

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TECHNOLOGY DRIVE

HIGH PRIORITY DEMONSTRATION
SECTION 05-00087-03-SP
PROJECT NO. HPD-1040(004)
CITY OF EFFINGHAM
EFFINGHAM COUNTY, ILLINOIS
C-97-094-05

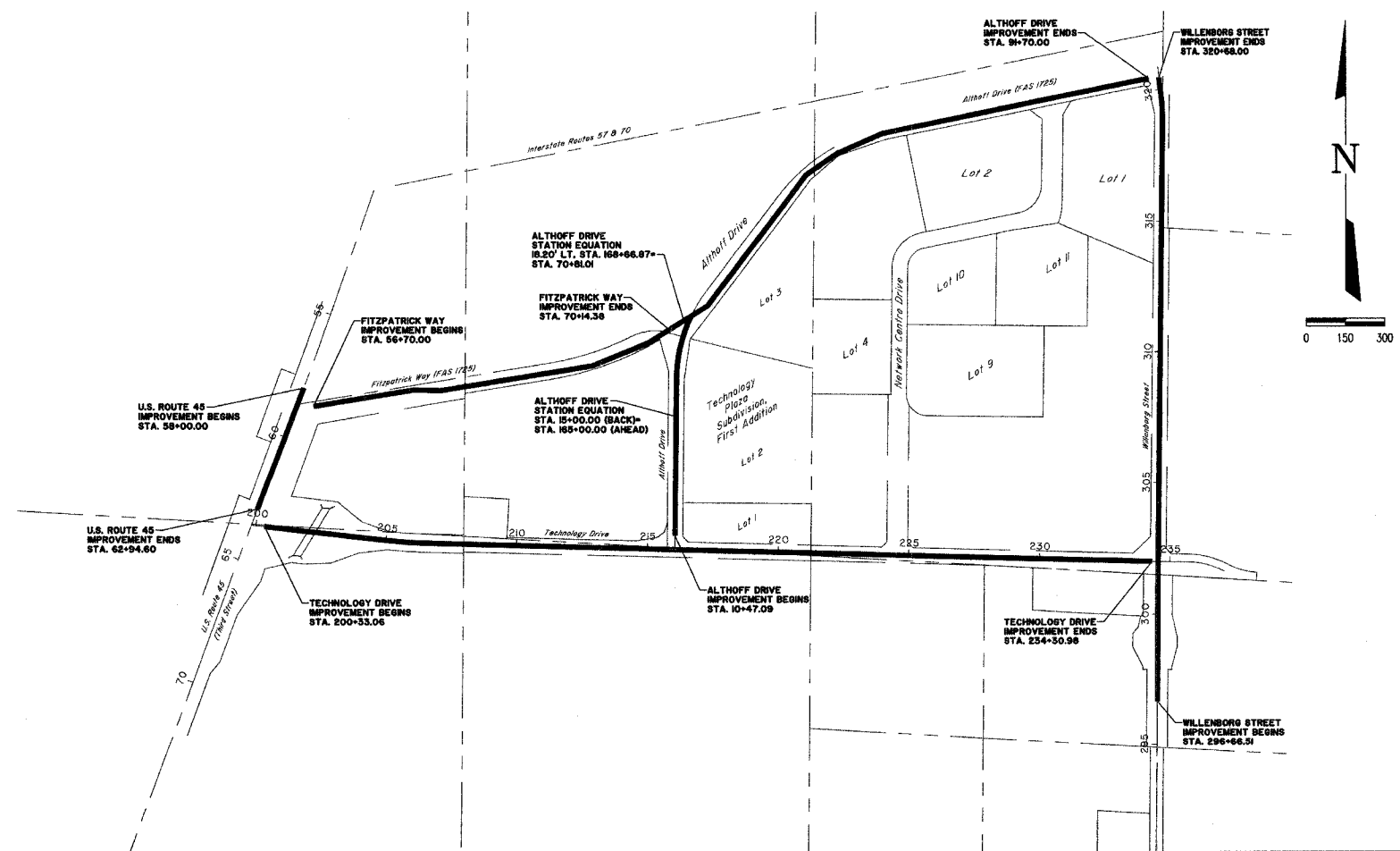
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.A.	05-00087-03-SP	EFFINGHAM	54	1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



FOR INDEX OF SHEETS
SEE SHEET 2

SCALES

PLAN	0 20 40
PROFILE (HORIZONTAL)	0 20 40
PROFILE (VERTICAL)	0 5 10
CROSS SECTIONS (HORIZONTAL)	0 10 20
CROSS SECTIONS (VERTICAL)	0 5 10



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

UTILITY NOTE

THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST CONTACT J.U.L.I.E. 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

ADT (2002)
TECHNOLOGY DRIVE - 4872
MINOR ARTERIAL
WILKENBORG STREET - 1000
URBAN COLLECTOR

LOCATION MAP
CITY OF EFFINGHAM
LENGTH OF PROJECT
TECHNOLOGY DRIVE = 3397.92 FEET (0.64 miles)
U.S. ROUTE 45 = 494.6 FEET (0.09 miles)
ALTHOFF DRIVE = 2908.77 FEET (0.55 miles)
FITZPATRICK WAY = 1344.38 FEET (0.26 miles)
WILKENBORG STREET = 2401.49 FEET (0.45 miles)

APPROVED: 3-24 20.06
Stewart Milla
CITY ENGINEER

PASSED: 4/20 20.06
Markus D. [Signature]
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review: 4/20 20.06
Charles A. Grunloh
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TECHNOLOGY DRIVE
HIGH PRIORITY DEMONSTRATION
PROJECT No. HPD-1040(004)
SECTION: 05-00087-03-SP

Contract No. 95473

PLANS DATED: March 8, 2006
REVISED March 15, 2006
REVISED March 23, 2006

MILANO & GRUNLOH ENGINEERS, INC.
712 BOX 997
EFFINGHAM, ILLINOIS 62401
PHONE: (217) 347-7262
(800) 677-2174
FAX #: (217) 342-3433

File name: S:\DWG\05\050087.dwg\Title Sht.dwg
Plot date: 03/23/06 at 12:00

CHARLES A. GRUNLOH
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS
No. 35151
My License Expires 11-30-07

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A.	05-00087-03-SP	EFFINGHAM	54	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473

INDEX OF SHEETS

1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARDS
3	GENERAL NOTES
4	SUMMARY OF QUANTITIES
5-6	TYPICAL SECTIONS
7-8	SCHEDULE OF QUANTITIES
9	ALIGNMENT TIES
10-16	PLAN SHEETS (SIDEWALK AND LIGHTING)
17-25	PLAN AND PROFILE SHEETS (STORM SEWER)
26	STORM SEWER DETAILS
27-29	STREET LIGHTING DETAILS
30-54	CROSS SECTIONS

STANDARDS

000001-04	Standard Symbols, Abbreviations, and Patterns
280001-02	Temporary Erosion Control Systems
424001-04	Sidewalk Ramps Accessible to the Disabled
542301	Precast Reinforced Concrete Flared End Section
542606	Reinforced Concrete Pipe Tee
602401-01	Manhole, Type A
602601	Precast Reinforced Concrete Flat Slab Top
602701-01	Cast Iron Steps
604001-02	Frame and Lid, Type 1
604006-02	Frame and Grate, Type 3
606001-02	Concrete Curb and Combination Concrete Curb and Gutter
701301-02	Lane Closure 2L, 2W Short Time Operations
701306-01	Lane Closure 2L, 2W Slow Moving Operations - Day Only for Speeds \geq 45 MPH
701311-02	Lane Closure 2L, 2W Moving Operations - Day Only
701326-02	Lane Closure 2L, 2W Pavement Widening for Speeds \geq 45 MPH
701501-03	Urban Lane Closure, 2L 2W Undivided
701801-03	Lane Closure Multilane 1W or 2W Crosswalk or Sidewalk Closure
702001-06	Traffic Control Devices
780001-01	Typical Pavement Markings

REVISED: March 15, 2006

	MILANO & GRUNLOH ENGINEERS, LLC
	14 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401
	PHONE: (217) 347-7282 (800) 677-2774
	FAX #: (217) 342-3433

INDEX OF SHEETS AND STANDARDS
TECHNOLOGY DRIVE, SECTION 3
CITY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\06006\dwg\Title Sht.dwg
Plot date: 03/23/06 at 12:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S&L P.A.	05-00087-03-SP	EFFINGHAM	54	3
FED. ROAD DIST. NO. 7	LLINOIS	FED. AID PROJECT-	CONTRACT #95473	

1. This section shall be constructed in accordance with the Plans; the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2002; the "Supplemental Specifications and Recurring Special Provisions"; and the Special Provisions included in the proposal.

2. The work included in Section T, I, L consists of Concrete Walks, Street Lighting, Storm Sewer, Pavement Removal, Culvert Extensions, New Ditches, Earth Excavation, Pavement Markings, and Miscellaneous Appurtenances.

3. Seeding shall be placed on all areas that are disturbed by construction operations. Nutrients and Mulch shall be applied to all seeded areas. The seeding shall be done according to Articles 250 and 251 of the Standard Specifications or as directed by the Engineer.

4. Pavement grades shown are at the top of pavement surfaces, unless otherwise noted in the plans.

5. Erosion control measures shall be in accordance with IDOT Specifications. Placement shall be directed by the Engineer.

6. All elevations refer to U.S.G.S. mean sea level datum.

7. Excess topsoil excavation shall be removed as per Article 202 of the Standard Specifications.

8. The contractor shall be responsible for protecting the utility property from construction operations as outlined in Article 107.31 of the Standard Specifications. The J.U.L.I.E. number is 800-892-0123. A minimum of 48 hours advance notice is required. The utility members of J.U.L.I.E. known to be within the limits of the improvements:

ELECTRIC

AmernCIPS
1800 Ford Avenue
Effingham, Illinois 62401
217-342-2540
888-789-2477

TELEPHONE

Illinois Consolidated Telephone Company
121 S. 17th Street
Mattoon, Illinois 61938
217-234-9971

GAS

AmernCIPS
1800 Ford Avenue
Effingham, Illinois 62401
217-342-2540
888-789-2477

WATER, SEWER

City of Effingham
201 E. Jefferson Avenue
Effingham, Illinois 62401
217-342-2366

CABLE TV

MediaCom
710 W. Jefferson Avenue
Effingham, Illinois 62401
217-342-6656

9. The following rates of application have been assumed in calculating plan quantities:

Crushed Stone	2.05 Tons/CY
Bituminous Concrete	115 lbs/Inch/SY
Bituminous Materials (Prime Coat) on Aggregate Bases	0.50 Gal/SY
Nitrogen Fertilizer Nutrient	90 lbs/Acre
Phosphorus Fertilizer Nutrient	90 lbs/Acre
Potassium Fertilizer Nutrient	90 lbs/Acre
Agricultural Ground Limestone	2 Tons/Acre
Mulch, Method 2	2 Tons/Acre
Temporary Erosion Control Seeding	100 lbs/Acre

10. Before ordering storm sewers, pipe culverts or pipe drains, the Contractor shall consult the Engineer for exact lengths.

11. The Engineer shall be the sole judge concerning curing time for the various bituminous lifts.

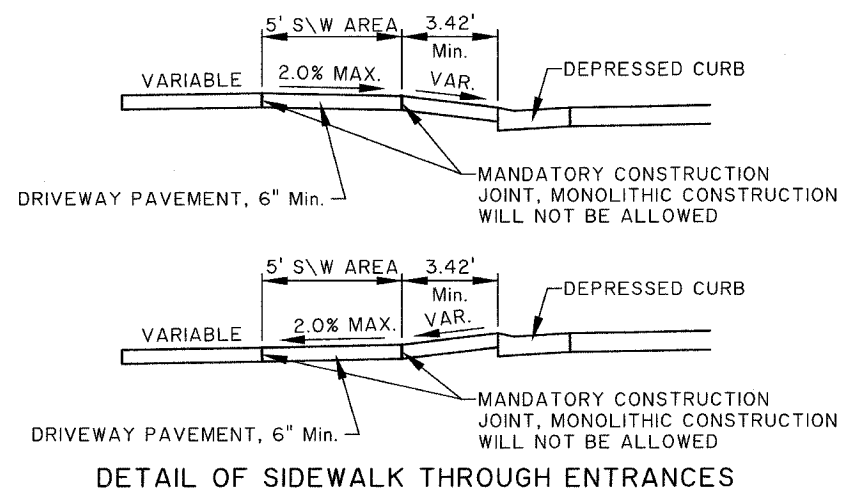
12. For the pay item Bituminous Materials (Prime Coat), the Contractor shall use either RC-70 or an emulsified polymer prime SS-IHP.

13. CURB AND GUTTER, WALKS, SLABS AND RETAINING WALLS

A. Concrete curb and gutter shall be in accordance with IDOT Std. Spec. Locate contraction joints at 20 ft on center, unless otherwise shown. Locate expansion joints at minimum 100 ft. on center, unless otherwise shown.

B. Concrete walks, islands, and other slabs shall be in accordance with IDOT Std. Spec. Unless otherwise shown, locate sidewalk contraction joints at 5 ft on center and expansions joints at 50 ft on center, unless otherwise shown, locate contraction joints in larger slabs at 15 ft intervals in each direction, reinforced with lubricated smooth dowel bars (3/4 in. diameter, 18 in. length, at 12 in. centers).

C. Concrete walks crossing through entrances shall be constructed in accordance with the detail shown below. Monolithically constructed sidewalks will not be allowed.



15. DISPOSAL

A. Remove from Owner's property and legally dispose of excess excavated material, trash, debris, and waste materials.

16. Only those trees designated by the Engineer shall be removed. The Contractor shall protect all remaining trees from damage due to his operations.

