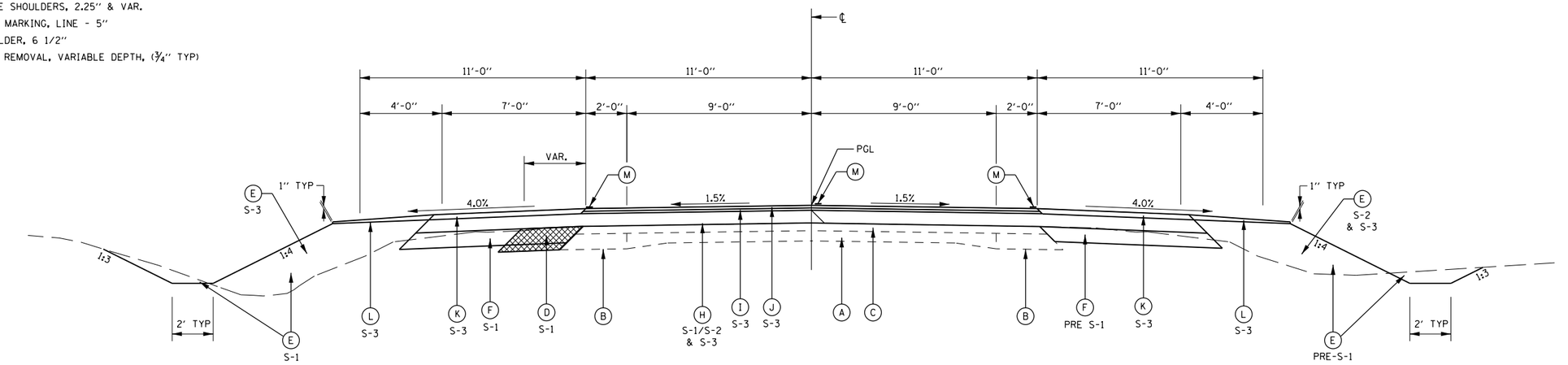
FAP 614 - TYPICAL CROSS SECTION NO. 3

LT STA 988+06.00 TO LT STA 988+50.00 - NO PR HMA BINDER

NOTE: PR HMA SHOULDER/ HMA BASE COURSE WID, 10″ TAPERS IN WIDTH FROM LT STA 988+06.00 TO LT STA 988+13.00, OUTSIDE EDGE 11.0′ LT TO 18.0′ LT; AND FROM RT STA 988+50.00 TO RT STA 989+25.00, OUTSIDE EDGE 13.0′ RT TO 18.0′ RT.

LEGEND

- (A) EX PCC PAVEMENT 9 - 6 - 9
- (B) EX HMA BASE CSE WIDENING 9″
- (C) EX HMA RESURFACING, 6″±
- (D) EX HMA SHOULDERS / WIDENING, 12″+ (TO BE REMOVED)
- (E) PR EARTHWORK (EARTH EXCAVATION & EMBANKMENT)
- (F) PR BASE CSE / WIDENING, 10″
- (G) PR SUB-BASE GRANULAR MATERIAL, TYPE A, VAR. DEPTH, 6″ MIN.
- (H) PR HMA BINDER COURSE, VAR. DEPTH (USED ONLY IN LOCATIONS WHERE TOTAL PR RESURFACING THICKNESS EXCEEDS 4.5″; THEREFORE, MINIMUM BINDER THICKNESS = 2.25″)
- (I) PR LEVELING BINDER (MACHINE METHOD), ¾″ & VARIABLE
- (J) PR HMA SURFACE COURSE, 1.5″
- (K) PR HMA SHOULDERS, 2.25″ & VAR.
- (L) PR AGGREGATE SHOULDERS, 2.25″ & VAR.
- (M) PR PAVEMENT MARKING, LINE - 5″
- (N) PR HMA SHOULDER, 6 1/2″
- (O) HMA SURFACE REMOVAL, VARIABLE DEPTH, (¾″ TYP)



FAP 614 - TYPICAL CROSS SECTION NO. 4

STA 988+50.00 TO STA 991+72.00
STA 991+72.00 TO STA 992+34.00 - WIDENING ON RT SIDE ONLY (PRE S-1); EX PVT & CULV. TBR; PR DBL BOX CULV. GRAN. CULV. BACKFILL; PR HMA BASE CSE, 10″ - NO HMA BINDER
STA 992+34.00 TO STA 995+72.00
RT STA 995+00.0 TO RT STA 995+50.00 - PR HMA SHLD/WID. WIDTH TAPERS FROM 7.0′ TO 5.0′
LT STA 995+25.00 TO LT STA 995+75.00 - PR HMA SHLD/WID. WIDTH TAPERS FROM 7.0′ TO 5.0′

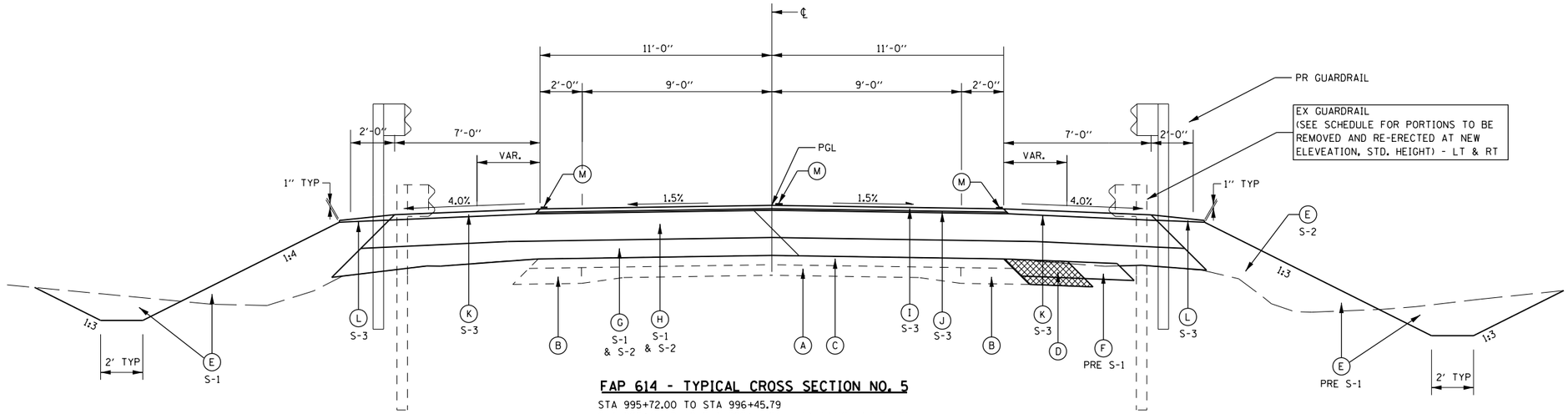
The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 19.6850 ′ / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:41AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS – IL 78

SCALE: NTS | SHEET NO. 2 OF 4 SHEETS | STA. 988+06.00 TO STA. 995+72.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	9
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

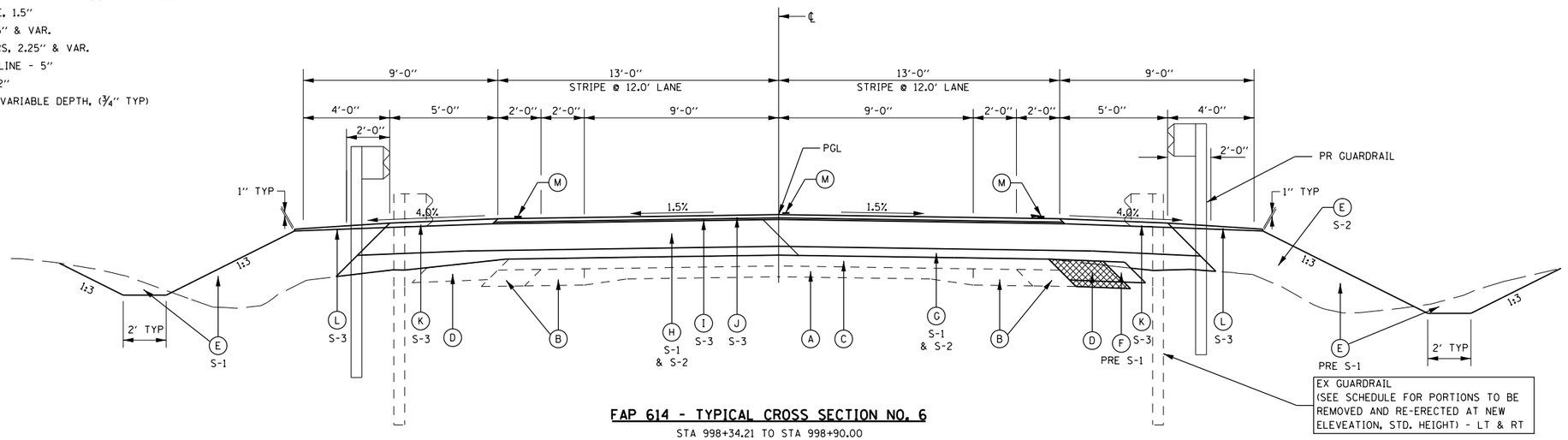


FAP 614 - TYPICAL CROSS SECTION NO. 5

STA 995+72.00 TO STA 996+45.79
STA 996+45.79 TO STA 996+77.64 - PR BRIDGE APPR. PVT.
STA 996+77.64 TO STA 998+02.36 - PR BRIDGE
STA 998+02.36 TO STA 998+34.21 - PR BRIDGE APPR. PVT.

LEGEND

- (A) EX PCC PAVEMENT 9 - 6 - 9
- (B) EX HMA BASE CSE WIDENING 9"
- (C) EX HMA RESURFACING, 6"±
- (D) EX HMA SHOULDERS / WIDENING, 12"+ (TO BE REMOVED)
- (E) PR EARTHWORK (EARTH EXCAVATION & EMBANKMENT)
- (F) PR BASE CSE / WIDENING, 10"
- (G) PR SUB-BASE GRANULAR MATERIAL, TYPE A, VAR. DEPTH, 6" MIN.
- (H) PR HMA BINDER COURSE, VAR. DEPTH (USED ONLY IN LOCATIONS WHERE TOTAL PR RESURFACING THICKNESS EXCEEDS 4.5"; THEREFORE, MINIMUM BINDER THICKNESS = 2.25")
- (I) PR LEVELING BINDER (MACHINE METHOD), ¾" & VARIABLE
- (J) PR HMA SURFACE COURSE, 1.5"
- (K) PR HMA SHOULDERS, 2.25" & VAR.
- (L) PR AGGREGATE SHOULDERS, 2.25" & VAR.
- (M) PR PAVEMENT MARKING, LINE - 5"
- (N) PR HMA SHOULDER, 6 1/2"
- (O) HMA SURFACE REMOVAL, VARIABLE DEPTH, (¾" TYP)



FAP 614 - TYPICAL CROSS SECTION NO. 6

STA 998+34.21 TO STA 998+90.00

NOTE: PR HMA BASE CSE/WID, 10" ON RT SIDE TO BE BUILT IN PRE S-1 TAPERS IN WIDTH FROM STA 999+00.00 TO STA 999+50.00, OUTSIDE EDGE 16.0' RT TO 18.0' + RT (FINAL SHLD. SURFACE, 18.0' RT); CONTINUES AT 18.0' + RT (FINAL SHLD. SURFACE, 18.0' RT) TO STA 1000+75.00, THEN TAPERS DOWN TO 14.0' + RT (FINAL SHLD. SURFACE, 14.0' RT) AT STA 1001+50.00.

The VOLKERT/DMA Joint Venture

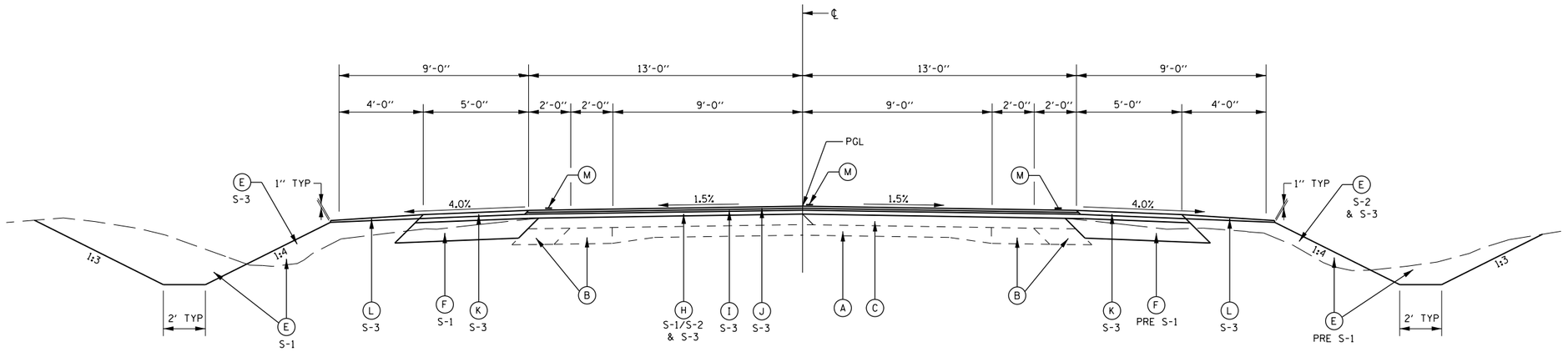
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 19.6850 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:40:41AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS – IL 78

SCALE: NTS | SHEET NO. 3 OF 4 SHEETS | STA. 995+72.00 TO STA. 998+90.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	10
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



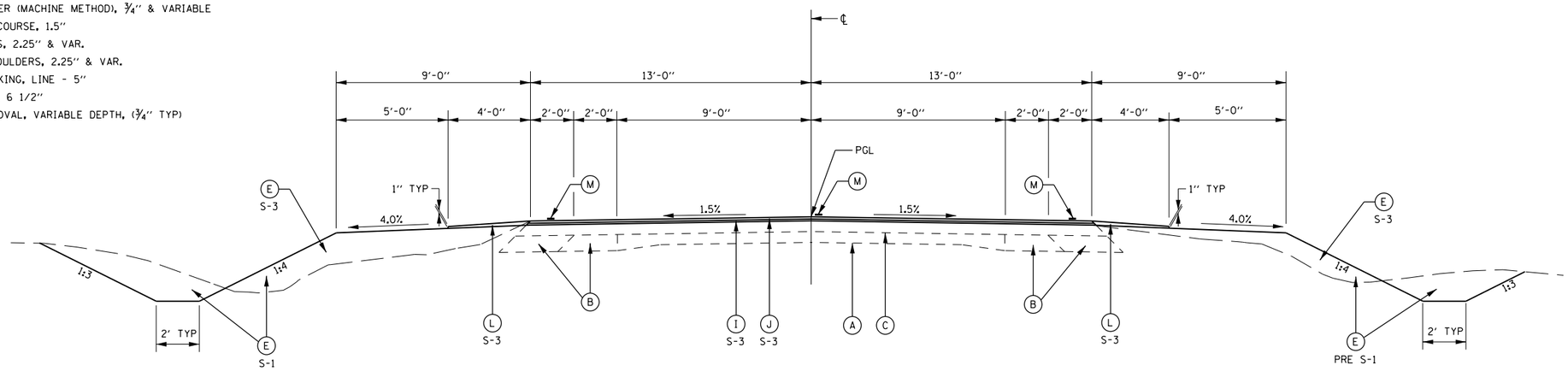
FAP 614 - TYPICAL CROSS SECTION NO. 7

STA 998+90.00 TO STA 1001+00.00
STA 1001+00.00 TO STA 1001+50.00 - NO PR HMA BINDER

NOTE: PR HMA SHLD/HMA BASE CSE WID, 10" TAPERS IN WIDTH FROM STA 1000+75.00 TO STA 1001+50.00 ON BOTH LT & RT SIDES, OUTSIDE EDGE 18.0' LT & RT TO 14.0' LT & RT (1' STUBS)

LEGEND

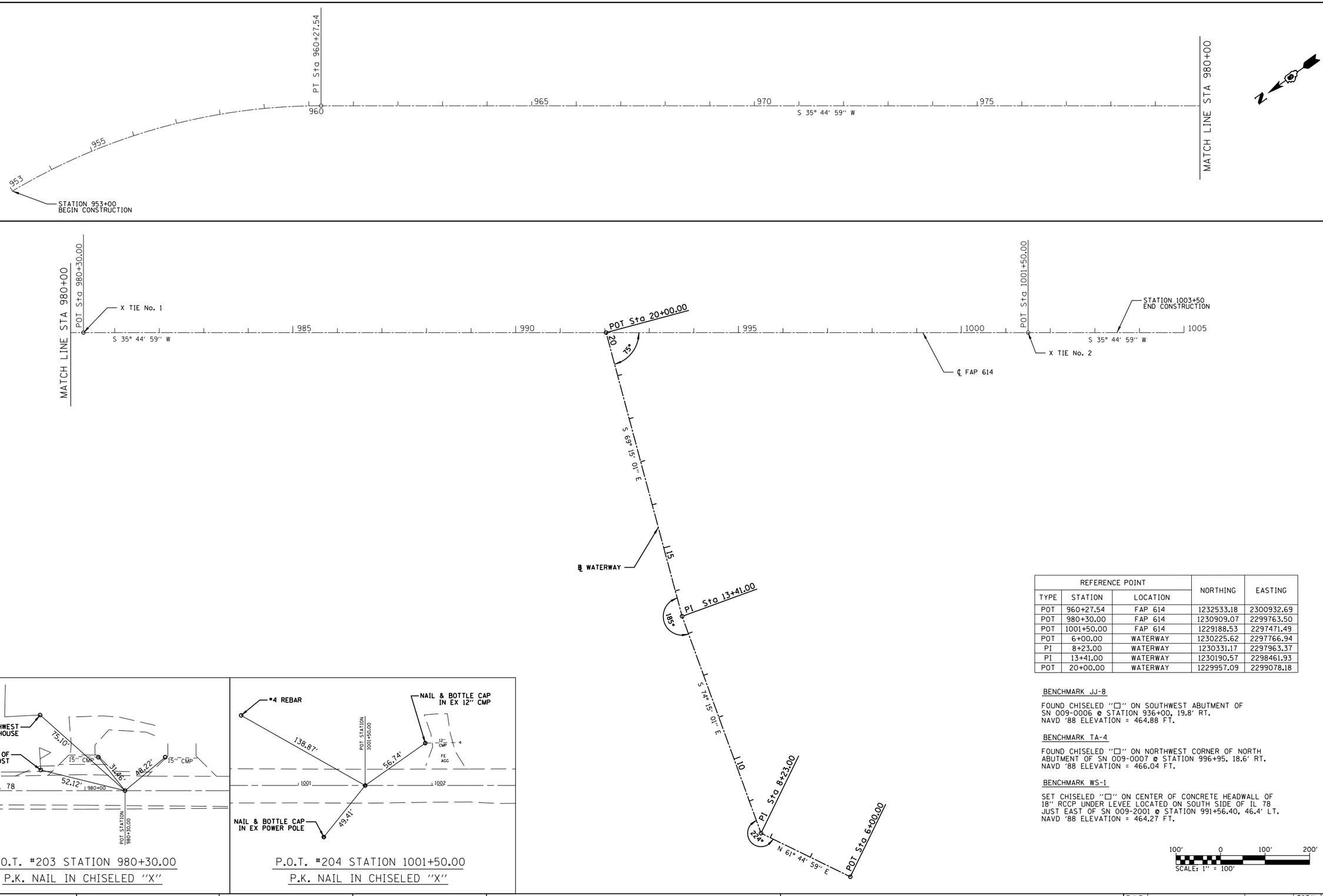
- (A) EX PCC PAVEMENT 9 - 6 - 9
- (B) EX HMA BASE CSE WIDENING 9"
- (C) EX HMA RESURFACING, 6"±
- (D) EX HMA SHOULDERS / WIDENING, 12"+ (TO BE REMOVED)
- (E) PR EARTHWORK (EARTH EXCAVATION & EMBANKMENT)
- (F) PR BASE CSE / WIDENING, 10"
- (G) PR SUB-BASE GRANULAR MATERIAL, TYPE A, VAR. DEPTH, 6" MIN.
- (H) PR HMA BINDER COURSE, VAR. DEPTH (USED ONLY IN LOCATIONS WHERE TOTAL PR RESURFACING THICKNESS EXCEEDS 4.5"; THEREFORE, MINIMUM BINDER THICKNESS = 2.25")
- (I) PR LEVELING BINDER (MACHINE METHOD), ¾" & VARIABLE
- (J) PR HMA SURFACE COURSE, 1.5"
- (K) PR HMA SHOULDERS, 2.25" & VAR.
- (L) PR AGGREGATE SHOULDERS, 2.25" & VAR.
- (M) PR PAVEMENT MARKING, LINE - 5"
- (N) PR HMA SHOULDER, 6 1/2"
- (O) HMA SURFACE REMOVAL, VARIABLE DEPTH, (¾" TYP)



FAP 614 - TYPICAL CROSS SECTION NO. 8

STA 1001+50.00 TO STA 1003+50.00

The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL CROSS SECTIONS – IL 78		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - DRH	REVISED -				614	144 (B-4); 144 (B-5)	CASS	97	11
	PLOT SCALE = 19.6850 ' / in.	CHECKED - VAM	REVISED -						CONTRACT NO. 72B55		
	PLOT DATE = Aug-31-2011 09:40:41AM	DATE - 8/26/2011	REVISED -		SCALE: NTS	SHEET NO. 4 OF 4 SHEETS STA. 998+90.00 TO STA. 1003+50.00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



P.O.T. #203 STATION 980+30.00

P.K. NAIL IN CHISELED ″X″

P.O.T. #204 STATION 1001+50.00

P.K. NAIL IN CHISELED ″X″

REFERENCE POINT			NORTHING	EASTING
TYPE	STATION	LOCATION		
POT	960+27.54	FAP 614	1232533.18	2300932.69
POT	980+30.00	FAP 614	1230909.07	2299763.50
POT	1001+50.00	FAP 614	1229188.53	2297471.49
POT	6+00.00	WATERWAY	1230225.62	2297766.94
PI	8+23.00	WATERWAY	1230331.17	2297963.37
PI	13+41.00	WATERWAY	1230190.57	2298461.93
POT	20+00.00	WATERWAY	1229957.09	2299078.18

BENCHMARK JJ-8

FOUND CHISELED ″□″ ON SOUTHWEST ABUTMENT OF SN 009-0006 ℄ STATION 936+00, 19.8′ RT.
NAVD ′88 ELEVATION = 464.88 FT.

BENCHMARK TA-4

FOUND CHISELED ″□″ ON NORTHWEST CORNER OF NORTH ABUTMENT OF SN 009-0007 ℄ STATION 996+95, 18.6′ RT.
NAVD ′88 ELEVATION = 466.04 FT.

BENCHMARK WS-1

SET CHISELED ″□″ ON CENTER OF CONCRETE HEADWALL OF 18″ RCCP UNDER LEVEE LOCATED ON SOUTH SIDE OF IL 78 JUST EAST OF SN 009-2001 ℄ STATION 991+56.40, 46.4′ LT.
NAVD ′88 ELEVATION = 464.27 FT.

100′ 0 100′ 200′
SCALE: 1″ = 100′

FILE NAME = c:\...\72B55-sht-align.dgn	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 200.0000 ′ / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:47AM	DATE - 8/26/2011	REVISED -

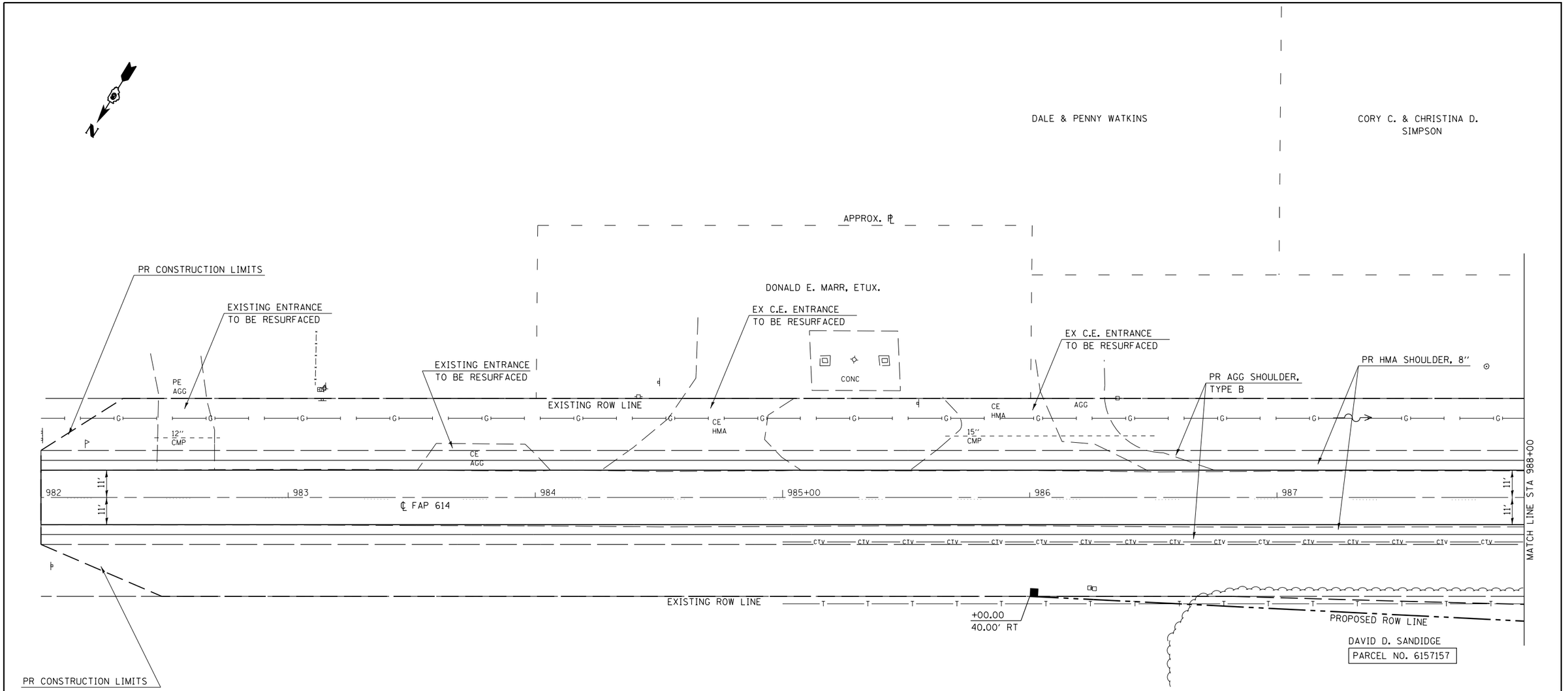
The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES & BENCHMARK DATA

SCALE: 1″ = 100′ | SHEET NO. 1 OF 1 SHEETS | STA. 980+30.00 TO STA. 1001+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	12
		CONTRACT NO. 72B55		
		ILLINOIS	FED. AID PROJECT	



USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
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PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:40:51AM	DATE - 8/26/2011	REVISED -	

The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

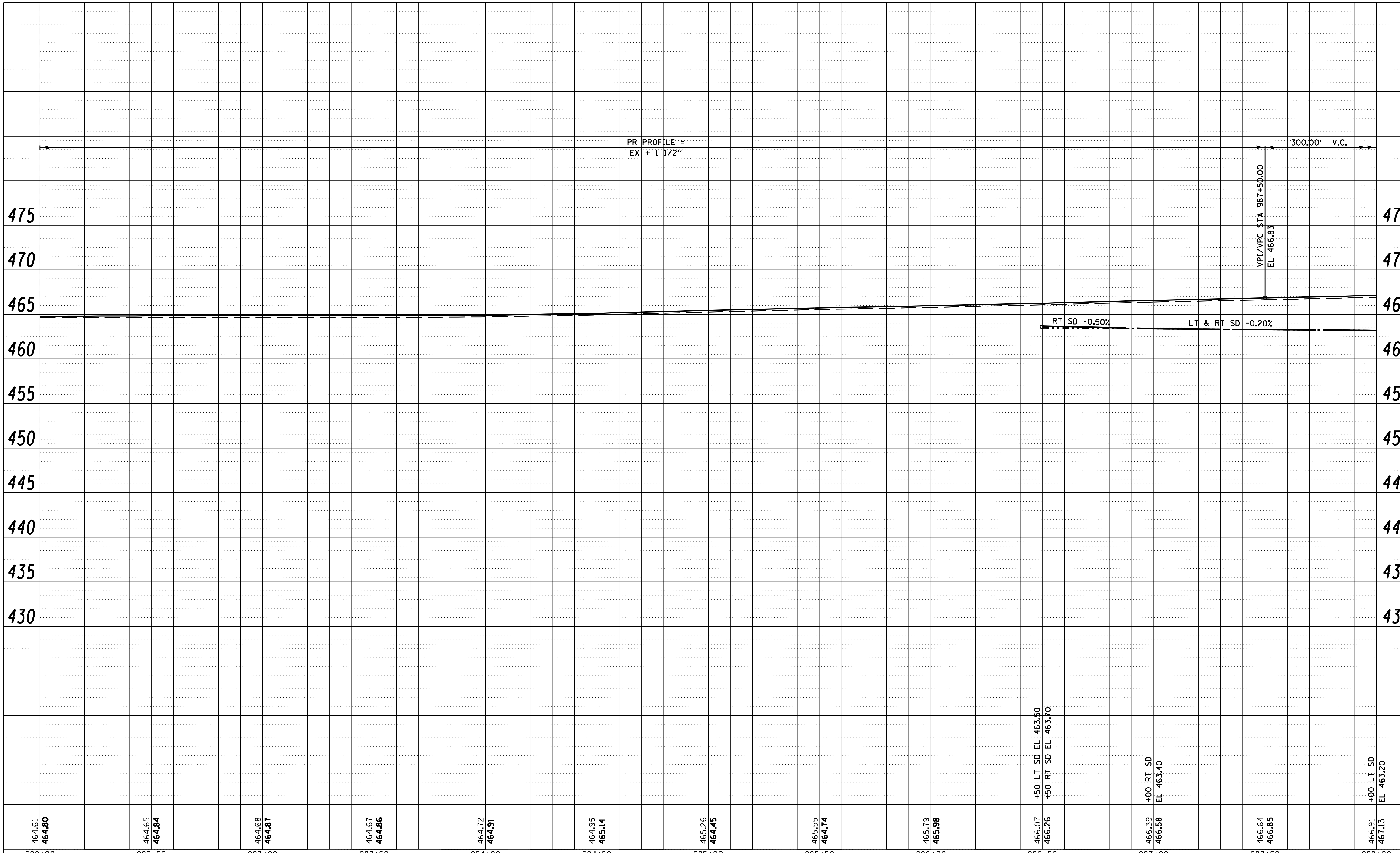
PLAN – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20' | SHEET NO. 1 OF 8 SHEETS | STA. 982+00 TO STA. 988+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	13
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
NOTE BOOK NO. ____
SURVEYED ____
PLOTTED ____
ALIGNMENT CHECKED ____
RT. OF WAY CHECKED ____
CADD FILE NAME ____
BY | DATE

PROFILE
NOTE BOOK NO. ____
SURVEYED ____
PLOTTED ____
GRADES CHECKED ____
B.M. NOTED ____
STRUCTURE NOTAT'NS CH'KD
BY | DATE



The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	FILE NAME =	DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:51AM	DATE - 8/26/2011	REVISED -

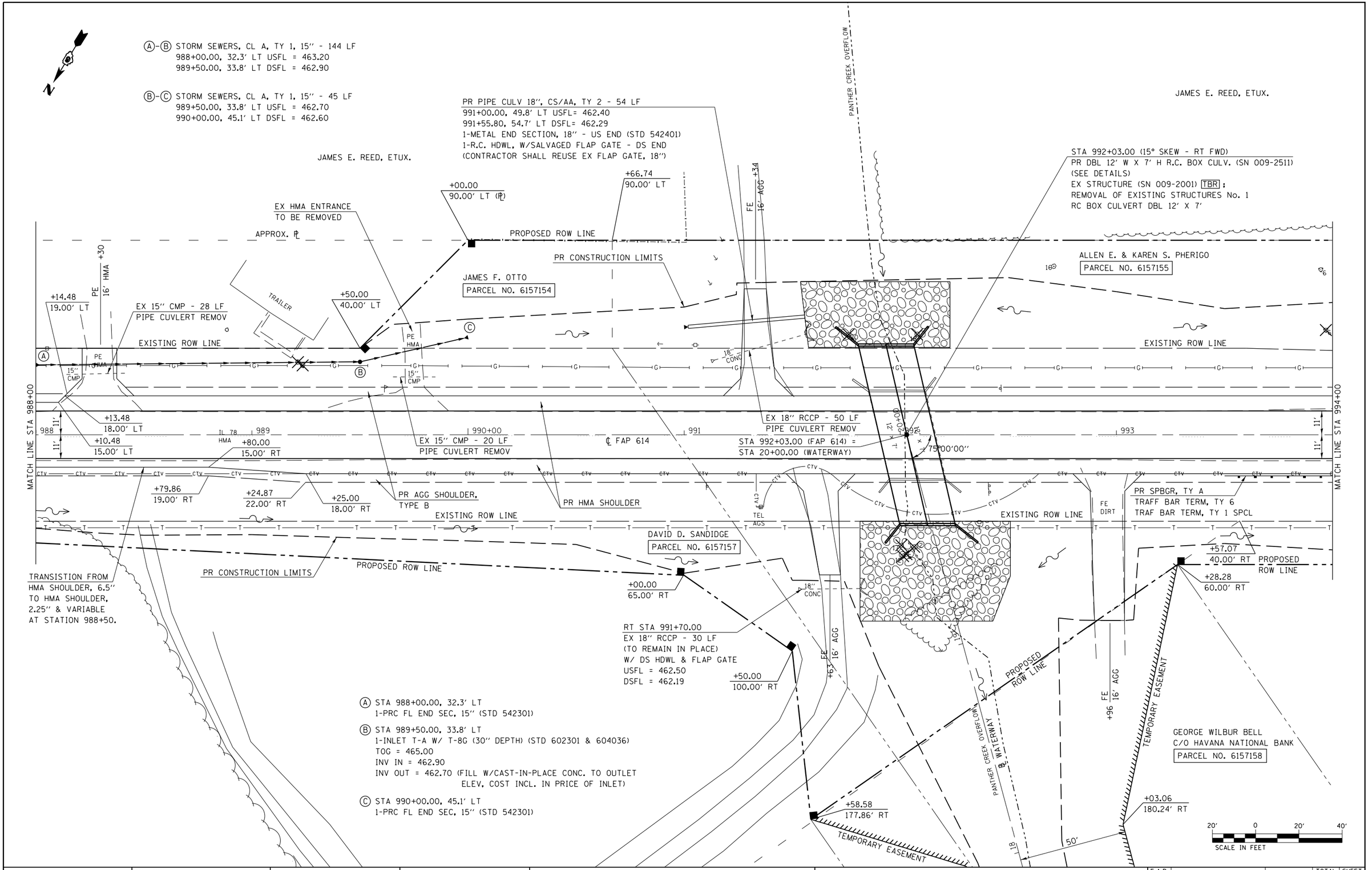
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20', 1"=5' | SHEET NO. 2 OF 8 SHEETS | STA. 982+00 TO STA. 988+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	14
		CONTRACT NO. 72B55		

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
FILE NAME =	DRAWN - DRH	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:40:52AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20' | SHEET NO. 3 OF 8 SHEETS | STA. 988+00 TO STA. 994+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	15
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
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CHECKED
NOTE BOOK
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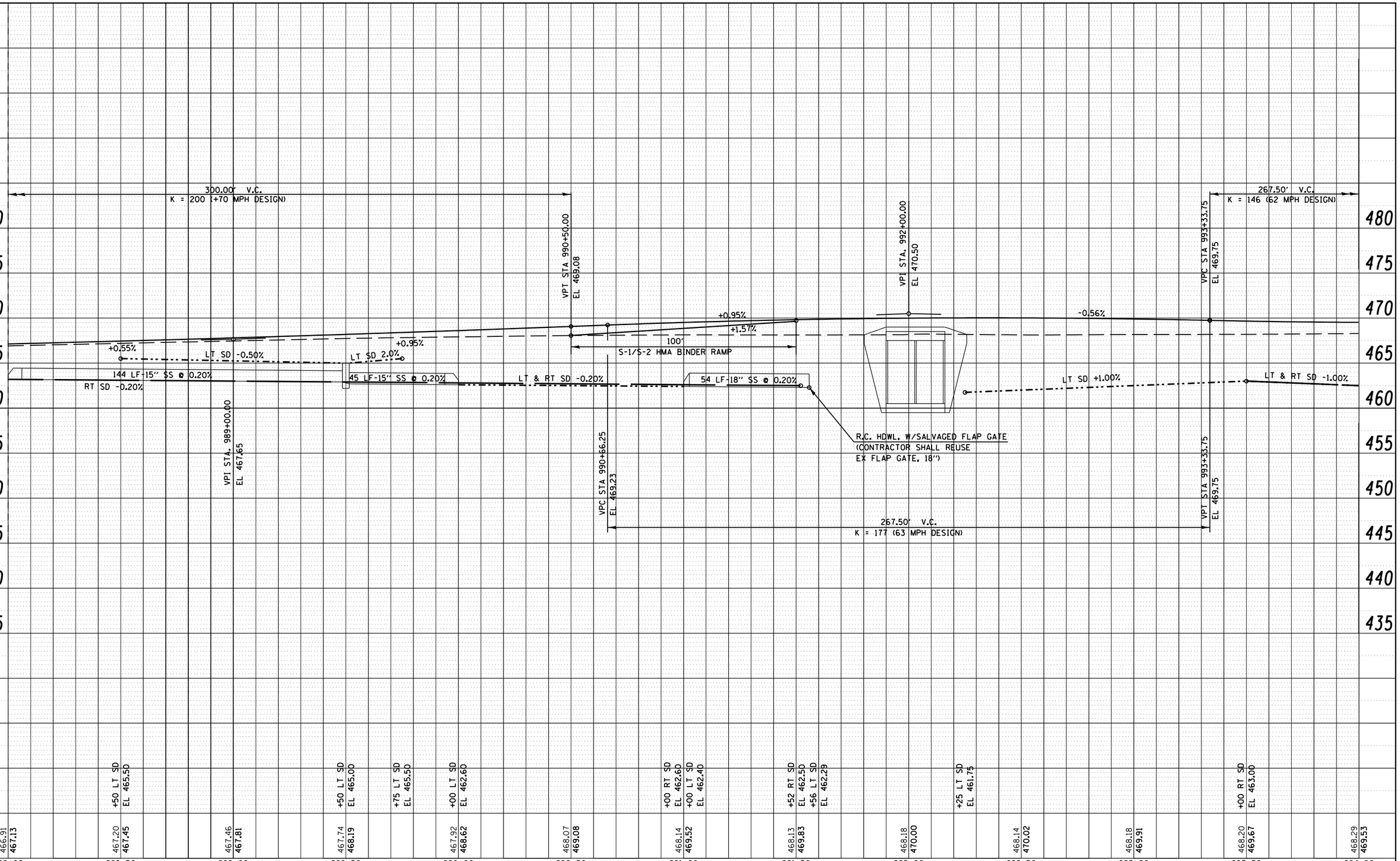
BY
DATE

PROFILE
SURVEYED
PLOTTED
CHECKED
NOTE BOOK
NO.
BY
DATE



USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
FILE NAME =	DRAWN - DRH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:40:52AM	DATE - 8/26/2011	REVISED -	

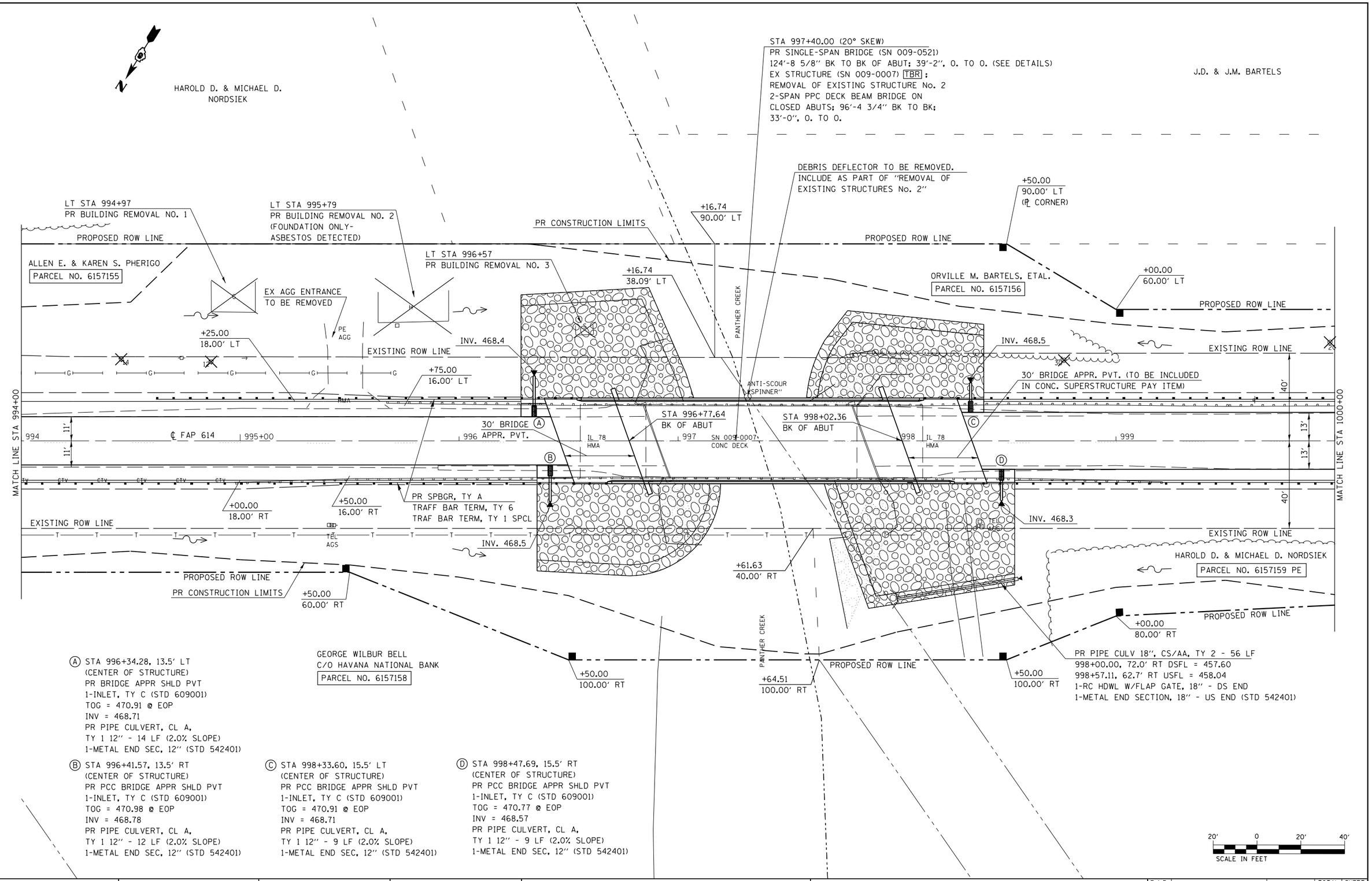
The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20', 1"=5' | SHEET NO. 4 OF 8 SHEETS | STA. 988+00 TO STA. 994+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	16
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Ⓐ STA 996+34.28, 13.5' LT
(CENTER OF STRUCTURE)
PR BRIDGE APPR SHLD PVT
1-INLET, TY C (STD 609001)
TOG = 470.91 @ EOP
INV = 468.71
PR PIPE CULVERT, CL A,
TY 1 12" - 14 LF (2.0% SLOPE)
1-METAL END SEC, 12" (STD 542401)

Ⓑ STA 996+41.57, 13.5' RT
(CENTER OF STRUCTURE)
PR PCC BRIDGE APPR SHLD PVT
1-INLET, TY C (STD 609001)
TOG = 470.98 @ EOP
INV = 468.78
PR PIPE CULVERT, CL A,
TY 1 12" - 12 LF (2.0% SLOPE)
1-METAL END SEC, 12" (STD 542401)

Ⓒ STA 998+33.60, 15.5' LT
(CENTER OF STRUCTURE)
PR PCC BRIDGE APPR SHLD PVT
1-INLET, TY C (STD 609001)
TOG = 470.91 @ EOP
INV = 468.71
PR PIPE CULVERT, CL A,
TY 1 12" - 9 LF (2.0% SLOPE)
1-METAL END SEC, 12" (STD 542401)

Ⓓ STA 998+47.69, 15.5' RT
(CENTER OF STRUCTURE)
PR PCC BRIDGE APPR SHLD PVT
1-INLET, TY C (STD 609001)
TOG = 470.77 @ EOP
INV = 468.57
PR PIPE CULVERT, CL A,
TY 1 12" - 9 LF (2.0% SLOPE)
1-METAL END SEC, 12" (STD 542401)

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
FILE NAME =	DRAWN - DRH	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:40:53AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

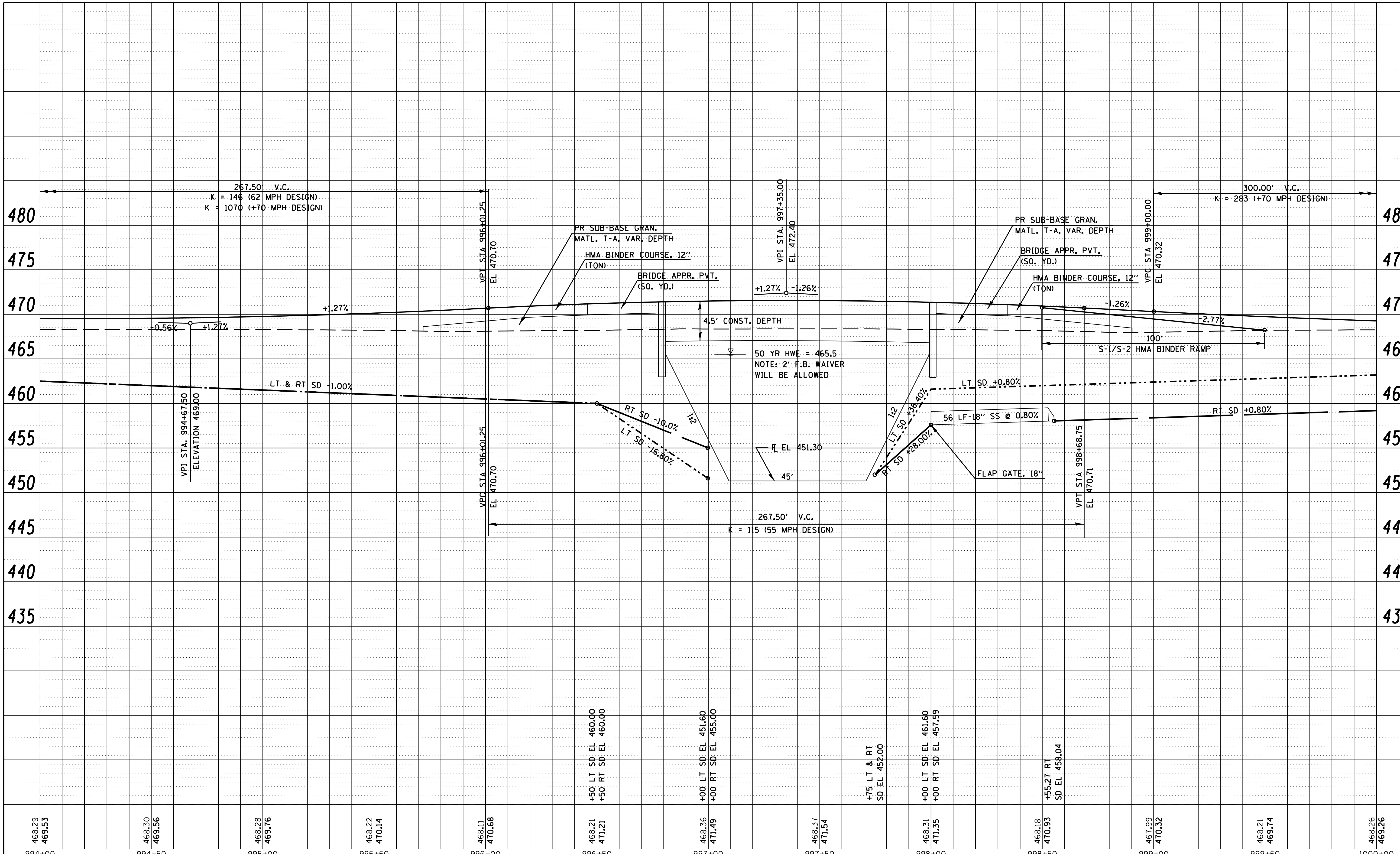
PLAN – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20' | SHEET NO. 5 OF 8 SHEETS | STA. 994+00 TO STA. 1000+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	17
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
NOTE BOOK NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
BY
DATE

