

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 PLANS FOR PROPOSED  
 RICHLAND CREEK BIKE TRAIL PHASE 2B  
 VILLAGE OF SWANSEA  
 ST CLAIR COUNTY  
 SECTION 10-00032-00-BT  
 PROJECT NO. - TE-00D8(156)  
 JOB NO. - C-98-311-11

ROUTE	SECTION	COUNTY
	TE-00D8(156)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

THOUVENOT,  
 WADE &  
 MOERCHEN, INC.  
 ENGINEERS • SURVEYORS • PLANNERS



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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-00120
PROFESSIONAL ENGINEERING CORP.	62-03570
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005262
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

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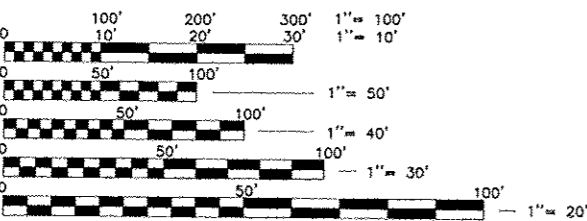
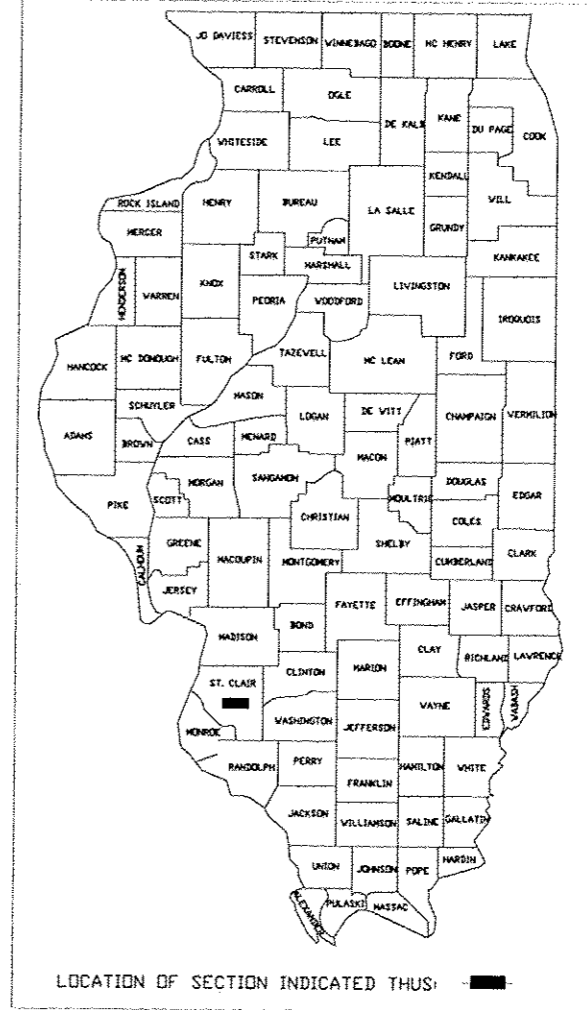
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- 606001-05 CONCRETE CURB TYPE B AND COMBINATION
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- 664001-02 CHAIN LINK FENCE
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- 873001-02 TRAFFIC SIGNAL GROUNDING AND BONDING
- 878001-09 CONCRETE FOUNDATION DETAILS
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS

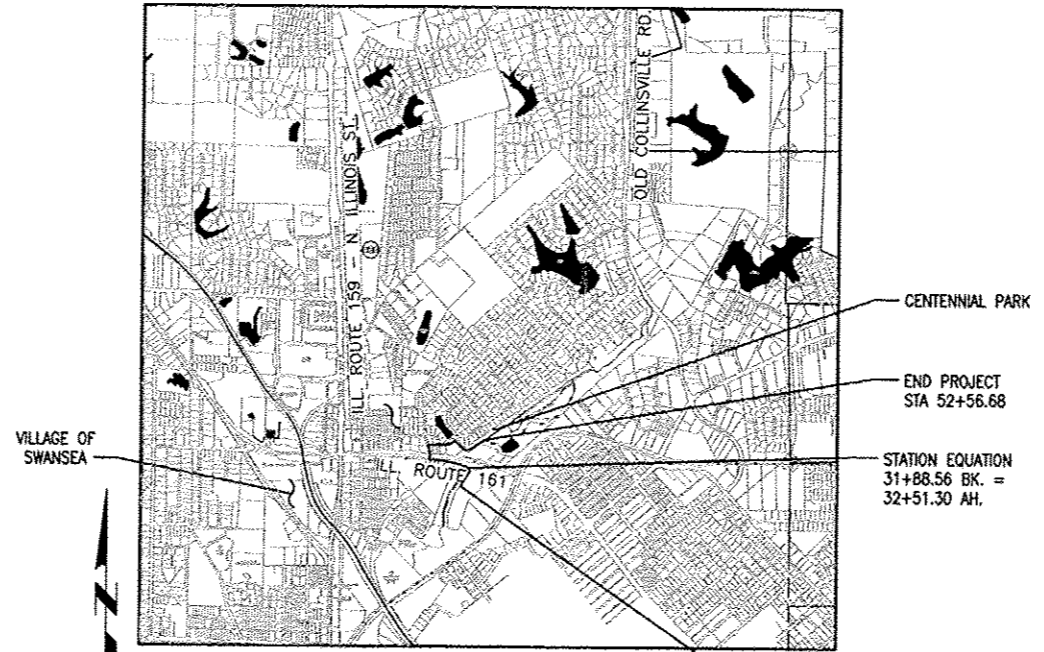
SCALES

PLAN	1 INCH = 20 FEET
PROFILE HORIZ.	1 INCH = 20 FEET
PROFILE VERT.	1 INCH = 5 FEET
CROSS SECTIONS	1 INCH = 5 FEET HORIZ.
	1 INCH = 5 FEET VERT.



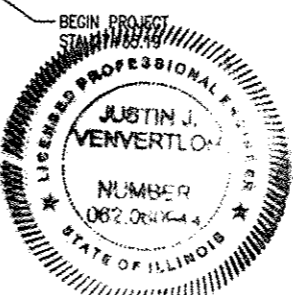
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



**LOCATION MAP**

NET LENGTH PROJECT = 2,458.75' (0.466 MILES)



STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

APPROVED: *James B. Rauckman* Nov. 27, 2012  
 JAMES B. RAUCKMAN, VILLAGE PRESIDENT

PASSED: *[Signature]* Dec. 12, 2012  
 DISTRICT 8 ENGINEER  
 LOCAL ROADS AND STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW: *[Signature]* Dec. 12, 2012  
 DEPUTY DIRECTOR OF HIGHWAYS  
 REGION 5 ENGINEER

JUSTIN J. VENVERTLOH, P.E.  
 LICENSE NO. 062-060944

DATE: 11-27-2012  
 EXPIRES 11-30-2013

PREPARED BY:  
 THOUVENOT, WADE & MOERCHEN, INC.

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

Signature: \_\_\_\_\_  
 Signature Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_

STATEMENT OF RESPONSIBILITY  
 I hereby confirm that the document herein to be authenticated by my seal is restricted to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be utilized for any other part of the architectural, engineering or survey project.

TITLE: COVER SHEET

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION

DRAWN BY: JUV	SHEET
DESIGNED BY: JUV	1
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JUV	PROJECT DESCRIPTION
PROJECT NUMBER: 119100072A	

SECTION	CONTRACT NO. 97500	COUNTY
FE-0000(15B)		ST. CLAIR
FEDERAL AID PROJECT		ILLINOIS

THOUVENOT, WADE & MOERCHEN, INC.  
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stlois@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	154-001220
PROFESSIONAL ENGINEERING CORP.	02-050370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	040-000028
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

Signature: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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I hereby confirm that the document herein to be authenticated by my seal is restricted to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any other part of the architectural, engineering or survey project.

TITLE: GENERAL NOTES AND SUMMARY OF QUANTITIES

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JVV	SHEET
DESIGNED BY: JVV	2
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JVV	PROJECT DESCRIPTION
PROJECT NUMBER: 119100072A	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW <input type="checkbox"/> ISSUED FOR BIDDING <input type="checkbox"/> ISSUED FOR CONSTRUCTION RECORD DRAWING	

**SUMMARY OF QUANTITIES**

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	ROADWAY QUANTITY	ELECTRICAL QUANTITY
20100110	TREE REMOVAL (6-15 UNITS DIAMETER)	UNIT	34	34	0
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	86	86	0
20100500	TREE REMOVAL, ACRES	ACRE	0.22	0.22	0
20200100	EARTH EXCAVATION	CU YD	385	385	0
20400800	FURNISHED EXCAVATION	CU YD	2,298	2,298	0
20800150	TRENCH BACKFILL	CU YD	26	26	0
25000100	SEEDING, CLASS 1	ACRE	0.83	0.83	0
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	75	75	0
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	75	75	0
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	75	75	0
25100115	MULCH, METHOD 2	ACRE	0.83	0.83	0
25100630	EROSION CONTROL BLANKET	SQ YD	792	792	0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	83	83	0
28000400	PERIMETER EROSION BARRIER	FOOT	1,840	1,840	0
28000500	INLET AND PIPE PROTECTION	EACH	5	5	0
28100705	STONE DUMPED RIPRAP, CLASS A3	SQ YD	13	13	0
28100707	STONE DUMPED RIPRAP, CLASS A4	SQ YD	225	225	0
28200200	FILTER FABRIC	SQ YD	238	238	0
35100500	AGGREGATE BASE COURSE, TYPE A 6"	SQ YD	225	225	0
35100700	AGGREGATE BASE COURSE, TYPE A 8"	SQ YD	2,023	2,023	0
40200500	AGGREGATE SURFACE COURSE, TYPE A, 6"	SQ YD	97	97	0
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	57	57	0
40600100	BITUMINOUS MATERIALS PRIME COAT	GALLON	836	836	0
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	175	175	0
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	23	23	0
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	115	115	0
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	2,282	2,282	0
42400800	DETECTABLE WARNINGS	SQ FT	157	157	0
44000100	PAVEMENT REMOVAL	SQ YD	40	40	0
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	60	60	0
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	154	154	0
44000600	SIDEWALK REMOVAL	SQ FT	131	131	0
542D0217	PIPE CULVERT, CLASS D, TYPE 1 12"	FOOT	29	29	0
54213447	END SECTIONS, 12"	EACH	2	2	0
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	1	0
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	44	44	0
550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	194	194	0
55100500	STORM SEWER REMOVAL 12"	FOOT	35	35	0
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	0
60238800	INLET TYPE A	EACH	1	1	0
60500060	REMOVING INLETS	EACH	1	1	0
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	120	120	0
60609800	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.18	FOOT	34	34	0
67100100	MOBILIZATION	L SUM	1	1	0
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1	0
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701802	L SUM	1	1	0
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1	0
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1	0
* 72000100	SIGN PANEL - TYPE 1	SQ FT	176	176	0
* 73000100	WOOD SIGN SUPPORT	FOOT	461.5	461.5	0
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	917	917	0
* 78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	368	368	0
* 80300100	LOCATING UNDERGROUND CABLE	FOOT	200	0	200
* 81028200	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	12	0	12
* 81028320	CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	36	0	36
* 81028340	CONDUIT IN TRENCH, 1 1/2" DIA., PVC	FOOT	12	0	12
* 81028360	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	15	0	15
* 81028370	CONDUIT IN TRENCH, 3" DIA., PVC	FOOT	15	0	15
* 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	236	0	236
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	250	0	250
* 87502680	TRAFFIC SIGNAL POST, ALUMINUM 14 FT.	EACH	3	0	3
* 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	9	0	9
* 87900200	DRILL EXISTING HANDHOLE	EACH	2	0	2
* 88102810	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED	EACH	3	0	3
* 88800100	PEDESTRIAN PUSH-BUTTON	EACH	3	0	3
* 89502200	MODIFY EXISTING CONTROLLER	EACH	1	0	1
* 89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	321	0	321
* Z0000402	BOLLARDS	EACH	16	0	16
Z0013302	SEGMENTAL CONCRETE BLOCK WALL	SQ. FT.	609	609	0
Z0077900	WOOD POST AND RAIL FENCE	FOOT	136	136	0
X0322508	PEDESTRIAN TRUSS SUPERSTRUCTURE	SQ. FT.	1,080	1,080	0
X0350805	FOLD DOWN BOLLARDS	EACH	8	8	0
X0358300	REMOVE AND RELAY PRECAST FLARED END SECTION	EACH	1	1	0
X6026050	SANITARY MANHOLES TO BE ADJUSTED	EACH	1	1	0
* X6640298	CHAIN LINK FENCE (SPECIAL)	FOOT	89	89	0
* X6640300	CHAIN LINK FENCE REMOVAL	FOOT	14	14	0

\* SPECIALTY ITEM  
040293CR GN SQ.dwg 3/15/2013 2:22pm

GENERAL NOTES

- IF ASH TREES ARE REMOVED ON THE PROJECT, THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH MEASURES SPECIFIED BY THE ILLINOIS DEPARTMENT OF AGRICULTURE (IDOA) TO PREVENT THE SPREAD OF THE EMERALD ASH BORER. THE IDOA INFORMATION FOR ASH TREE REMOVAL CAN BE FOUND ON THE IDOA WEBSITE AT WWW.AGR.STATE.IL.US/EAB
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL EROSION AND DISPLACED SEDIMENT DOES NOT MIGRATE OFF SITE. IF UNEXPECTED EROSION OR SEDIMENTATION OCCURS, OR IF THE EROSION PLAN STRUCTURES BECOME DAMAGED, THE CONTRACTOR SHALL PROVIDE SUFFICIENT MEASURES TO REPAIR, REPLACE, OR INSTALL EROSION CONTROL STRUCTURES TO INSURE OFF-SITE DAMAGE DOES NOT OCCUR. ANY SEDIMENT OR EROSION DAMAGE WHICH OCCURS OFF-SITE SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- ALL TRAFFIC CONTROL INCLUDING BUT NOT LIMITED TO, WORK ZONE, TEMPORARY, AND PERMANENT, SHALL BE FURNISHED, INSTALLED, MAINTAINED, RELOCATED, AND/OR REMOVED IN ACCORDANCE WITH SECTION 701 OF THE LATEST EDITION OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- TRAFFIC CONTROL SIGNS SHALL BE 48" FLUORESCENT ORANGE.
- THE OWNER AND ENGINEER HAVE NOT UNDERTAKEN SUBSURFACE EXPLORATORY INVESTIGATIONS TO CONFIRM OR VERIFY THE UTILITIES SHOWN ON THESE DOCUMENTS. THEREFORE THEIR EXACT LOCATION, SIZE AND FUNCTION MUST BE CONSIDERED APPROXIMATE AND MUST BE FIELD CONFIRMED BY THE CONTRACTOR.
- THE ENGINEER AND OWNER FURTHER DO NOT WARRANT THAT ALL UTILITIES HAVE BEEN ILLUSTRATED ON THESE DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING J.U.L.I.E. FOR FIELD VERIFICATION OF ALL UTILITIES AT THIS LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE AREA LOCATED WITHIN THE CONSTRUCTION LIMIT LINES, AS SHOWN PER PLANS. ANY AREA DISTURBED BEYOND THESE LIMITS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- ALL EARTH SURFACES DISTURBED BY CONSTRUCTION OR AS DIRECTED BY THE ENGINEER SHALL BE SEEDED. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PAY ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

0.83	ACRES	SEEDING CL 1
0.83	ACRES	MULCH METHOD 2
75	POUNDS	NITROGEN FERTILIZER NUTRIENT
75	POUNDS	PHOSPHORUS FERTILIZER NUTRIENT
75	POUNDS	POTASSIUM FERTILIZER NUTRIENT

NUTRIENTS SHALL BE APPLIED AT 90 POUNDS PER ACRE.
- SEEDING DATES:

FALL:	AUG. 1 - NOV. 15
SPRING:	MARCH 1 - JUNE 1
NO SEEDING SHALL BE DONE BETWEEN	
JUNE 2 - JULY 31	
NOV. 16 - FEB. 28	
- ALL SIGNS SHALL BE A MINIMUM OF 4' OR A MAXIMUM OF 5' FROM THE BOTTOM OF THE SIGN TO THE NEAREST EDGE OF PAVEMENT.
- THOUVENOT WADE & MOERCHEN, INC. WILL PROVIDE ALL REFERENCE POINTS OR BENCHMARKS FOR THE CONTRACTOR TO CONSTRUCT THE IMPROVEMENTS AS PROPOSED HEREIN.

COMMITMENTS

NO COMMITMENTS

SANITARY SEWER VILLAGE OF SWANSEA (618) 234-0044	WATER ILLINOIS AMERICAN WATER COMPANY (618) 239-3258	TELEPHONE AT&T (618) 346-7292
ELECTRIC/GAS AMEREN IP (618) 236-4362	CABLE TELEVISION CHARTER COMMUNICATIONS (618) 236-9619	

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

FBI ROUTE	SECTION	COUNTY
	4E-6008(156)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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720 OLIVE ST., SUITE 200 A  
ST. LOUIS, MISSOURI 63101  
TEL (314) 241-6300  
stlouis@twm-inc.com

STATION	OFFSET (FEET)	TREE REM 6-15 UNIT	TREE REM. OVER 15 UNIT	TREE REM.
				ACRE
30+31.70				0.21
40+37.31	2.55	RT	42	
40+79.81	6.54	LT	44	
49+04.05	3.28	RT	10	
48+14.24	16.14	RT	12	
48+25.14	6.34	RT	12	
51+50.00	5	RT		0.01
TOTAL				0.22

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE, SHORTAGE(-)
	CU YD	CU YD	CU YD	CU YD
27+35.19 TO 52+56.68	385.00	288.75	2,586.75	-2,298.00
TOTAL				-2,298.00

LOCATION (STATION)	AGG BASE COURSE T-A, 6" (SQ YD)	AGG SURFACE COURSE T-A, 6" (SQ YD)	BITUMINOUS MATERIAL PRIME COAT (GALLON)	INCIDENTAL HOT-MIX ASPHALT SURFACING (TON)	DRIVEWAY PAVEMENT REMOVAL (SQ YD)	PCC DRIVEWAY PAVT. - 6" (SQ YD)	AGGREGATE FOR TEMPORARY ACCESS (TON)
33+60.01	L/R	16.95	96.78			16.95	
35+39.96	L	7.97		2.99	0.89		8.86
36+11.10	L/R	9.15		3.43	1.02	15.73	23.23
37+46.07	L/R			67.04	20.02	15.35	22.08
37+72.35	L/R	178.77				14.96	28.41
39+69.80	L/R	12.21		4.58	1.37	13.80	22.96
TOTAL				225	97	60	115

LOCATION	INLET AND PIPE PROTECTION	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET	RR-3 RIP RAP	RR-4 RIP RAP	FILTER FABRIC			
							EACH	FEET	SQ YD.
29+74.00	34.56 L	30+63.63	33.80 L						
29+76.93	36.00 R	30+62.46	30.91 R						
30+29.56	37.79 L	30+99.74	16.91 L						
30+29.56	27.10 R	31+00.01	21.62 R						
30+62.32	0.00	30+90.96	0.00		155	155			
31+22.46	0.00	31+62.79	19.21 R						
31+22.46	0.00	35+31.39	9.90 L						
31+27.00	0.00	31+53.85	0.00		70	70			
31+40.02	15.19 L								
31+53.49	4.00 L	33+10.04	4.00 L			250			
34+14.59	23.94 L								
35+51.28	8.91 L	35+98.79	11.52 L			48			
39+54.87	6.30 R	41+06.54	4.48 R			140			
40+91.59	9.76 L								
41+39.94	7.10 R	42+63.14	7.02 R			138			
43+13.04	14.79 R	48+92.97	15.87 R			568			
48+00.00	14.00 L								
48+00.00	14.00 R								
48+00.00	11.00 R	48+00.00	25.00 R			7.00			
48+00.00	10.00 L	48+00.00	20.00 L			5.54			
49+18.01	18.25 R	52+56.68	4.00 R						
TOTAL				5	1,840	792	43	225	238

STATION	TO	STATION	AGGREGATE BASE COURSE, TYPE-A 6"	BITUMINOUS MATERIALS PRIME COAT	HMA SURFACE COURSE MIX C, N70
			SQ YD	GALLON	TON
27+35.19	TO	30+54.64	354.06	133.11	31.80
31+61.19	TO	36+01.66	483.41	183.53	37.61
36+20.81	TO	37+36.72	128.79	48.30	11.54
37+54.68	TO	37+62.87	9.68	3.71	0.80
37+80.60	TO	38+59.58	87.76	32.91	7.86
39+54.87	TO	39+62.08	9.01	3.38	0.72
39+76.45	TO	40+09.84	125.77	47.16	11.27
41+48.27	TO	42+77.24	146.53	54.95	13.04
46+17.97	TO	46+86.85	299.75	112.41	26.77
49+23.97	TO	52+56.68	370.80	139.05	33.13
TOTAL			2,023	768	176

FROM STATION	OFFSET (FEET)	TO STATION	OFFSET (FEET)	SIZE AND LENGTH OF PIPE (FEET)				TRENCH BACKFILL (CU YD)
				12" PIPE CULVERT CL. D. TY 1	12" CL. A. TY 1	18" CL. A. TY 2	12" REMOVAL	
31+41.71	16.27 L	33+19.03	18.74 L			100		
33+19.03	18.74 L	34+12.43	23.94 L			94		
40+52.74	10.35 R	40+91.59	9.76 L		44			23.00
46+52.74	10.35 R	40+85.18	0.00 L					35
48+00.00	18.00 R	48+00.00	14.00 L	29				3.00
TOTAL				29	44	194	35	26

LOCATION	TO	LOCATION	CHAIN LINK FENCE (SPECIAL)	CHAIN LINK FENCE (REMOVAL)	SEGMENTAL CONCRETE BLOCK WALL	WOOD POST AND RAIL FENCE	PIPE BOLLARD	REMOVABLE PIPE BOLLARD
			FEET	FEET	SQ. FT.	FEET	EACH	EACH
29+29.27	7.00	L TO 30+51.48	7.00	L				47
29+97.27	7.00	R TO 30+61.88	7.00	R				62
31+65.57	7.00	L TO 32+58.37	7.00	L				27
36+25.82	5.06	R TO 37+29.71	5.00	R				205.83
37+87.16	4.75	L TO 38+59.58	4.75	L				231.04
38+60.09								2
39+60.66								2
40+89.64								2
41+50.27								2
42+69.99								2
43+31.72	18.13	R TO 46+36.60	6.00	R				89
45+33.20	20.42	R TO 46+04.64	14.21	R				172.49
46+21.97								2
48+53.64	6.05	R TO 48+54.22	6.00	L				14
48+82.72								2
49+32.52								2
TOTAL			89	14	609	136	16	8

STRUCTURE LABEL	STATION	OFFSET (FEET)	MH TYPE-A TYPE-1 FRAME AND LID	INLET TYPE A W/ SLVAGED TYPE 8 GRATE	REMOVING INLETS	18" FES	REMOVE EX 18" FES AND REINSTALL
EXFES	31+41.71	16.27 L					1
STRUCTURE #1	33+19.03	18.74 L	1				
FES #1	34+12.43	23.94 L				1	
EX STRUCTURE	40+52.74	10.35 R			1		
STRUCTURE #2	40+91.59	9.76 L		1			
TOTAL							

ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	82-003370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005802
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

**STATEMENT OF RESPONSIBILITY**  
I hereby confirm that the document herein to be authenticated by my seal is restricted to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be utilized for any other part of the architectural, engineering or survey project.

**SCHEDULE OF QUANTITIES**

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY

REV	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JVV SHEET 3 OF 46  
DESIGNED BY: JVV  
CHECKED BY: MJK  
APPROVED BY: JVV  
PROJECT NUMBER: 19100072A  
ISSUED FOR REVIEW  ISSUED FOR BIDDING  ISSUED FOR CONSTRUCTION RECORD DRAWING

FBI ROUTE	SECTION	COUNTY
TE-0000(100)	ST CLAIR	ILLINOIS
CONTRACT NO. 97500		
FEDERAL AID PROJECT		

THOUVENOT,  
WADE &  
MOERCHEN, INC.  
ENGINEERS & SURVEYORS



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4940 OLD COLLINSVILLE RD.  
SWANSEA, ILLINOIS 62226  
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FAX (618) 624-6688  
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WATERLOO OFFICE  
113 SOUTH MAIN STREET  
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720 OLIVE ST., SUITE 200 A  
ST. LOUIS, MISSOURI 63101  
TEL (314) 241-6300  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	104-001220
PROFESSIONAL ENGINEERING CORP.	62-053370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-055022
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000366

Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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**CURB, GUTTER, & SIDEWALK SCHEDULE**

LOCATION			TO LOCATION			COMB. CONC. CURB & GUTTER REMOVAL	SIDEWALK REMOVAL	COMB. CONC. CURB & GUTTER TYPE B5.24	COMB. CONC. CURB & GUTTER TYPE M6.16	PORTLAND CEMENT CONCRETE SIDEWALK, 4"	DETECTABLE WARNINGS
STATION	OFFSET	LR	STATION	OFFSET	LR	FEET	SQ FT	FEET	FEET	SQ FT	SQ FT
33+39.35	13.78	R	TO 33+81.25	12.49	R	42		42		52	14
38+58.58	0.00		TO 38+65.40	0.00							
38+65.90	5.00	L	TO 38+65.90	5.00	R	10		10			
39+32.41	20.05	L	TO 39+46.55	5.12	R	30		30			
39+39.57	20.08	L	TO 39+54.67	0.50			75			221	34
39+33.73	63.77	R	TO 39+40.85	45.39	R	11		11			
39+37.08	49.28	R	TO 39+36.75	60.57	R		56			81	17
40+89.64	0.00		TO 41+08.08	0.00				14		173	14
41+08.92	7.00	R	TO 41+09.59	7.00	L	14		14			
41+39.89	6.52	L	TO 41+40.11	6.48	R	13		13			
41+40.27	0.00		TO 41+46.27	0.00						54	14
42+77.24	0.00		TO 42+83.24	0.00						54	14
42+83.21	6.50	R	TO 42+83.28	6.50	L	13			13		
43+13.37	13.87	R	TO 43+20.12	5.09	R	12		12			
43+15.72	8.67	R	TO 46+16.32	4.00	R					1,497	8
46+03.76	3.97	R	TO 46+12.21	4.50	L	9		9			
46+11.97	0.00		TO 46+17.97	0.00						54	14
48+86.85	0.00		TO 48+92.85	0.00						48	14
49+17.96	0.00		TO 49+23.97	0.00						48	14
<b>TOTAL</b>						<b>164</b>	<b>131</b>	<b>120</b>	<b>34</b>	<b>2,282</b>	<b>157</b>

**PAINT PAVEMENT MARKINGS**

STATION	LOCATION	4" SOLID YELLOW LINE	4" YELLOW DASHED 3'-9" SKIP DASH	12" SOLID WHITE LINE
		FEET	FEET	FEET
27+35.19	TO 28+97.27		66	
29+97.27	TO 30+62.32	65		
31+53.49	TO 31+88.56	36		
31+88.56	TO 36+11.24		90	
36+11.24	TO 38+65.09	264		
38+65.23	L TO 39+34.59			66
38+68.23	R TO 39+34.12			66
39+34.12	R TO 39+33.77			45
39+40.83	R TO 38+26.57			40
39+50.76	TO 39+70.75	30		
39+70.75	TO 40+79.05		24	
40+79.05	TO 41+00.00	30		
41+03.07				4
41+11.38	TO 41+37.67			68
41+42.78	TO 41+60.29	33		
41+49.05				4
41+60.29	TO 42+60.03		21	
42+60.03	TO 42+77.23	30		
42+74.90				4
46+14.47	TO 46+31.97	30		
46+20.04				4
46+31.97	TO 48+72.75		60	
48+72.75	TO 48+90.35	30		
48+85.15				4
48+92.85	TO 49+17.96			59
49+22.40	TO 49+42.63	30		
49+27.47				4
49+42.63	TO 52+56.88		78	
<b>TOTAL</b>		<b>678</b>	<b>339</b>	<b>368</b>

**SIGNAGE SCHEDULE**

STATION	OFFSET		SIGN TYPE	SIZE (BY)		SIGN PANEL TYPE 1 (SQ FT)	WOOD SIGN SUPPORT (FOOT)	
				L	W			
28+72.75	7.75	RT	W1-2	ADVANCE CURVE WARNING	18	18	2.25	10.50
32+62.43	7.75	LT	W7-5	ADVANCE DOWNGRADE WARNING	18	18	2.25	10.50
33+79.63	8.00	LT	W1-2	ADVANCE CURVE WARNING	18	18	2.25	10.50
34+10.67	7.75	RT	R9-6	YIELD TO PEDESTRIANS	12	18	1.50	11.00
34+14.96	8.00	LT	R5-3	NO MOTOR VEHICLES	24	24	4.00	10.50
35+06.54	8.00	RT	R-SP	"RIDERS SHALL DISMOUNT AND WALK"	24	24	4.00	11.00
38+55.59	6.24	LT	D11-1	"BIKE ROUTE"	24	18	3.00	10.50
38+55.59	6.24	LT	M7-1	DIRECTIONAL ARROW	12	9	0.75	
38+55.53	4.00	LT	D11-1	"BIKE ROUTE"	24	18	3.00	10.50
38+55.53	4.00	LT	M7-1	DIRECTIONAL ARROW	12	9	0.75	
38+60.34	7.05	LT	R9-6	"USE PED SIGNAL"	12	18	1.50	
38+60.43	7.05	LT	R10-4B	"PUSH BUTTON FOR WALK"	9	12	0.75	
39+42.31	9.75	LT	R9-6	"USE PED SIGNAL"	12	18	1.50	
39+42.31	9.75	LT	R10-4B	"PUSH BUTTON FOR WALK"	9	12	0.75	
39+61.20	8.68	RT	D11-1	"BIKE ROUTE"	24	18	3.00	10.50
40+00.00	42.00	RT	W11-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
40+00.00	42.00	RT	W16-1	"SHARE THE ROAD"	18	24	3.00	
40+50.00	8.00	RT	R-SP	"RIDERS SHALL DISMOUNT AND WALK"	24	24	4.00	11.00
40+89.07	8.50	RT	R1-1	STOP	18	18	2.25	10.50
40+97.73	8.00	LT	D11-1	"BIKE ROUTE"	24	18	3.00	10.50
40+97.73	8.00	LT	M7-1	DIRECTIONAL ARROW	12	9	0.75	
41+00.09	8.00	LT	D11-1	"BIKE ROUTE"	24	18	3.00	10.50
41+00.09	8.00	LT	M7-1	DIRECTIONAL ARROW	12	9	0.75	
JOSEPHINE 100' NORTH			W11-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
JOSEPHINE 100' NORTH			W16-1	"SHARE THE ROAD"	18	24	3.00	
41+04.62	8.00	LT	W1-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
41+04.62	8.00	LT	W16-7P	DIAGONAL ARROW	12	24	2.00	
41+42.83	8.00	RT	W1-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
41+42.83	8.00	RT	W16-7P	DIAGONAL ARROW	12	24	2.00	
41+45.54	8.00	LT	R11-1	STOP	18	18	2.25	10.50
41+45.54	8.00	RT	R5-3	NO MOTOR VEHICLES	24	24	4.00	10.50
41+71.39	8.00	LT	R-SP	"RIDERS SHALL DISMOUNT AND WALK"	24	24	4.00	11.00
42+79.09	8.00	RT	R1-1	STOP	18	18	2.25	10.50
42+79.09	8.00	LT	R5-3	NO MOTOR VEHICLES	24	24	4.00	10.50
42+80.81	10.00	LT	W1-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
42+80.81	10.00	LT	W16-7P	DIAGONAL ARROW	12	24	2.00	
42+80.81	100.00	LT	W11-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
42+80.81	100.00	LT	W16-1	"SHARE THE ROAD"	18	24	3.00	
43+16.12	15.00	RT	W1-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
43+16.12	15.00	RT	W16-7P	DIAGONAL ARROW	12	24	2.00	
43+16.12	100.00	RT	W11-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
43+16.12	100.00	RT	W16-1	"SHARE THE ROAD"	18	24	3.00	
43+30.88	5.00	RT	D11-1	"BIKE ROUTE"	24	18	3.00	10.50
43+56.57	28.00	LT	R5-1B	"WRONG WAY"	18	12	1.50	11.00
43+56.57	28.00	LT	R9-3C	"RIDE WITH TRAFFIC"	12	12	1.00	
45+08.06	8.00	RT	W11-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
45+08.06	8.00	RT	W16-1	"SHARE THE ROAD"	18	24	3.00	
45+59.17	6.00	RT	R5-1B	"WRONG WAY"	18	12	1.50	11.00
45+59.17	6.00	RT	R9-3C	"RIDE WITH TRAFFIC"	12	12	1.00	
46+00.00	5.00	RT	W1-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
46+00.00	5.00	RT	W16-7P	DIAGONAL ARROW	12	24	2.00	
46+05.98	30.00	LT	D11-1	"BIKE ROUTE"	24	18	3.00	11.00
46+05.98	30.00	LT	M7-1	DIRECTIONAL ARROW	9	12	0.75	
46+08.06	30.00	LT	W1-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
46+08.06	30.00	LT	W16-7P	DIAGONAL ARROW	12	24	2.00	
CASTLE DR 100' EAST			W11-1	BICYCLE WARNING SIGN	24	24	4.00	11.00
CASTLE DR 100' EAST			W16-1	"SHARE THE ROAD"	18	24	3.00	
46+15.61	15.00	LT	D11-1	"BIKE ROUTE"	24	18	3.00	11.00
46+15.61	15.00	LT	M7-1	DIRECTIONAL ARROW	9	12	0.75	
46+19.24	8.00	LT	R1-1	STOP	18	18	2.25	10.50
46+24.92	8.00	RT	R5-3	NO MOTOR VEHICLES	18	18	2.25	10.50
46+88.47	9.40	LT	R5-3	NO MOTOR VEHICLES	24	24	4.00	10.50
46+88.64	9.40	RT	R11-1	STOP	18	18	2.25	10.50
49+21.51	9.40	LT	R1-1	STOP	18	18	2.25	10.50
49+21.69	8.00	RT	R5-3	NO MOTOR VEHICLES	24	24	4.00	10.50
50+14.95	7.75	LT	W1-1	ADVANCE CURVE WARNING	18	18	2.25	10.50
52+00.00	7.50	RT	R9-6	"YIELD TO PEDESTRIANS"	12	18	1.50	10.50
<b>TOTAL</b>						<b>176</b>	<b>461.6</b>	

**SCHEDULE OF QUANTITIES**

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY

REV	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JVV	SHEET 4
DESIGNED BY: JVV	OF 46 SHEETS
CHECKED BY: MJK	PROJECT DESCRIPTION
APPROVED BY: JVV	PROJECT NUMBER M19100072A

ISSUED FOR REVIEW  ISSUED FOR BIDDING  
 ISSUED FOR CONSTR RECORD DRAWING

FBI ROUTE	SECTION	COUNTY
	TE-0000(156)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS • SURVEYORS • PLANNERS



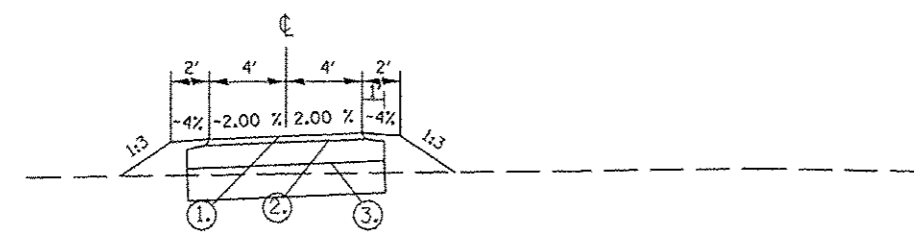
- CORPORATE OFFICE**  
4940 OLD COLLINSVILLE RD.  
SWANSEA, ILLINOIS 62226  
TEL (618) 624-4488  
FAX (618) 624-6888  
corp@twm-inc.com
- WATERLOO OFFICE**  
113 SOUTH MAIN STREET  
WATERLOO, ILLINOIS 62298  
TEL (618) 939-5050  
FAX (618) 939-3938  
waterloo@twm-inc.com
- EDWARDSVILLE OFFICE**  
600 COUNTRY CLUB VIEW, SUITE 1  
EDWARDSVILLE, ILLINOIS 62025  
TEL (618) 656-4040  
FAX (618) 656-4343  
edwardsville@twm-inc.com
- ST. LOUIS OFFICE**  
720 OLIVE ST., SUITE 200 A  
ST. LOUIS, MISSOURI 63101  
TEL (314) 241-6300  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-00120
PROFESSIONAL ENGINEERING CORP.	62-033370
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ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

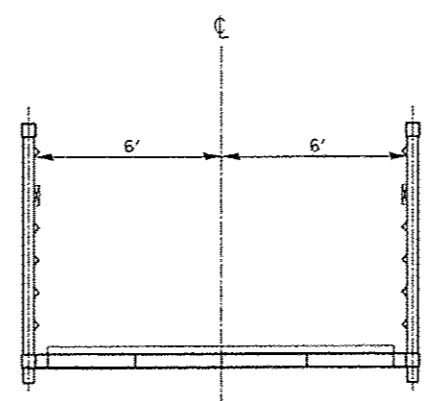
SEAL

Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

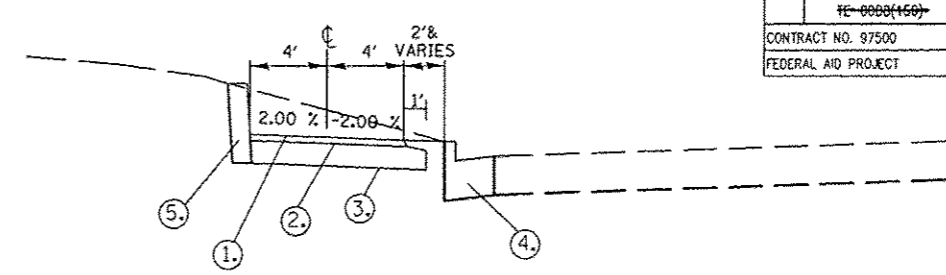
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I hereby confirm that the document herein to be authorized by my seal is replicated to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be utilized for any other part of the architectural, engineering or survey project.