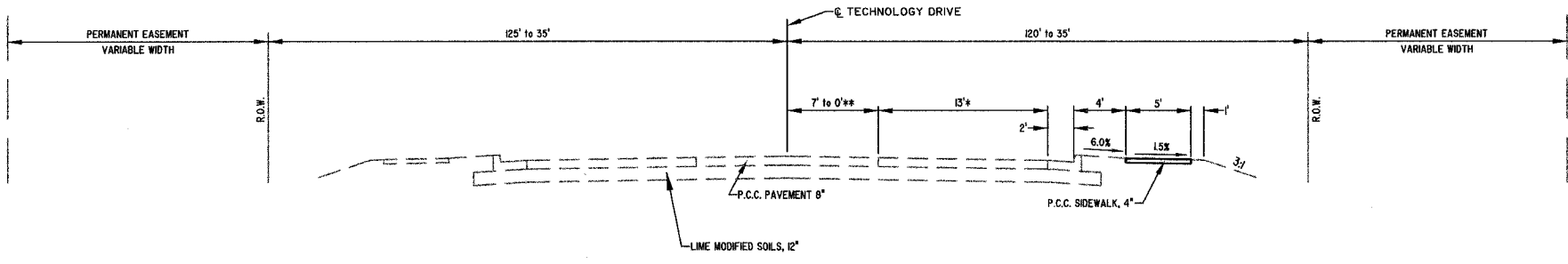
MILANO & GRUNLOH ENGINEERS, LLC
14 WEST WASHINGTON
P.O. BOX 897
EFFINGHAM, ILLINOIS 62401
PHONE: (217) 347-7262
(800) 677-2714
FAX #: (217) 342-3433

GENERAL NOTES
TECHNOLOGY DRIVE, SECTION 3
CITY OF EFFINGHAM, ILLINOIS

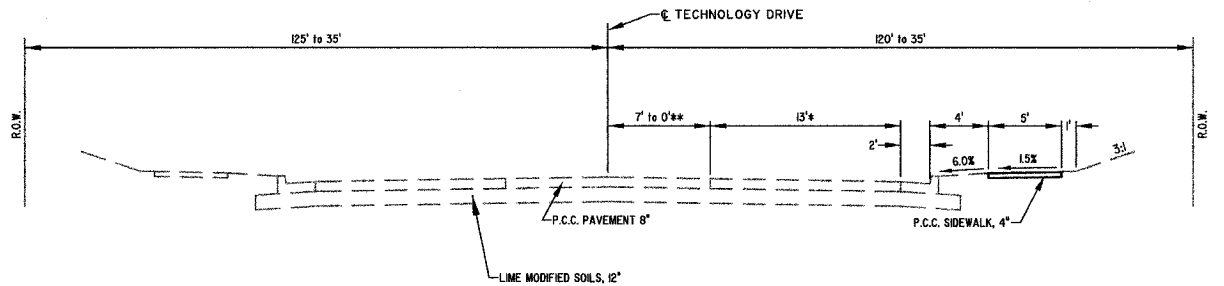
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L.	05-00087-05-SP	EFFINGHAM	54	5
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473



FILL SECTION

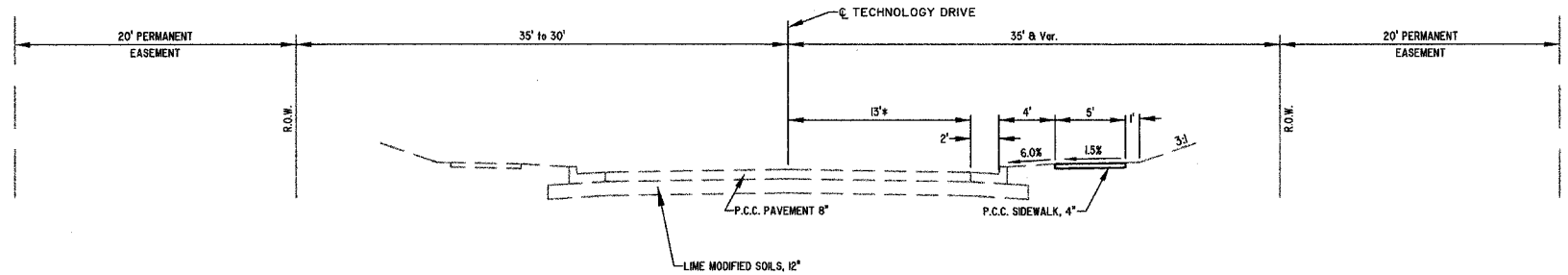


CUT SECTION

* VARIABLE RT. STA. 199+98.57 TO RT. STA. 204+31.79 (U.S. ROUTE 45 INTERSECTION)

** TRANSITION FROM 7' TO 0' RT. STA. 203+57.11 TO RT. STA. 206+38.35

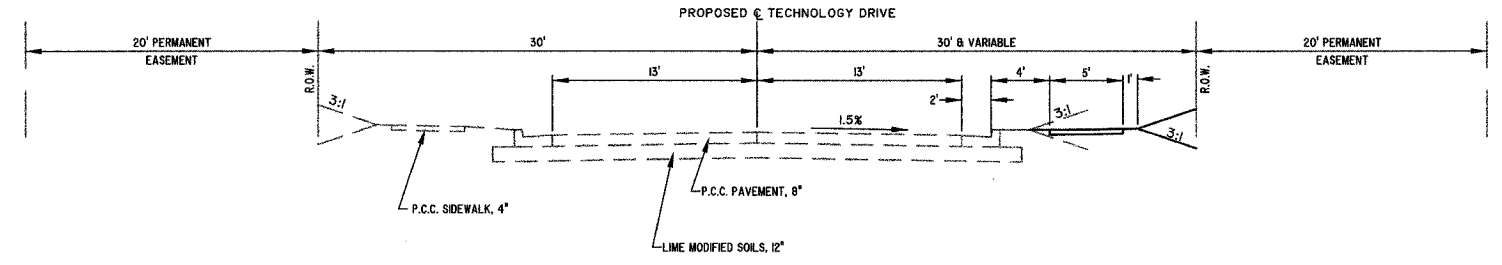
TYPICAL SECTION
STATION 200+33.06 TO STATION 206+38.35 (TECHNOLOGY DRIVE)
STATION 296+65.00 TO STATION 320+68.00 (WILLENBORG STREET)



TYPICAL SECTION - TECHNOLOGY DRIVE

STATION 206+38.35 TO STATION 215+92.58

* VARIABLE RT. STA. 233+93.07 TO RT. STA. 234+40.98 (WILLENBORG STREET INTERSECTION)



TYPICAL SECTION - TECHNOLOGY DRIVE

STATION 230+92.53 TO STATION 233+50.00

LEGEND

- IRON PIN FOUND
- IP IRON PIPE FOUND
- △NBW NAIL & WASHER FOUND
- FP IRON PIPE FOUND
- IRON PIN SET
- ☼ TREE (DECIDUOUS)
- ☼ TREE (EVERGREEN)
- ⊕ FIRE HYDRANT
- ⊕ WATER METER
- ⊕ WATER VALVE
- EXISTING GAS MAIN
- TP TELEPHONE PEDESTAL
- FOP FIBER OPTIC PEDESTAL
- UNDERGROUND TELEPHONE
- UTILITY POLE
- ⊕ ELECTRIC TRANSFORMER
- /HE OVERHEAD ELECTRIC
- LIGHT POLE
- FENCE
- TREE/BRUSH LINE

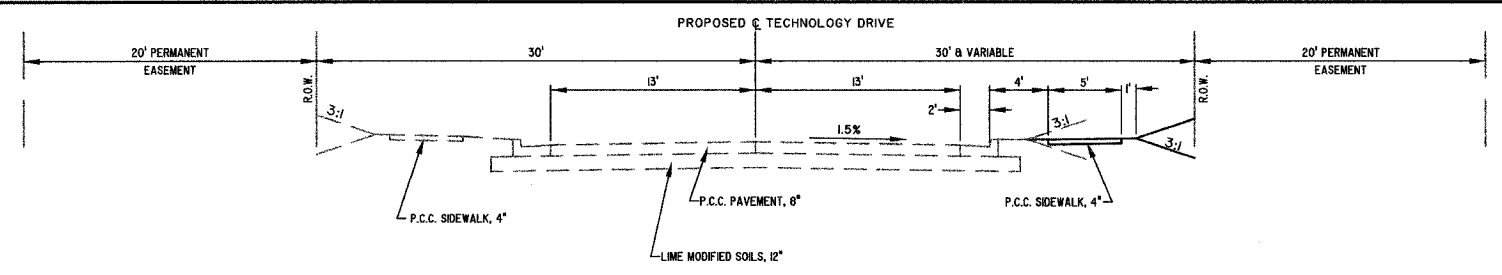
MILANO & GRUNLOH ENGINEERS, LLC
14 WEST WASHINGTON
P.O. BOX 897
EFFINGHAM, ILLINOIS 62401
Phone: (217) 347-7282
(800) 677-2794
Fax #: (217) 342-3433
Web Address: www.mgenengineers.com
Design Firm #: 04-00308

TYPICAL SECTIONS
TECHNOLOGY DRIVE, SECTION 3
EFFINGHAM, ILLINOIS

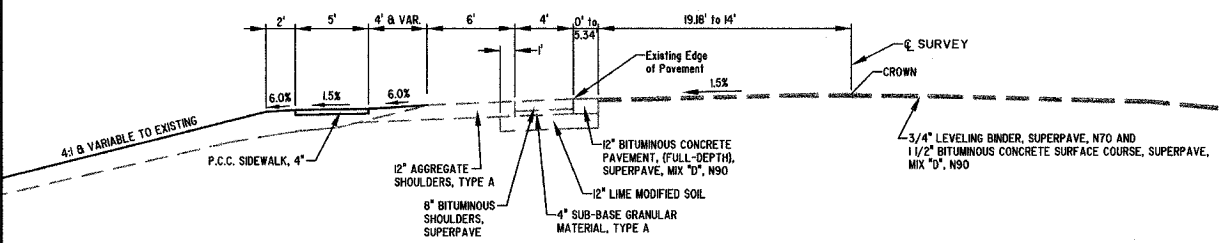
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S&L	05-0007-03-SP	EFFINGHAM	54	6
F.A.				
FED. ROAD DIST. NO. 7	ALLIANCE	FED. AID PROJECT-		

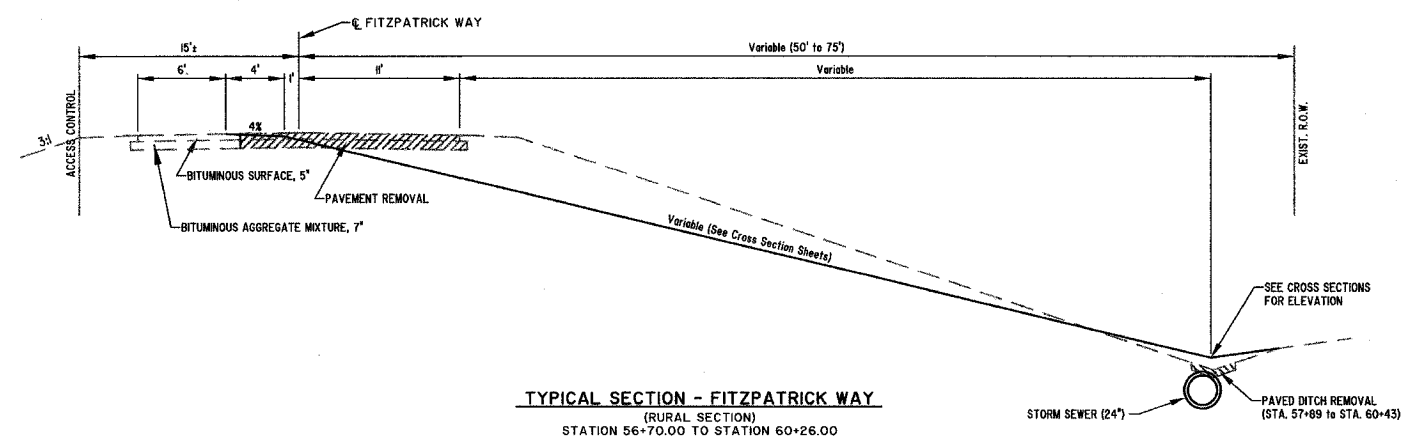
CONTRACT #95473



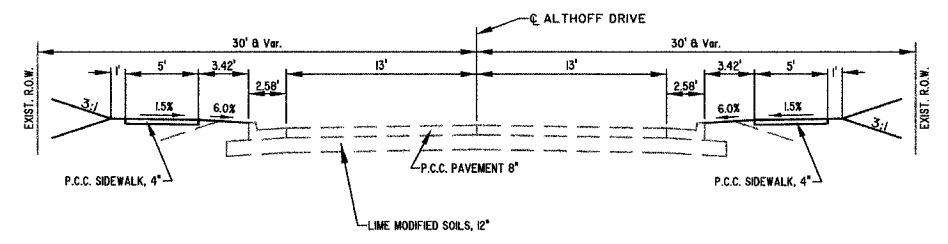
TYPICAL SECTION - TECHNOLOGY DRIVE
STATION 215+92.58 TO STATION 230+92.53
STATION 233+50.00 TO STATION 234+30.98



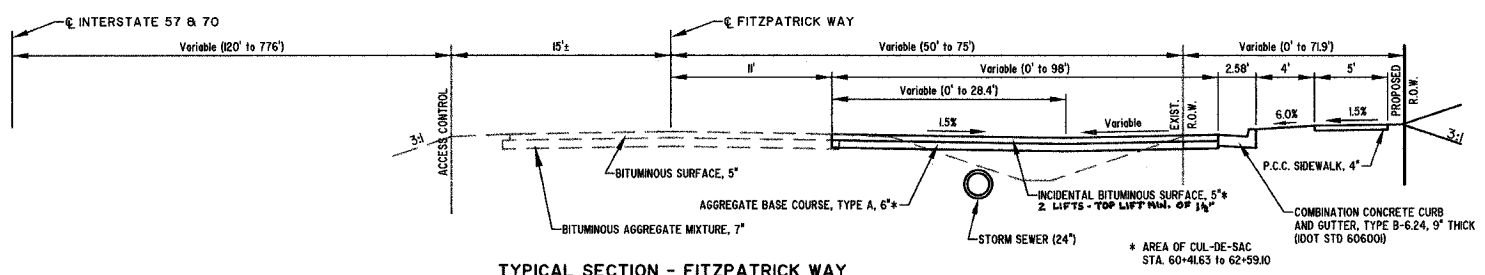
TYPICAL SECTION - U.S. ROUTE 45
STATION 58+00.00 TO STATION 62+94.60



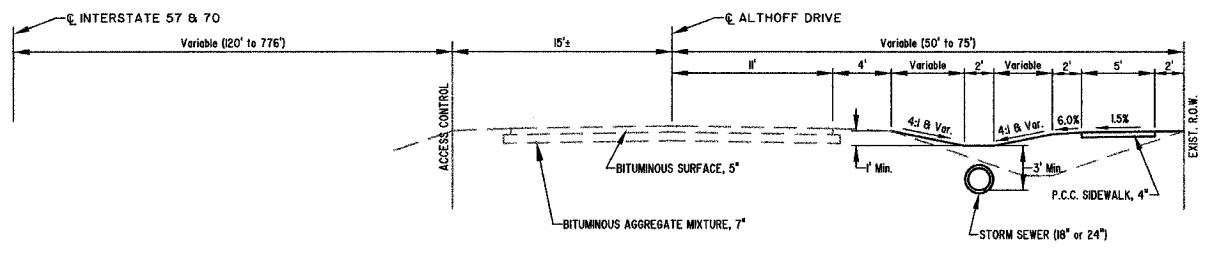
TYPICAL SECTION - FITZPATRICK WAY
(RURAL SECTION)
STATION 56+70.00 TO STATION 60+26.00



TYPICAL SECTION - ALTHOFF DRIVE
(URBAN SECTION)
STATION 10+47.09 TO STATION 168+66.87



TYPICAL SECTION - FITZPATRICK WAY
(CUL-DE-SAC)
STATION 60+26.00 TO STATION 62+60.00



TYPICAL SECTION
STATION 62+60.00 TO STATION 70+14.38 (FITZPATRICK WAY)
STATION 70+80.01 TO STATION 91+84.37 (ALTHOFF DRIVE)

REVISED: March 15, 2006

MILANO & GRUNLOH ENGINEERS, LLC
14 WEST WASHINGTON
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(800) 677-2794
Fax #: (217) 342-3433
Web Address: www.mgsengineers.com
Design Firm #: 04-00308

TYPICAL SECTIONS
TECHNOLOGY DRIVE, SECTION 3
EFFINGHAM, ILLINOIS

File name: S:\DWG\01\01018\ewg\Typical.dwg
Plot date: 03/25/06 of 12:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S&L F.A.	05-00087-03-SP	EFFINGHAM	54	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT #95473	

TREE PLANTING SCHEDULE				
NO.	STA	OFFSET FEET	TREES EACH	TYPE
T1	204+50	40' LT	1	Columnar Maple
T2	204+50	40' RT	1	Columnar Maple
T3	205+50	30' LT	1	Columnar Maple
*T4	206+00	30' LT	1	Pin Oak
T5	206+00	30' RT	1	Columnar Maple
T6	206+50	30' LT	1	Columnar Maple
T7	207+00	30' RT	1	Columnar Maple
T8	207+30	30' LT	1	Columnar Maple
T9	208+50	30' RT	1	Columnar Maple
T10	209+00	30' RT	1	Columnar Maple
T11	210+00	30' RT	1	Columnar Maple
T12	211+00	30' RT	1	Columnar Maple
T13	212+00	30' RT	1	Columnar Maple
T14	213+00	30' RT	1	Columnar Maple
T15	214+00	30' RT	1	Columnar Maple
T16	215+00	30' RT	1	Columnar Maple
T17	234+90	40' RT	1	Pin Oak
T18	301+40	50' LT	1	Pin Oak
T19	309+00	27' RT	1	Columnar Maple
T20	310+00	27' RT	1	Columnar Maple
T21	311+00	27' RT	1	Columnar Maple
T22	312+00	27' RT	1	Columnar Maple
T23	313+00	27' RT	1	Columnar Maple
T24	314+00	27' RT	1	Columnar Maple
T25	315+00	27' RT	1	Columnar Maple
T26	316+00	27' RT	1	Columnar Maple
T27	317+00	27' RT	1	Columnar Maple
T28	318+00	27' RT	1	Columnar Maple
T29	319+00	28' RT	1	Columnar Maple
T30	320+00	42' RT	1	Columnar Maple
*T31	320+17	50' LT	1	Columnar Maple
**T32 - T92			61	Columnar Maple & Pin Oak
TOTAL			92	

* Exact location to be determined by Resident Engineer.
 ** Tree Species and exact placement to be determined by the District 7 Roadside Manager.