PROFILE
NOTE BOOK NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTAT'NS CH'KD
BY
DATE



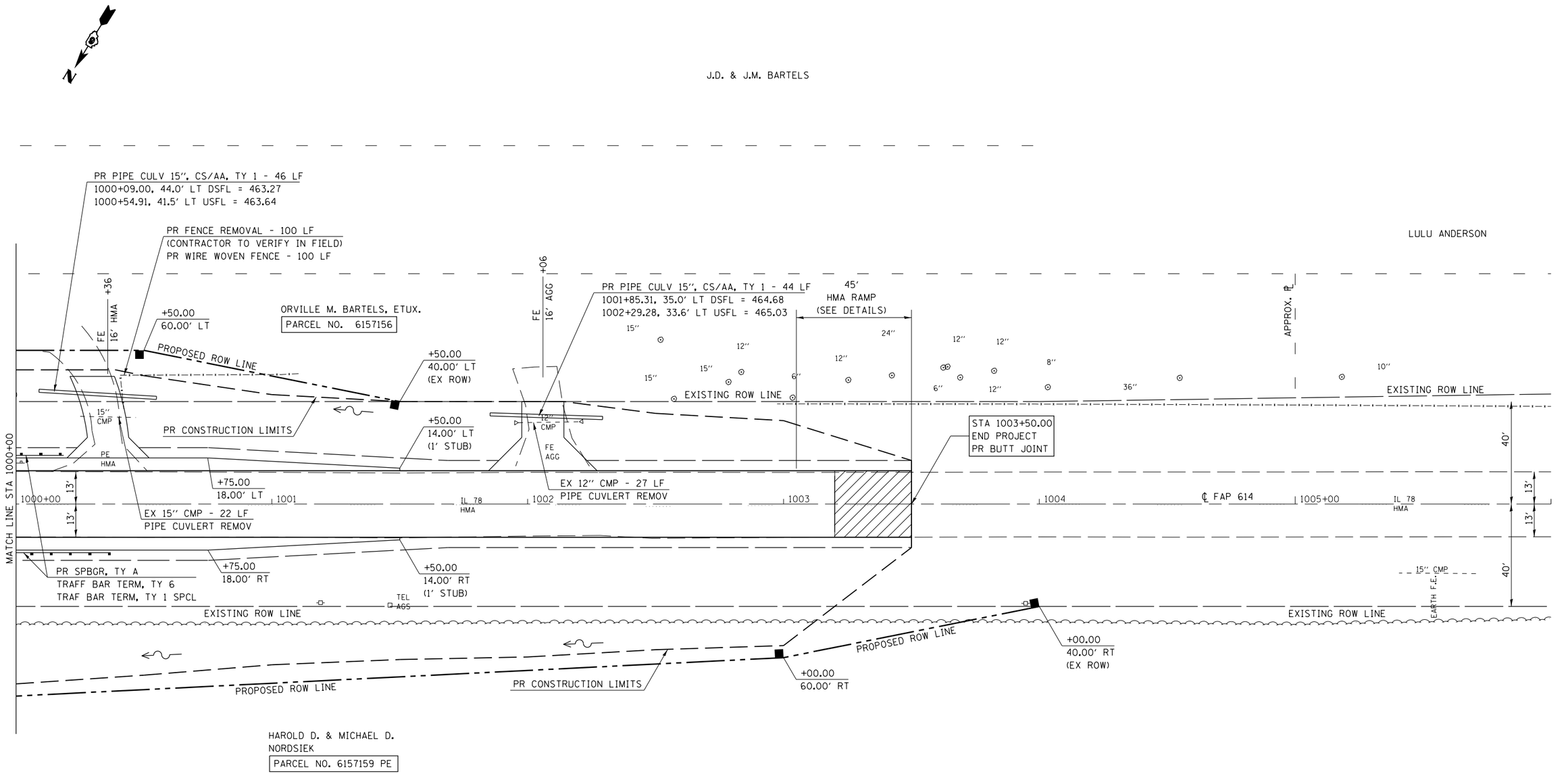
The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	FILE NAME =	DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:54AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20', 1"=5' | SHEET NO. 6 OF 8 SHEETS | STA. 994+00 TO STA. 1000+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	18
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
FILE NAME =	DRAWN - DRH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:40:54AM	DATE - 8/26/2011	REVISED -	

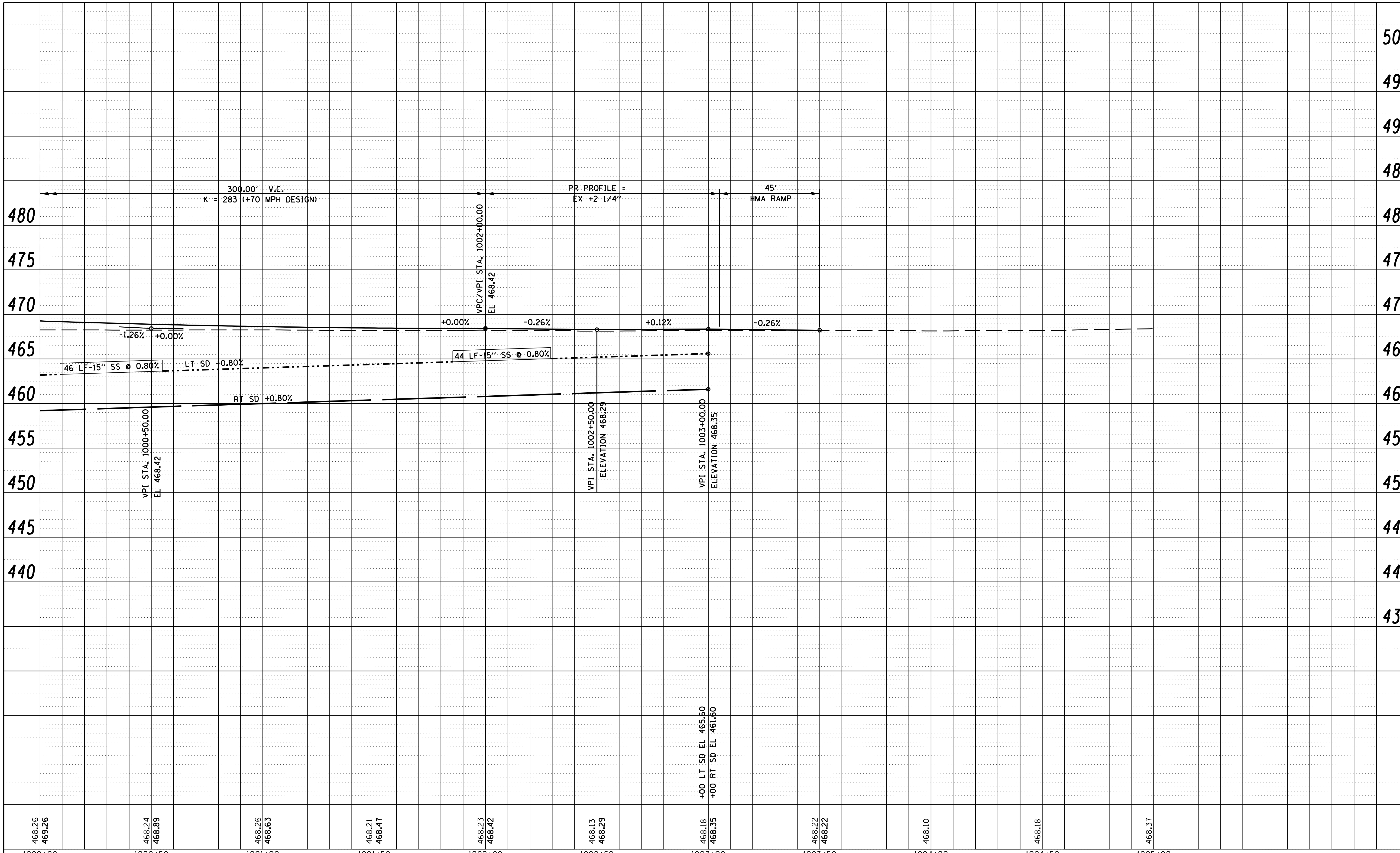
The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20' | SHEET NO. 7 OF 8 SHEETS | STA. 1000+00 TO STA. 1006+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	19
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN
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PLOTTED ____
ALIGNMENT CHECKED ____
RT. OF WAY CHECKED ____
CADD FILE NAME ____

BY	DATE

PROFILE
NOTE BOOK
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SURVEYED ____
PLOTTED ____
GRADES CHECKED ____
B.M. NOTED ____
STRUCTURE NOTAT'NS CH'KD ____

BY	DATE

The VOLKERT/DMA Joint Venture

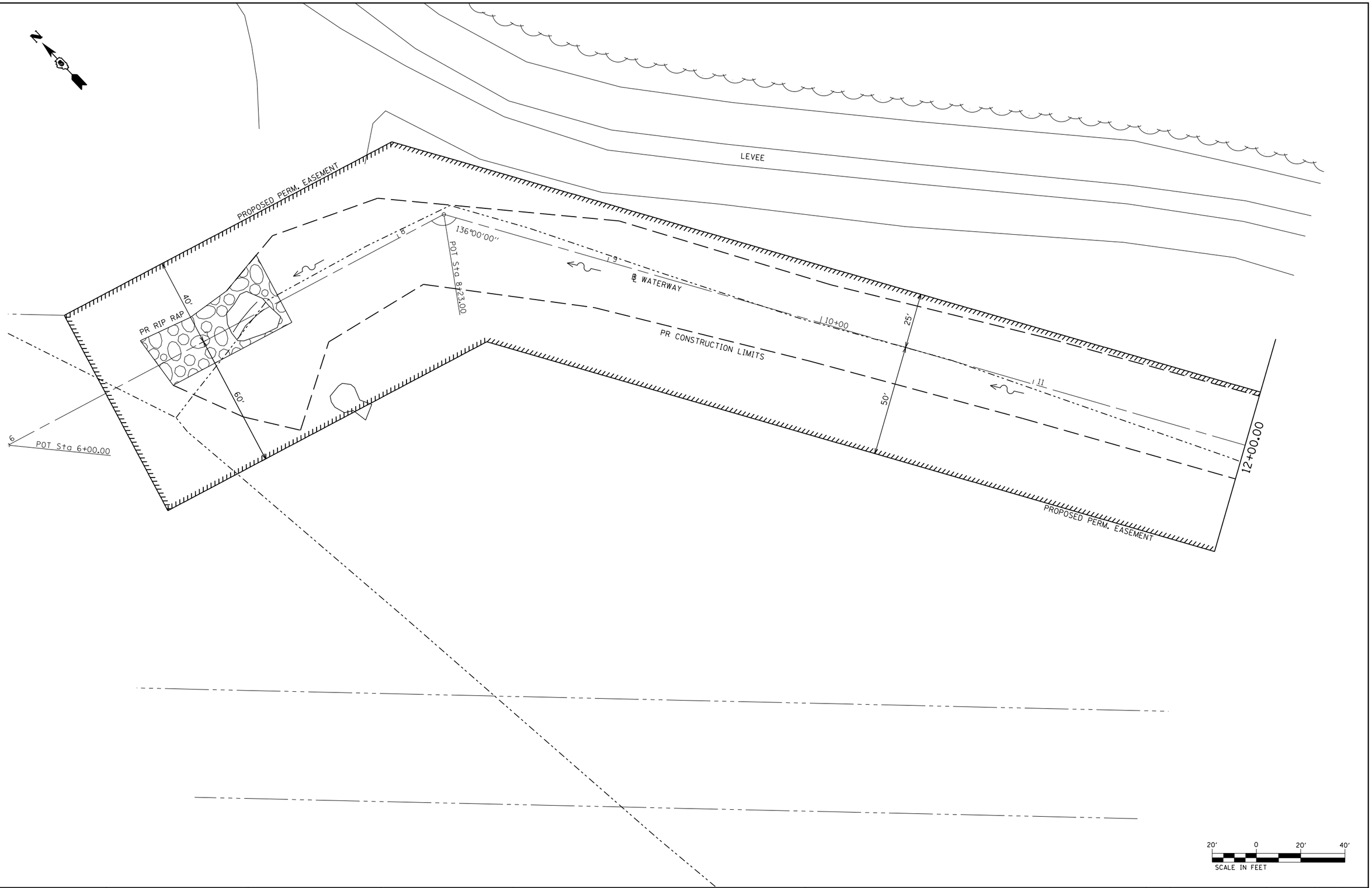
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
FILE NAME =	DRAWN - DRH	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:40:54AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=20', 1"=5' | SHEET NO. 8 OF 8 SHEETS | STA. 1000+00 TO STA. 1006+00

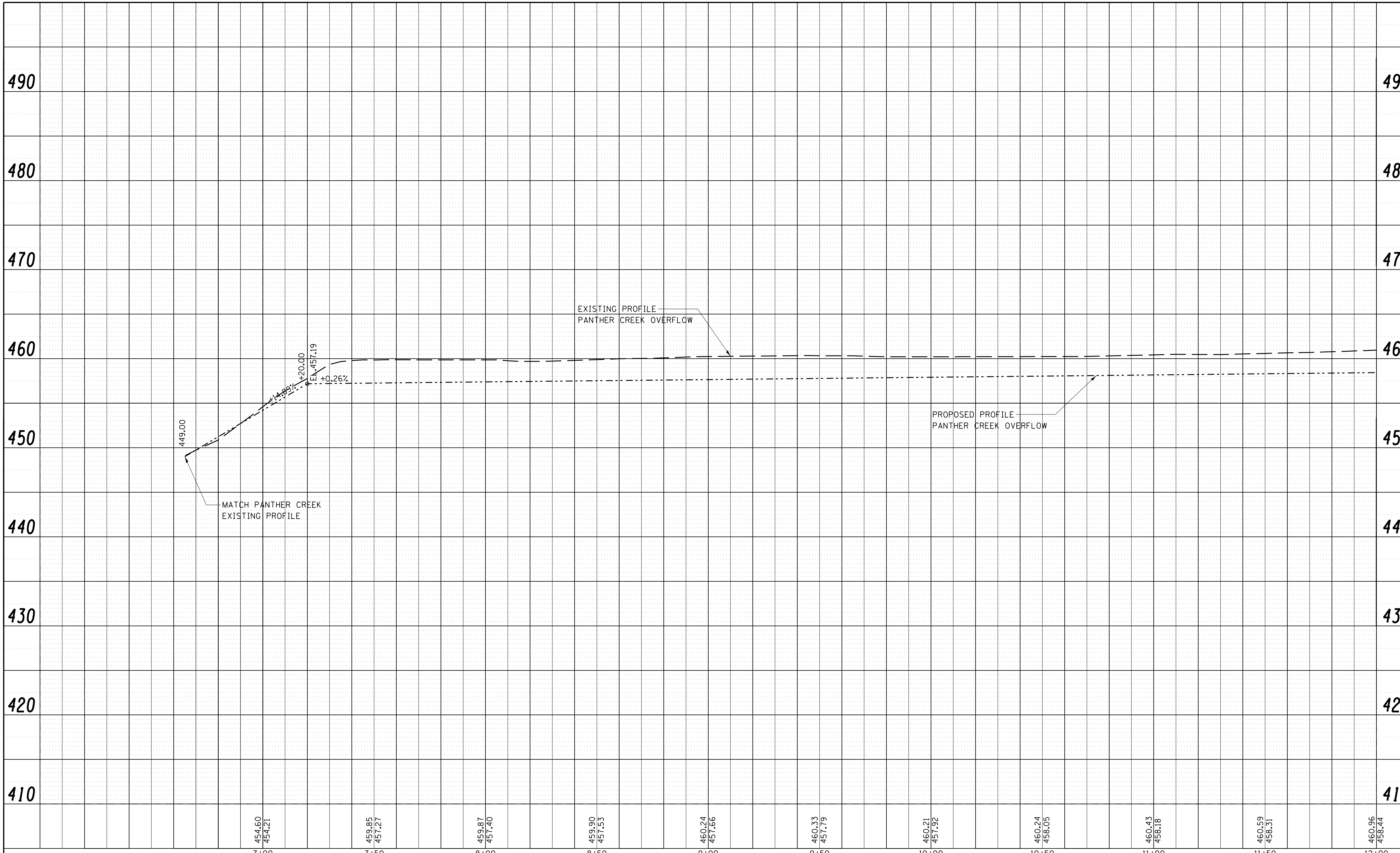
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	20
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WATERWAY PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - DRH	REVISED -			614	144 (B-4); 144 (B-5)	CASS	97	21
	PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -					CONTRACT NO. 72B55		
	PLOT DATE = Aug-31-2011 09:40:58AM	DATE - 8/26/2011	REVISED -		SCALE: 1"=20' | SHEET NO. 1 OF 6 SHEETS | STA. 6+50 TO STA. 12+00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN | NOTE BOOK | NO. ____ | SURVEYED ____ | PLOTTED ____ | ALIGNMENT CHECKED ____ | RT. OF WAY CHECKED ____ | CADD FILE NAME ____ | BY | DATE

PROFILE | NOTE BOOK | NO. ____ | SURVEYED ____ | PLOTTED ____ | GRADES CHECKED ____ | B.M. NOTED | STRUCTURE NOTAT'NS CH'KD | BY | DATE



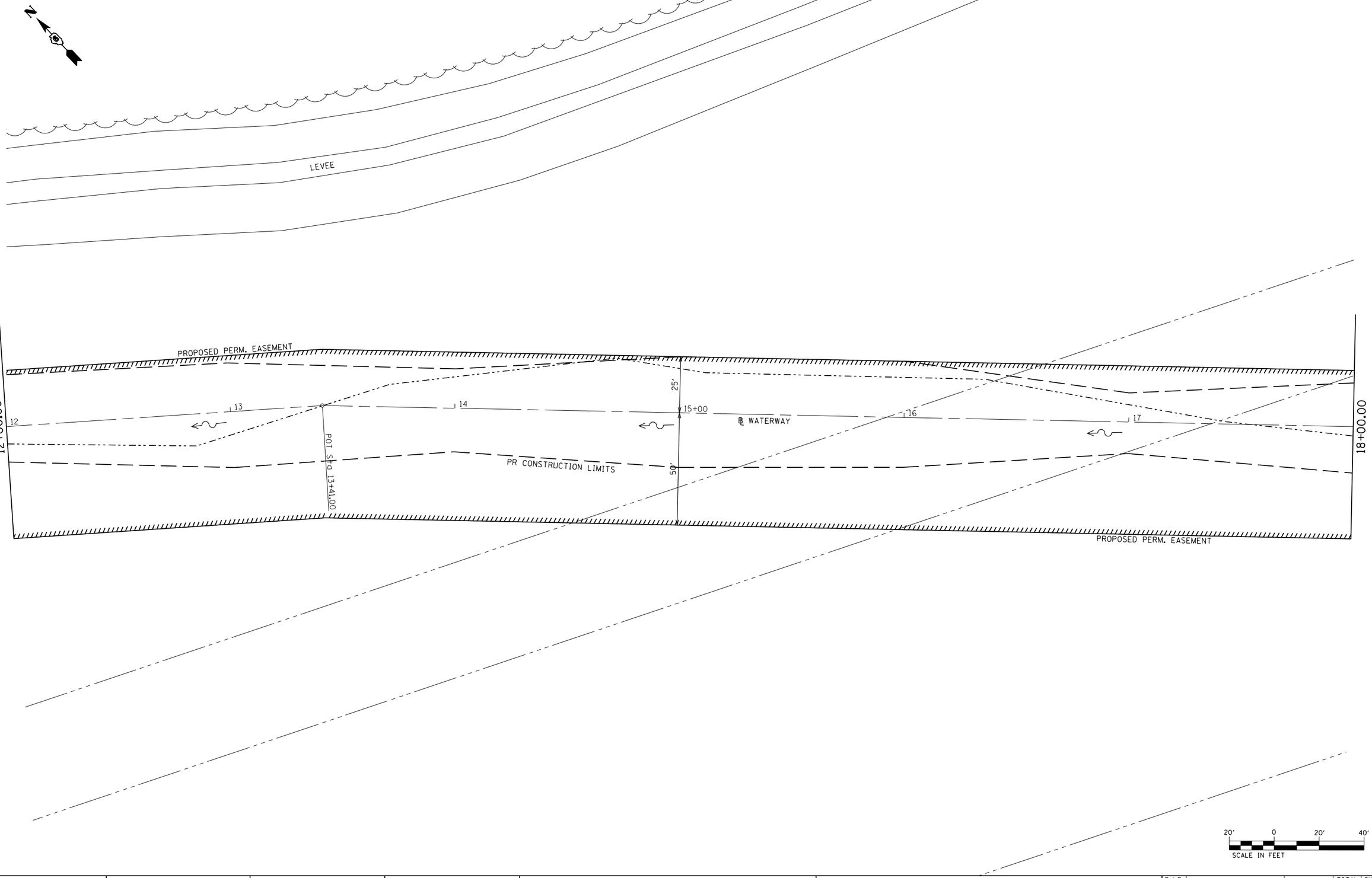
The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:59AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY PROFILE

SCALE: 1''=20', 1''=5' | SHEET NO. 2 OF 6 SHEETS | STA. 6+50 TO STA. 12+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	22
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:40:59AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

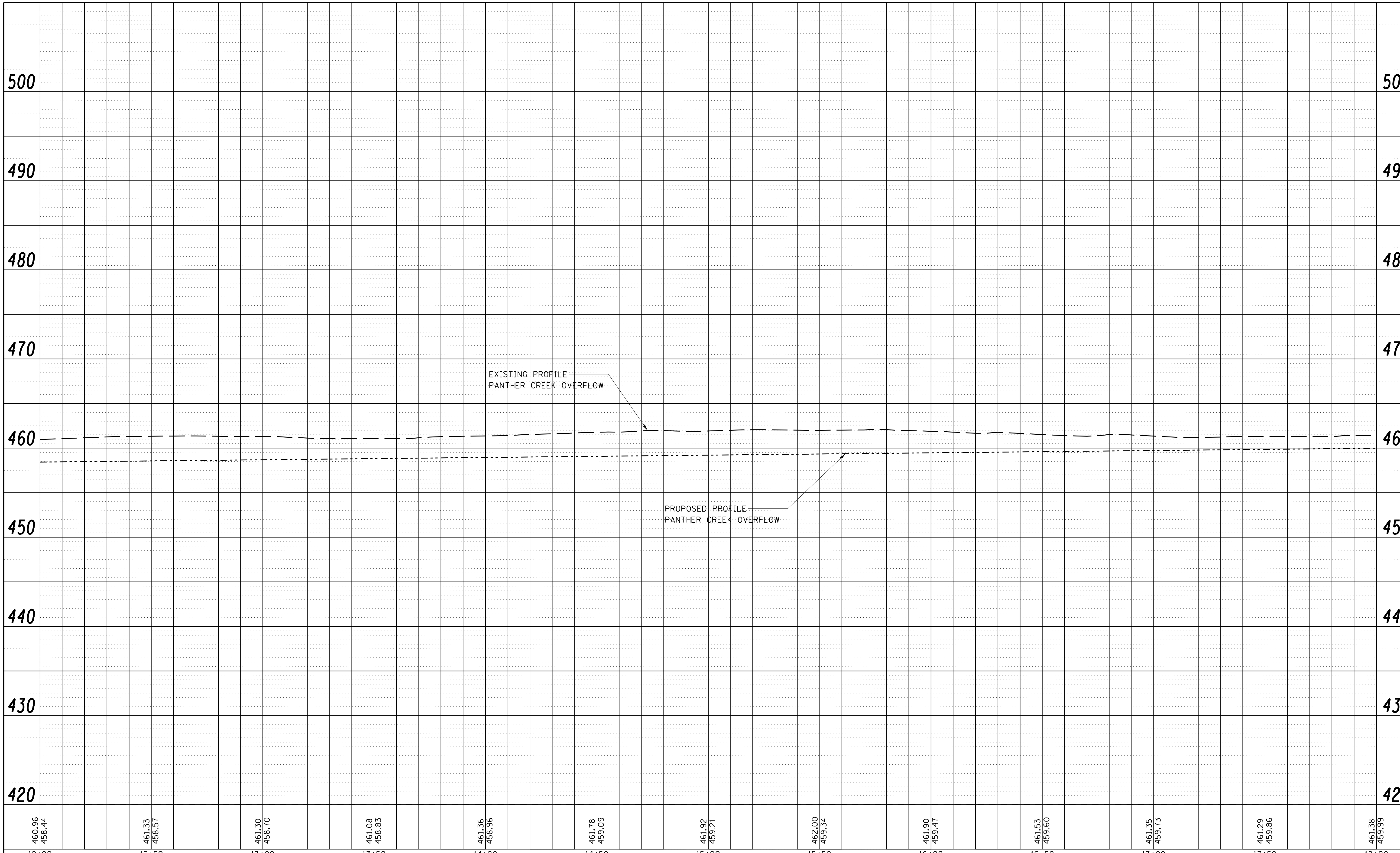
WATERWAY PLAN

SCALE: 1"=20' | SHEET NO. 3 OF 6 SHEETS | STA. 12+00 TO STA. 18+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	23
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
NOTE BOOK
NO. ____
SURVEYED ____
PLOTTED ____
ALIGNMENT CHECKED ____
RT. OF WAY CHECKED ____
CADD FILE NAME ____
BY
DATE

PROFILE
NOTE BOOK
NO. ____
SURVEYED ____
PLOTTED ____
GRADES CHECKED ____
B.M. NOTED ____
STRUCTURE NOTAT'NS CH'KD
BY
DATE



The VOLKERT/DMA Joint Venture

USER NAME = sparksgw
PLOT SCALE = 40.0000 ' / in.
PLOT DATE = Aug-31-2011 09:41:00AM

DESIGNED - DRH	REVISED -	
DRAWN - DRH	REVISED -	
CHECKED - VAM	REVISED -	
DATE - 8/26/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

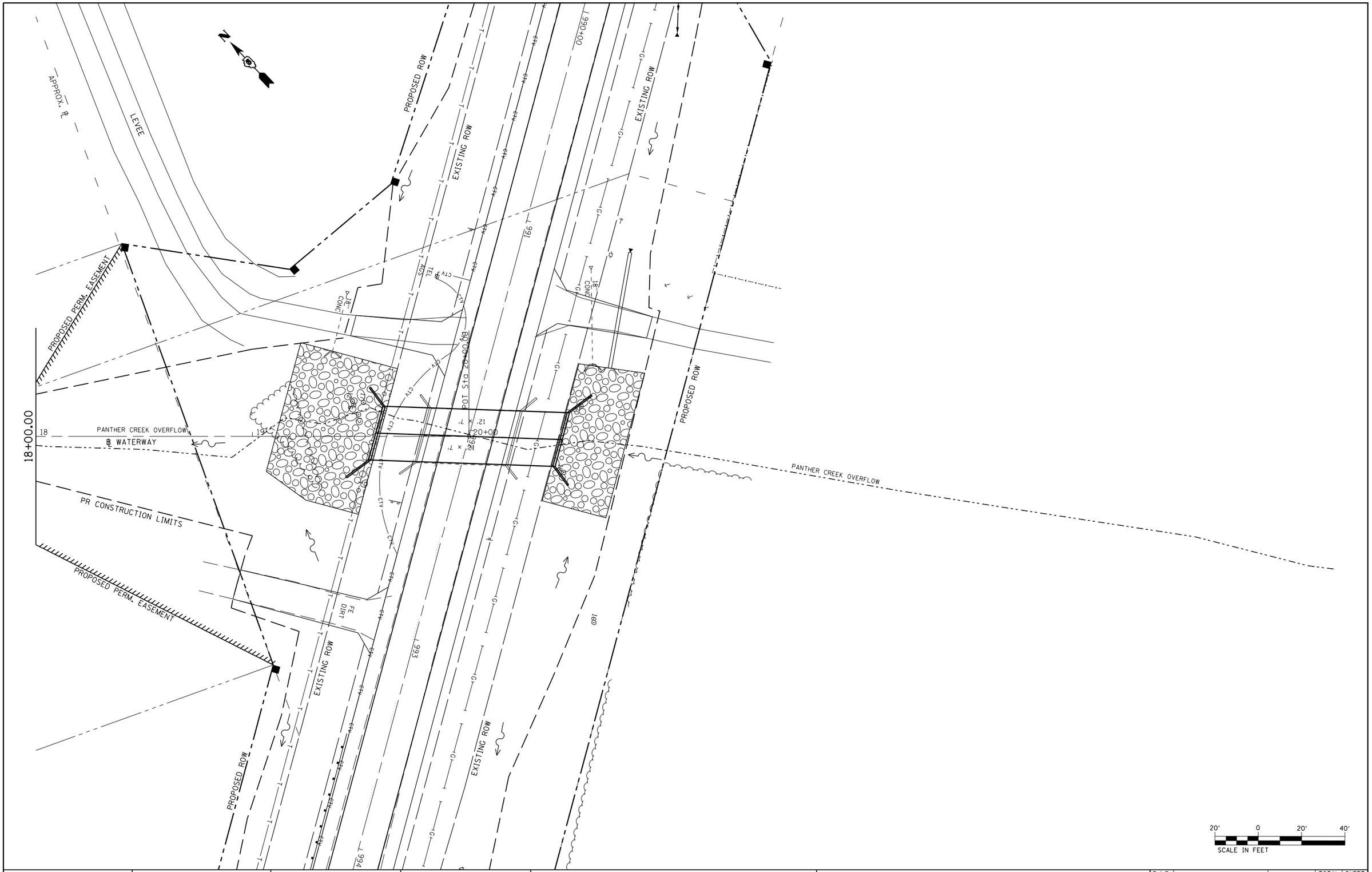
WATERWAY PROFILE

SCALE: 1''=20', 1''=5' | SHEET NO. 4 OF 6 SHEETS | STA. 12+00 TO STA. 18+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	24

CONTRACT NO. 72B55

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:41:00AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY PLAN

SCALE: 1"=20' | SHEET NO. 5 OF 6 SHEETS | STA. 18+00 TO STA. 20+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	25
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN

DATE	BY	
		SURVEYED
		PLOTTED
		ALIGNMENT CHECKED
		RT. OF WAY CHECKED
		CADD FILE NAME
		NOTE BOOK
		NO.

PROFILE

DATE	BY	
		SURVEYED
		PLOTTED
		GRADES CHECKED
		B.M. NOTED
		STRUCTURE NOTATNS CHKD
		NOTE BOOK
		NO.

USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
	DRAWN - DRH	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:41:00AM	DATE - 8/26/2011	REVISED -	

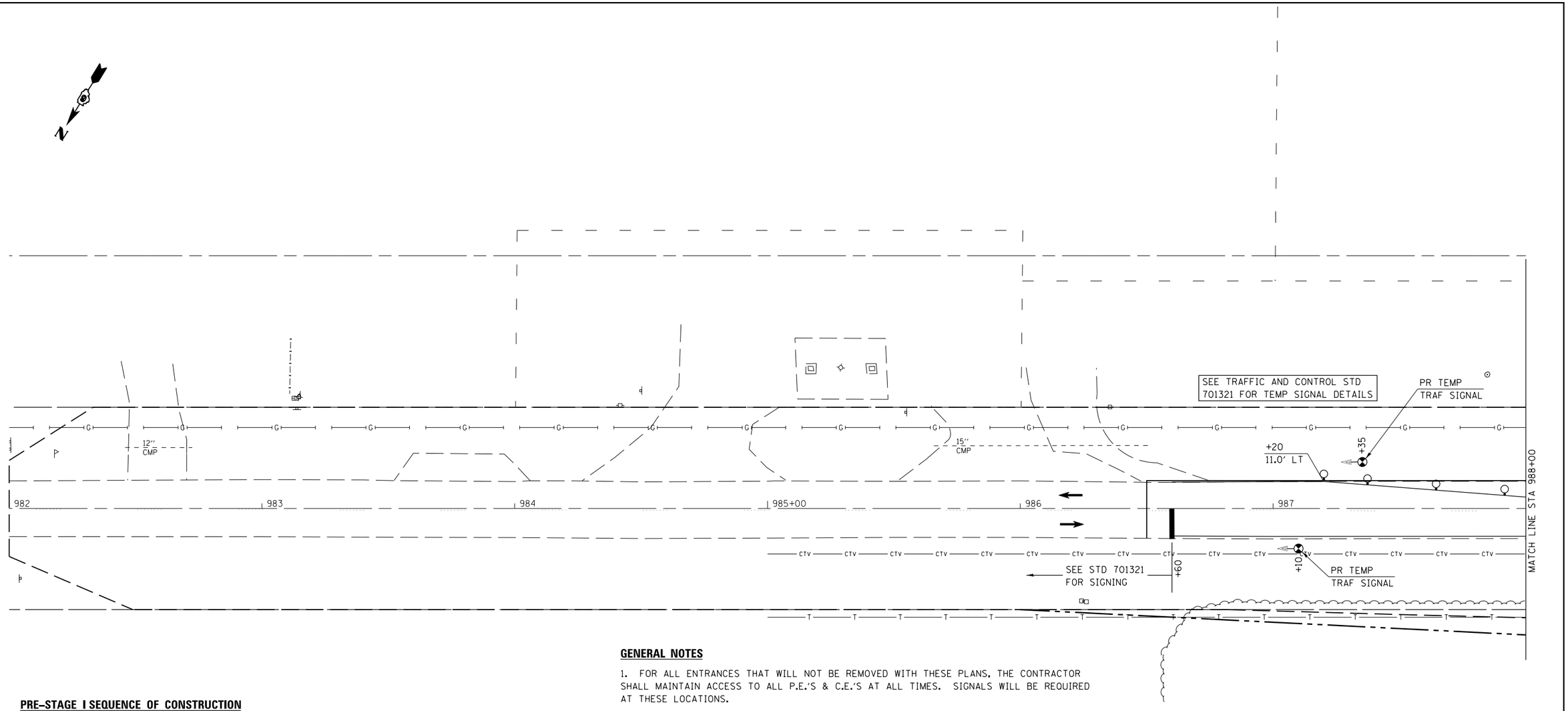
The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY PROFILE

SCALE: 1"=20', 1"=5' | SHEET NO. 6 OF 6 SHEETS | STA. 18+00 TO STA. 20+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	26
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PRE-STAGE I SEQUENCE OF CONSTRUCTION

1. REMOVE EXISTING HMA SHOULDERS AND CONSTRUCT HMA BASE COURSE WIDENING AS SHOWN ON THE PLANS, USING TRAFFIC CONTROL & PROTECTION STANDARD 701326. PERFORM TREE REMOVAL AND CLEARING, AND EARTH EXCAVATION AND EMBANKMENT AS SHOWN ON THE PLANS AND CROSS SECTIONS.

2. REMOVE EXISTING PAVEMENT WIDENING, INSTALL HMA BASE COURSE WIDENING, 10'' AND TEMPORARY GUARDRAIL AS SHOWN ON THESE PLAN. UTILIZE TRAFFIC CONTROL & PROTECTION STANDARD 701326.

STAGE I SEQUENCE OF CONSTRUCTION

1. SET UP TEMPORARY TRAFFIC CONTROL AND SIGNALS USING THESE PLANS IN CONJUNCTION WITH TRAFFIC CONTROL & PROTECTION STANDARD 701321.

2. REMOVE ANY CONFLICTING PAVEMENT MARKINGS AND PLACE TEMPORARY CONCRETE BARRIER AND PAVEMENT MARKING IN ACCORDANCE WITH THESE PLANS FOR STAGE I CONSTRUCTION.

3. INSTALL SOIL PROTECTION SYSTEM PRIOR TO ANY EXCAVATION.

4. COMPLETE STAGE I CONSTRUCTION WORK, PAVEMENT REMOVAL, WIDENING, DRAINAGE WORK, BRIDGE APPROACH PAVEMENTS, AND STAGE I STRUCTURAL WORK AS SHOWN IN THESE PLANS.

GENERAL NOTES

1. FOR ALL ENTRANCES THAT WILL NOT BE REMOVED WITH THESE PLANS, THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL P.E.'S & C.E.'S AT ALL TIMES. SIGNALS WILL BE REQUIRED AT THESE LOCATIONS.

2. ACCESS MUST BE PROVIDED TO ALL F.E.'S AS REQUIRED BY THE PROPERTY OWNER. NO SIGNALS WILL BE REQUIRED AT THESE LOCATIONS.

3. THIS TRAFFIC CONTROL PLAN SHALL BE USED IN CONJUCTION WITH STANDARD 701321 AND AS DIRECTED BY THE ENGINEER.

4. VERTICAL PANELS, DRUMS WITH STEADY BURNING LIGHTS, TYPE III BARRICADES, SIGNS, MICROWAVE DETECTOR SYSTEMS, DETECTOR LOOPS, AND TYPE C BI-DIRECTIONAL REFLECTORS, SHALL BE INCLUDED IN THE COST OF THE PAY ITEM FOR "TRAFFIC CONTROL AND PROTECTION STANDARD 701321." TEMPORARY PAVEMENT MARKING AND TRAFFIC SIGNALS WILL BE PAID FOR SEPARATELY.

5. THE CONTRACTOR SHALL PROVIDE AND ERECT LANE WIDTH RESTRICTION SIGNING. THESE SIGNS SHALL BE PLACED AS DIRECTED BY THE ENGINEER BEFORE IMPLEMENTING ANY STAGE I TRAFFIC CONTROL.

6. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS PH: (217) 785-5836 AT LEAST 21 DAYS PRIOR TO IMPLEMENTING STAGE I TRAFFIC CONTROL AND WHEN A SWITCH IN STAGING IS MADE.

7. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS AT LEAST THREE (3) DAYS PRIOR TO ACTIVATING THE TEMPORARY TRAFFIC SIGNALS, PLEASE REFER TO THE DISTRICT 6 SPECIAL PROVISIONS FOR TEMPORARY BRIDGE TRAFFIC SIGNALS FOR CONTACT INFORMATION.

20' 0 20' 40'
SCALE IN FEET

The VOLKERT/DMA Joint Venture

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FILE NAME =	DRAWN - DRH	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - VAM	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION - STAGE 1

SCALE: 1"=20' | SHEET NO. 1 OF 4 SHEETS | STA. 982+00 TO STA. 988+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	27
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

N

PR CULV. REMOVAL & REPLACEMENT; PR PVT. REMOVAL; PR GRAN. CULV. BACKFILL; PR BASE CSE/WID, 10" (S-1)

PR SOIL RETENTION SYSTEM (S-1)

PR BASE CSE/WID, 10" (S-1)

PR HMA BINDER, VAR DEPTH (OVER EX PVT. & PR WID., - SEE PROFILE) (S-1)

PR HMA BASE CSE/WID, 10" (S-1)

PR IMPACT ATTENUATOR

+07 11.0' LT

+14 18.0' LT

15" CMP

+46 18.0' LT

+00 4.0' LT

15" CMP

+25 6.0' RT

+50 HMA RAMP

100' HMA RAMP (SEE PROFILE SHEET)

+50 19.0' LT

PR TEMP CONC BARRIER

+50 18.0' LT

+50 HMA RAMP

+50 20.0' RT

18" CONC

MATCH LINE STA 988+00

MATCH LINE STA 994+00

988

989

990+00

991

992

993

+46 11.0' RT

+46 13.0' RT

+14

PR TEMP TRAF SIGNAL

+00 16.5' RT

+64

PR TEMP TRAF SIGNAL AND VEHICLE DETECTION

+50 19.0' RT

+50 7.0' RT

+50 17.0' RT

+50 19.0' RT

PR TEMP PVT MKG LINE, 5" (WHITE)

+50 20.0' RT

+00 13.0' RT (1' STUB)

+50 13.5' RT

PR HMA BASE CSE/WID, 10" (PRIOR TO S-1) NOTE: LT SIDE WIDENING REQUIRED FOR PE ACCESS DURING S-1

PR TEMP TBT, T-1 S & L (TANG) (PRIOR TO S-1)

PR TEMP GUARDRAIL ATTACHED TO STRUCTURE (STD 630101-CASE III) (PRIOR TO S-1)

18" CONC

PR TEMP TBT, T-1 S & L (TANG) (PRIOR TO S-1)

• OFFSET @ FINAL GRADE

20' 0 20' 40'

SCALE IN FEET

The VOLKERT/DMA Joint Venture

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 1

SCALE: 1"=20' | SHEET NO. 2 OF 4 SHEETS | STA. 988+00 TO STA. 994+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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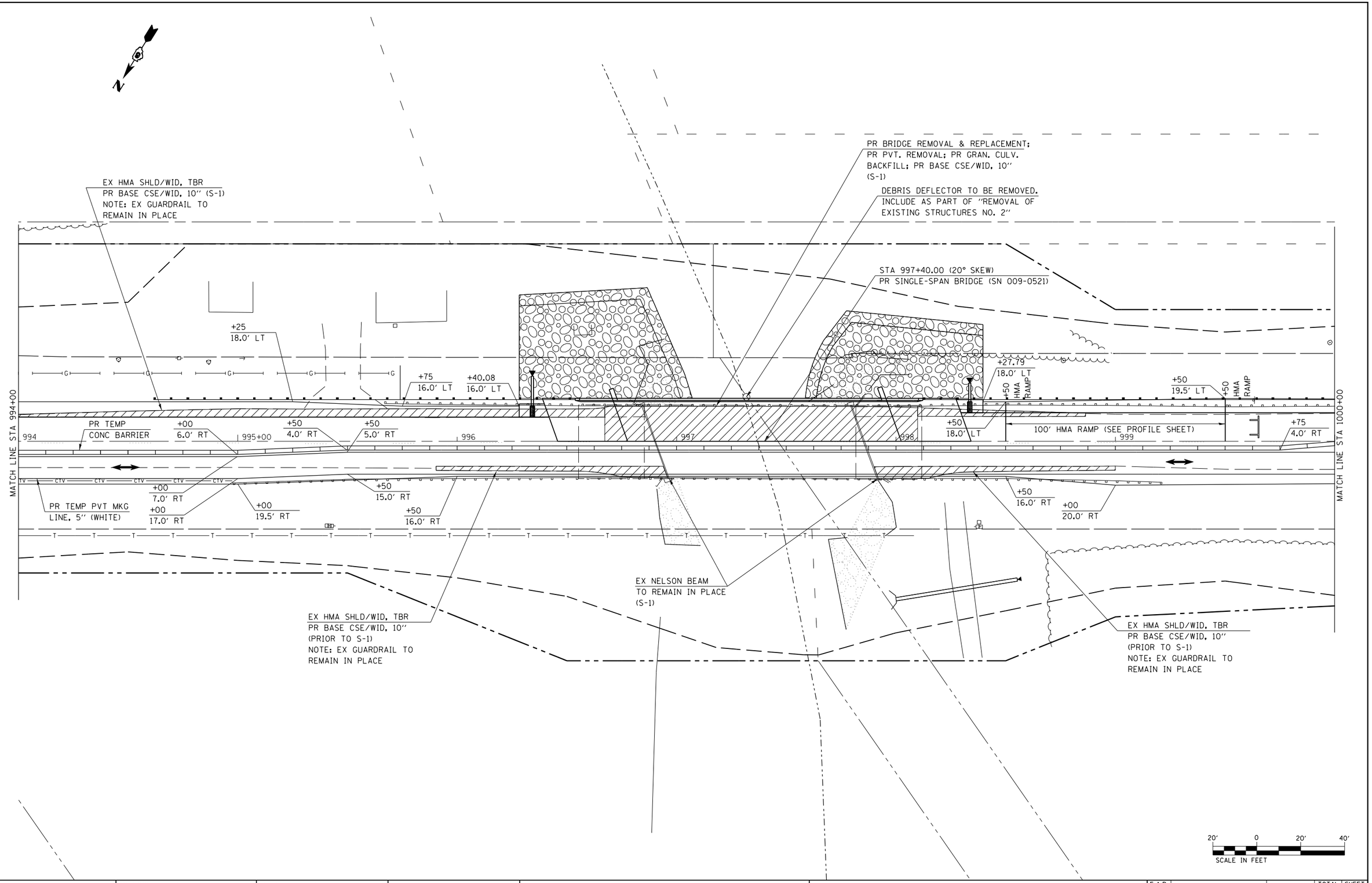
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



The VOLKERT/DMA Joint Venture

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 1

SCALE: 1"=20' | SHEET NO. 3 OF 4 SHEETS | STA. 994+00 TO STA. 1000+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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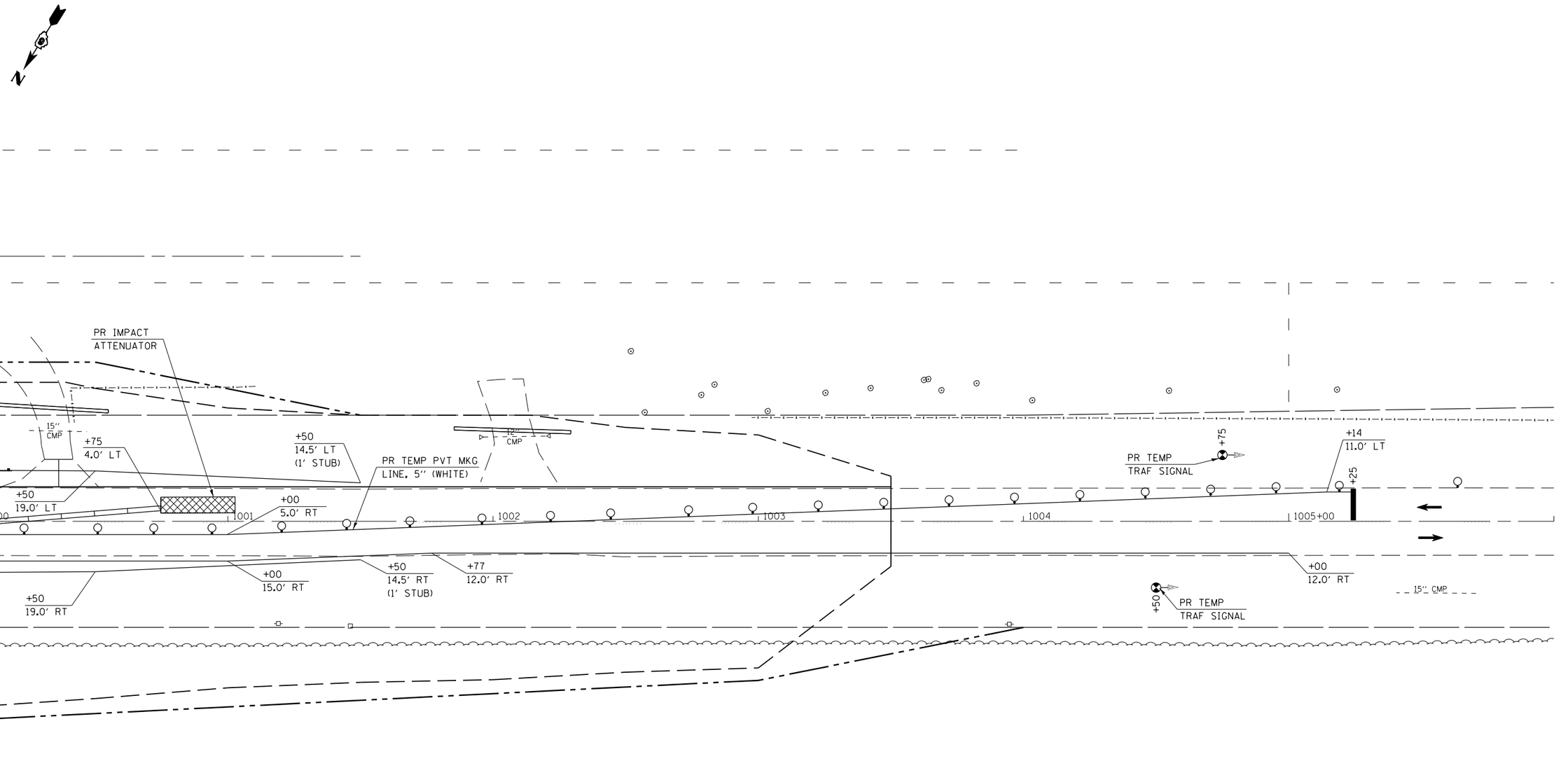
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 1

SCALE: 1"=20' | SHEET NO. 4 OF 4 SHEETS | STA. 1000+00 TO STA. 1006+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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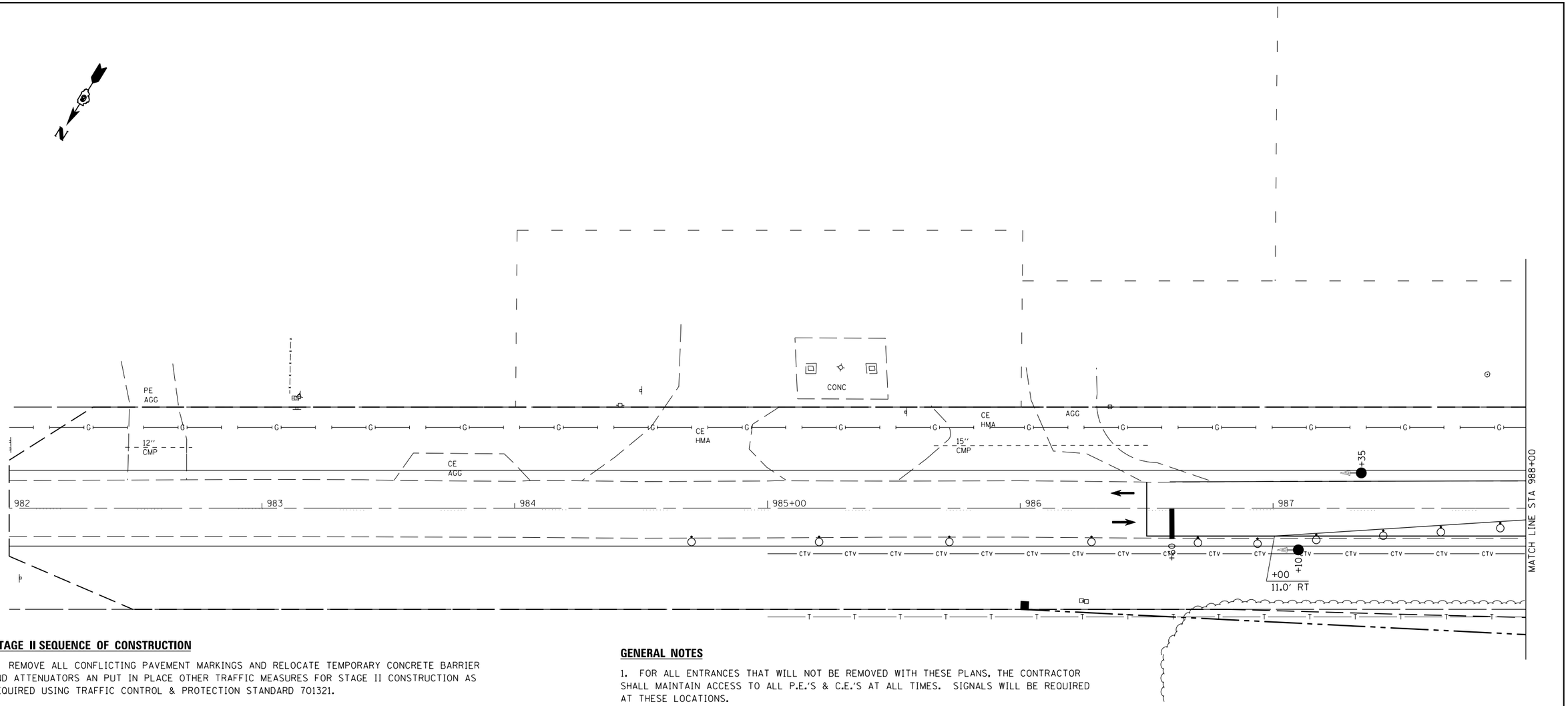
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



STAGE II SEQUENCE OF CONSTRUCTION

1. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND RELOCATE TEMPORARY CONCRETE BARRIER AND ATTENUATORS AN PUT IN PLACE OTHER TRAFFIC MEASURES FOR STAGE II CONSTRUCTION AS REQUIRED USING TRAFFIC CONTROL & PROTECTION STANDARD 701321.