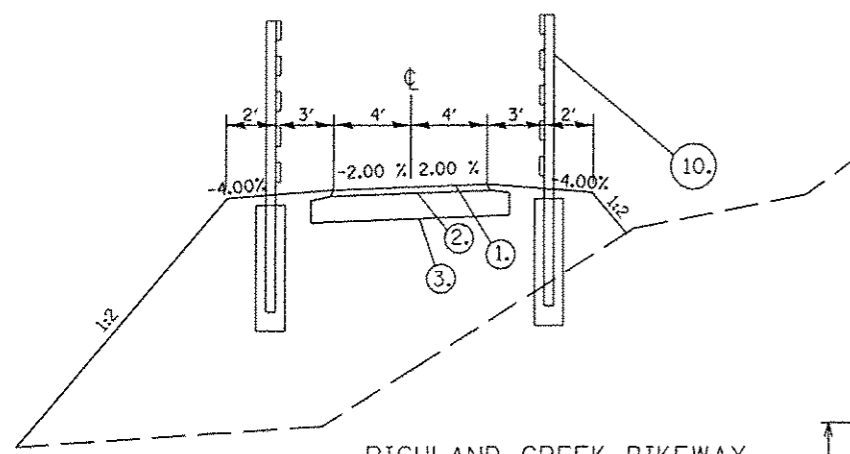
**RICHLAND CREEK BIKEWAY**  
STA. 27+35.19 TO STA. 29+97.27  
STA. 46+10.02 TO STA. 48+92.85



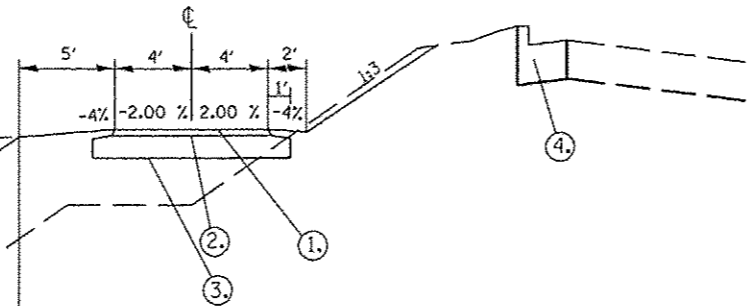
**RICHLAND CREEK BIKEWAY**  
STA. 30+62.82 TO STA. 31+53.99



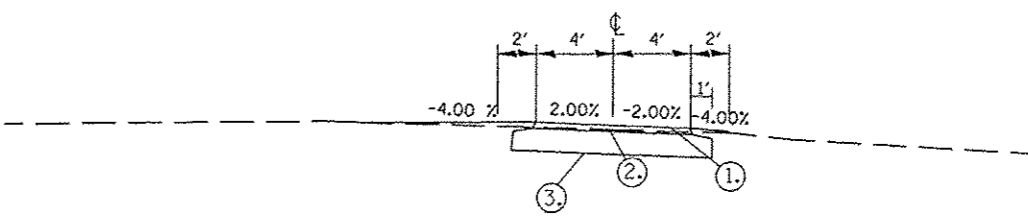
**RICHLAND CREEK BIKEWAY**  
STA. 36+22.68 TO STA. 37+35.12  
STA. 37+87.09 TO STA. 38+59.58



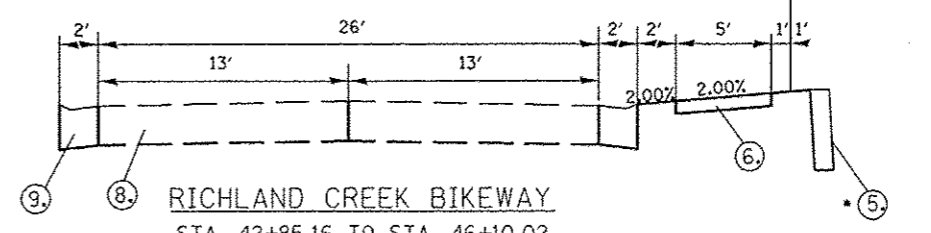
**RICHLAND CREEK BIKEWAY**  
STA. 29+97.27 TO STA. 30+62.82  
STA. 31+53.99 TO STA. 31+65.84



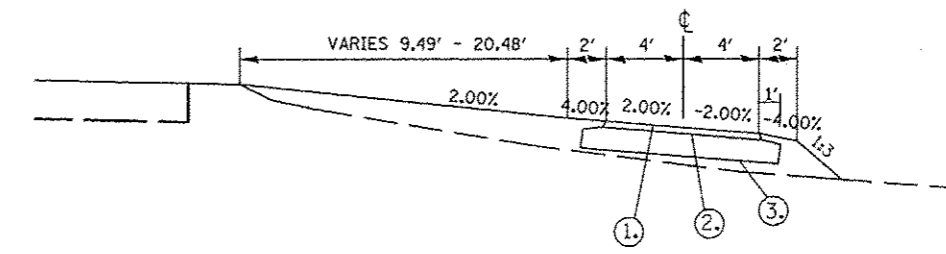
**RICHLAND CREEK BIKEWAY**  
STA. 32+58.37 TO STA. 33+50.00



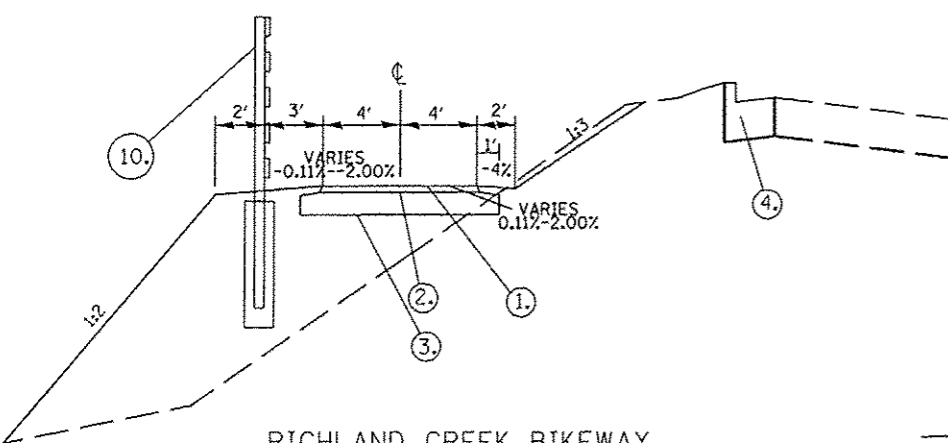
**RICHLAND CREEK BIKEWAY**  
STA. 41+37.69 TO STA. 42+85.16



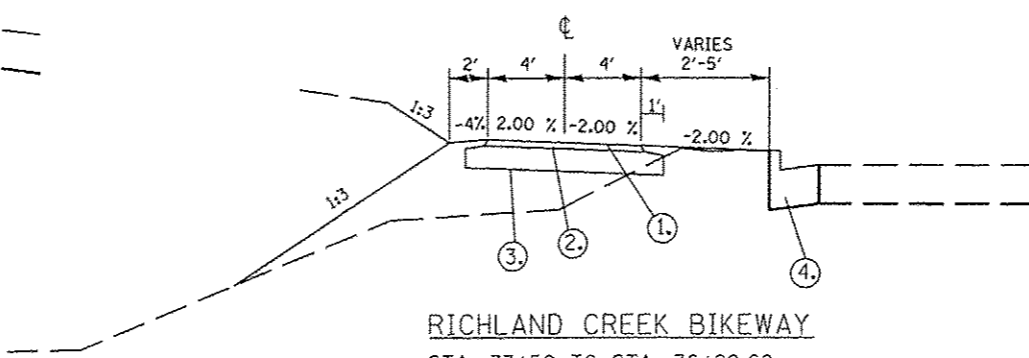
**RICHLAND CREEK BIKEWAY**  
STA. 42+85.16 TO STA. 46+10.02  
\*RETAINING WALL STA. 45+33.20 TO STA. 46+04.64



**RICHLAND CREEK BIKEWAY**  
STA. 49+17.95 TO STA. 52+56.68



**RICHLAND CREEK BIKEWAY**  
STA. 31+65+84 TO STA. 32+58.37



**RICHLAND CREEK BIKEWAY**  
STA. 33+50 TO STA. 36+22.68  
STA. 37+35.12 TO STA. 37+87.09  
STA. 38+59.58 TO STA. 38+68.23  
STA. 39+41.97 TO STA. 41+11.09

**LEGEND**

- ① HMA SURFACE COURSE, MIX "C", N70-2"
- ② AGGREGATE BASE COURSE, TYPE A- 8"
- ③ COMPACTED EARTH SUBGRADE
- ④ EXISTING B-6.24 CONCRETE CURB AND GUTTER
- ⑤ SEGMENTAL CONCRETE BLOCK WALL
- ⑥ PCC SIDEWALK, 4"
- ⑦ CHAIN LINK FENCE (SPECIAL)
- ⑧ EXISTING OIL AND CHIP PAVEMENT
- ⑨ EXISTING MOUNTABLE CURB AND GUTTER
- ⑩ WOOD POST AND RAIL FENCE

TITLE: SECTION 10-00032-00-8T  
TYPICAL SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY, IL

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JVV	SHEET
DESIGNED BY: JVV	<b>5</b>
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JVV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
ISSUED FOR REVIEW	ISSUED FOR BIDDING
ISSUED FOR CONSTR.	RECORD DRAWING

P:\00072A\00032\00-8T\PHASE 2B\Plan\00032-00-8T-TYP SECTIONS.dwg, Plotted By: jmoerchen

FAU ROUTE	SECTION	COUNTY
TE-0088(106)	TE-0088(106)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS • SURVEYORS • PLANNERS



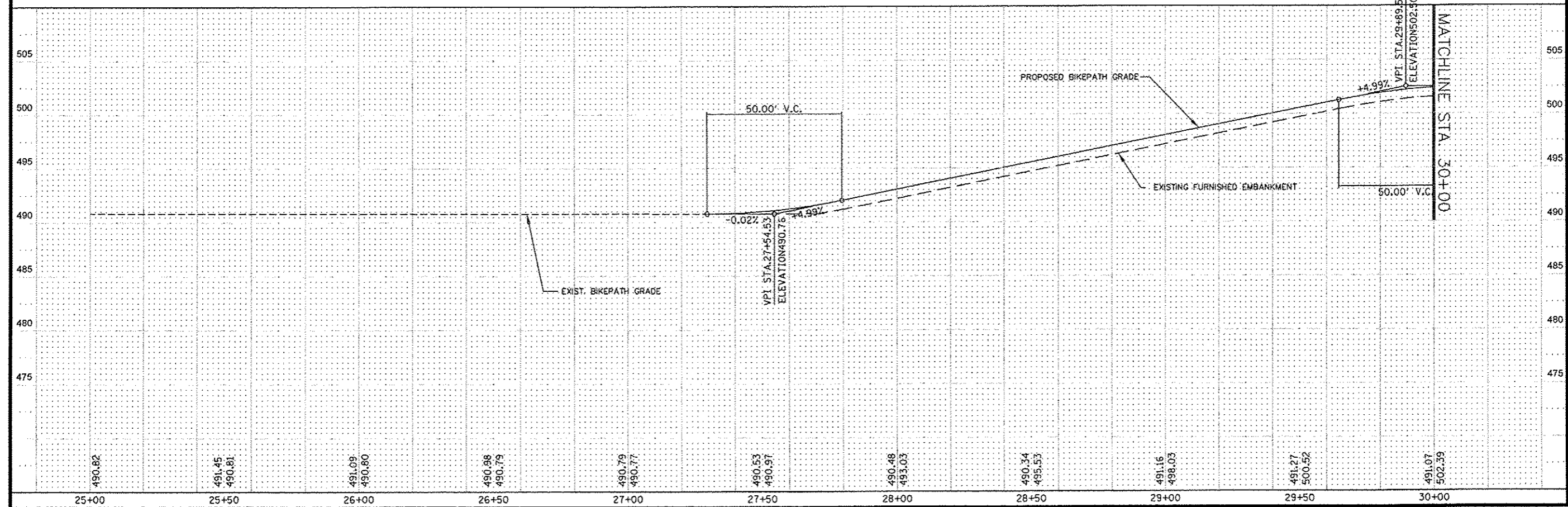
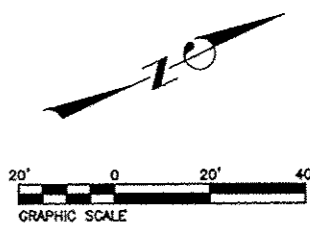
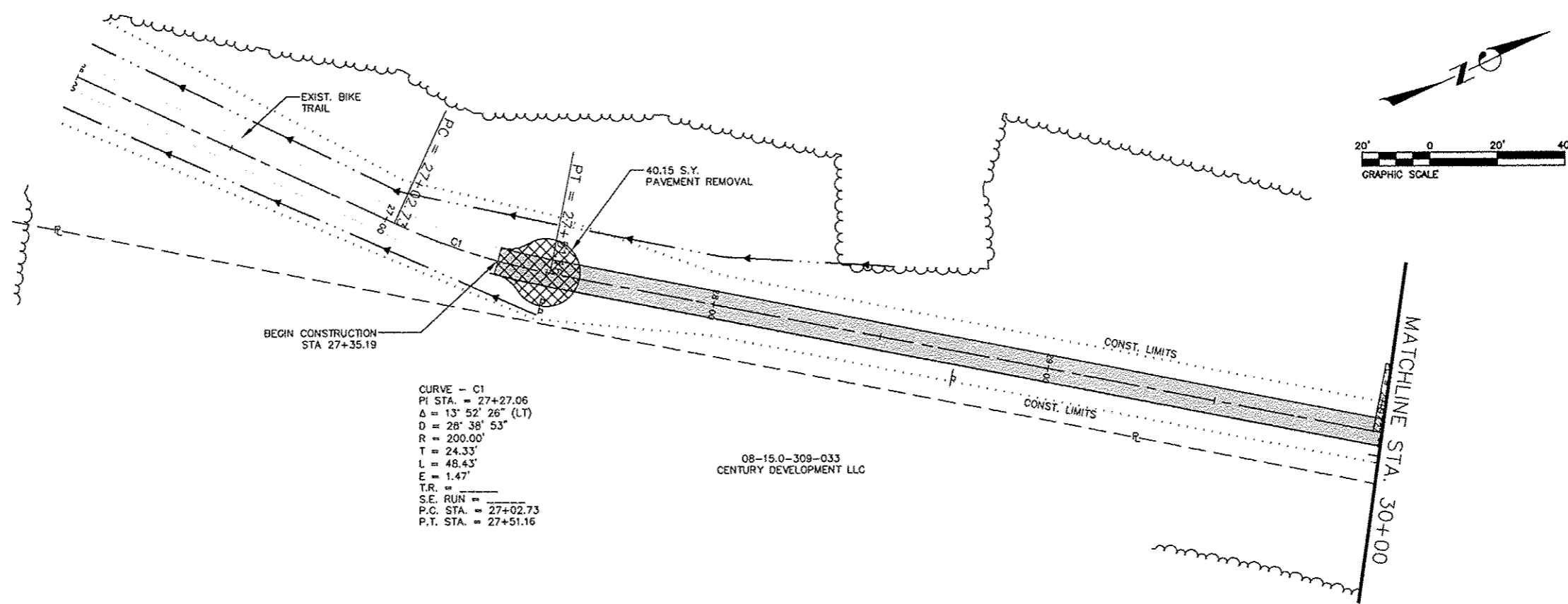
- CORPORATE OFFICE**  
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FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	194-001220
PROFESSIONAL ENGINEERING CORP.	62-055370
PROFESSIONAL STRUCTURAL ENGR. CORP.	61-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000246

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Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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**PLAN AND PROFILE**  
STA. 27+35.19 TO STA. 30+00  
SECTION 10-00032-00-BT

**PROJECT:** RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY, IL

REV	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	6
CHECKED BY: MJK	
APPROVED BY: JJV	
PROJECT NUMBER: M19100072A	OF 46 SHEETS
<input type="checkbox"/> ISSUED FOR REVIEW	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

FED. ROUTE	SECTION	COUNTY
	TE-0008(156)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS SURVEYORS



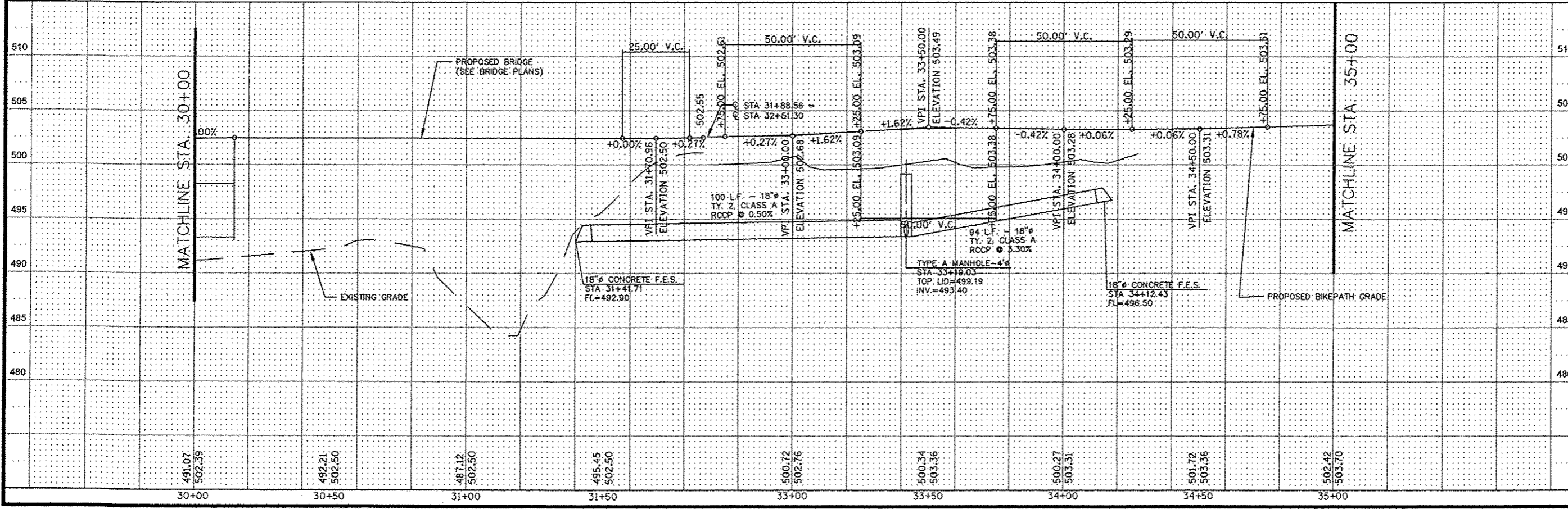
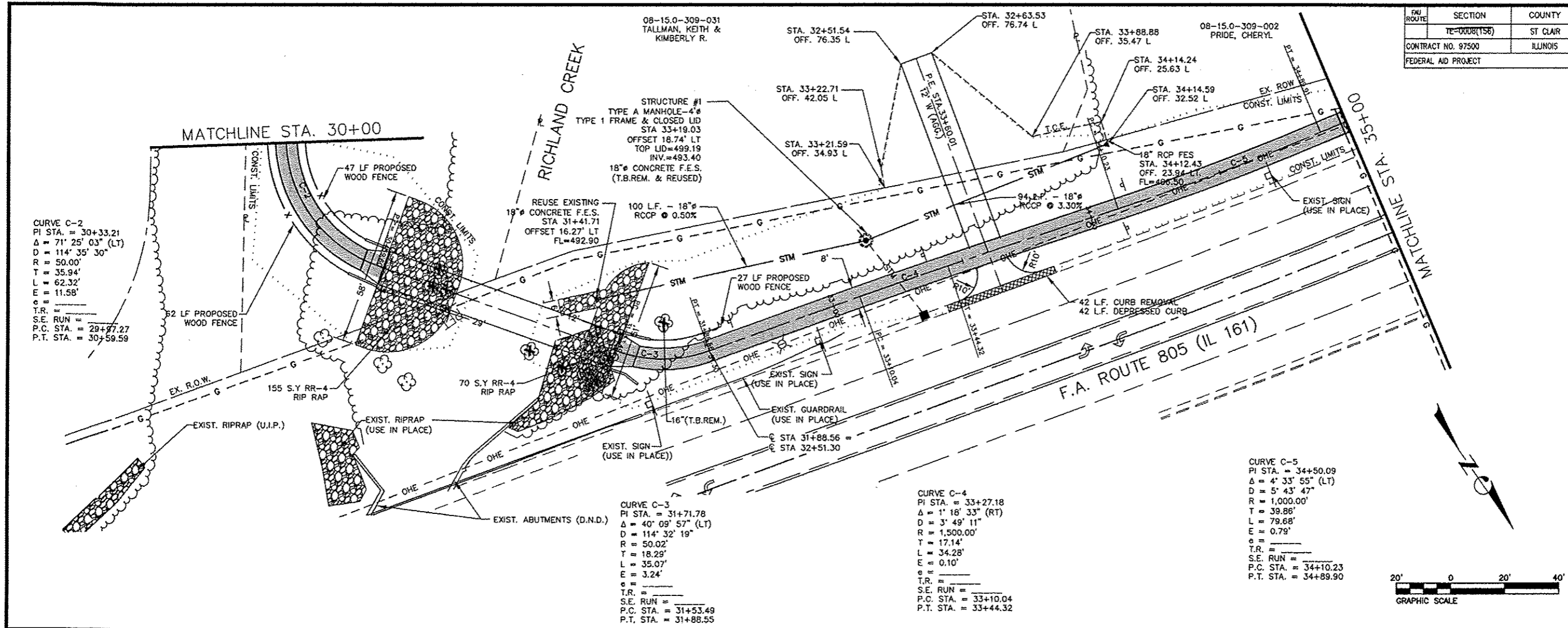
- CORPORATE OFFICE**  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-065002
ILLINOIS PROF. LAND SURVEYING CORP.	048-000028
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000246

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**PLAN AND PROFILE**  
STA. 30+00 - STA. 35+00

**PROJECT:**  
RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, IL

REV	DATE	DESCRIPTION
1		
2		
3		

DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	7
CHECKED BY: MJK	
APPROVED BY: JJV	
PROJECT NUMBER: M19100072A	OF 46

ISSUED FOR REVIEW  ISSUED FOR BIDDING   
ISSUED FOR CONSTRUCTION RECORD DRAWING

FAU ROUTE	SECTION	COUNTY
	1E-0008(166)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS SURVEYORS PLANNERS



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TEL (618) 939-5050  
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waterloo@twm-inc.com

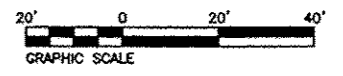
**ST. LOUIS OFFICE**  
1001 CRAIG ROAD, SUITE 260  
ST. LOUIS, MISSOURI 63146  
TEL (314) 236-5052  
FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	61-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	61-002902
ILLINOIS PROF. LAND SURVEYING CORP.	046-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

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Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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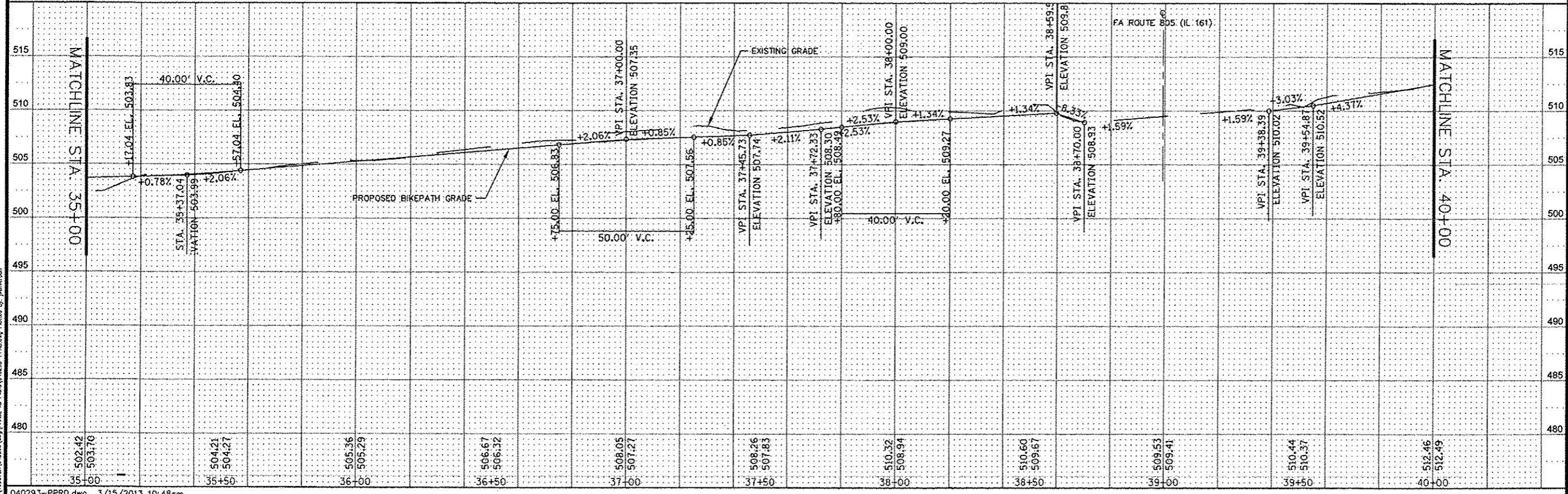
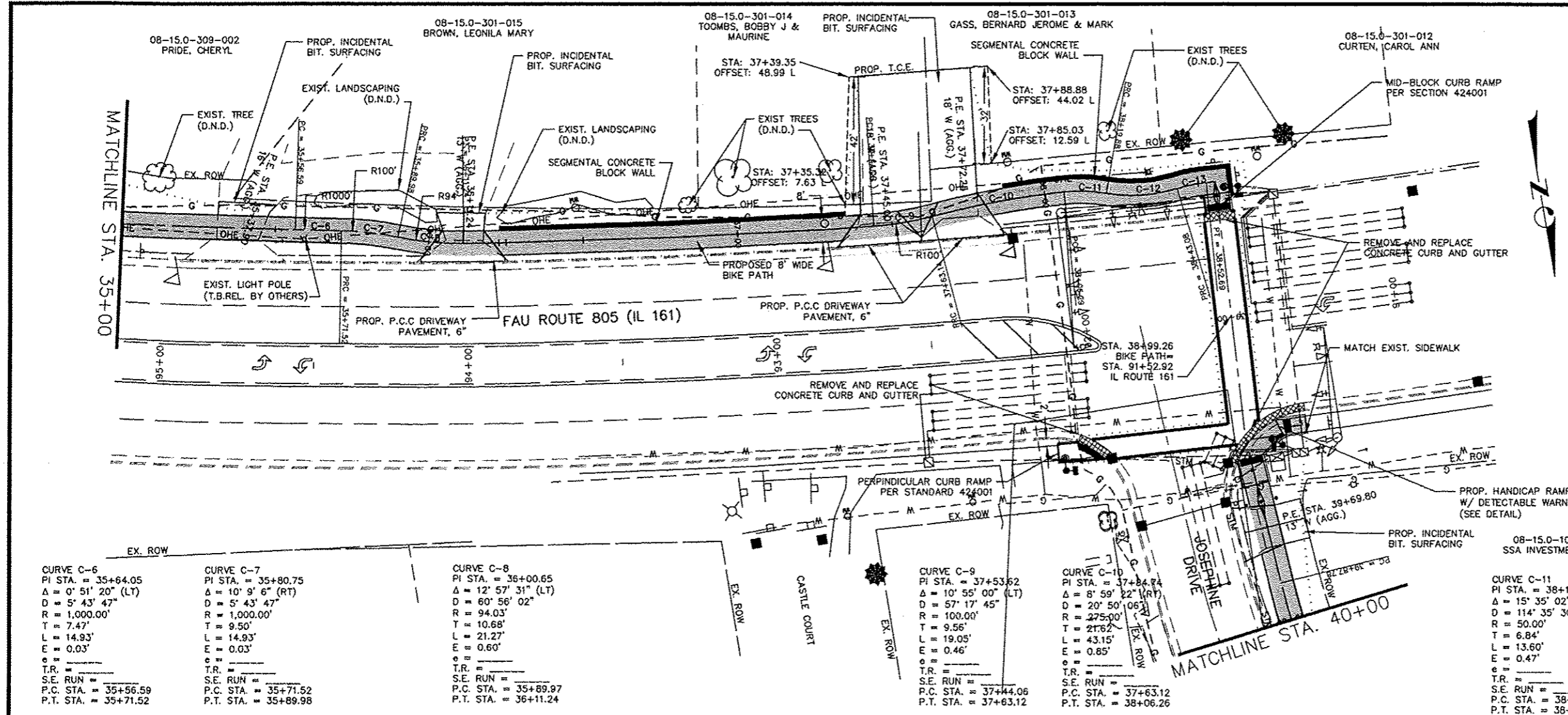


NOTE: SEE TRAFFIC SIGNAL PLANS FOR PROPOSED PEDESTRIAN SIGNALS AND EQUIPMENT TO BE RETROFITTED TO THE EXISTING TRAFFIC SIGNALS.

CURVE C-12  
PI STA. = 38+31.67  
Δ = 26° 34' 30" (LT)  
D = 114' 35' 30"  
R = 50.00'  
T = 11.81'  
L = 23.19'  
E = 1.38'  
C = \_\_\_\_\_  
T.R. = \_\_\_\_\_  
S.E. RUN = \_\_\_\_\_  
P.C. STA. = 38+19.86  
P.T. STA. = 38+43.05

CURVE C-11  
PI STA. = 38+13.11  
Δ = 15° 35' 02" (RT)  
D = 114' 35' 30"  
R = 50.00'  
T = 6.84'  
L = 13.60'  
E = 0.47'  
C = \_\_\_\_\_  
T.R. = \_\_\_\_\_  
S.E. RUN = \_\_\_\_\_  
P.C. STA. = 38+06.26  
P.T. STA. = 38+19.86

CURVE C-13  
PI STA. = 38+47.88  
Δ = 11° 01' 14" (RT)  
D = 114' 35' 30"  
R = 50.00'  
T = 4.82'  
L = 9.62'  
E = 0.23'  
C = \_\_\_\_\_  
T.R. = \_\_\_\_\_  
S.E. RUN = \_\_\_\_\_  
P.C. STA. = 38+43.05  
P.T. STA. = 38+52.67



**PLAN AND PROFILE**  
STA. 35+00 - STA. 40+00

PROJECT: **RICHLAND CREEK BIKE TRAIL**  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, IL

REV	DATE	DESCRIPTION
1		
2		
3		

DRAWN BY: JVV	SHEET: 8
DESIGNED BY: JVV	
CHECKED BY: MJK	
APPROVED BY: JVV	
PROJECT NUMBER: M19100072A	OF 46 SHEETS
ISSUED FOR REVIEW □ ISSUED FOR BIDDING □ ISSUED FOR CONSTRUCTION RECORD DRAWING	

P:\00072A\00072A.dwg Phase 2B Plans\040293-PPRD.dwg Printed By: jmmw053



FBI ROUTE	SECTION	COUNTY
	FE-0008(156)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS • SURVEYORS • PLANNERS



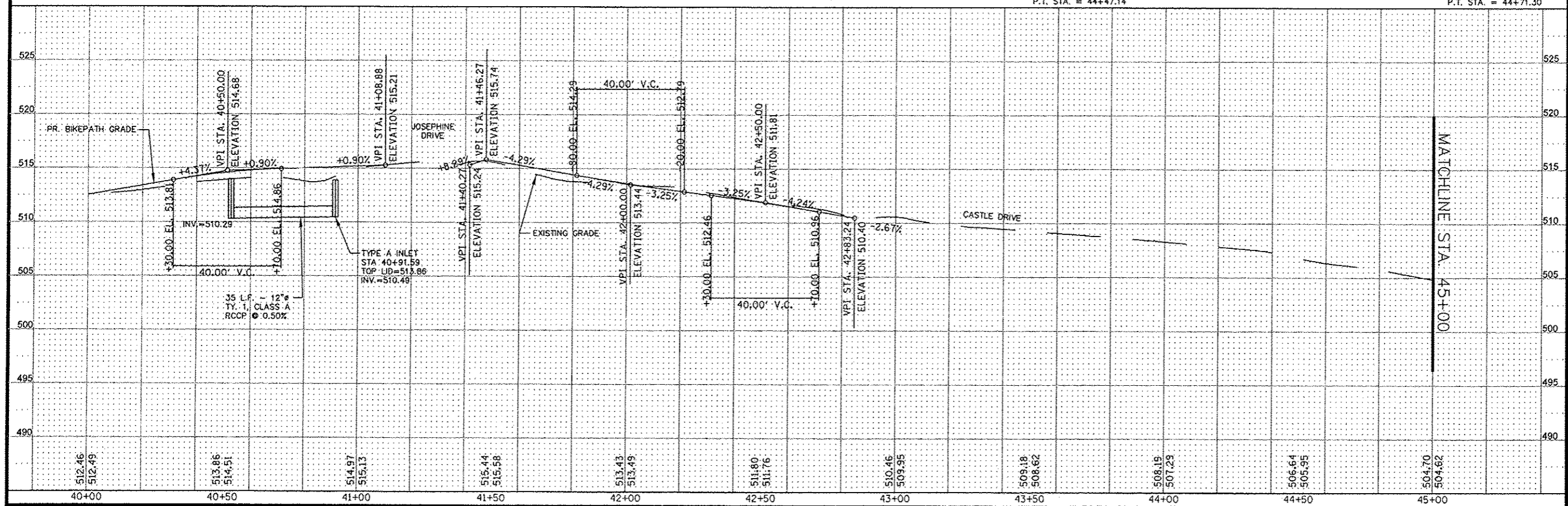
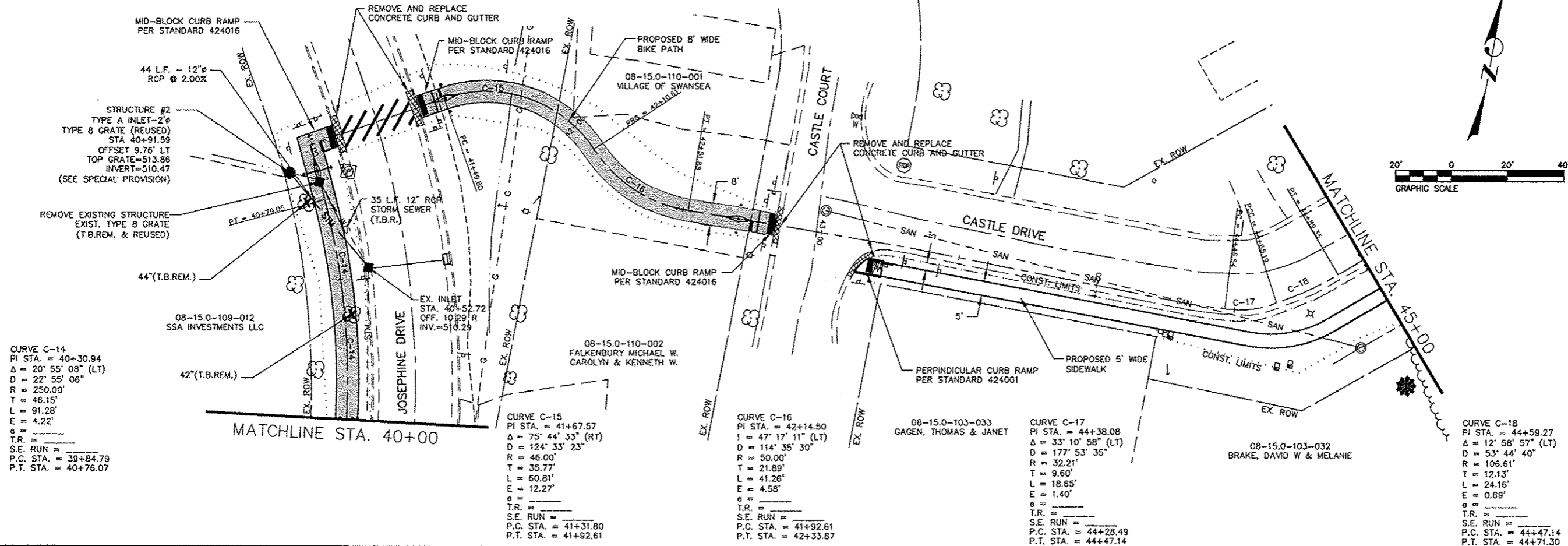
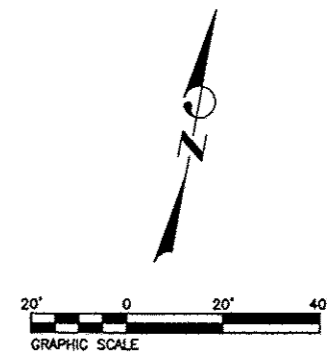
- CORPORATE OFFICE**  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005002
ILLINOIS PROF. LAND SURVEYING CORP.	948-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