PAVEMENT SCHEDULE										
SECTION	STATION	PAVEMENT REMOVAL	PCC PAVEMENT 8"	BITUMINOUS CONCRETE SURFACE REMOVAL (SPECIAL)	INCIDENTAL BITUMINOUS SURFACING	BITUMINOUS MATERIALS PRIME	AGGREGATE BASE COURSE TYPE A	PAVED DITCH REMOVAL	GUARDRAIL REMOVAL	AGGREGATE SURFACE COURSE TYPE A
FITZPATRICK WAY	100' Rt, 11+50									100
ALTHOFF DRIVE	38+06 to 38+64	40	40							
FITZPATRICK WAY	60+55 to 62+59				400	650				
FITZPATRICK WAY	56+70 to 61+12			850			475	260	260	

EROSION CONTROL							
LOCATION	SEEDING CL2 (SPECIAL)	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER	INLET FILTERS	STONE RIPRAP CLASS A3	RIPRAP SPECIAL	SECTION
200+33 to 234+30	0.8	15					TECHNOLOGY DRIVE
296+66 to 320+47	0.8	15	200		40	470	WILLENBORG
10+47 to 91+85	1.5	30		7			ALTHOFF DRIVE
56+09 to 70+15	0.3	10	500	8	12		FITZPATRICK WAY
58+31 to 62+95	1.6	30					US ROUTE 45
TOTAL	5	100	700	15	52	470	

EARTHWORK SCHEDULE					
LOCATION	EARTH EXCAVATION (SPECIAL)	UNSUITABLE OR UNSTABLE MATERIAL (1)	EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	EARTHWORK BALANCE WASTE OR (SHORTAGE)
Technology Drive 200+33-234+30	325	325	0	300	(300)
Willenborg Street 296+66-320+47	150	150	0	875	(875)
Althoff Drive 10+47-166+67	125	125	0	125	(125)
Althoff Drive 70+81-91+85	2444	1740	528	4132	(3604)
Fitzpatrick Way 56+09-70+81	2965	313	1989	767	1222 (2)(0)
US Route 45 58+31-62+95	350	350	0	987	(987)
Total	6359	3003	2517	7186	(5891)

Note 1: Unsuitable or unstable material to be disposed of off site.
 Note 2: Stockpile for use by Property Owner Rt, Sta. 61+50 as shown on Sheet 19, as directed by the Engineer (Incidental to Earth Excavation).

TREE REMOVAL			
LOCATION	OFFSET	6-15	OVER 15
165+30 (Althoff Drive)	25' LT		16
58+30 (Fitzpatrick Way)	20' RT	8	
61+80 (Fitzpatrick Way)	30' RT	8	
69+75 (Fitzpatrick Way)	40' RT	8	
319+86 (Willenborg Street)	35' RT	10	
58+95 (U.S. Route 45)	99' LT	7	
57+67 to 60+81 (U.S. Route 45)	LT	114	
Total		155	16

WILLENBORG STREET LIGHTING SCHEDULE										
LOCATION	HANDHOLE	CONDUIT	ELECTRIC CABLE		UNIT DUCT			LIGHTING		
			#2 3-C	#8 3-C	#2	#4	#8	POLE FOUNDATION METAL EACH	POLES & LUMINARIES EACH	TRENCH AND BACKFILL FOOT
CP1-HH1	1	85	110							
HH1-L26					730			1	1	720
L26-L27					170			1	1	150
L27-L28						165		1	1	150
L28-L29						165		1	1	150
L29-L30						165		1	1	150
L30-L31						165		1	1	150
L31-L32							165	1	1	150
L32-L33							170	1	1	150
L33-L34		75		85				1	1	
TOTAL	1	160	110	85	900	660	335	9	9	1770

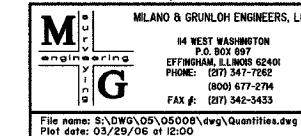
EPOXY PAVEMENT MARKING				
LOCATION	STATION	6" WHITE		24" WHITE
		FOOT		FOOT
TECHNOLOGY	200+35	210		
TECHNOLOGY	215+60	110		
TECHNOLOGY	216+45	100		
WILLENBORG	301+60	100		
WILLENBORG	320+65	180		
WILLENBORG	320+55			40
ALTHOFF DRIVE	167+80	60		
ALTHOFF DRIVE	168+10	100		
ALTHOFF DRIVE	88+01	120		
TOTAL		980		40

SIDEWALK SCHEDULE			
LOCATION	QUANTITY SQ FT	DRIVEWAY REMOVAL SQ YD	PCC DRIVEWAY PAVEMENT SQ YD
Technology Drive	16800	58	58
Althoff Drive	6400		
Willenborg Street	11600		
Althoff Avenue	10400		
Route 45 North	3000		
Fitzpatrick Way	5800		80
TOTAL	54000	58	138

MANHOLES TO BE ADJUSTED				
LOCATION	OFFSET	STREET	QUANTITY EACH	
200+59	RT	Technology Drive	1	
201+20	RT	Technology Drive	1	
204+00	RT	Technology Drive	1	
206+50	RT	Technology Drive	1	
209+00	RT	Technology Drive	1	
213+40	RT	Technology Drive	1	
214+40	RT	Technology Drive	1	
215+38	RT	Technology Drive	1	
217+67	RT	Technology Drive	1	
219+50	RT	Technology Drive	1	
223+92	RT	Technology Drive	1	
225+19	RT	Technology Drive	1	
227+50	RT	Technology Drive	1	
229+98	RT	Technology Drive	1	
231+95	RT	Technology Drive	1	
233+50	RT	Technology Drive	1	
234+08	RT	Technology Drive	1	
165+50	RT	Althoff Drive	1	
167+00	RT	Althoff Drive	1	
168+45	RT	Althoff Drive	1	
297+00	RT	Willenborg Street	1	
299+00	RT	Willenborg Street	1	
299+44	RT	Willenborg Street	1	
301+00	RT	Willenborg Street	1	
303+00	RT	Willenborg Street	1	
304+60	RT	Willenborg Street	1	
306+00	RT	Willenborg Street	1	
307+60	RT	Willenborg Street	1	
313+69	RT	Willenborg Street	1	
317+00	RT	Willenborg Street	1	
319+00	RT	Willenborg Street	1	
TOTAL			31	

DETECTABLE WARNINGS CROSSING LOCATIONS						
	LOCATION	SHEET NO.	NUMBER	CURB REMOVE AND REPLACE	TYPE	SQ FT
1	Technology and Route 45	10	2	No	A	12
2	Technology and C.E. sta. 205 + 10	10	2	No	A	12
3	Technology and C.E. sta. 207 + 50	10	2	No	A	12
4	Technology and Althoff	11	2	Yes	A	12
5	Willenborg and Technology	13	1	Yes	A	6
6	Willenborg and Althoff	14	4	Yes	A & B	24
7	Althoff and Fitzpatrick	16	2	Yes	A	12
8	Althoff and C.E. sta. 12 + 60	16	1	Yes	A	6
9	Althoff and Network Center	24	2	Yes	A	12
	TOTAL					108

REVISED: March 15, 2006



SCHEDULE OF QUANTITIES
 TECHNOLOGY DRIVE, SECTION 3
 CITY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\050008.dwg Quantities.dwg
 Plot date: 03/29/06 at 12:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S&L F.A.	05-00087-03-SP	EFFINGHAM	54	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT #95473	

STRUCTURE NUMBER	STATION	OFFSET (FEET)	TEE 18 x 12	TEE 24 x 12	REINFORCED CONCRETE PIPE TEE (SPECIAL)	18" FLARED END SECTION	24" FLARED END SECTION	REMOVE AND REINSTALL FLARED END SECTION	GRADED INLET (SPECIAL)	MANHOLES			LID or GRATE ELEVATION	INVERT ELEVATION		COMMENTS
										4' DIA	4' DIA	5' DIA		IN	OUT	
										TYPE 37	TY 1F CLOSED	TY 1F CLOSED				
1	8+14.98	0'Rt					1						574.07	570.57(NE)	570.57(SW)	TYPE 37 GRATE
1A	9+37.40	0'Rt			1								579.82	575.98(NE)	571.82(SW)	
1B	9+81.47	0'Rt								1	1		589.80	583.07(E)	582.94(W)	
2	10+60.00	0'Rt											592.38	584.28(E)	584.28(W)	TYPE 3 FRAME and GRATE
2A	10+87.11	0'Rt			1								595.98	593.04(E)	592.92(W)	
3	12+69.06	0'Rt								1			597.39	594.44(E)	594.40(W)	
4	14+10.00	0'Rt								1			599.95	597.01(E)	596.97(W)	
5	16+66.33	0'Rt								1			602.19	599.24(E)	599.21(W)	
6	18+90.34	0'Rt													599.55±(W)	CONNECT TO EXISTING PIPE
7	19+69.89	0'Rt													600.19±(W)	600.20±(SE)
8	22+74.11	0'Rt									1		603.83	600.20(E)	600.19±(W)	
9	25+56.55	0'Rt								1			603.98	600.76(E)	600.76(W)	
10	28+04.53	0'Rt									1		604.48	601.26(E)	601.25(W)	
11	29+99.04	0'Rt											604.86	601.65(E)	601.64(W)	
12	31+19.93	0'Rt											605.10	601.89(E)	601.88(W)	
13	34+00.00	0'Rt											605.66	602.45(E)	602.44(W)	
14	36+00.00	0'Rt											606.06	602.85(E)	602.84(W)	
15	39+00.00	0'Rt											606.66	603.45(E)	603.44(W)	
16	40+50.00	0'Rt											606.96	603.75(E)	603.74(W)	
17	41+66.67	0'Rt													603.98(E)	
18	31+38.37	0'Rt	1												602.20(S)	601.92(W)
19	31+38.37	26.40'Rt							1				606.02			603.52(N)
20	32+33.06	0'Rt	1												602.41(S)	602.11(W)
21	32+33.06	20.42'Rt							1				606.38			603.88(N)
22	19+33.84	0'Rt			1										599.96(S)	599.94(W)
23	19+33.84	18.49'Rt							1				603.15			600.65(N)
24	61+75.20	60.47'Lt														OPEN END OF PIPE
25	61+91.99	37.81'Lt														OPEN END OF PIPE
26	299+00.00	71.92'Lt							1							54" DIAMETER RCCP
27	299+00.00	68.23'Rt							1							54" DIAMETER RCCP
TOTAL			2	1	2	1	1	2	3	12	2	1				

FROM STRUCTURE	INVERT ELEVATION	TO STRUCTURE	INVERT ELEVATION	% SLOPE	STORM SEWER, PVC, SDR 26		PIPE CULVERT, TYPE 1		STORM SEWER, RUBBER GASKET, CLASS A		PIPE CULVERT, CLASS A		TRENCH BACKFILL (CU YDS)	COMMENTS
					12"	15" EQRS	18"	24"	54"	54"				
							TYPE 1	TYPE 2	TYPE 2	TYPE 2				
1	568.07	1A	570.57	2.98										
1A	570.57	1B	571.82	2.98										
1B	575.98	2	582.94	5.00										
2	583.07	2A	584.28	4.80										
2A	584.28	3	593.04	4.80									170	
3	593.04	4	594.40	1.00									8	
4	594.44	5	596.97	1.00										
5	597.01	6	599.21	1.00										
6	599.24	7	599.55	0.40										
8	600.20	9	600.76	0.20										
9	600.76	10	601.25	0.20									24	
10	601.26	11	601.64	0.20									8	
11	601.65	12	601.88	0.20										
12	601.89	13	602.44	0.20										
13	602.45	14	602.84	0.20										
14	602.85	15	603.44	0.20										
15	603.45	16	603.74	0.20										
16	603.75	17	603.98	0.20										
18	602.20	19	603.52	5.33	24									
20	602.41	21	603.88	7.83	18									
22	599.96	23	600.65	4.08	15									
24	590.50	25	589.00	-5.36		26								(SHEET 15)
26	*			*							8			* EXTEND AT EXISTING GRADE (SHEET 13)
27	*			*							16			* EXTEND AT EXISTING GRADE (SHEET 13)
TOTAL					57	28		1854	1075		24	242		

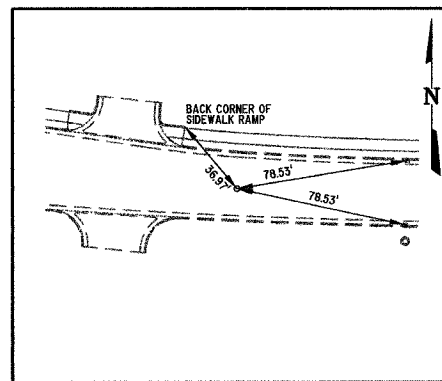
REVISED: March 15, 2006

MILANO & GRUNLOH ENGINEERS, LLC
 14 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 PHONE: (217) 347-7522
 (800) 677-2754
 FAX #: (217) 342-3433

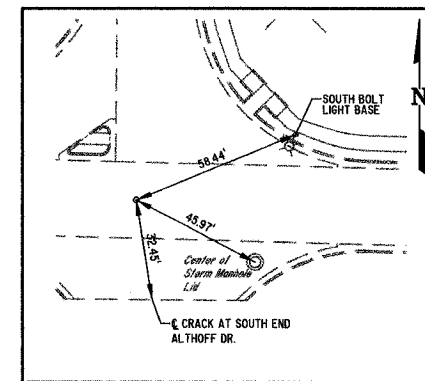
SCHEDULE OF QUANTITIES
 TECHNOLOGY DRIVE, SECTION 3
 CITY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05008\dwg\Quantities.dwg
 Plot date: 03/29/06 at 12:00