2. COMPLETE ALL STAGE II CONSTRUCTION WORK - PAVEMENT, GUARDRAIL, SHOULDERS, DRAINAGE ITEMS, BRIDGE APPROACH PAVEMENTS, AND STAGE II STRUCTURAL WORK AS SHOWN ON THE PLANS.

3. CONSTRUCT HMA BINDER COURSE AND SUBBASE GRANULAR MATERIAL FOR TEMPORARY PROFILE.

STAGE III SEQUENCE OF CONSTRUCTION

1. FOLLOWING STAGE II CONSTRUCTION, COMPLETE BRIDGE APPROACH SHOULDERS, INLETS, HMA SHOULDERS, GUARDRAIL, ENTRANCES, AND HMA BINDER, LEVELING BINDER, AND SURFACE COURSES UP TO FINAL GRADE. PLACE FINAL STRIPING.

GENERAL NOTES

1. FOR ALL ENTRANCES THAT WILL NOT BE REMOVED WITH THESE PLANS, THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL P.E.'S & C.E.'S AT ALL TIMES. SIGNALS WILL BE REQUIRED AT THESE LOCATIONS.

2. ACCESS MUST BE PROVIDED TO ALL F.E.'S AS REQUIRED BY THE PROPERTY OWNER. NO SIGNALS WILL BE REQUIRED AT THESE LOCATIONS.

3. THIS TRAFFIC CONTROL PLAN SHALL BE USED IN CONJUCTION WITH STANDARD 701321 AND AS DIRECTED BY THE ENGINEER.

4. VERTICAL PANELS, DRUMS WITH STEADY BURNING LIGHTS, TYPE III BARRICADES, SIGNS, MICROWAVE DETECTOR SYSTEMS, DETECTOR LOOPS, AND TYPE C BI-DIRECTIONAL REFLECTORS, SHALL BE INCLUDED IN THE COST OF THE PAY ITEM FOR "TRAFFIC CONTROL AND PROTECTION STANDARD 701321 (SPECIAL)." TEMPORARY PAVEMENT MARKING AND TRAFFIC SIGNALS WILL BE PAID FOR SEPARATELY.

5. THE CONTRACTOR SHALL PROVIDE AND ERECT LANE WIDTH AND LOAD RESTRICTION SIGNING. THESE SIGNS SHALL BE PLACED AS DIRECTED BY THE ENGINEER BEFORE IMPLEMENTING ANY STAGE I TRAFFIC CONTROL (SEE LOAD RESTRICTION DETOUR MAP).

6. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS PH: (217) 785-5836 AT LEAST 21 DAYS PRIOR TO IMPLEMENTING STAGE I TRAFFIC CONTROL AND WHEN A SWITCH IN STAGING IS MADE.

7. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS AT LEAST THREE (3) DAYS PRIOR TO ACTIVATING THE TEMPORARY TRAFFIC SIGNALS, PLEASE REFER TO THE DISTRICT 6 SPECIAL PROVISIONS FOR TEMPORARY BRIDGE TRAFFIC SIGNALS FOR CONTACT INFORMATION.

20' 0 20' 40'
SCALE IN FEET

The VOLKERT/DMA Joint Venture

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 2

SCALE: 1"=20' | SHEET NO. 1 OF 4 SHEETS | STA. 982+00 TO STA. 988+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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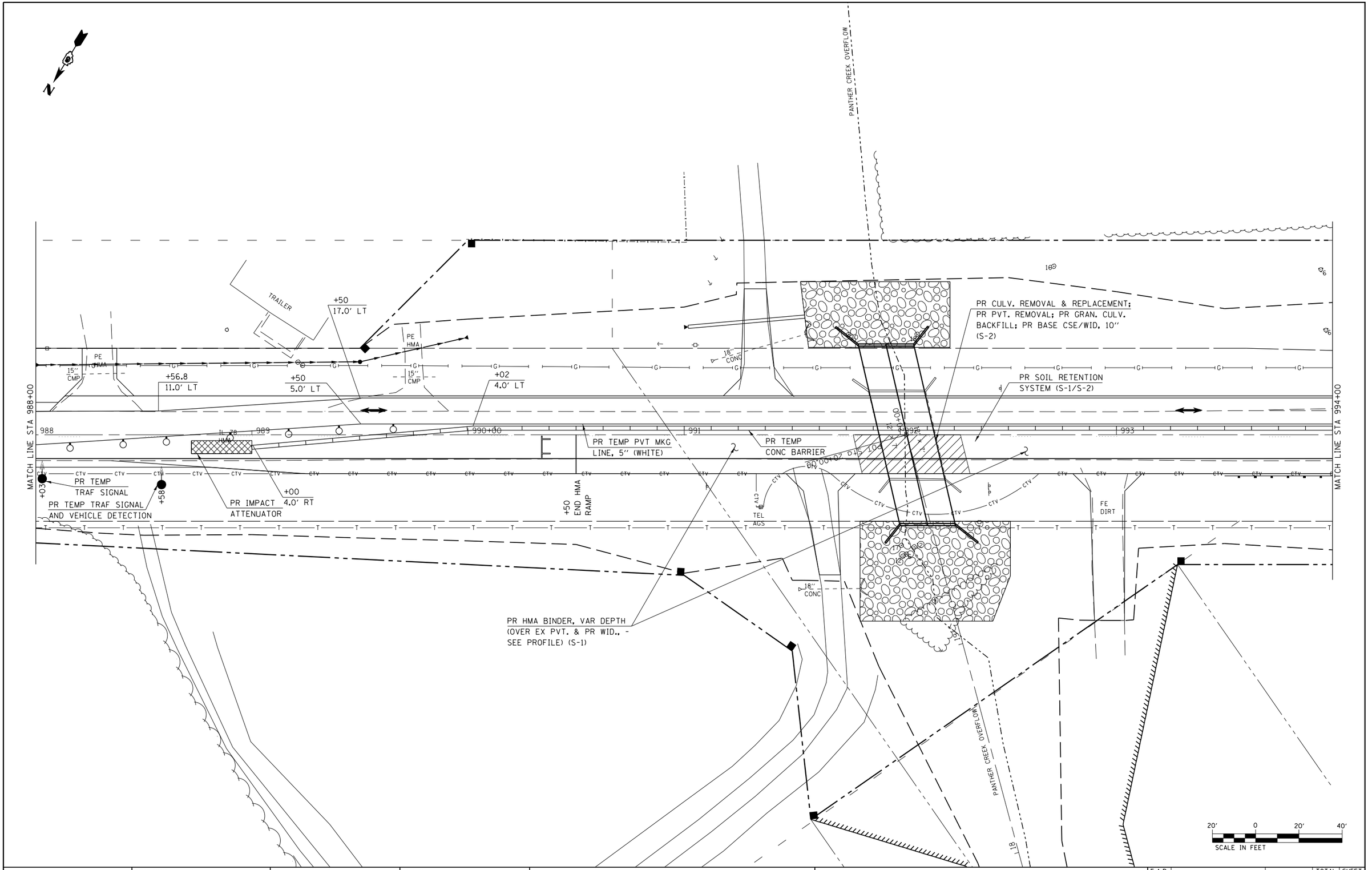
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 2

SCALE: 1"=20' | SHEET NO. 2 OF 4 SHEETS | STA. 988+00 TO STA. 994+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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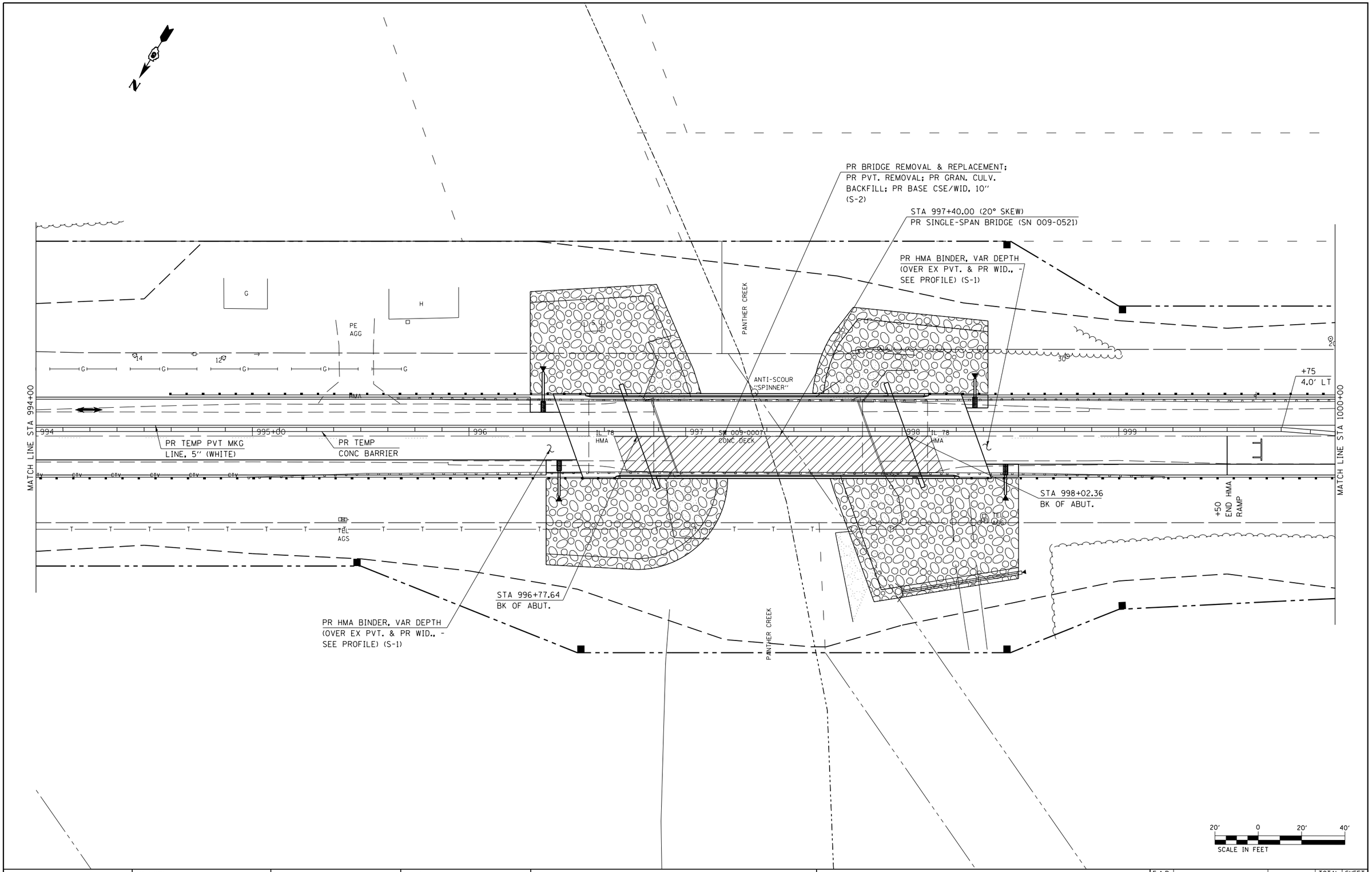
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 2

SCALE: 1"=20' | SHEET NO. 3 OF 4 SHEETS | STA. 994+00 TO STA. 1000+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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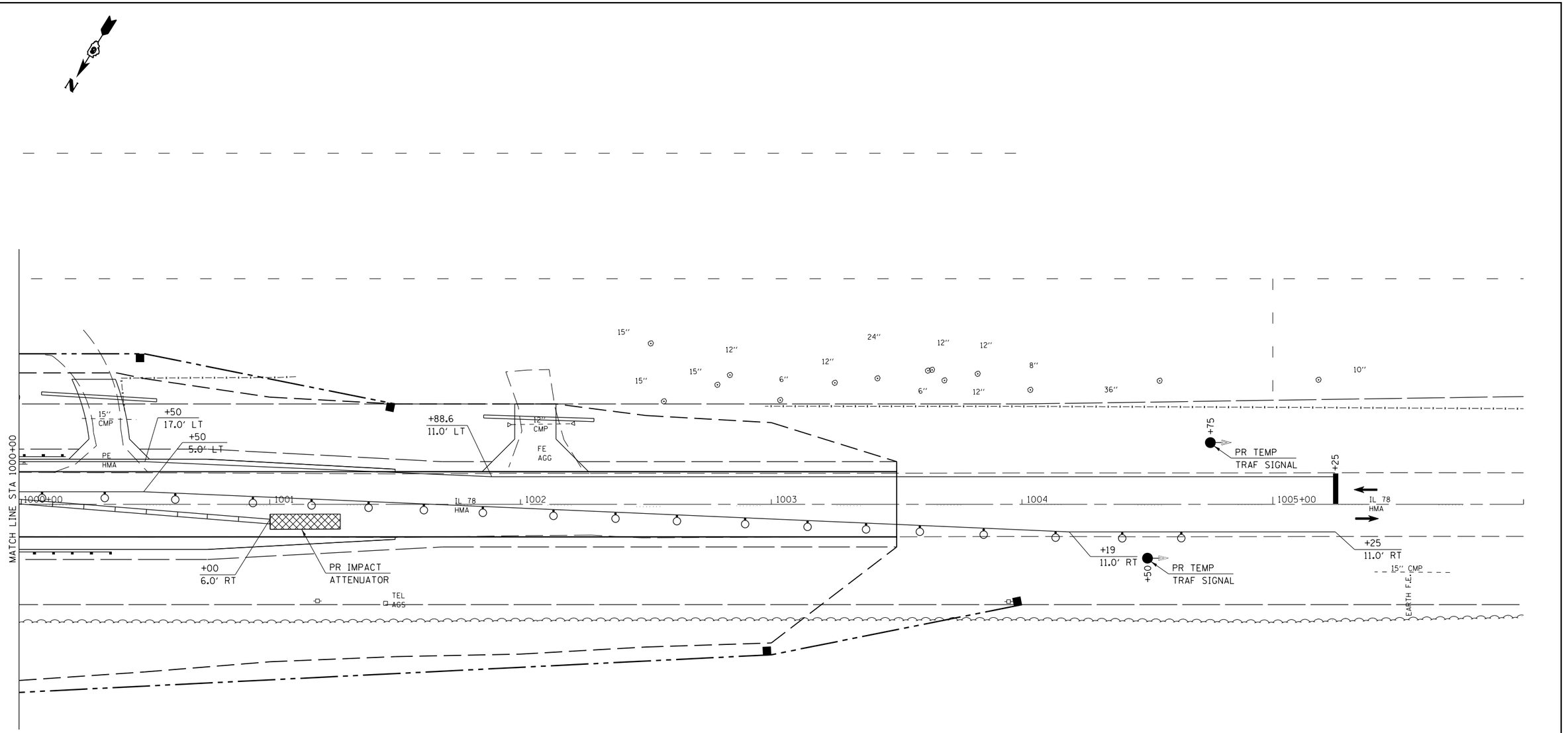
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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The VOLKERT/DMA Joint Venture

IL 78 OVER PANTHER CREEK OVERFLOW
TRAFFIC CONTROL & PROTECTION – STAGE 2

SCALE: 1"=20' | SHEET NO. 4 OF 4 SHEETS | STA. 1000+00 TO STA. 1006+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	34
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STORM WATER POLLUTION PREVENTION PLAN

Route: FAP 614 Marked: IL 78

Section: 144(B-4);144(B-5) Project No.:

County: CASS Contract No.: 72B55

This plan has been prepared to comply with the provision of the NPDES Permit Number ILR10_____ issued by the Illinois Environmental Protection Agency for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquire of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

(Signature) (Date)

_____

(Title)

Note: The above boxed in area will be filled out by IDOT - Construction after the award of the contract to obtain the required NPDES permit.

The following plan was established and included in these plans to direct the Contractor in the placement of temporary erosion control systems and to provide a storm water pollution prevention plan for compliance under NPDES. The Contractor shall abide to all requirements within this plan as part of the contract.

The purpose of this plan is to prevent / minimize siltation within the construction zone and to eliminate sediments from entering and leaving the construction zone by utilizing proper temporary erosion control systems and providing ground cover within a reasonable time.

Certain items, as shown in this plan and referenced by the legend, shall be placed by the Contractor at the beginning of construction. Other items shall be placed by the Contractor as directed by the Engineer on a case by case situation resulting from the Contractor's sequence of activities, time of the year, and expected weather conditions.

The Contractor shall place permanent erosion control systems and seeding within a reasonable amount of time; therefore, reducing the amount of area being open to the possibility of erosion and reducing the amount of temporary erosion control systems and temporary seeding. The Resident Engineer will determine if temporary erosion control systems shown in the plan can be deleted, the size of the proposed ditch checks, the proper method of installation, and if any additional temporary erosion control systems shall be added which are not included in this plan. The Contractor shall perform all work as directed by the Engineer and as shown in special details and in Standard 280001 of the plans.

The special provisions Temporary Seeding, Temporary Erosion Control Seeding, and Temporary Erosion Control additionally supplement this plan.

All disturbed areas having high potential for erosion, as determined by the Engineer, shall be temporarily seeded or permanently seeded by October 1st of each construction year and shall not be reopened until after the winter shutdown period.

SITE DESCRIPTION

Description of Construction Activity:

1. The proposed project consists of replacing one bridge on IL 78 (FAP 614) south of Chandlerville with a replacement bridge and culvert. The project will require raising the existing roadway profile at the bridge approximately 3.0 feet, and will include resurfacing of approximately 0.75 miles of existing il 78.

2. Construction consists of grading, constructing a new bridge and culverts, HMA pavement, widening, HMA resurfacing, placing aggregate shoulders and other miscellaneous work to complete improvements to the proposed roadways.

Description of Intended Sequence of Major Construction Activities Which Will Disturb Earth and Lead to Possible Erosion for Major Portions of the Construction Site:

1. Tree removal will be completed to clear approximately 0.1 acres of wooded land.

2. Excavation will be completed along the entire length to grade out for proposed roadway ditches and waterways.

3. Excavation will also be completed in proposed cut sections to lower the existing ground elevation to meet the proposed roadway grade/vertical alignment.

4. Embankment will be completed in fill areas to raise the existing ground elevation to meet the proposed roadway foreslope and backslope.

5. Drainage structures will be installed before and/or during the construction of the excavation and embankment to allow proper drainage across the proposed two lane facility.

6. Placement, maintenance, removal and proper clean-up of temporary erosion control, such as erosion control fence, hay or straw bale ditch checks, riprap ditch checks, sediment basins, temporary seeding, etc.

7. Placement of permanent erosion control, such as riprap ditch lining, riprap stilling basins, riprap dry dams, excelsior blanket, seeding, etc.

8. Final grading, paving and other miscellaneous items.

Area of Construction Site:

The total drainage area entering and including the construction site is estimated to be approx. 52 sq miles in which acres will be disturbed by excavation, grading or other activities.

Other Reports, Studies and Plans which Aid in the Development of this Storm Water Pollution Prevention Plan as Referenced Documents:

1. None.

Drainage Tributaries Receiving Water from this Construction Site:

1. Panther Creek and Panther Creek Overflow

CONTROLS - EROSION CONTROLS AND SEDIMENT CONTROLS

Description of Stabilization Practices at the Beginning of Construction:

1. The area between the existing and proposed right-of-way/temporary easement boundaries and limits of the project will be improved and managed for the purposes of controlling erosion within the area, reducing water flow by temporary diversion and minimizing siltation into the construction zone, and establishing vegetative cover which will become permanent vegetation and act as an erosion barrier. Work at the beginning of construction will consist of the following:

   (a) Areas of existing vegetation (woods and grasslands) outside the proposed construction slope limits shall be identified for preserving and shall be protected from mowing, brush cutting, tree removal and other activities which would be detrimental to their maintenance and development.

   (b) Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the Engineer, along with required tree removal.

   (c) As soon as reasonable access is available (such as trees cleared) to all locations where water drains away from the project, sediment basins, riprap ditch checks, temporary ditch checks, and/or erosion control fence shall be installed as called out in this plan and directed by the Engineer.

   (d) Bare and sparsely vegetated ground in highly erodable areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are immediately expected as stated in the special provision "Temporary Erosion Control Seeding".

   (e) Immediately after tree removal is completed in certain areas which are highly erodable areas as determined by the Engineer, the areas shall be temporarily seeded where no construction activities are immediately expected as stated in the special provision •Temporary Erosion Control Seeding•.

   (f) At locations where a significant amount of water drains into the construction zone from outside areas (adjacent landowners), erosion control fence, temporary ditch checks, or riprap ditch checks will be utilized to locally divert water, reduce flow rates, and collect outside siltation inside the right-of-way line. Erosion control items will not be allowed to be installed to cause flooding to upstream private property which could cause crop damages or other undesireable conditions.

2. Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and overseeding can be complete.

3. A third benefit of these filter areas is that they will begin to provide a screen and buffer. They will help protect the construction site from winds and excess sun and mitigate construction noise and dust.

Description of Stabilization Practices During Construction:

1. During roadway construction, areas outside the construction slope limits as outlined previous herein shall be protected from damaging effects of construction. The Contractor shall not use this area for staging (except as designated on the plans or directed by the Engineer), parking of vehicles or construction equipment, storage of materials, or other construction related activities.
   (a) Within the construction zone, critical areas which have high flows of water as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
   (b) Top soil and earth stockpiles shall be temporarily seeded if they are to remain unused for more than fourteen days.
   (c) As the Contractor constructs a portion of roadway in a fill section, he/she shall follow the following steps as directed by the Engineer:

   i. Place temporary erosion control systems at locations where water leaves and enters the construction zone
   ii. Temporary seed highly erodable areas outside the construction slope limits
   iii. Construct roadside ditches and provide temporary erosion control systems
   iv. Temporary divert water around proposed culvert locations
   v. Build necessary embankment at culvert locations and then excavate and place culvert
   vi. Continue building up the embankment to the proposed grade while at the same time place permanent erosion control such as riprap ditch lining and conduct final shaping to the slopes

   (d) The Contractor shall immediately follow major earth moving operations with final grading equipment. After the major earth spread operation has moved to a new location, final grading shall be completed within fourteen days. If grading is not completed within fourteen days, all major earth moving operations will be stopped, as directed by the Engineer, until disturbed areas are final graded and seeded.

   (e) Excavated areas and embankments shall be permanently seeded when final graded. If not, they shall be temporarily seeded as stated in the special provision "Temporary Erosion Control Seeding".

   (f) Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution run-off in compliance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

   (g) The Resident Engineer shall inspect the project daily during activities and weekly or after large rains during the winter shutdown period. The project shall additionally be inspected by the Construction Field Engineer on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other control work is necessary.

   (h) Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance will be paid for in accordance with Article 109.04 of the Standard Specifications.

   (i) The temporary erosion control systems shall be removed as directed by the Engineer after use is no longer needed or no longer functioning. The costs of this removal shall be included in the unit bid price for the temporary erosion control system. No additional compensation will be allowed.

Description of Structural Practices After Final Grading:

1. Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas seeded and established with a proper stand.

2. Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded. Temporary riprap ditch checks will be allowed to remain in place where approved by the Engineer.

Maintenance after Construction:

1. Construction is complete after acceptance is received at the final inspection.

2. Areas will be inspected on a regular basis by IDOT District 6 Bureau of Operations.

3. Maintenance crews will perform regular mowings to aid in keeping weeds down and establishing a good roadside seed stand.

4. Maintenance crews will also aid in any ditch lining maintenance or in any drainage problems.

5. All maintenance will be conducted at times when weather conditions will not cause site damage.

DOCUMENTATION

1. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with Section 4.b. shall be made and retained as part of the plan for at least three years after the date of inspection. The report shall be signed in accordance with part VI.G of the general permit.

2. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incident of Noncompliance (ION)" report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI.G. of the general permit. The report of noncompliance shall be mailed to the following address:

   Illinois Environmental Protection Agency
   Division of Water Pollution Control
   2200 Churchill Road, P.O. Box 19276
   Springfield, IL 62794-9276
   Attn: Compliance Assurance Section

CONTRACTOR CERTIFICATION STATEMENT

This certification statement is part of the Storm Water Pollution Plan for the project described below in accordance with NPDES Permit No. ILR10_____, issued by the Illinois Environmental Protection Agency on _____.

Route: FAP 614 Marked: IL 78

Section: 144 (B-4); 144 (B-5) Project No.: _____

County: CASS Contract No.: 72B55

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature_____ Date_____

Title_____

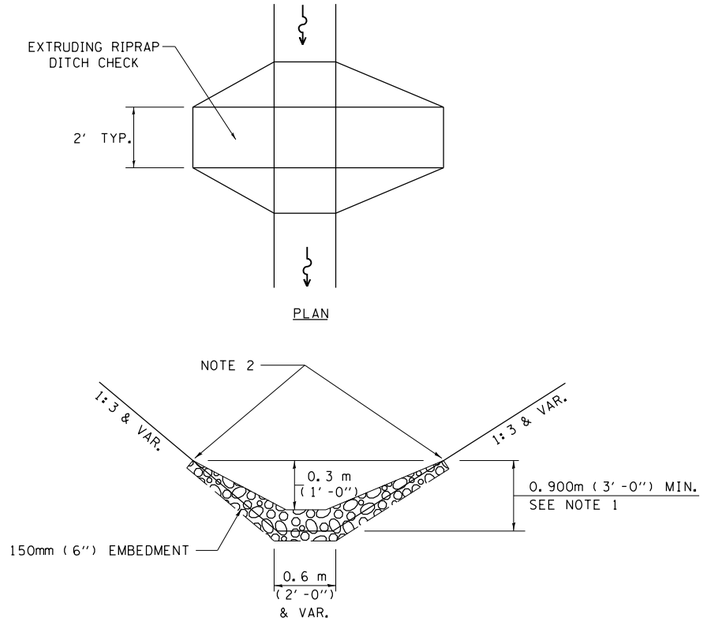
Name of Firm_____

Street Address_____

City, State, Zip_____

Phone Number_____

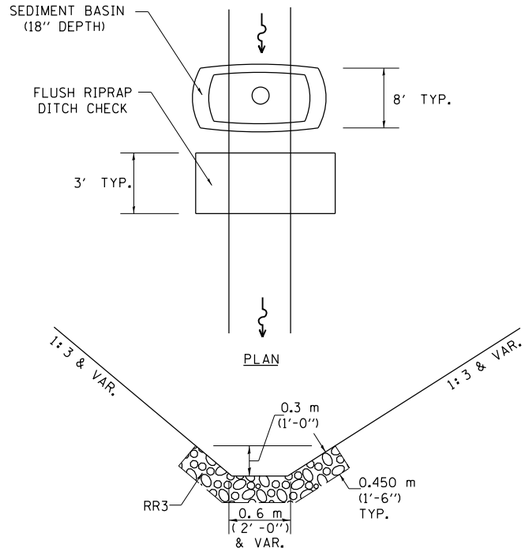
Note: The above boxed in area shall be filled out by the Contractor after the award of the contract to obtain the required NPDES Permit from IEPA. This is a requirement for this contract.



ELEVATION

OPTION 1

(EXTRUDING DITCH CHECK)
RECOMMENDED FOR AREAS
W/ RIPRAP DITCH LINING



ELEVATION

OPTION 2

(FLUSH DITCH CHECK)
RECOMMENDED FOR AREAS
W/O RIPRAP DITCH LINING

STONE DUMPED RIPRAP DITCH CHECK

(TYPICAL & OPTIONS 1 & 2
AS DIRECTED BY THE ENGINEER)

NOTE 1: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3m (1') OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE RIPRAP.

NOTE 2: ENDS SHALL BE TIED INTO SLOPES.

LEGEND FOR STORM WATER POLLUTION PREVENTION PLAN

ITEM	SYMBOL
AGGREGATE (EROSION CONTROL) [STONE DUMPED RIPRAP DITCH CHECKS: Height = 0.6m (2')]	
TEMPORARY DITCH CHECKS	
INLET PIPE PROTECTION (I&PP)	
EROSION CONTROL FENCE	
EARTH EXCAVATION FOR EROSION CONTROL (SEDIMENT BASINS)	
PRESERVE EXISTING TREES, WOODLANDS, AND UNDERSTORY (OUTSIDE CONSTRUCTION LIMITS)	
ITEM PLACED AT BEGINNING OF CONSTRUCTION (Requirement)	* ITEM *
ITEM PLACED AS DIRECTED BY ENGINEER (When required by situation)	ITEM
DIRECTION OF OVERLAND FLOW	

GENERAL NOTES:

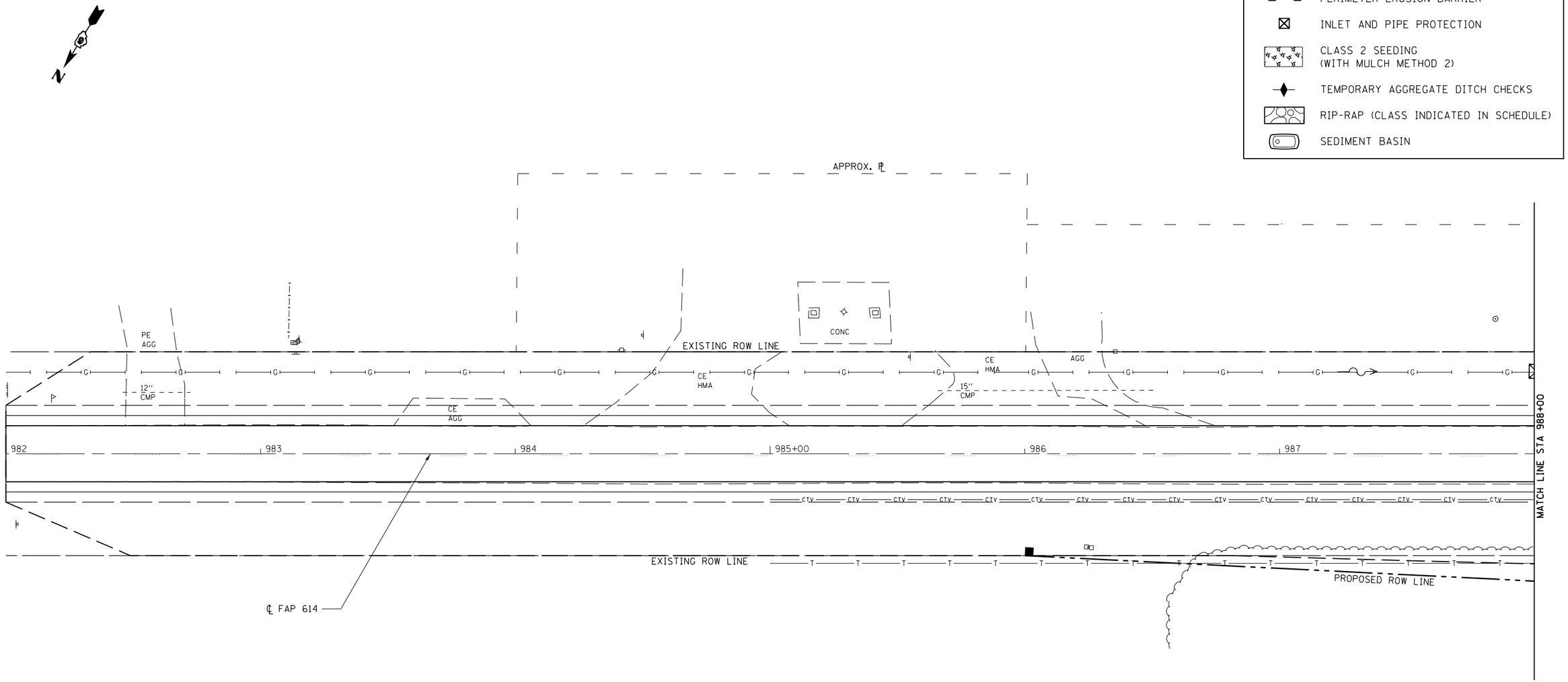
All items shall be constructed as shown on this sheet, on Standard 280001, and as directed by the Engineer.

The symbology on the STORM WATER POLLUTION PREVENTION PLAN sheets does not represent the size or quantity of bales, for number of bales refer to details and notes shown on this sheet and/or as directed by the Engineer.

THE CONTRACTOR SHALL INSTALL DITCH CHECKS AS DIRECTED BY THE ENGINEER. IF THE ENGINEER ELECTS TO UTILIZE FLUSH RIPRAP DITCH CHECKS IN LIEU OF TEMPORARY DITCH CHECKS AS SHOWN ON THE FOLLOWING PLAN SHEETS, THE SPACING SHOULD BE DOUBLED.

LEGEND

- PERIMETER EROSION BARRIER
- INLET AND PIPE PROTECTION
- CLASS 2 SEEDING (WITH MULCH METHOD 2)
- TEMPORARY AGGREGATE DITCH CHECKS
- RIP-RAP (CLASS INDICATED IN SCHEDULE)
- SEDIMENT BASIN



20' 0 20' 40'
SCALE IN FEET

The VOLKERT/DMA Joint Venture

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FILE NAME =	DRAWN - CJS	REVISED -
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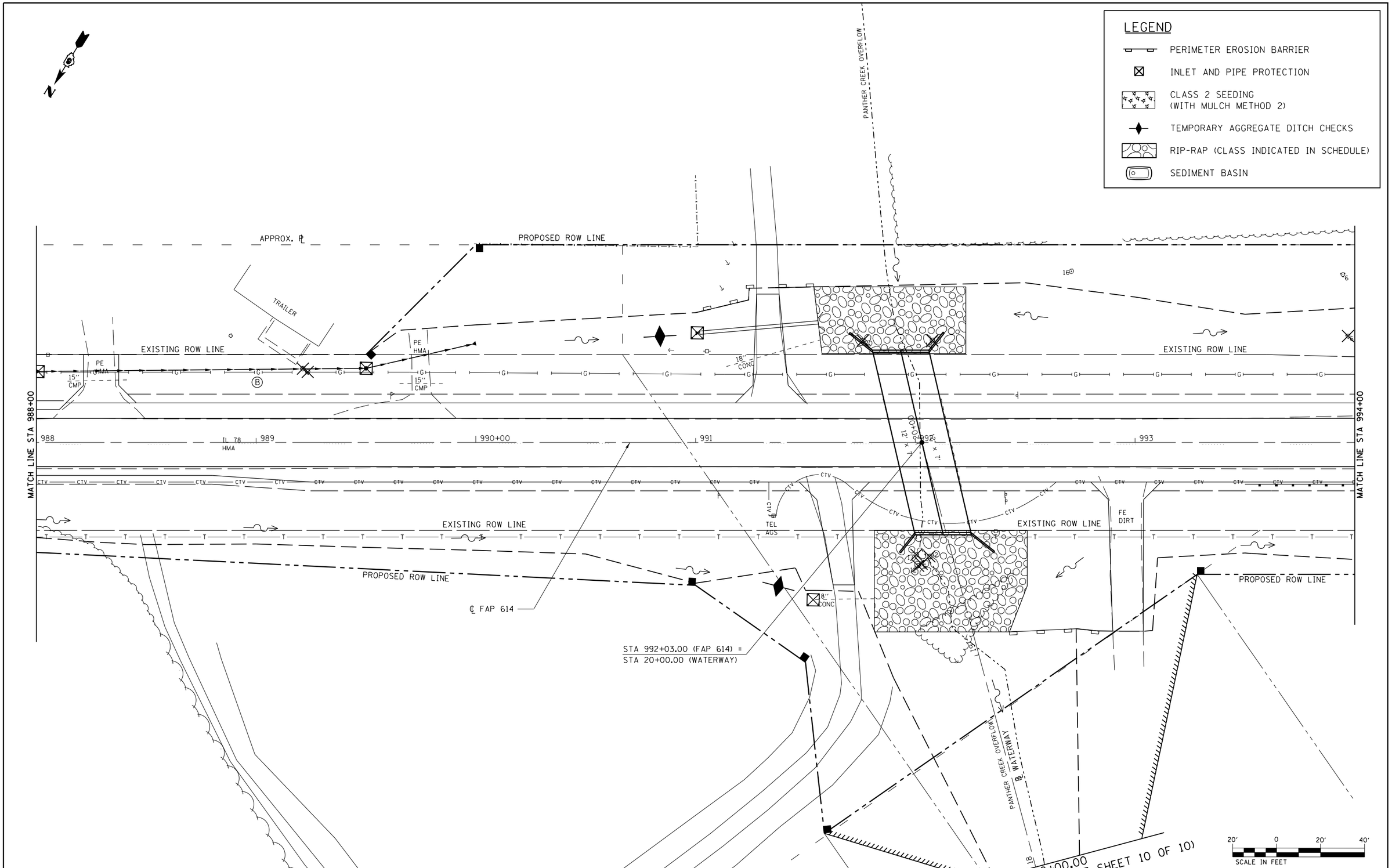
PLOT DATE = Aug-31-2011 09:41:19AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=20' | SHEET NO. 5 OF 10 SHEETS | STA. 982+00 TO STA. 988+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	39
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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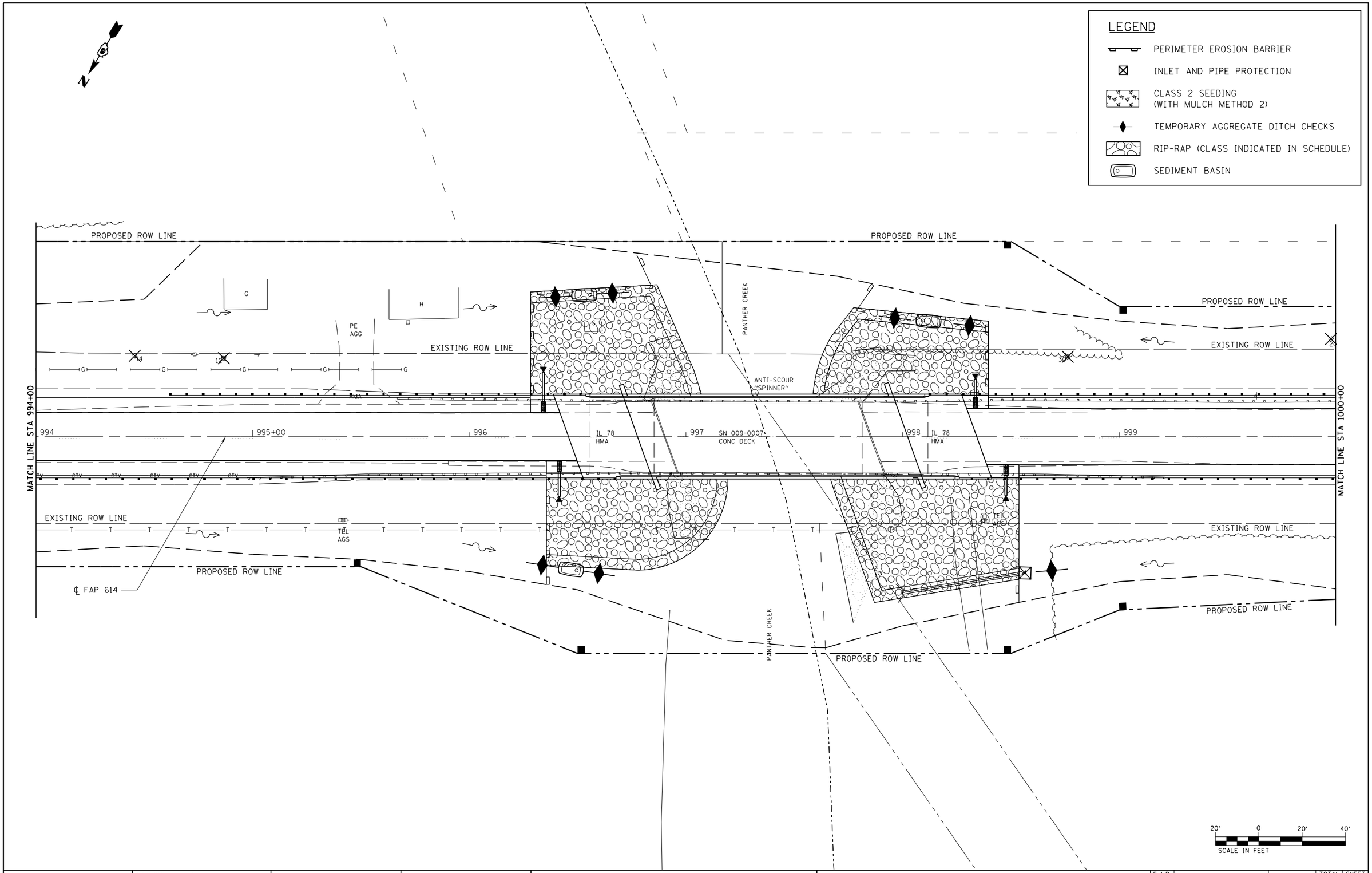
The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=20' | SHEET NO. 6 OF 10 SHEETS | STA. 988+00 TO STA. 994+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	40
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PLOT DATE = Aug-31-2011 09:41:20AM	DATE - 8/26/2011	REVISED -	