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Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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**PLAN AND PROFILE**  
STA. 40+00 - STA. 45+00  
SECTION 10-00032-00-BT

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, IL

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	9
CHECKED BY: MJR	
APPROVED BY: JJV	
PROJECT NUMBER: 10-00032-00-BT	OF 46 SHEETS
<input type="checkbox"/> ISSUED FOR PERMITS	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



FAU ROUTE	SECTION	COUNTY
	1E-0000(466)	ST. CLAIR
CONTRACT NO. 97500	ILLINOIS	
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
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**TWM**

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 waterloo@twm-inc.com

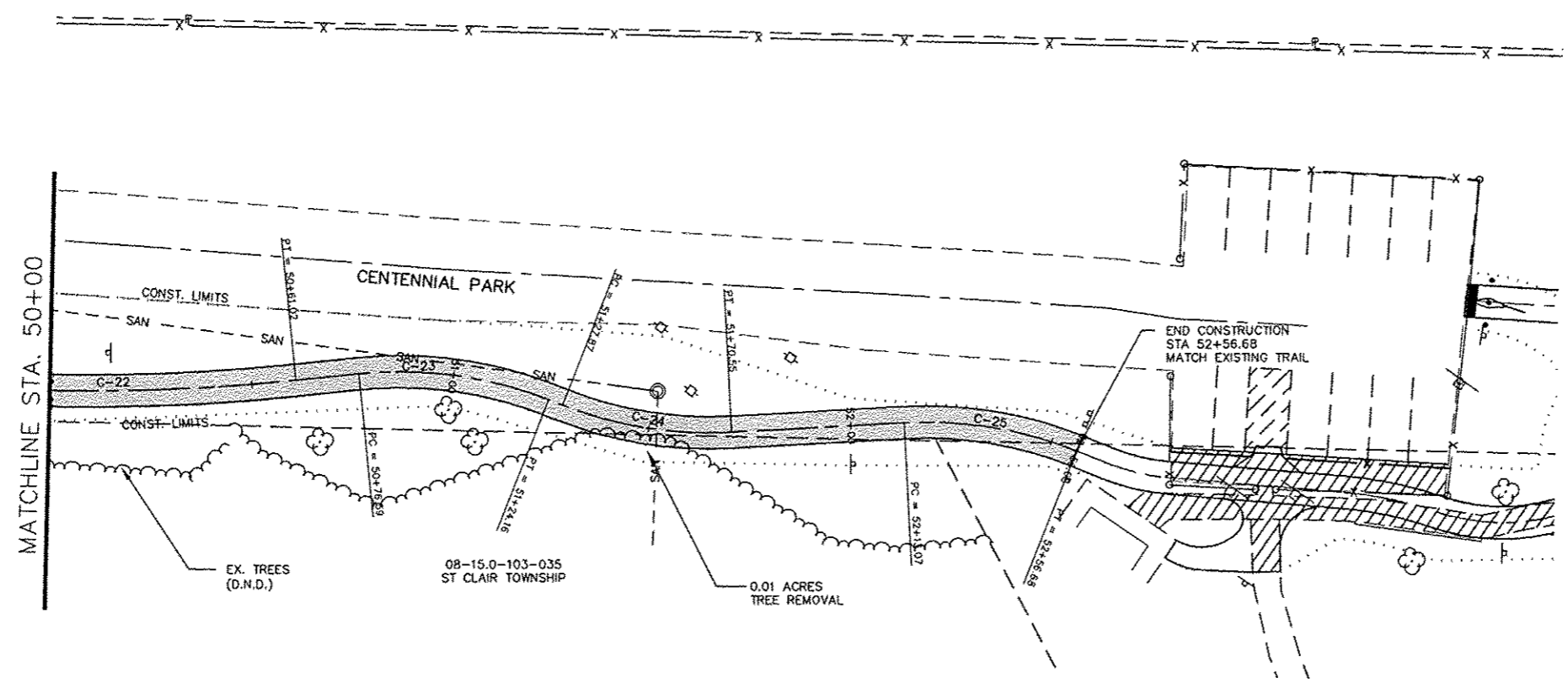
**ST. LOUIS OFFICE**  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	HC 001528
MISSOURI LAND SURVEYING CORP.	HC 000346

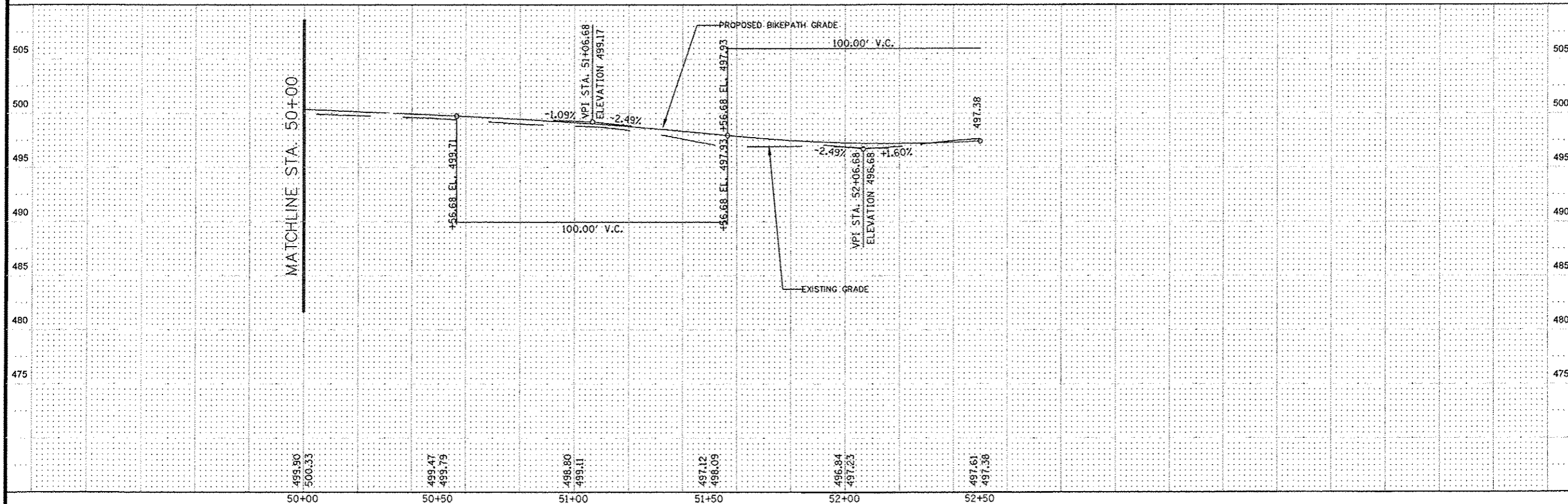
SEAL

Signature: \_\_\_\_\_  
 Signature Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_

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<b>CURVE C-22</b> PI STA. = 50+15.20 $\Delta = 10^\circ 31' 51''$ (LT) $D = 11^\circ 27' 33''$ $R = 500.00'$ $T = 46.08'$ $L = 91.90'$ $E = 2.12'$ $e =$ $T.R. =$ $S.E. RUN =$ $P.C. STA. = 49+69.12$ $P.T. STA. = 50+61.02$	<b>CURVE C-23</b> PI STA. = 51+00.83 $\Delta = 27^\circ 15' 26''$ (RT) $D = 57^\circ 17' 45''$ $R = 100.00'$ $T = 24.25'$ $L = 47.57'$ $E = 2.90'$ $e =$ $T.R. =$ $S.E. RUN =$ $P.C. STA. = 50+76.59$ $P.T. STA. = 51+24.16$	<b>CURVE C-24</b> PI STA. = 51+49.54 $\Delta = 24^\circ 27' 11''$ (LT) $D = 57^\circ 17' 45''$ $R = 100.00'$ $T = 21.67'$ $L = 42.68'$ $E = 2.32'$ $e =$ $T.R. =$ $S.E. RUN =$ $P.C. STA. = 51+27.87$ $P.T. STA. = 51+70.55$	<b>CURVE C-25</b> PI STA. = 52+35.23 $\Delta = 24^\circ 59' 14''$ (RT) $D = 57^\circ 17' 45''$ $R = 100.00'$ $T = 22.16'$ $L = 43.61'$ $E = 2.43'$ $e =$ $T.R. =$ $S.E. RUN =$ $P.C. STA. = 52+13.07$ $P.T. STA. = 52+56.68$
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**TITLE:**  
 PLAN AND PROFILE  
 STA. 50+00 - STA. 52+56.68  
 SECTION 10-00032-00-BT

**PROJECT:**  
 RICHLAND CREEK BIKE TRAIL  
 PHASE 2B  
 VILLAGE OF SWANSEA  
 ST. CLAIR COUNTY, IL

REV	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JUV	SHEET <b>11</b> OF 46 SHEETS
DESIGNED BY: JUV	
CHECKED BY: MJK	
APPROVED BY: JUV	
PROJECT NUMBER: 19100072A	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

SECTION	COUNTY
TE-0000(440)	ST. CLAIR
CONTRACT NO. 97500	
ILLINOIS	
FEDERAL AID PROJECT	

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS ♦ SURVEYORS ♦ PLANNERS



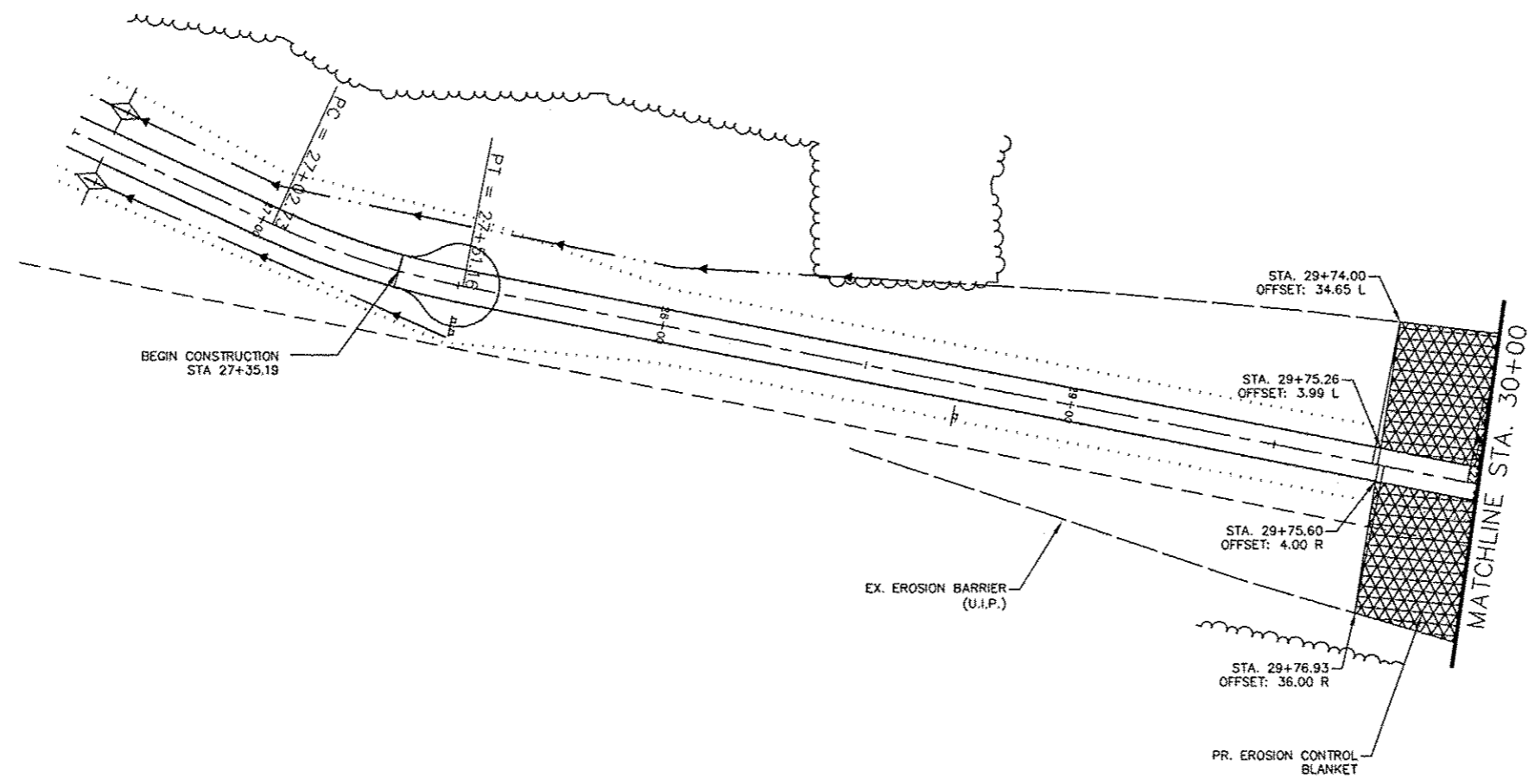
- CORPORATE OFFICE**  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

SEAL

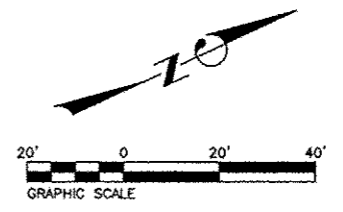
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Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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**TEMPORARY EROSION CONTROL ITEMS**

① INLET & PIPE PROTECTION	
② EROSION BARRIER	
③ EROSION CONTROL BLANKET	



TITLE: **EROSION CONTROL PLAN**  
**SECTION 10-00032-00-BT**

PROJECT: **RICHLAND CREEK BIKE TRAIL**  
**PHASE 2B**  
**VILLAGE OF SWANSEA**  
**ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JVV	SHEET <b>12</b> OF 46 SHEETS
DESIGNED BY: JVV	
CHECKED BY: MJK	PROJECT DESCRIPTION
APPROVED BY: JVV	PROJECT NUMBER: M19100072A
ISSUED FOR REVIEW <input checked="" type="checkbox"/> ISSUED FOR BIDDING <input type="checkbox"/>	
ISSUED FOR CONSTR. <input type="checkbox"/> RECORD DRAWING <input type="checkbox"/>	

P:\100072A\100072A\100072A-EROS.dwg Plotted By: jmm2012

FED. AID PROJECT	SECTION 1E-000B(156)	COUNTY ST. CLAIR ILLINOIS
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THOUVENOT,  
WADE &  
MOERCHEN, INC.  
ENGINEERS SURVEYORS

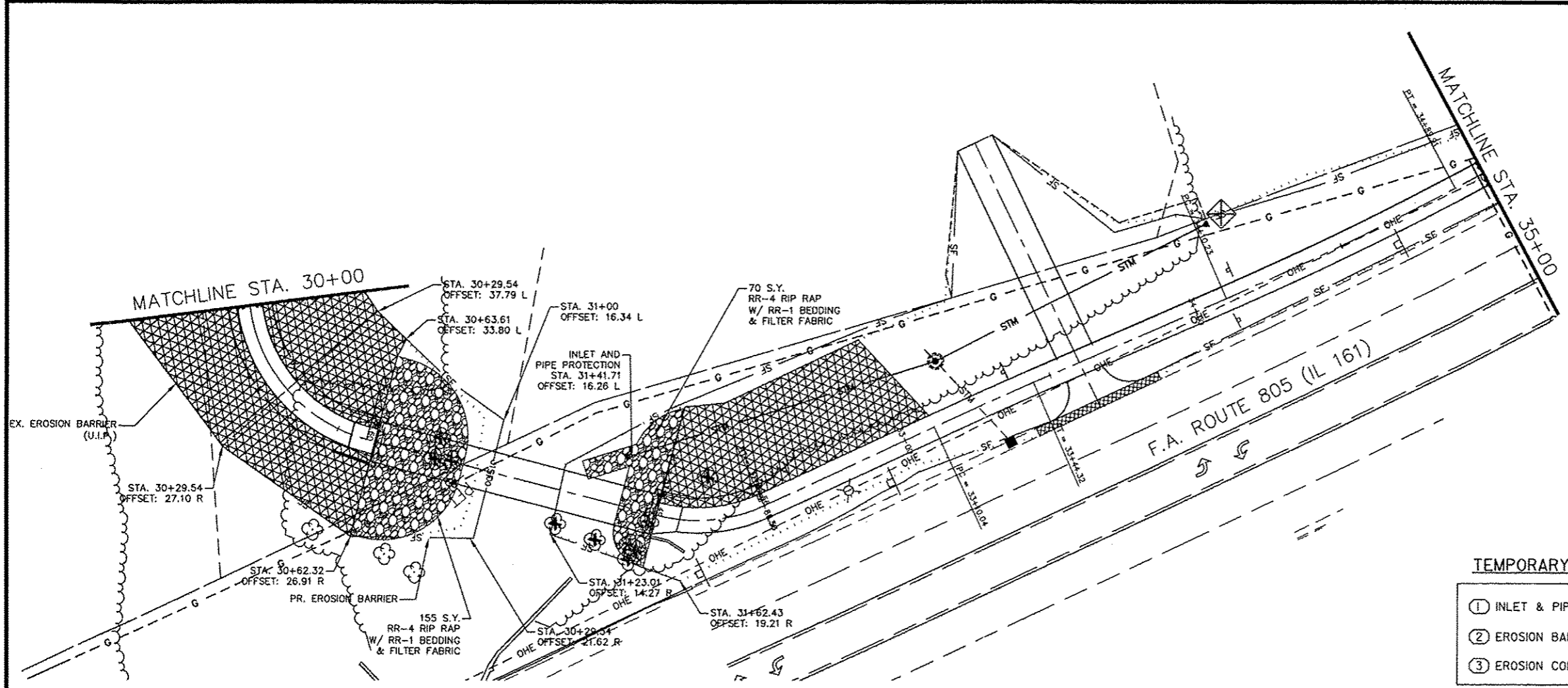
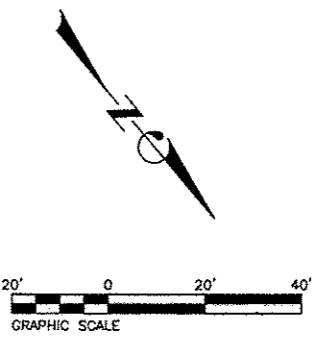


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ST. LOUIS, MISSOURI 63101  
TEL (314) 241-6300  
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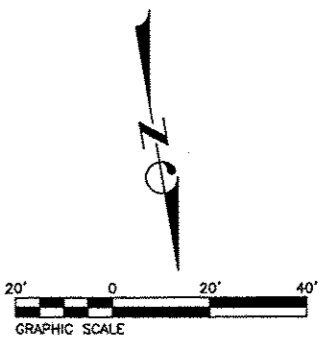
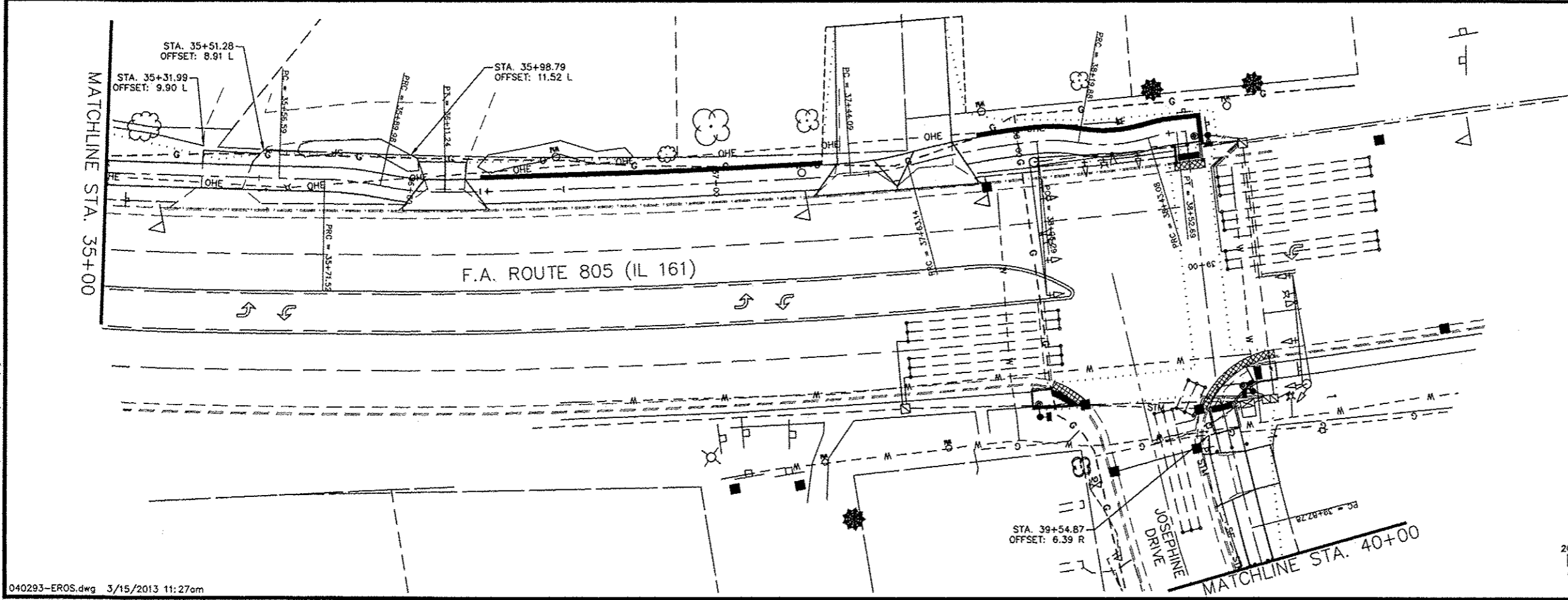
TEMPORARY EROSION CONTROL ITEMS

- ① INLET & PIPE PROTECTION
- ② EROSION BARRIER
- ③ EROSION CONTROL BLANKET

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001270
ILLINOIS PROFESSIONAL ENGINEERING CORP.	62-035370
ILLINOIS PROFESSIONAL STRUCTURAL ENGINEER CORP.	81-005202
ILLINOIS PROFESSIONAL LAND SURVEYING CORP.	048-000020
MISSOURI PROFESSIONAL ENGINEER CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

Signature: \_\_\_\_\_  
 Signature Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_

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TITLE:  
**EROSION CONTROL PLAN  
 STA. 30+00 TO STA. 40+00**

PROJECT:  
**RICHLAND CREEK BIKE TRAIL  
 PHASE 2B  
 VILLAGE OF SWANSEA  
 ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JUV	SHEET
DESIGNED BY: JUV	<b>13</b>
CHECKED BY: MJK	OF 46
APPROVED BY: JUV	PROJECT DESCRIPTION:
PROJECT NUMBER: 119100072A	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTRUCTION RECORD	<input type="checkbox"/> DRAWING

P:\10072A\10072A.dwg (Phase 2B) Plot: 10072A-EROS.dwg Plotted By: jmmw@tbc

FAU ROUTE	SECTION	COUNTY
10-00032-00-BT	10-00032-00-BT	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
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4940 OLD COLLINSVILLE RD.  
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corp@twm-inc.com

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TEL (618) 939-5050  
FAX (618) 939-3938  
waterloo@twm-inc.com

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TEL (618) 656-4040  
FAX (618) 656-4343  
edwardsville@twm-inc.com

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720 OLIVE ST., SUITE 200 A  
ST. LOUIS, MISSOURI 63101  
TEL (314) 241-6300  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	02-053770
PROFESSIONAL STRUCTURAL ENGR. CORP.	01-005002
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000345

Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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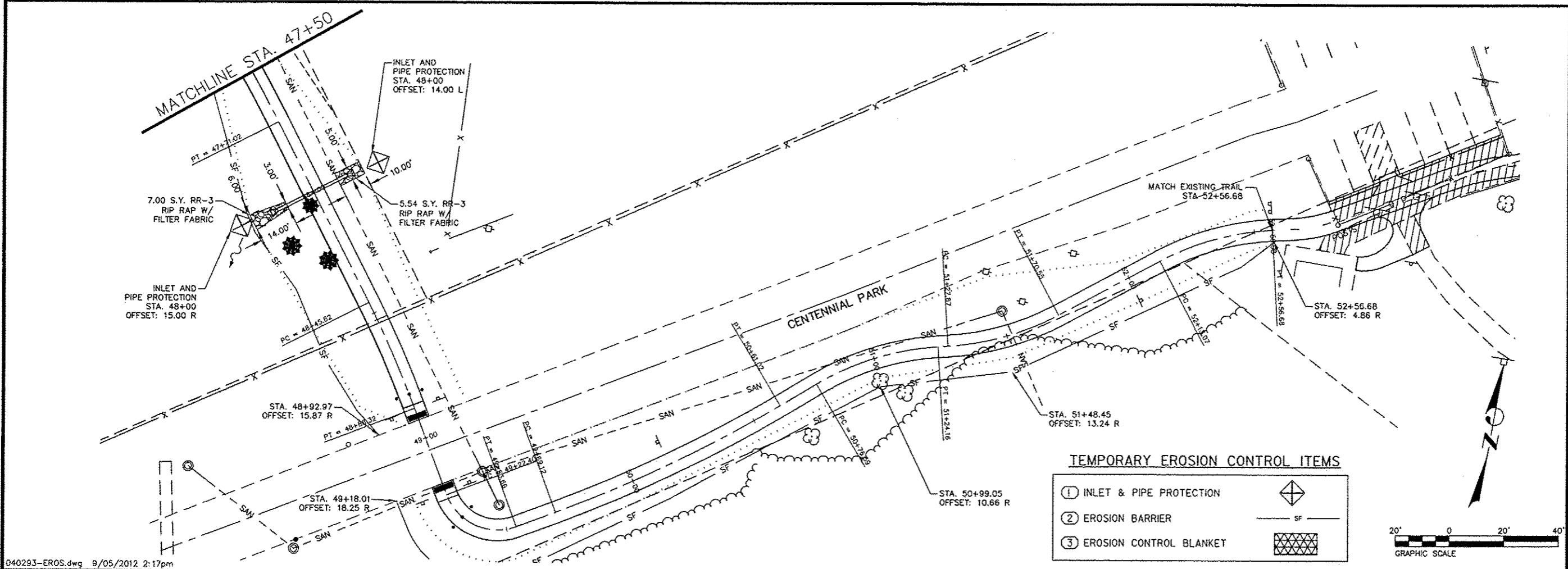
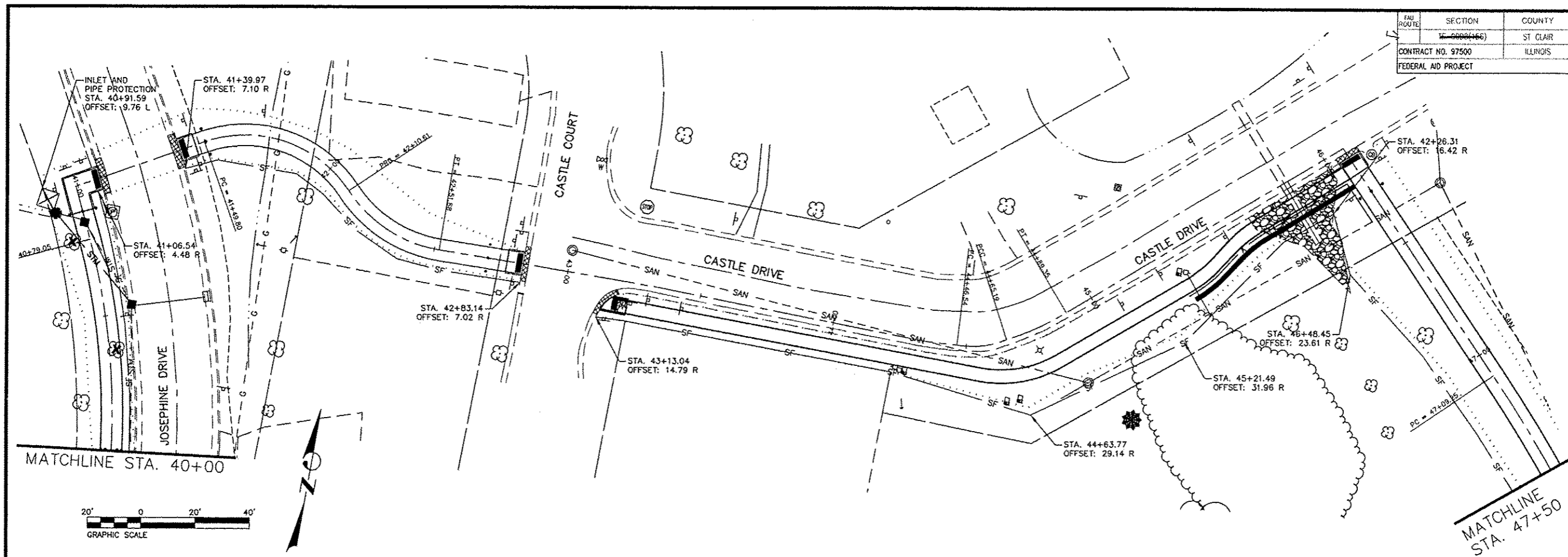
TITLE: SECTION 10-00032-00-BT  
EROSION CONTROL PLAN  
STA. 40+00 - STA. 52+56.68

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION

DRAWN BY: JUV	SHEET
DESIGNED BY: JUV	14
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JUV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	

ISSUED FOR REVIEW     ISSUED FOR BIDDING  
 ISSUED FOR CONSTR.     RECORD DRAWING



P:\100221\100221.dwg Phase 2B Plan\100221-020.dwg Plotted By: jmmw@twm.com 9/5/2012 2:17pm

ROUTE	SECTION	COUNTY
	7E-0000(156)	ST CLAIR
CONTRACT NO. 97500		
ILLINOIS		
FEDERAL AID PROJECT		

**THOUVENOT,  
WADE &  
MOERCHEN, INC.**  
ENGINEERS ♦ SURVEYORS ♦ PLANNERS

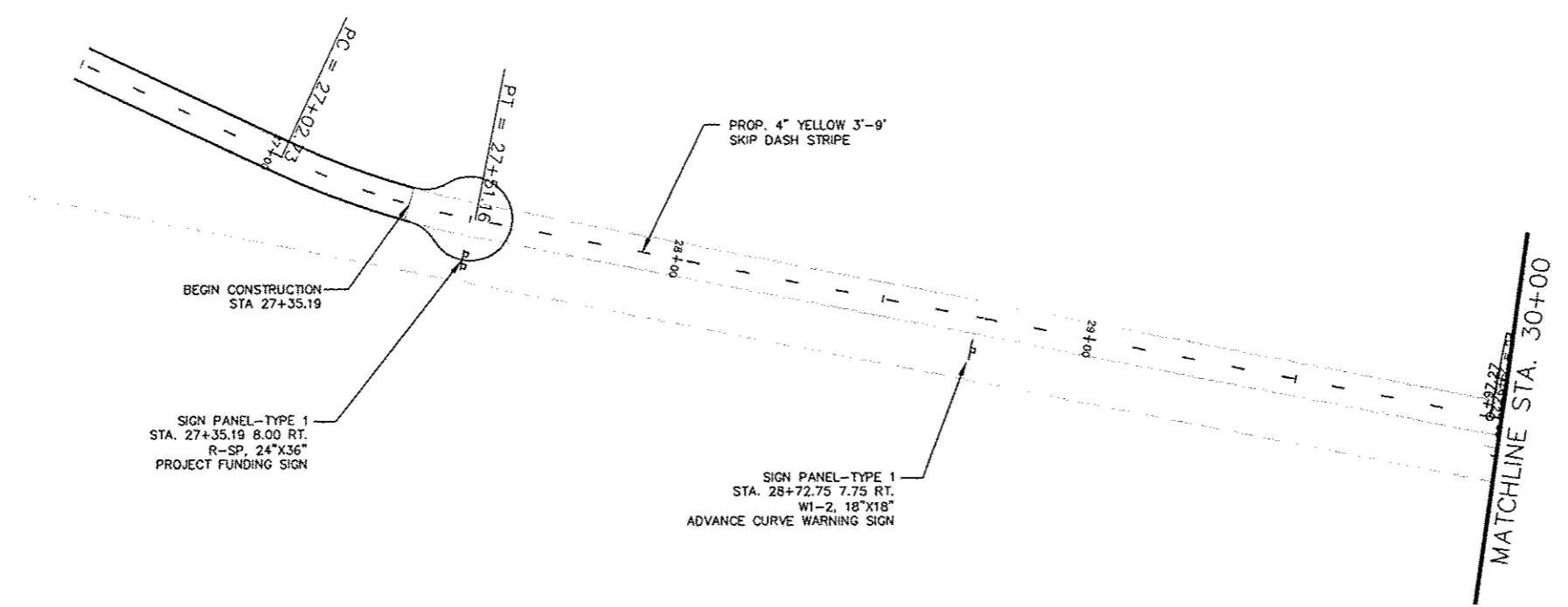
- TWM**
- CORPORATE OFFICE  
4940 OLD COLLINSVILLE RD.  
SWANSEA, ILLINOIS 62226  
TEL (618) 624-4488  
FAX (618) 624-6688  
corp@twm-inc.com
  - WATERLOO OFFICE  
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600 COUNTRY CLUB VIEW, SUITE 1  
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ST. LOUIS, MISSOURI 63101  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-065202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MO 001528
MISSOURI LAND SURVEYING CORP.	MO 000346

SEAL

Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

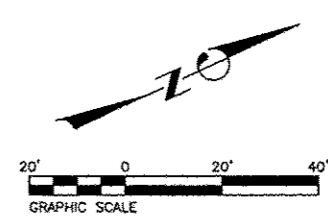
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SIGN PANEL-TYPE 1  
STA. 27+35.19 8.00 RT.  
R-SP, 24"X36"  
PROJECT FUNDING SIGN