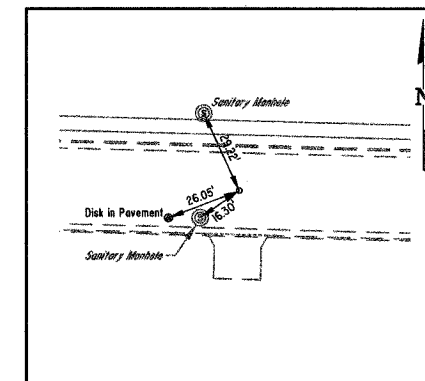
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S&A F.A.	05-0007- 03-SP	EFFINGHAM	54	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95473				



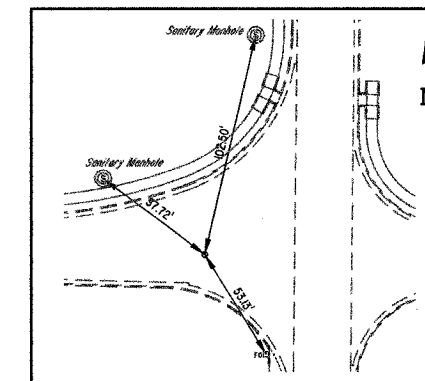
P.I. STA. 205+72.94
1/4" DIA. IRON PIN
(TECHNOLOGY DRIVE)



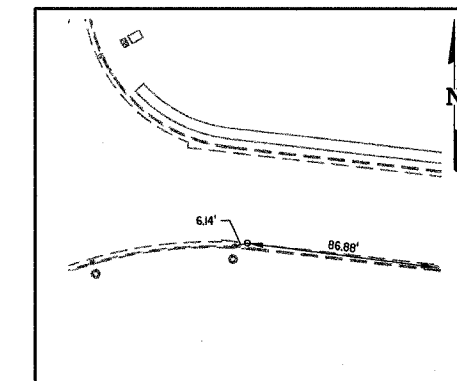
P.O.T. STA. 216+00
1/4" DIA. IRON PIN
(TECHNOLOGY DRIVE)



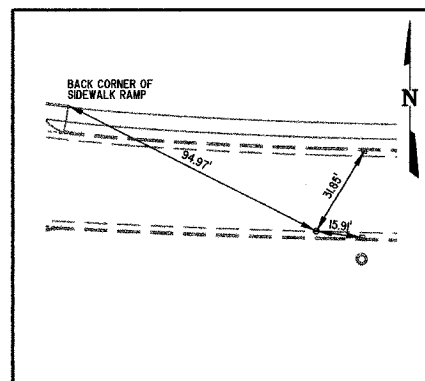
P.O.T. STA. 221+50
1/4" DIA. IRON PIN
(TECHNOLOGY DRIVE)



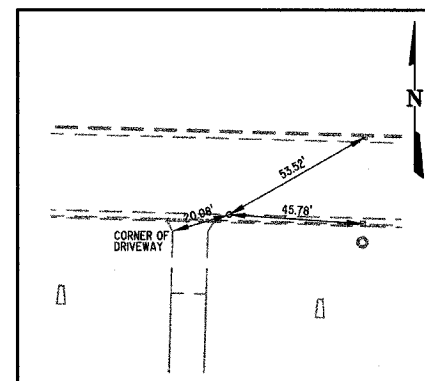
P.O.T. STA. 234+00
1/4" DIA. IRON PIN
(TECHNOLOGY DRIVE)



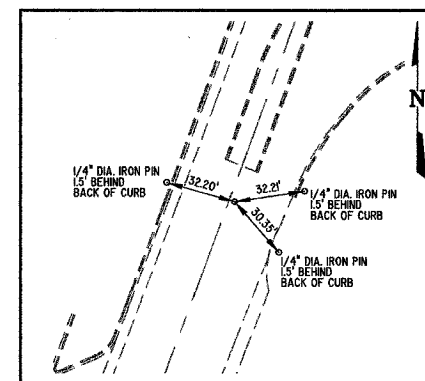
CONTROL POINT #190
NAIL & WASHER AT EDGE OF PAVEMENT
(20.08'RI, Sta 201+25.81)
(TECHNOLOGY DRIVE)



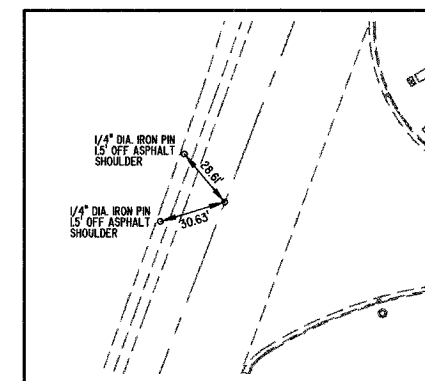
CONTROL POINT #191
NAIL & WASHER AT EDGE OF PAVEMENT
(23.93'RI, Sta 206+34.23)
(TECHNOLOGY DRIVE)



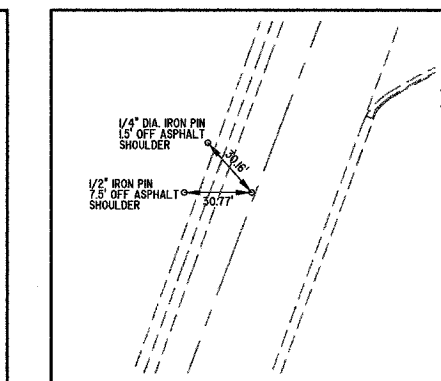
CONTROL POINT #196
NAIL & WASHER AT EDGE OF PAVEMENT
(13.01'RI, Sta 231+49.41)
(TECHNOLOGY DRIVE)



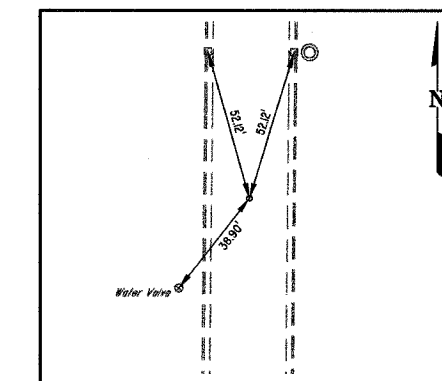
P.I. STA. 57+61.90
NAIL & WASHER
(U.S. ROUTE 45)



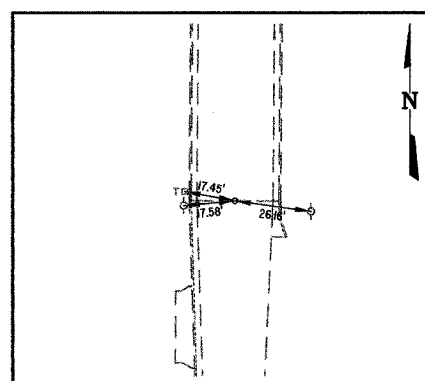
P.O.C. STA. 63+60.63
NAIL & WASHER
(U.S. ROUTE 45)



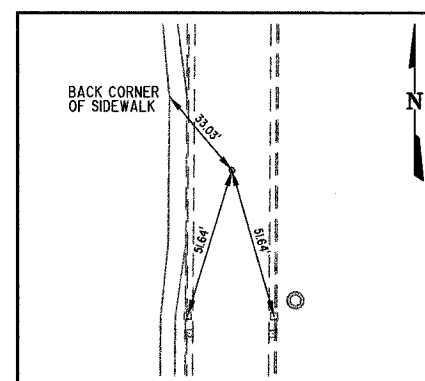
P.I. STA. 64+79.91
NAIL & WASHER
(U.S. ROUTE 45)



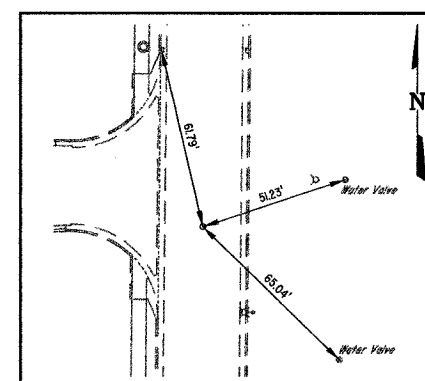
P.O.T. STA. 15+00 - STA. 165+00
1/4" DIA. IRON PIN
(ALTHOFF DRIVE)



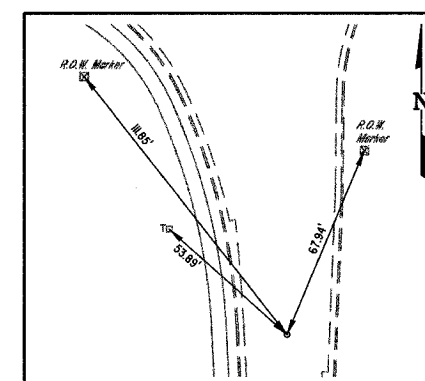
P.O.T. STA. 292+00
1/4" DIA. IRON PIN
(WILLENBORG STREET)



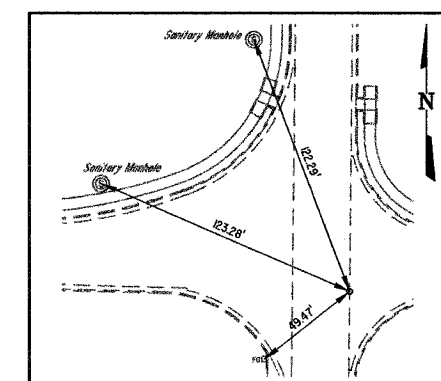
P.O.T. STA. 300+00
1/4" DIA. IRON PIN
(WILLENBORG STREET)



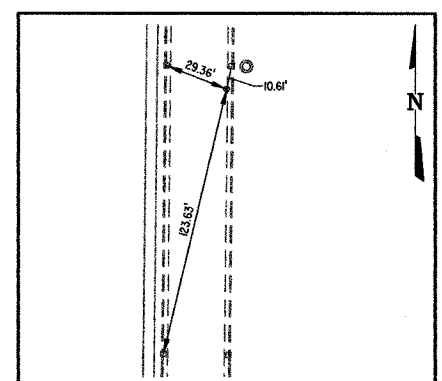
P.O.T. STA. 307+00
1/4" DIA. IRON PIN
(WILLENBORG STREET)



P.I. STA. 319+26.31
1/4" DIA. IRON PIN
(WILLENBORG STREET)



CONTROL POINT #197
NAIL & WASHER AT EDGE OF PAVEMENT
(13.05'RI, Sta 301+87.15)
(WILLENBORG STREET)



CONTROL POINT #198
NAIL & WASHER AT EDGE OF PAVEMENT
(12.69'RI, Sta 316+89.60)
(WILLENBORG STREET)

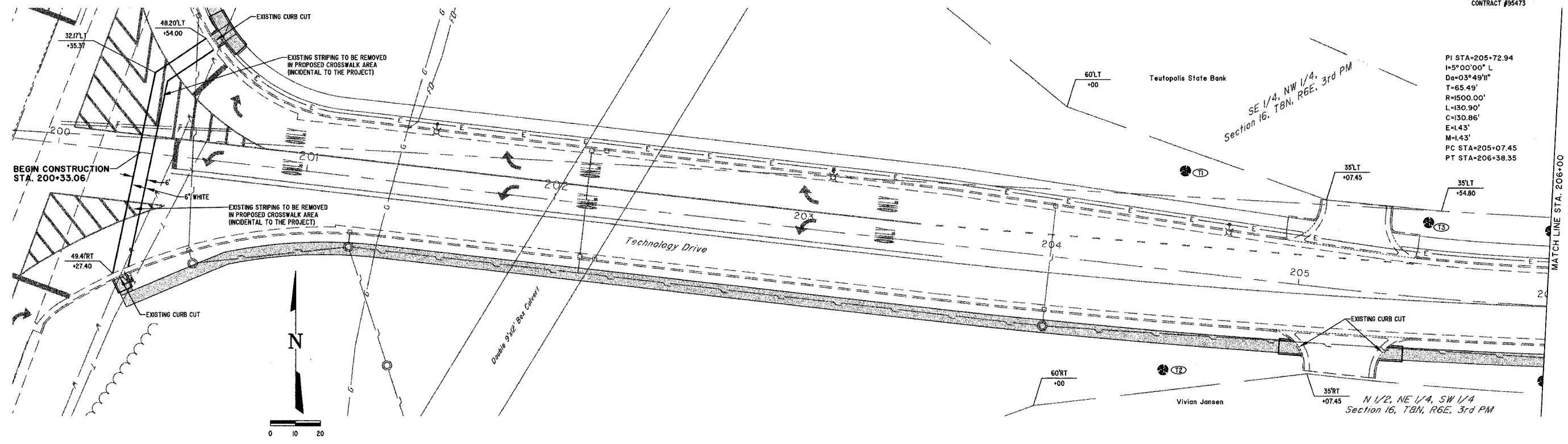
MILANO & GRUNLOH ENGINEERS, LLC
44 WEST WASHINGTON
P.O. BOX 897
EFFINGHAM, ILLINOIS 62404
PHONE: (217) 347-7322
(800) 617-2774
FAX #: (217) 342-3433

ALIGNMENT TIES
TECHNOLOGY DRIVE, SECTION 3
CITY OF EFFINGHAM, ILLINOIS

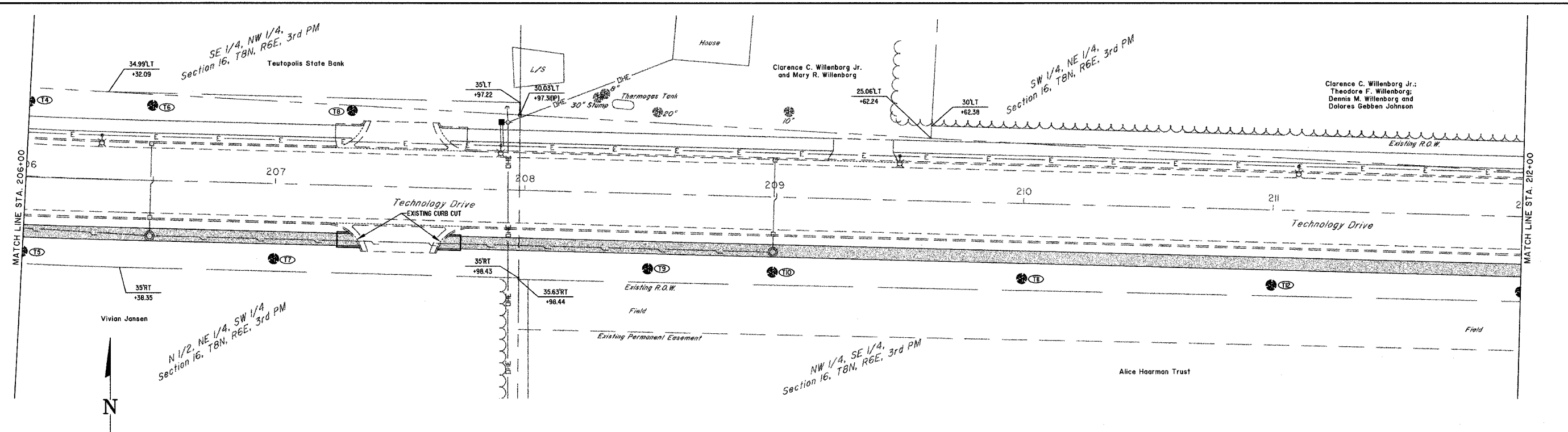
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Plot date: 03/23/06 at 12:00

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
S&L F.A.	05-0007- 03-SP	EFFINGHAM	54	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473



PI STA=205+72.94
 I=5°00'00" L
 Dg=03°49'11"
 T=65.49'
 R=1500.00'
 L=130.90'
 C=130.86'
 E=1.43'
 M=1.43'
 PC STA=205+07.45
 PT STA=206+38.35