The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=20' | SHEET NO. 7 OF 10 SHEETS | STA. 994+00 TO STA. 1000+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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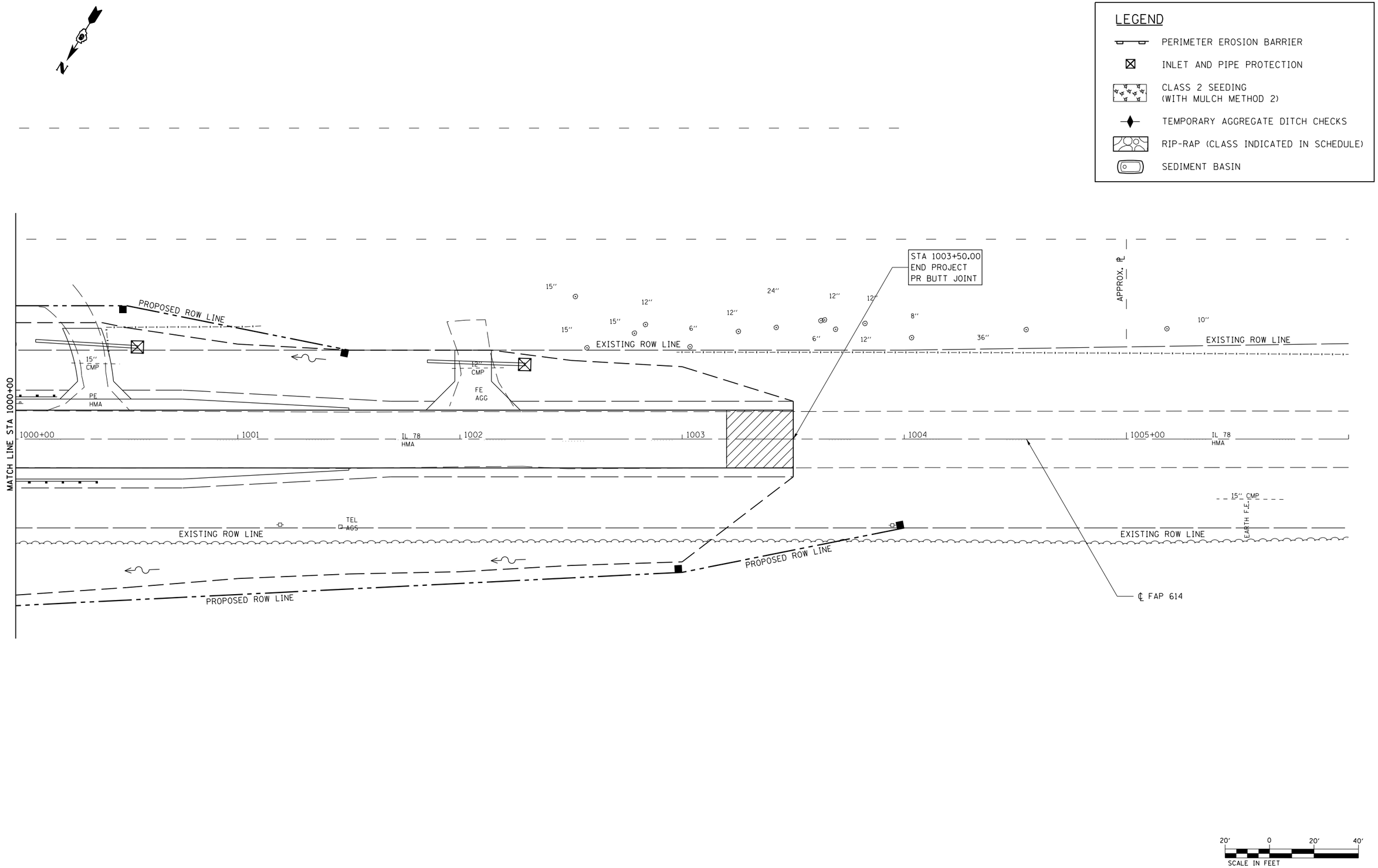
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=20' | SHEET NO. 8 OF 10 SHEETS | STA. 1000+00 TO STA. 1006+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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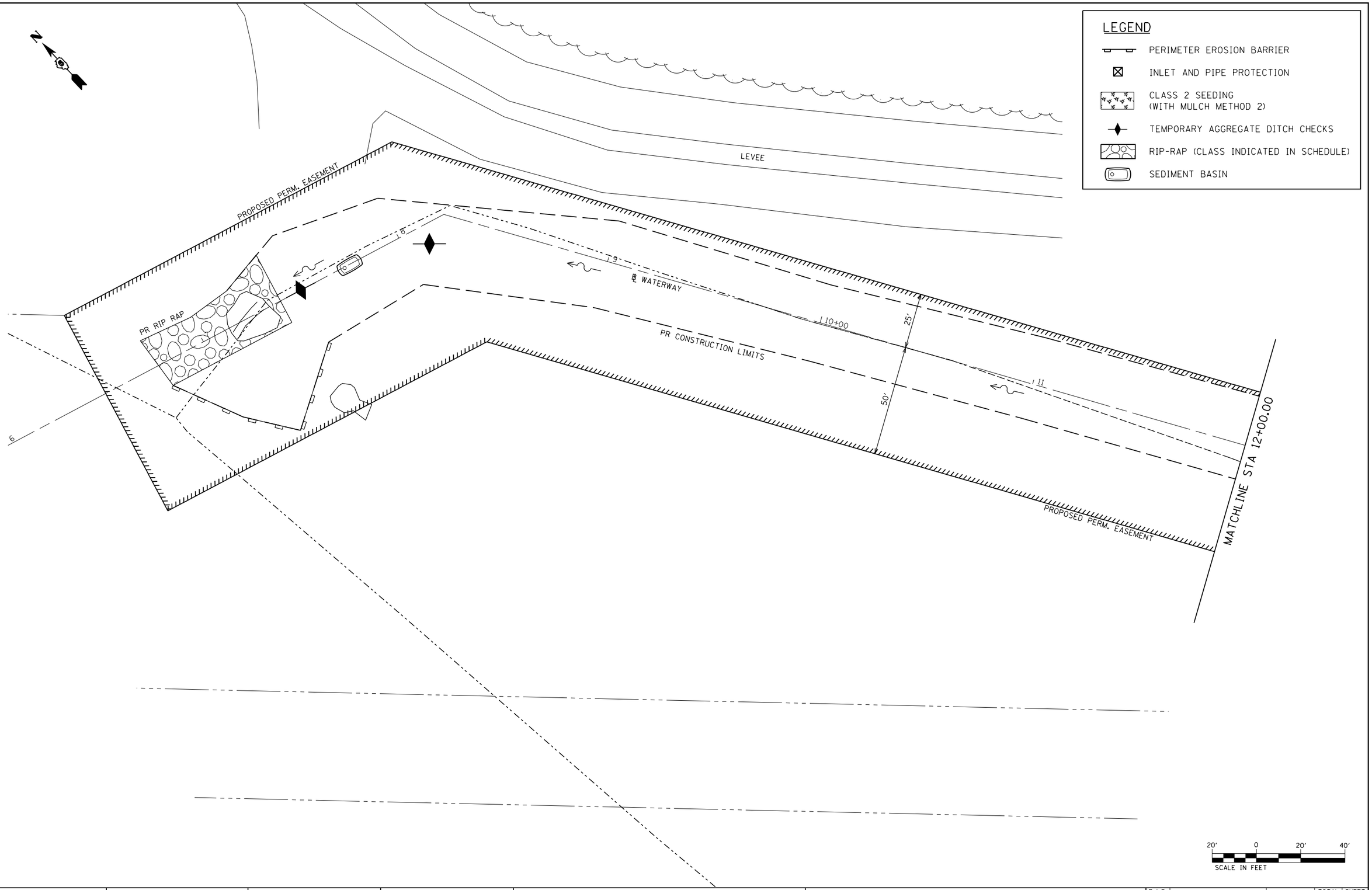
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
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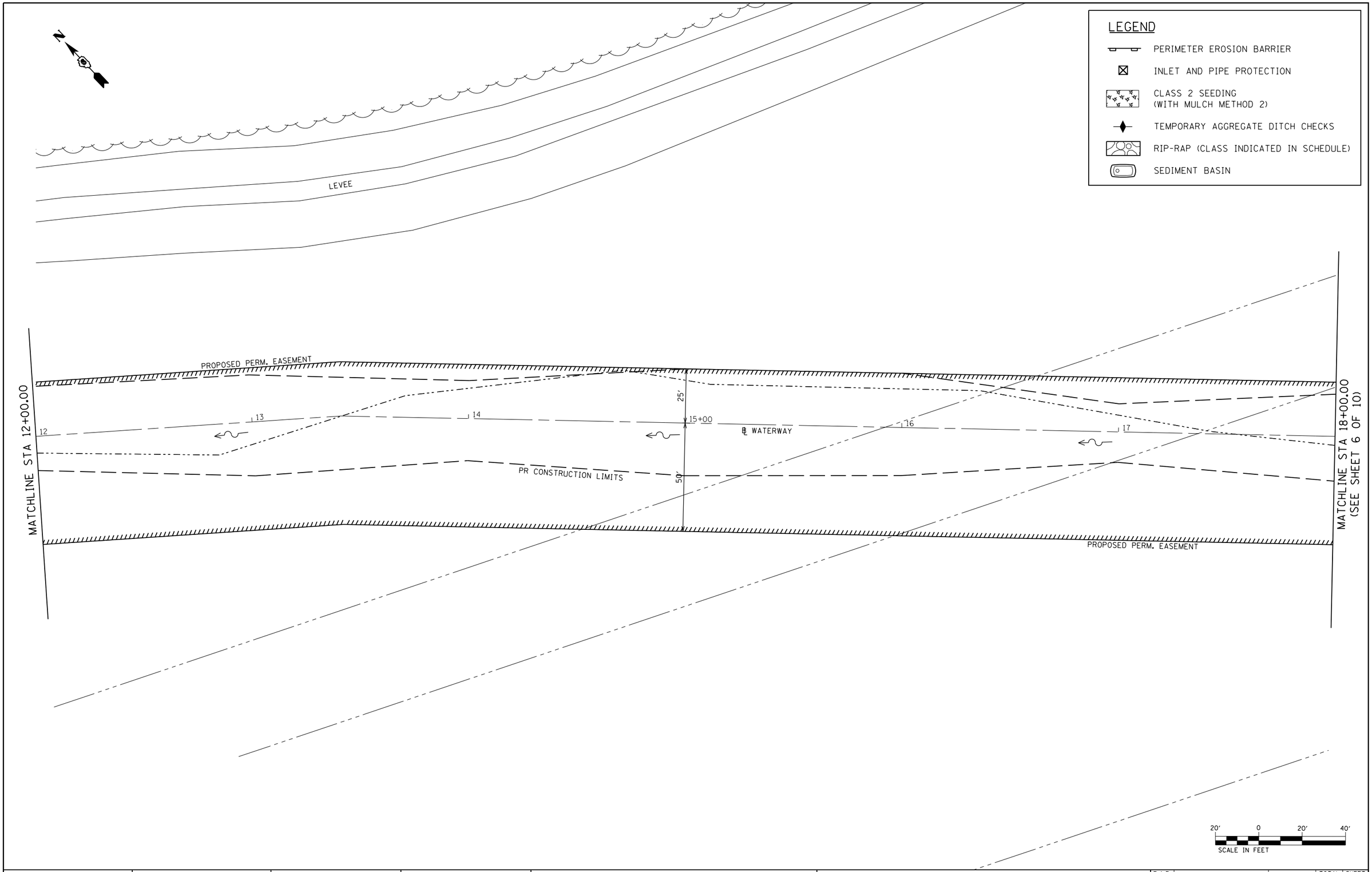
	PLOT DATE = Aug-31-2011 09:41:21AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=20' | SHEET NO. 9 OF 10 SHEETS | STA. 6+50 TO STA. 12+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	43
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

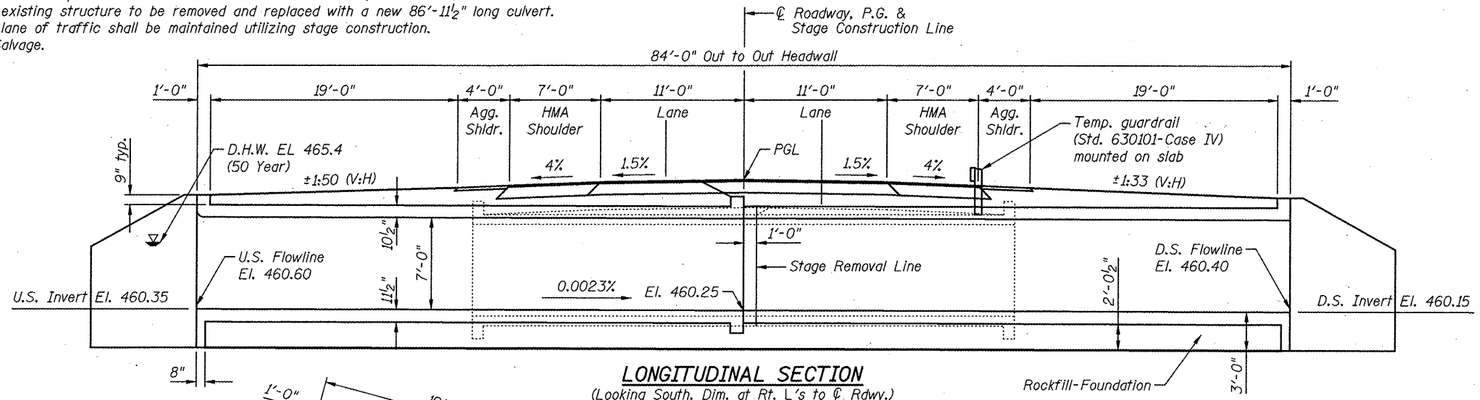
STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=20' | SHEET NO. 10 OF 10 SHEETS | STA. 12+00 TO STA. 18+00

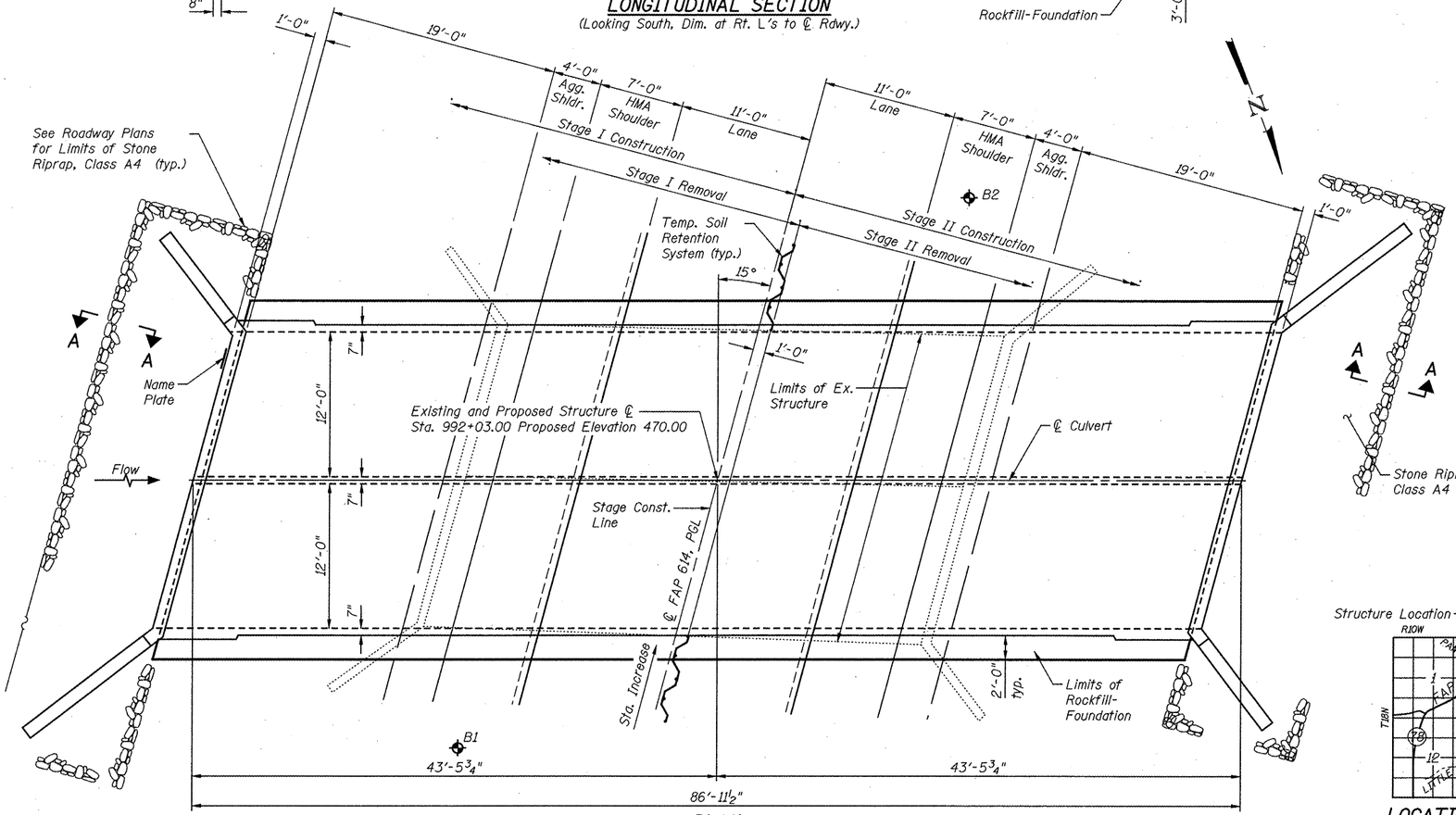
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	44
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Benchmark: Chiseled "□" in concrete headwall of 18" RCCP under levee South side of IL 78.
Sta. 991+56.4, 46.4' Lt. NAVD '88 Elev. 464.27

Existing Structure: SN 009-2001
Originally built in 1931 as SBI 78, Section 144, B, a 2 cell reinforced concrete box culvert with 12 foot spans and 7 foot rise. C.L. Sta. 992+03.00, 13° skew Rt. forward.
The existing structure to be removed and replaced with a new 86'-11½" long culvert.
One lane of traffic shall be maintained utilizing stage construction.
No Salvage.



LONGITUDINAL SECTION
(Looking South, Dim. at Rt. L's to ℄ Rdwy.)



PLAN

GENERAL NOTES

Precast alternate is not allowed.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
Reinforcement bars designated (E) shall be epoxy coated.
Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

TOTAL BILL OF MATERIAL

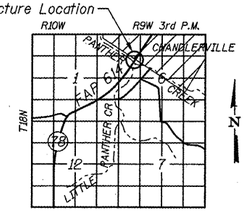
ITEM	UNIT	TOTAL
Stone Riprap, Class A4	Sq. Yd.	111
Filter Fabric	Sq. Yd.	111
Removal of Existing Structures No. 1	Each	1
Reinforcement Bars, Epoxy Coated	Pound	51,340
Bar Splicers	Each	125
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	218.1
Granular Culvert Backfill	Cu. Yd.	278
Temporary Soil Retention System	Sq. Ft.	223
Rockfill-Foundation	Ton	363
Temporary Steel Plate Beam Guardrail, Attached to Structures	Foot	25

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
MARY COOMBE BLOXDORF
4859
SPRINGFIELD
STATE OF ILLINOIS

ILLINOIS STRUCTURAL NO. 4859
~~EXPIRES~~ 11/30/12
DATE: 8/28/2011

Structure Location



LOCATION SKETCH

GENERAL PLAN
IL-78 OVER PANTHER CREEK OVERFLOW
FAP ROUTE 614 SECTION 144(B-4)
CASS COUNTY
STATION 992+03.00
STRUCTURE NO. 009-2511

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	45
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

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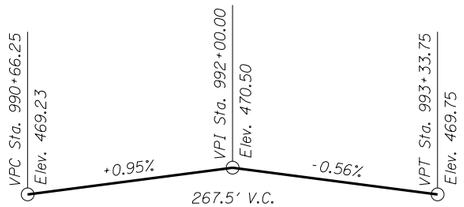
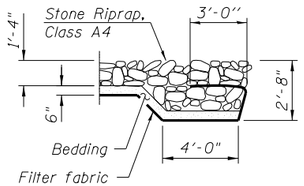
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PROFILE GRADE
(Along ℄ Roadway)



SECTION A-A

STATION 992+03.00
BUILT 20___ BY
STATE OF ILLINOIS
F.A.P. RT. 614 SEC. 144(B-4)
LOADING HS 20-44
STR. NO. 009-2511

LETTERING FOR NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

LOADING HS-20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	457.35	457.15

WATERWAY INFORMATION

Drainage Area = 52 sq. mi.

Existing Low Grade Elev. = 468.1 @ Sta. 995+90.27
Proposed Low Grade Elev. = 468.1 @ Sta. 995+90.27

Flood	Freq. Yr.	Discharge (cfs)	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Bridge	10	4107	910	910	463.7	0.0	0.0	463.7	463.7
Box		183	93	93					
Design Bridge	50	6412	1061	1061	465.4	0.2	0.2	465.5	465.5
Box		508	133	133					
Base Bridge	100	7459	1102	1102	465.8	0.3	0.3	466.1	466.1
Box		641	145	145					
Overtopping	>500								
Max. Bridge	500	10081	1102	1102	466.9	0.7	0.7	467.6	467.6
Calc. Box		919	168	168					

INDEX OF SHEETS

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

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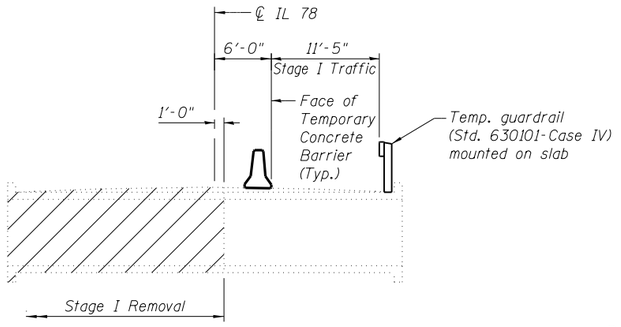
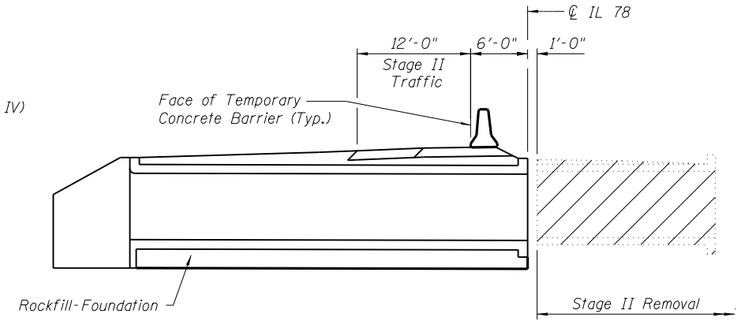
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 009-2511
SHEET NO. 2 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	46
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			



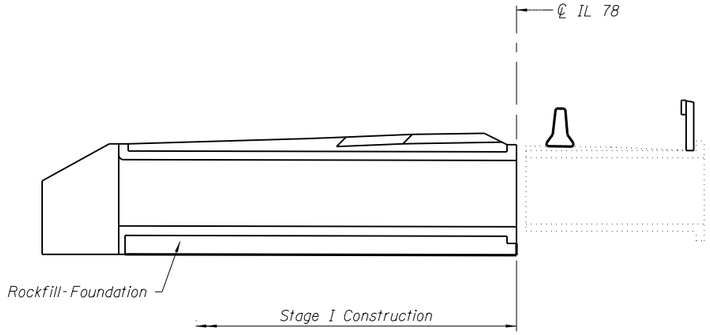
STAGE I REMOVAL
(Looking South)



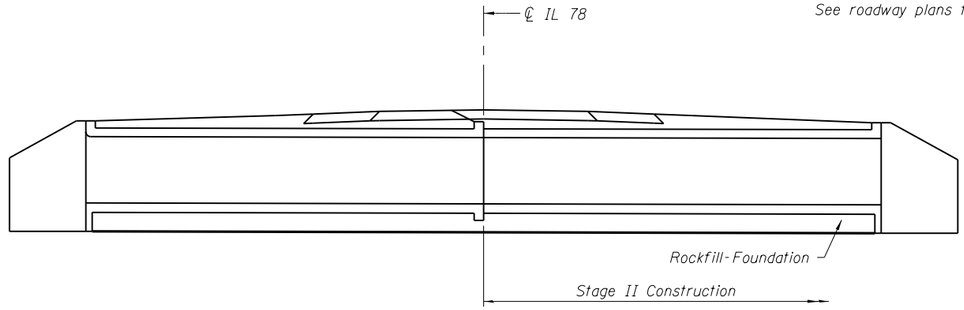
STAGE II REMOVAL
(Looking South)

Note: Dimensions at Rt. L's to ℄ Roadway unless otherwise noted.

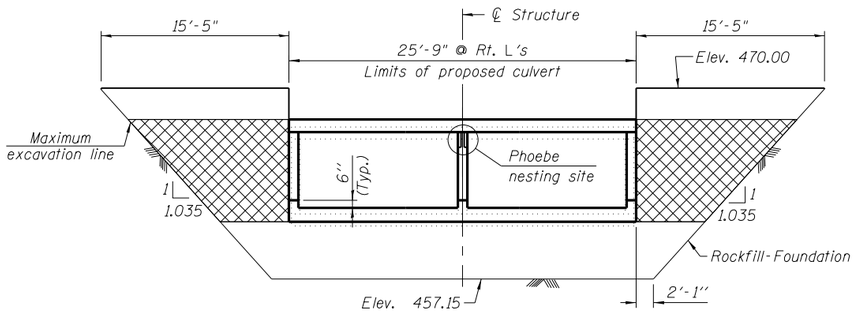
Notes:
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
Cross-hatched area indicates granular culvert backfill.
See roadway plans for quantity of temporary concrete barrier.



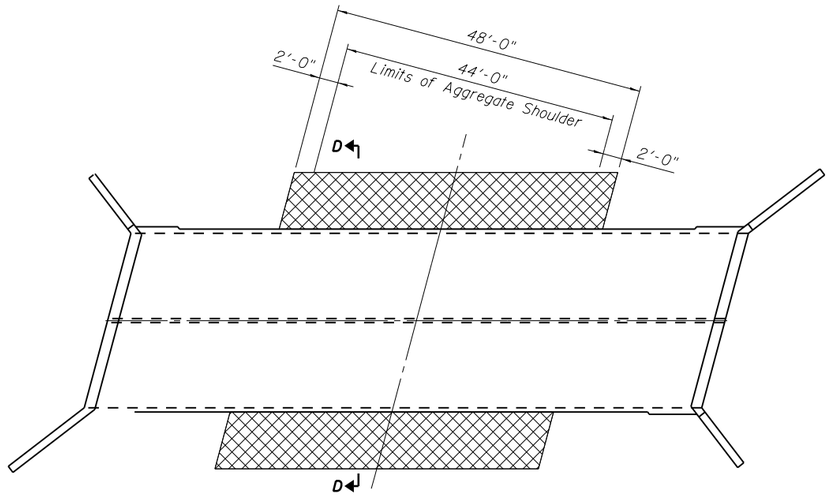
STAGE I CONSTRUCTION
(Looking South)



STAGE II CONSTRUCTION
(Looking South)



TEMPORARY SOIL RETENTION SYSTEM & SEC D-D
(Dimensions along ℄ Roadway unless noted otherwise)



GRANULAR CULVERT BACKFILL
See Special Provisions for Granular Culvert Backfill

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

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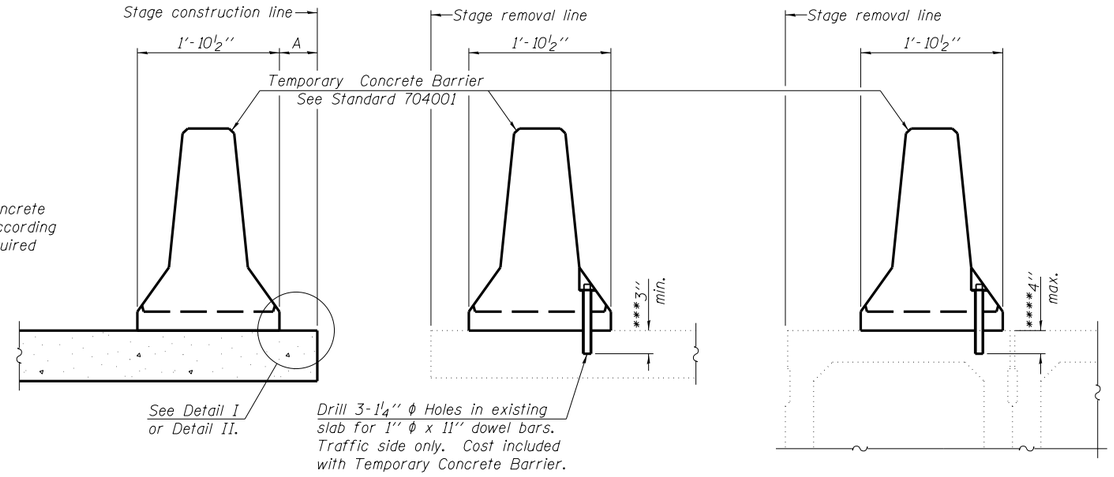
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 009-2511
SHEET NO. 3 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	47
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel ℙ to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel ℙ to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

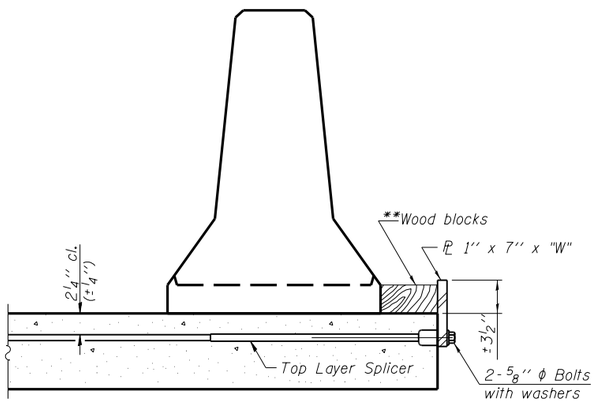
Cost of anchorage is included with Temporary Concrete Barrier.

The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

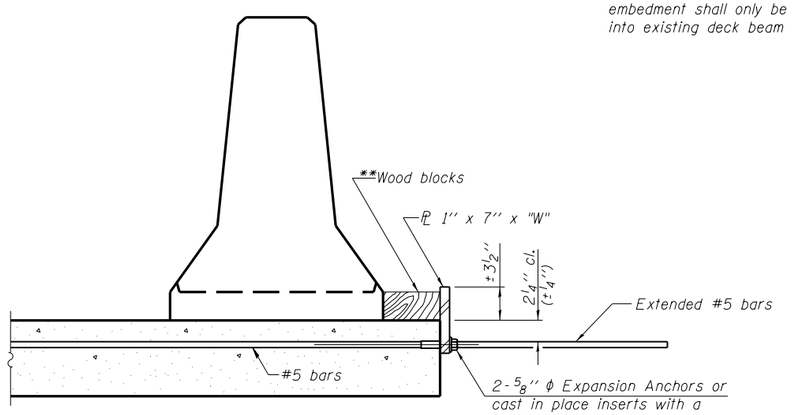
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

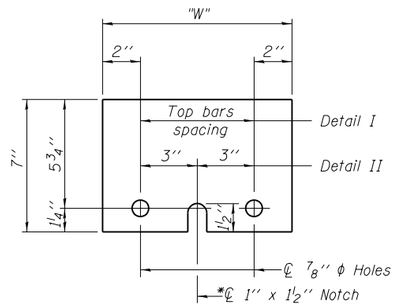
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER ℙ 1'' x 7'' x ''W''

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4''

R-27

7-1-10

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 009-2511

SHEET NO. 4 OF 9 SHEETS

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	48
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

(Back)
4-#8 $h_3(E)$ bars at ±9" cts. Short Wing
4-#8 $h_7(E)$ bars at ±9" cts. Long Wing
(Front)
10-#8 $h_3(E)$ bars at ±9 cts. Short Wing
10-#8 $h_7(E)$ bars at ±9" cts. Long Wing

Bend in Field, typ.

11-#8 $h_6(E)$ bars at 9" cts. Long Wing
11-#8 $h_8(E)$ bars at 9" cts. Short Wing

(Back) (Back)

4-#4 $v_1(E)$ bars Ea. Wing See Plan View

8"

1'-0"

82'-0"

41'-0"

41'-0"

See Sheet 6 of 9 for Headwall & Edge Beam Reinforcement Details

℄ Rdwy. & Stage Construction Line

9"

$a_1(E)$ or $a_2(E)$

$h_2(E)$

$d(E)$

$h(E)$

110-#4 $v(E)$ bars at 9½" cts. at center (55 Stage I, 55 Stage II)

$h_5(E)$

$d(E)$

Elev. 460.35

$h_5(E)$

$d(E)$

2" cl.

7-#6 $h_9(E)$ bars at 12" cts.

7-Bar Splicers For #6 $h_9(E)$ bars Typ. Ea. Wall

3"ϕ Drains at ±8'-0" cts.

2'-0"

Const. Jt.

6"

7-#6 $h_9(E)$ bars at 12" cts.

Flow

110-#4 $v(E)$ bars at 9½" cts. (55 Stage I, 55 Stage II)

10½"

7'-0"

1½"

Elev. 460.15

3'-0"

3'-10"

7'-9½"

11'-7½"

42'-0" Stage I Construction

42'-0" Stage II Construction

HALF LONG SECTION

Showing bars in Center Wall

HALF ELEVATION

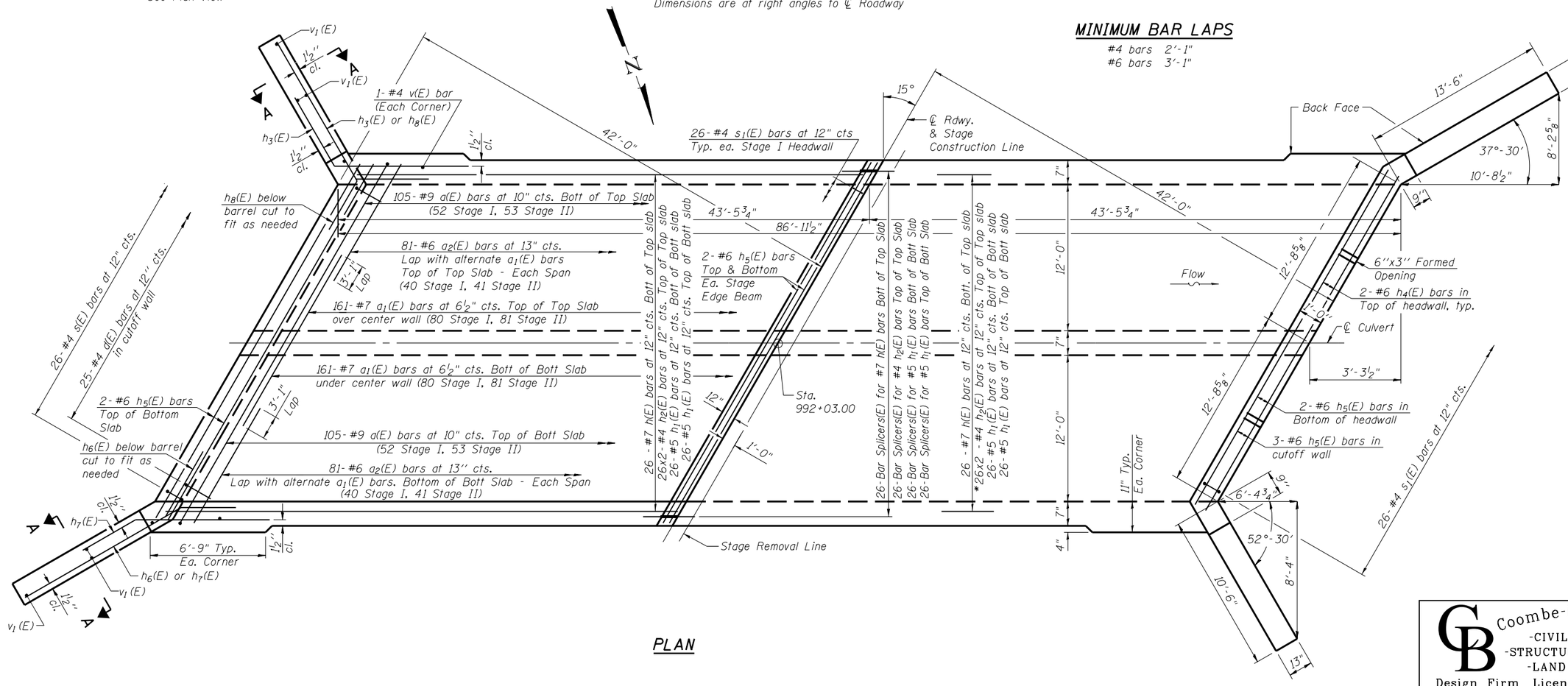
Showing bars in Outside Wall

Dimensions are at right angles to ℄ Roadway

Notes: See Sheet 6 of 9 for Culvert Details, including Section A-A, bar details and Bill of Material.
Bars indicated thus 26x2-#4, etc. indicates 26 lines of bars with 2 lengths per line.

MINIMUM BAR LAPS

#4 bars 2'-1"
#6 bars 3'-1"



PLAN

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT PLAN
STRUCTURE NO. 009-2511
SHEET NO. 5 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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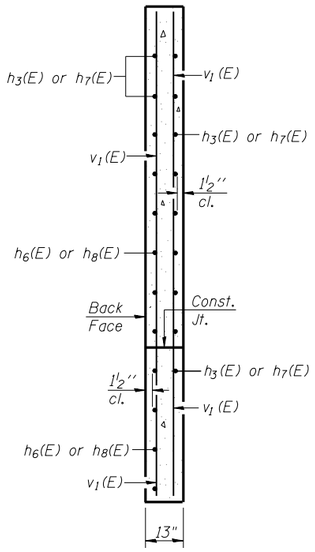
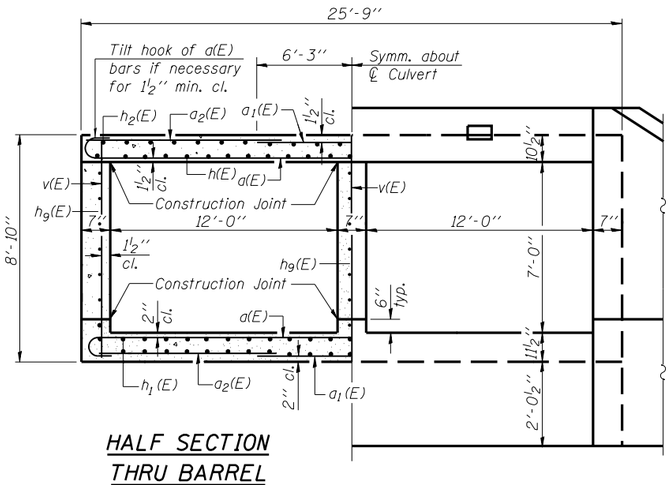
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			



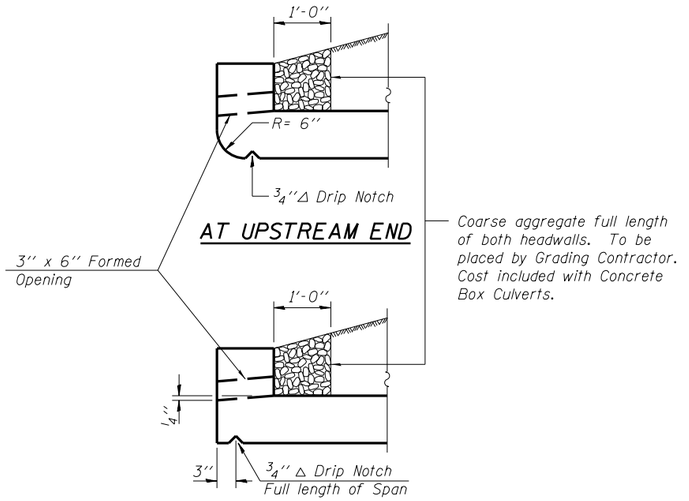
SECTION A-A



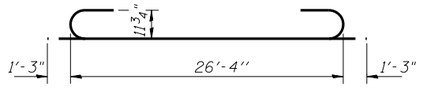
HALF SECTION THRU BARREL

HALF END ELEVATION

Note:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

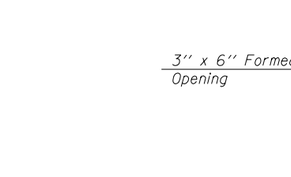


DRAIN DETAIL

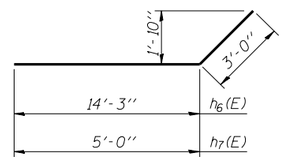


BAR a(E)

BAR d(E)



BARS $h_3(E)$ & $h_8(E)$

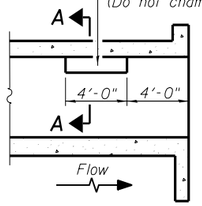


BARS $h_6(E)$ & $h_7(E)$

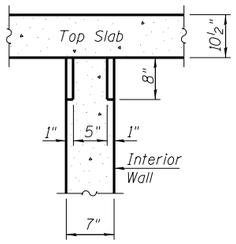
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	210	#9	28'-10"	
$a_1(E)$	322	#7	12'-6"	
$a_2(E)$	162	#6	10'-0"	
d(E)	50	#4	4'-6"	
h(E)	52	#7	43'-1"	
$h_1(E)$	104	#5	43'-1"	
$h_2(E)$	104	#4	22'-8"	
$h_3(E)$	28	#8	8'-0"	
$h_4(E)$	4	#6	26'-6"	
$h_5(E)$	22	#6	27'-0"	
$h_6(E)$	22	#8	17'-3"	
$h_7(E)$	28	#8	8'-0"	
$h_8(E)$	22	#8	13'-9"	
$h_9(E)$	42	#6	43'-1"	
s(E)	26	#4	4'-5"	
$s_1(E)$	78	#4	4'-7"	
v(E)	334	#4	8'-6"	
$v_1(E)$	16	#4	11'-3"	
Concrete Box Culverts			Cu. Yd.	218.1
Reinforcement Bars, Epoxy Coated			Pound	51,340
Bar Splicers			Each	125

Notch formed by rough finished board attached to and removed with form work, each interior wall. (Do not chamfer).

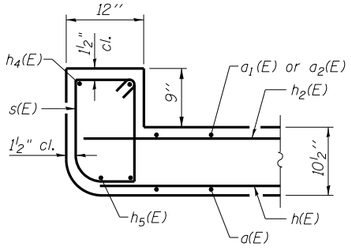


LONGITUDINAL SECTION

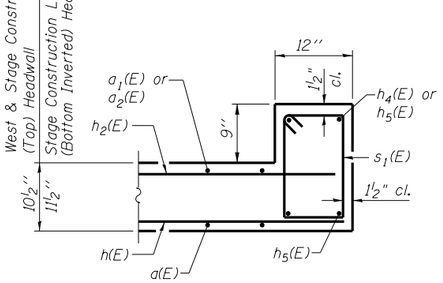


SECTION A-A

PHOEBE NESTING SITE DETAILS
(Downstream End Only)

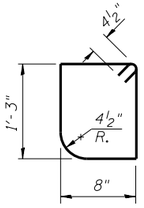


EAST HEADWALL REINFORCEMENT DETAIL

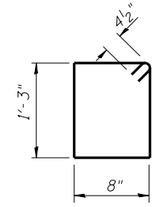


EDGE BEAMS AT STAGE I CONSTRUCTION & WEST HEADWALL REINFORCEMENT DETAIL

Note: Use bottom headwall reinforcement in top of bottom slab and top headwall reinforcement in bottom of Lower Edge Beam.



BAR s(E)



BAR $s_1(E)$

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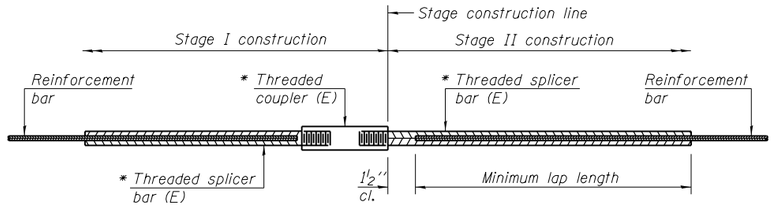
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS
STRUCTURE NO. 009-2511
SHEET NO. 6 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	50
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

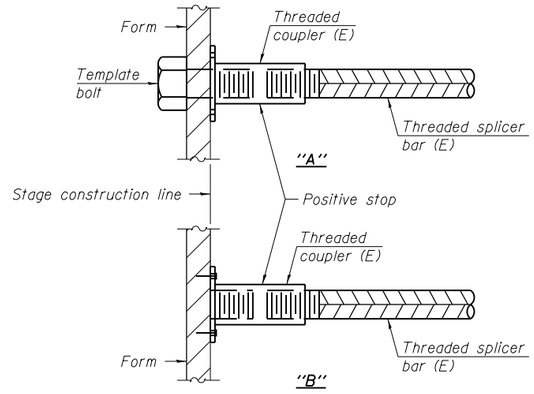
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1½" + thread length

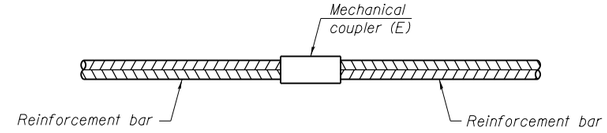
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Top of Top Slab	#4	26	3
Bott of Top Slab	#7	26	3
Bottom Slab	#5	52	3
Sidewalls	#6	21	4



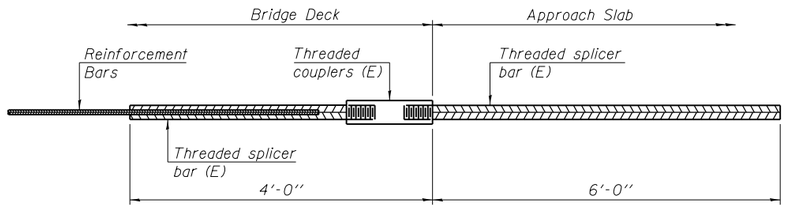
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



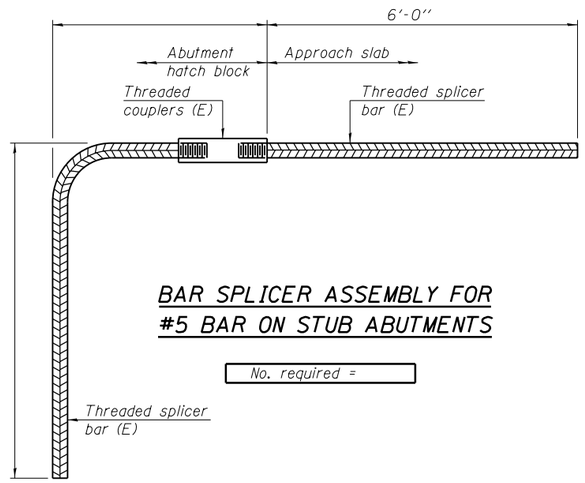
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

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

See special provision for Mechanical Splicers.

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

BSD-1 7-1-10

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Design Firm License No. 184-002703

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 009-2511
SHEET NO. 7 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	51
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 6/11/08

ROUTE FAP 614 DESCRIPTION IL-78 Over Panther Creek Overflow LOGGED BY M. Tappan

SECTION 144(B-4) LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 4 PM

COUNTY Cass DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 009-2511
Station 992+03

BORING NO. 1 NE WW
Station 991+76
Offset 15.0ft Lt
Ground Surface Elev. 467.6 ft

Surface Water Elev. 460.1 ft
Stream Bed Elev. 459.5 ft

Groundwater Elev.:
▽ First Encounter 453.6 ft
▽ Upon Completion Washed ft
▼ After 5 Days Hrs. 464.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Dark Gray moist SILTY CLAY LOAM (Fill)
	0			No Recovery. WOH
	0	-	-	
	0			
	0			
-5	0	0.3	26	Gray very moist SILTY CLAY LOAM (Fill)
	1	B		
460.60	0			
	0	0.3	30	Light Brown and Gray moist SILTY CLAY LOAM
	0	B		
	0			
-10	1	0.5	22	
	1	B		
455.60	0			
	1	-	-	Tan Medium wet SAND
	2			
	0			
-15	0	-	-	Tan Fine Dirty SAND with some Loam seams Free Water
	1			
	0			
	0	-	-	Tan Fine Clean SAND
	1			
	2			
-20	1	-	-	Tan Medium SAND
				with some Pea Gravel Washed
	2			Tan Medium wet SAND *(continued)*
	1			
	5	-	-	Tan Medium SAND Washed
	5			
	5			
-25	9	-	-	Tan Medium SAND with some Coarse Gravel Washed
	10			
	1			
-30	6	-	-	Tan Medium SAND Washed
	9			
	19			
-35	26	-	-	Tan Medium SAND to Gray Medium Sandy Gravel Washed
	45			
430.10				
				Gray moist SILTY CLAY (Drilled Stiff at 37.5) Washed
	8			
-40	8	3.7	21	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILSIGINT FILES\CASS\PANTHER CREEK OVERFLOW\GPJ Data Template DISTEMPLT.GDT Data Printed 6/1/09
Latitude 40D 2.053N Longitude 90D 9.481W Datum NAD83 Job Number D-96-011-08

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 6/11/08

ROUTE FAP 614 DESCRIPTION IL-78 Over Panther Creek Overflow LOGGED BY M. Tappan

SECTION 144(B-4) LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 4 PM

COUNTY Cass DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 009-2511
Station 992+03

BORING NO. 1 NE WW
Station 991+76
Offset 15.0ft Lt
Ground Surface Elev. 467.6 ft

Surface Water Elev. 460.1 ft
Stream Bed Elev. 459.5 ft

Groundwater Elev.:
▽ First Encounter 453.6 ft
▽ Upon Completion Washed ft
▼ After 5 Days Hrs. 464.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
427.10	11	B		
-45				
-50				
-55				
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Latitude 40D 2.053N Longitude 90D 9.481W Datum NAD83 Job Number D-96-011-08

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-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 009-2511
SHEET NO. 8 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	52
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
District 8

SOIL BORING LOG

Date 6/12/08

ROUTE FAP 614 DESCRIPTION IL-78 Over Panther Creek Overflow LOGGED BY M. Tappan

SECTION 144(B-4) LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 4 PM

COUNTY Cass DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 009-2511
Station 992+03

BORING NO. 2 SW WW
Station 992+31
Offset 14.0ft Rt
Ground Surface Elev. 467.5 ft

Surface Water Elev. 460.1 ft
Stream Bed Elev. 459.5 ft

Groundwater Elev.:
▽ First Encounter 455.5 ft
▽ Upon Completion Washed ft
▼ After 4 Days Hrs. 464.5 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				Dk Gray Moist SILTY CLAY LOAM (Fill)
	0			
	1	0.5	28	
	2	B		
	0			
-5	1	0.3	20	Gray and Brown V. Moist
	1	B		
460.50	0			
	1	0.6	20	Lt Brownish Gray Moist SILTY CLAY LOAM
	2	B		
458.00	1			
-10	1			Brown Moist Med. SAND
	2			
	0			
	0			Brown Wet Dirty SAND
	1			Free Water
	0			
-15	0			
	0			
	0			Tan Med to Coarse SAND
	0			
	1			
	2			
-20	3			Brown Med to Coarse SAND

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	3			w/ some Med Sandy Gravel
				Washed
				Brown Moist Med. SAND
	2			*(continued)*
	1			Gray Dirty Fine SAND
	1			
	2			
-25	3			Gray Med SAND
	3			
	4			
-30	6			Tan
	10			
	15			
-35	24			Gray Med to Coarse SAND
	29			w/ some Med Gravel
429.50				
	10			Gray Moist SILTY CLAY
-40	6	2.9	18	drilled stiff @ 38ft

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name:S:\SOILS\SGINT FILES\CASS\PANTHER CREEK OVERFLOW.GPJ Data Template DISTEMPLT.GDT Date Printed 6/14/09
Latitude 40D 2.64N Longitude 90D 9.47W Datum NAD83 Job Number D-06-011-08

Illinois Department of Transportation
Division of Highways
District 8

SOIL BORING LOG

Date 6/12/08

ROUTE FAP 614 DESCRIPTION IL-78 Over Panther Creek Overflow LOGGED BY M. Tappan

SECTION 144(B-4) LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 4 PM

COUNTY Cass DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 009-2511
Station 992+03

BORING NO. 2 SW WW
Station 992+31
Offset 14.0ft Rt
Ground Surface Elev. 467.5 ft

Surface Water Elev. 460.1 ft
Stream Bed Elev. 459.5 ft

Groundwater Elev.:
▽ First Encounter 455.5 ft
▽ Upon Completion Washed ft
▼ After 4 Days Hrs. 464.5 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
427.00	11	B		
				Boring Complete
-45				
-50				
-55				
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name:S:\SOILS\SGINT FILES\CASS\PANTHER CREEK OVERFLOW.GPJ Data Template DISTEMPLT.GDT Date Printed 6/14/09
Latitude 40D 2.64N Longitude 90D 9.47W Datum NAD83 Job Number D-06-011-08

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CB PROJECT NO. 07048-14	PLOT DATE = Sep-01-2011 06:59:50AM	DRAWN - MML	REVISED -
		CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 009-2511
SHEET NO. 9 OF 9 SHEETS

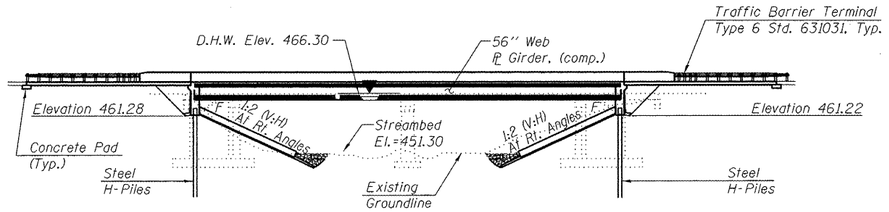
Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-4)	CASS	97	53
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

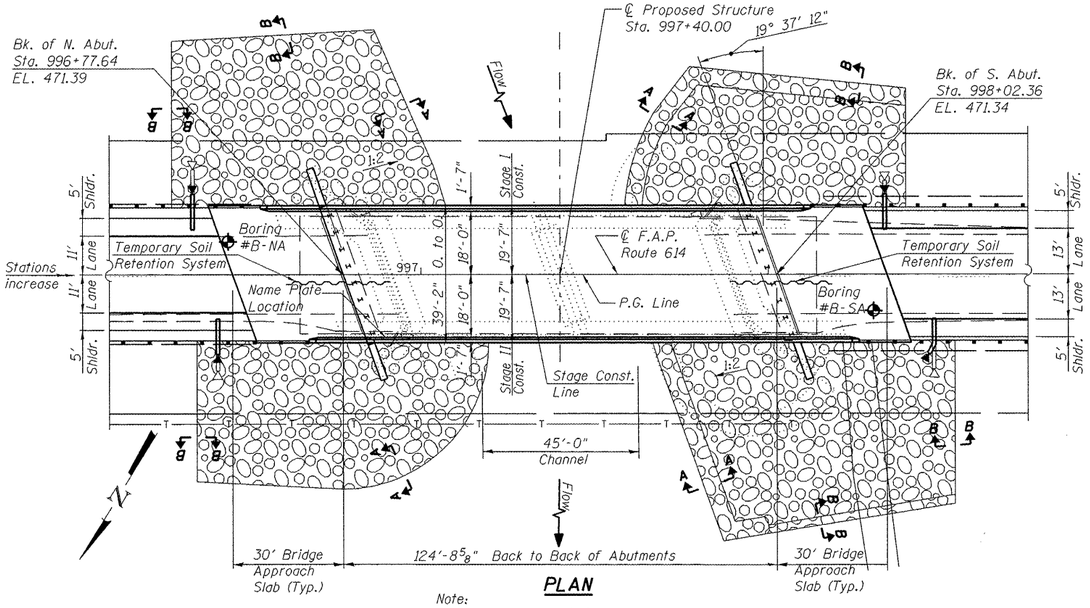
Bench Mark: Chisled "Square" in Northwest corner of North abutment. 18.6' RT. STA. 996+95. Elev = 446.04

Existing Structure: S.N. 009-0007 was built in 1931 as SBI 78, Section 144-B. In 1984 the abutments and pier were widened and the superstructure was reconstructed using 11 PPC deck beams. The superstructure consists of spill-through abutments founded on timber piles and a solid pier on timber piles. The back-to-back dimension measures 96'-5", while the out-to-out width measures 33'-0". The structure is to be replaced using stage construction.