SIGN PANEL-TYPE 1  
STA. 28+72.75 7.75 RT.  
W1-2, 18"X18"  
ADVANCE CURVE WARNING SIGN

MATCHLINE STA. 30+00



SECTION 10-00032-00-BT  
PAVEMENT MARKING AND  
SIGNAGE PLAN  
STA. 27+35.19 TO STA. 30+00

PROJECT:  
RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		
△		

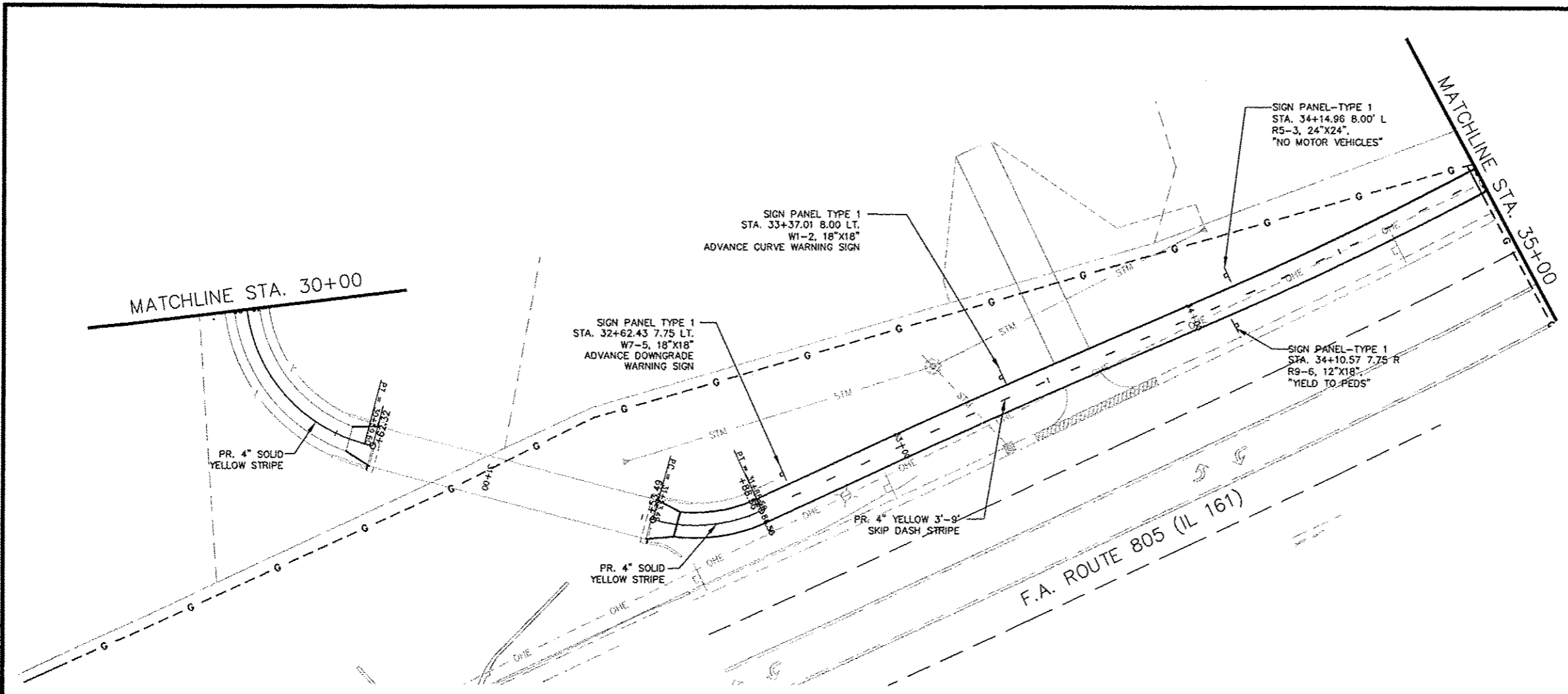
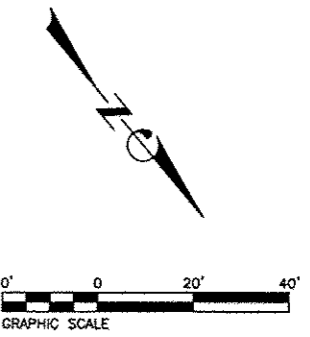
DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	15
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JJV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
<input type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

ROUTE	SECTION	COUNTY
	TE-0006(100)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

THOUVENOT,  
WADE &  
MOERCHEN, INC.  
ENGINEERS SURVEYORS



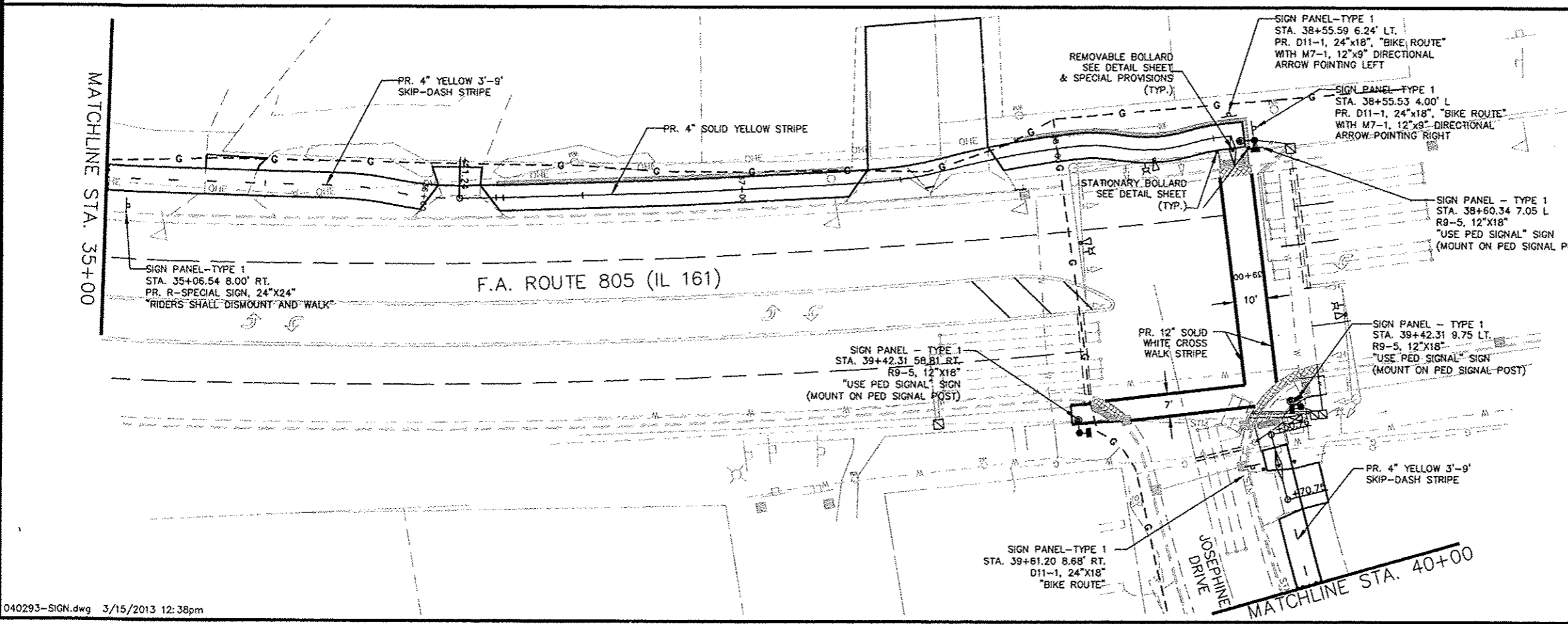
- CORPORATE OFFICE  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	181-001220
PROFESSIONAL ENGINEERING CORP.	62-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	01-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000223
MISSOURI PROFESSIONAL ENGR. CORP.	HC 001526
MISSOURI LAND SURVEYING CORP.	HC 000346

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Expiration Date: \_\_\_\_\_

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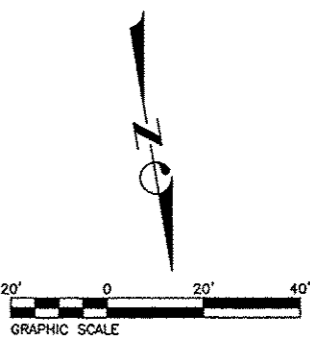


NOTE: SEE TRAFFIC SIGNAL PLANS FOR PROPOSED PEDESTRIAN SIGNALS AND EQUIPMENT TO BE RETROFITTED TO THE EXISTING TRAFFIC SIGNALS.

**TITLE:** PAVEMENT MARKING AND SIGNAGE PLAN  
**PROJECT:** RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION

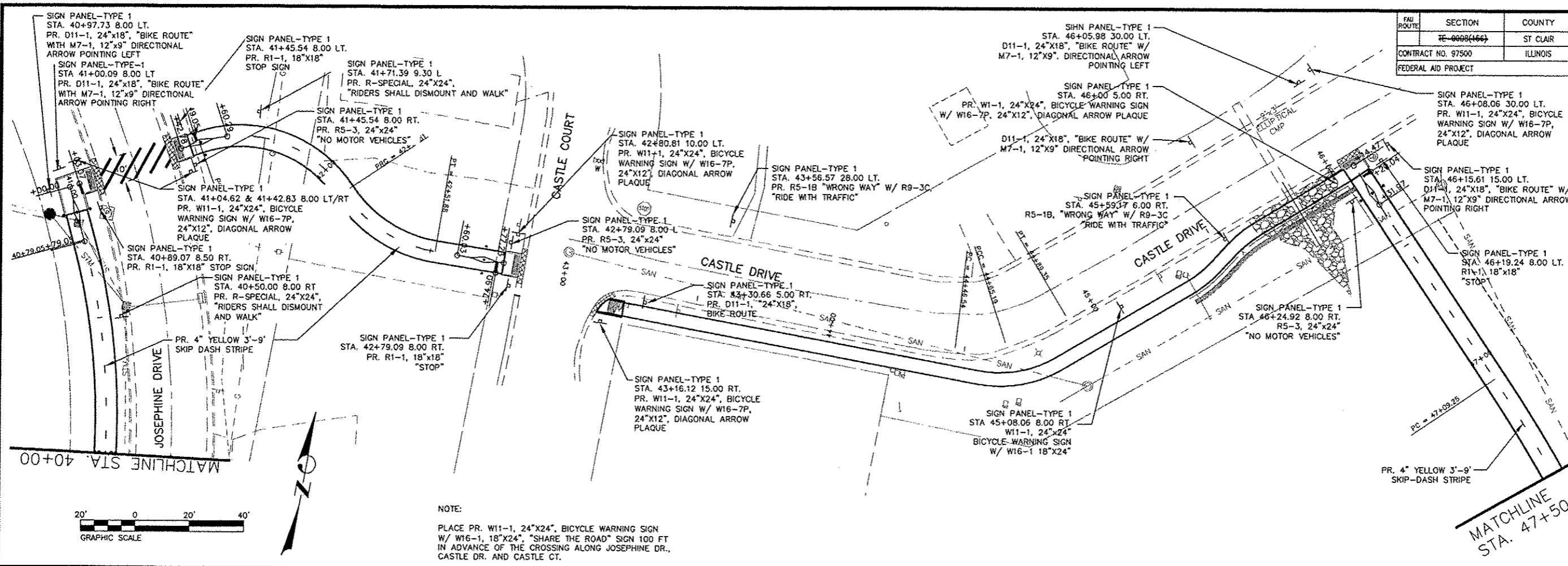
DRAWN BY: JVV	SHEET 16
DESIGNED BY: JVV	OF 46 SHEETS
CHECKED BY: MJK	PROJECT DESCRIPTION
APPROVED BY: JVV	PROJECT NUMBER: 10100072A



P:\10072A\040293\DWG\PHASE 2B\Plan\040293-SIGN.dwg Plotted By: jmmethob

ISSUED FOR REVIEW  ISSUED FOR BIDDING  ISSUED FOR CONSTRUCTION RECORD DRAWING





FBI ROUTE	SECTION	COUNTY
	TE-0008(166)	ST. CLAIR
CONTRACT NO. 97500	ILLINOIS	
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS • SURVEYORS • PLANNERS

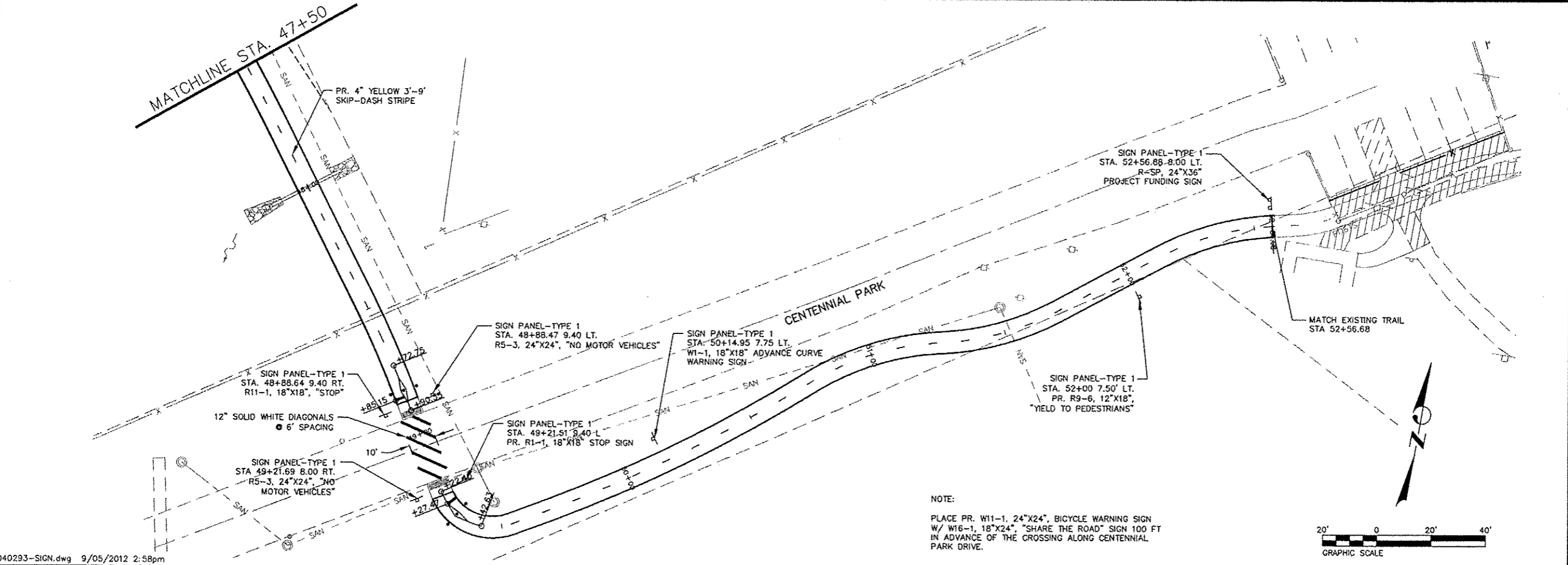


- CORPORATE OFFICE**  
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SWANSEA, ILLINOIS 62226  
TEL (618) 624-4488  
FAX (618) 624-6688  
corp@twm-inc.com
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WATERLOO, ILLINOIS 62298  
TEL (618) 939-5050  
FAX (618) 939-3938  
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600 COUNTRY CLUB VIEW, SUITE 1  
EDWARDSVILLE, ILLINOIS 62025  
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720 OLIVE ST., SUITE 200 A  
ST. LOUIS, MISSOURI 63101  
TEL (314) 241-6300  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	164-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005282
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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SECTION 10-00032-00-BT  
PAVEMENT MARKING AND SIGNAGE PLAN

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS


REV.	DATE	DESCRIPTION

DRAWN BY: JVV	SHEET
DESIGNED BY: JVV	17
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JVV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
ISSUED FOR REVIEW	ISSUED FOR BIDDING
ISSUED FOR CONSTR.	RECORD DRAWING

P:\10072A\100293-SIGN.dwg PHASE 2B File: 10/02/2012 2:58pm Plotted By: jmmorchen

ROUTE	SECTION	COUNTY
	1E-0000(130)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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TEL (314) 421-6300  
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WATERLOO, ILLINOIS 62298  
TEL (618) 939-5050  
FAX (618) 939-3938  
info@twm-inc.com

STANDARDS















- 701602
- 701701
- 720001
- 878001
- 880006
- 873001

ELECTRICAL GENERAL NOTES

1. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE 12" L.E.D. SECTIONS. ALL MOUNTING HARDWARE, SIGNAL POSTS, AND BASES SHALL BE UNPAINTED ALUMINUM. ALL BOLTS, SCREWS, NUTS AND WASHERS SHALL BE STAINLESS STEEL. ANTI-SEIZE PASTE COMPOUND SHALL BE USED ON ALL MOUNTING HARDWARE FIELD CONNECTIONS.
2. ALL TRAFFIC SIGNAL CABLES SHALL BE #14 AWG STRANDED COPPER UNLESS OTHERWISE SPECIFIED.
3. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THE VARIOUS TRAFFIC SIGNAL INSTALLATION. AGENCIES KNOWN TO HAVE UNDERGROUND FACILITIES WITHIN THE LIMITS OF THIS IMPROVEMENT ARE THE FOLLOWING: MEMBER OF J.U.L.I.E. PHONE (800) 892-0123 ARE INDICATED BY \* (CALL ONE WEEK BEFORE YOU PLAN TO DIG).
  - AMEREN IP (GAS & ELECTRIC)
  - VILLAGE OF SWANSEA (SAN. SEWER)
  - CHARTER COMMUNICATIONS (CABLE)
  - AT&T (TELEPHONE)
  - ILLINOIS AMERICAN (WATER)
4. A 1/4" NYLON PULL ROPE SHALL BE FURNISHED AND INSTALLED IN ALL SIGNAL CONDUITS, THIS WORK SHALL BE INCLUDED WITH THE CONDUIT PAY ITEM.

SCHEDULE		TOTAL QUANTITIES
ITEM	UNIT	
TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1
SIGN PANEL - TYPE 1	SQ FT	2.25
LOCATING UNDERGROUND CABLE	FOOT	200
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	12
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	36
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	12
UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	15
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	15
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	236
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	250
TRAFFIC SIGNAL POST, ALUMINUM 14 FT.	EACH	3
CONCRETE FOUNDATION, TYPE A	FOOT	9
DRILL EXISTING HANDHOLE	EACH	2
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	321
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED	EACH	3
PEDESTRIAN PUSH-BUTTON	EACH	3

TRAFFIC SIGNALS LEGEND

- RREC REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT
- PVCC POLYVINYL CHLORIDE CONDUIT
- GSC GALVANIZED STEEL CONDUIT
-  EXISTING SIGNAL POST
-  EXISTING TRAFFIC SIGNAL MAST ARM
-  EXISTING HANDHOLE
-  EXISTING DOUBLE HANDHOLE
-  EXISTING DETECTOR LOOP
-  EXISTING EMERGENCY VEHICLE SYSTEM DETECTOR (E.V.P.S.)
-  EXISTING (E.V.P.S.) CONFIRMATION BEACON
-  EXISTING CONTROLLER AND SERVICE INSTALLATION
-  EXISTING STREET NAME SIGN/TRAFFIC SIGN
-  EXISTING CONDUIT
-  PROPOSED CONDUIT: "T" TRENCH, SIZE SPECIFIED
-  PROPOSED PEDESTRIAN PUSHBUTTON DETECTOR
-  PROPOSED SIGNAL HEAD, PEDESTRIAN
-  PROPOSED SIGNAL POST

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001200
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005002
ILLINOIS PROF. LAND SURVEYING CORP.	048-000028
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000348

TITLE: TRAFFIC SIGNAL PLANS  
PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	18
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JJV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
<input type="checkbox"/> ISSUED FOR REVIEW <input type="checkbox"/> ISSUED FOR BIDDING <input type="checkbox"/> ISSUED FOR CONSTR. <input type="checkbox"/> RECORD DRAWING	

MODIFY EXISTING CONTROLLER

EXISTING SEQUENCE OF OPERATION								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT	←	→	↑	↓	←	→	←	→
CONCURRENT MOVEMENT PERMITTED	6	6	NONE	NOT USED	NOT USED	1 OR 2	NOT USED	NOT USED

PROPOSED SEQUENCE OF OPERATION								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT	←	→	↑	↓	←	→	←	→
CONCURRENT MOVEMENT PERMITTED	6	6	NONE	NOT USED	NOT USED	1 OR 2	NOT USED	NOT USED

\* PEDESTRIAN INDICATIONS ON ACTUATION ONLY

ROUTE	SECTION	COUNTY
	10-0000(160)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS • SURVEYORS • PLANNERS



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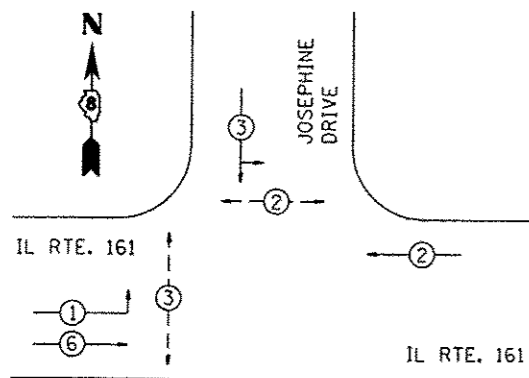
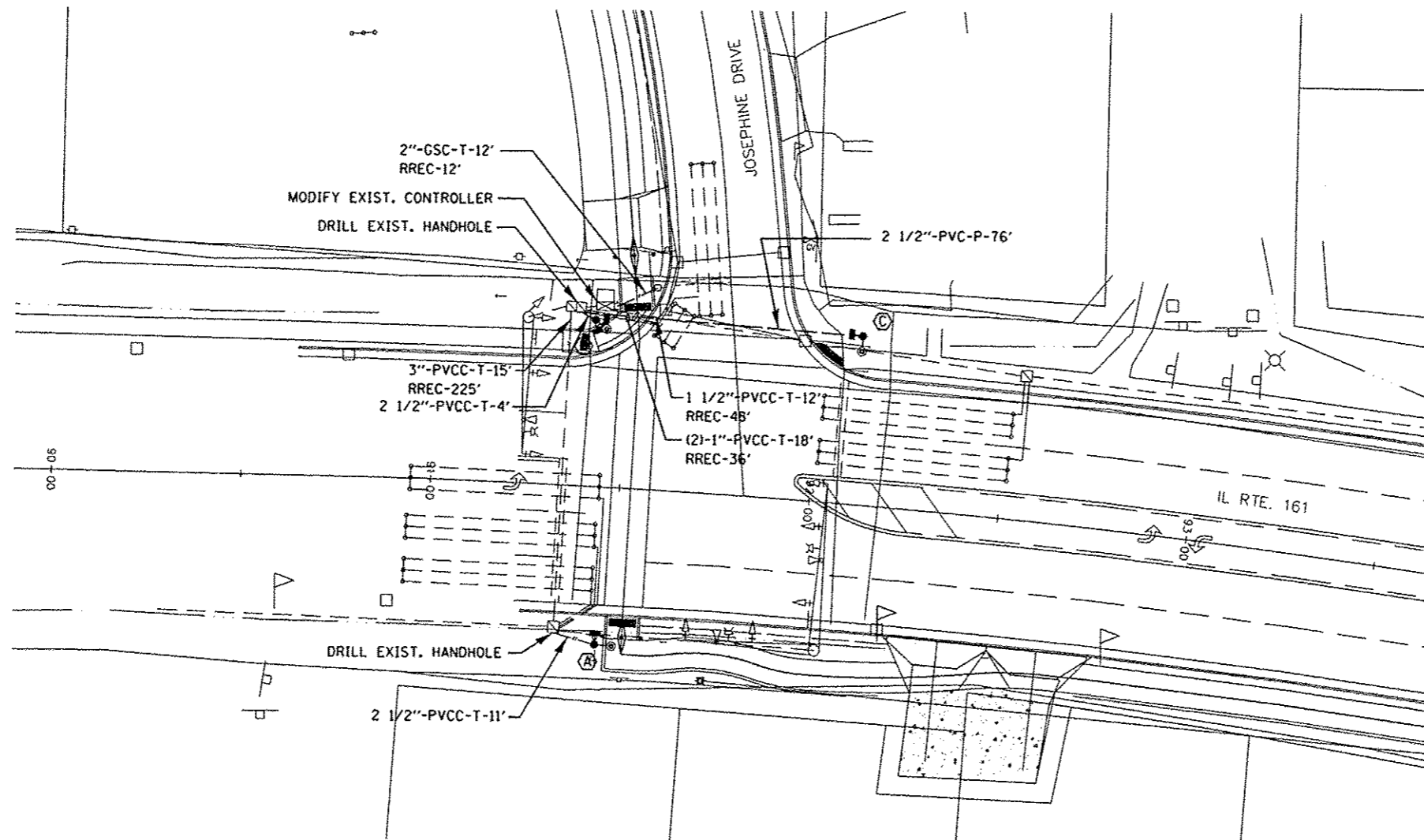
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FAX (618) 939-3938  
info@twm-inc.com

TRAFFIC SIGNAL FACES

12" LED



PEDESTRIAN SIGNAL HEAD

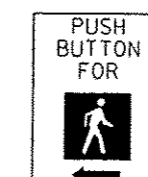


PHASE DESIGNATION DIAGRAM



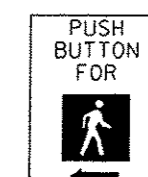
R10-4B (R)  
9" x 12"

DETAIL A  
1 EACH REQUIRED  
SIGN PANEL TYPE 1  
(NOT TO SCALE)



R10-4B (L)  
9" x 12"

DETAIL B  
1 EACH REQUIRED  
SIGN PANEL TYPE 1  
(NOT TO SCALE)



R10-4B (L)  
9" x 12"

DETAIL C  
1 EACH REQUIRED  
SIGN PANEL TYPE 1  
(NOT TO SCALE)

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001200
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005002
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	HC 001528
MISSOURI LAND SURVEYING CORP.	HC 000346

SECTION 10-00032-00-BT  
TRAFFIC SIGNAL PLANS  
ELECTRICAL PLAN SHEET  
PROJECT: RICHLAND CREEK BIKEWAY  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JJV	SHEET 19
DESIGNED BY: JJV	OF 46 SHEETS
CHECKED BY: MJK	PROJECT DESCRIPTION
APPROVED BY: JJV	PROJECT NUMBER: M19100078A
<input type="checkbox"/> ISSUED FOR REVIEW	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

ROUTE	SECTION	COUNTY
	#E-0000(160)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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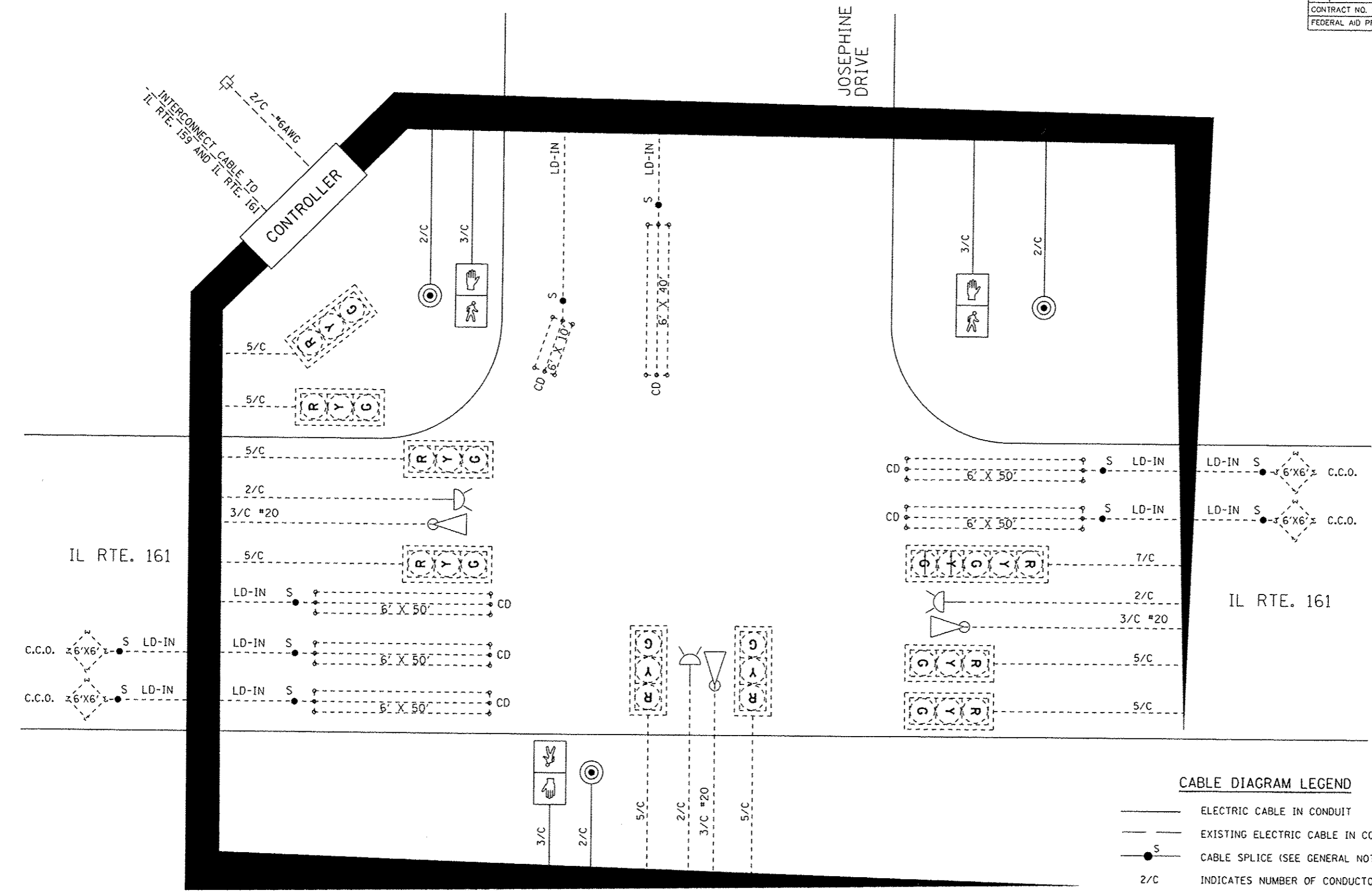
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ILLINOIS PROFESSIONAL DESIGN FIRM	184-00120
PROFESSIONAL ENGINEERING CORP.	62-036370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	040-000028
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

**TITLE:** SECTION 10-00032-00-BT  
TRAFFIC SIGNAL PLANS  
CABLE DIAGRAM

**PROJECT:** RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	<b>20</b>
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JJV	PROJECT DESCRIPTION
PROJECT NUMBER: M18100072A	
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



**CABLE DIAGRAM LEGEND**

- ELECTRIC CABLE IN CONDUIT
- - - EXISTING ELECTRIC CABLE IN CONDUIT
- S CABLE SPLICE (SEE GENERAL NOTES)
- 2/C INDICATES NUMBER OF CONDUCTORS IN CABLE
- CD CALL DELAY (SEE GENERAL NOTES)
- CCO CALL CARRY OVER (SEE GENERAL NOTES)
- SERVICE INSTALLATION
- \*6 INDICATES AMERICAN WIRE GAUGE (AWG) SIZE 6 CONDUCTORS (SEE GENERAL NOTES)

Benchmark: Permanent Benchmarks to be set by Engineer prior to construction.

Existing Structure: None.

ROUTE	SECTION	COUNTY
10-0000(150)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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FAX (618) 939-3938  
info@twm-inc.com

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Pedestrian Truss Superstructure	Sq. Ft.	1080

**INDEX OF SHEETS**

- 21 General Plan and Elevation
- 22 Abutment & Approach Slab Details
- 23 Pile Details
- 24 Fence Rail Transition Details
- 25 Soil Boring Logs

**DESIGN SPECIFICATIONS**

2009 AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges

2010 AASHTO LRFD Bridge Design Specifications

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 3  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.37g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.80g  
Soil Site Class = E

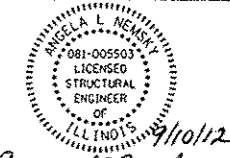
**DESIGN STRESSES**

$f'_c$  = 3,500 psi  
 $f_y$  = 60,000 psi (Reinforcement)

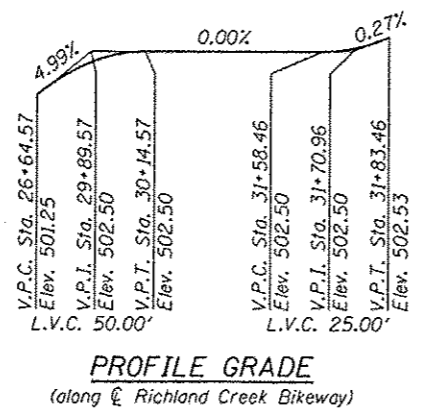
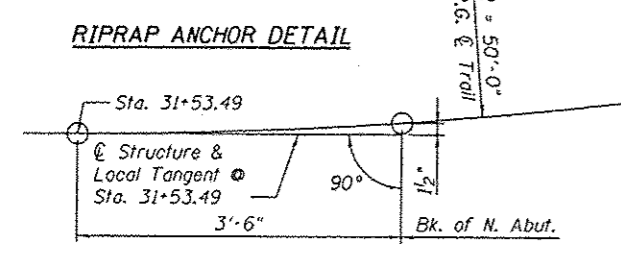
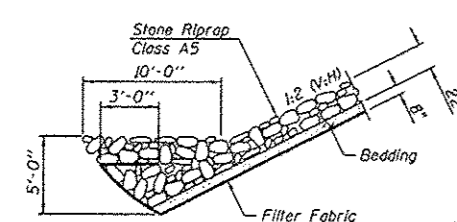
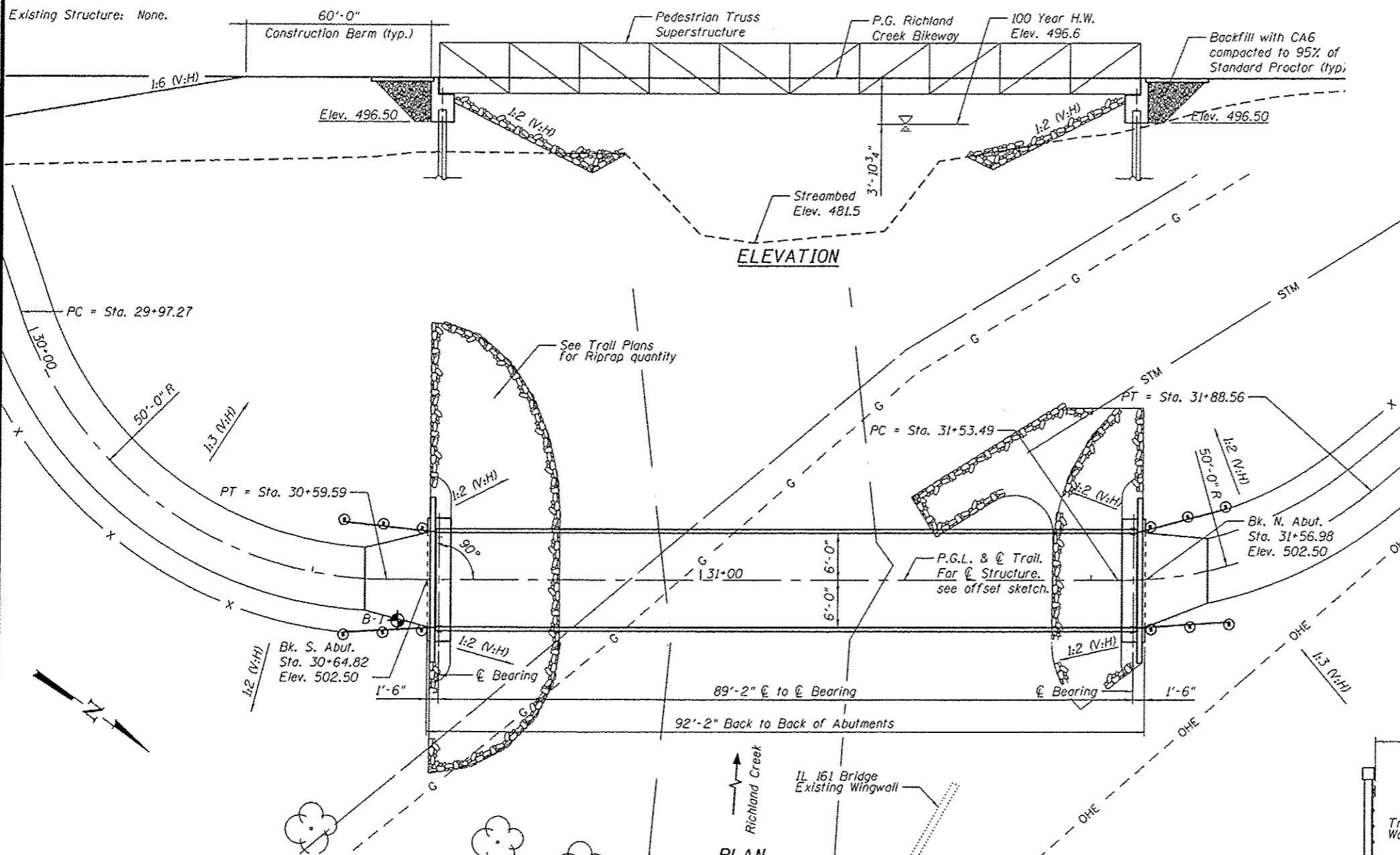
**LOADING**

Pedestrian Live Load = 90 psf and applied according to Art. 3.1 of the Guide Specifications

\*\* I certify that to the best of knowledge, information and belief, the substructure design for this bridge is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications. This seal applies to sheets 21 thru 25 only.



PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	02-053720
PROFESSIONAL STRUCTURAL ENGR. CORP.	01-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346



**DESIGN SCOUR ELEVATION TABLE**

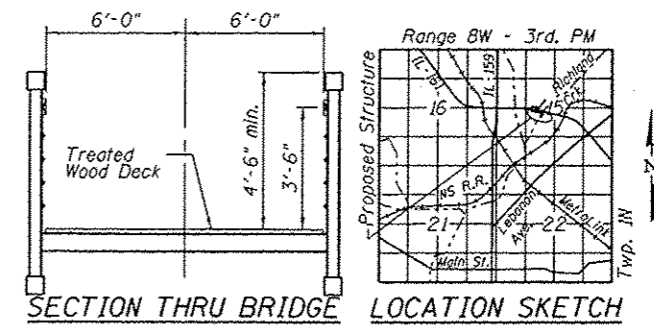
Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	496.50*	496.50*

\* Indicated elevation will be coordinated with backwall dimension requirements of bridge fabricator (See Abutment Details)

**WATERWAY INFORMATION**

Drainage Area = 12.24 sq. mi. Low Grade Elev. 490.76 @ Sta. 27+29.53

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	2128	-	423.4	494.2	-	0.14	-	494.3	
Base	50	4072	-	540.8	495.9	-	0.70	-	496.6	
Overtopping	100	4971	-	592.7	496.6	-	1.18	-	497.8	
Max. Calc.	N/A									



**GENERAL NOTES**

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
- The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number as shown in the contract plans.
- For approach details, see abutment details, sheet 22.
- The Pedestrian Truss Superstructure shall meet the requirements of the Special Provisions
- Deck: The deck shall be Treated Structural Timber conforming to the requirements of Section 1007.03 of the Standard Specifications.
- Bearings: The bearings shall be specified by the bridge manufacturer.
- Camber: The truss shall be cambered for Dead Load.