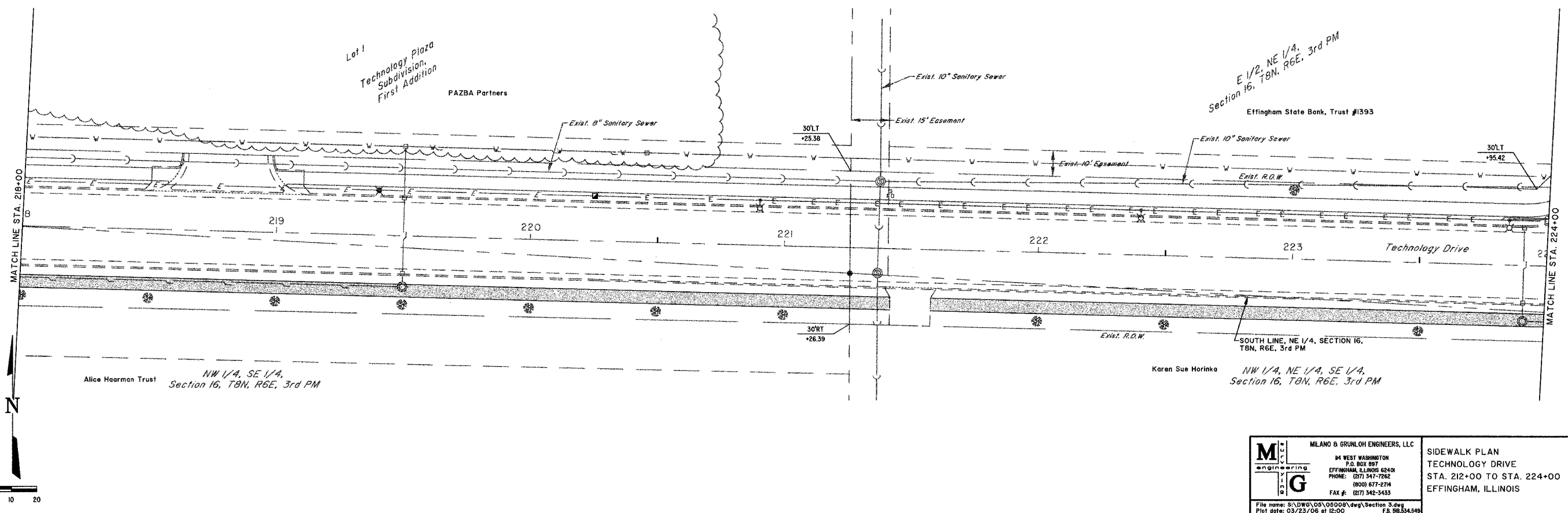
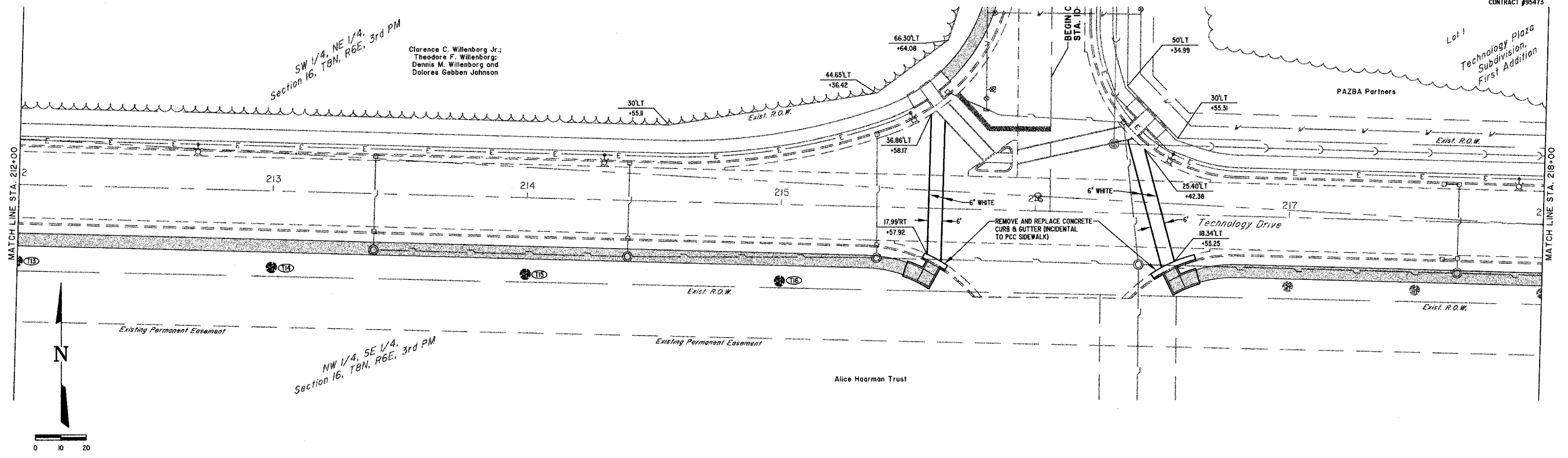


Clarence C. Willenborg Jr.:
 Theodore F. Willenborg;
 Dennis M. Willenborg and
 Dolores Gebben Johnson

	MILANO & GRUNLOH ENGINEERS, LLC	SIDEWALK PLAN TECHNOLOGY DRIVE STA. 200+00 TO STA. 212+00 EFFINGHAM, ILLINOIS
	14 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	
	PHONE: (217) 347-7562 (800) 677-2774	
	FAX #: (217) 342-3433	
File name: S:\DWG\05\05000\dwg\Section 3.dwg Plot date: 03/23/06 at 12:00		

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
SAL F.A.	05-0007- 05-SP	EFFINGHAM	54	II
FED. ROAD DIST. NO. 7	ILLINOIS	PER. IMP. PROJECT		

CONTRACT #95473



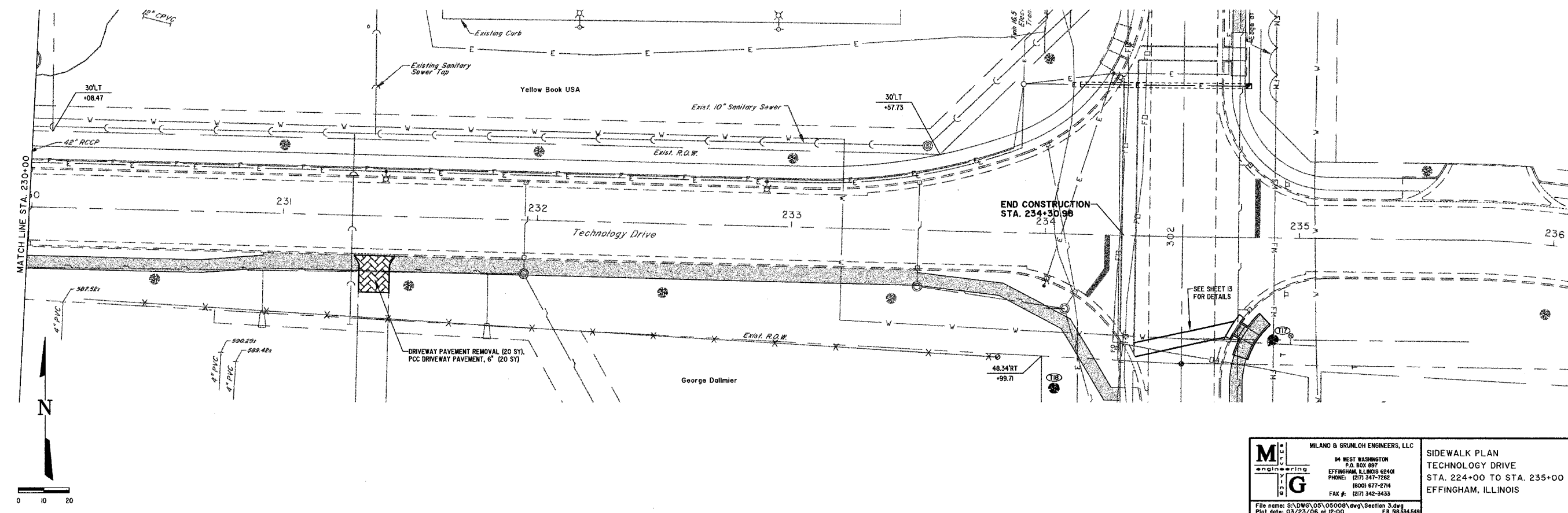
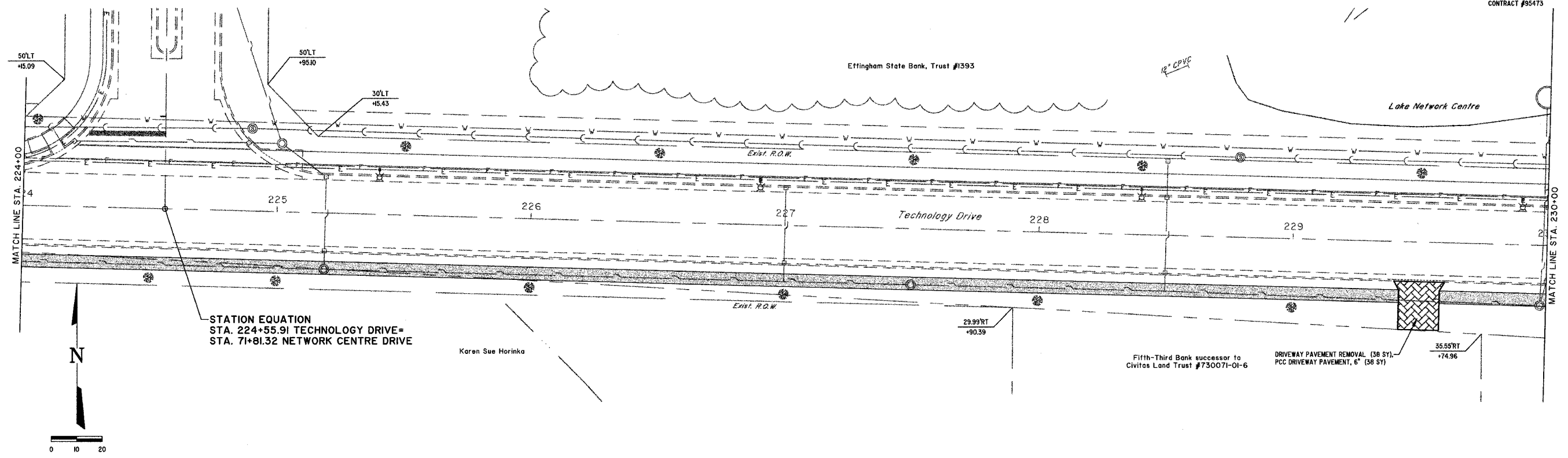
MILANO & GRUNLOH ENGINEERS, LLC
 84 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62404
 PHONE: (217) 347-7582
 (800) 677-2774
 FAX #: (217) 342-3433

SIDEWALK PLAN
 TECHNOLOGY DRIVE
 STA. 212+00 TO STA. 224+00
 EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05008.dwg Section 3.dwg
 Plot date: 03/23/06 at 12:00

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
S&L F.A.	05-00087- 03-SP	EFFINGHAM	54	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

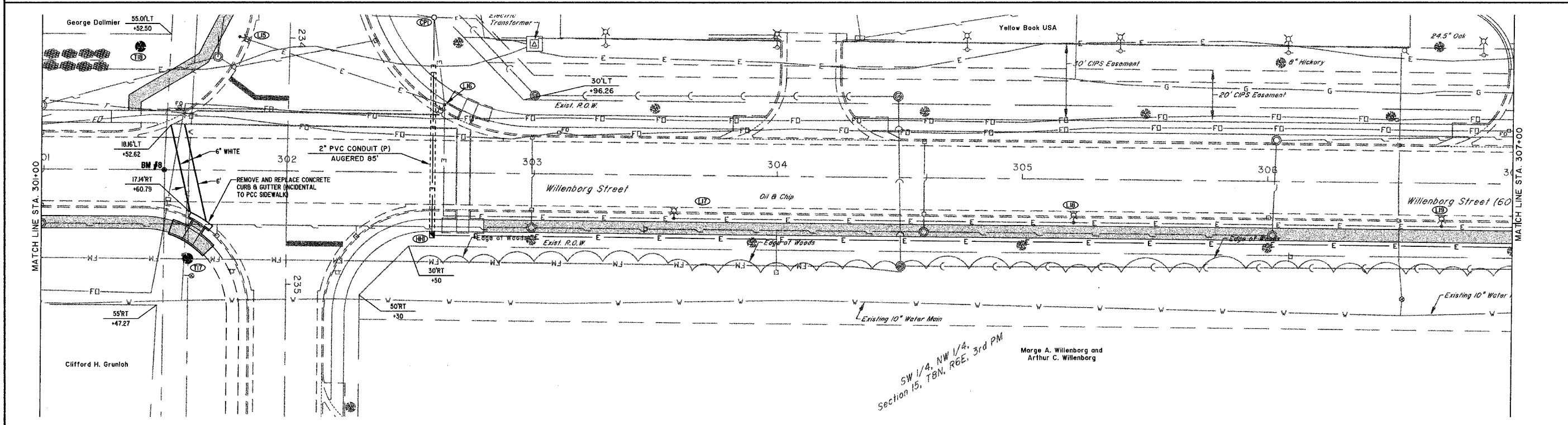
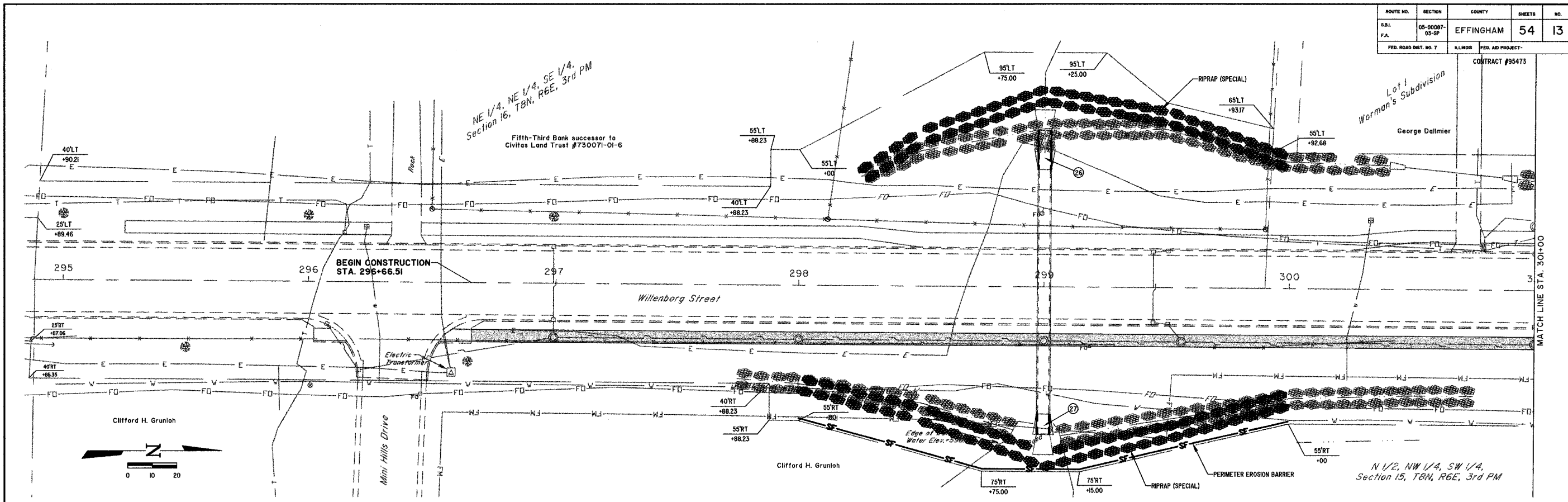
CONTRACT #95473