No Salvage

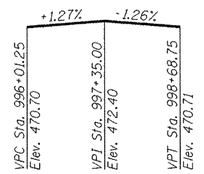


ELEVATION



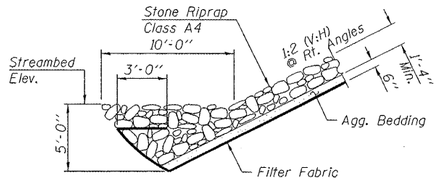
PLAN

Note:
Removal cost of existing slopewall shall be included with Removal of Existing Structures.

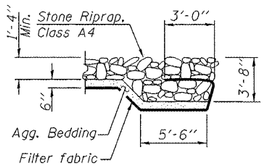


PROFILE GRADE

(along ℄ roadway)



SECTION A-A



SECTION B-B

STATION 997+40.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. RT. 614
SEC. 144 (B-5)
LOADING HL93
STR. NO. 009-0512

NAME PLATE

See Std. 515001

WATERWAY INFORMATION

Drainage Area = 52 sq mi.
Existing Low Grade Elev. 468.1 @ Sta. 1002+50
Proposed Low Grade Elev. 468.1 @ Sta. 1004+00

Flood		Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
		10	4290	1220	1310	464.6	0.0	0.0	464.6	464.6
Design	Main Channel	50	6300	1100	1380					
	Overflow		620	160	140					
	Total		6920	1260	1520	466.3	0.5	0.3	466.8	466.6
Base	Main Channel	100	7045	1100	1380					
	Overflow		1055	170	150					
	Total		8100	1270	1530	466.9	0.8	0.5	467.7	467.4
Maximum or Over-topping	Main Channel	300	6930	1100	1380					
	Overflow		1170	170	150					
	Total		11000	1270	1550	467.9	1.0	0.9	468.9	468.0

10 Year Velocity Through Existing Bridge = 4.17 ft/s
10 Year Velocity Through Proposed Bridge = 3.37 ft/s

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft)	N. Abut	S. Abut
	461.63	461.70

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

MARC BACCHETTI
081-005240
LICENSED
STRUCTURAL
ENGINEER
ST. LOUIS, MO
STATE OF ILLINOIS
12-9-11
Exp 11-30-12

INDEX OF SHEETS

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications,
5th Edition with 2010 Interims.

LOADING HL-93

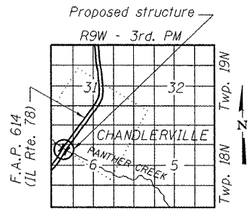
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi
M270 Gr. 50W

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.220
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.132
Soil Site Class = D



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL 78 OVER PANTHER CREEK
F.A.P. ROUTE 614 (IL 78)
SEC. 144 (B-5)
CASS COUNTY
STATION 997+40.00
STRUCTURE NO. 009-0512

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 009-0512
SHEET NO. 1 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	54
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 3/4-in. ϕ, holes 13/16-in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 232.833 pounds

All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in Article 506 of the standard specifications.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

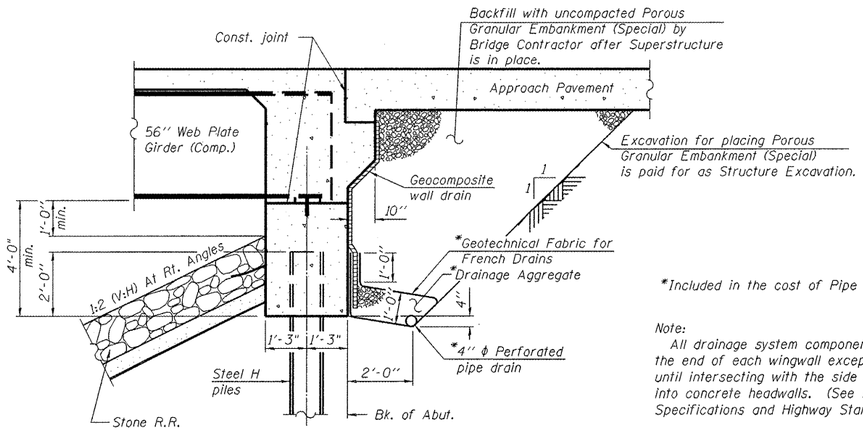
Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Slipforming of parapets is not allowed.

TOTAL BILL OF MATERIALS

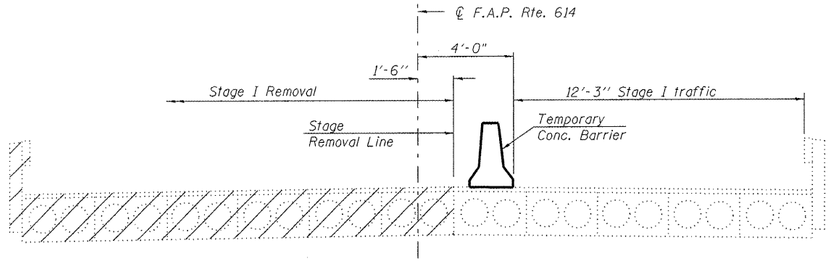
ITEM	UNIT	SUPER	SUB	TOTAL
POROUS GRANULAR EMBANKMENT, SPECIAL	CU. YD.		489	489
STONE RIPRAP, CLASS A4	SQ. YD.		2190	2190
FILTER FABRIC	SQ. YD.		2190	2190
REMOVAL OF EXISTING STRUCTURES NO.2	EACH			1
STRUCTURE EXCAVATION	CU. YD.		124	124
CONCRETE STRUCTURES	CU. YD.	21.6	48	69.6
CONCRETE SUPERSTRUCTURE	CU. YD.	298.6		298.6
BRIDGE DECK GROOVING	SQ. YD.	805		805
CONCRETE ENCASEMENT	CU. YD.		5.6	5.6
PROTECTIVE COAT	SQ. YD.	932		932
FURNISHING AND ERECTING STRUCTURAL STEEL	L. SUM			1
STUD SHEAR CONNECTORS	EACH	3312		3312
REINFORCEMENT BARS, EPOXY COATED	POUND	69022	16364	85386
BAR SPLICERS	EACH	681	108	789
FURNISHING STEEL PILES HP12x63	FOOT		700	700
DRIVING PILES	FOOT		700	700
TEST PILE STEEL HP 12x63	EACH		2	2
NAME PLATES	EACH	1		1
GEOCOMPOSITE WALL DRAIN	SQ. YD.		120	120
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT		125	125
TEMPORARY SOIL RETENTION SYSTEM	SQ. FT.		1200	1200
ANCHOR BOLTS, 1"	EACH		24	24
ASBESTOS BEARING PAD REMOVAL	EACH			44



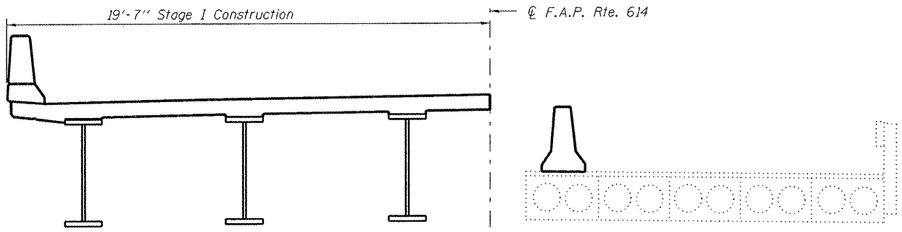
*Included in the cost of Pipe Underdrains for Structures 4"

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

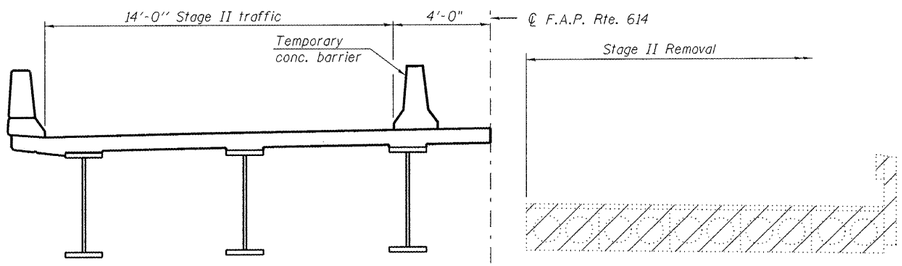
SECTION THRU INTEGRAL ABUTMENT
HORIZONTAL DIMENSION @ RIGHT ANGLES



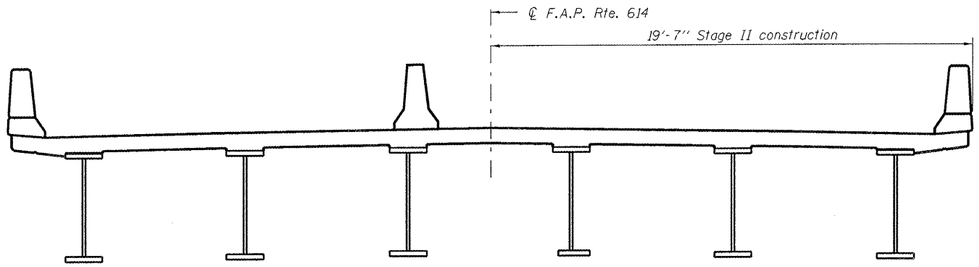
STAGE I REMOVAL



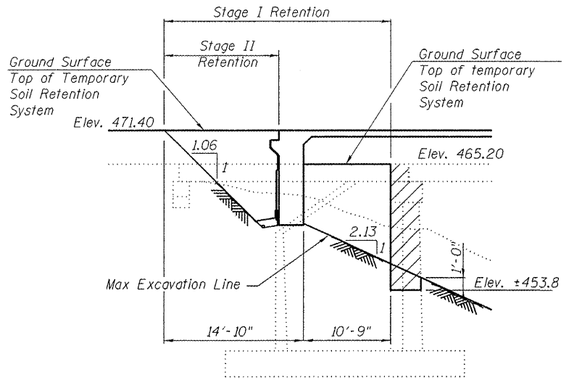
STAGE I CONSTRUCTION



STAGE II REMOVAL

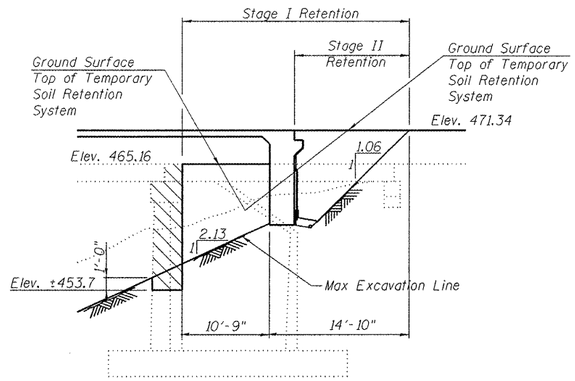


STAGE II CONSTRUCTION



TEMPORARY SOIL RETENTION SYSTEM AT NORTH ABUTMENT

(Dimensions taken along stage construction line)



TEMPORARY SOIL RETENTION SYSTEM AT SOUTH ABUTMENT

(Dimensions taken along stage construction line)

NOTES:

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Cross Hatched areas indicate removal of existing structure.

All cross sections are looking South.

Removal of existing overlay is included with Removal of Existing Structures.

See Roadway plans for quantity of Temporary Concrete Barrier.

See sheet 4 of 20 for details of Temporary Concrete Barrier.

Stage Removal and Construction lines also apply to abutments.

Final abutment removal shall be performed after completion of Stage II construction to required depth per standard specs.

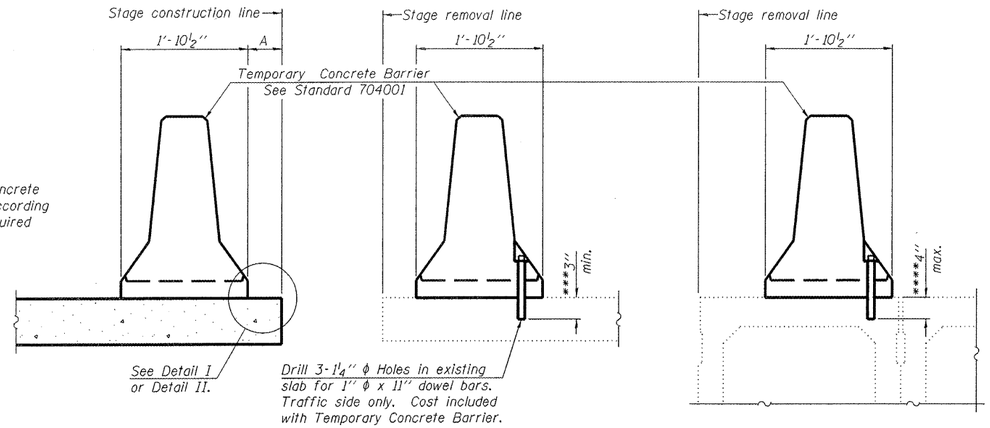
The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 009-0512
SHEET NO. 3 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	94	56
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

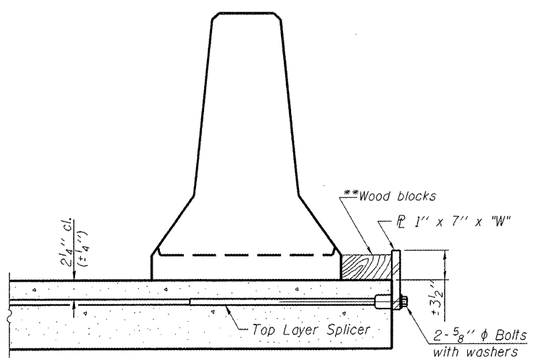
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

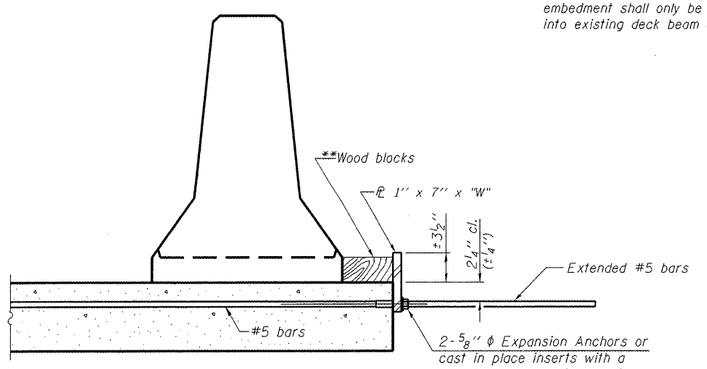
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



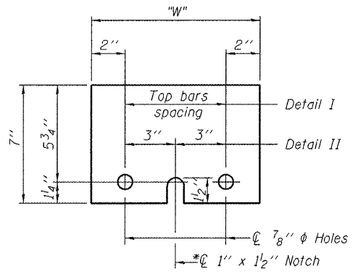
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



STEEL RETAINER ℄ 1" x 7" x "W"

* Required only with Detail II

R-27

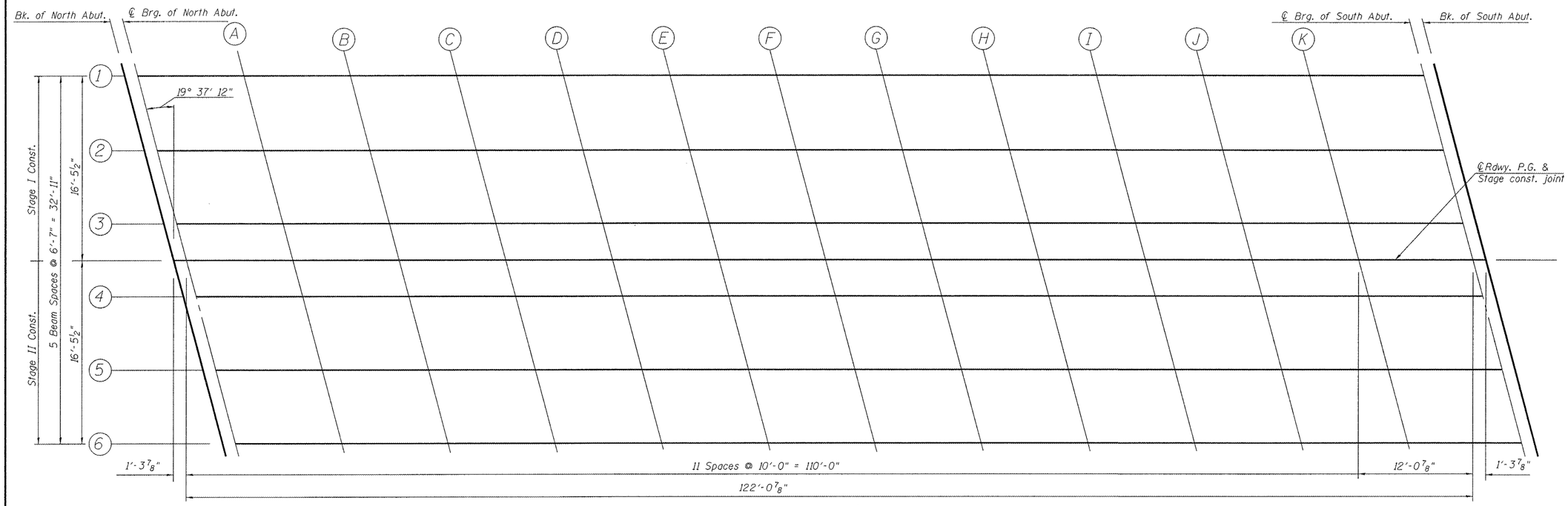
7-1-10

USER NAME =	DESIGNED JR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED JEK	REVISED -	
PLOT SCALE =	DRAWN WJG	REVISED -	
PLOT DATE =	CHECKED JEK	REVISED -	

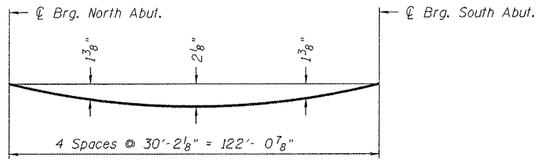
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 009-0512
SHEET NO. 4 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	94	57
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



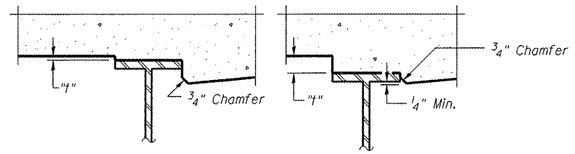
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 6 of 20.



At Minimum Fillet At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subfracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 6 of 20, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELAVATIONS STRUCTURE NO. 009-0512	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JEK	REVISED -			614	144(B-5)	CASS	97	58
	PLOT SCALE =	DRAWN - WJG	REVISED -					CONTRACT NO. 72B55		
	PLOT DATE =	CHECKED - JEK	REVISED -		SHEET NO. 5 OF 20 SHEETS			ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+71.77	-16.46	471.09	471.09
C.L. Brg. N. Abut	996+73.10	-16.46	471.10	471.10
A	996+83.10	-16.46	471.15	471.19
B	996+93.10	-16.46	471.19	471.27
C	997+03.10	-16.46	471.23	471.34
D	997+13.10	-16.46	471.26	471.40
E	997+23.10	-16.46	471.27	471.43
F	997+33.10	-16.46	471.28	471.46
G	997+43.10	-16.46	471.28	471.44
H	997+53.10	-16.46	471.27	471.41
I	997+63.10	-16.46	471.24	471.36
J	997+73.10	-16.46	471.21	471.29
K	997+83.10	-16.46	471.17	471.22
C.L. Brg. S. Abut	997+95.17	-16.46	471.11	471.11
Bk. S. Abut.	997+96.49	-16.46	471.11	471.11

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+74.12	-9.87	471.22	471.22
C.L. Brg. N. Abut	996+75.45	-9.87	471.23	471.23
A	996+85.45	-9.87	471.28	471.32
B	996+95.45	-9.87	471.32	471.40
C	997+05.45	-9.87	471.36	471.47
D	997+15.45	-9.87	471.38	471.52
E	997+25.45	-9.87	471.39	471.55
F	997+35.45	-9.87	471.40	471.58
G	997+45.35	-9.87	471.39	471.55
H	997+55.45	-9.87	471.38	471.52
I	997+65.45	-9.87	471.36	471.48
J	997+75.45	-9.87	471.32	471.41
K	997+85.45	-9.87	471.28	471.33
C.L. Brg. S. Abut	997+97.51	-9.87	471.22	471.22
Bk. S. Abut.	997+98.84	-9.87	471.21	471.21

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+76.47	-3.29	471.34	471.34
C.L. Brg. N. Abut	996+77.79	-3.29	471.35	471.35
A	996+87.79	-3.29	471.40	471.44
B	996+97.79	-3.29	471.43	471.51
C	997+07.79	-3.29	471.46	471.57
D	997+17.79	-3.29	471.49	471.63
E	997+27.79	-3.29	471.50	471.66
F	997+37.79	-3.29	471.50	471.68
G	997+47.79	-3.29	471.49	471.65
H	997+57.79	-3.29	471.48	471.62
I	997+67.79	-3.29	471.45	471.57
J	997+77.79	-3.29	471.42	471.51
K	997+87.79	-3.29	471.37	471.42
C.L. Brg. S. Abut	997+99.86	-3.29	471.30	471.30
Bk. S. Abut.	998+01.19	-3.29	471.30	471.30

℄RDWY P.G. & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+77.64	0.00	471.40	471.40
C.L. Brg. N. Abut	996+78.97	0.00	471.40	471.40
A	996+88.97	0.00	471.45	471.49
B	996+98.97	0.00	471.49	471.57
C	997+08.97	0.00	471.52	471.63
D	997+18.97	0.00	471.54	471.68
E	997+28.97	0.00	471.55	471.71
F	997+38.97	0.00	471.55	471.73
G	997+48.97	0.00	471.54	471.70
H	997+58.97	0.00	471.53	471.67
I	997+68.97	0.00	471.50	471.62
J	997+78.97	0.00	471.46	471.55
K	997+88.97	0.00	471.42	471.47
C.L. Brg. S. Abut	998+01.03	0.00	471.35	471.35
Bk. S. Abut.	998+02.36	0.00	471.34	471.34

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+78.81	3.29	471.35	471.35
C.L. Brg. N. Abut	996+80.14	3.29	471.36	471.36
A	996+90.14	3.29	471.40	471.44
B	997+00.14	3.29	471.44	471.52
C	997+10.14	3.29	471.47	471.58
D	997+20.14	3.29	471.49	471.63
E	997+30.14	3.29	471.50	471.66
F	997+40.14	3.29	471.50	471.68
G	997+50.14	3.29	471.49	471.65
H	997+60.14	3.29	471.47	471.61
I	997+70.14	3.29	471.45	471.57
J	997+80.14	3.29	471.41	471.50
K	997+90.14	3.29	471.36	471.41
C.L. Brg. S. Abut	998+02.21	3.29	471.29	471.29
Bk. S. Abut.	998+03.53	3.29	471.28	471.28

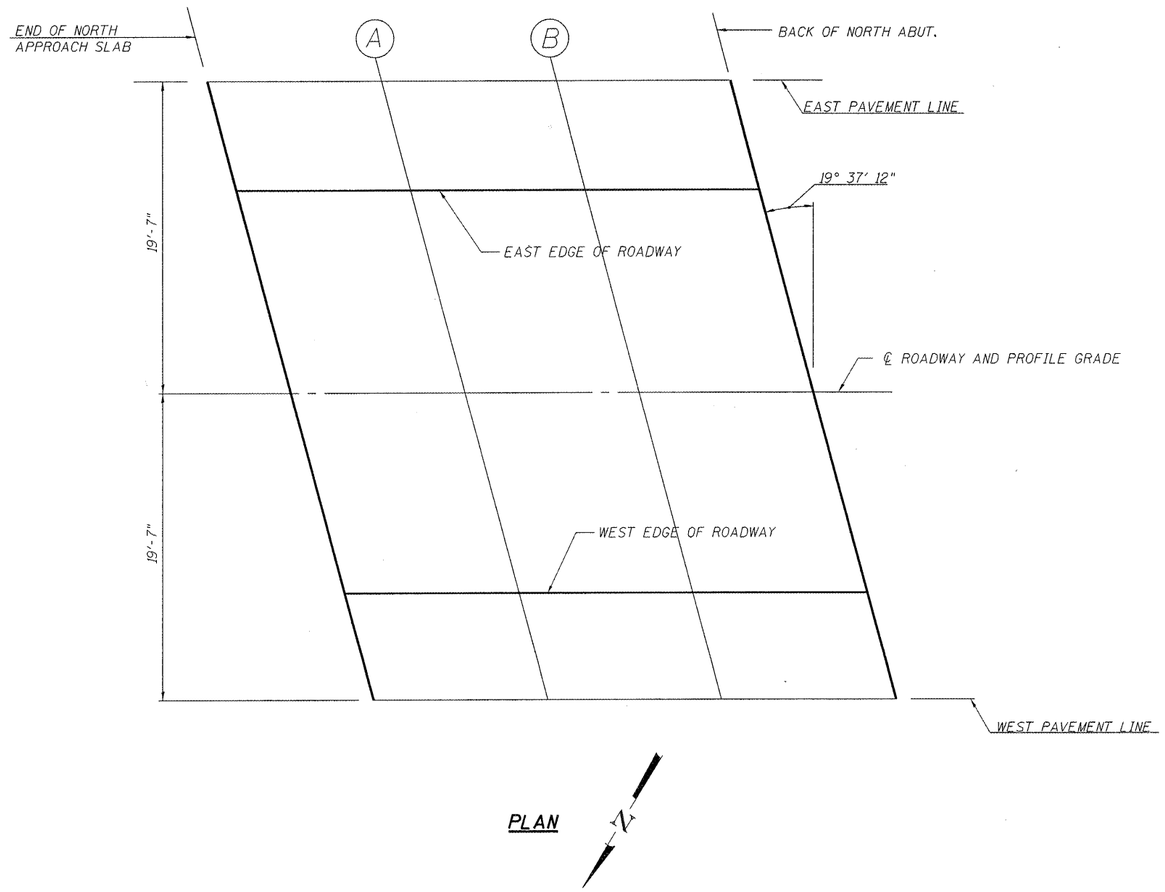
GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+81.16	9.88	471.26	471.26
C.L. Brg. N. Abut	996+82.49	9.88	471.27	471.27
A	996+92.49	9.88	471.31	471.35
B	997+02.49	9.88	471.35	471.43
C	997+12.49	9.88	471.38	471.49
D	997+22.49	9.88	471.39	471.53
E	997+32.49	9.88	471.40	471.56
F	997+42.49	9.88	471.40	471.58
G	997+52.49	9.88	471.39	471.55
H	997+62.49	9.88	471.36	471.50
I	997+72.49	9.88	471.33	471.45
J	997+82.49	9.88	471.30	471.39
K	997+92.49	9.88	471.24	471.29
C.L. Brg. S. Abut	998+04.55	9.88	471.17	471.17
Bk. S. Abut.	998+05.88	9.88	471.16	471.16

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	996+83.51	16.46	471.15	471.15
C.L. Brg. N. Abut	996+84.83	16.46	471.16	471.16
A	996+94.83	16.46	471.20	471.24
B	997+04.83	16.46	471.24	471.32
C	997+14.83	16.46	471.26	471.37
D	997+24.83	16.46	471.27	471.41
E	997+34.83	16.46	471.28	471.44
F	997+44.83	16.46	471.28	471.46
G	997+54.83	16.46	471.26	471.42
H	997+64.83	16.46	471.24	471.38
I	997+74.83	16.46	471.21	471.33
J	997+84.83	16.46	471.16	471.25
K	997+94.83	16.46	471.11	471.16
C.L. Brg. S. Abut	998+06.90	16.46	471.04	471.04
Bk. S. Abut.	998+08.23	16.46	471.03	471.03

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

EAST PAVEMENT LINE

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	996+40.66	-19.58	470.79
A	996+50.66	-19.58	470.88
B	996+60.66	-19.58	470.95
Bk. N. Abut.	996+70.66	-19.58	471.02

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	996+43.01	-13.00	470.95
A	996+53.01	-13.00	471.03
B	996+63.01	-13.00	471.10
Bk. N. Abut.	996+73.01	-13.00	471.17

PROFILE GRADE & ℄ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	996+47.64	0.00	471.19
A	996+57.64	0.00	471.27
B	996+67.64	0.00	471.34
Bk. N. Abut.	996+77.64	0.00	471.40

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	996+52.27	13.00	471.02
A	996+62.27	13.00	471.09
B	996+72.27	13.00	471.16
Bk. N. Abut.	996+82.27	13.00	471.21

WEST PAVEMENT LINE

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	996+54.62	19.58	470.91
A	996+64.62	19.58	470.98
B	996+74.62	19.58	471.05
Bk. N. Abut.	996+84.62	19.58	471.10

The VOLKERT/DMA Joint Venture

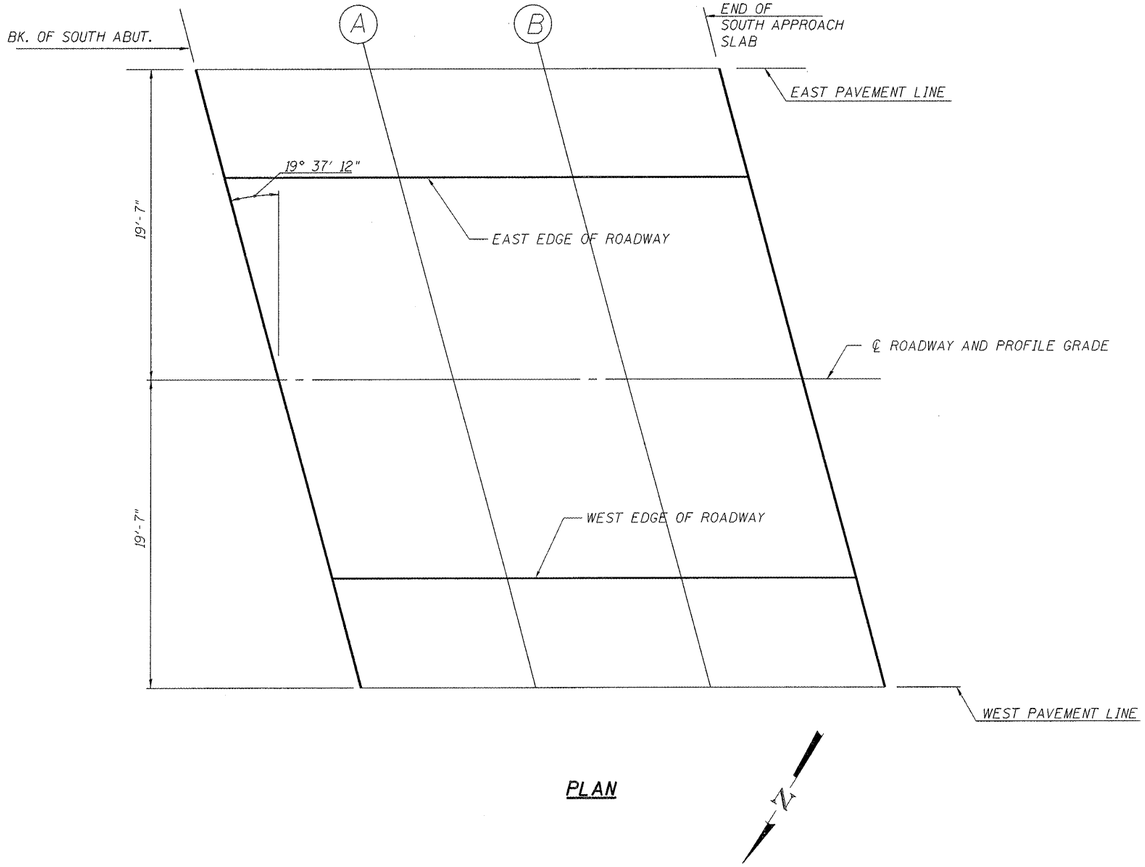
USER NAME =	DESIGNED - JR	REVISED -
	CHECKED - JEK	REVISED -
PLOT SCALE =	DRAWN - WJG	REVISED -
PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 009-0512
SHEET NO. 7 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	94	60
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

EAST PAVEMENT LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	997+95.38	-19.58	471.05
A	998+05.38	-19.58	470.99
B	998+15.38	-19.58	470.92
End S. Appr. Slab	998+25.38	-19.58	470.84

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	997+97.72	-13.00	471.16
A	998+07.72	-13.00	471.10
B	998+17.72	-13.00	471.03
End S. Appr. Slab	998+27.72	-13.00	470.94

PROFILE GRADE & ℄ ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	998+02.36	0.00	471.34
A	998+12.36	0.00	471.27
B	998+22.36	0.00	471.20
End S. Appr. Slab	998+32.36	0.00	471.11

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	998+06.99	13.00	471.11
A	998+16.99	13.00	471.03
B	998+26.99	13.00	470.95
End S. Appr. Slab	998+36.99	13.00	470.86

WEST PAVEMENT LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	998+09.34	19.58	470.96
A	998+19.34	19.58	470.89
B	998+29.34	19.58	470.80
End S. Appr. Slab	998+39.34	19.58	470.71

The VOLKERT/DMA Joint Venture

USER NAME =	DESIGNED - JR	REVISED -
	CHECKED - JEK	REVISED -
PLOT SCALE =	DRAWN - WJG	REVISED -
PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

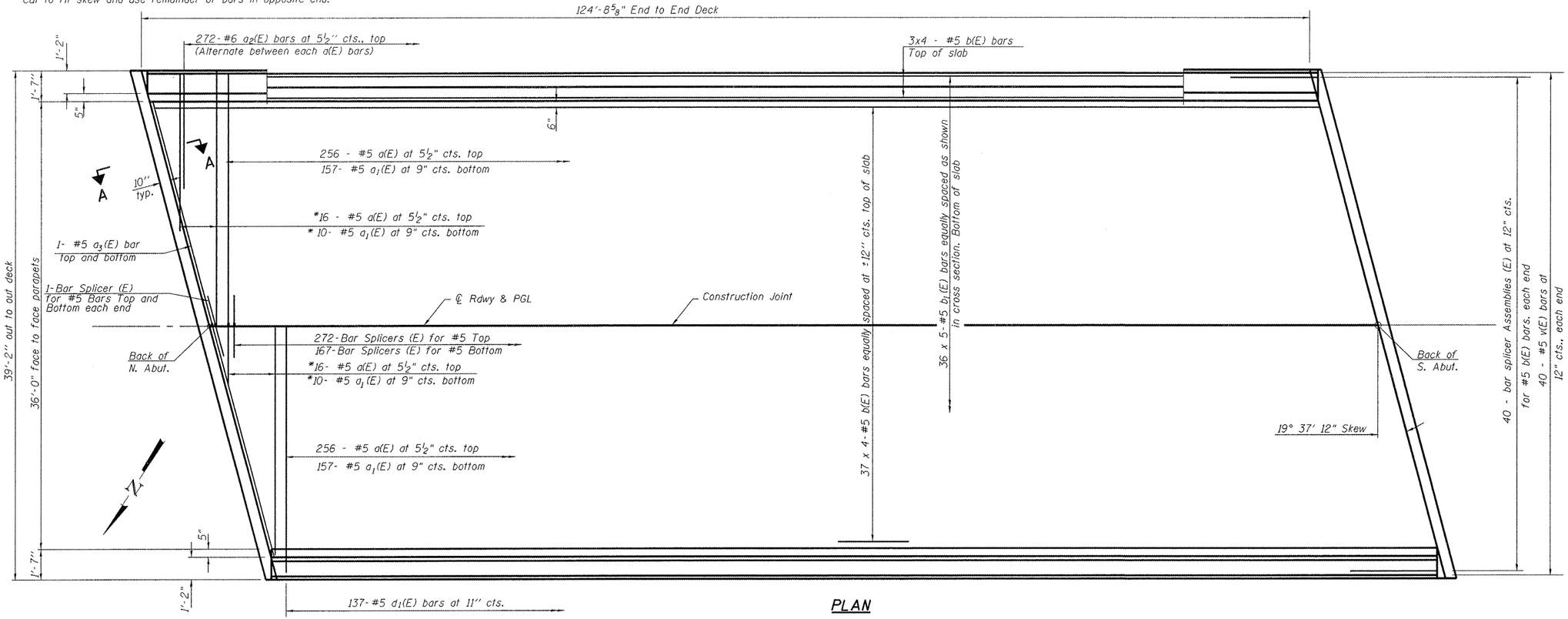
TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 009-0512
SHEET NO. 8 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	94	61
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

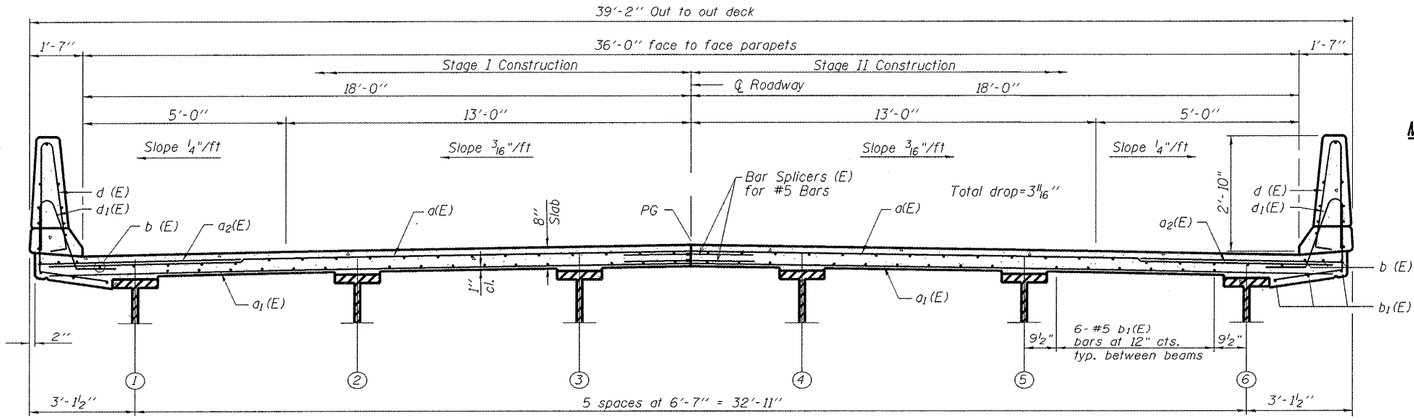
5 6 7

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order $a(E)$, $a_1(E)$ bars full length.
Cut to fit skew and use remainder of bars in opposite end.



PLAN



CROSS SECTION

(Looking South)

NOTES:
See sheet 10 of 20 for Superstructure Details and Bill of Materials.
Bars indicated thus 20x3 - #5 etc. indicate 20 lines of bars with 3 lengths per line.
See sheet 10 of 20 for Parapet Reinforcement.
See sheet 13 of 20 for Section A - A.
See sheet 19 of 20 for Bar Splicer Details.

MINIMUM BAR LAP

(Slab)
#5 bar = 2'-7"

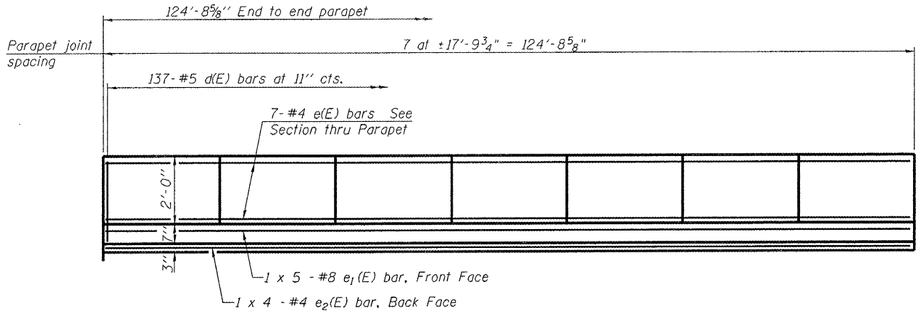
The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

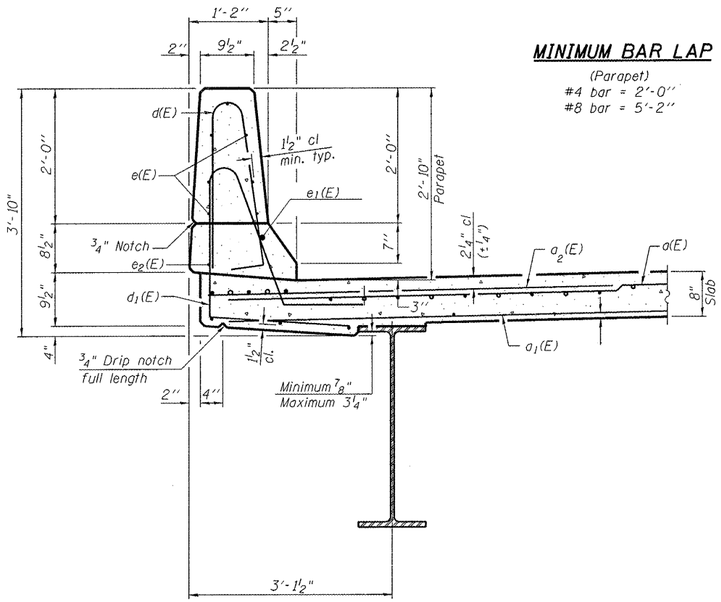
SUPERSTRUCTURE
STRUCTURE NO. 009-0512
SHEET NO. 9 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	62
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



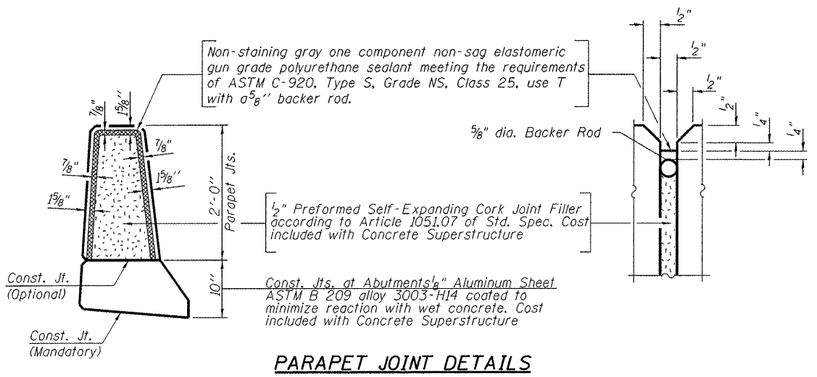
INSIDE ELEVATION OF PARAPET



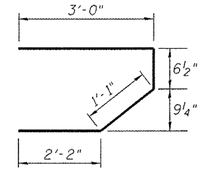
SECTION THRU PARAPET

MINIMUM BAR LAP

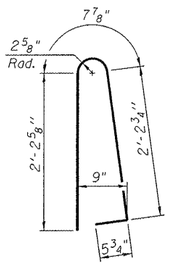
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



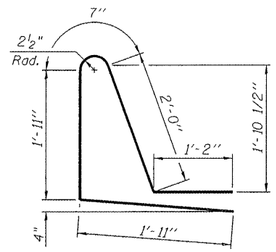
PARAPET JOINT DETAILS



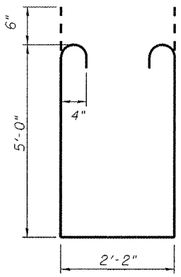
BAR s(E)



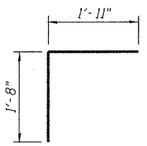
BAR d(E)



BAR d1(E)



BAR s1(E)



BAR v(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	544	#5	18'-9"	
a1(E)	334	#5	18'-9"	
a2(E)	544	#6	6'-6"	
a3(E)	8	#5	20'-6"	
b(E)	172	#5	33'-8"	
b1(E)	180	#5	27'-6"	
d(E)	274	#5	5'-7"	
d1(E)	274	#5	7'-7"	
e(E)	98	#4	17'-5"	
e1(E)	10	#8	29'-6"	
e2(E)	8	#4	33'-3"	
m(E)	10	#6	41'-4"	
m1(E)	28	#6	9'-10"	
m2(E)	8	#6	6'-3"	
m3(E)	4	#6	2'-10"	
s(E)	82	#5	6'-10"	
s1(E)	72	#4	13'-2"	
v(E)	80	#5	3'-7"	
Reinforcement Bars, Epoxy Coated		Pound	42367	
Concrete Superstructure		Cu. Yds.	185	

Bars indicated thus 1 x 4 -#5 etc. indicates 1 line of bars with 4 lengths per line.