TITLE: GENERAL PLAN AND ELEVATION  
SECTION 10-00032-00-BT  
PROJECT: RICHLAND CREEK BIKEWAY VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION

DRAWN BY: JTH	SHEET 21
DESIGNED BY: JTH	OF 46 SHEETS
CHECKED BY: ALN	PROJECT DESCRIPTION
APPROVED BY: ALN	PROJECT NUMBER 100072A
ISSUED FOR CONSTRUCTION	ISSUED FOR BIDDING
ISSUED FOR RECORD DRAWING	

ROUTE	SECTION	COUNTY
	1E-0008(166)	ST. CLAIR
CONTRACT NO.	97500 ILLINOIS	
FEDERAL AID PROJECT		

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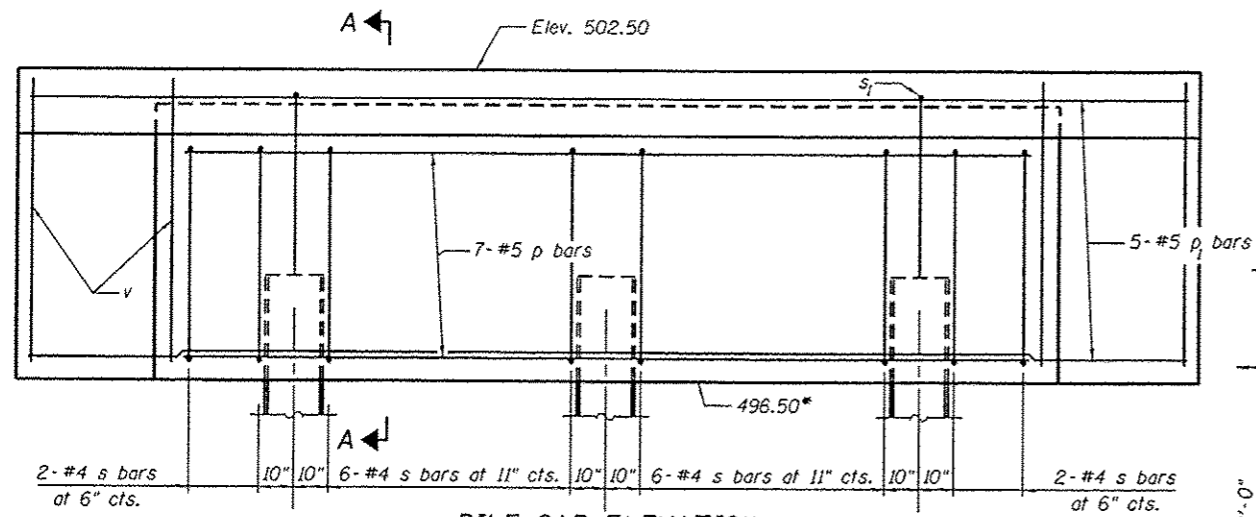


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TEL (618) 939-5050  
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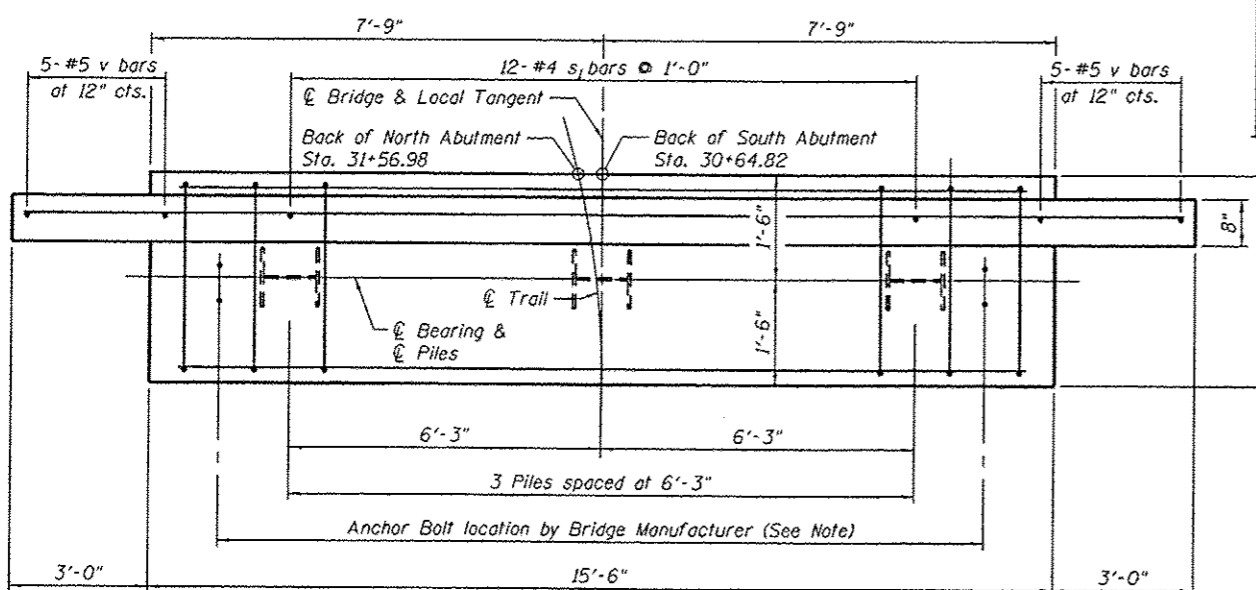
PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	181-001220
PROFESSIONAL ENGINEERING CORP.	02-055270
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000028
MISSOURI PROFESSIONAL ENGR. CORP.	NO. 001528
MISSOURI LAND SURVEYING CORP.	NO. 000346

**PILE DATA**

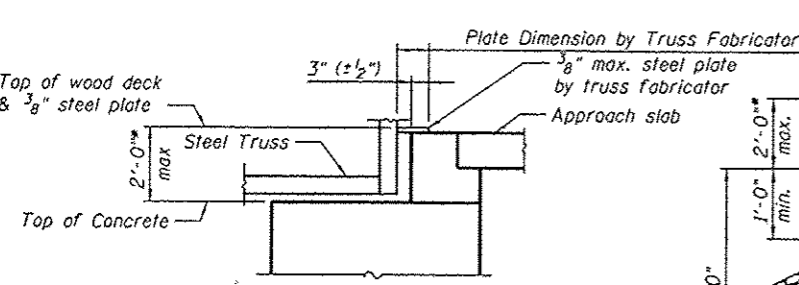
Type: HP 10x42  
Nominal Required Bearing: 335 kips  
Factored Resistance Available: 171 kips  
Est. Length: 47 ft  
No. Production Piles: 4  
No. Test Piles: 2 (1 at each abut.)



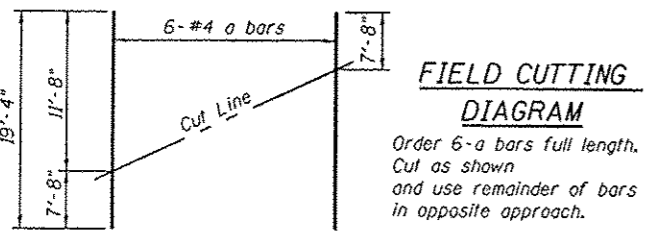
**PILE CAP ELEVATION**  
\* Indicated elevation will be coordinated with backwall requirements of bridge fabricator.



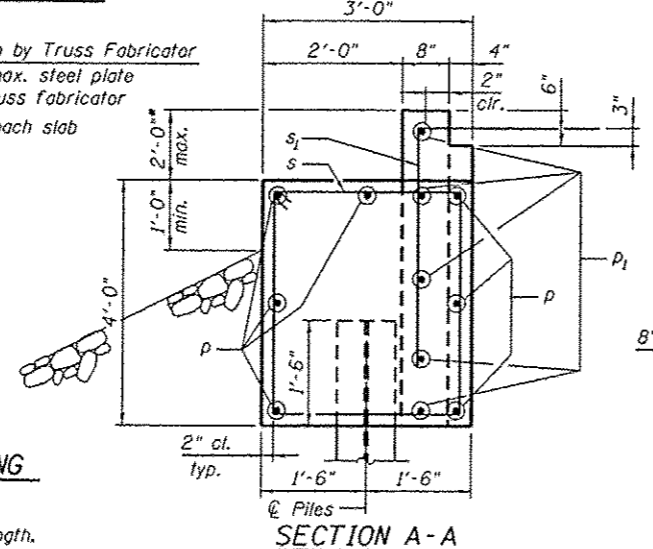
**PILE CAP PLAN**



**APPROACH DETAIL**  
(Fixed and Expansion Abutments)

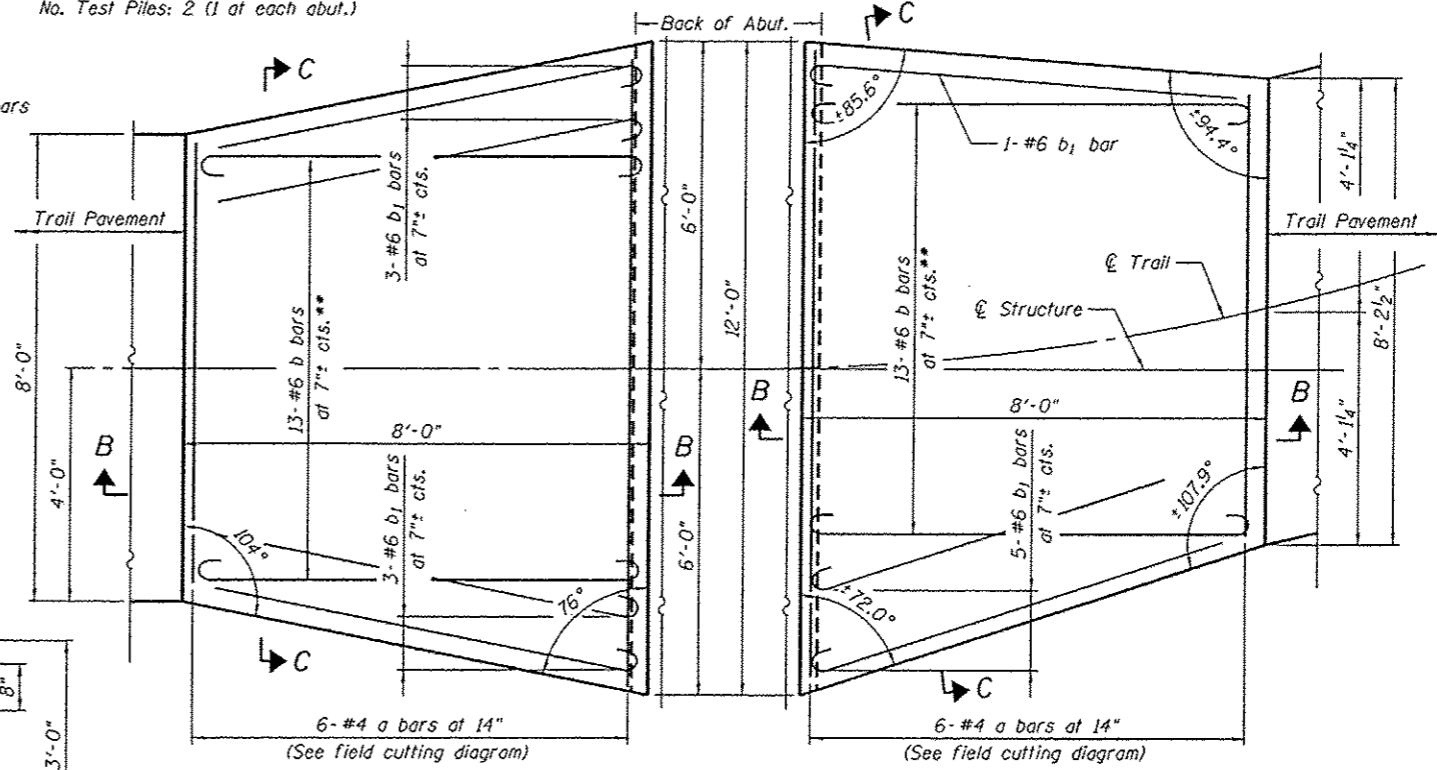


**FIELD CUTTING DIAGRAM**  
Order 6-a bars full length. Cut as shown and use remainder of bars in opposite approach.



**SECTION A-A**

\* Indicated backwall dimensions will be coordinated with requirements of bridge fabricator. Estimated quantities and bar dimensions based on dimensions shown.

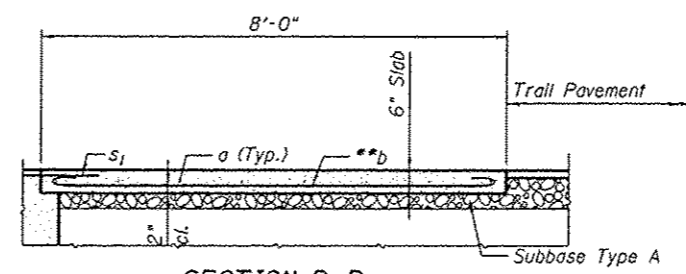


**APPROACH SLAB PLAN**  
South Approach

\*\* Till #6 b bars as required to maintain clearance.

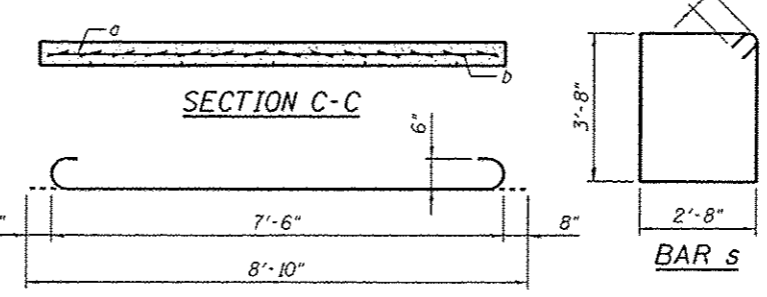
**APPROACH SLAB PLAN**  
North Approach

\*\* Till #6 b bars as required to maintain clearance.

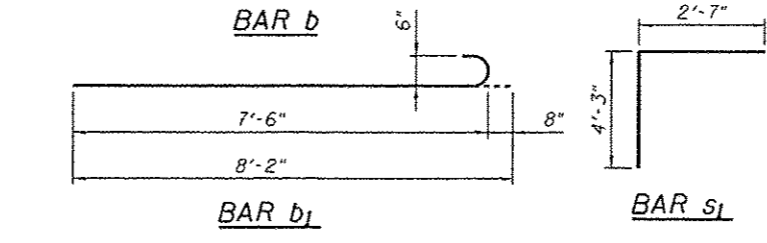


**SECTION B-B**

\*\* Till #6 b bars as required to maintain clearance.



**SECTION C-C**



**BILL OF MATERIAL**  
(2 Abut. & 2 Appr.)

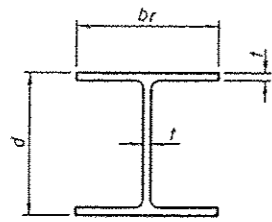
Bar	No.	Size	Length	Shape
p	14	#5	15'-2"	—
p1	10	#5	21'-3"	—
s	32	#4	13'-5"	□
s1	24	#4	8'-10"	□
v	20	#5	5'-7"	—
b	26	#6	8'-10"	U
b1	12	#6	8'-2"	U
a	6	#4	19'-4"	—
Item	Unit	Quantity		
Structure Excavation	Cu Yd	14		
Concrete Structures	Cu Yd	21		
Reinforcement Bars	Pound	1520		
Furnishing Steel Piles, HP10x42	Foot	188		
Test Pile Steel, HP10x42	Each	2		
Driving Piles	Foot	188		

**NOTES:**  
Spacing of s bars at each end of pile cap should be modified to avoid anchor bolts.  
Size, number and location of anchor bolts are to be based on the approved shop drawings for the Pedestrian Truss Superstructure.  
Items in the Bill of Material will not be paid for separately, but are included in the cost of Pedestrian Truss Superstructure.

**ABUTMENT AND APPROACH SLAB DETAILS**  
SECTION 10-00032-00-BT  
RICHLAND CREEK BIKEWAY  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

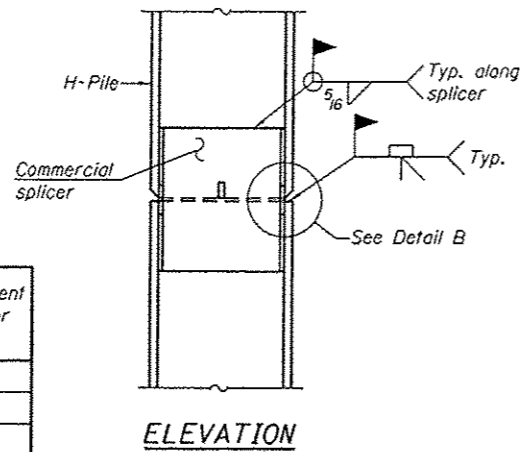
REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JTH	SHEET
DESIGNED BY: JTH	<b>22</b>
CHECKED BY: ALN	OF 46 SHEETS
APPROVED BY: ALN	PROJECT DESCRIPTION
PROJECT NUMBER: 100072A	
ISSUED FOR REVIEW	ISSUED FOR BIDDING
ISSUED FOR CONSTR.	RECORD DRAWING

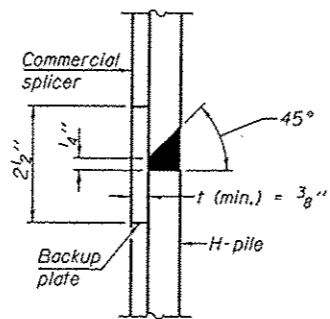


**STEEL PILE TABLE**

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	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"	1/16"	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"

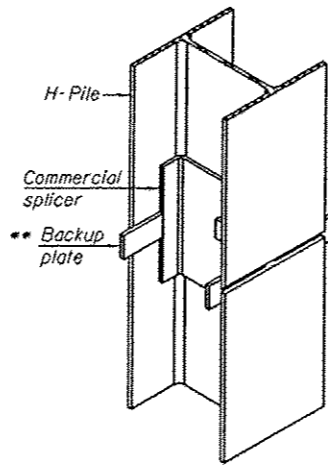


**ELEVATION**

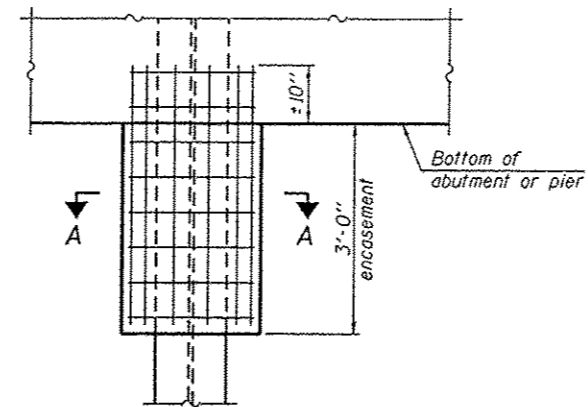


**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**

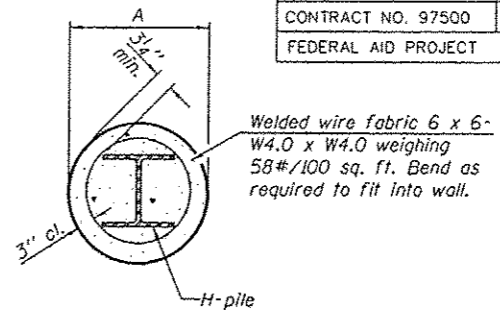


**ISOMETRIC VIEW**



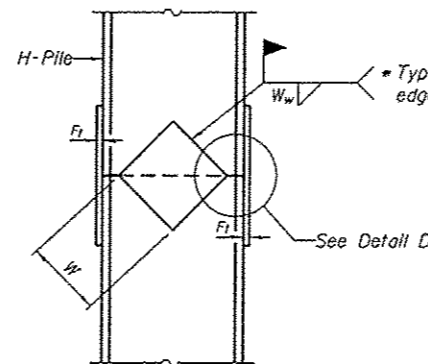
**ELEVATION**

**PILE ENCASEMENT**

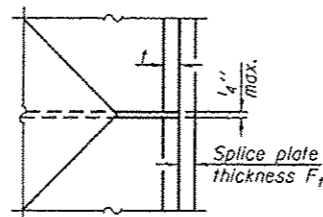


**SECTION A-A**

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



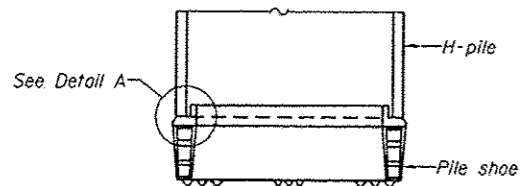
**ELEVATION**



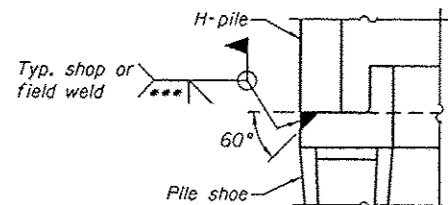
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
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"	1/16"	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"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	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"

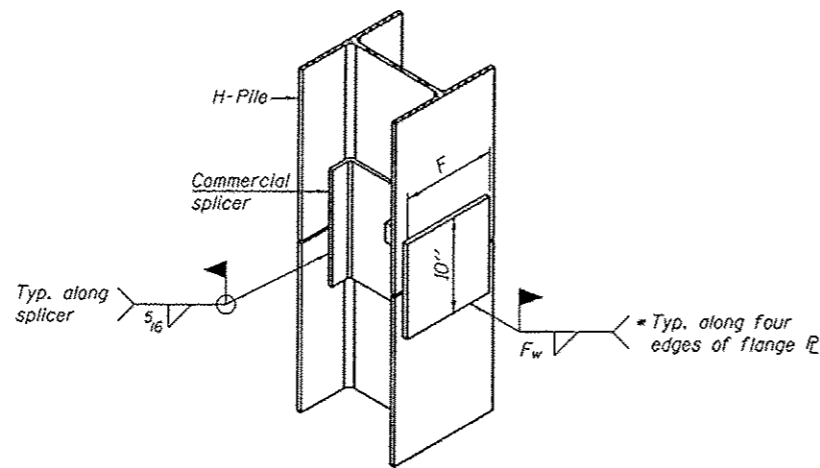


**ELEVATION**



**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**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.).

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

ROUTE	SECTION	COUNTY
	1E-0000(166)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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TEL (618) 939-5050  
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	02-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PRICE LAND SURVEYING CORP.	046-000079
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

**HP PILE DETAILS**  
SECTION 10-00032-00-BT  
RICHLAND CREEK BIKEWAY  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JTH	SHEET
DESIGNED BY: JTH	<b>23</b>
CHECKED BY: ALN	OF 46 SHEETS
APPROVED BY: ALN	PROJECT DESCRIPTION
PROJECT NUMBER: 100072A	
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<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

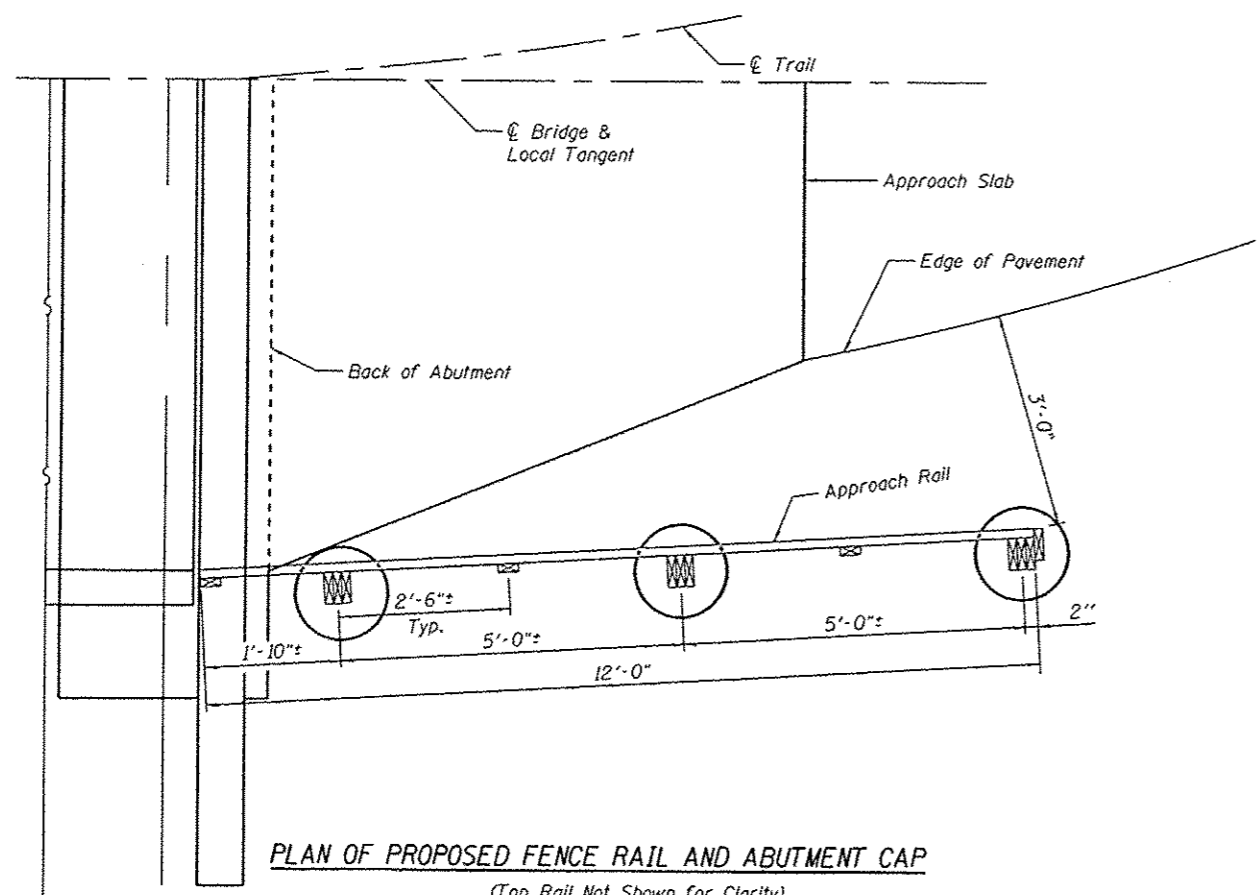
ROUTE	SECTION	COUNTY
	7E-0008(166)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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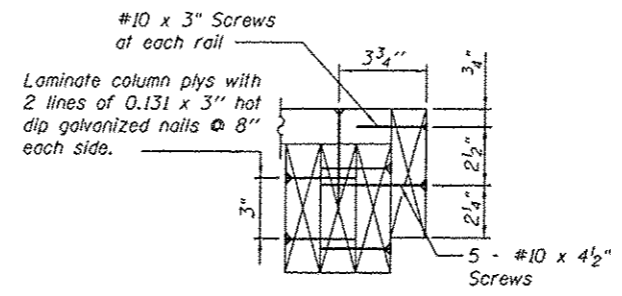


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FAX (618) 656-4343  
info@twm-inc.com
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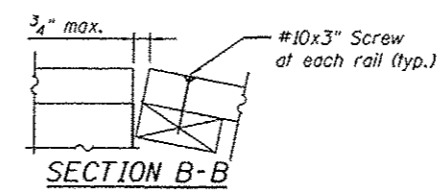
PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-091220
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ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 081528
MISSOURI LAND SURVEYING CORP.	MC 003348



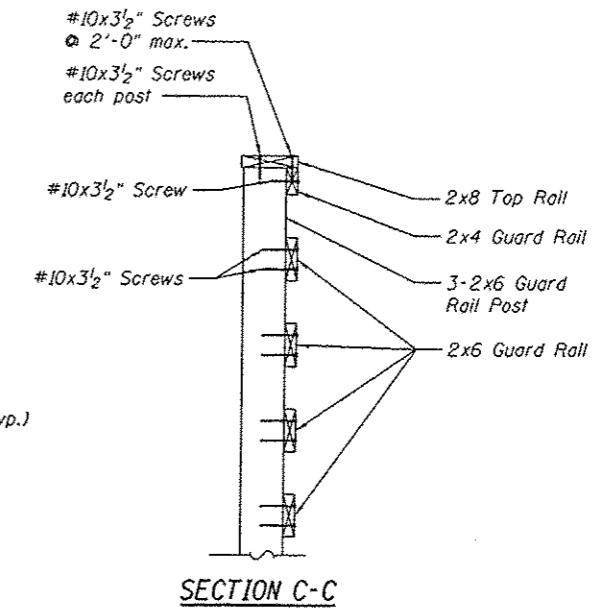
**PLAN OF PROPOSED FENCE RAIL AND ABUTMENT CAP**  
(Top Rail Not Shown for Clarity)



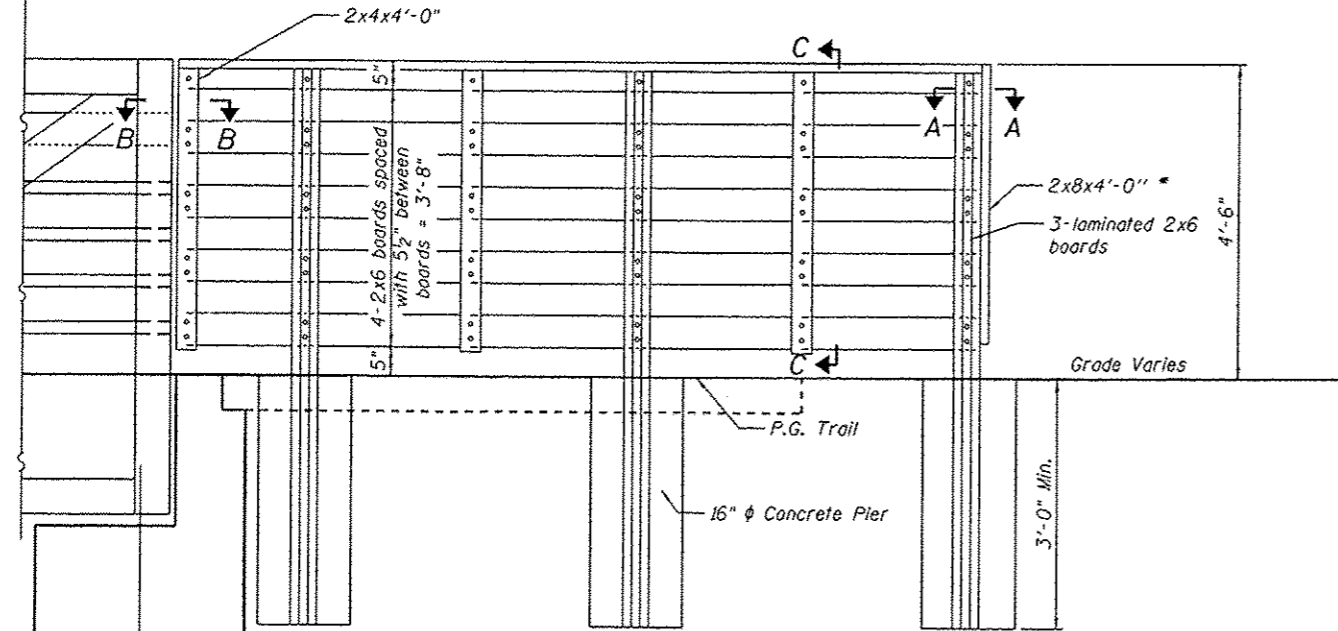
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**



**ELEVATION**

\* 2x8 only necessary where fence terminates. See Trail Plans for limits of fence.

The fence shall be constructed of No. 1 Southern Pine Treated Structural Timber conforming to the applicable requirements of Section 507 of the Standard Specifications except as modified by these plans. See Trail Plans for quantity.

**WOOD POST AND RAIL FENCE DETAILS**  
SECTION 10-00032-00-BT

**RICHLAND CREEK BIKEWAY VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JTH	SHEET
DESIGNED BY: JTH	<b>24</b>
CHECKED BY: ALN	OF 46 SHEETS
APPROVED BY: ALN	PROJECT DESCRIPTION
PROJECT NUMBER: 100072A	

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ROUTE	SECTION	COUNTY
	7E-0008(166)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
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ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

**SOIL BORING LOG**  
SECTION 10-00032-00-BT  
RICHLAND CREEK BIKEWAY  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JTH	SHEET
DESIGNED BY: JTH	<b>25</b>
CHECKED BY: ALN	OF 46 SHEETS
APPROVED BY: ALN	PROJECT DESCRIPTION
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<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

## LOG OF BORING B - 1

**Project Name:** Richland Creek Bikeway  
**Project Location:** Swansea, Illinois  
**Project Number:** SG13-3773

**Date Drilled:** 7/24/2006  
**Drilling Contractor:** Terra Drill, Inc.  
**Drilling Method:** Hollow Stem Auger  
**Logged By:** Marlo/Delancey

Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
0		6/8/6	CL	Brown Silty CLAY, Trace Cinders, FILL		4.5+ Qp	13	
4.3		24/74	CL	-1" Layer of Cinders at 4.3 Feet Gray Silty CLAY	91	2.75 Qp	28	
6		0/18						
10		18/18				0.25 Qp	32	
17.0		0/24		-Trace Sand below 17.0 Feet				
18		18/18				0.25 Qp	30	
22.0		14/18		Gray Highly Weathered SHALE				Hard drilling at 22.0 feet.
25		28/50/4"		(continued)				

**Notes:**

**GROUNDWATER**

- ▽ First Observed During Drilling - 18.0 Feet
- ▽ At Completion - 10.0 Feet
- ▽ 14 hrs After Completion - 10.0 Feet
- Piezometer Installed No



Missouri (314) 770-1001  
Illinois (618) 398-1414

## LOG OF BORING B - 1 (Cont.)

**Project Name:** Richland Creek Bikeway  
**Project Location:** Swansea, Illinois  
**Project Number:** SG13-3773

**Date Drilled:** 7/24/2006  
**Drilling Contractor:** Terra Drill, Inc.  
**Drilling Method:** Hollow Stem Auger  
**Logged By:** Marlo/Delancey

Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
25				Gray Highly Weathered SHALE (continued)				
30		17/26/30	14/18				13	
35		14/24/33	14/18	CH Light Gray, Reddish Gray, & Olive Yellow Shaley CLAY		4.5+ Qp	12	
40		25/35/50/5"	12/18			4.5+ Qp	10	
42.0		50/4"	4/18	Gray Highly Weathered SHALE			14	
45				TD - 42.0 Feet				
50								

**Notes:**

**GROUNDWATER**

- ▽ First Observed During Drilling - 18.0 Feet
- ▽ At Completion - 10.0 Feet
- ▽ 14 hrs After Completion - 10.0 Feet
- Piezometer Installed: No



Missouri (314) 770-1001  
Illinois (618) 398-1414

**Note:**  
Boring B-1 was located at Sta. 30+61 Off. 5.21' Rt.  
The ground elevation at the boring was 493.19.

FAU ROUTE	SECTION	COUNTY
TE-0600(150)		ST. CLAIR
CONTRACT NO. 97500	ILLINOIS	
FEDERAL AID PROJECT		

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TEL (314) 241-6300  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001270
PROFESSIONAL ENGINEERING CORP.	62-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

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Expiration Date: \_\_\_\_\_

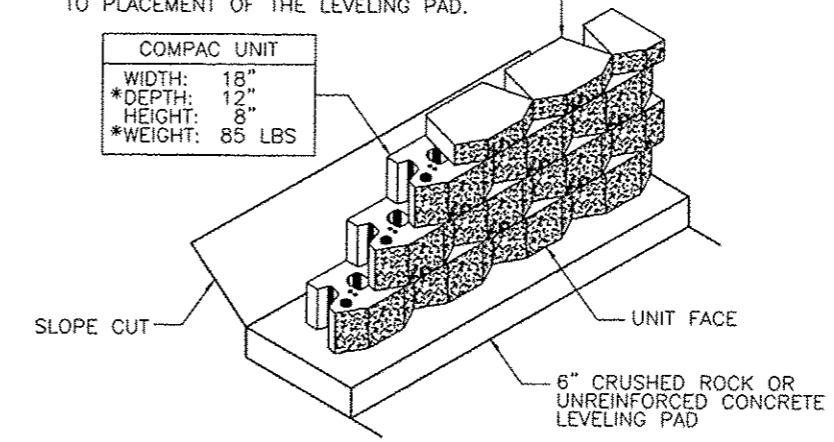
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**BASE LEVELING PAD NOTES:**

1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2,000 PSI± UNREINFORCED CONCRETE.
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.