	MILANO & GRUNLOH ENGINEERS, LLC	SIDEWALK PLAN TECHNOLOGY DRIVE STA. 224+00 TO STA. 235+00 EFFINGHAM, ILLINOIS
	84 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62404	
	PHONE: (217) 347-7262 (800) 677-2774	
	FAK #: (217) 342-3433	

File name: S:\DWG\05\050087.dwg, Section 3.dwg
Plot date: 03/23/06 of 12:00

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
S&L F.A.	05-0007- 05-SP	EFFINGHAM	54	13
FED. ROAD DIST. NO. 7	LLHMS	FED. AID PROJECT-	CONTRACT #95473	



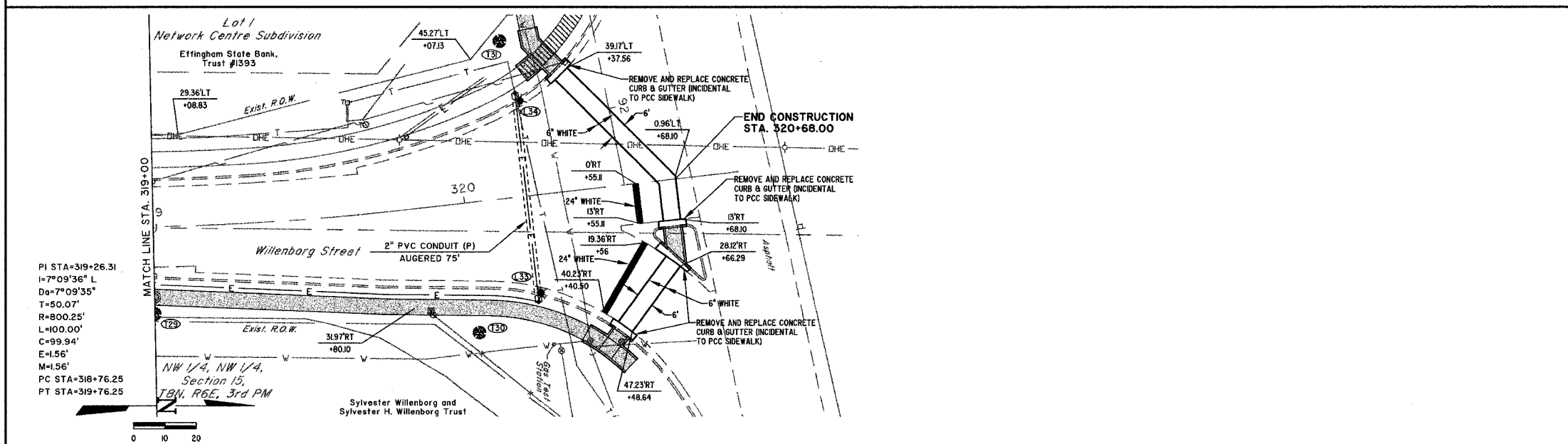
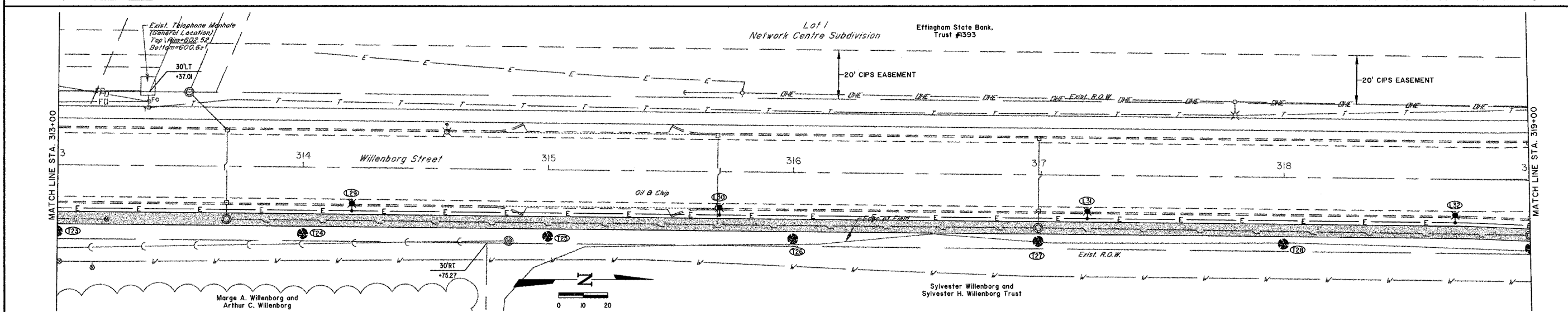
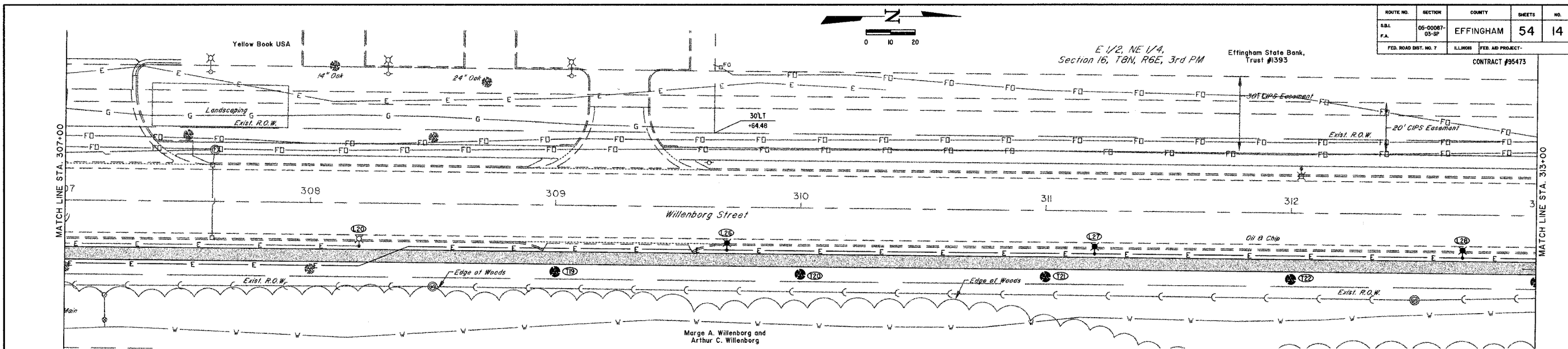
BM #6
TOP OF BRASS DISK AT
O'RT, STA. 301+50
ELEV. -589.95

MILANO & GRUNLOH ENGINEERS, LLC
14 WEST WASHINGTON
P.O. BOX 897
EFFINGHAM, ILLINOIS 62401
PHONE: (217) 347-7252
(800) 677-2794
FAX #: (217) 342-3433

SIDEWALK AND LIGHTING PLAN
WILLENBORG STREET
STA. 295+00 TO STA. 307+00
EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05008.dwg, Section 3.dwg
Plot date: 03/23/06 at 12:00

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
S&L F.A.	05-00087- 03-SP	EFFINGHAM	54	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT #95473	



PI STA=319+26.31
 I=7°09'36" L
 D=7°09'35"
 T=50.07'
 R=800.25'
 L=100.00'
 C=99.94'
 E=1.56'
 M=1.56'
 PC STA=316+76.25
 PT STA=319+76.25

REVISED: March 15, 2006

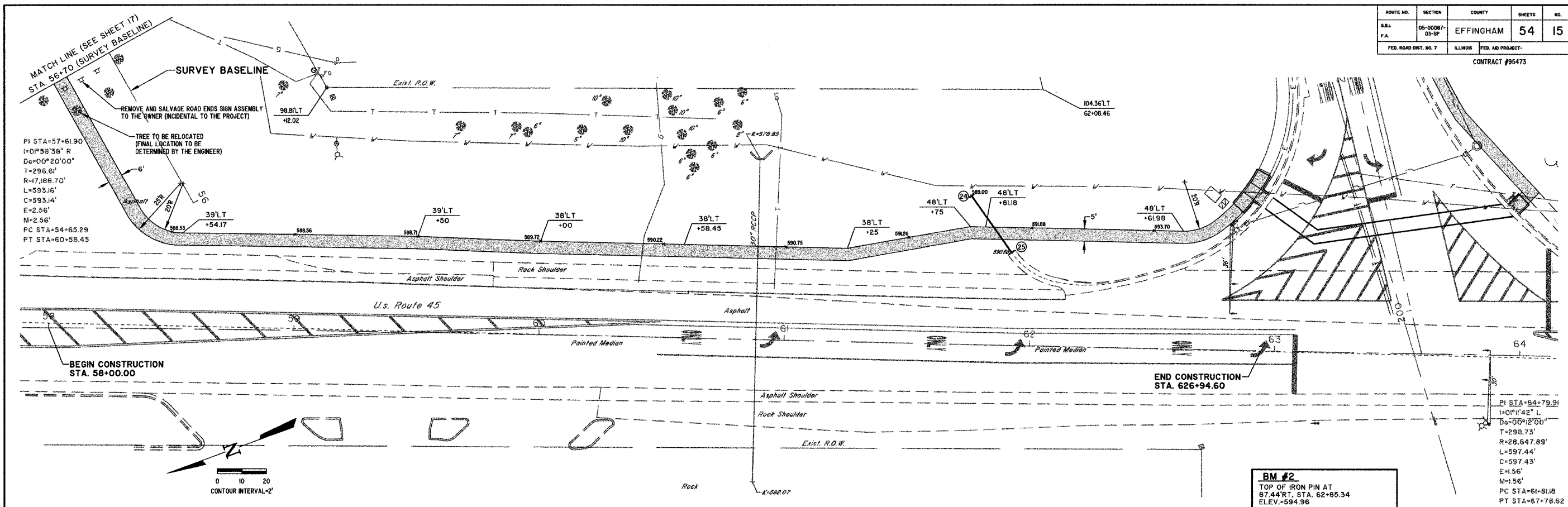
MILANO & GRUNLOH ENGINEERS, LLC
 44 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62404
 PHONE: (217) 347-7562
 (800) 677-8774
 FAX #: (217) 342-3433

SIDEWALK AND LIGHTING PLAN
 WILLENBORG STREET
 STA. 307+00 TO STA. 320+73.09
 EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05008\dwg\Section 3.dwg
 Plot date: 03/23/06 at 12:00

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
S.B.L.	05-00087-03-SP	EFFINGHAM	54	15
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

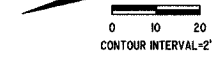
CONTRACT #95473



PI STA=57+61.90
 I=0°58'38" R
 D=00°20'00"
 T=296.61'
 R=17,188.70'
 L=593.16'
 C=593.14'
 E=2.56'
 M=2.56'
 PC STA=54+65.29
 PT STA=60+58.45

BEGIN CONSTRUCTION
 STA. 58+00.00

END CONSTRUCTION
 STA. 62+94.60



BM #2
 TOP OF IRON PIN AT
 87.44' RT, STA. 62+85.34
 ELEV.=594.96

PI STA=64+79.91
 I=0°1'42" L
 D=00°12'00"
 T=298.73'
 R=28,647.89'
 L=597.44'
 C=597.43'
 E=1.56'
 M=1.56'
 PC STA=61+81.18
 PT STA=67+78.62

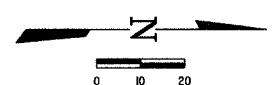
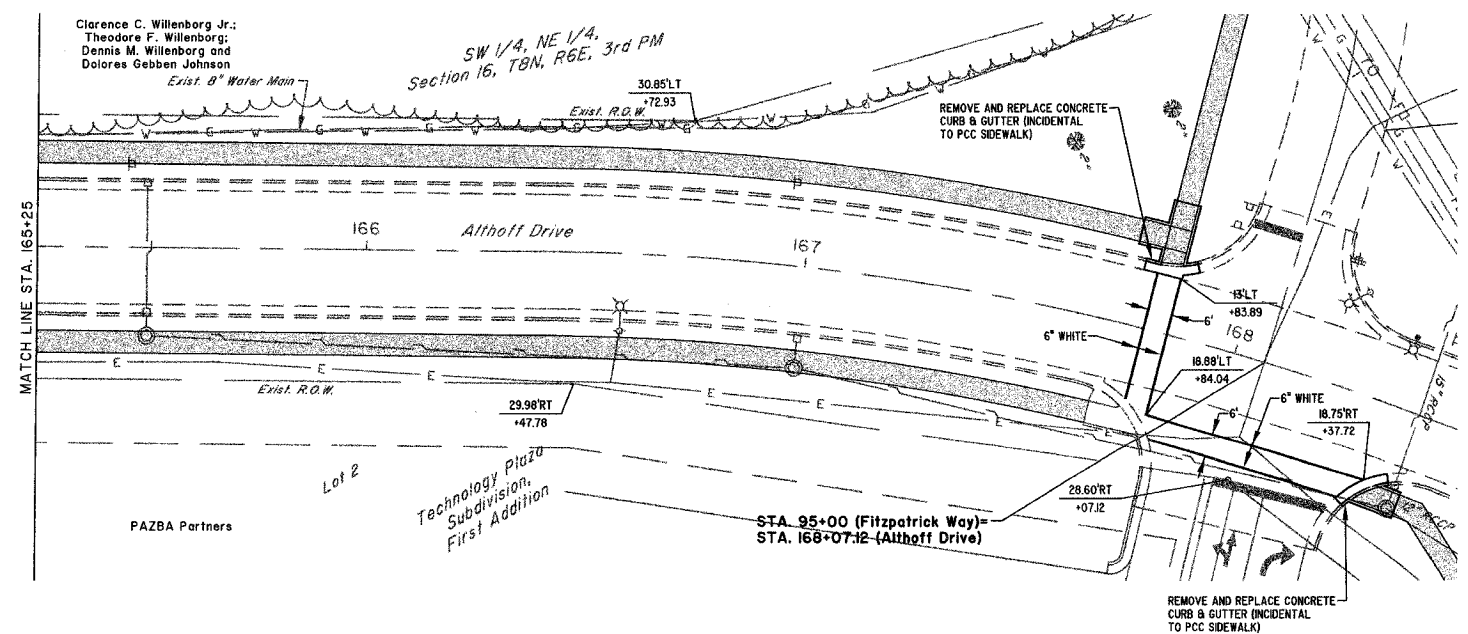
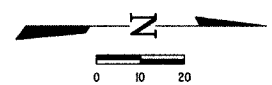
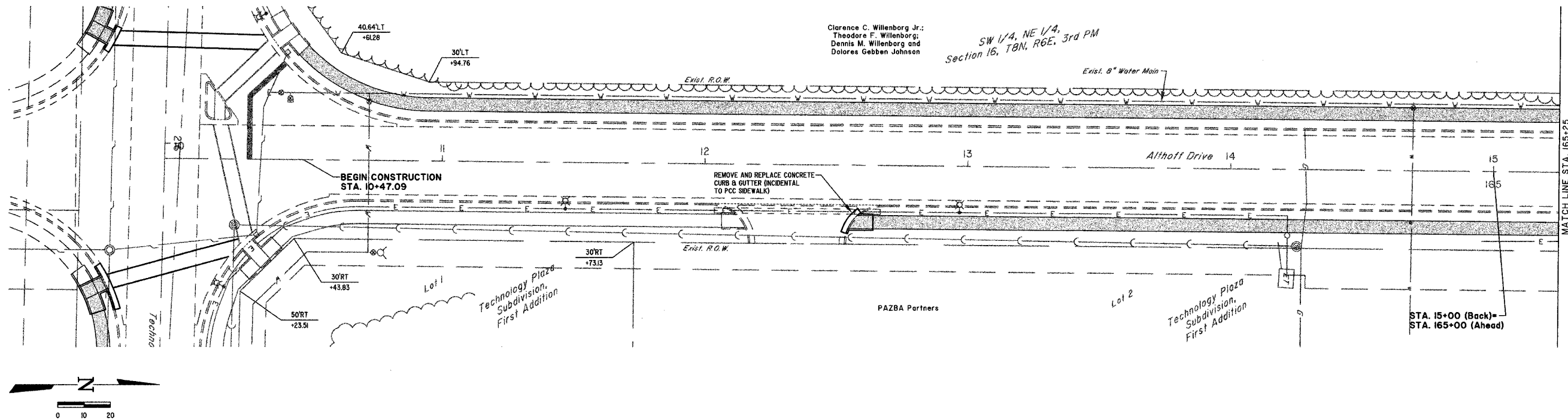
REVISED: March 15, 2006