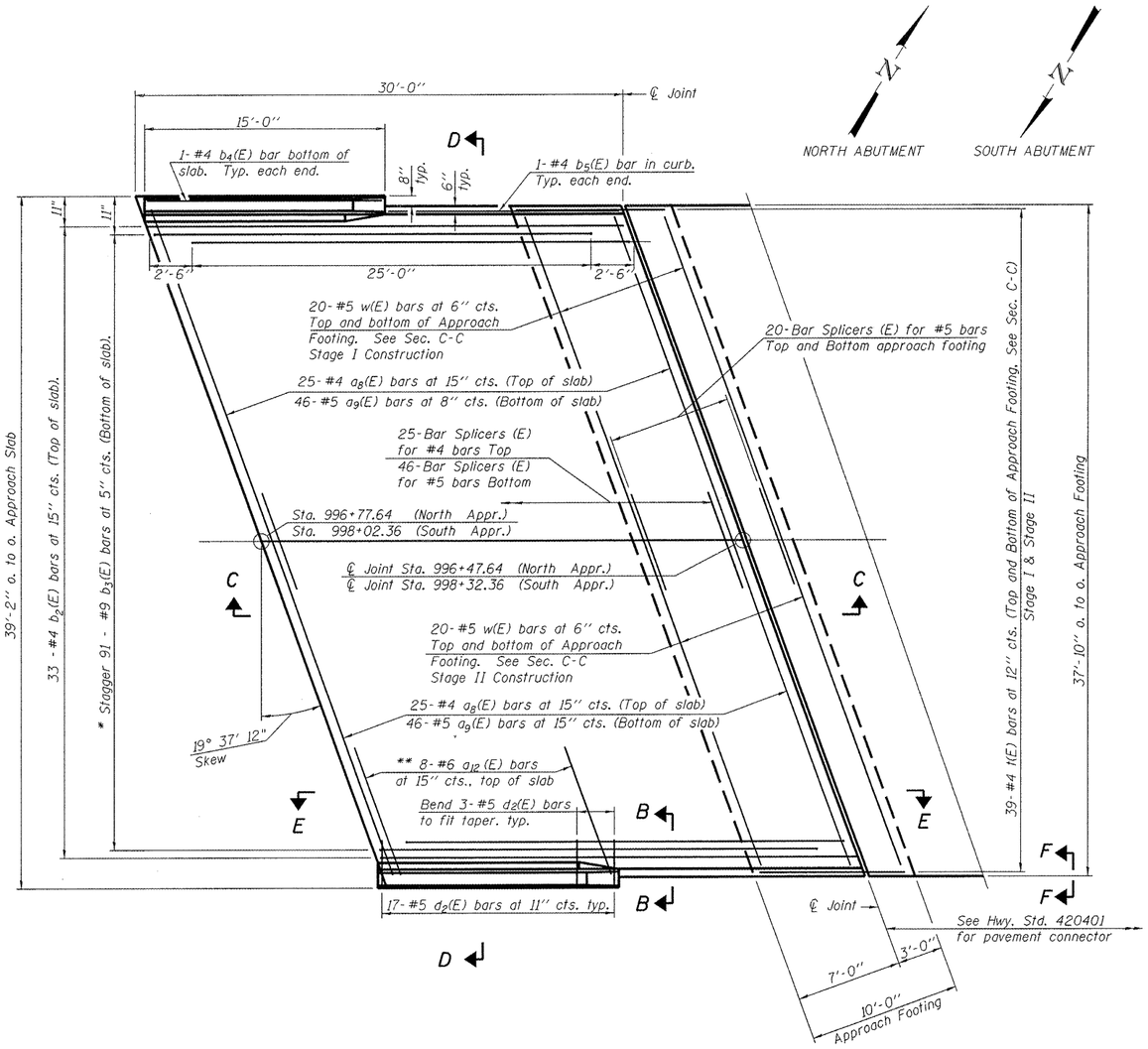
The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE 009-0512
SHEET NO. 10 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	63
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

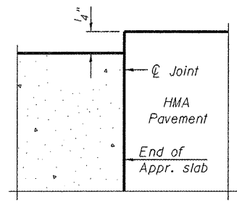


PLAN

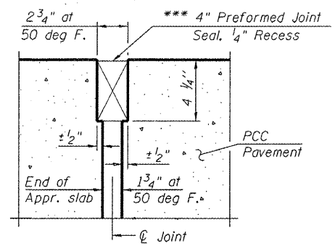
* Tilt #9 b_3(E) bars as required to maintain clearance.
** Space between a_8(E) bars, typ. each parapet.

Notes:
See sheet 12 of 20 for Sections C-C & D-D and View E-E.
a_8(E) and a_9(E) bar spacings measured along ℄ Rdwy.

*** Cost included with Concrete Superstructure.

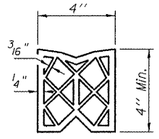


FLEXIBLE PAVEMENT

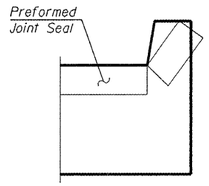


RIGID PAVEMENT

DETAIL A

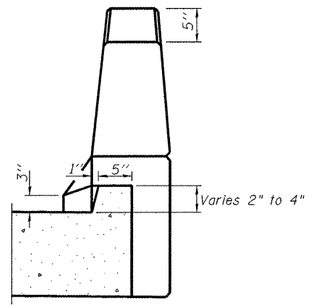


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

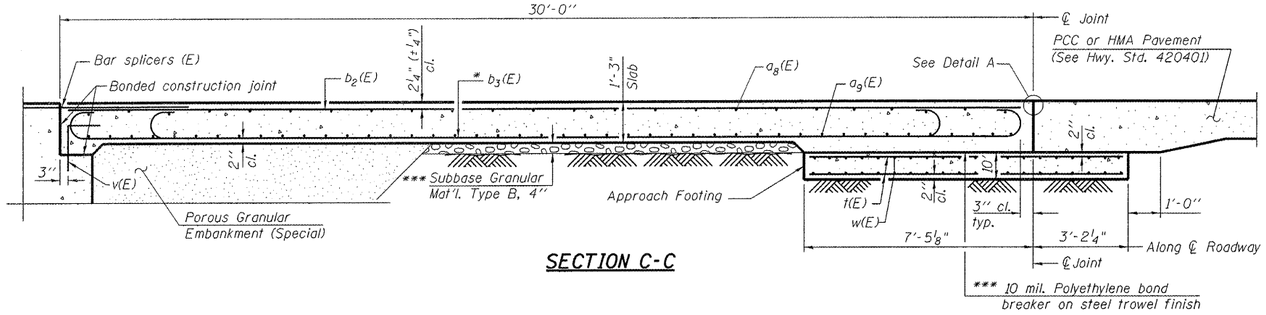
The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

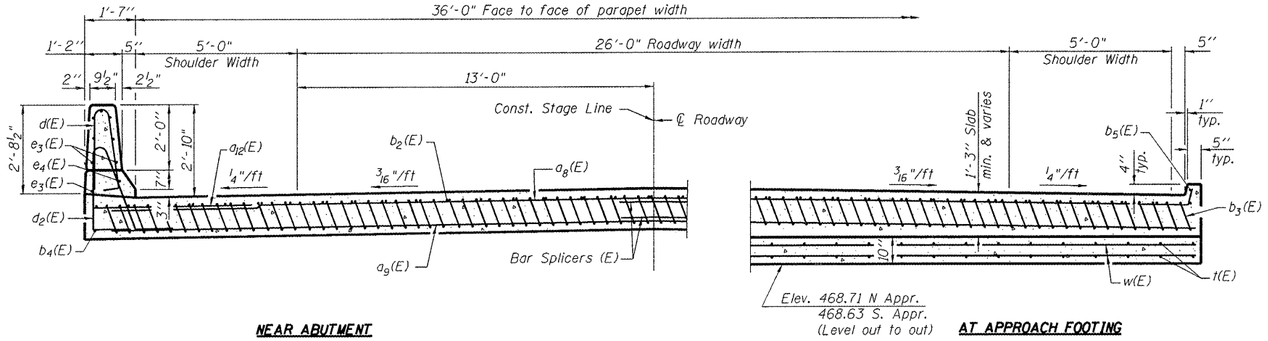
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 009-0512
SHEET NO. 11 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	64
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C

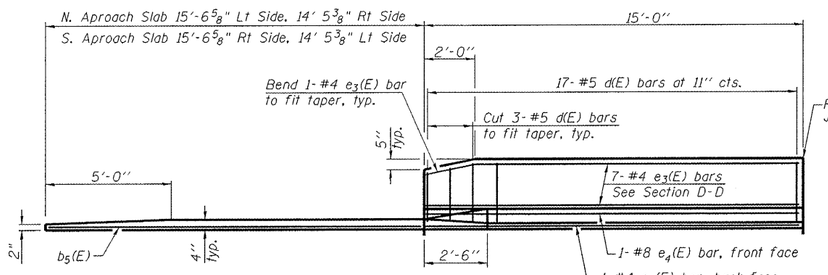


NEAR ABUTMENT

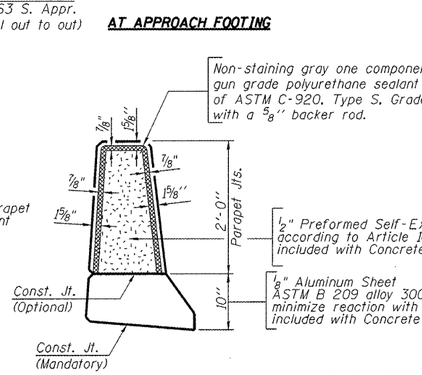
AT APPROACH FOOTING

SECTION D-D

(See Plan for dimensions not shown)

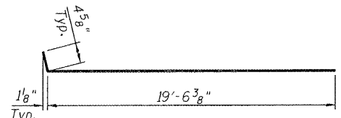


VIEW E-E

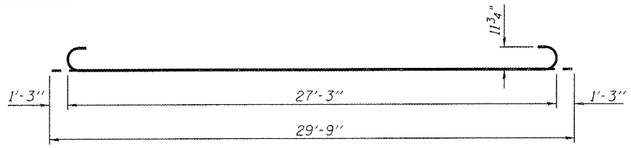


PARAPET JOINT DETAILS

DETAIL A



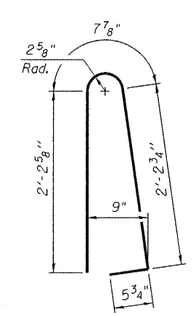
BARS a8(E) & a10(E)



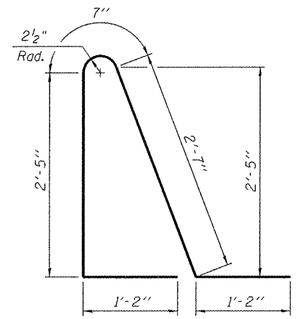
BAR b3(E)

Notes:
- See sheet 11 of 20 for Detail A and View B-B.
- Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar details, see sheet 10 of 20.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see sheet 19 of 20.
- Cost of excavation for approach footing included with Concrete Structures.
- For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 20.
- For additional parapet details, see sheet 10 of 20.

* Tilt #9 $b_3(E)$ bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.



BAR d(E)



BAR $d_2(E)$

TWO APPROACHES
BILL OF MATERIAL

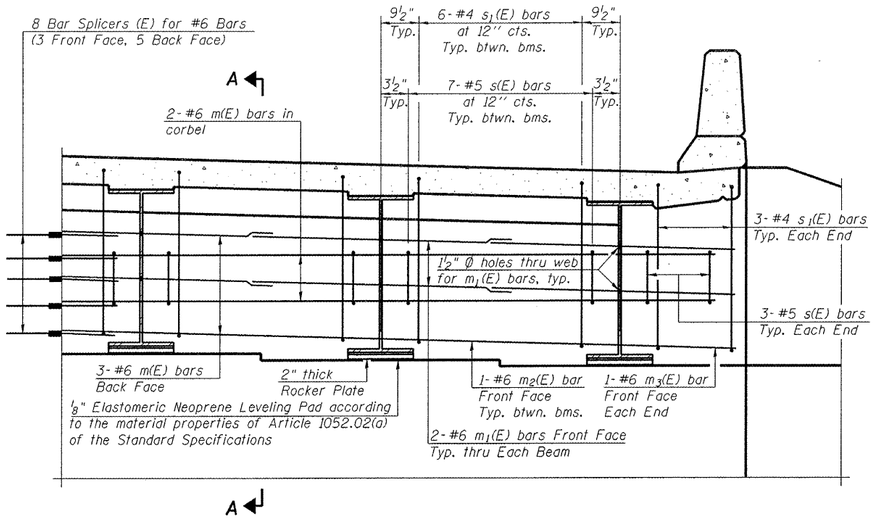
Bar	No.	Size	Length	Shape
$a_8(E)$	100	#4	19'-11"	
$a_9(E)$	184	#5	19'-9"	
$a_{10}(E)$	32	#6	6'-6"	
$b_2(E)$	66	#4	29'-8"	
$b_3(E)$	182	#9	29'-9"	
$b_4(E)$	4	#4	14'-8"	
$b_5(E)$	4	#4	14'-3"	
d(E)	68	#5	5'-7"	
$d_2(E)$	68	#5	7'-11"	
$e_3(E)$	32	#4	14'-8"	
$e_4(E)$	4	#8	14'-8"	
t(E)	156	#4	10'-0"	
w(E)	160	#5	19'-9"	
Concrete Superstructure		Cu. Yd.	113.6	
Concrete Structures		Cu. Yd.	21.6	
Reinforcement Bars, Epoxy Coated		Pound	30,993	

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 009-0512
SHEET NO. 12 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	65
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

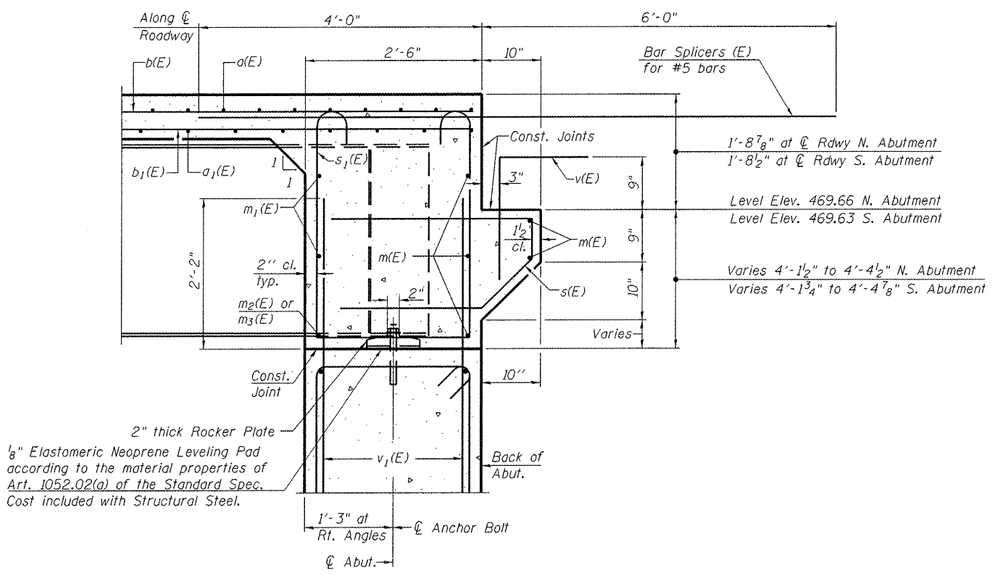


DIAPHRAGM ELEVATION AT ABUTMENT

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 20.
Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 20.
For details of bars s(E) & s_1(E) see sheet 10 of 20 .
The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

#6 bar = 3'-4"

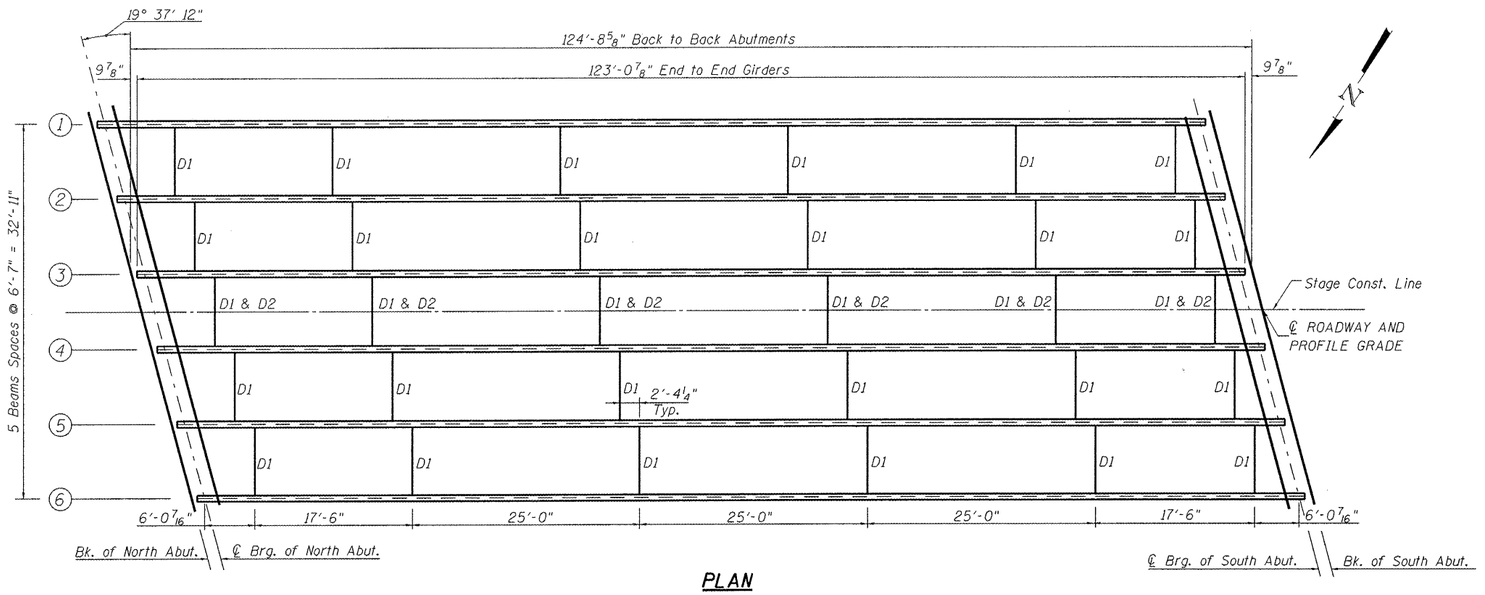


SECTION A-A

Dimensions at right angles to abutment, except as shown.

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIAPHRAGM DETAILS STRUCTURE NO. 009-0512	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JEK	REVISED -			614	144(B-5)	CASS	97	66
	PLOT SCALE =	DRAWN - WJC	REVISED -					CONTRACT NO. 72B55		
	PLOT DATE =	CHECKED - JEK	REVISED -		SHEET NO. 13 OF 20 SHEETS			ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

INTERIOR GIRDER REACTION TABLE		
		Abut.
R_{DC1}	(k)	60
R_{DC2}	(k)	9.2
R_{DW}	(k)	20
R_{L+IM}	(k)	90.1
R_{Total}	(k)	179.3

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	54,355
$I_c(n)$	(in^4)	107,559
$I_c(3n)$	(in^4)	80,022
S_s	(in^3)	1,907.9
$S_c(n)$	(in^3)	2,363.9
$S_c(3n)$	(in^3)	2,179.8
DC1	(k/')	0.96
M_{DC1}	('k)	1,815
DC2	(k/')	0.150
M_{DC2}	('k)	279
DW	(k/')	0.33
M_{DW}	('k)	614
M_{L+IM}	('k)	2,250
M_u (Strength I)	('k)	7,365
$\phi_f M_n$	('k)	11,096
f_s DC1	(ksi)	11.42
f_s DC2	(ksi)	1.54
f_s DW	(ksi)	3.38
f_s 1.3(L+IM)	(ksi)	14.85
f_s (Service II)	(ksi)	31.19
V_r	('k)	55

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) ((kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.) or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

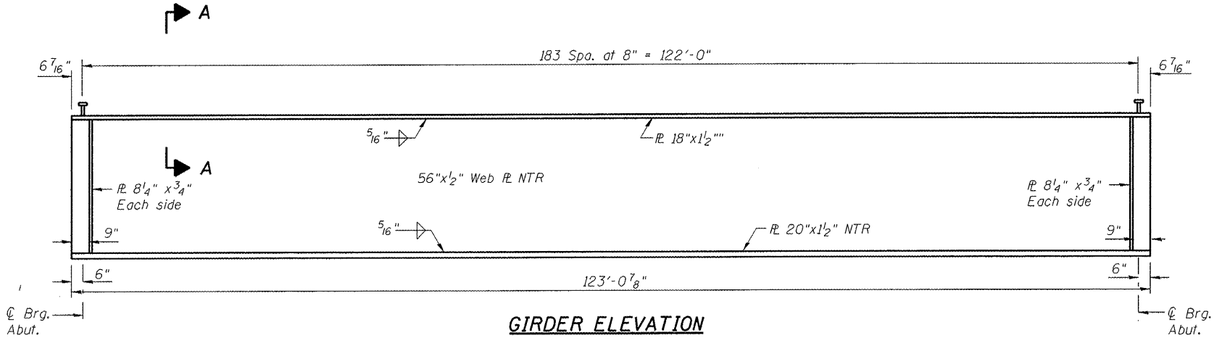
f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ as applicable.

f_s 1.3(L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$1.3M_{L+IM} / S_c(n)$ as applicable.

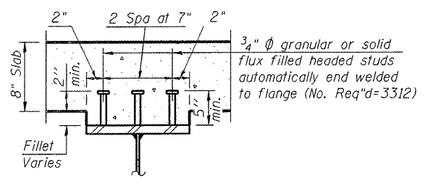
f_s (Service II): Sum of stresses as computed below from the moments below (ksi)
$MDC1 + MDC2 + MDW + 1.3M_L + IM$

V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10

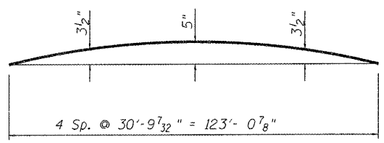


GIRDER ELEVATION
(M270 GR 50W)

Load carrying components designated "NTR" shall conform to the Impact testing Requirements, zone 2



SECTION A-A



CAMBER DIAGRAM

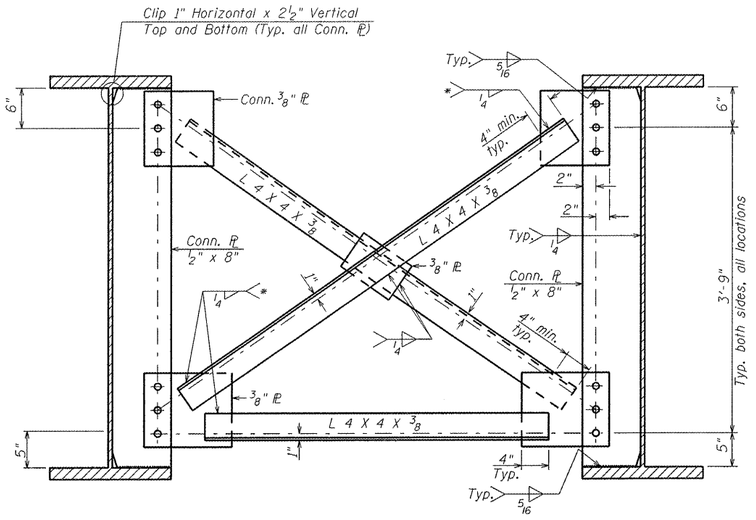
TOP OF WEB ELEVATIONS (FOR FABRICATORS ONLY)					
Beam Number	℄ Brg. North Abutment	0.25 Pt.	0.50 Pt.	0.75 Pt.	℄ Brg. South Abutment
1	470.25	470.55	470.67	470.56	470.26
2	470.38	470.68	470.79	470.67	470.37
3	470.50	470.79	470.89	470.77	470.45
4	470.51	470.79	470.89	470.76	470.43
5	470.42	470.70	470.79	470.65	470.32
6	470.31	470.58	470.66	470.52	470.19

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE 009-0512
SHEET NO. 14 OF 20 SHEETS

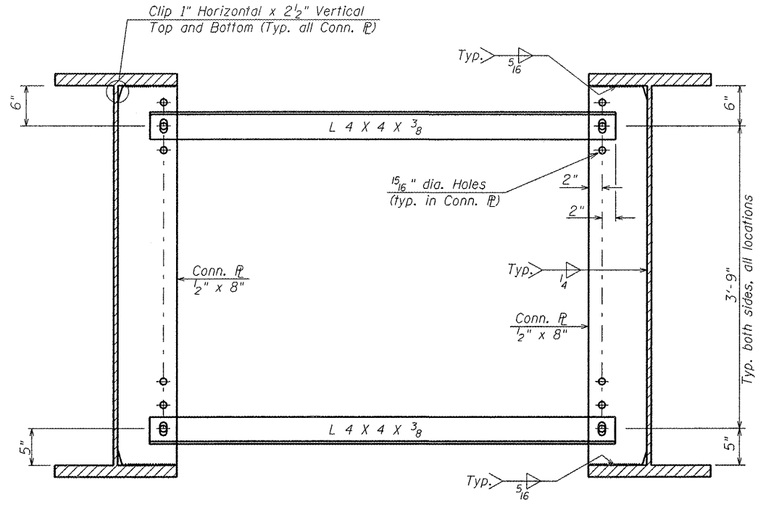
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	67
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		



* Fillet weld angles 3 sides on one face of gusset plate.

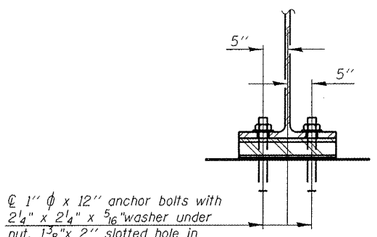
D1 INTERIOR CROSS FRAME

No. Required = 30

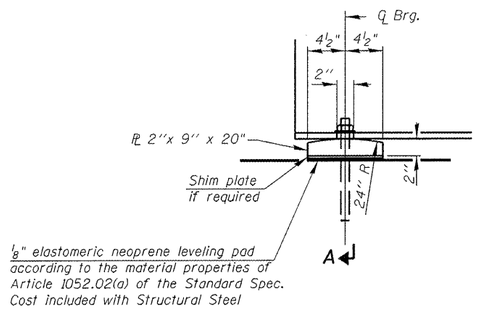


D2 TEMPORARY BRACE

No. Required = 6

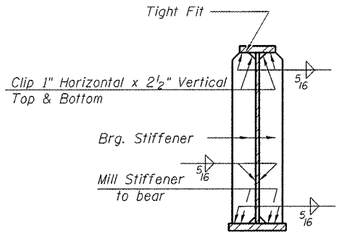


SECTION A-A



ELEVATION AT ABUTMENT

FIXED BEARING



SECTION AT ABUTMENT-A

NOTES:

All connections to be made with ¾" H.S. Bolts with 15/16" dia. holes. Two hardened washers required for each set of oversized holes.

All Cross Frame members shall be M270, Gr. 50W.

All cross frames shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods

For stage construction, the D2 Temporary Braces between Beams 3 and 4 shall be installed with one ⅞" dia. bolt at each end only finger tight and with slots positioned to allow maximum differential deflection during deck pour.

Temporary Brace angles shall have 15/16" x 2¾" vertical slotted holes at each end of angle.

After the differential displacements due to stage construction have been eliminated, temporary braces are replaced by permanent D1 Interior Cross Frames with standard oversized holes.

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

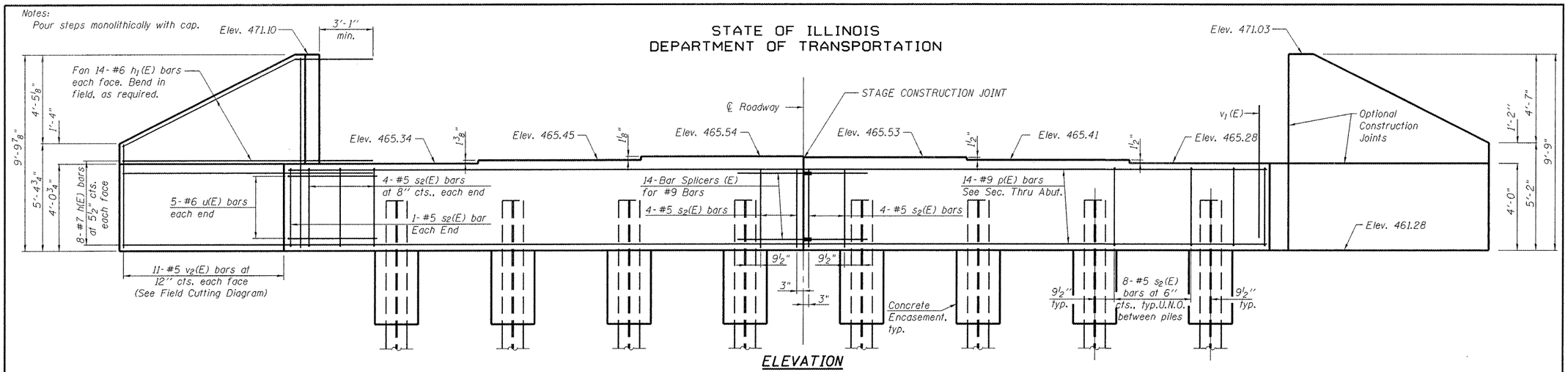
CROSS FRAME DETAILS
STRUCTURE NO. 009-0512

SHEET NO. 15 OF 20 SHEETS

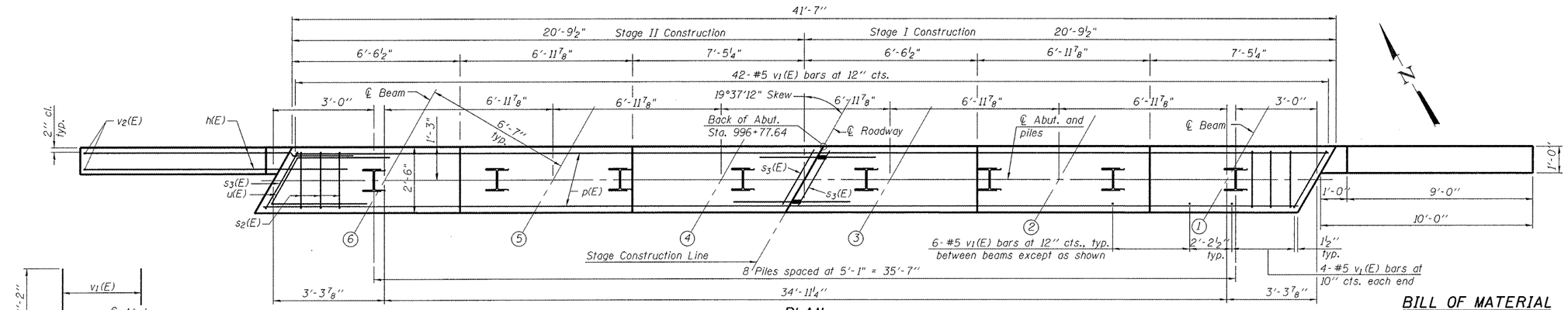
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	68
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

Notes:
Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

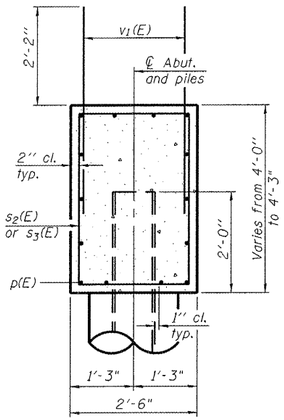


ELEVATION

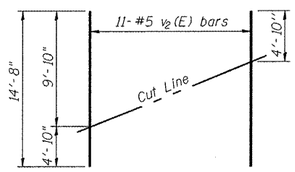


PLAN

Note:
The Contractor is advised that a portion of the existing footing may interfere with the driving of the piles.

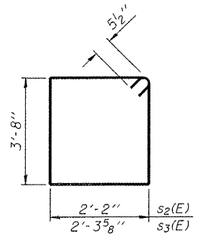


SEC. THRU ABUT.

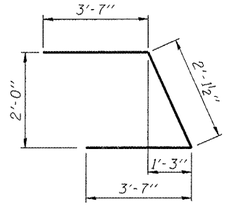


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E) & s3(E)



BAR u(E)

PILE DATA

Type:	HP 12 x 63
Nominal Required Bearing:	497 kips
Factored Resistance Available:	258 kips
Est. Length:	55 ft.
No. Production Piles:	7
No. Test Piles:	1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#7	14'-4"	
h1(E)	56	#6	14'-4"	
p(E)	28	#9	20'-5"	
s2(E)	66	#5	12'-7"	
s3(E)	4	#5	12'-11"	
u(E)	10	#6	9'-4"	
v1(E)	80	#5	4'-4"	
v2(E)	22	#5	14'-8"	
Structure Excavation		Cu. Yd.	62	
Concrete Structures		Cu. Yd.	24	
Concrete Encasement		Cu. Yd.	2.80	
Reinforcement Bars, Epoxy Coated		Pound	6013	
Furnishing Steel Piles, HP 12x63		Foot	385	
Driving Piles		Foot	385	
Test Pile, HP12x63		Each	1	

The VOLKERT/DMA Joint Venture

USER NAME =	DESIGNED - JR	REVISED -
	CHECKED - JEK	REVISED -
PLOT SCALE =	DRAWN - WJG	REVISED -
PLOT DATE =	CHECKED - JEK	REVISED -

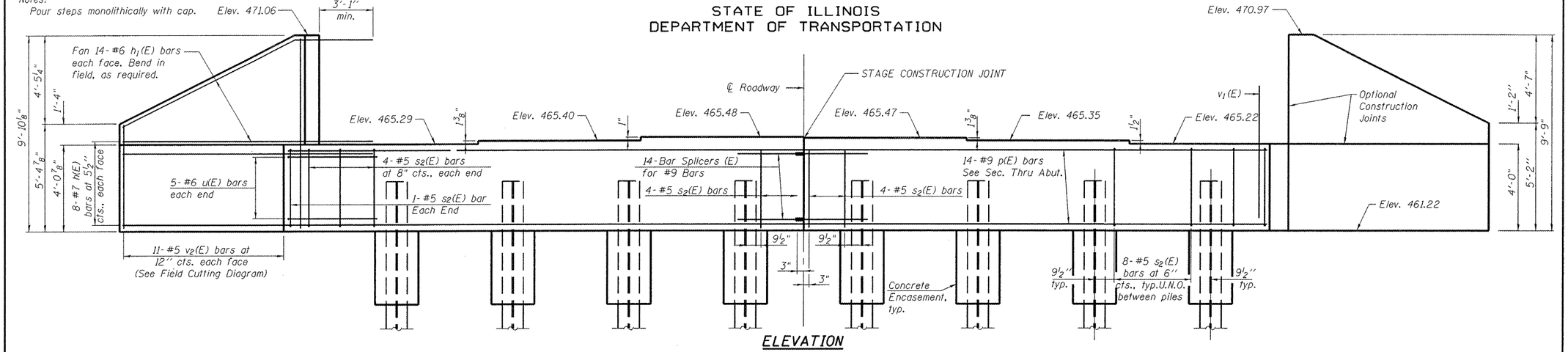
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 009-0512
SHEET NO. 16 OF 20 SHEETS

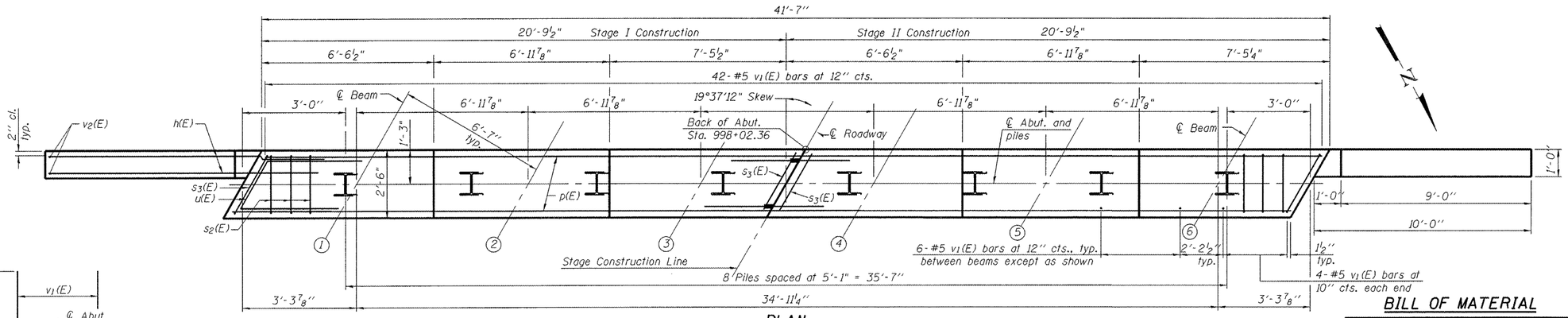
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	69
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

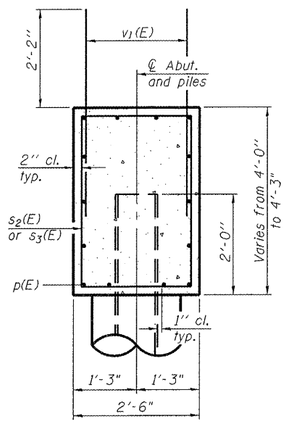


ELEVATION

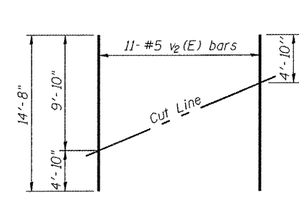


PLAN

Note:
The Contractor is advised that a portion of the existing footing may interfere with the driving of the piles.

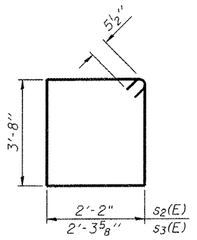


SEC. THRU ABUT.

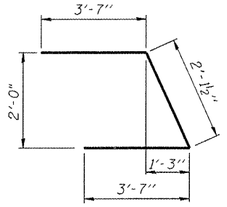


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E) & s3(E)



BAR u(E)

PILE DATA

Type:	HP 12 x 63
Nominal Required Bearing:	497 kips
Factored Resistance Available:	265 kips
Est. Length:	45 ft.
No. Production Piles:	7
No. Test Piles:	1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#7	14'-4"	
h1(E)	56	#6	14'-4"	
p(E)	28	#9	20'-5"	
s2(E)	66	#5	12'-7"	
s3(E)	4	#5	12'-11"	
u(E)	10	#6	9'-4"	
v1(E)	80	#5	4'-4"	
v2(E)	22	#5	14'-8"	
Structure Excavation		Cu. Yd.	62	
Concrete Structures		Cu. Yd.	24	
Concrete Encasement		Cu. Yd.	2.80	
Reinforcement Bars, Epoxy Coated		Pound	6013	
Furnishing Steel Piles, HP 12x63		Foot	315	
Driving Piles		Foot	315	
Test Pile, HP12x63		Each	1	

The VOLKERT/DMA Joint Venture

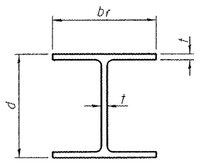
USER NAME =	DESIGNED - JR	REVISED -	
	CHECKED - JEK	REVISED -	
PLOT SCALE =	DRAWN - WJG	REVISED -	
PLOT DATE =	CHECKED - JEK	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 009-0512
SHEET NO. 17 OF 20 SHEETS

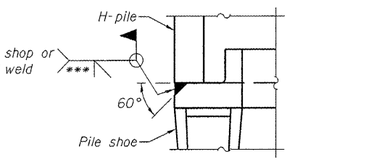
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	70
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STEEL PILE TABLE

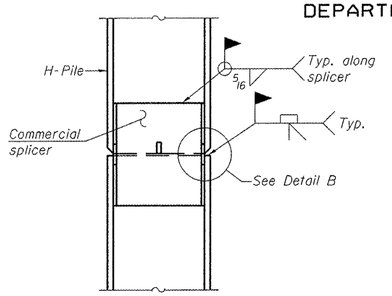
Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



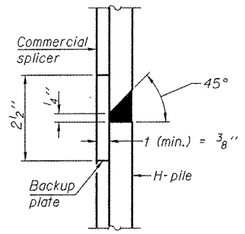
ELEVATION

DETAIL A

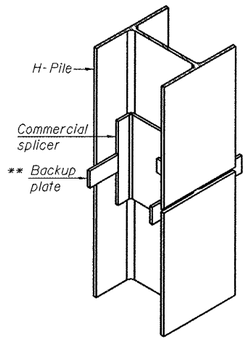
H-PILE SHOE ATTACHMENT



ELEVATION

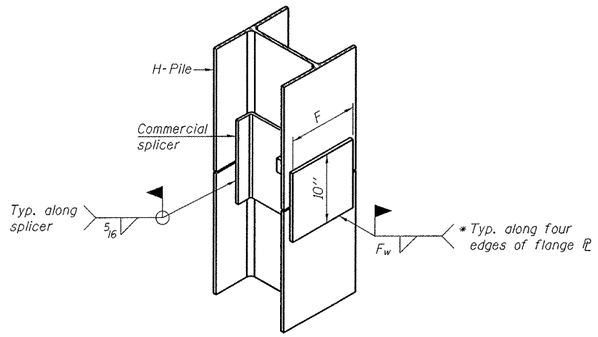


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



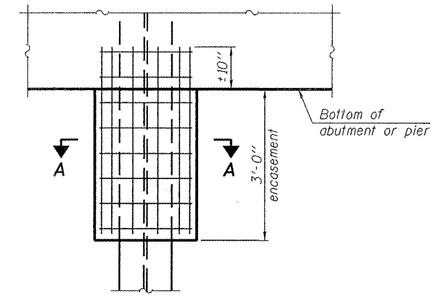
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

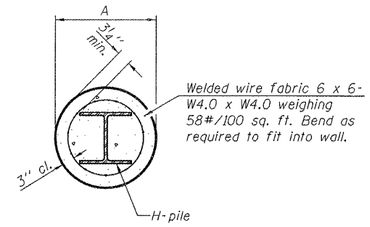
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



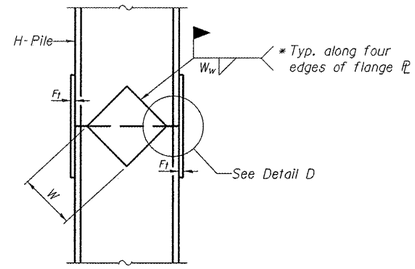
ELEVATION



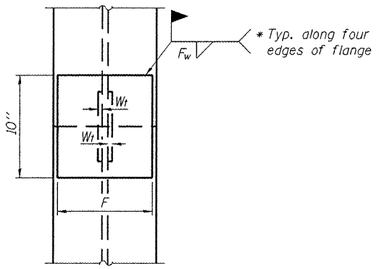
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

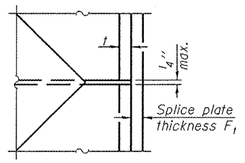
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 7-1-10

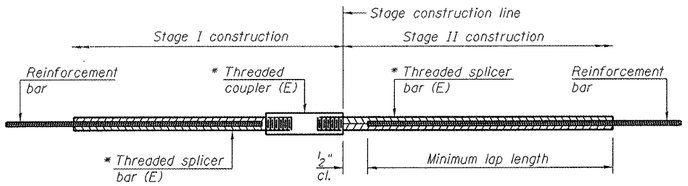
The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 009-0512
SHEET NO. 18 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	71
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

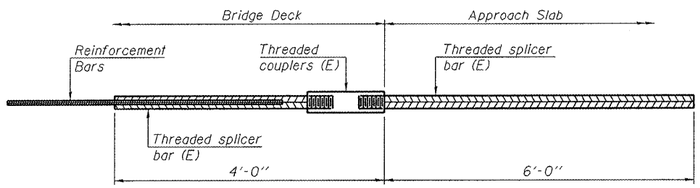
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1 ½" + thread length

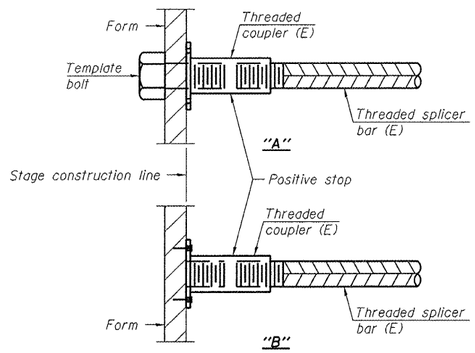
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	443	3
Conc. Diaphragm	#6	16	3
Approach Slabs	#4	50	4
Approach Slabs	#5	92	3
Approach Footing	#5	80	3
Abutments	#9	28	4



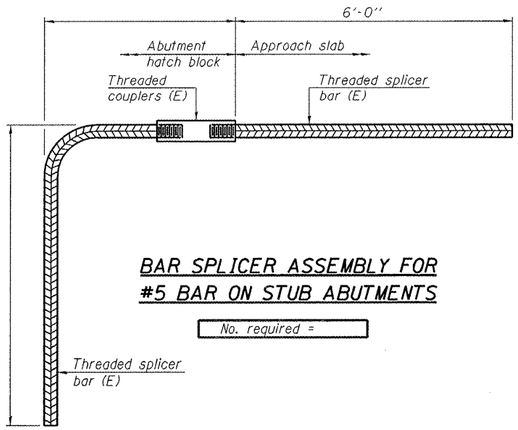
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 80



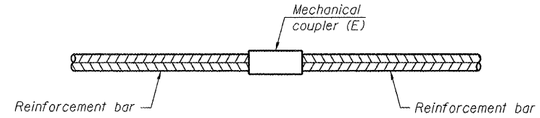
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

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

See special provision for Mechanical Splicers.