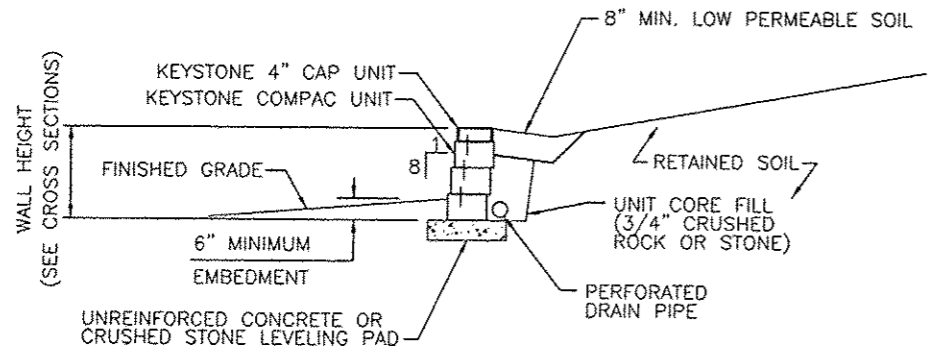
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*DEPTH:	10"
HEIGHT:	4"
*WEIGHT:	45 LBS

<b>COMPAC UNIT</b>	
WIDTH:	18"
*DEPTH:	12"
HEIGHT:	8"
*WEIGHT:	85 LBS

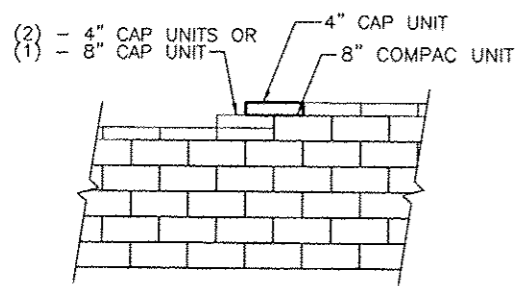


**COMPAC UNIT/BASE PAD ISOMETRIC VIEW**  
N.T.S.

\*DIMENSIONS & WEIGHT MAY VARY BY REGION



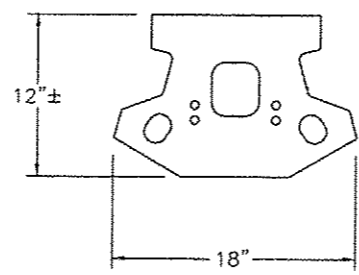
**TYPICAL GRAVITY WALL SECTION**  
COMPAC UNIT - 1" MINIMUM SETBACK



**TOP OF WALL STEPS**  
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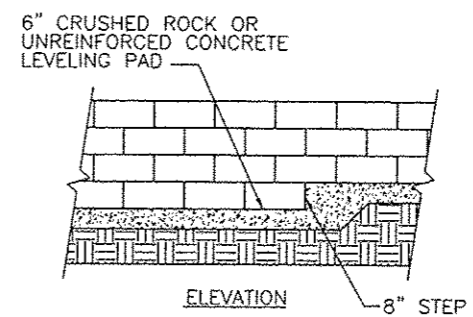


**COMPAC ELEVATION**

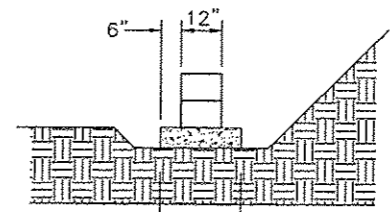


**COMPAC PLAN**

**COMPAC UNIT**  
N.T.S.



**ELEVATION**



**SECTION**

**LEVELING PAD DETAIL**  
N.T.S.

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**RETAINING WALL DETAILS**  
SECTION 10-00032-00-BT

PROJECT: **RICHLAND CREEK BIKE TRAIL**  
**PHASE 2B**  
**VILLAGE OF SWANSEA**  
**ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JVV	SHEET
DESIGNED BY: JVV	<b>26</b>
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JVV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	

ISSUED FOR REVIEW     ISSUED FOR BIDDING  
 ISSUED FOR CONSTR.     RECORD DRAWING

FBI ROUTE	SECTION	COUNTY
	1E-0008(456)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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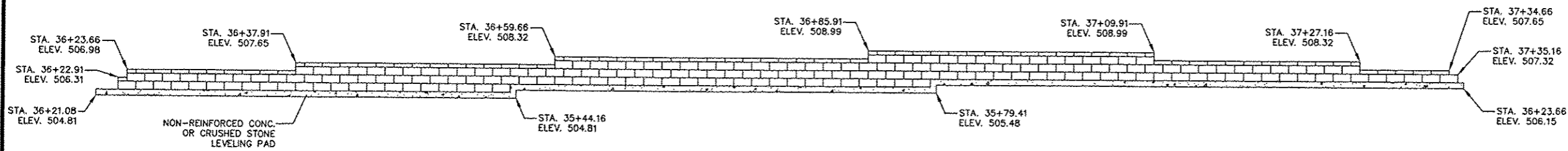
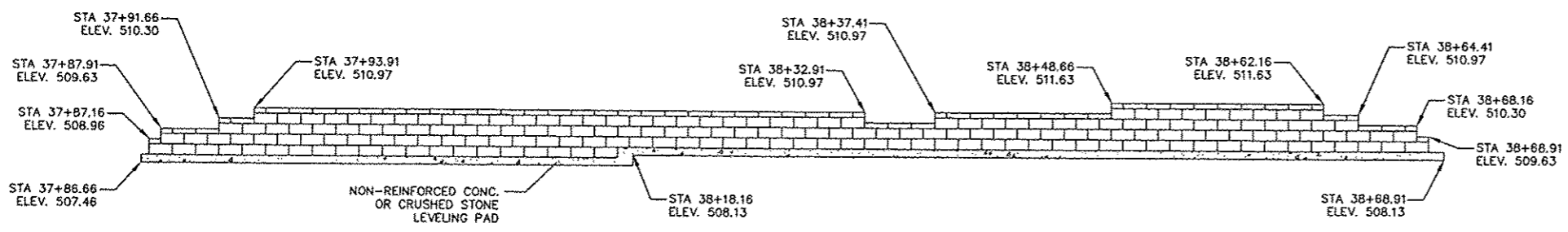
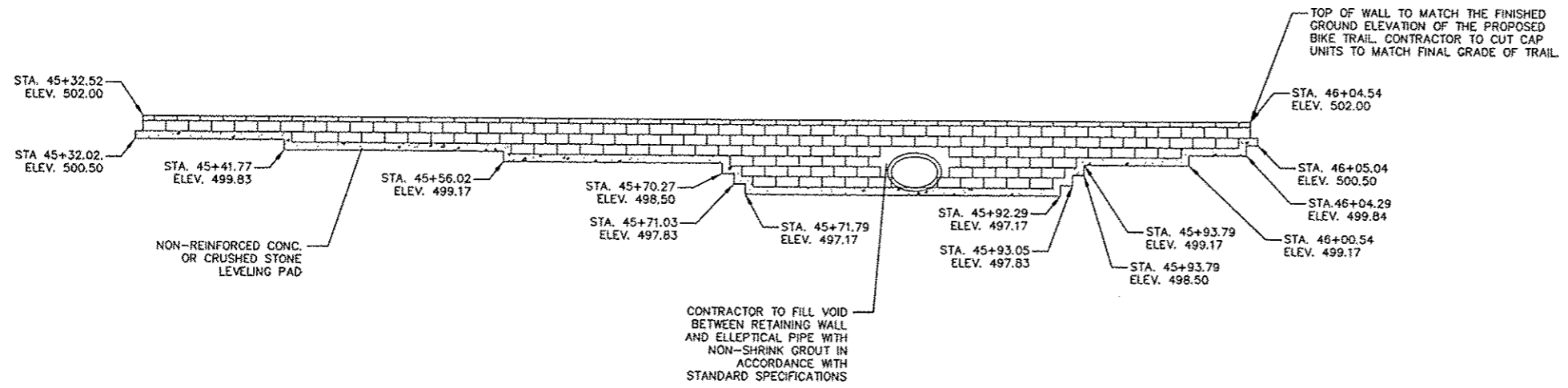
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ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

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TITLE: SECTION 10-00032-00-BT  
RETAINING WALL PROFILES

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
▲		
▲		
▲		

DRAWN BY: JJV	SHEET
DESIGNED BY: JJV	27
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JJV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
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<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

FBI ROUTE	SECTION	COUNTY
	1E-0000(+50)	ST CLAIR
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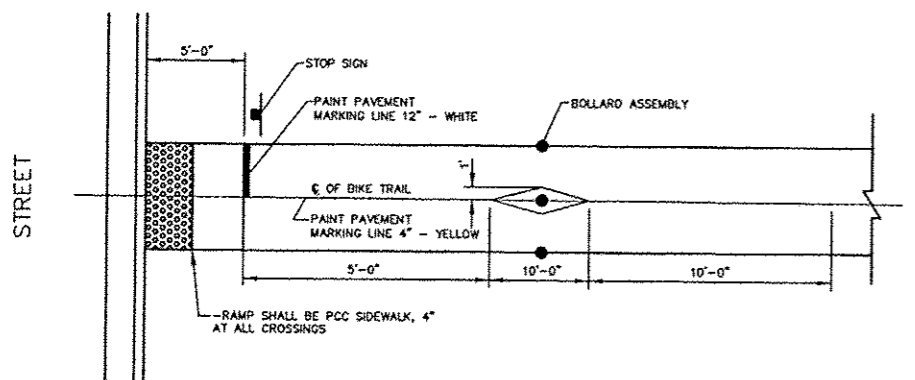


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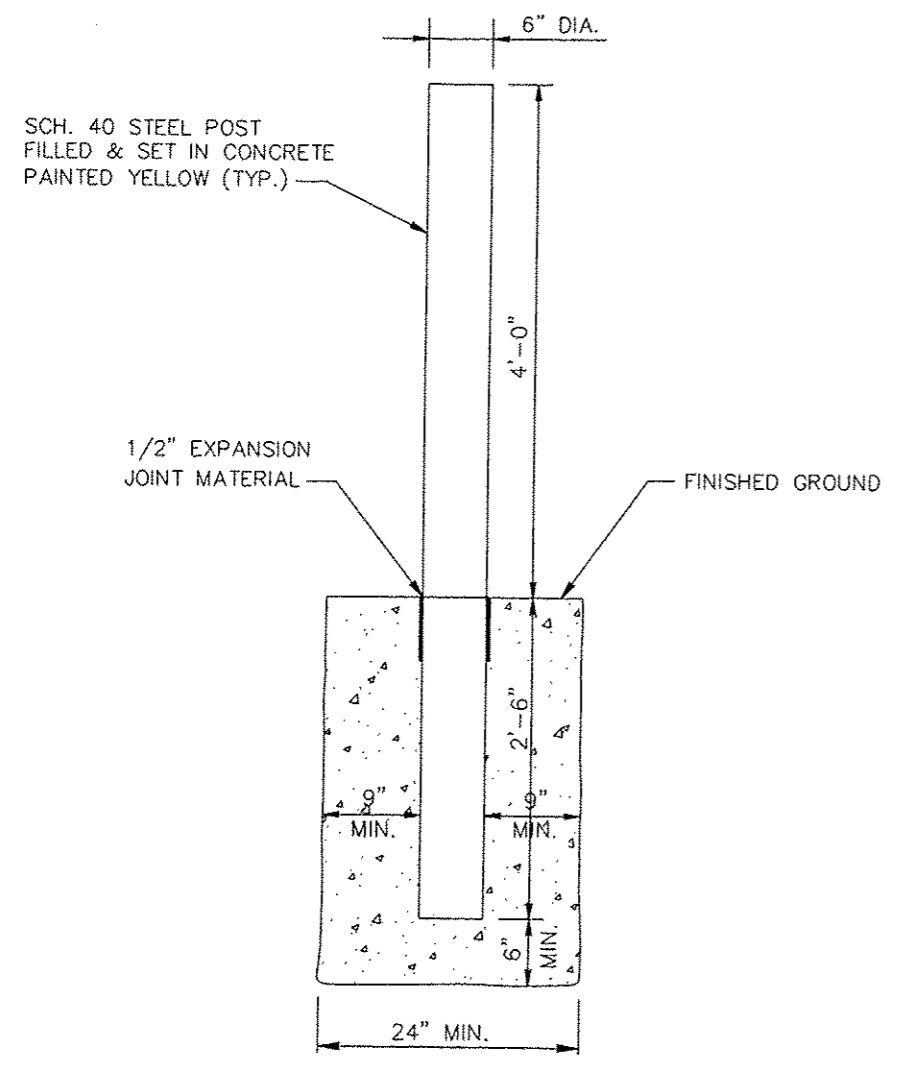
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ILLINOIS PROFESSIONAL DESIGN FIRM	184-00120
PROFESSIONAL ENGINEERING CORP.	42-03370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-00020
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

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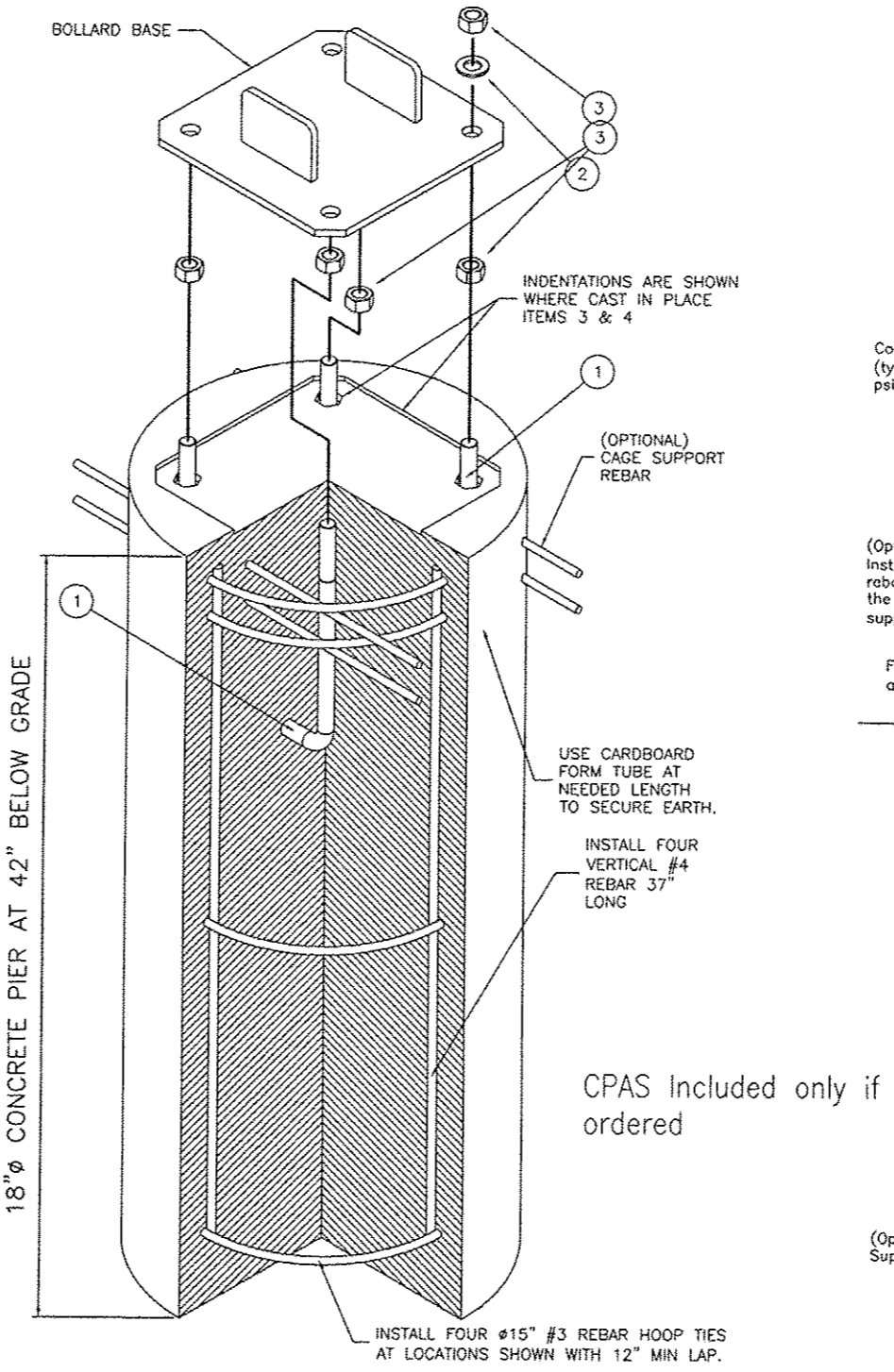
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**STATIONARY PIPE BOLLARD DETAIL**

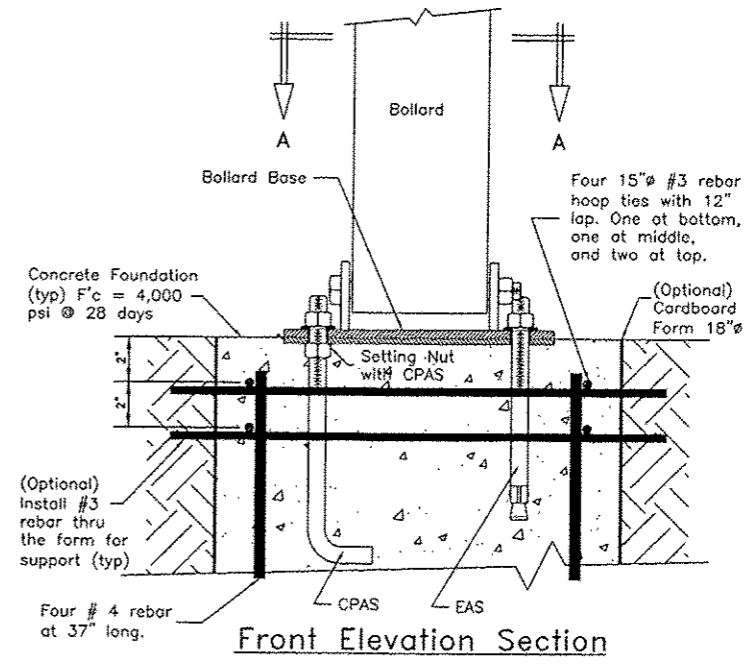
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ITEM PART #	DESCRIPTION	QTY.
* 9001	CPAS KIT - INCLUDES THE FOLLOWING PART NUMBERS *	*
1 0002	Ø3/4" x 12" TYPE L ANCHOR BOLT-H.D.G.	4
2 0007	Ø3/4" TYPE A FLAT NARROW WASHER GALVANIZED STEEL	4
3 0006	Ø3/4" HEX NUT GALVANIZED STEEL	8

NOTE: CONCRETE, FORM AND REBAR PROVIDED BY OTHERS

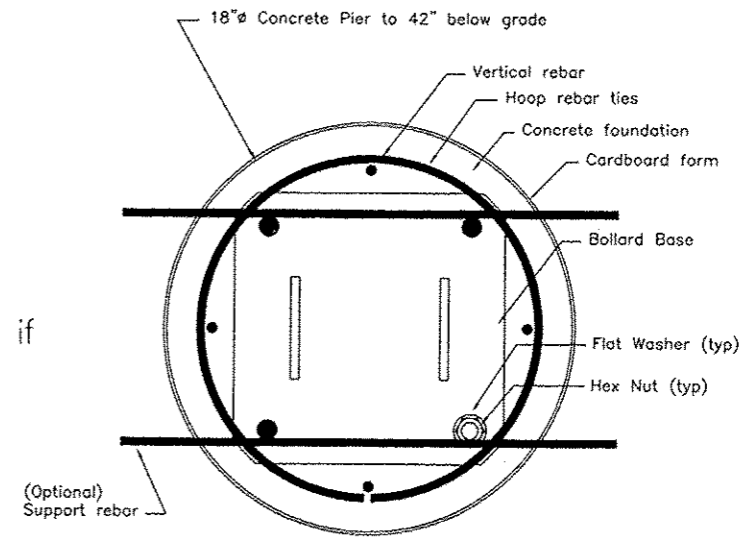


**CONCRETE PIER ANCHOR SYSTEM (CPAS)**

**REMOVABLE BOLLARD BASE DETAIL**



**Front Elevation Section**



**Plan Section "A-A"**

TITLE: SECTION 10-00032-00-BT  
**BOLLARD DETAILS**

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
▲		
▲		
▲		

DRAWN BY: JUV	SHEET
DESIGNED BY: JUV	<b>28</b>
CHECKED BY: MJK	OF 46 SHEETS
APPROVED BY: JUV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
<input type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

FBI ROUTE	SECTION	COUNTY
	1E-0008(156)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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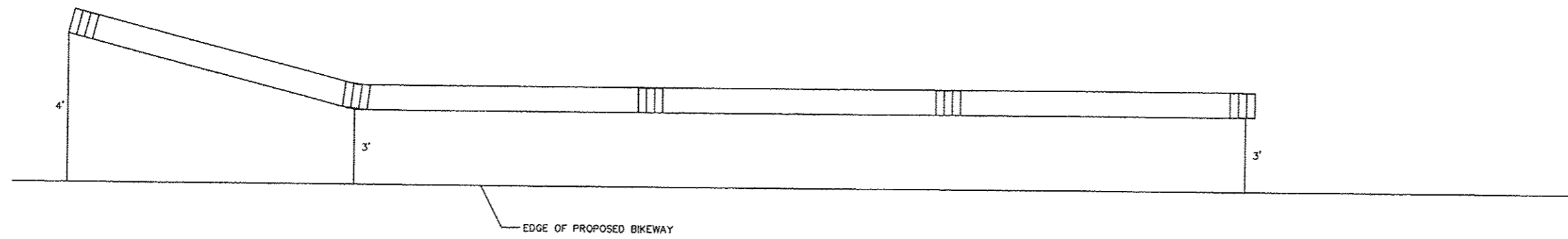
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-025370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-066292
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NO 001528
MISSOURI LAND SURVEYING CORP.	NO 000346

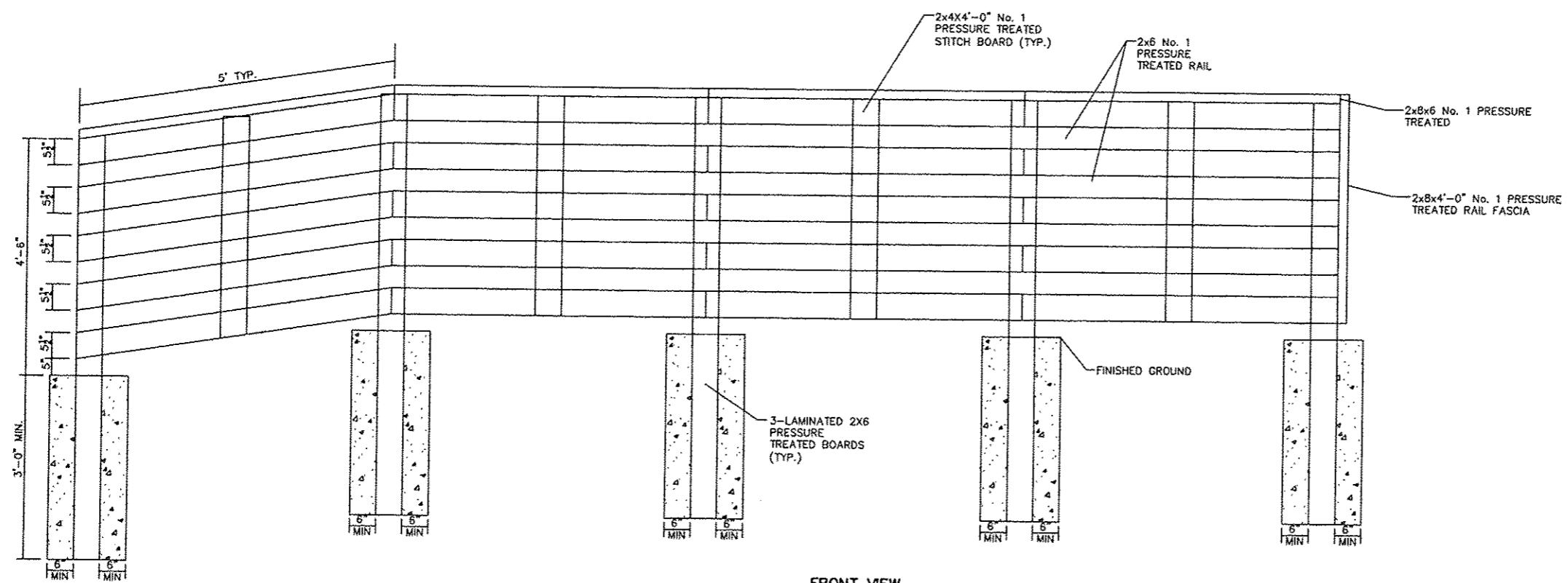
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Signature: \_\_\_\_\_  
Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

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PLAN VIEW



FRONT VIEW

**WOOD FENCE**  
STA. 29+29.27 - STA. 30+51.48  
STA. 29+97.27 - STA. 30+51.88  
STA. 31+65.57 - STA. 32+58.37

- \* SEE PLAN AND PROFILE SHEETS FOR TOTAL LENGTH OF EACH FENCE
- \* NO SPLICES ON END RAILING
- \* SEE FENCE RAIL TRANSITION DETAILS FOR FASTENER INFORMATION

TITLE: SECTION 10-00032-00-BT  
WOOD FENCE DETAILS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: JUV	SHEET 29
DESIGNED BY: JUV	OF 46 SHEETS
CHECKED BY: MJK	PROJECT DESCRIPTION
APPROVED BY: JUV	PROJECT NUMBER: M19100072A
<input type="checkbox"/> ISSUED FOR REVIEW <input type="checkbox"/> ISSUED FOR BIDDING <input type="checkbox"/> ISSUED FOR CONSTR. <input type="checkbox"/> RECORD DRAWING	

ROUTE	SECTION	COUNTY
	TC-0006(156)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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MOERCHEN, INC.**  
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TEL (618) 939-5050  
FAX (618) 939-3938  
waterloo@twm-inc.com
- ST. LOUIS OFFICE**  
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ST. LOUIS, MISSOURI 63146  
TEL (314) 236-5052  
FAX (314) 872-2184  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001573
MISSOURI LAND SURVEYING CORP.	MC 000246

SEAL

Renewal Date:  
Signature Date:

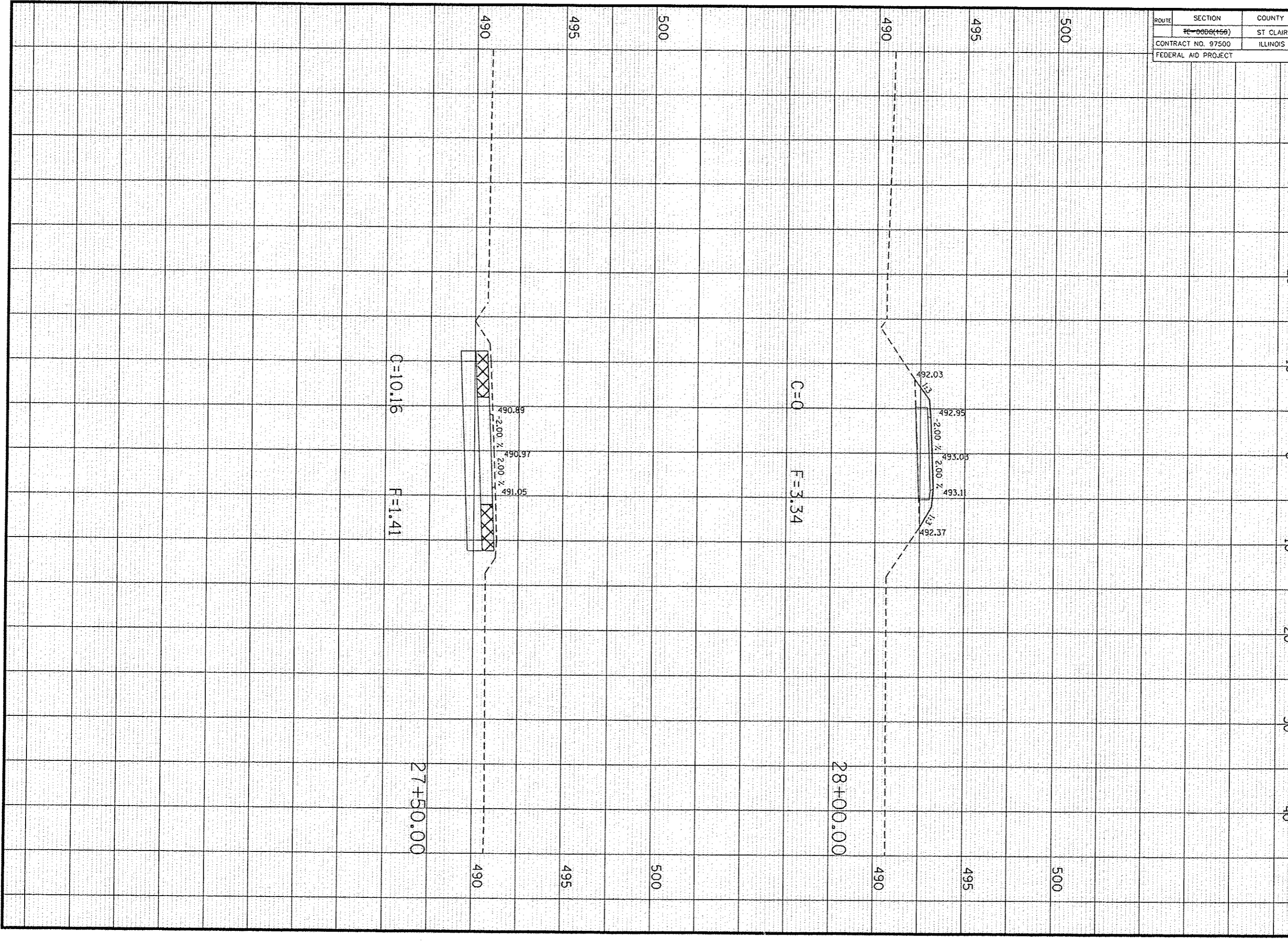
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TITLE: SECTION 10-10-0002-00-BT CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	31
CHECKED BY: RSD	
APPROVED BY: JUV	OF 46 SHEETS
PROJECT NUMBER: T07040293	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



FAU ROUTE	SECTION	COUNTY
	7E-0008(156)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	164-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	61-065302
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

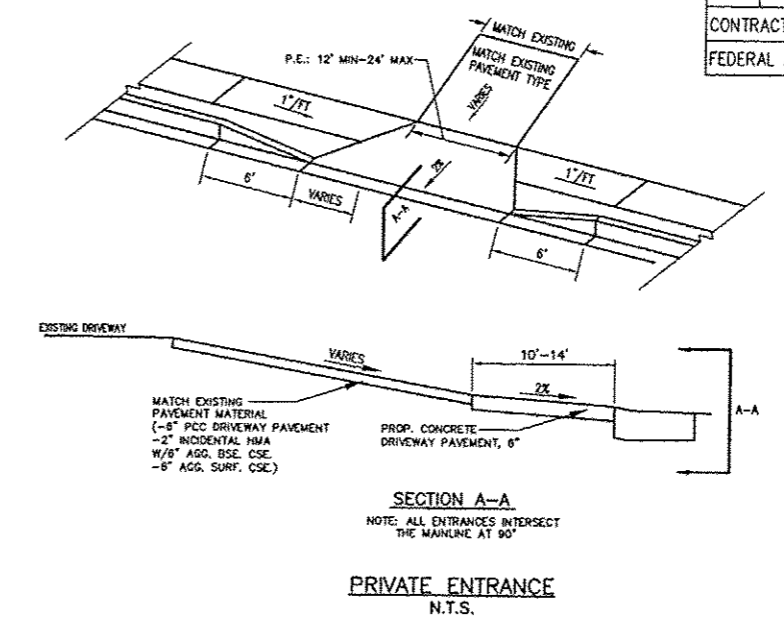
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Signature Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_  
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TITLE: SECTION 10-00032-00-BT  
CHAIN LINK FENCE AND SIGN DETAILS  
PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST CLAIR COUNTY, ILLINOIS

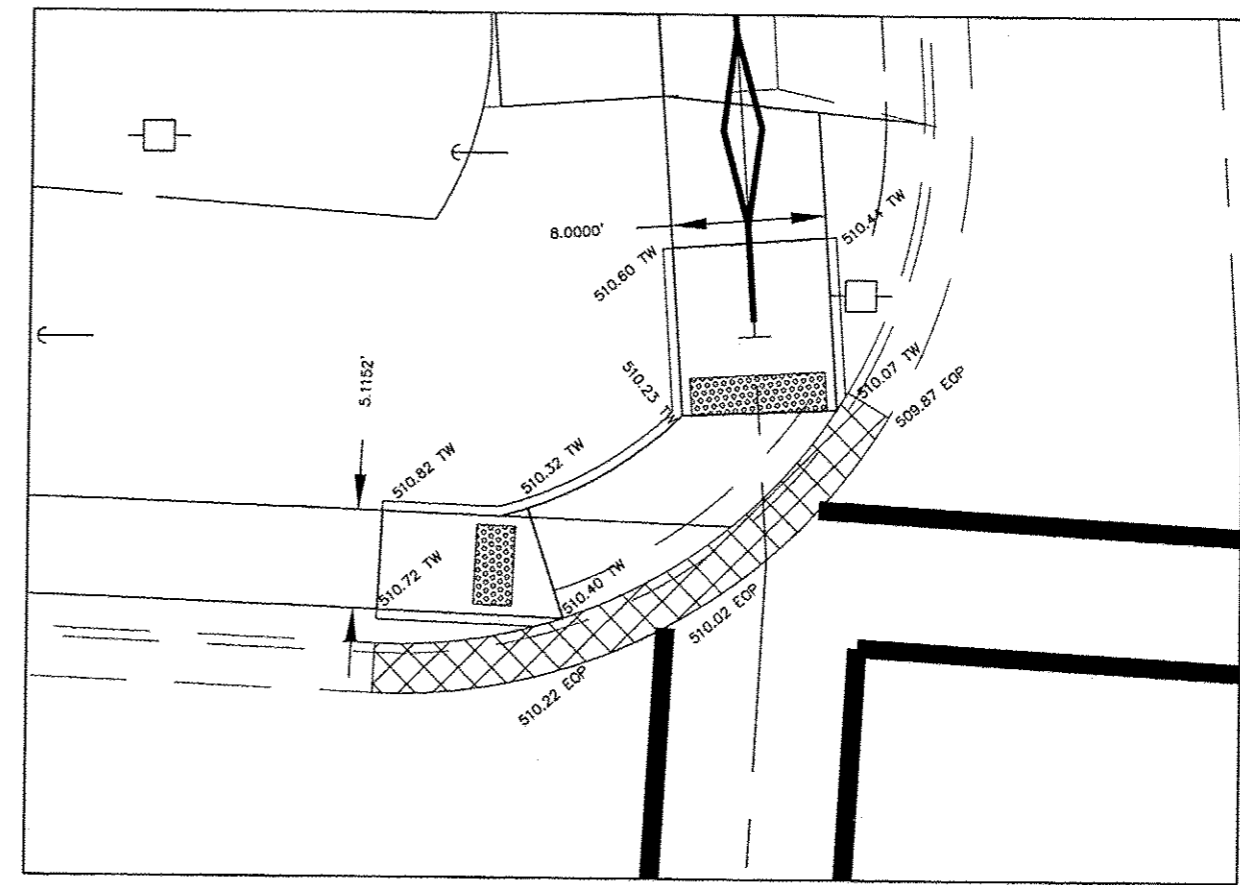
REV.	DATE	DESCRIPTION

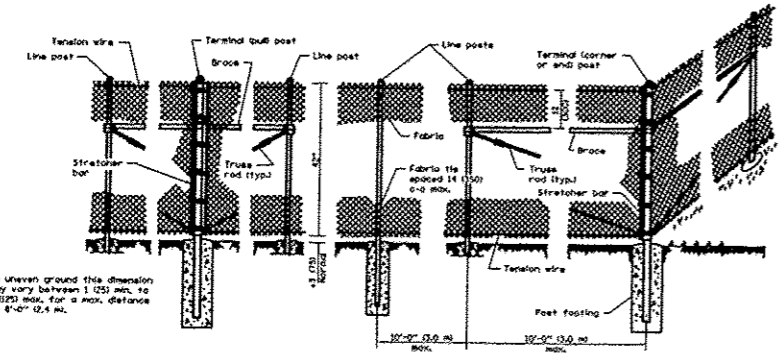
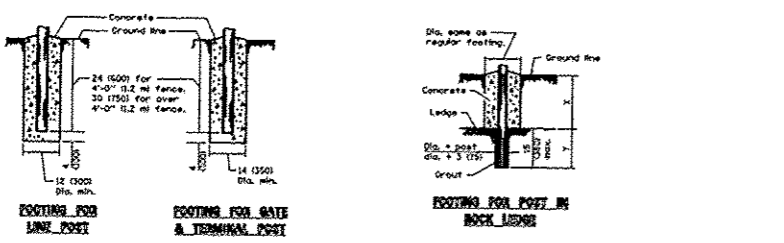
DRAWN BY: JUV	SHEET
DESIGNED BY: JUV	30
CHECKED BY: MJK	OF 45 SHEETS
APPROVED BY: JUV	PROJECT DESCRIPTION
PROJECT NUMBER: M19100072A	
ISSUED FOR REVIEW	ISSUED FOR BIDDING
ISSUED FOR CONSTR.	RECORD DRAWING



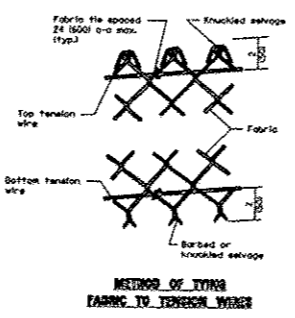
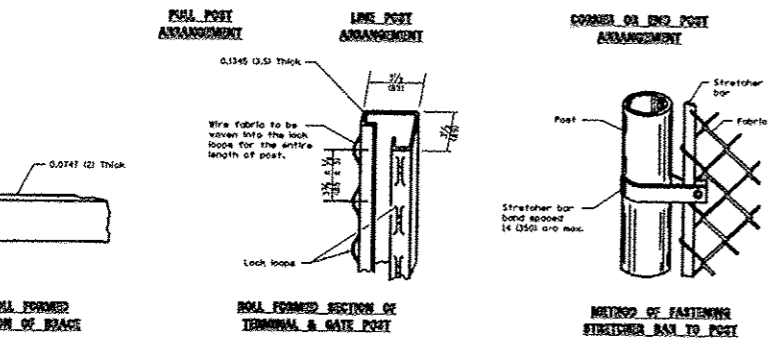
**SECTION A-A**  
NOTE: ALL ENTRANCES INTERSECT THE MAINLINE AT 90°  
**PRIVATE ENTRANCE**  
N.T.S.