MILANO & GRUNLOH ENGINEERS, LLC
 44 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 PHONE: (217) 347-7282
 (800) 677-2794
 FAX #: (217) 342-3433

SIDEWALK PLAN
 U.S. ROUTE 45
 STA. 58+00 TO STA. 63+00
 EFFINGHAM, ILLINOIS

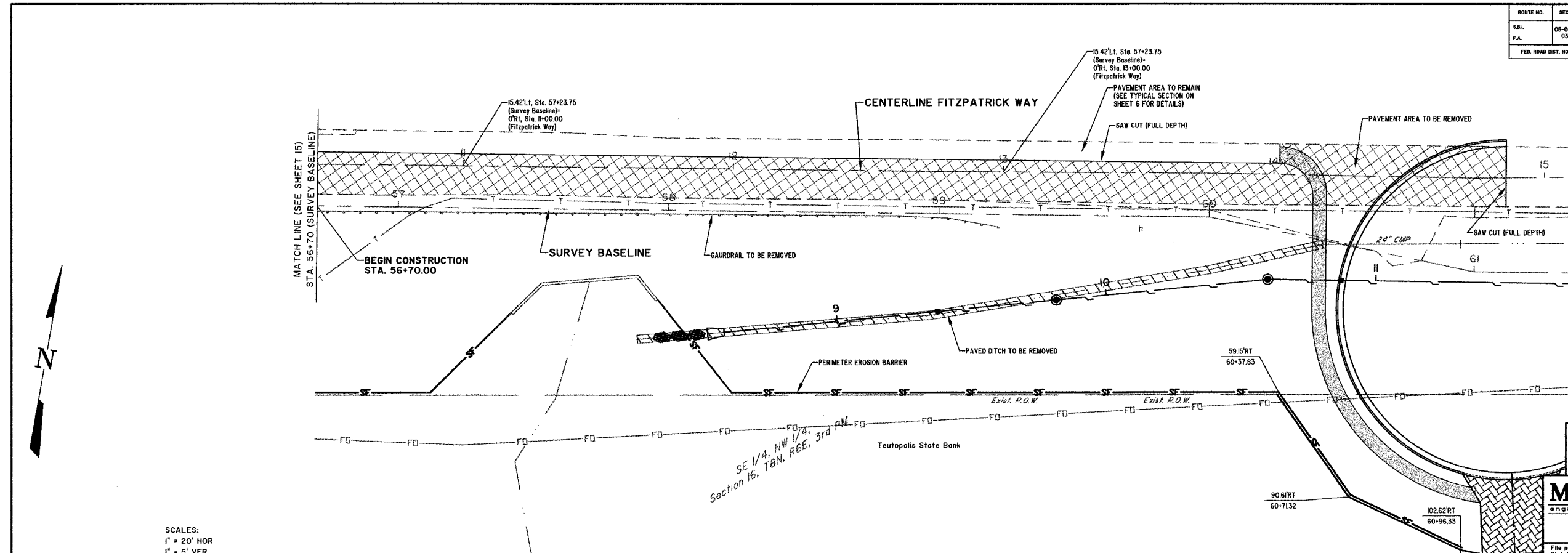
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 Plot date: 03/23/06 at 12:00

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.
SBL F.A.	05-0007- 03-SP	EFFINGHAM	54	16
FED. ROAD DIST. NO. 7	KLINGBE	FED. AID PROJECT-		
CONTRACT #95473				



	MILANO & GRUNLOH ENGINEERS, LLC	SIDEWALK PLAN ALTHOFF DRIVE STA. 10+00 TO STA. 168+00 EFFINGHAM, ILLINOIS
	14 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	
	PHONE: (217) 347-7252 (800) 677-2774 FAX #: (217) 342-3433	
	File name: S:\DWG\05\05008.dwg, Section 3.dwg Plot date: 03/23/06 at 12:00	

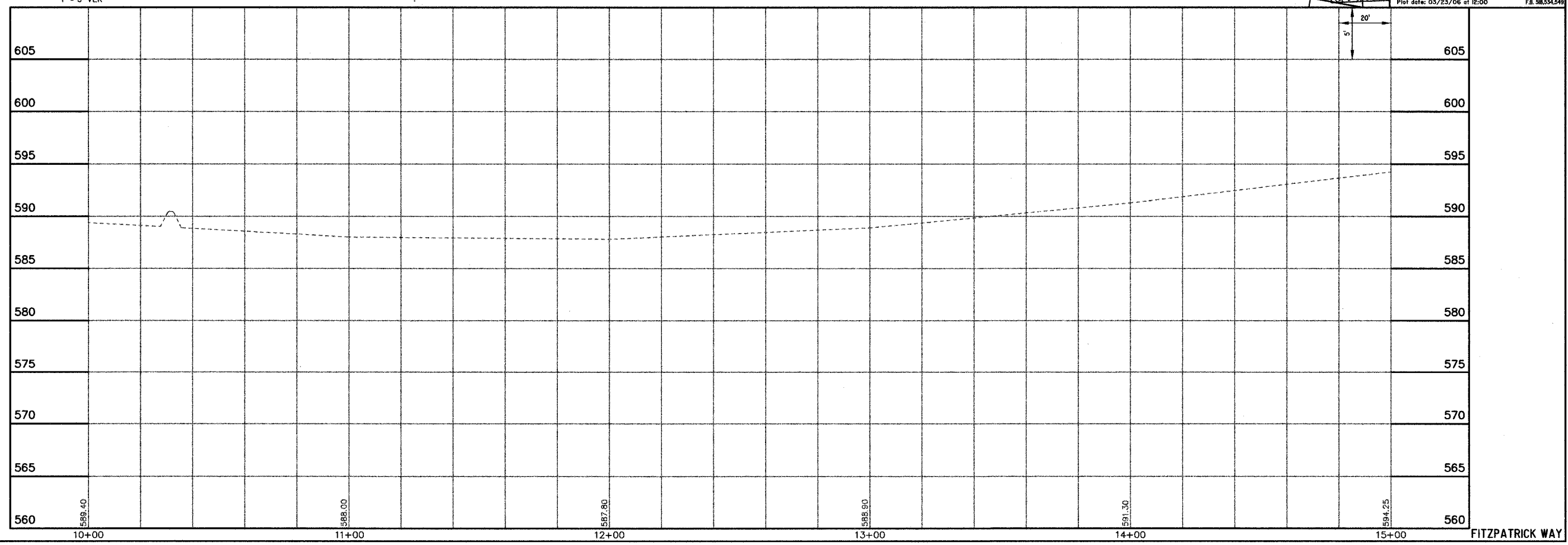
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
05-0087-03-07		EFFINGHAM	54	17
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95473				



SCALES:
 1" = 20' HOR
 1" = 5' VER

REVISED: March 15, 2006
BM #7
 CAP BOLT AT POINT OF "OPEN" ARROW ON FIRE HYDRANT, WEST SIDE OF DRIVEWAY TO WILLEBORG'S HOUSE.
 25°RT, Sta. 63+36.50, ELEV.+604.33

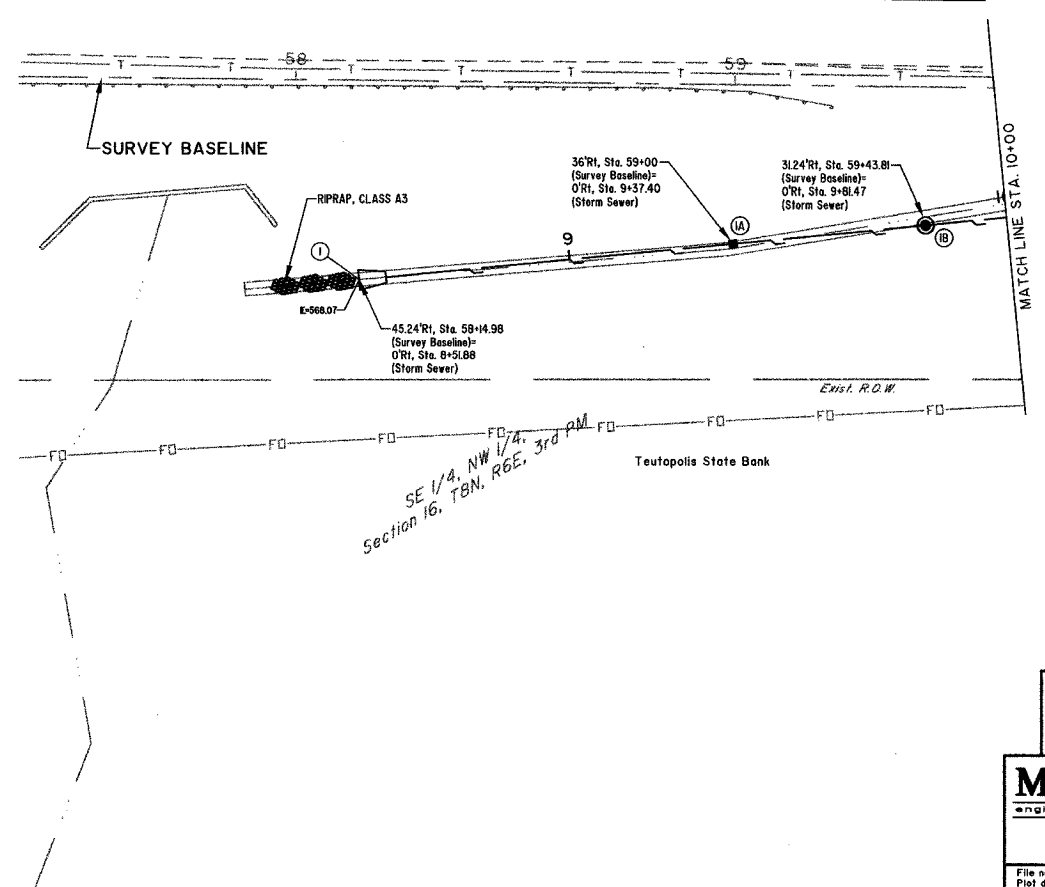
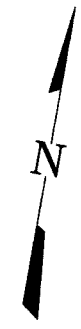
MILANO B. BRUNLOH ENGINEERS, LLC
 14 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 Phone: (618) 347-7592
 (800) 677-2774
 (618) 342-3433
 Fax: (618) 342-3433
 Web Address: www.mbe-engineers.com
 Design Firm #: 104-00308
 File name: S:\DWG\05\05000\dwg\Section 3.dwg
 Plot date: 03/23/06 at 12:00
 F.B. 98.534.549



FITZPATRICK WAY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A.	05-0007-03-07	EFFINGHAM	54	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473

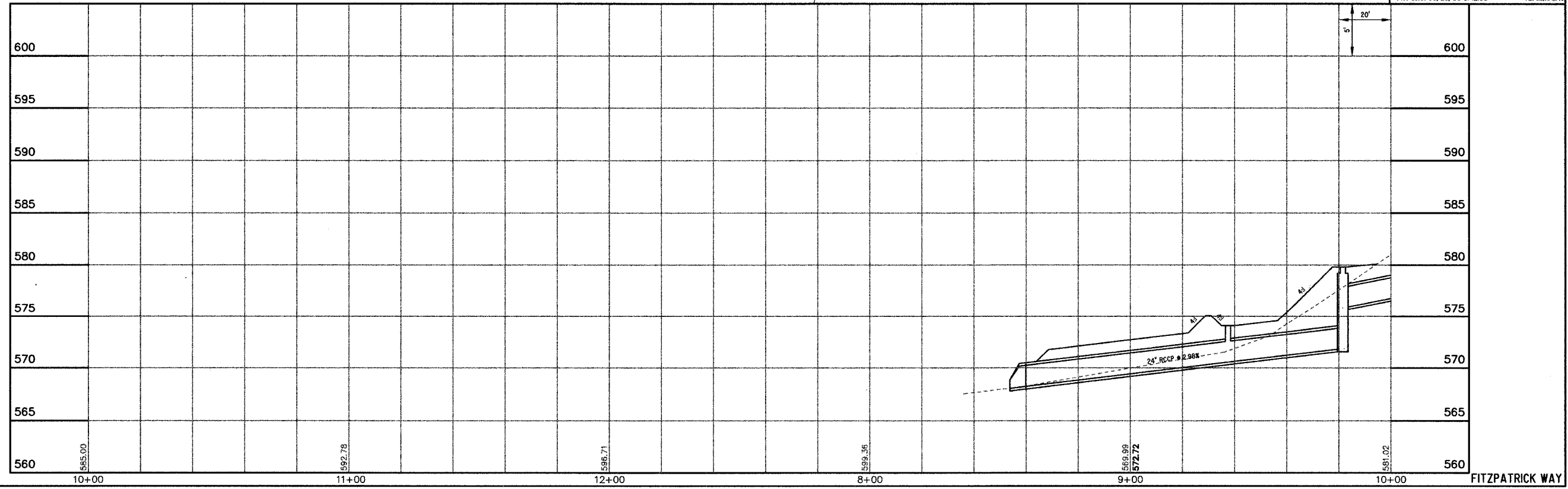


SCALES:
 1" = 20' HOR
 1" = 5' VER

REVISED: March 15, 2006

BM #7
 CAP BOLT AT POINT OF "OPEN" ARROW ON FIRE HYDRANT, WEST SIDE OF DRIVEWAY TO WILLENBORG'S HOUSE.
 25'RI, Sta. 63+36.50, ELEV.=604.33