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

BSD-1 7-1-10

The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -
		CHECKED - JEK	REVISED -
	PLOT SCALE =	DRAWN - WJG	REVISED -
	PLOT DATE =	CHECKED - JEK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 009-0512
SHEET NO. 19 OF 20 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-5)	CASS	97	72
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Illinois department of transportation

Page 1 of 2 — Date 3/24/10

ROUTE FAP 614 — DESCRIPTION IL-78 Over Panther Creek Overflow — LOGGED BY M. Tappan

SECTION 144(B-4) — LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 4 PM

COUNTY Cass — DRILLING METHOD HSA — HAMMER TYPE 140# Auto

STRUCT. NO. 009-0512 (Pr) 009-0007 (Ex) — Station 997+40

BORING NO. B-NA — Station 996+50 — Offset 13.0ft Lt — Ground Surface Elev. 468.0 ft

Surface Water Elev. 451.3 ft — Stream Bed Elev. 449.6 ft

Groundwater Elev.: First Encounter 4561.0 ft — Upon Completion Washed ft — After ___ Hrs. PLUGGED ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray moist LOAM to SILTY CLAY LOAM (Fill)			0, 1, 1	0.4 B	17
LOAM		-5	0, 1, 2	0.6 S-10	17
	461.00				
Gray moist LOAM to SILTY CLAY LOAM			0, 1, 1	0.4 B	26
Gray moist SILTY CLAY LOAM		-10	0, 1, 1	0.5 B	34
Gray V. moist SILTY CLAY LOAM			0, 0, 1	0.3 B	32
	454.50				
Gray SAND Wet Fine		-15	0, 2, 1	–	–
Wet Fine FREE WATER ∇			0, 1, 1	–	–
Medium		-20	0, 1	–	–
Gray SAND (continued)			1		
w/ some 3/8" Pea Gravel			1, 5, 1	–	–
Gray Med. SANDY GRAVEL Washed		-25	2, 3, 8	–	–
Tan Medium to Coarse w/ 1/4" Pea Gravel Washed		-30	6, 7, 12	–	–
	435.50				
Gray Moist CLAY					
Washed		-35	2, 3, 11	4.5 P	20
Washed		-40	7, 11	6.2	22

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H – Sampler Advanced By Weight of Hammer, W.O.P – Advanced by Weight of Pipe, B.S. – Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 2 of 2 — Date 3/24/10

ROUTE FAP 614 — DESCRIPTION IL-78 Over Panther Creek Overflow — LOGGED BY M. Tappan

SECTION 144(B-4) — LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 4 PM

COUNTY Cass — DRILLING METHOD HSA — HAMMER TYPE 140# Auto

STRUCT. NO. 009-0512 (Pr) 009-0007 (Ex) — Station 997+40

BORING NO. B-NA — Station 996+50 — Offset 13.0ft Lt — Ground Surface Elev. 468.0 ft

Surface Water Elev. 451.3 ft — Stream Bed Elev. 449.6 ft

Groundwater Elev.: First Encounter 4561.0 ft — Upon Completion Washed ft — After ___ Hrs. PLUGGED ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray Moist CLAY (continued)			8	B	
Washed		-45	5, 10, 15	6.0 B	20
Washed		-50	6, 13, 20	6.1 B	21
	413.50		100/6"	5.7 B	17
Grey to blue gray and olive brown moist CLAY with dark gray well indurated ARGILLACEOUS LIMESTONE Auger refusal at 55 ft	413.00	-55			
Boring Complete					
Medium		-60	1	–	–

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H – Sampler Advanced By Weight of Hammer, W.O.P – Advanced by Weight of Pipe, B.S. – Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Page 1 of 1 — Date 3/29/10

ROUTE FAP 614 — DESCRIPTION IL 78 over Panther Creek — LOGGED BY M. Tappan

SECTION 144(B-4) — LOCATION NW 1/4, SEC. 6, TWP. 18N, RNG. 9W, 3 PM

COUNTY Cass — DRILLING METHOD HSA — HAMMER TYPE 140 # AUTO

STRUCT. NO. 009-0512(Pr) 009-0007 (Ex) — Station 997+40

BORING NO. B-SA — Station 998+20 — Offset 13.0ft LT — Ground Surface Elev. 468.0 ft

Surface Water Elev. 451.3 ft — Stream Bed Elev. 449.6 ft

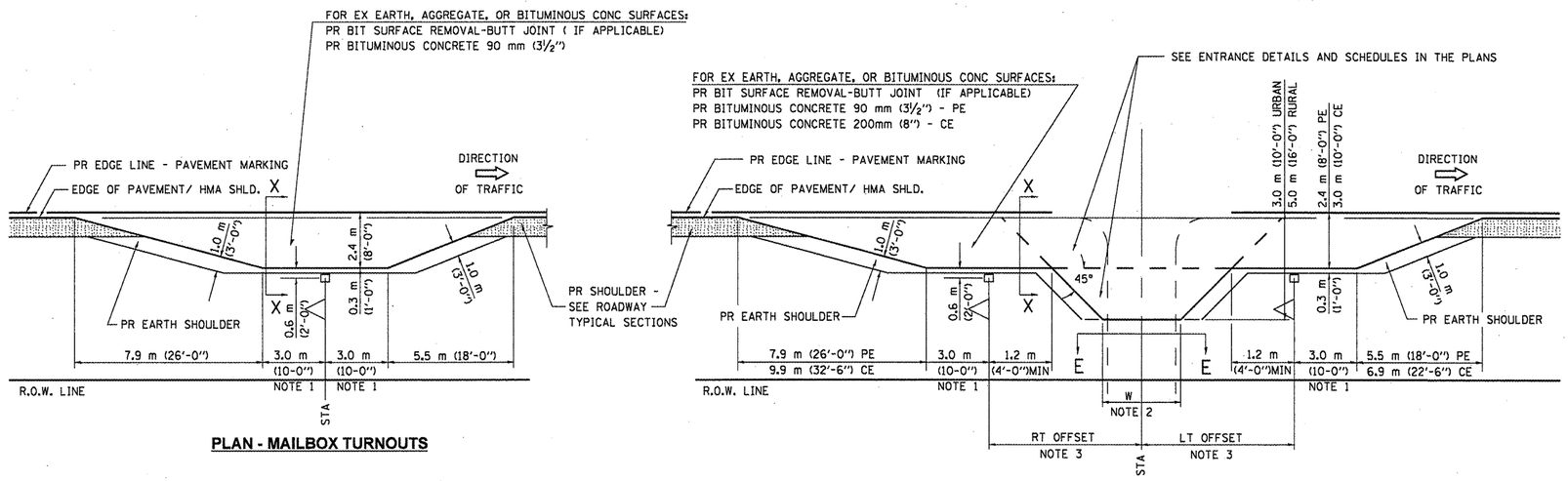
Groundwater Elev.: First Encounter 451.5 ft — Upon Completion washed ft — After ___ Hrs. plugged ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray very moist medium SANDY GRAVEL (Fill)			0, 2, 2		
	465.00				
Gray very moist medium SILTY CLAY LOAM (Fill)		-5	W, O, H	0.1 B	22
			0, 0, 1	0.3 B	26
Moist		-10	0, 1, 2	0.7 B	26
Very moist			0, 0, 1	0.3 B	22
	455.00				
Gray very moist LOAM		-15	0, 0, 2	0.4 B	18
∇	451.50				
SAND Tan wet medium FREE WATER			0, 2, 2		
Tan and Gray Dirty Fine Sand		-20	0, 2, 3		
SAND (continued)			1		
Tan medium Sandy Gravel Washed			1, 2, 2		
Brown Medium Sandy Gravel Washed		-25	3, 6, 6		
Gray Medium Sandy Gravel Washed		-30	6, 4, 5		
	435.50				
Clayey SHALE Light Gray Moist Very Weathered Washed		-35	30, 58, 42/2"		12
Gray Moist			4, 100/4"		11
Boring Complete	428.00	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H – Sampler Advanced By Weight of Hammer, W.O.P – Advanced by Weight of Pipe, B.S. – Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

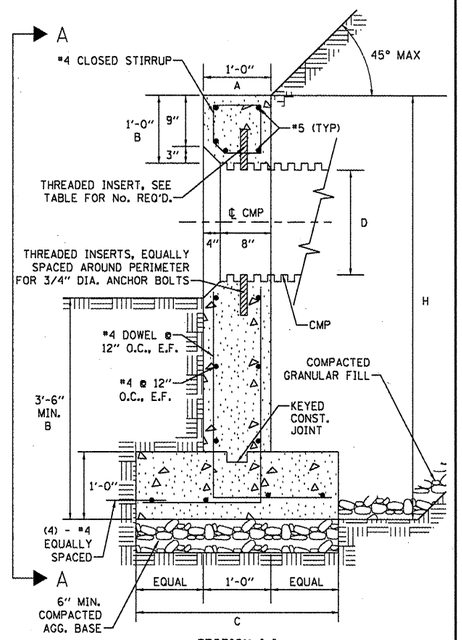
The VOLKERT/DMA Joint Venture	USER NAME =	DESIGNED - JR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 009-0512	F.A.P. RTE. 614	SECTION 144(B-5)	COUNTY CASS	TOTAL SHEETS 97	SHEET NO. 73
		CHECKED - JEK	REVISED -					CONTRACT NO. 72B55		
	PLOT SCALE =	DRAWN - WJG	REVISED -		SHEET NO. 20 OF 20 SHEETS					
	PLOT DATE =	CHECKED - JEK	REVISED -				ILLINOIS FED. AID PROJECT			

DETAILS OF MAILBOX TURNOUTS

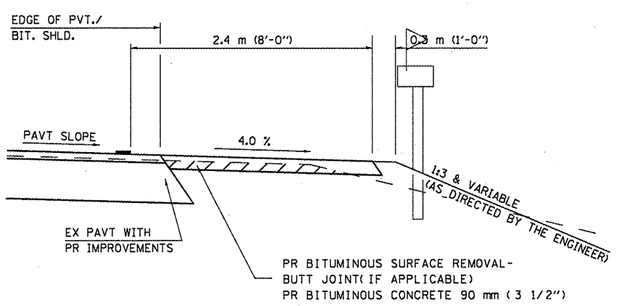


PLAN - MAILBOX TURNOUTS

PLAN - COMBINED MAILBOX TURNOUT WITH TRAILING OR LEADING ENTRANCE

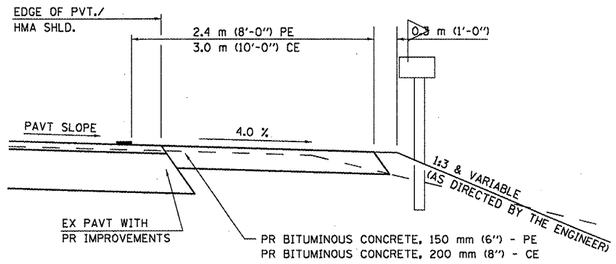


SECTION I-I



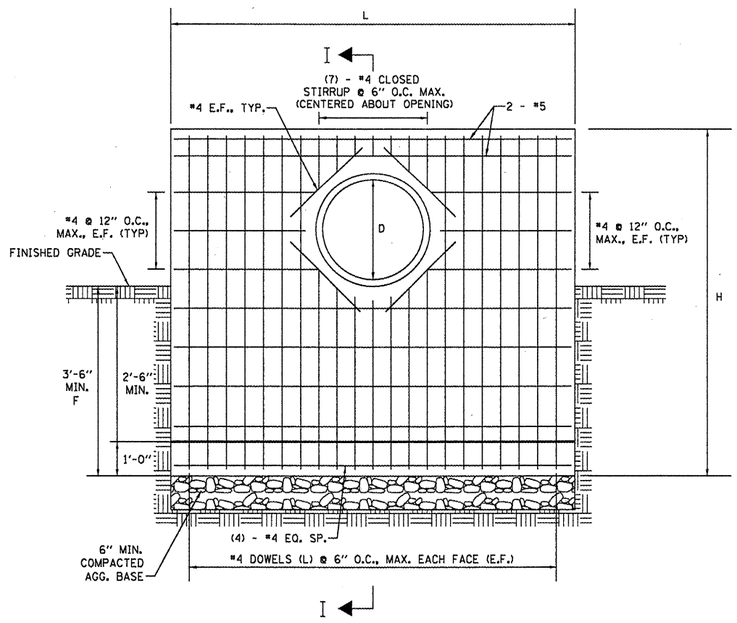
SECTION X-X THRU MAILBOX TURNOUT
ALSO APPLIES TO MAILBOX TURNOUTS COMBINED WITH EX EARTH, AGGREGATE, OR BITUMINOUS PE & FE

(DETAIL APPLIES WHEN M.B. TURNOUT DOES NOT EXIST. IF EXISTING, TREAT SAME AS ENTRANCE.)



SECTION X-X THRU MAILBOX TURNOUT
COMBINED WITH EX BITUMINOUS CONC & PC CONC PE & CE

(DETAIL APPLIES WHEN M.B. TURNOUT DOES NOT EXIST. IF EXISTING, TREAT SAME AS ENTRANCE.)



CONCRETE HEADWALL FOR CMP CULVERT

ELEVATION A-A

HEADWALL FOR CIRCULAR PIPE						
DIAMETER CMP	6" - 12"	15"	18"	21" - 24"	27" - 30"	33" - 36"
A	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
B	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
C	3'-0"	3'-0"	3'-0"	3'-0"	3'-6"	3'-6"
D	1'-0"	1'-3"	1'-6"	2'-0"	2'-6"	3'-0"
F	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"
H	5'-9"	6'-0"	6'-3"	6'-9"	7'-3"	7'-9"
L	4'-0"	5'-0"	6'-0"	8'-0"	10'-0"	12'-0"
No. THREADED INSERTS	4	4	4	5	6	7
QUANTITIES						
REINFORCING (LB)	135	190	220	310	405	490
CONCRETE (CY)	1.14	1.44	1.77	2.50	3.46	4.34

NOTE 1 IF MORE THAN ONE MAILBOX IS PRESENT, DIMENSION FROM CENTER OF END MAILBOX.

NOTE 2 FOR ENTRANCE LAYOUT DIMENSIONS AND SECTIONS A-A & E-E REFER TO THE SCHEDULES IN THE PLANS.

NOTE 3 BOTH LT OR RT OFFSETS FOR MAILBOX SHOWN USE OFFSET DIMENSION PER SCHEDULE AND REFER TO LAYOUT SHOWN ON THE PLAN.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

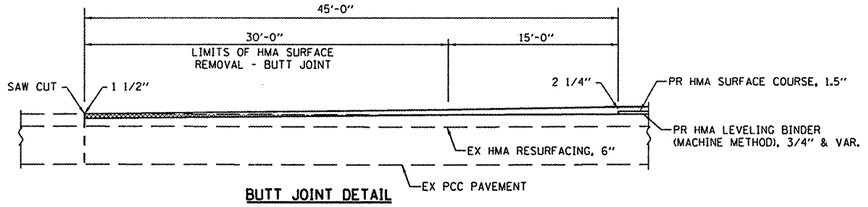
The VOLKERT/DMA Joint Venture	USER NAME = default	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 '/ in.	CHECKED - VAM	REVISED -
	PLOT DATE = 9/15/2011	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

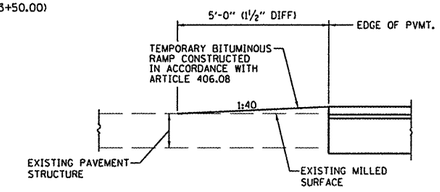
SCALE: N.T.S. | SHEET NO. 2 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	75
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

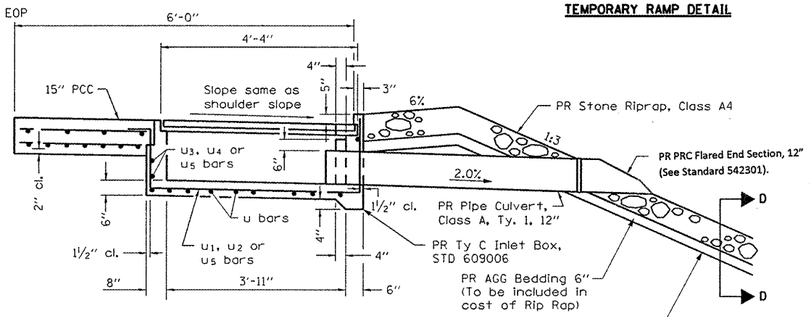


BUTT JOINT DETAIL

(STA. 953+00.00 TO STA. 953+45.00)
(STA. 1003+05.00 TO STA. 1003+50.00)



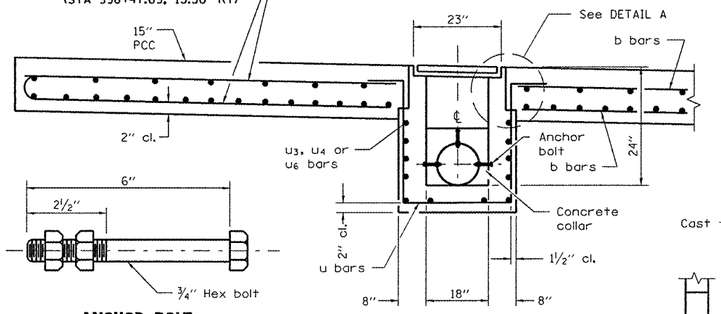
TEMPORARY RAMP DETAIL



APPROACH SHOULDER DRAIN DETAIL

(STA 996+34.28, 13.50' LT)
(STA 996+41.57, 13.50' RT)
(STA 998+33.60, 15.50' LT)
(STA 998+47.69, 15.50' RT)

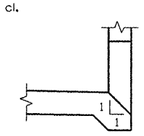
SECTION B-B



ANCHOR BOLT

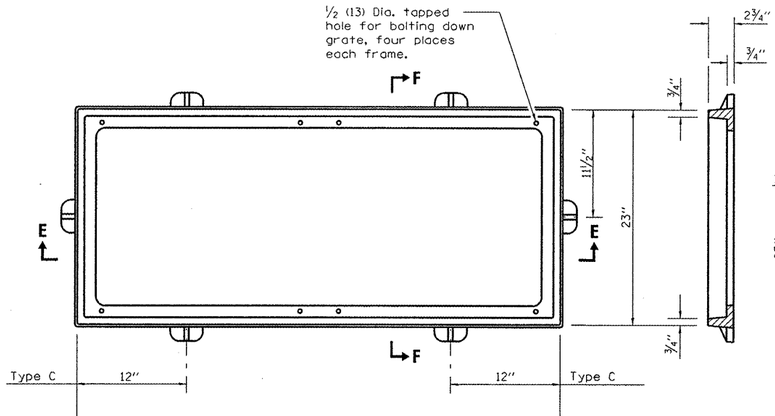
(Used to tie pipe to concrete collar)

SECTION A-A



BOX OUTLET WHEN PRECAST

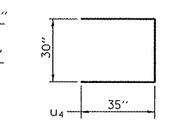
INLET TYPE	SHOULDER WIDTH	O-O GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type C	6'	4'-4"	3'-11"	18"



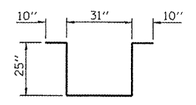
SECTION E-E

DETAIL OF CAST FRAME

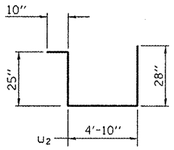
SECTION F-F



BAR u2



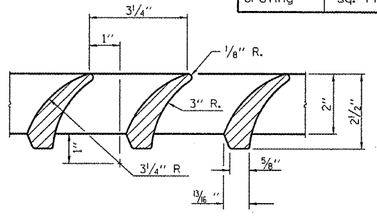
BAR u



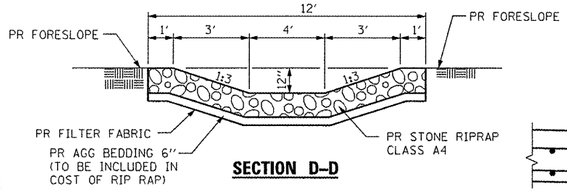
BAR u1

INLET BOX

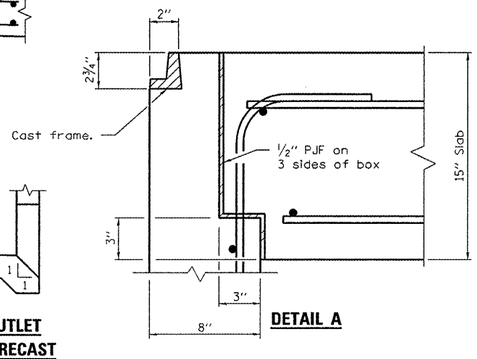
REQUIRED MATERIAL			
TYPE C			
Bar	Qty.	Size	Length
u	6	#4	8'-5"
u_1	3	#4	10'-1"
u_4	4	#4	8'-4"
Concrete	cu. yds.		0.8
Reinf. bars	lbs.		76
Grating	sq. ft.		7.3



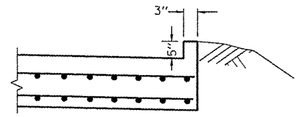
DETAIL B



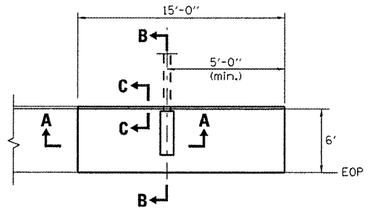
SECTION D-D



DETAIL A



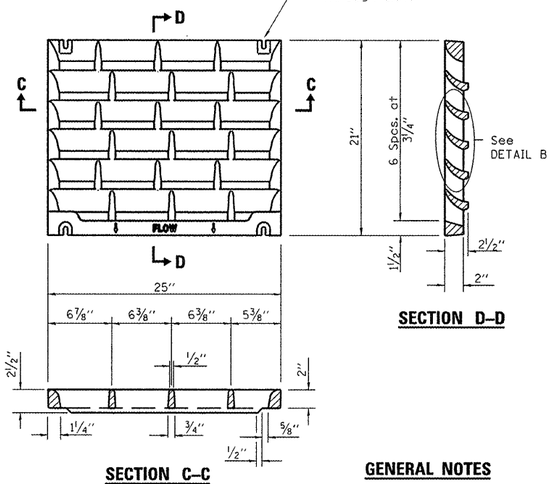
SECTION C-C



TYPICAL DETAIL PLAN

APPROACH SHOULDER & DRAIN DETAIL

STA. 1946+81.24 LT
STA. 1946+81.24 RT



SECTION C-C

DETAIL OF CAST GRATE

Type C requires 2 grates

SECTION D-D

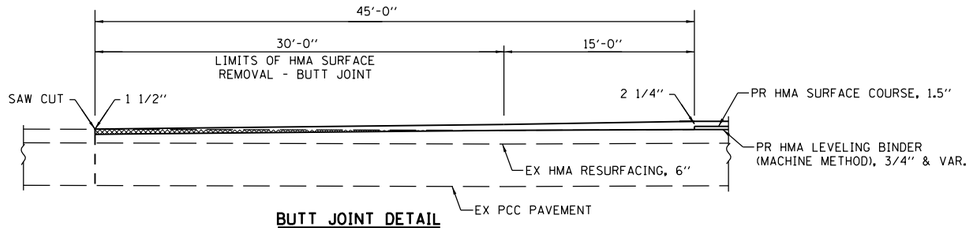
GENERAL NOTES

All exposed edges of the inlet, except the upper perimeter, shall be beveled ¾ (20).

All dimensions are in inches (millimeters) unless otherwise shown.

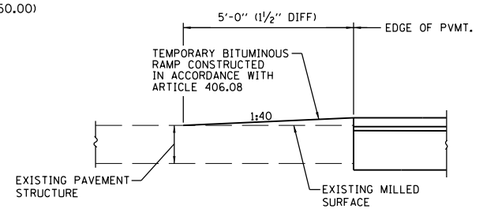
The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - DRH	REVISED -	MISCELLANEOUS DETAILS
	PLOT SCALE = 40.0000 ' / in.	CHECKED - DRH	REVISED -	SCALE: N.T.S. SHEET NO. 1 OF 1 SHEETS
	PLOT DATE = Aug-31-2011 09:43:38AM	DATE - 8/26/2011	REVISED -	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	76
		CONTRACT NO. 72B55		
		ILLINOIS FED. AID PROJECT		

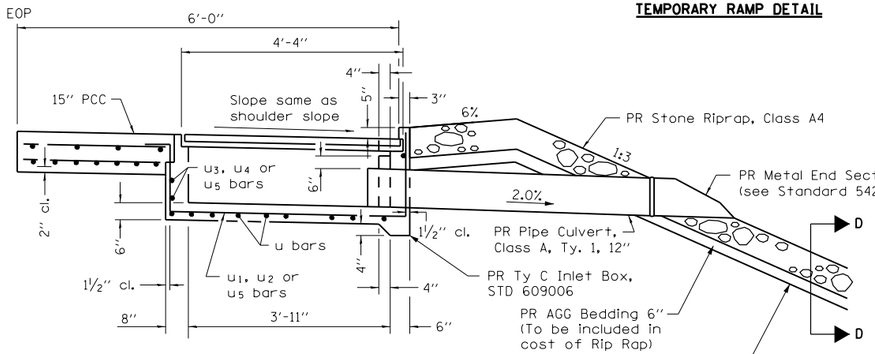


BUTT JOINT DETAIL

(STA. 953+00.00 TO STA. 953+45.00)
(STA. 1003+05.00 TO STA. 1003+50.00)



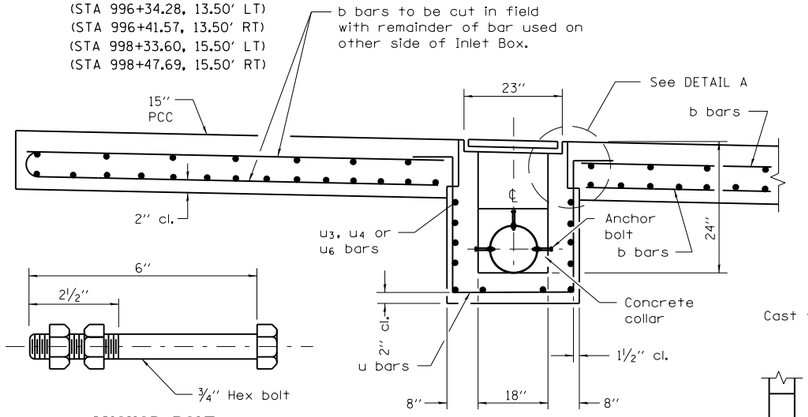
TEMPORARY RAMP DETAIL



APPROACH SHOULDER DRAIN DETAIL

(STA 996+34.28, 13.50' LT)
(STA 996+41.57, 13.50' RT)
(STA 998+33.60, 15.50' LT)
(STA 998+47.69, 15.50' RT)

SECTION B-B

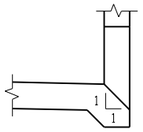


ANCHOR BOLT

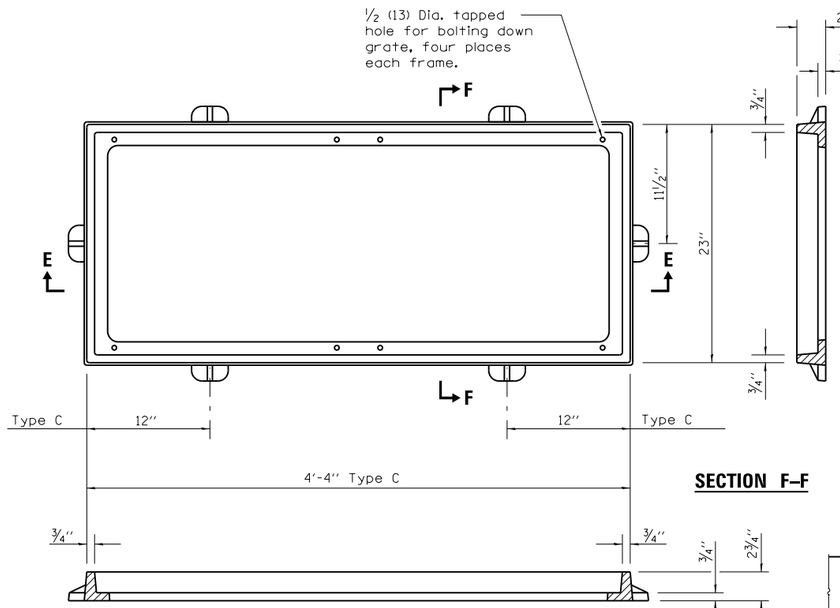
(Used to tie pipe to concrete collar)

SECTION A-A

INLET TYPE	SHOULDER WIDTH	O-O GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type C	6'	4'-4"	3'-11"	18"



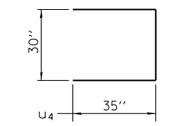
BOX OUTLET WHEN PRECAST



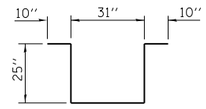
SECTION E-E

DETAIL OF CAST FRAME

SECTION F-F



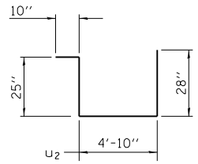
BAR u2



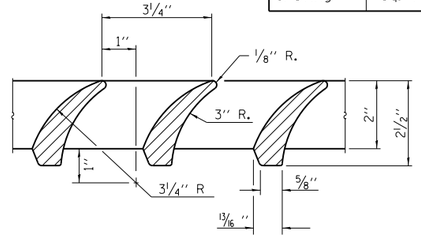
BAR u

INLET BOX

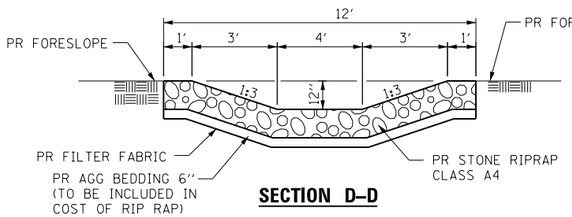
REQUIRED MATERIAL			
TYPE C			
Bar	Qty.	Size	Length
u	6	#4	8'-5"
u1	3	#4	10'-1"
u4	4	#4	8'-4"
Concrete		cu. yds.	0.8
Reinf. bars		lbs.	76
Grating		sq. ft.	7.3



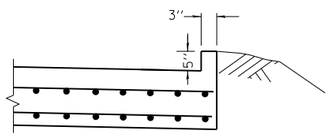
BAR u1



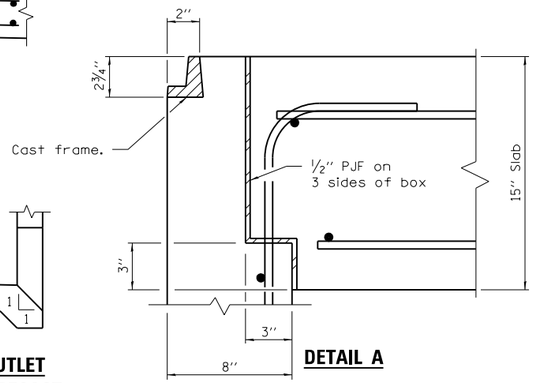
DETAIL B



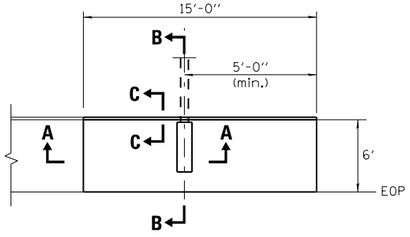
SECTION D-D



SECTION C-C

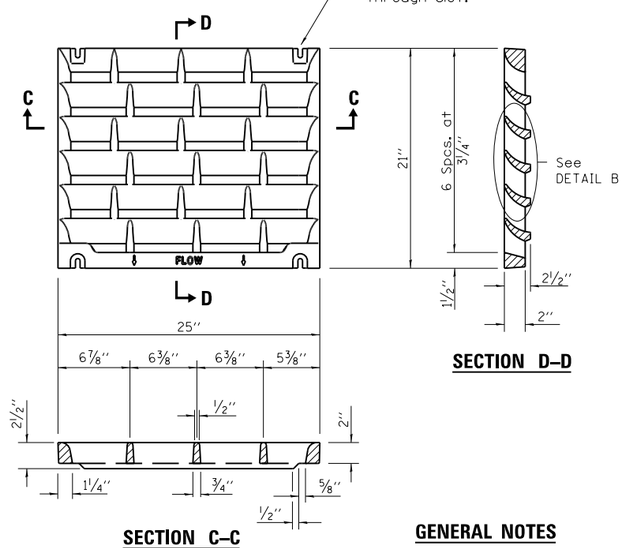


DETAIL A



TYPICAL DETAIL PLAN

APPROACH SHOULDER & DRAIN DETAIL
STA. 1946+81.24 LT
STA. 1946+81.24 RT



SECTION C-C

DETAIL OF CAST GRATE
Type C requires 2 grates

SECTION D-D

GENERAL NOTES

All exposed edges of the inlet, except the upper perimeter, shall be beveled ¾ (20).

All dimensions are in inches (millimeters) unless otherwise shown.

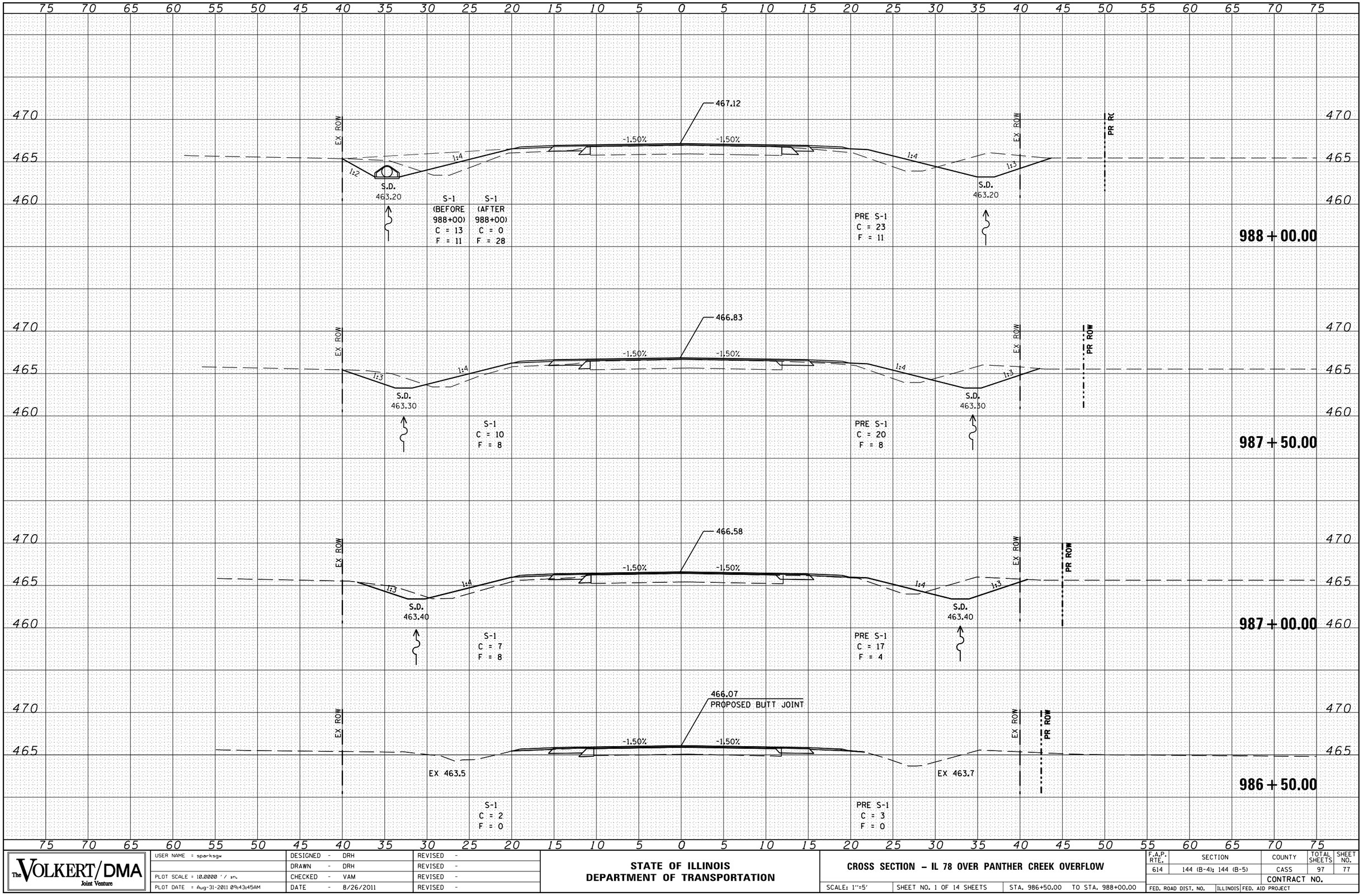
The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - DRH	REVISED -
	PLOT DATE = Aug-31-2011 09:43:38AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	76
		CONTRACT NO. 72B55		
	ILLINOIS FED. AID PROJECT			



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

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

The VOLKERT/DMA Joint Venture

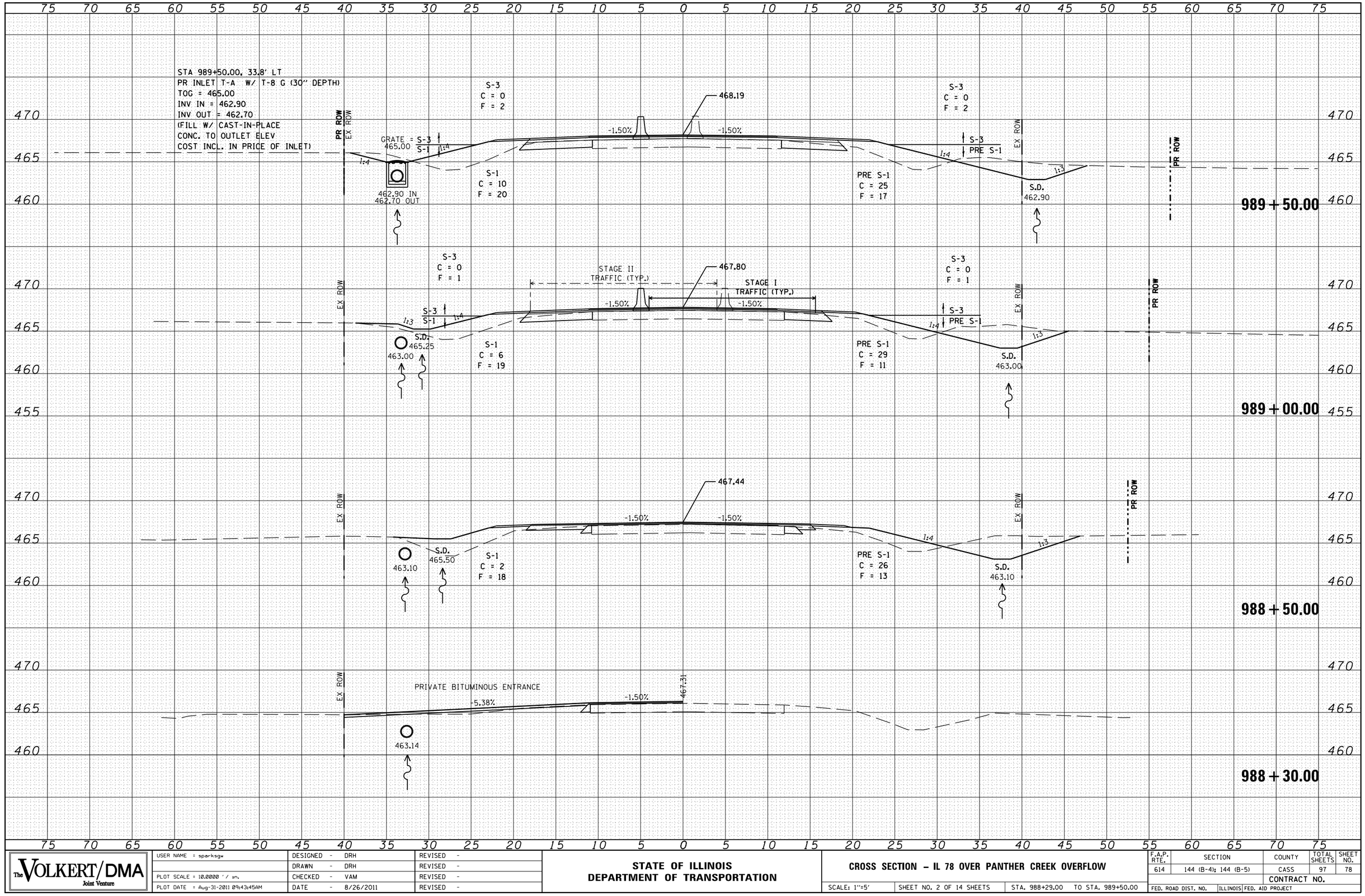
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:45AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 1 OF 14 SHEETS | STA. 986+50.00 TO STA. 988+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	77
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:45AM	DATE - 8/26/2011	REVISED -

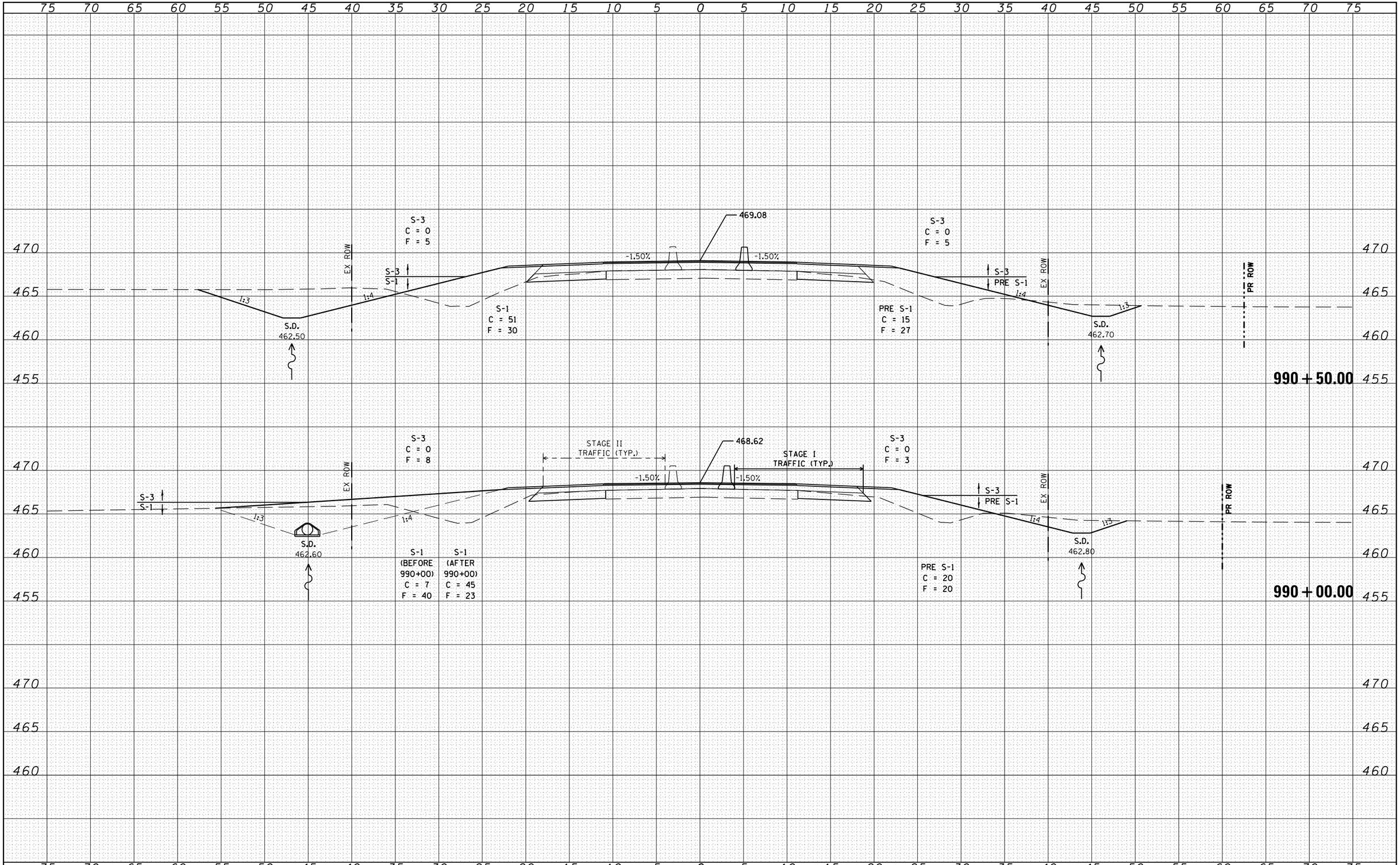
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 2 OF 14 SHEETS | STA. 988+29.00 TO STA. 989+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	78
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:46AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

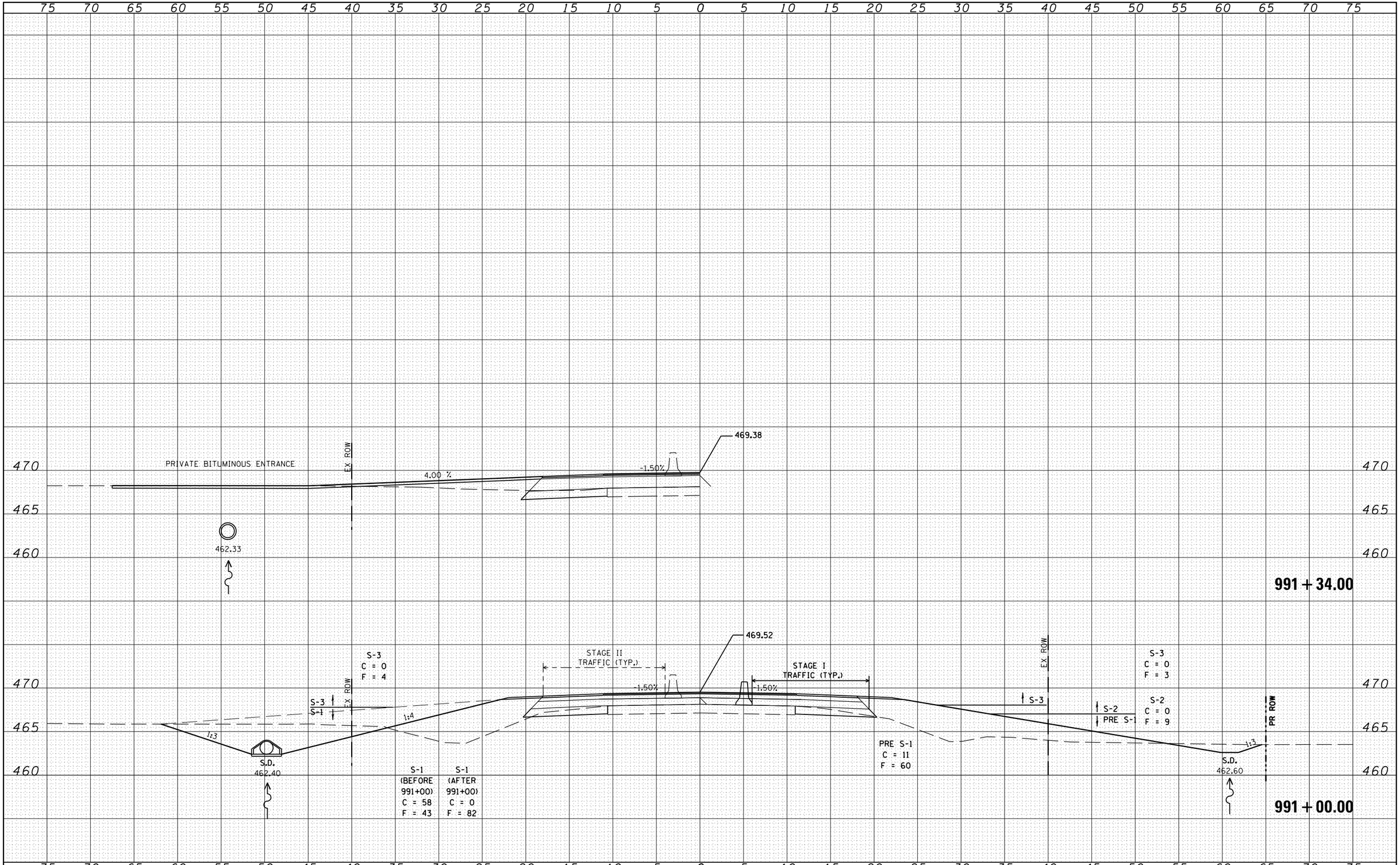
CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 3 OF 14 SHEETS | STA. 990+00.00 TO STA. 990+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	79
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
	DRAWN - DRH	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:43:47AM	DATE - 8/26/2011	REVISED -	

The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 4 OF 14 SHEETS | STA. 991+00.00 TO STA. 991+34.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	80
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

470
465
475
460
455

469.88
-1.50%
-4.00%
EX
FE/LEVEE
991 + 63.00

RT 991+52. 70.0' RT
EX 18" RCCP
USFL = 462.50

469.83
STAGE II
TRAFFIC (TYP.)
-1.50%
STAGE I
TRAFFIC (TYP.)
-1.50%
EX ROW
EX ROW
S-2
C = 0
F = 22
S-2
PRE S-1
54.23' LT
℄ 462.30
462.30
S-1
C = 8
F = 36
PRE S-1
C = 7
F = 32
991 + 50.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

The VOLKERT/DMA Joint Venture

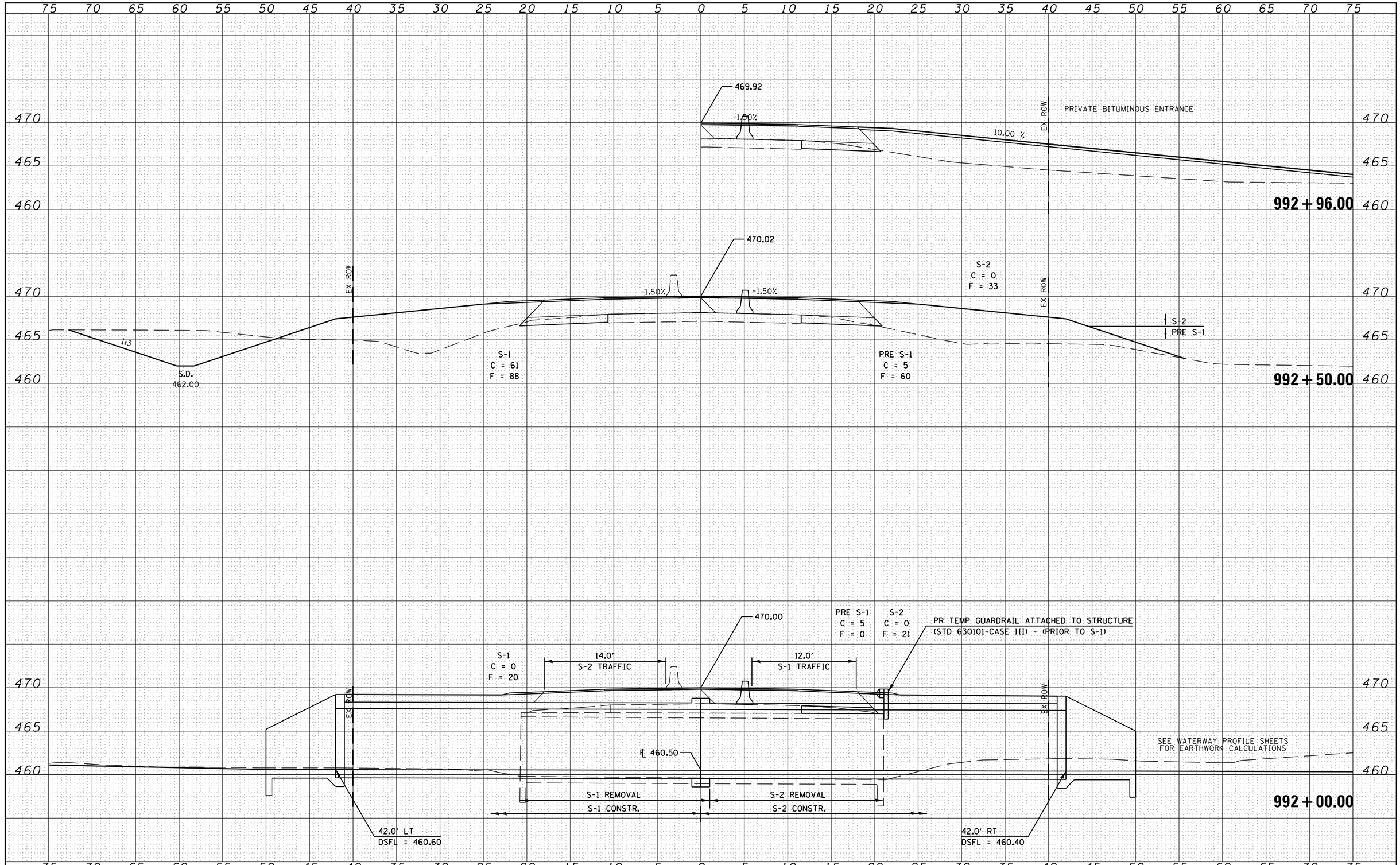
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:47AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 5 OF 14 SHEETS | STA. 991+50.00 TO STA. 991+63.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	81
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:48AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 6 OF 14 SHEETS | STA. 992+00.00 TO STA. 992+96.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	82
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