**HANDICAP RAMP DETAIL**



**GENERAL NOTES**  
Post posts shall be placed at locations determined by the Engineer. They shall be placed at 600' (200 m) intervals between posts to which the ends of the fabric are sloped or midway between such posts when the distance is less than 1200' (400 m) and greater than 600' (200 m).  
X + Y shall not exceed 24 (600), 30 (750), or 36 (900), as applicable. When X is 0 - 3 (0 - 75), 15 (380), or 21 (525), then Y = 15 (375) and the post shall be shortened as required. When X exceeds 8 (225), 15 (380), or 21 (525), then Y shall be decreased correspondingly.  
All dimensions are in inches (millimeter) unless otherwise shown.



LINE POST	Section	Qty./FT. (kg/m)
Pipe Type A 1.50 (48.3) O.D.	2.14 (6.09)	2.14
Pipe Type B 1.50 (48.3) O.D.	2.28 (6.53)	2.28
Pipe Type C 1.50 (48.3) O.D.	2.26 (6.50)	2.26
H 1.875x1.625 (47.6x41.3)	2.77 (7.82)	2.77
C	1.66 (4.70)	1.66
I	2.30 (6.50)	2.30

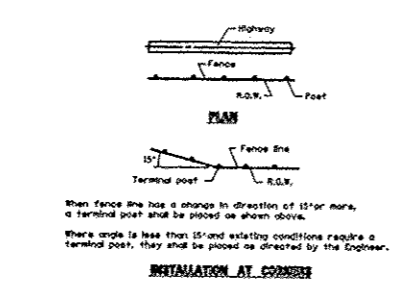
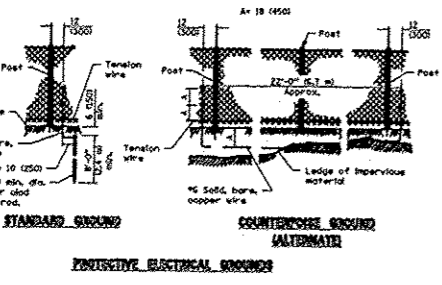
TERMINAL POST	Section	Qty./FT. (kg/m)
Pipe Type A 2.375 (60.3) O.D.	3.65 (10.3)	3.65
Pipe Type B 2.375 (60.3) O.D.	3.11 (8.83)	3.11
Pipe Type C 2.375 (60.3) O.D.	3.09 (8.80)	3.09
H 2.125x1.875 (54.0x47.6)	See detail	See detail
Roll Formed 2 1/2\"/>		

HORIZONTAL BRACE	Section	Qty./FT. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (6.46)	2.27
Pipe Type B 1.66 (42.2) O.D.	1.83 (5.17)	1.83
Pipe Type C 1.66 (42.2) O.D.	1.82 (5.15)	1.82
H 1.31x1.5 (33.3x38.1)	2.25 (6.35)	2.25
Roll Formed 1 1/2\"/>		

GATE FRAMES	Section	Qty./FT. (kg/m)
Pipe Type A 1.56 (47.2) O.D.	2.27 (6.46)	2.27
Pipe Type B 1.66 (42.2) O.D.	1.83 (5.17)	1.83
Pipe Type C 1.66 (42.2) O.D.	1.82 (5.15)	1.82

GATE POSTS *					
Gate Opening - ft. wd	Size (O.D.)	Qty./FT. (kg/m)	Qty./100 FT. (kg/30.5m)	Size (O.D.)	Qty./100 FT. (kg/30.5m)
Up to 4 (1.2)	Up to 8 (2.4)	2.375 (60.3)	271 (7.85)	4.32 (12.1)	311 (8.83)
Over 4 (1.2) to 8 (2.4)	Over 8 (2.4) to 16 (4.9)	2.875 (73.9)	279 (8.29)	5.79 (16.2)	464 (13.1)
Over 8 (2.4) to 12 (3.7)	Over 12 (3.7) to 24 (7.3)	3.5 (91.4)	278 (8.27)	8.82 (24.6)	670 (19.1)
Over 12 (3.7) to 16 (4.9)	Over 16 (4.9) to 24 (7.3)	3.5 (91.4)	278 (8.27)	11.30 (31.7)	849 (24.0)

\* The 3/4\"/>



**CHAIN LINK FENCE (SPECIAL) DETAIL**

ROUTE	SECTION	COUNTY
	<del>16-0000(166)</del>	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT,  
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ST. LOUIS, MISSOURI 63146  
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FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000020
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

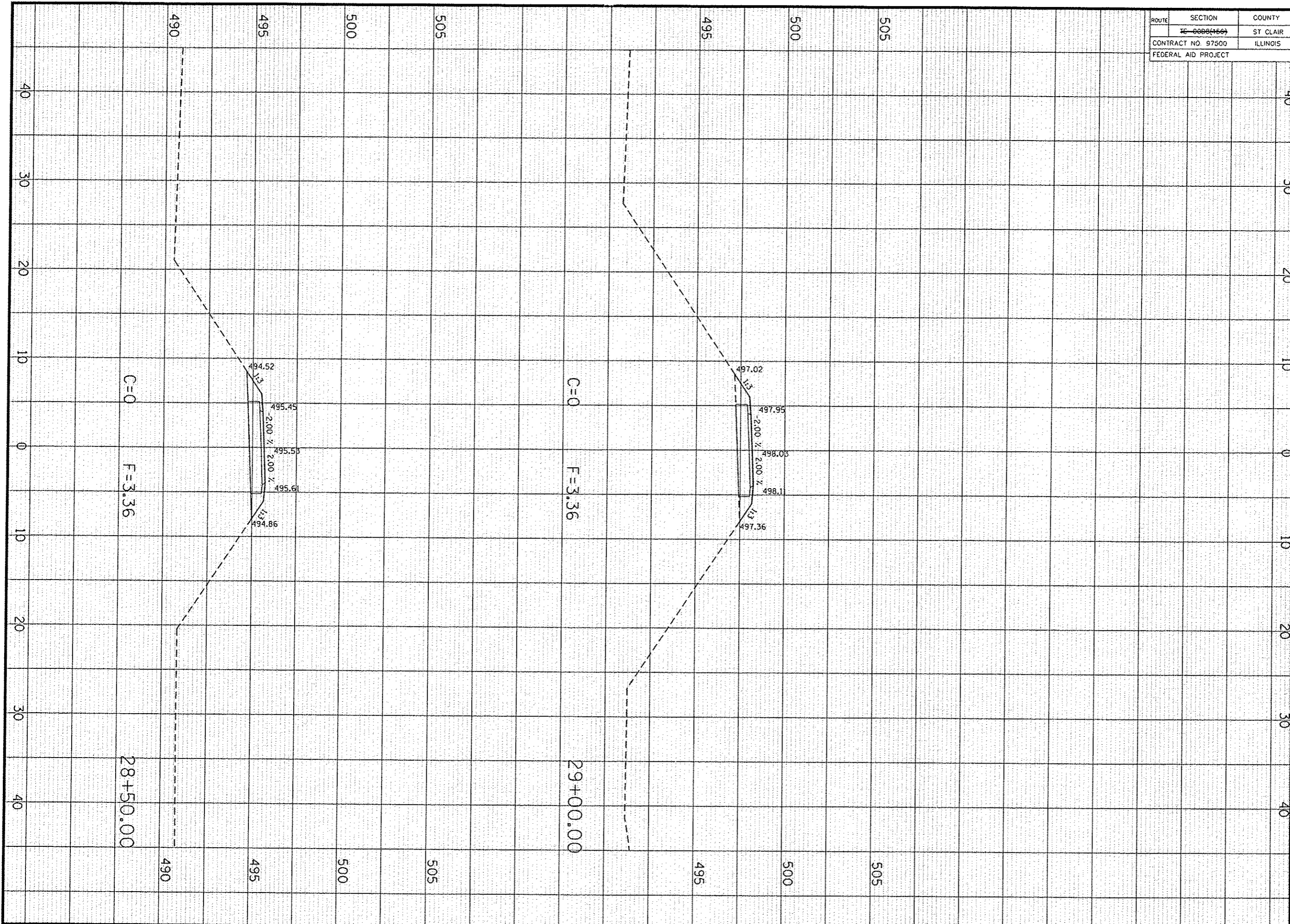
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TITLE: SECTION 10-0032-00-BT  
CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	32
CHECKED BY: RSD	
APPROVED BY: JW	OF 46 SHEETS
PROJECT NUMBER: T07040293	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
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ROUTE	SECTION	COUNTY
	TC-0608(456)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

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TITLE: 18-00-20000-01 NOTICES

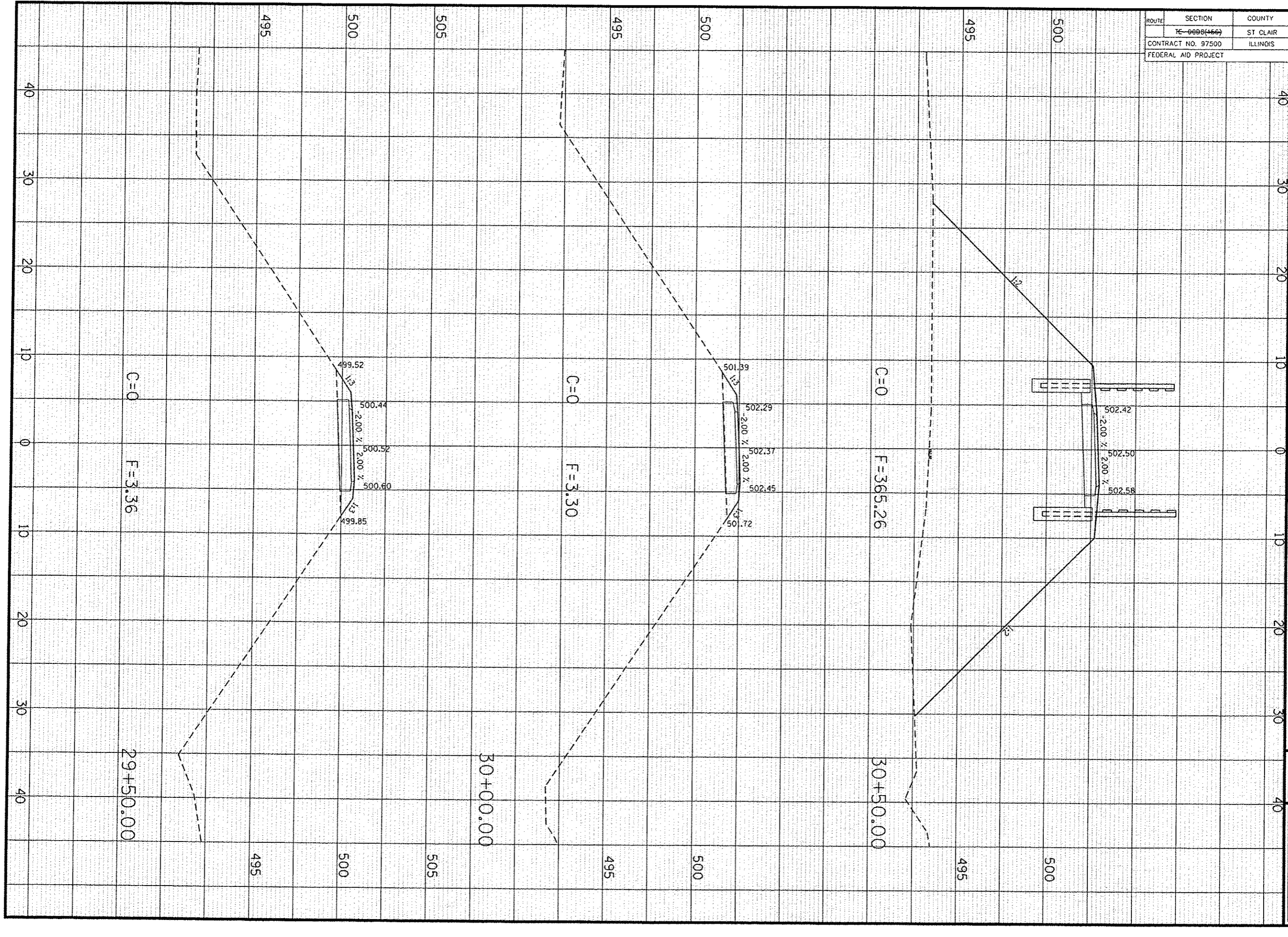
CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	<b>33</b>
CHECKED BY: RSD	
APPROVED BY: JUV	OF 46 SHEETS
PROJECT NUMBER: 107040293	

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ROUTE	SECTION	COUNTY
	#E-0000(150)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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PROFESSIONAL REGISTRATIONS	LICENSE NO.
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ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 006346

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Renewal Date:  
Signature Date:

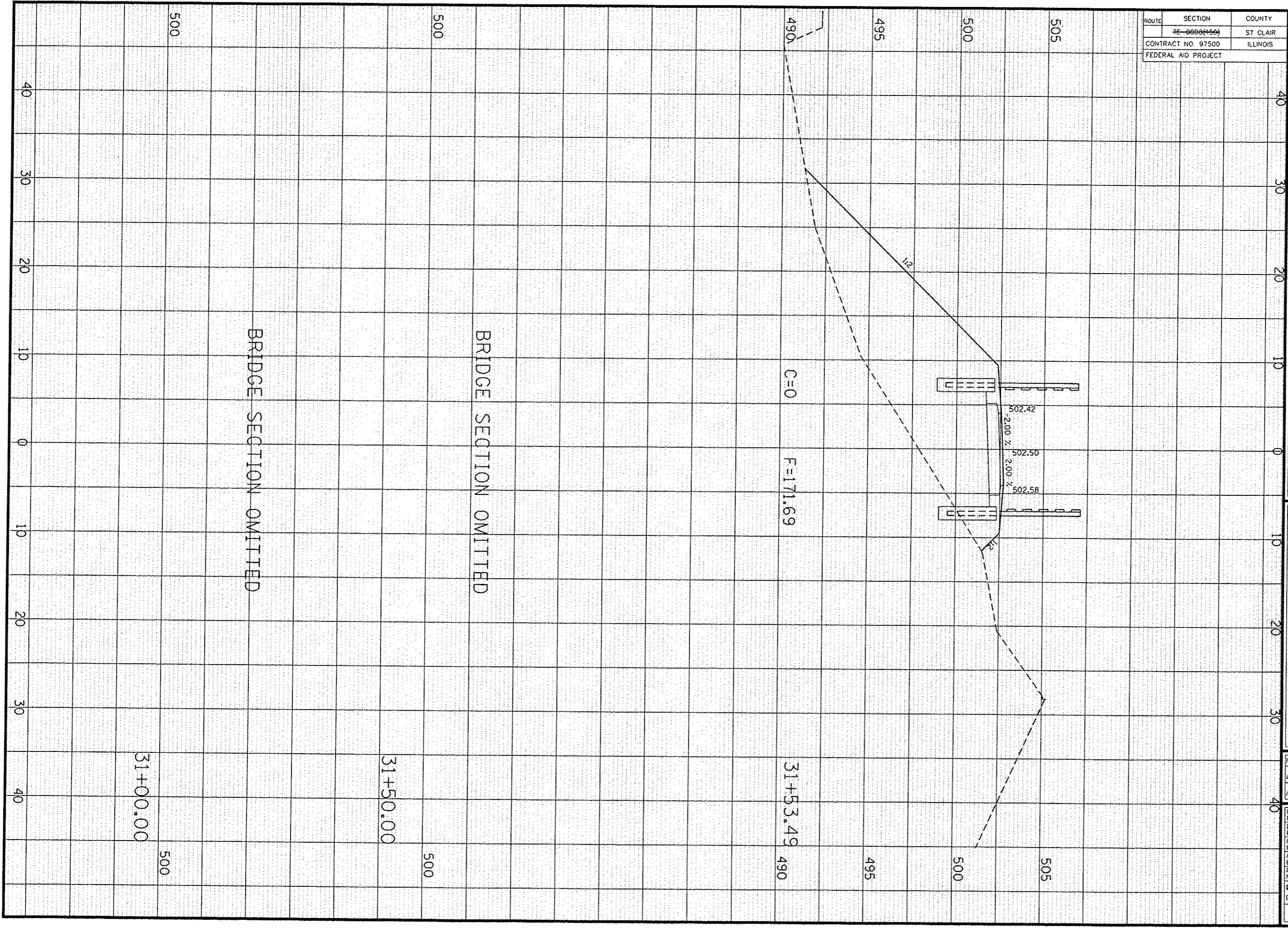
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SECTION 10-10-00-2000-01 NONION SECS  
CROSS SECTIONS

PROJECT:  
**RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS**

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	<b>34</b>
CHECKED BY: RSD	
APPROVED BY: JJV	OF 46 SHEETS
PROJECT NUMBER: T07040293	
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<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



ROUTE	SECTION	COUNTY
4E-0608(166)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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 FAX (314) 872-2194  
 stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001200
PROFESSIONAL ENGINEERING CORP.	62-035170
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

SEAL

Renewed Date:  
 Signature Date:

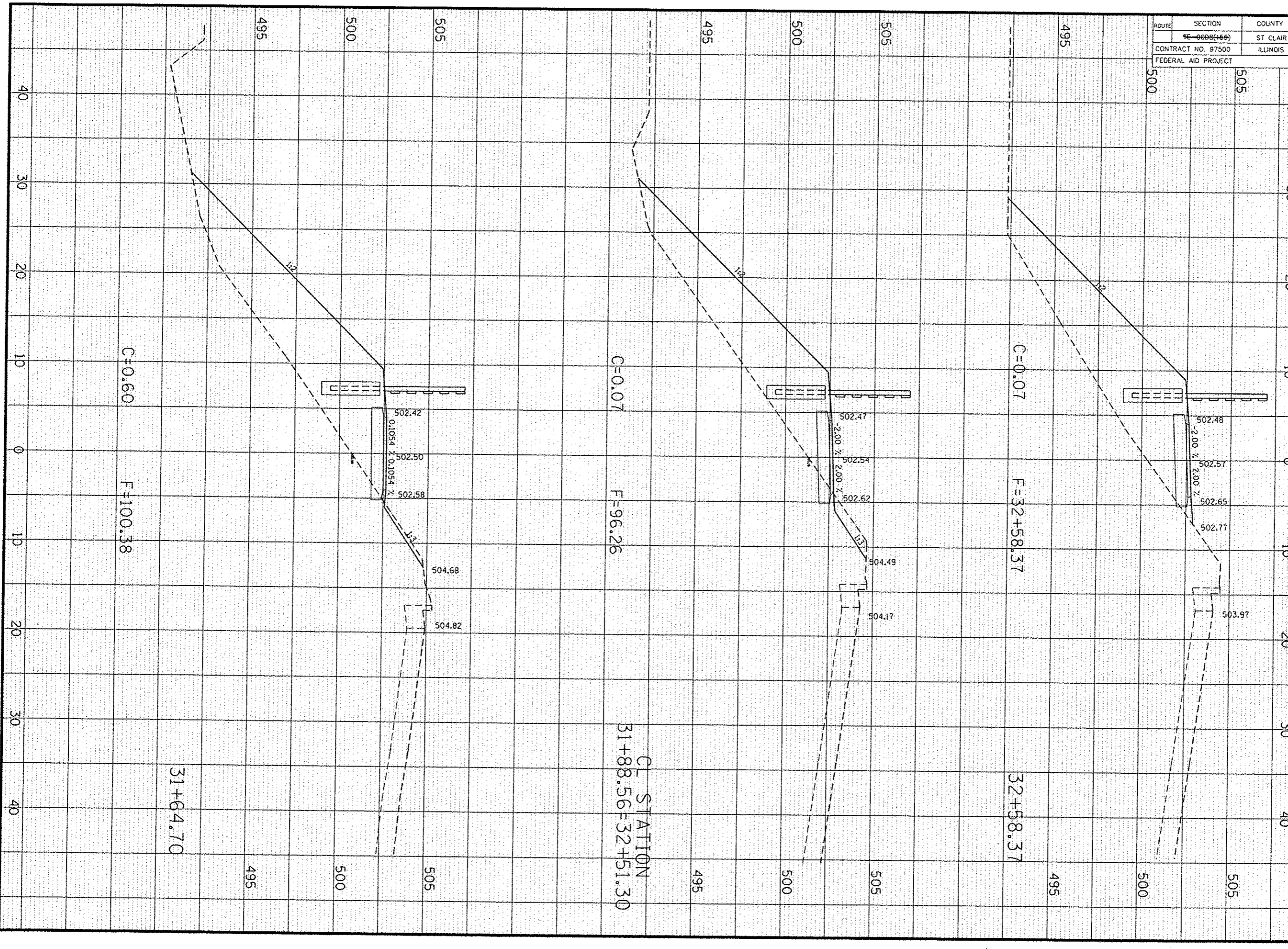
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TITLE: **SECTION CROSS SECTIONS**

PROJECT: **RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	<b>35</b>
CHECKED BY: RSD	OF 46 SHEETS
APPROVED BY: JJV	
PROJECT NUMBER: T07040293	
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<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



ROUTE	SECTION	COUNTY
	TC-0088(466)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-01220
PROFESSIONAL ENGINEERING CORP.	62-015370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

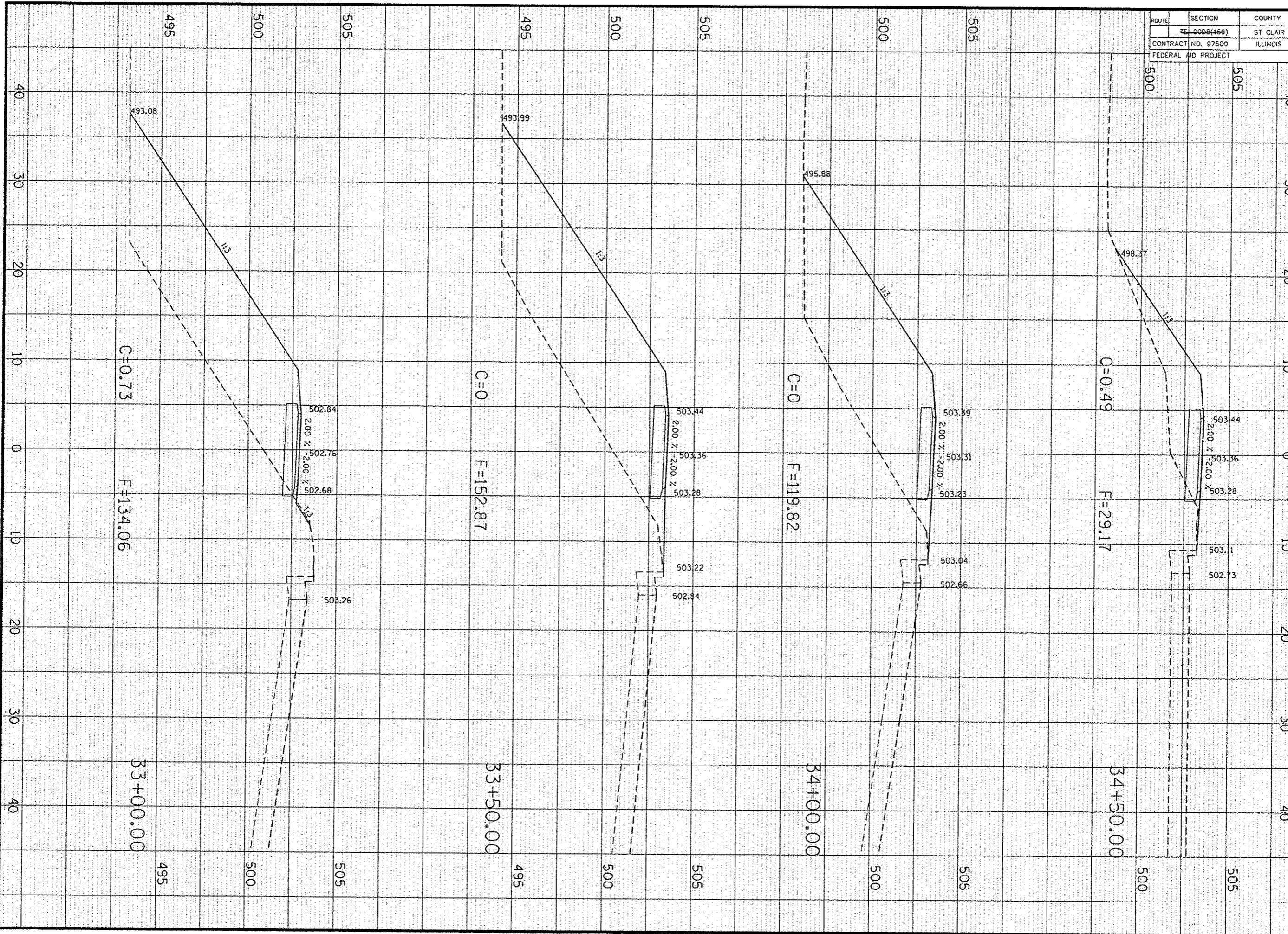
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TITLE: SECTION 10-10-10-00-23000-10 CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	<b>36</b>
CHECKED BY: RSD	
APPROVED BY: JJV	OF 46 SHEETS
PROJECT NUMBER T07040293	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



ROUTE	SECTION	COUNTY
TE-0008(156)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT,  
WADE &  
MOERCHEN, INC.**  
ENGINEERS SURVEYORS PLANNERS



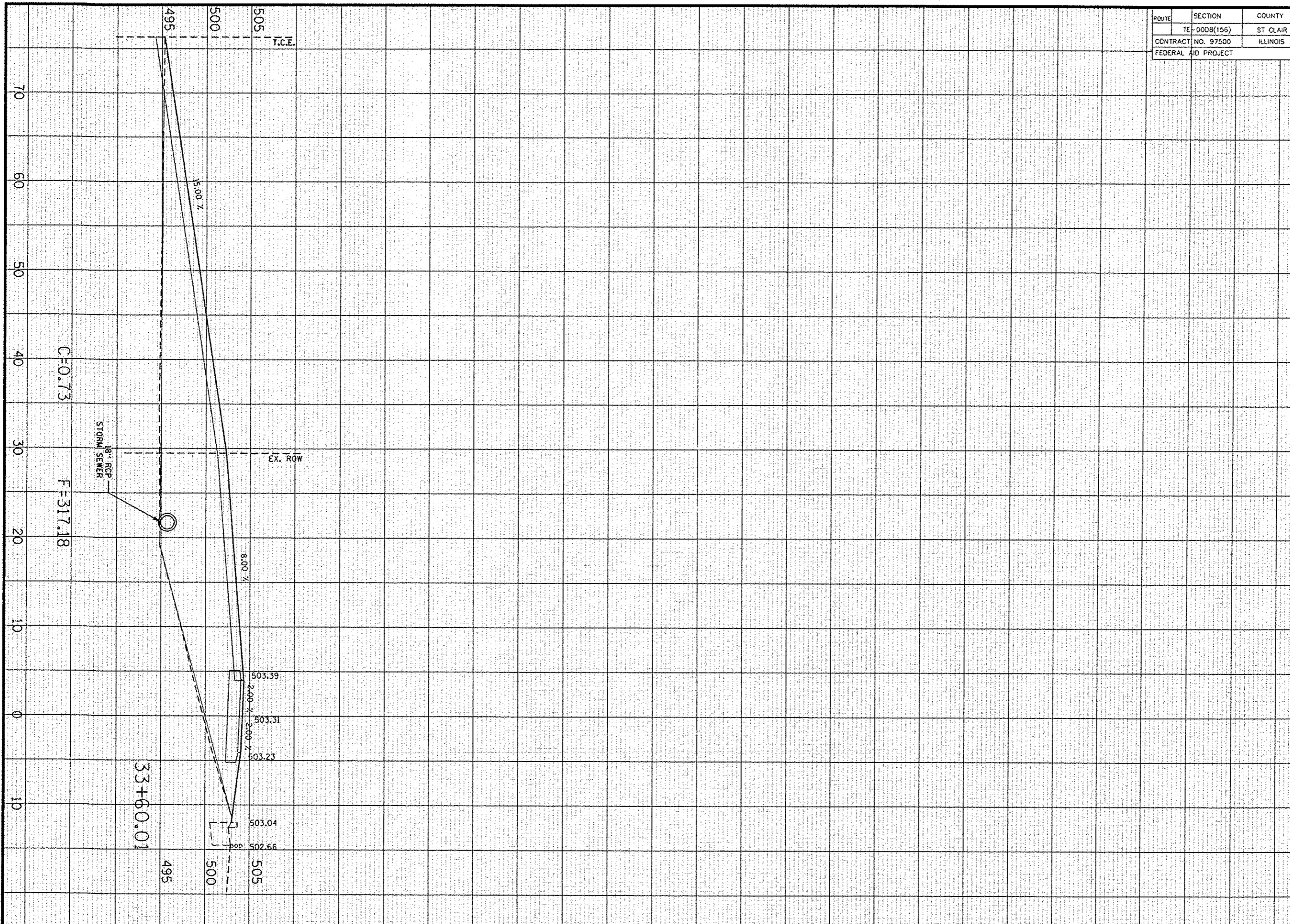
- CORPORATE OFFICE**  
4940 OLD COLLINSVILLE RD.  
SWANSEA, ILLINOIS 62226  
TEL (618) 624-4488  
FAX (618) 624-6588  
corp@twm-inc.com
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FAX (618) 939-3938  
waterloo@twm-inc.com
- ST. LOUIS OFFICE**  
1001 CRAIG ROAD, SUITE 260  
ST. LOUIS, MISSOURI 63146  
TEL (314) 236-5052  
FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

SEAL

Renewal Date:  
Signature Date:

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**CROSS SECTIONS**

**RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS**

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: <b>CHA</b>	SHEET
DESIGNED BY: <b>CHA</b>	<b>36A</b>
CHECKED BY: <b>RSD</b>	
APPROVED BY: <b>JJV</b>	
PROJECT NUMBER: <b>T07040293</b>	

OF 48 SHEETS

ISSUED FOR REVIEW     ISSUED FOR BIDDING  
 ISSUED FOR CONSTR.     RECORD DRAWING

ROUTE	SECTION	COUNTY
	2E-0008(466)	ST. CLAIR
	CONTRACT NO. 97500	ILLINOIS
FEDERAL AID PROJECT		

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TEL (314) 236-5052  
FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035310
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000279
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

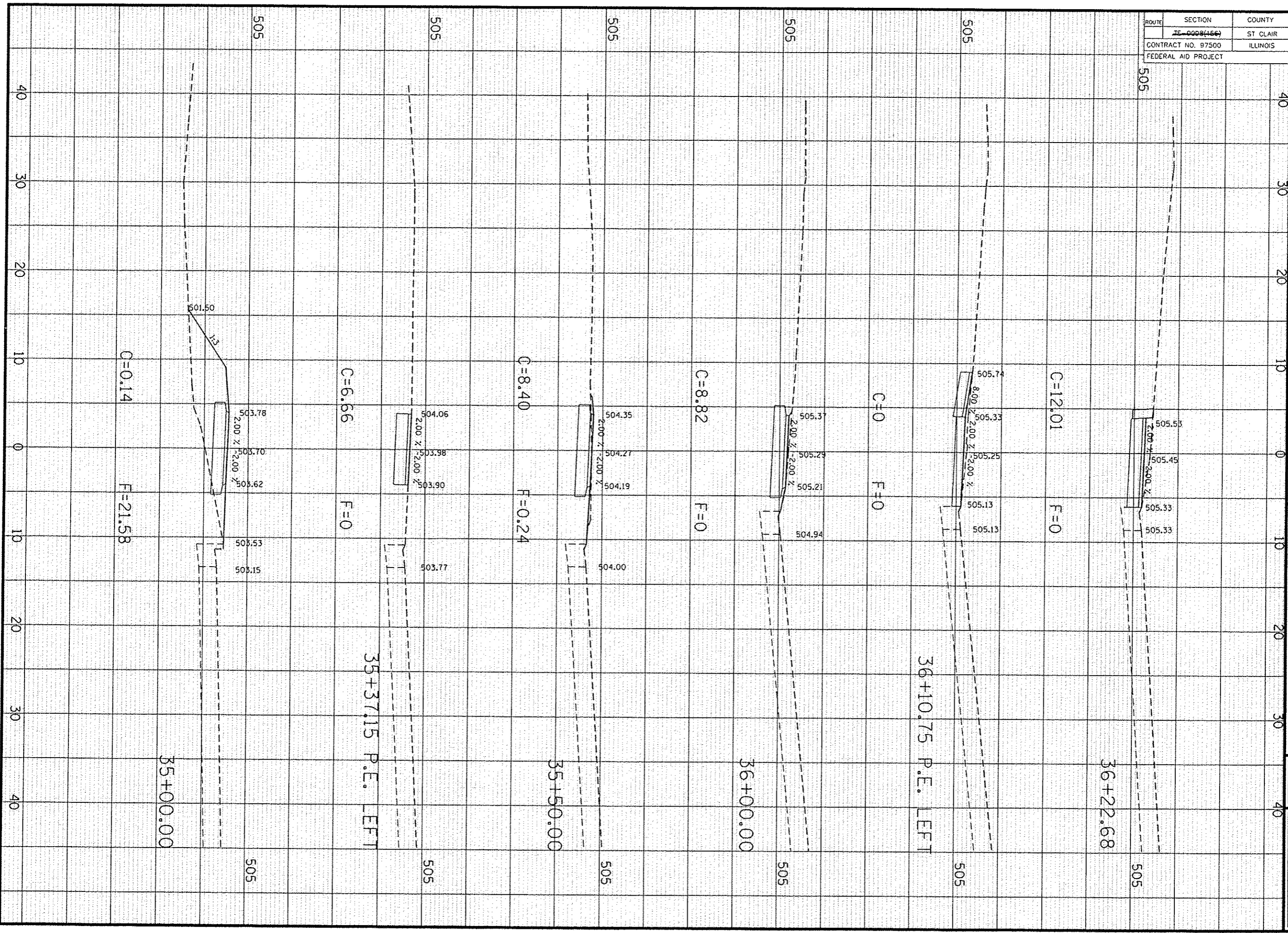
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SECTION 10-00032-00-BT  
CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	37
CHECKED BY: RSD	
APPROVED BY: JJV	
PROJECT NUMBER: T07040293	OF 46 SHEETS
<input type="checkbox"/> ISSUED FOR BIDDING <input type="checkbox"/> ISSUED FOR CONSTR. <input type="checkbox"/> RECORD DRAWING	



ROUTE	SECTION	COUNTY
7E-0888(466)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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ST. LOUIS, MISSOURI 63146  
TEL (314) 236-5052  
FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001270
PROFESSIONAL ENGINEERING CORP.	02-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 091528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