470
465
460

469.53
-1.50%
-1.50%
1:4
1:3
EX ROW
S.D.
462.50
S-1
C = 35
F = 52
S-2
C = 0
F = 7
PRE S-1
C = 16
F = 27
S-2
PRE S-1
PR ROW

994 + 00.00

469.67
-1.50%
-1.50%
1:4
1:3
EX ROW
S.D.
463.00
HIGH PT
S-1
C = 28
F = 49
S-2
C = 0
F = 10
PRE S-1
C = 10
F = 25
S-2
PRE S-1
PR ROW

993 + 50.00

469.91
STAGE II
TRAFFIC (TYP.)
STAGE I
TRAFFIC (TYP.)
-1.50%
-1.50%
1:3
EX ROW
S.D.
462.50
S-1
C = 40
F = 67
S-2
C = 0
F = 25
PRIVATE BITUMINOUS ENTRANCE
PRE S-1
C = 5
F = 96
S-2
PRE S-1
-10.17%

455

993 + 00.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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

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

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:48AM	DATE - 8/26/2011	REVISED -

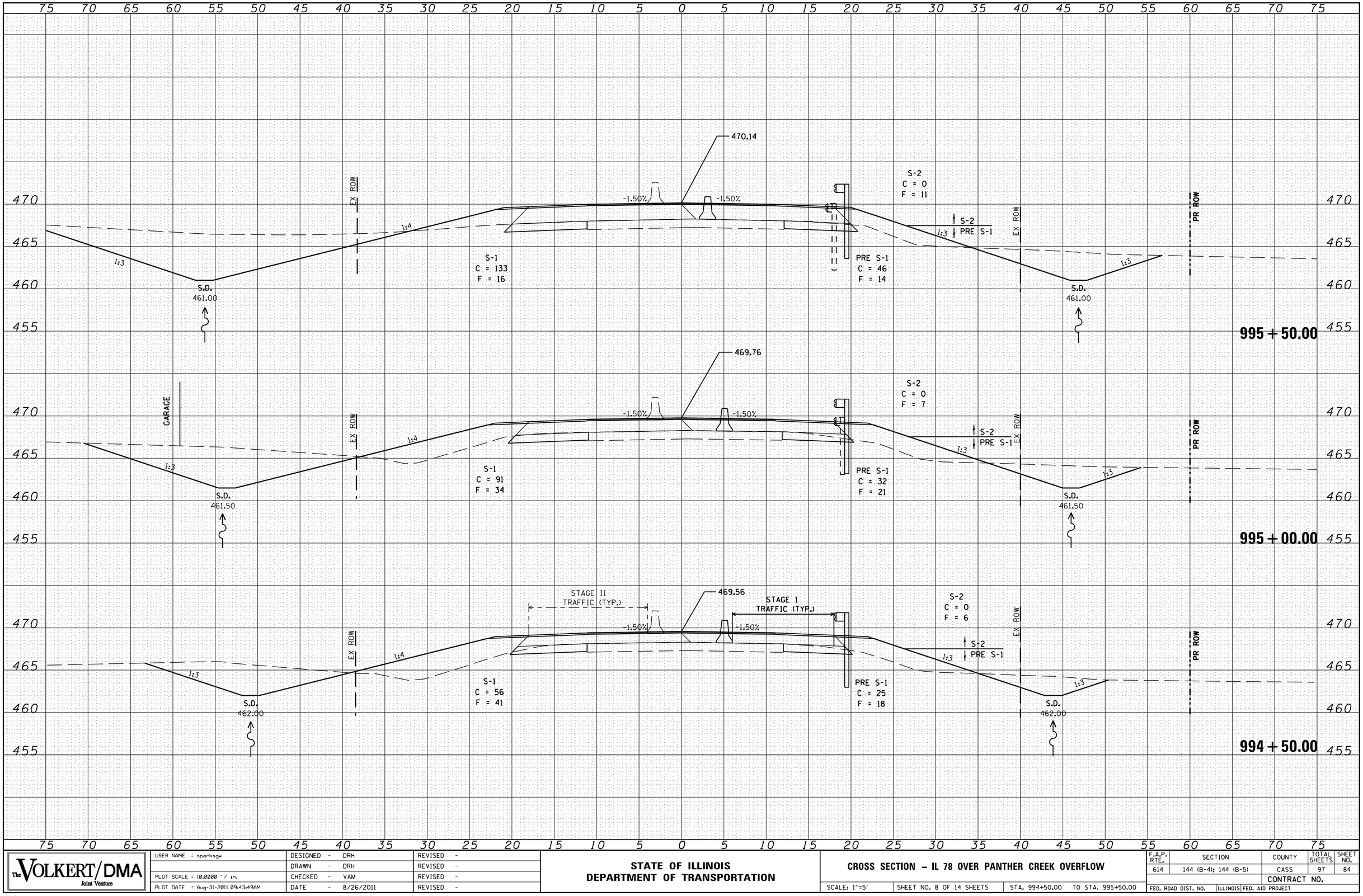
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 7 OF 14 SHEETS | STA. 993+00.00 TO STA. 994+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	83
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:49AM	DATE - 8/26/2011	REVISED -

The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 8 OF 14 SHEETS | STA. 994+50.00 TO STA. 995+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	84
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

470
465
460
455

SHED
EX ROW
1:4
1:3
S.D.
460.00
6%
471.22
-1.50%
-1.50%
S-1
C = 176
F = 44
PRE S-1
C = 111
F = 18
S-2
C = 0
F = 13
EX ROW
1:3
S-2
PRE S-1
S.D.
460.00

996 + 50.00

470.68
STAGE II
TRAFFIC (TYP.)
STAGE I
TRAFFIC (TYP.)
-1.50%
PR ROW
EX ROW
1:4
1:3
S.D.
460.50
S-1
C = 110
F = 41
S-2
C = 0
F = 17
S-2
PRE S-1
EX ROW
1:3
PRE S-1
C = 60
F = 18
S.D.
460.50

996 + 00.00

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

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

The VOLKERT/DMA Joint Venture

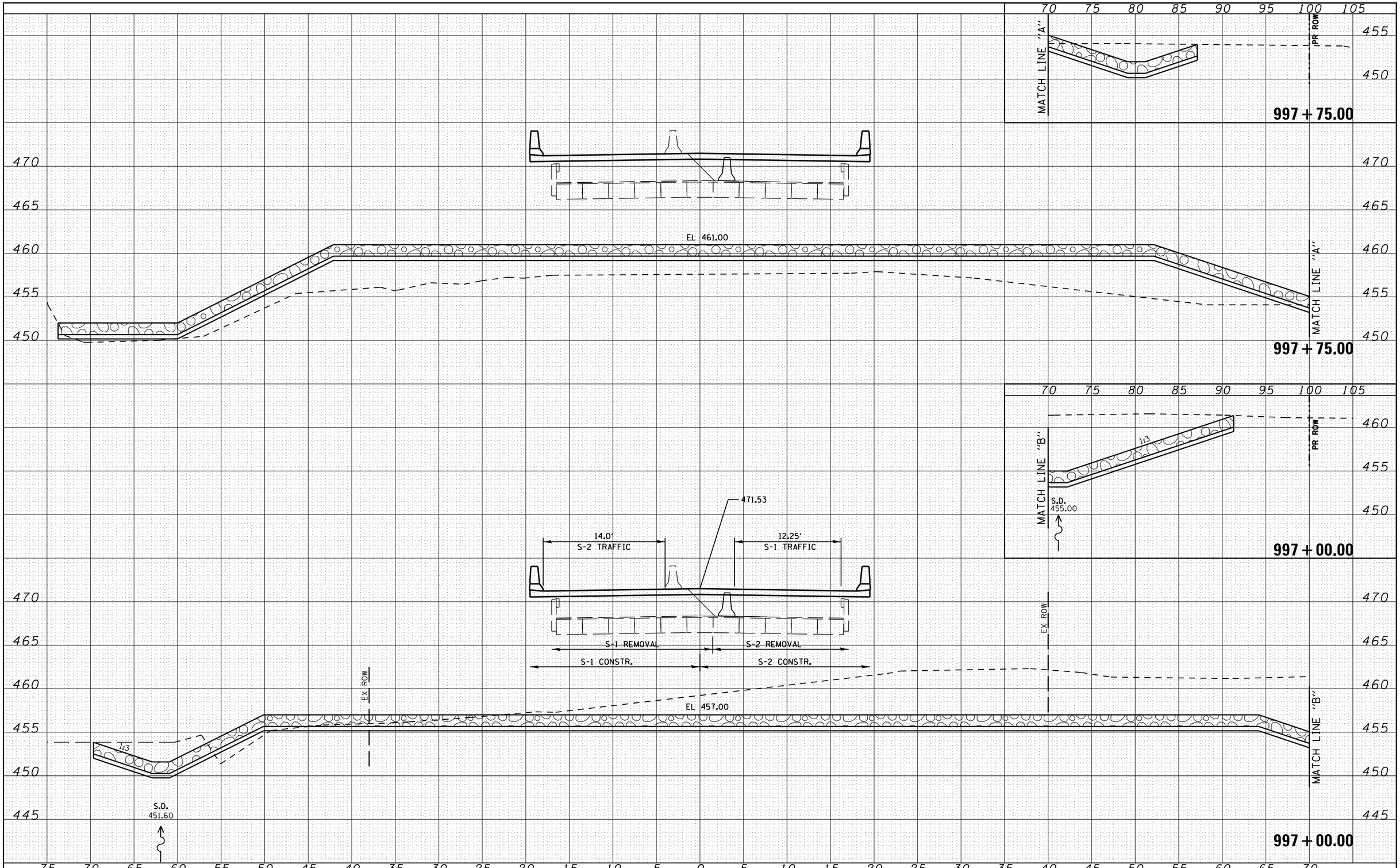
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:50AM	DATE - 144 (B-4); 144 (B-5)	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 9 OF 14 SHEETS | STA. 996+00.00 TO STA. 996+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	85
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY

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

ORIGINAL SURVEY

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

The VOLKERT/DMA Joint Venture

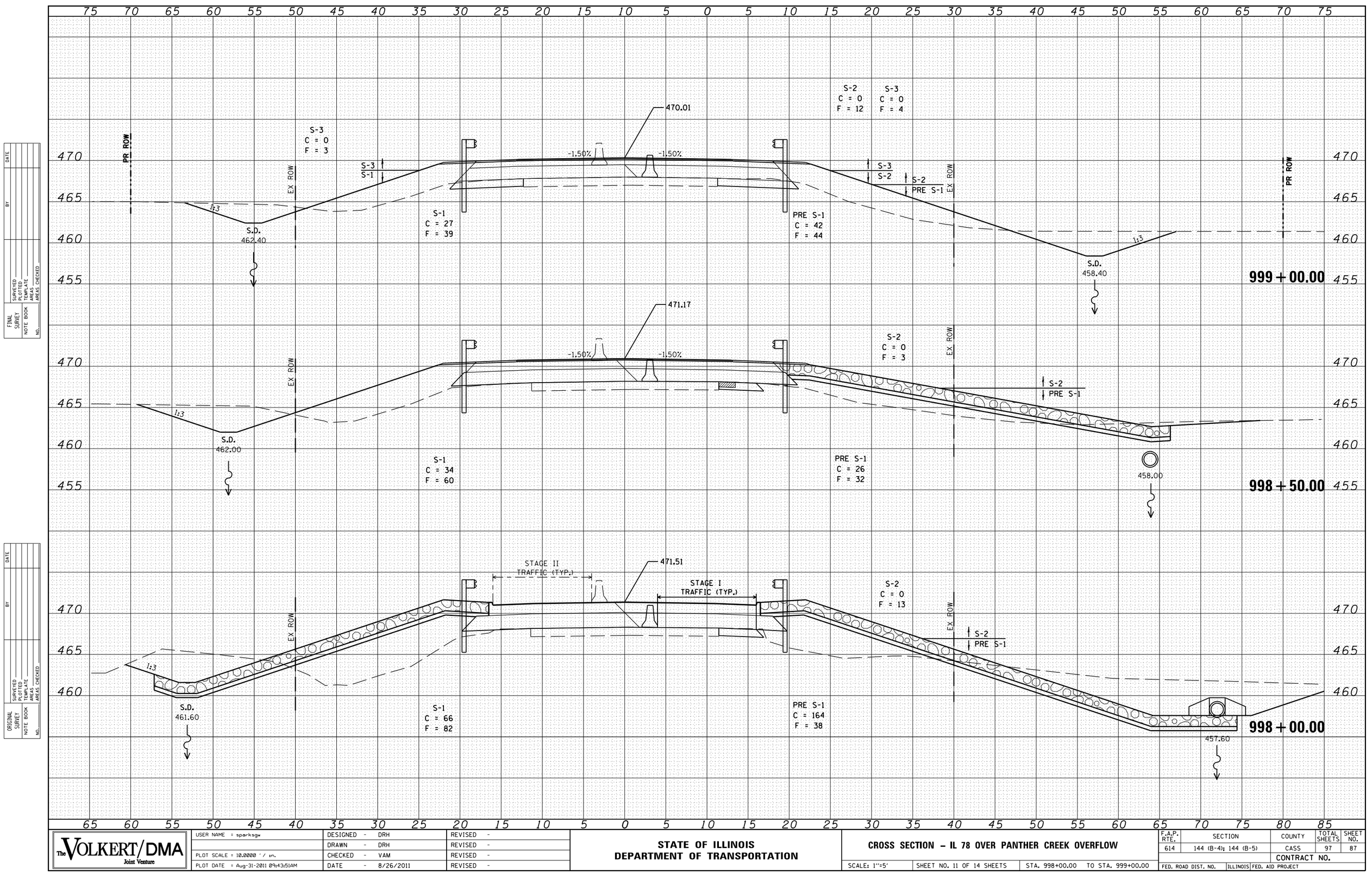
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:50AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 10 OF 14 SHEETS | STA. 997+00.00 TO STA. 997+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	86
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY

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

ORIGINAL SURVEY

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

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:51AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

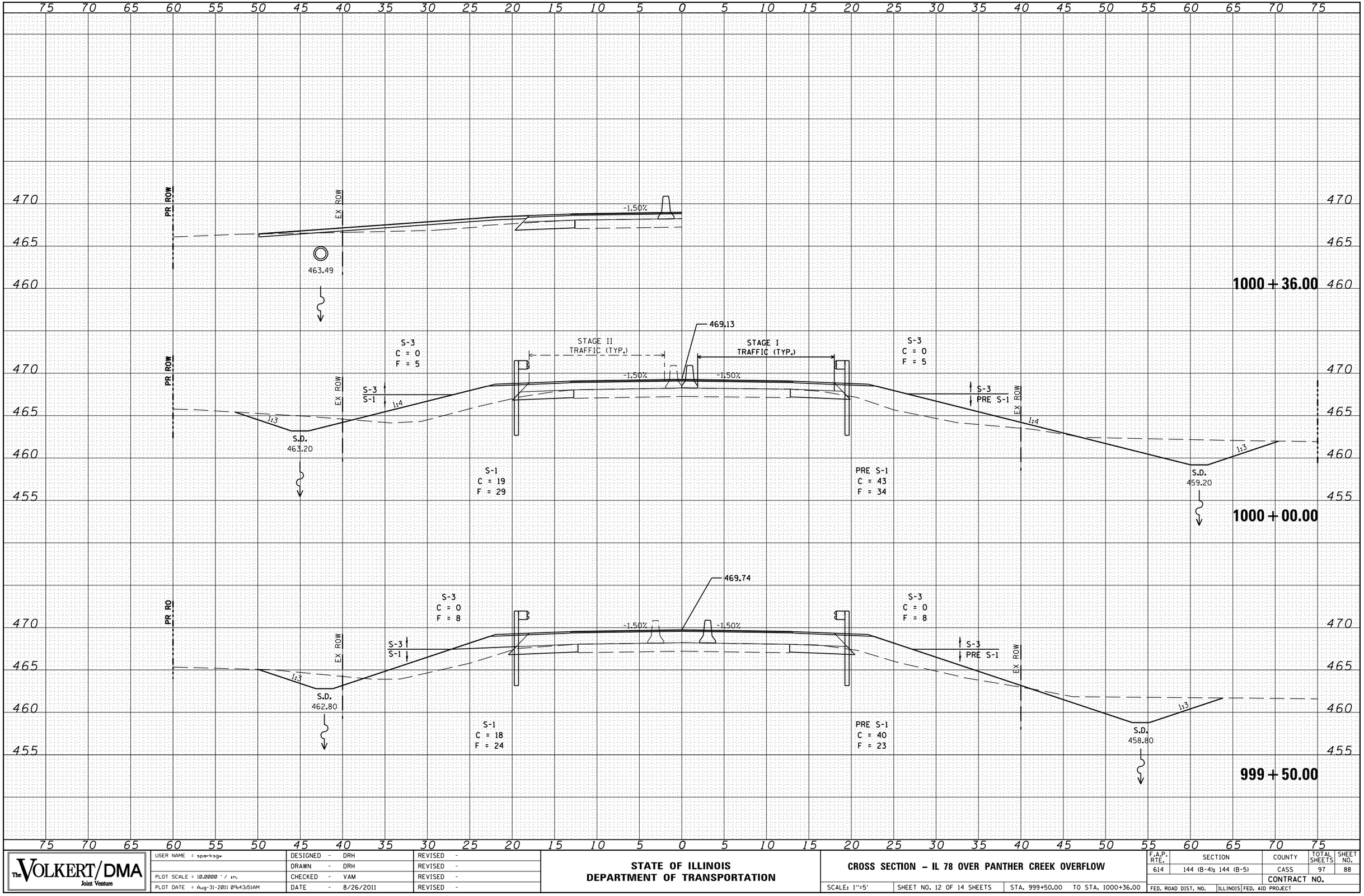
CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 11 OF 14 SHEETS | STA. 998+00.00 TO STA. 999+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	87
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
	DRAWN - DRH	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:43:51AM	DATE - 8/26/2011	REVISED -	

The VOLKERT/DMA Joint Venture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 12 OF 14 SHEETS | STA. 999+50.00 TO STA. 1000+36.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	88
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

470 465 460 455

S-3
C = 0
F = 1

468.46

-1.50 %

-1.50 %

EX ROW

PR ROW

S-3
S-1

1:4

1:3

S.D.
464.40

S-1
C = 4
F = 15

S-3
C = 0
F = 1

S-3
PRE S-1

PRE S-1
C = 36
F = 14

EX ROW

PR ROW

1:4

1:3

S.D.
460.40

1001 + 50.00

470 465 460 455

PR ROW

S-3
C = 0
F = 1

468.60

-1.50%

-1.50%

EX ROW

S-3
S-1

1:4

1:3

S.D.
464.00

S-1
C = 9
F = 20

S-3
C = 0
F = 1

S-3
PRE S-1

PRE S-1
C = 38
F = 21

EX ROW

PR ROW

1:4

1:3

S.D.
460.00

1001 + 00.00

470 465 460 455

PR ROW

S-3
C = 0
F = 4

468.82

-1.50%

-1.50%

EX ROW

S-3
S-1

463.60

S-1
C = 5
F = 52

S-3
C = 0
F = 3

S-3
PRE S-1

PRE S-1
C = 41
F = 27

EX ROW

PR ROW

1:4

1:3

S.D.
459.60

1000 + 50.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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

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

The VOLKERT/DMA Joint Venture

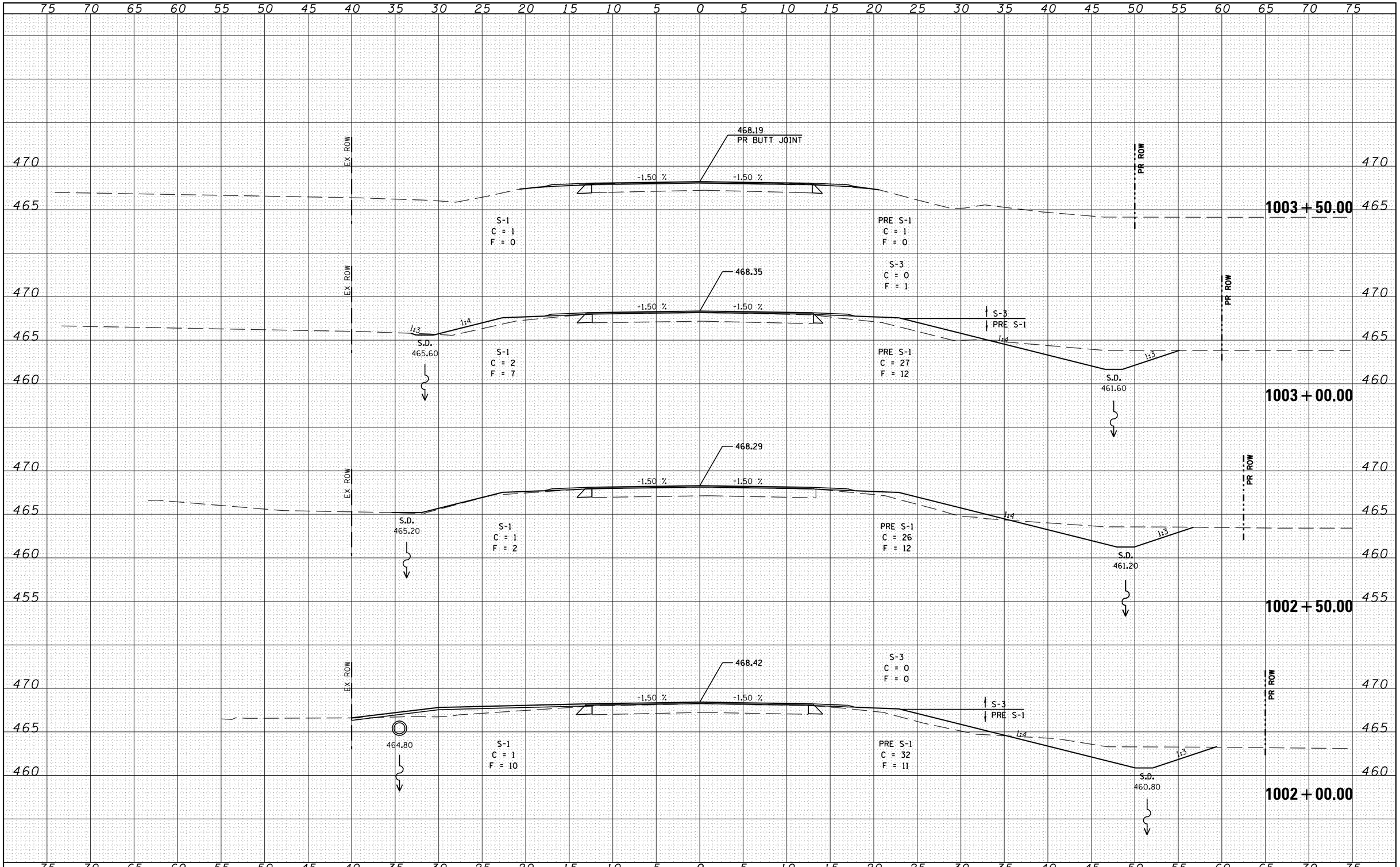
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:52AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 13 OF 14 SHEETS | STA. 1000+50.00 TO STA. 1001+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	89
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

DATE	BY

The VOLKERT/DMA Joint Venture

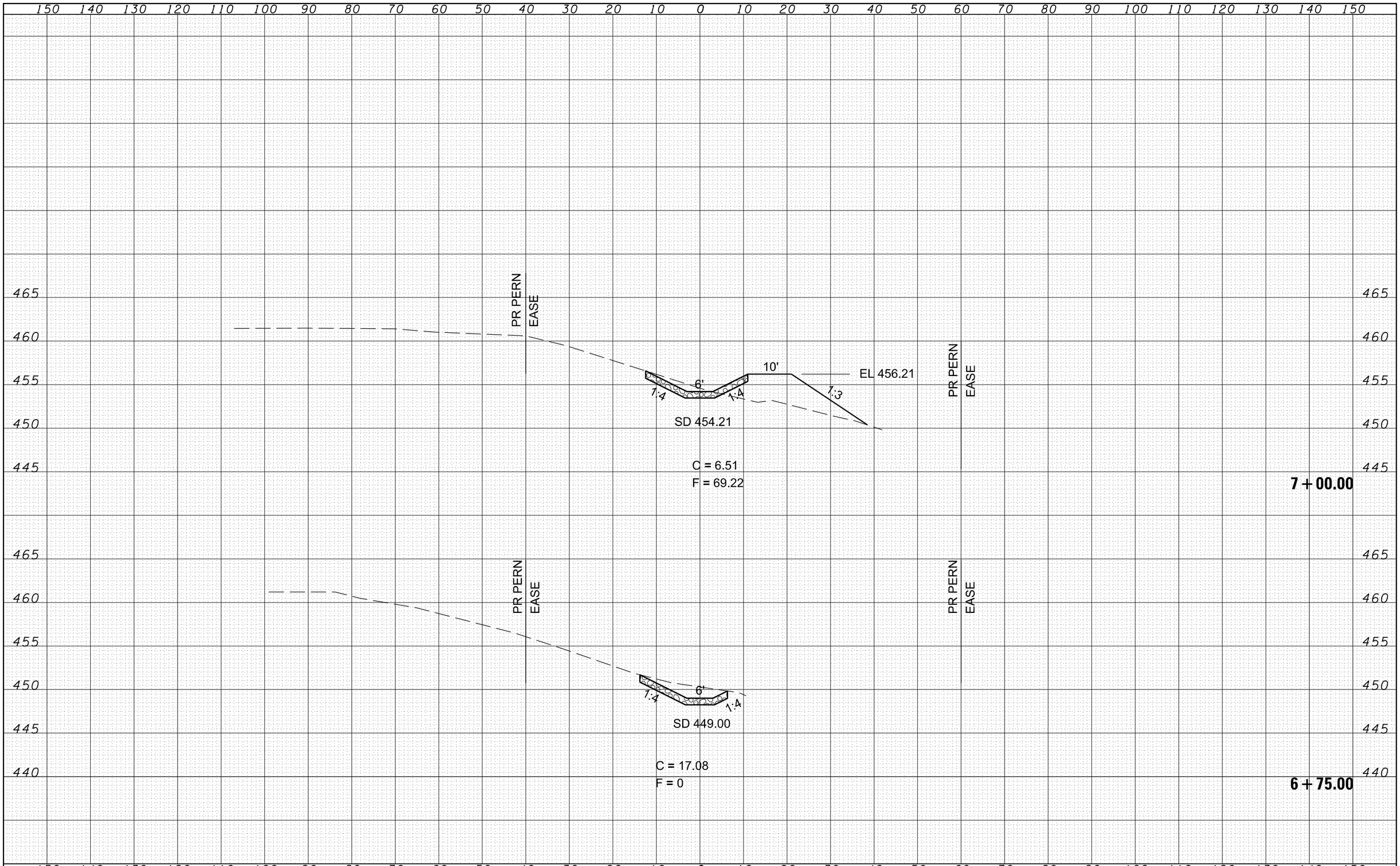
USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:43:53AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION – IL 78 OVER PANTHER CREEK OVERFLOW

SCALE: 1"=5' | SHEET NO. 14 OF 14 SHEETS | STA. 1002+00.00 TO STA. 1003+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	90
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY — NOTE BOOK — NO.

SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO.

SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

BY — DATE

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:44:07AM	DATE - 8/26/2011	REVISED -

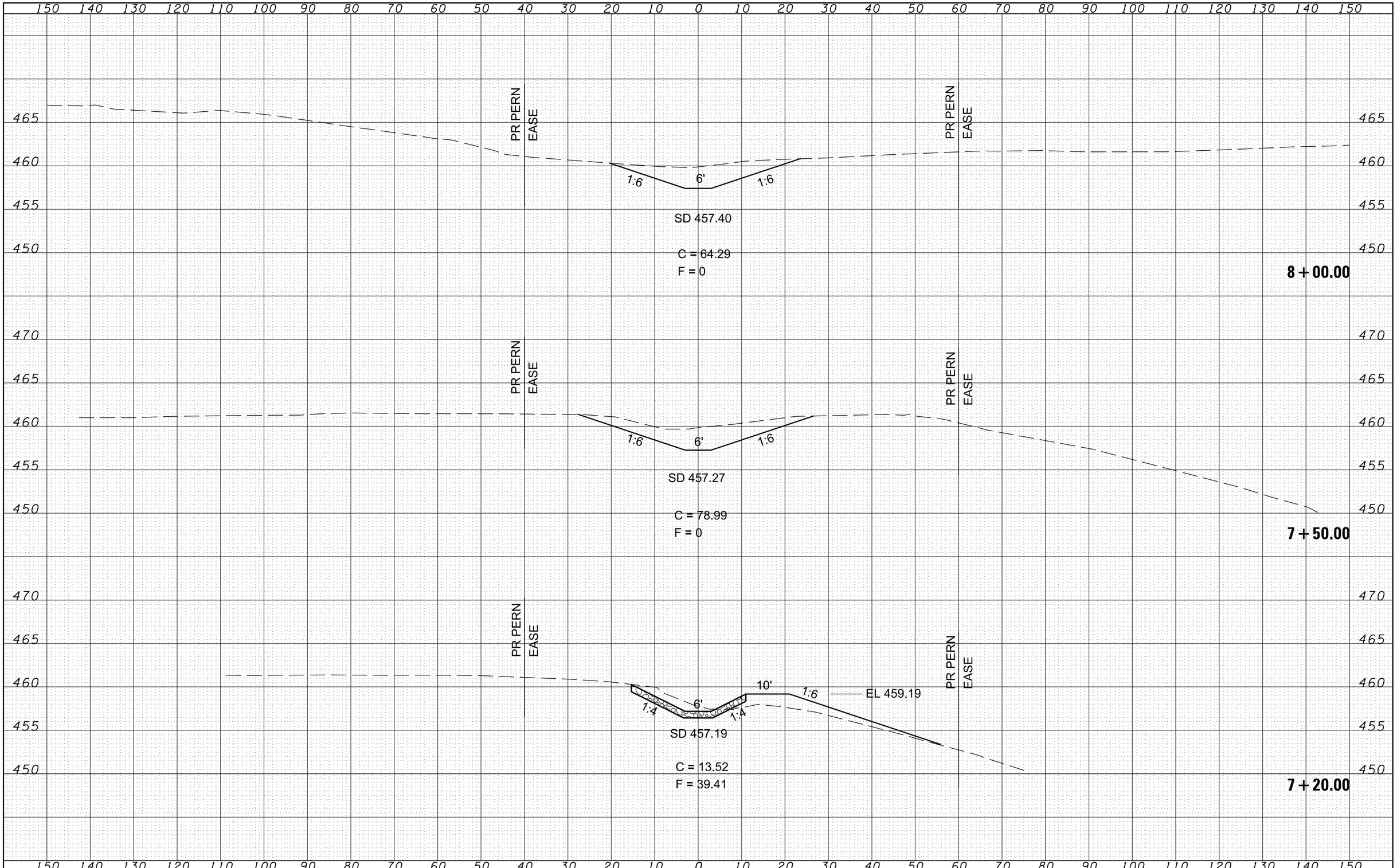
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 1 OF 7 SHEETS | STA. 6+75.00 TO STA. 7+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	91
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:44:08AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY
CROSS SECTIONS

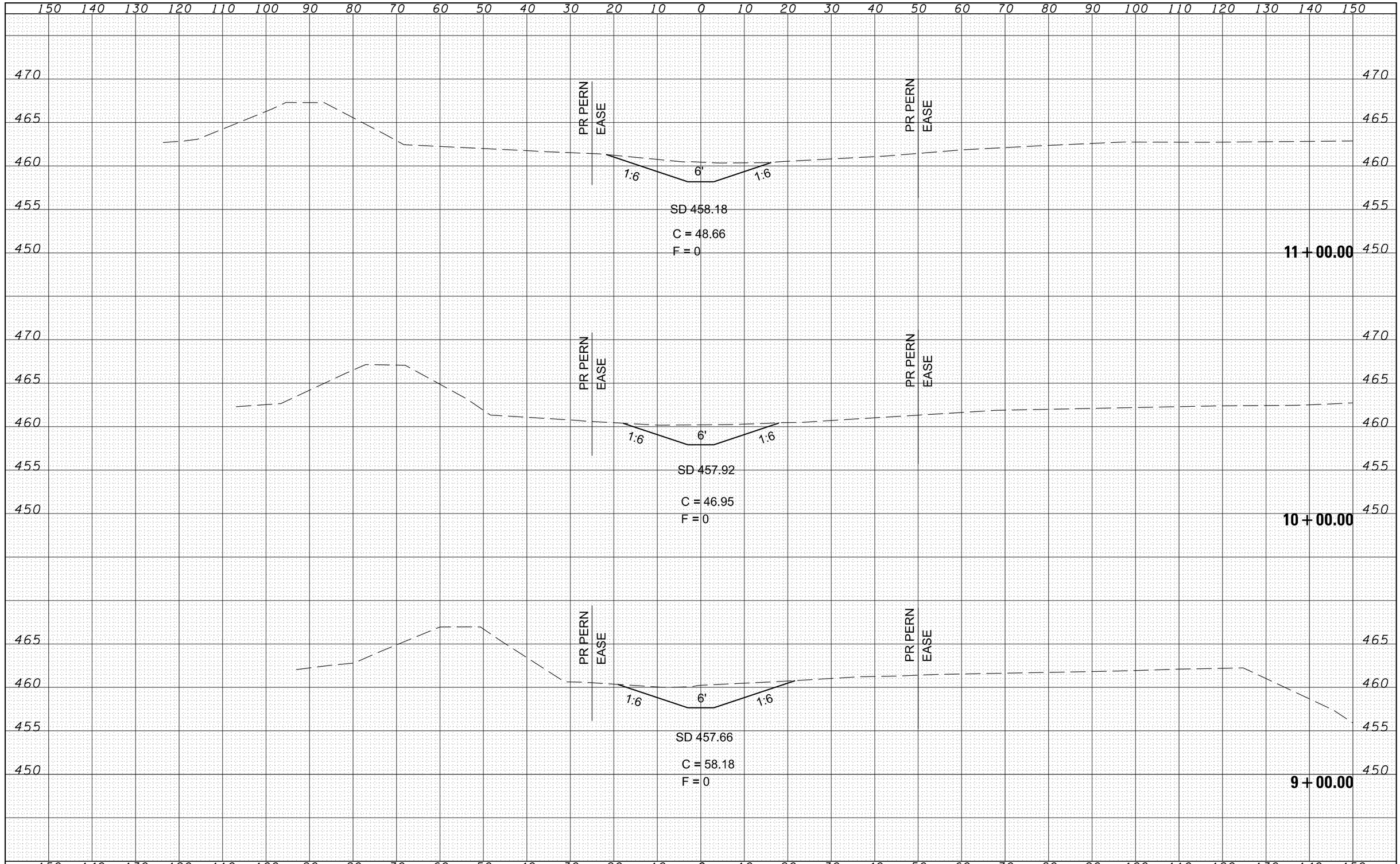
SCALE: 1"=5' | SHEET NO. 2 OF 7 SHEETS | STA. 7+20.00 TO STA. 8+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	92
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

BY

DATE



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

BY

DATE

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:44:08AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 3 OF 7 SHEETS | STA. 9+00.00 TO STA. 11+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	93
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

470
465
460
455
450

PR PERN EASE

1:6 6' 1:6 1:50

PR PERN EASE

SD 458.70

C = 58.26

F = 0

13 + 00.00

470
465
460
455
450

PR PERN EASE

1:6 6' 1:6

PR PERN EASE

SD 458.44

C = 57.04

F = 0

12 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FINAL SURVEY — NOTE BOOK — NO.

SURVEYED — BY — DATE
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO.

SURVEYED — BY — DATE
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -	
	DRAWN - DRH	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM	REVISED -	
PLOT DATE = Aug-31-2011 09:44:08AM	DATE - 8/26/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

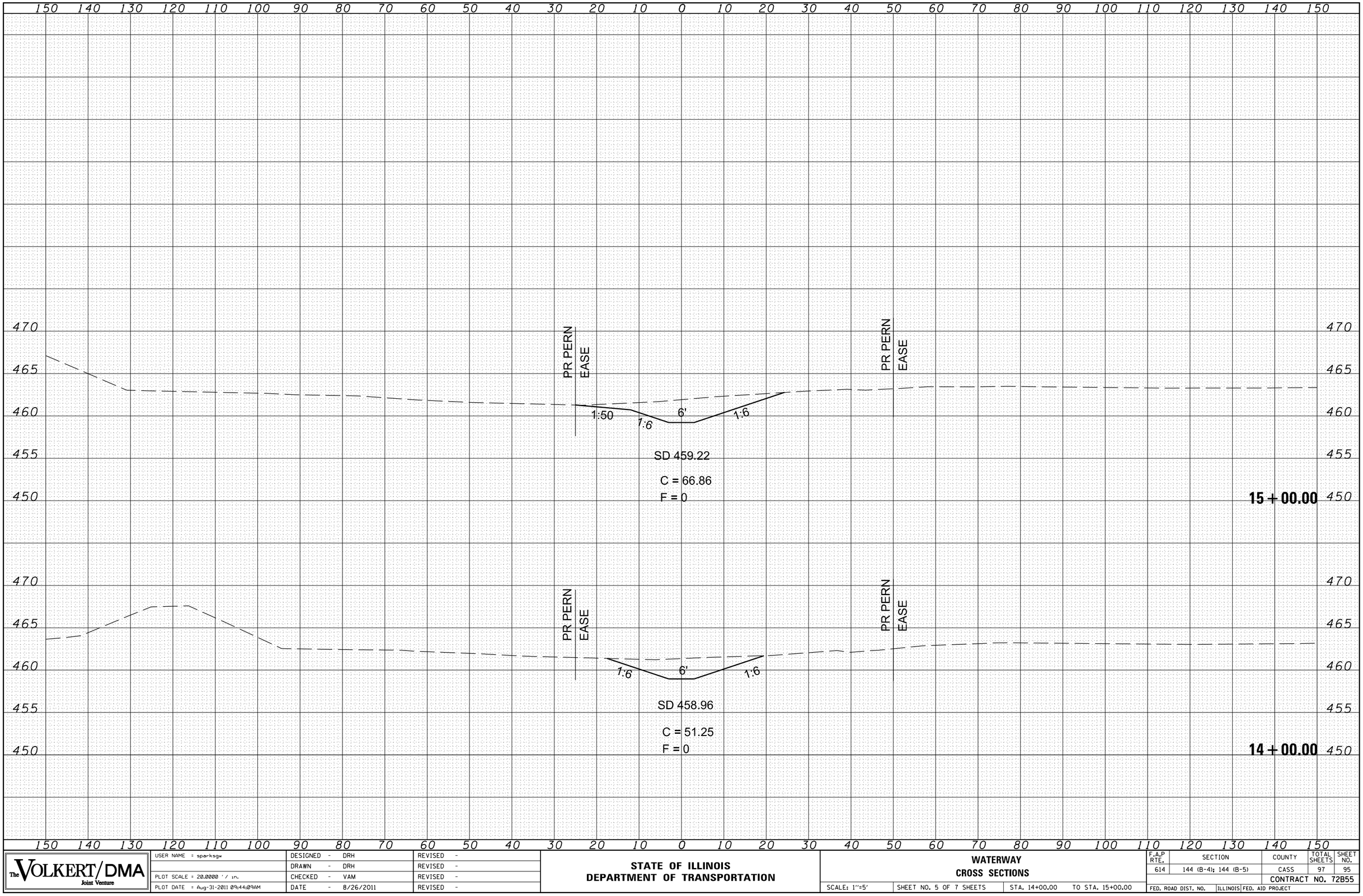
WATERWAY
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 4 OF 7 SHEETS | STA. 12+00.00 TO STA. 13+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	94
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

BY	DATE



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

BY	DATE

The VOLKERT/DMA Joint Venture

USER NAME = sparksgw	DESIGNED - DRH	REVISED -
	DRAWN - DRH	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM	REVISED -
PLOT DATE = Aug-31-2011 09:44:09AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

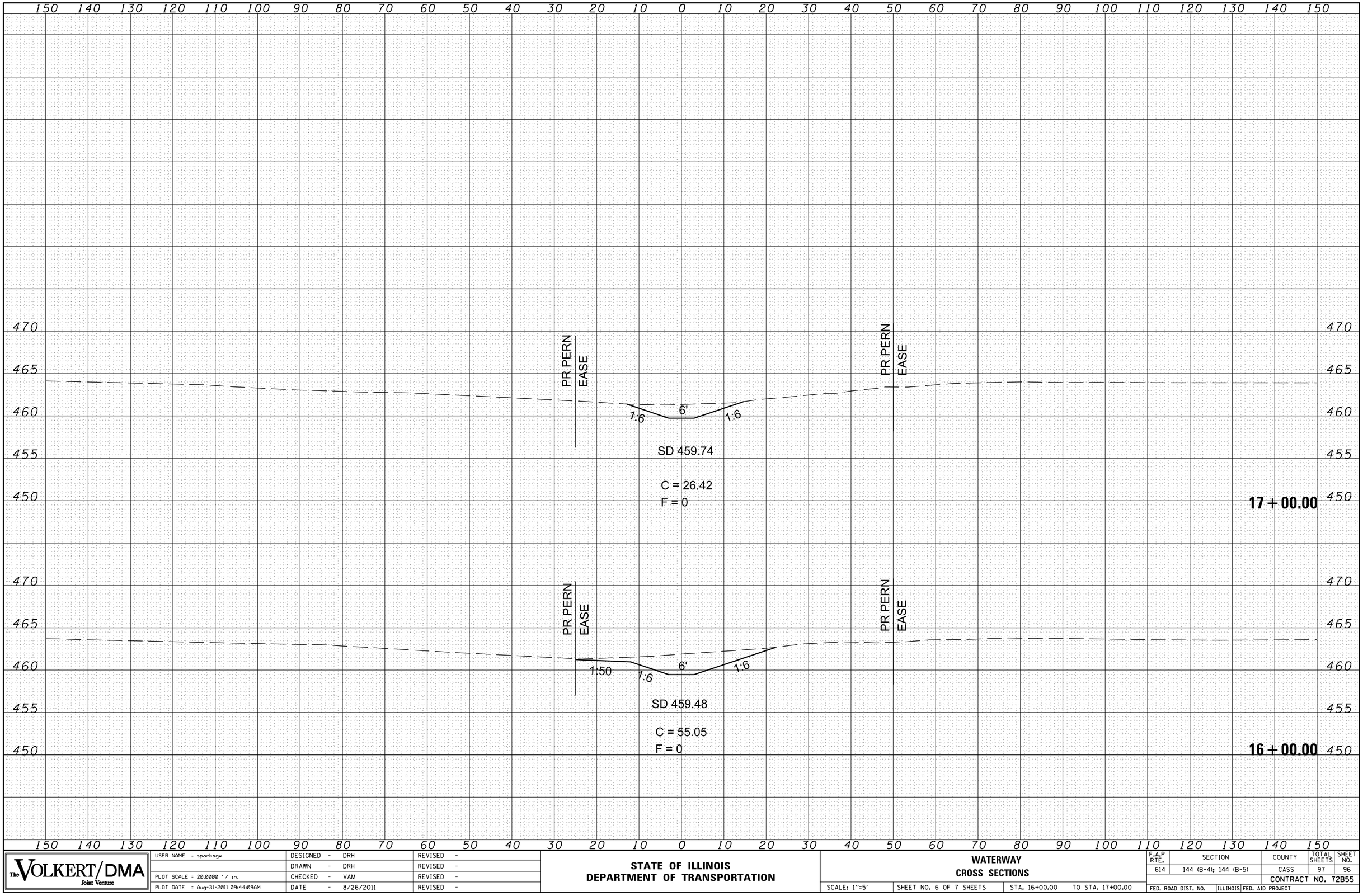
WATERWAY
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 5 OF 7 SHEETS | STA. 14+00.00 | TO STA. 15+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	95
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NO.	NOTE BOOK	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED



ORIGINAL SURVEY	NO.	NOTE BOOK	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH
		DRAWN - DRH
	PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM
	PLOT DATE = Aug-31-2011 09:44:09AM	DATE - 8/26/2011

REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 6 OF 7 SHEETS | STA. 16+00.00 TO STA. 17+00.00

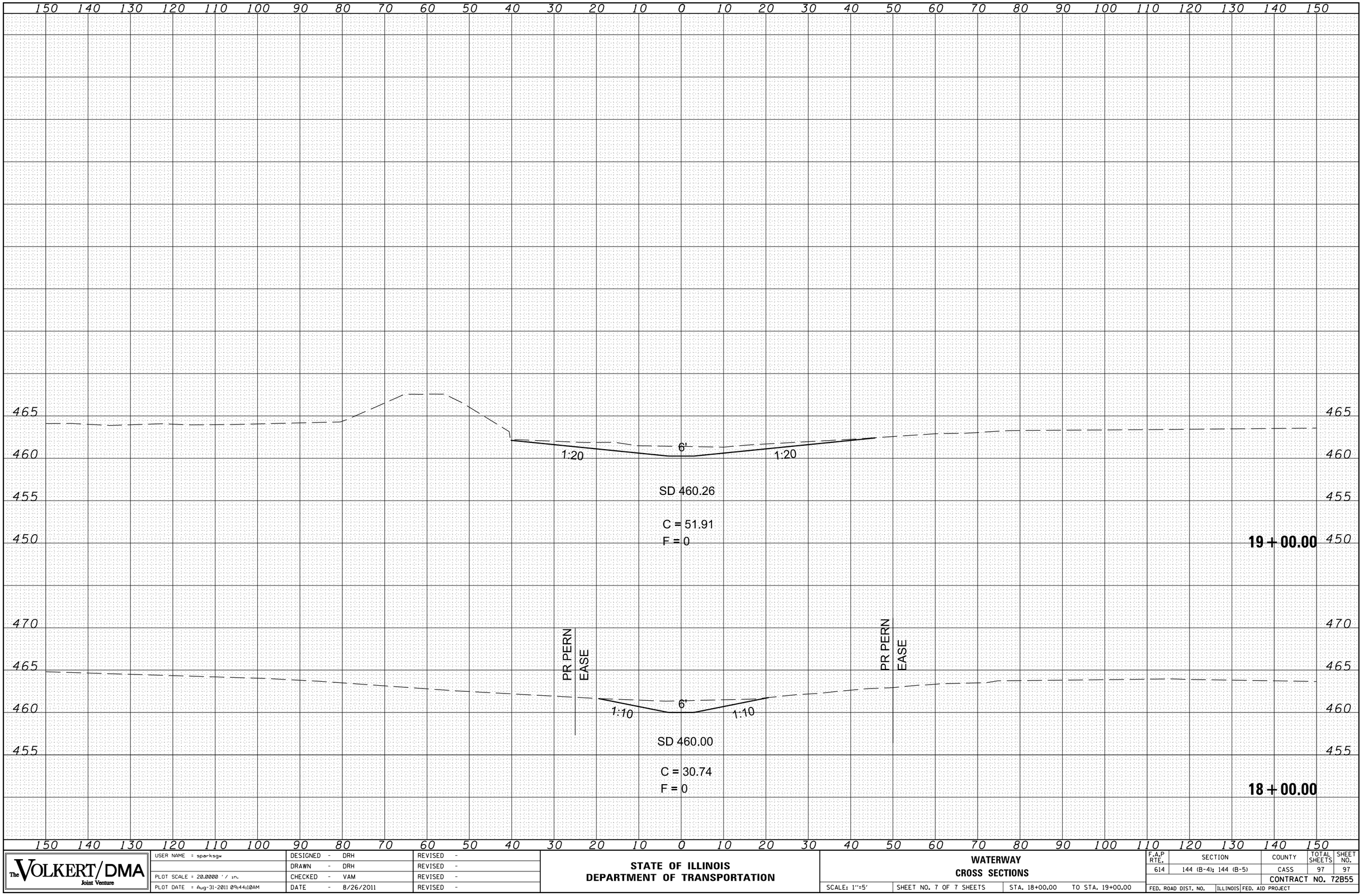
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	96
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

BY	DATE

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

BY	DATE



The VOLKERT/DMA Joint Venture	USER NAME = sparksgw	DESIGNED - DRH	REVISED -
		DRAWN - DRH	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - VAM	REVISED -
	PLOT DATE = Aug-31-2011 09:44:10AM	DATE - 8/26/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 7 OF 7 SHEETS | STA. 18+00.00 | TO STA. 19+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144 (B-4); 144 (B-5)	CASS	97	97
		CONTRACT NO. 72B55		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		