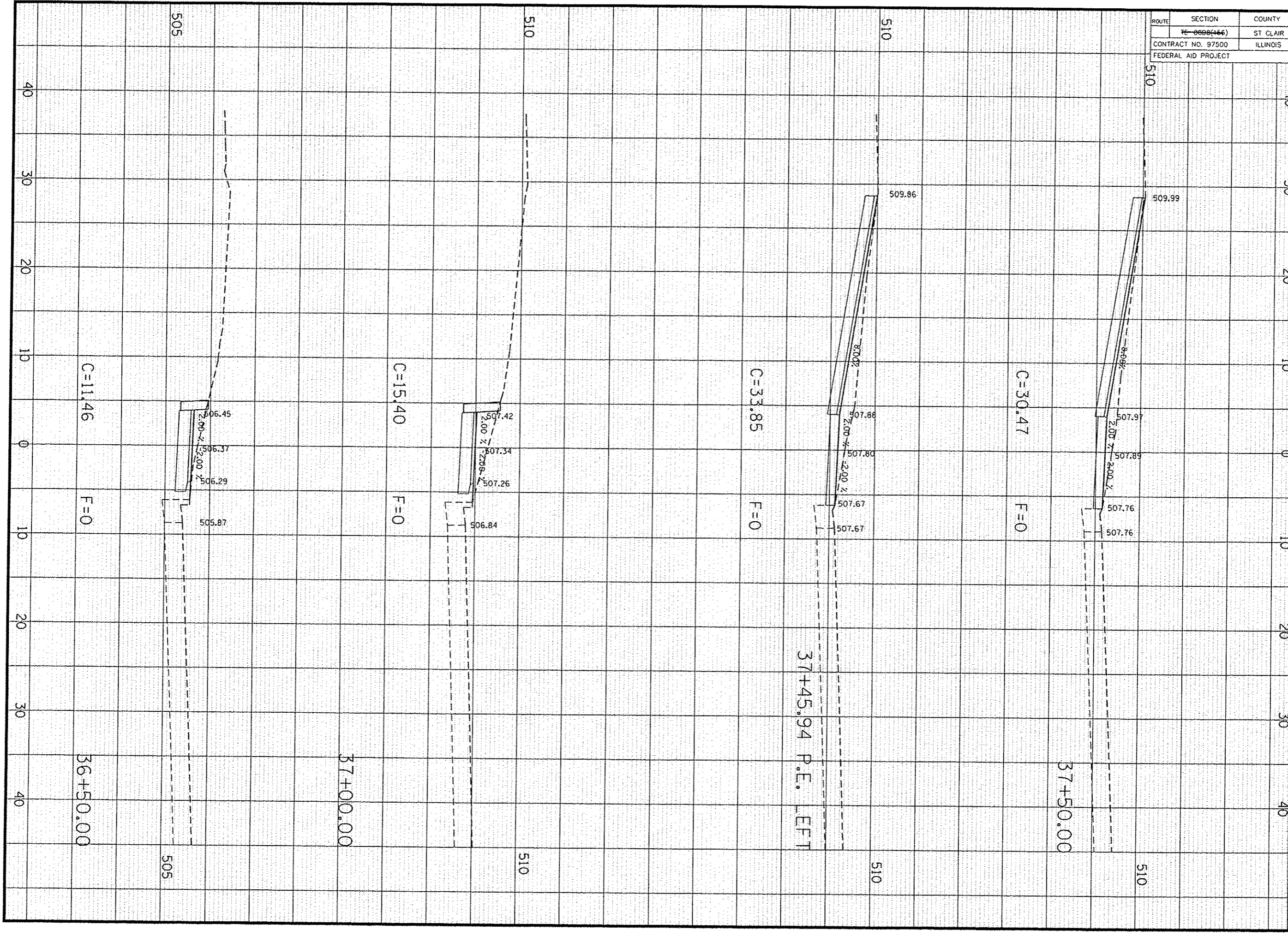
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TITLE: SECTION 18-00-22-0000-01 NORTH CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	CHECKED BY: RSD	APPROVED BY: JJV	SHEET 38
DESIGNED BY: CHA			
PROJECT NUMBER: T07040293	OF 46 SHEETS		
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING	<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



ROUTE	SECTION	COUNTY
	TC-0000(150)	ST CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001720
ILLINOIS PROFESSIONAL ENGINEERING CORP.	62-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-076202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000209
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

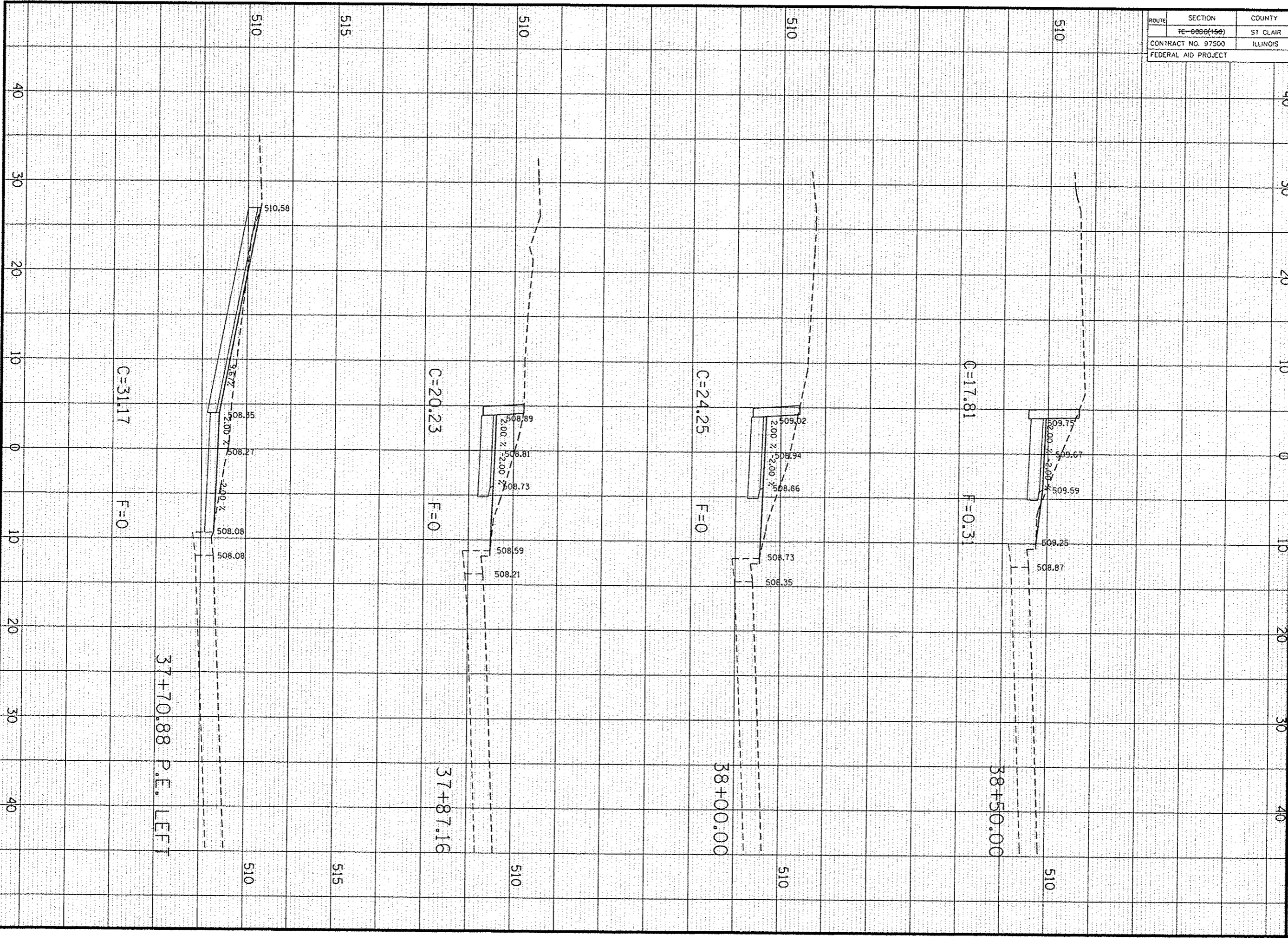
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TITLE: SECTION 10-00032-00-BT  
CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
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DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	39
CHECKED BY: RSD	
APPROVED BY: JUV	OF 46 SHEETS
PROJECT NUMBER T07040293	
<input checked="" type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING





ROUTE	SECTION	COUNTY
	4E-0000(456)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT,  
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MOERCHEN, INC.**  
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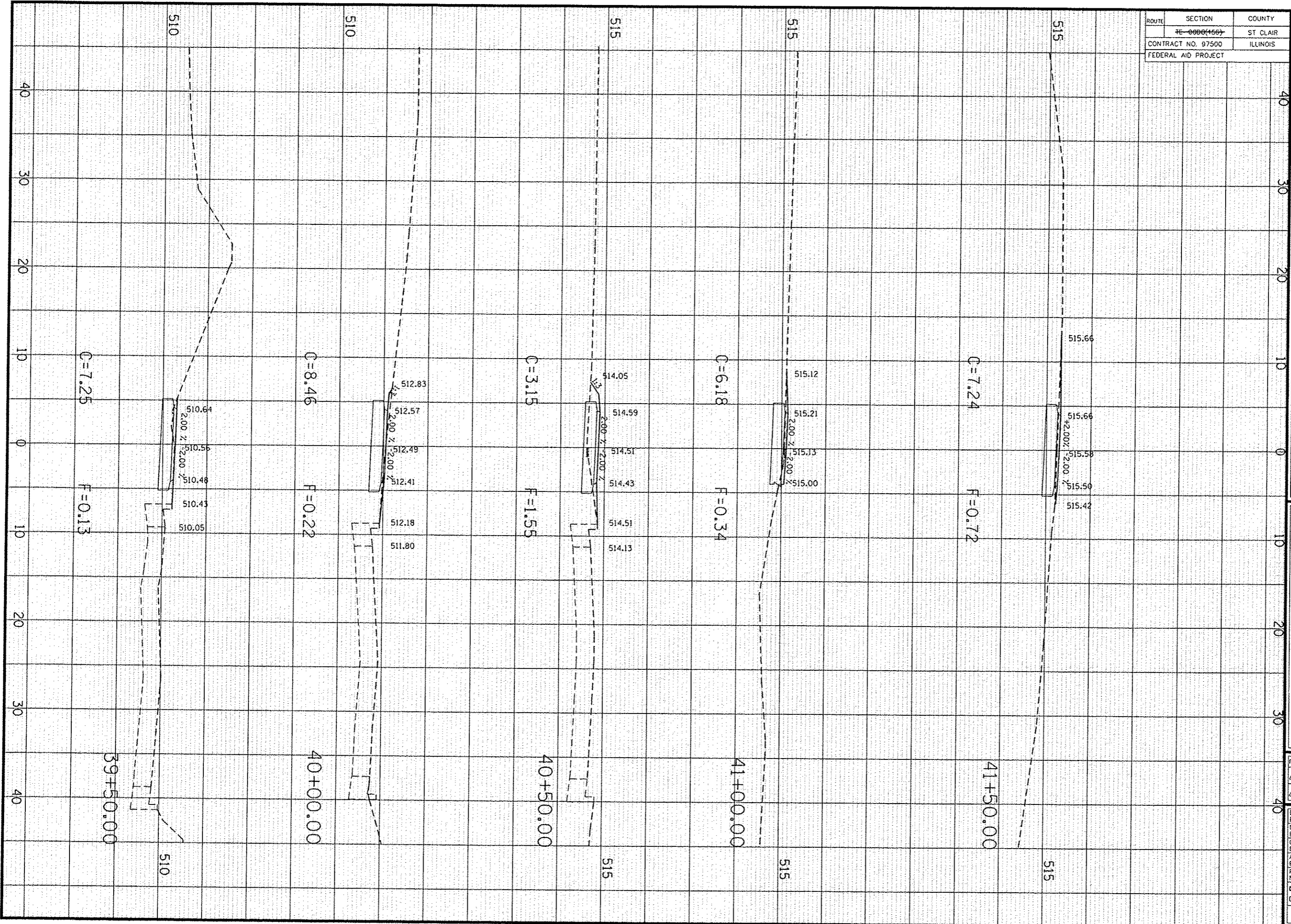
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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005292
ILLINOIS PROF. LAND SURVEYING CORP.	D48-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

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TITLE: SECTION SECTIONS CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
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DRAWN BY:	CHA	SHEET	
DESIGNED BY:	CHA	40	
CHECKED BY:	RSD		
APPROVED BY:	JJV		
PROJECT NUMBER	T07040293	OF 46 SHEETS	
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<input type="checkbox"/> ISSUED FOR CONSTR.		<input type="checkbox"/> RECORD DRAWING	

ROUTE	SECTION	COUNTY
4E-0000(150)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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ST. LOUIS, MISSOURI 63146  
TEL (314) 236-5052  
FAX (314) 872-2194  
stlouis@twm-inc.com

ILLINOIS PROFESSIONAL DESIGN FIRM	LICENSE NO.
ILLINOIS PROFESSIONAL ENGINEERING CORP.	184-001270
ILLINOIS PROFESSIONAL STRUCTURAL ENGINEER CORP.	81-005370
ILLINOIS PROFESSIONAL LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGINEER CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

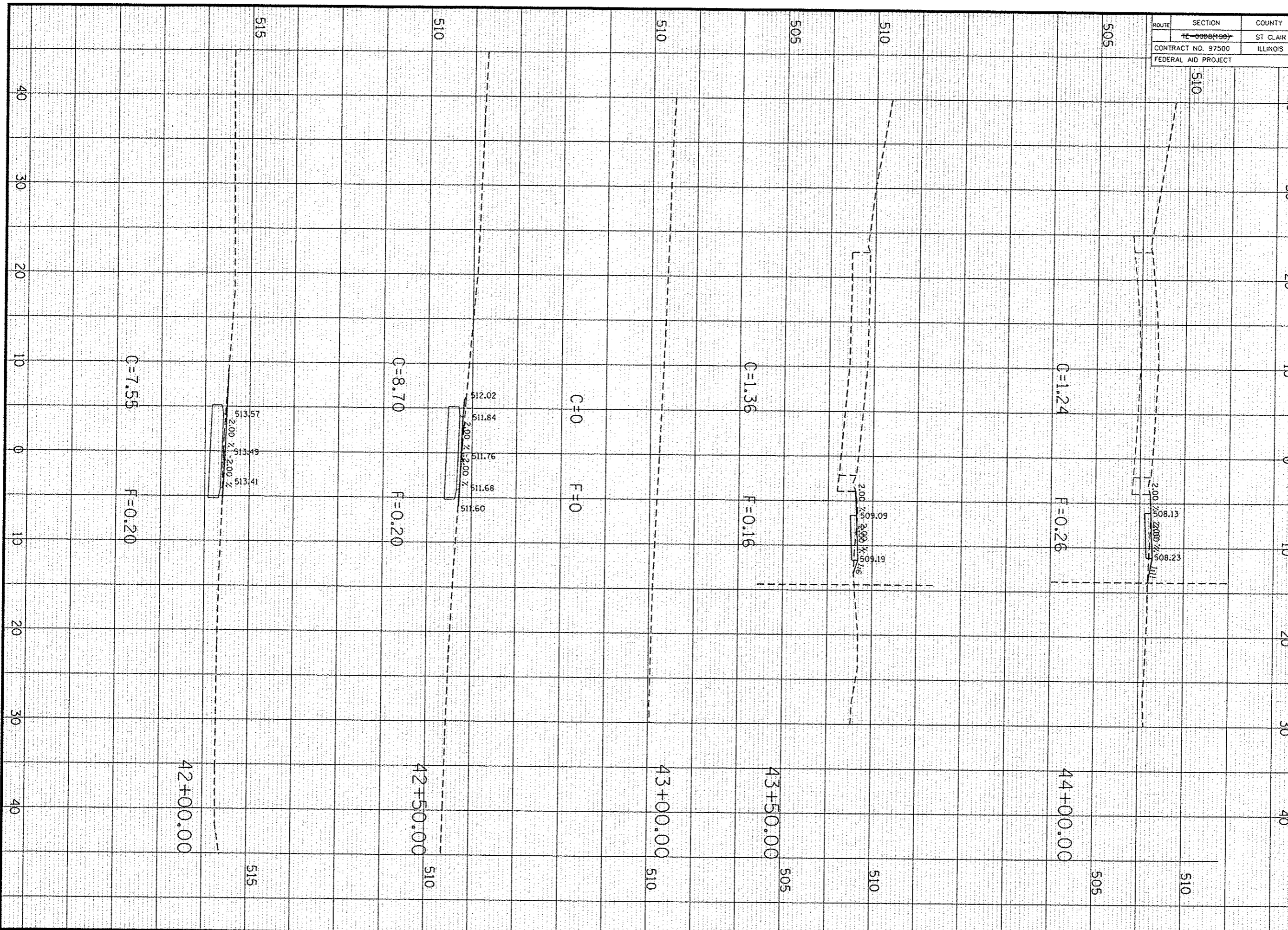
Renewal Date: \_\_\_\_\_  
Signature Date: \_\_\_\_\_

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TITLE: **CROSS SECTIONS**  
PROJECT: **RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	<b>41</b>
CHECKED BY: RSD	
APPROVED BY: JJV	OF 46 SHEETS
PROJECT NUMBER: T07040293	
<input type="checkbox"/> ISSUED FOR REVIEW	<input checked="" type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



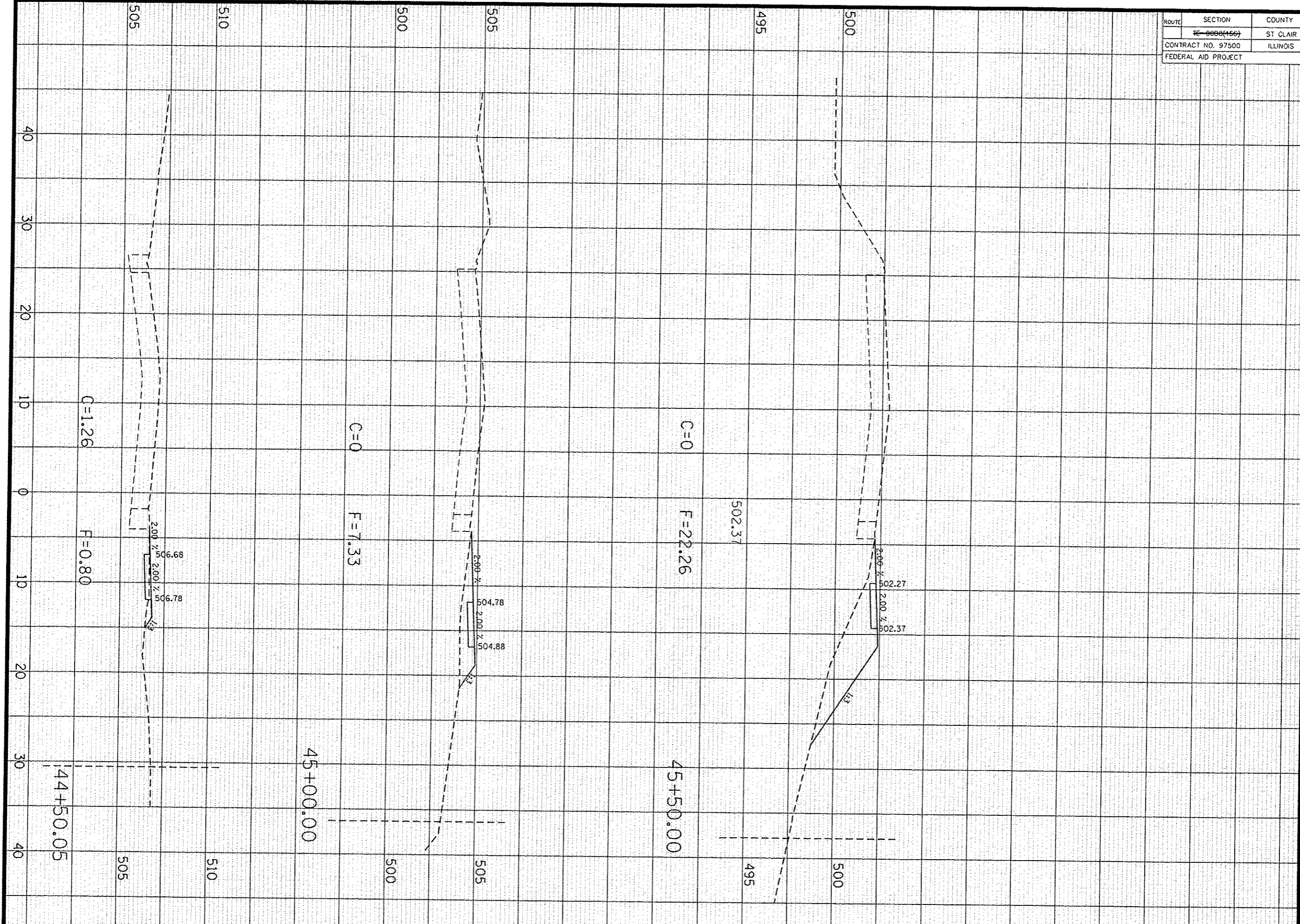
ROUTE	SECTION	COUNTY
	7E-0000(150)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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FAX (618) 549-8450  
info@twm-inc.com
- **EDWARDSVILLE OFFICE**  
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EDWARDSVILLE, ILLINOIS 62025  
TEL (618) 656-4040  
FAX (618) 656-4343  
info@twm-inc.com
- **ST. CHARLES OFFICE**  
400 NORTH 5th ST., SUITE 101  
ST. CHARLES, MISSOURI 63301  
TEL (636) 724-8300  
FAX (636) 724-8304  
info@twm-inc.com
- **WATERLOO OFFICE**  
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WATERLOO, ILLINOIS 62298  
TEL (618) 939-5050  
FAX (618) 939-3938  
info@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	104-001220
PROFESSIONAL ENGINEERING CORP.	62-033370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346



TITLE: SECTION 10-00032-00-BT  
CROSS SECTIONS  
PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
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△		

DRAWN BY:	JW	SHEET
DESIGNED BY:	JW	42
CHECKED BY:	JW	OF 48 SHEETS
APPROVED BY:	JW	PROJECT DESCRIPTION
PROJECT NUMBER	JW	

ISSUED FOR BIDDING  
ISSUED FOR CONSTR. □ RECORD DRAWING

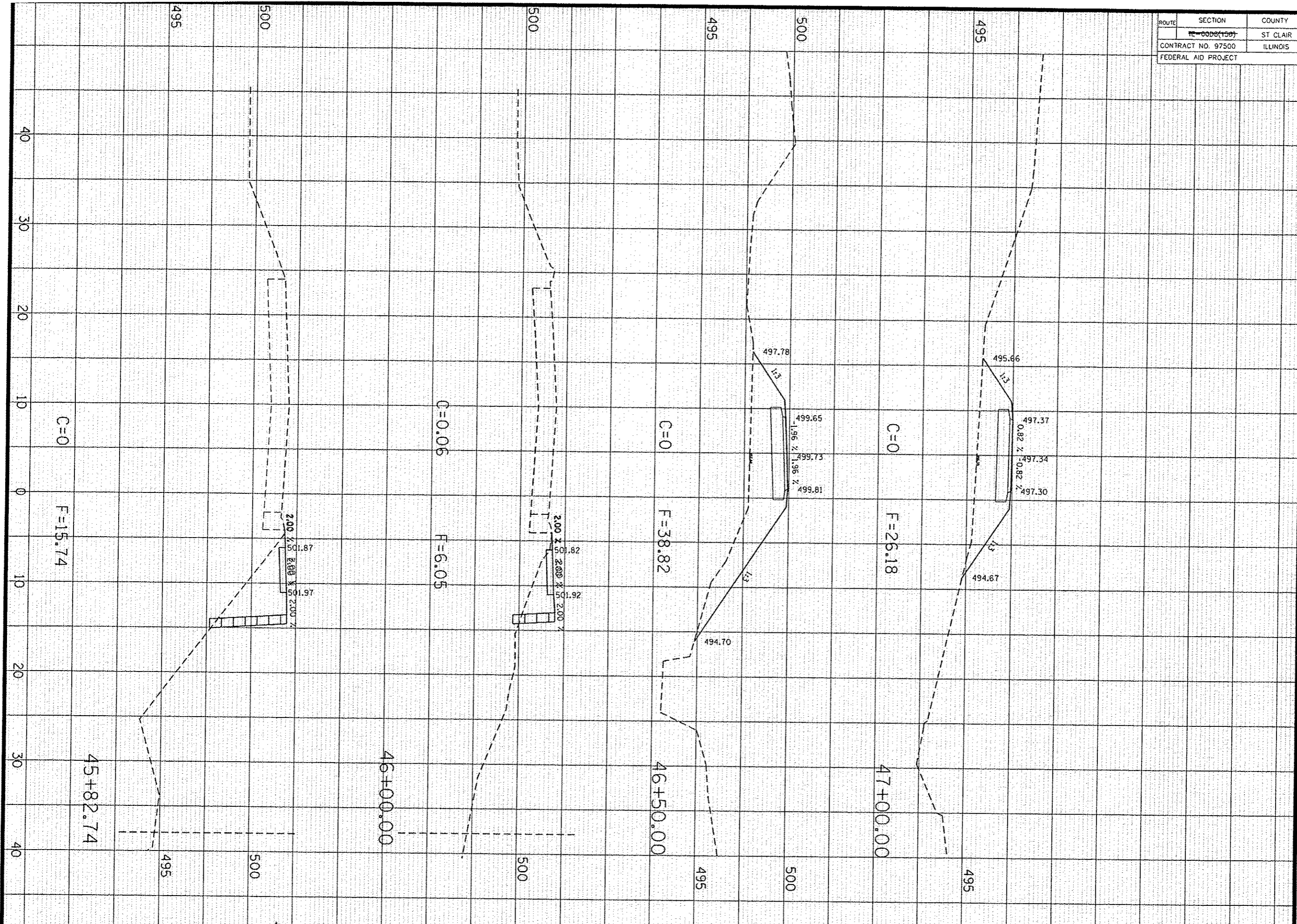
ROUTE	SECTION	COUNTY
	PC-0000(100)	ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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FAX (618) 939-3938  
info@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001320
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346



SECTION 10-0000-00-BT  
CROSS SECTIONS  
PROJECT: RICHLAND CREEK BIKE TRAIL  
PHASE 2B  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
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△		
△		

DRAWN BY: JVV	SHEET <b>43</b> OF 48 SHEETS PROJECT DESCRIPTION
DESIGNED BY: JVV	
CHECKED BY: JVV	
APPROVED BY: JVV	
PROJECT NUMBER	
<input type="checkbox"/> ISSUED FOR BIDDING	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING

ROUTE 495  
SECTION 166  
CONTRACT NO. 97500  
FEDERAL AID PROJECT

COUNTY ST. CLAIR  
ILLINOIS

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FAX (314) 872-2194  
stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-055370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005502
ILLINOIS PROF. LAND SURVEYING CORP.	048-000023
MISSOURI PROFESSIONAL ENGR. CORP.	NO. 001528
MISSOURI LAND SURVEYING CORP.	NO. 000346

SEAL

Renewal Date: \_\_\_\_\_  
Signature Date: \_\_\_\_\_

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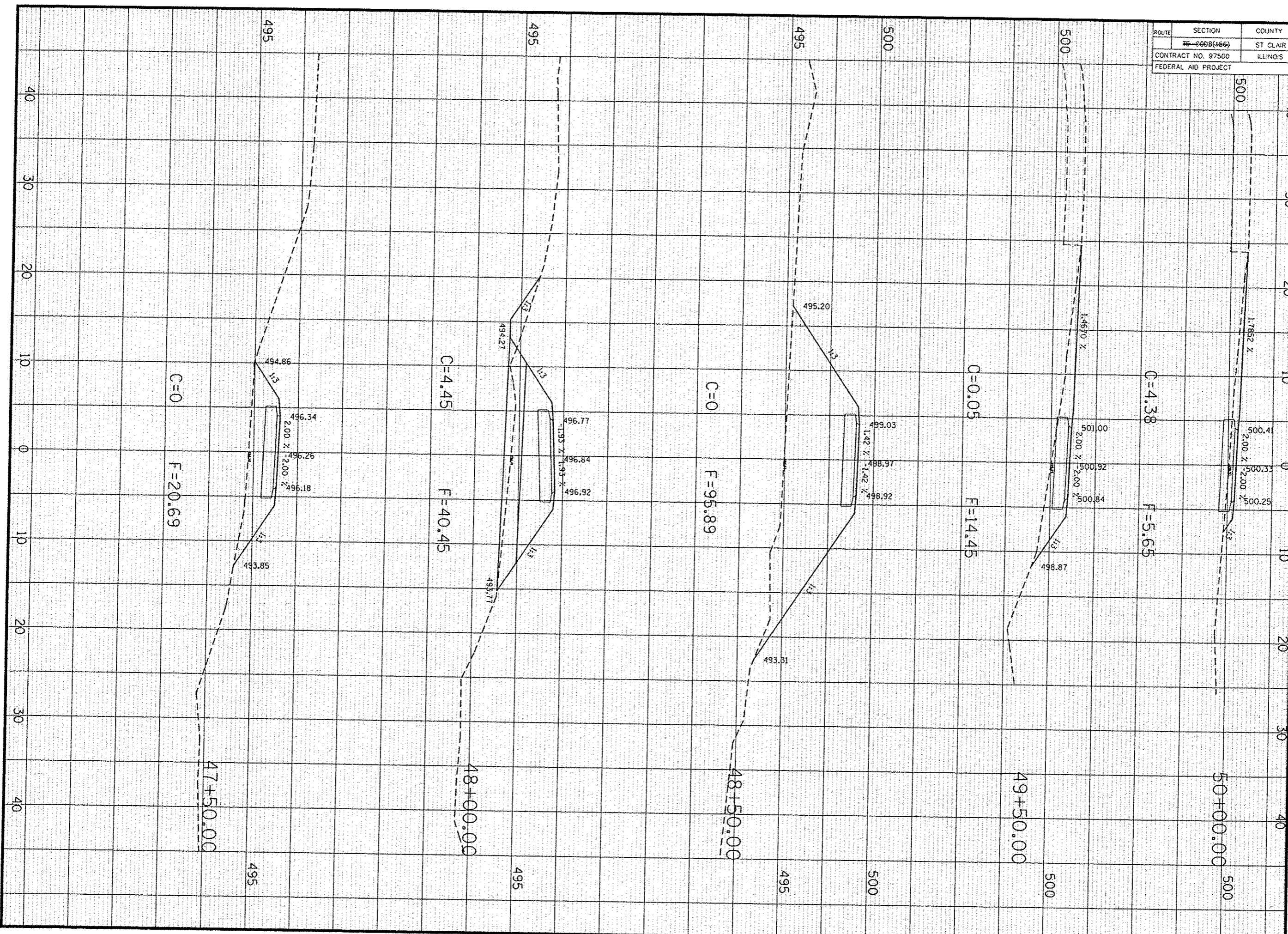
TITLE: **RICHLAND CREEK BIKE TRAIL CROSS SECTIONS**

PROJECT: **PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS**

REV.	DATE	DESCRIPTION
1		
2		

DRAWN BY: <b>CHA</b>	SHEET
DESIGNED BY: <b>CHA</b>	<b>44</b>
CHECKED BY: <b>RSD</b>	
APPROVED BY: <b>JJV</b>	OF 46 SHEETS
PROJECT NUMBER: <b>T07040293</b>	

ISSUED FOR REVIEW     ISSUED FOR BIDDING  
 ISSUED FOR CONSTR.     RECORD DRAWING



ROUTE	SECTION	COUNTY
12-0000(100)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

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stlouis@twm-inc.com

PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	181-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

SEAL

Renewal Date: \_\_\_\_\_  
Signature Date: \_\_\_\_\_

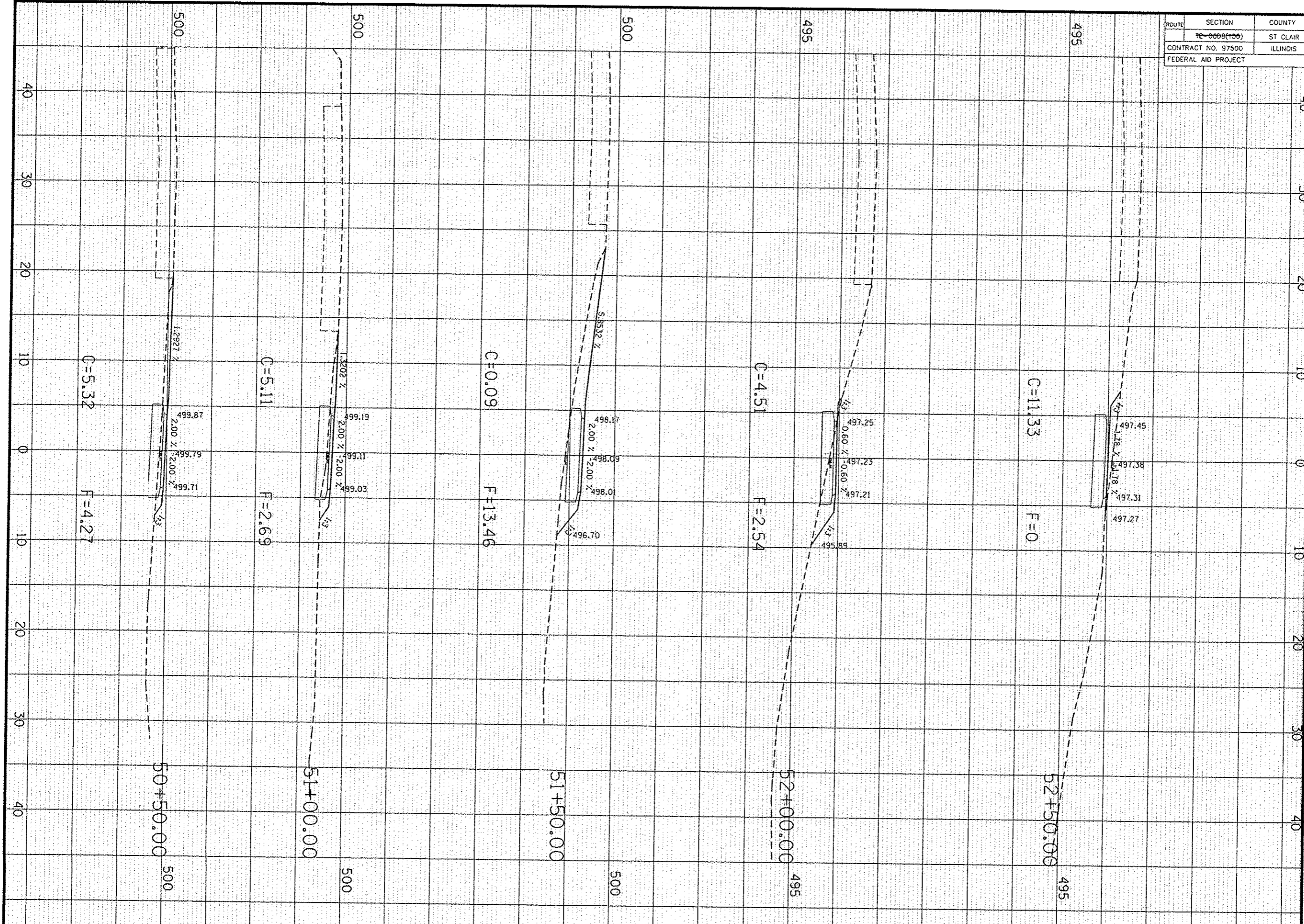
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TITLE: SECTION 10-00-26000-01 NOTION CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA	SHEET
DESIGNED BY: CHA	45
CHECKED BY: RSD	
APPROVED BY: JUV	OF 48 SHEETS
PROJECT NUMBER: T07040293	
<input type="checkbox"/> ISSUED FOR REVIEW	<input type="checkbox"/> ISSUED FOR BIDDING
<input type="checkbox"/> ISSUED FOR CONSTR.	<input type="checkbox"/> RECORD DRAWING



ROUTE	SECTION	COUNTY
TE-0000(150)		ST. CLAIR
CONTRACT NO. 97500		ILLINOIS
FEDERAL AID PROJECT		

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS ♦ SURVEYORS ♦ PLANNERS



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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	181-001220
PROFESSIONAL ENGINEERING CORP.	62-035370
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	MC 001528
MISSOURI LAND SURVEYING CORP.	MC 000346

SEAL

Renewal Date:  
Signature Date:

**STATEMENT OF RESPONSIBILITY**  
I hereby confirm that the document herein to be authenticated by my seal is restricted to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be utilized for any other part of the architectural, engineering or survey project.

TITLE: SECTION 10 0032-00-BT CROSS SECTIONS

PROJECT: RICHLAND CREEK BIKE TRAIL PHASE 2B VILLAGE OF SWANSEA ST. CLAIR COUNTY, ILLINOIS

REV	DATE	DESCRIPTION
△		
△		

DRAWN BY: CHA SHEET

DESIGNED BY: CHA

CHECKED BY: RSD

APPROVED BY: JJV

PROJECT NUMBER: T07040293 OF 46 SHEETS

**46**

ISSUED FOR REVIEW  ISSUED FOR BIDDING

ISSUED FOR CONSTR.  RECORD DRAWING