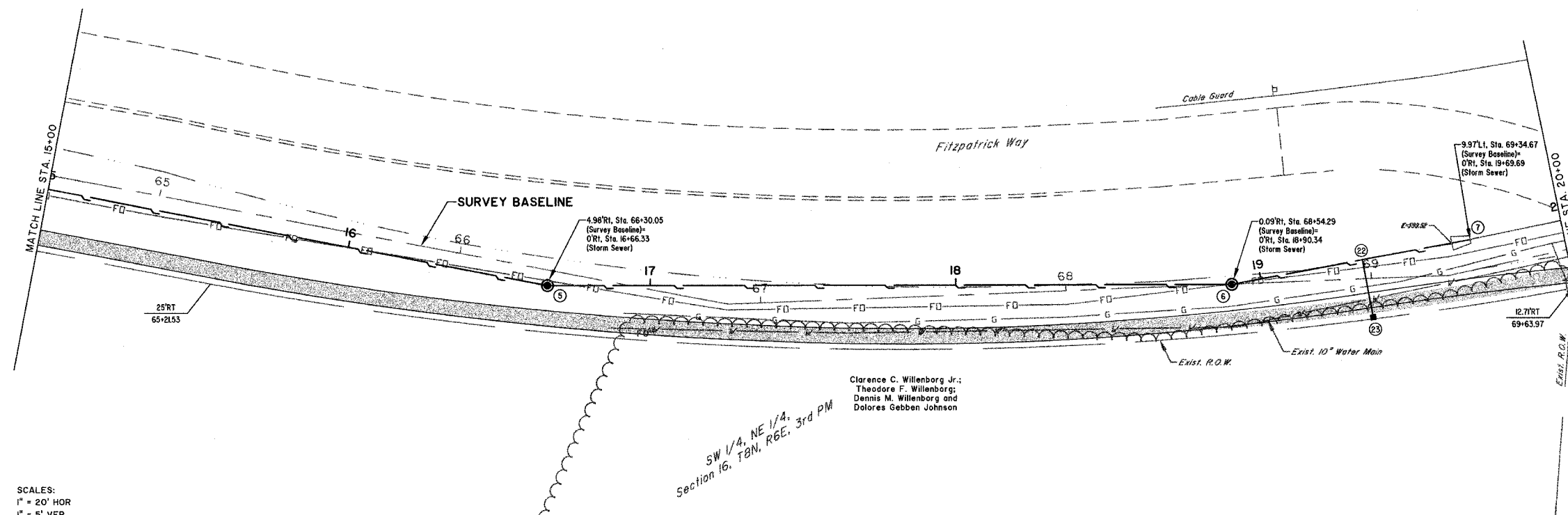
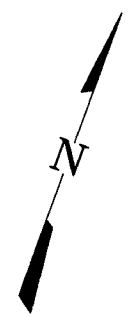
MILANO & GRUNLOH ENGINEERS, LLC
 14 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 Phone: (217) 342-7282
 (800) 617-5714
 Fax #: (217) 342-3433
 Web Address: www.mgengineers.com
 Design Firm #: 04-00308
 File name: S:\DWG\05\05000\dwg\Section 3.dwg
 Plot date: 03/23/06 at 12:00



FITZPATRICK WAY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S&L P.A.	05-00087-03-SF	EFFINGHAM	54	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473



SW 1/4, NE 1/4,
Section 16, T8N, R6E, 3rd PM

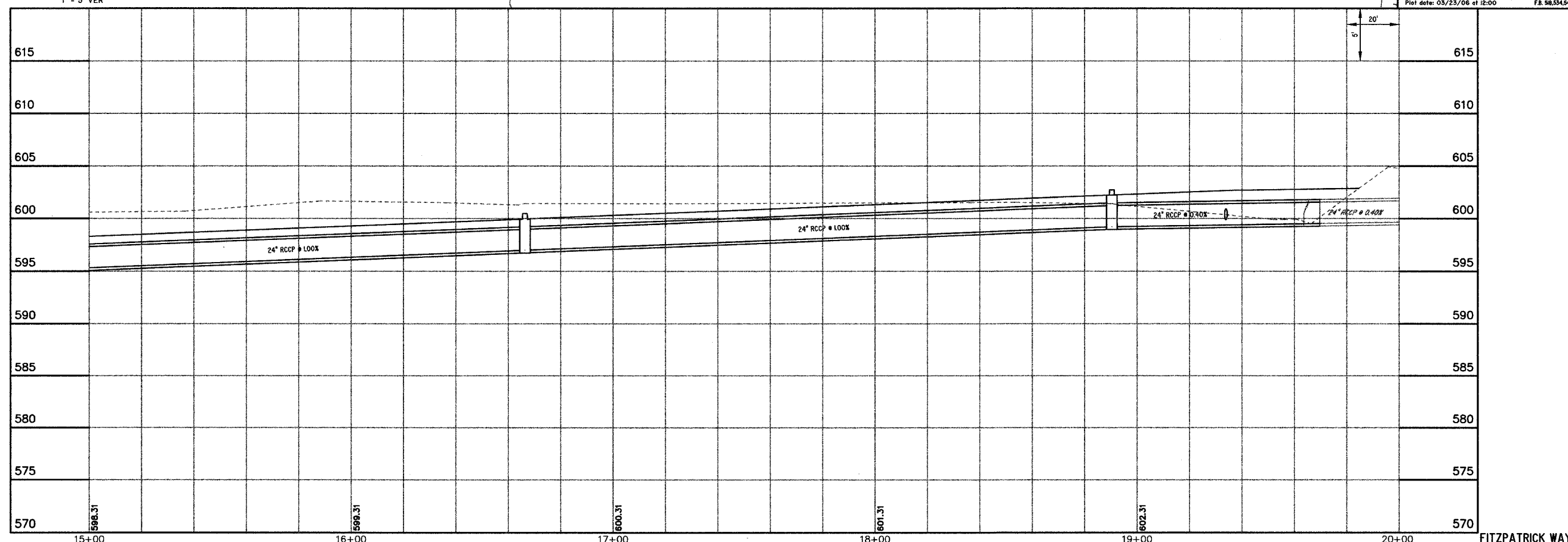
Clarence C. Willenborg Jr.;
Theodore F. Willenborg;
Dennis M. Willenborg and
Dolores Gebben Johnson

BM #7
CAP BOLT AT POINT OF "OPEN" ARROW
ON FIRE HYDRANT, WEST SIDE OF DRIVEWAY
TO WILLENBORG'S HOUSE.
23' RT, Sta. 63+56.50, ELEV. +604.33

MILANO B. GRUNLOH ENGINEERS, LLC
104 WEST WASHINGTON
P.O. BOX 897
EFFINGHAM, ILLINOIS 62401
Phone: (618) 347-7252
(618) 677-2774
Fax #: (618) 347-9433
Web Address: www.mge-engineers.com
Design Firm #: 184-00308

SCALES:
1" = 20' HOR
1" = 5' VER

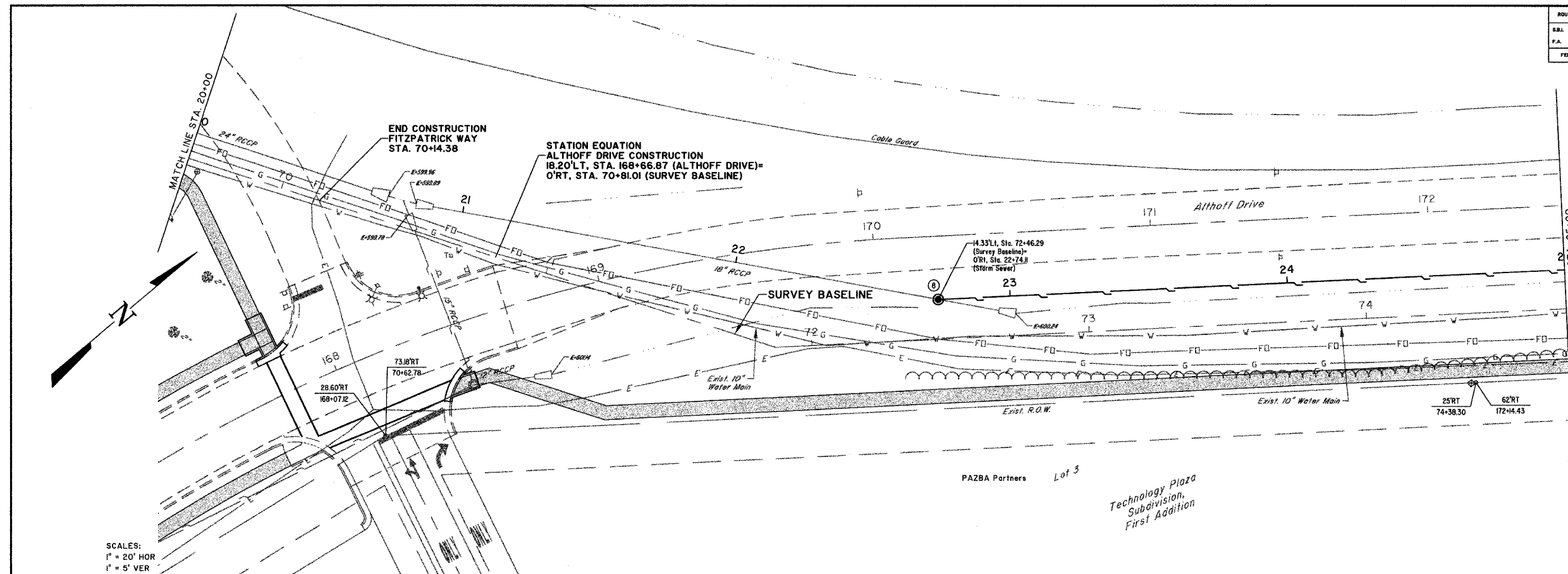
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Plot date: 03/23/06 at 12:00



FITZPATRICK WAY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L.	05-00087-03-SF	EFFINGHAM	54	21
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473

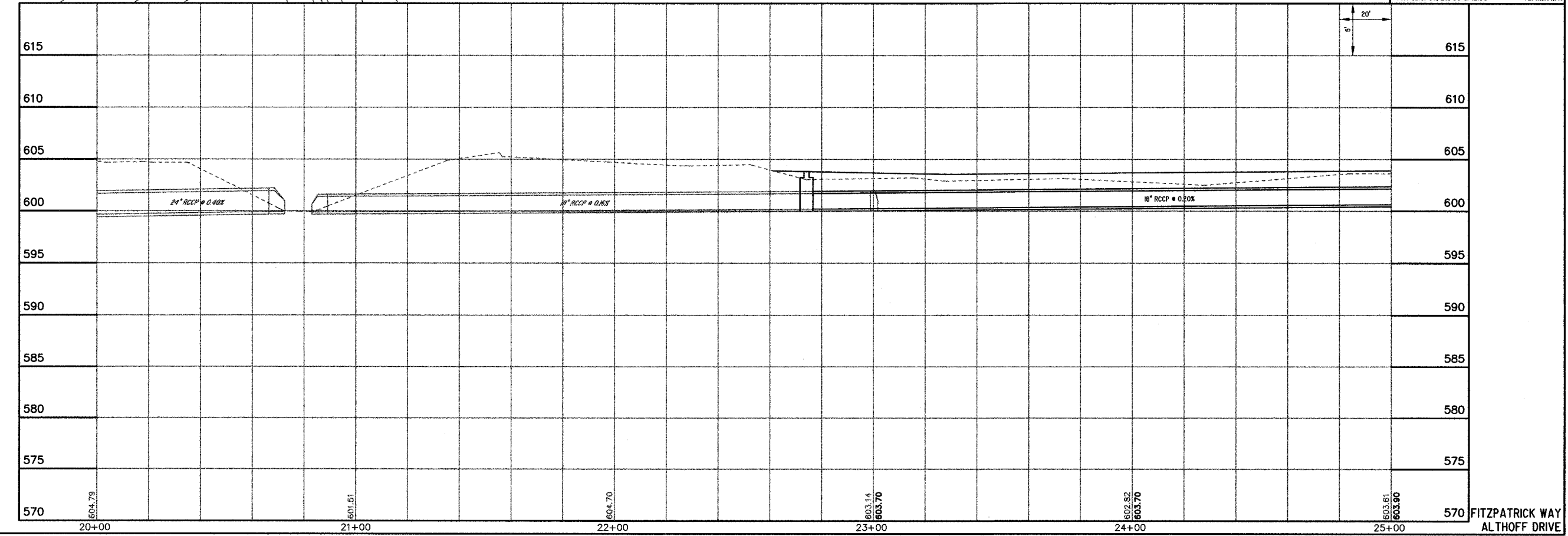


SCALES:
1" = 20' HOR
1" = 5' VER

BM #7
CAP BOLT AT POINT OF "OPEN" ARROW ON FIRE HYDRANT, WEST SIDE OF DRIVEWAY TO WILLENDORF'S HOUSE.
25RT, Sta. 63+56.50, ELEV.-604.33

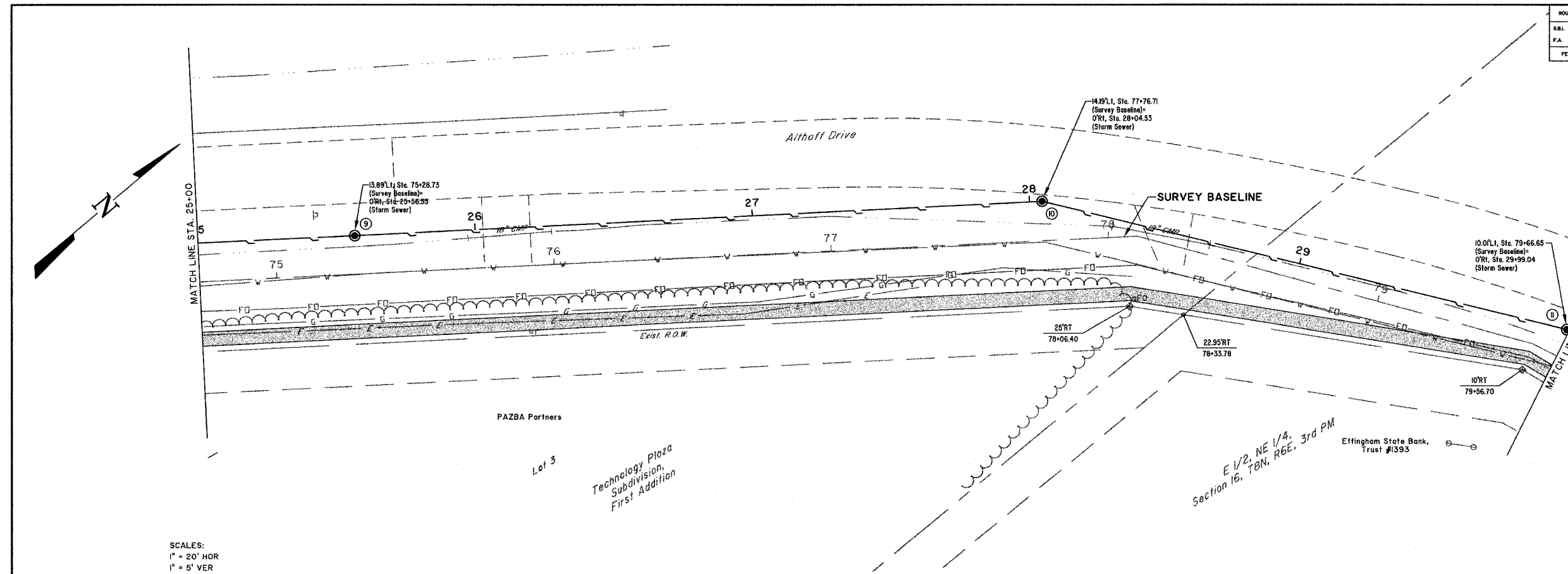
MILANO & GRUNLOH ENGINEERS, LLC
14 WEST WASHINGTON
P.O. BOX 897
EFFINGHAM, ILLINOIS 62401
Phone: (217) 347-7262
(800) 677-2714
Fax #: (217) 342-3433
Web Address: www.mge.com
Design Firm # 04-00208

File name: S:\DWG\05\05008\dwg\Section 3.dwg
Plot date: 03/23/06 at 12:00 P.M. F.B. 98,534,549



FITZPATRICK WAY
ALTHOFF DRIVE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.	05-00087-03-SF	EFFINGHAM	54	22
FED. ROAD DIST. NO. 7	LLINOS	FED. AID PROJECT-	CONTRACT #95473	

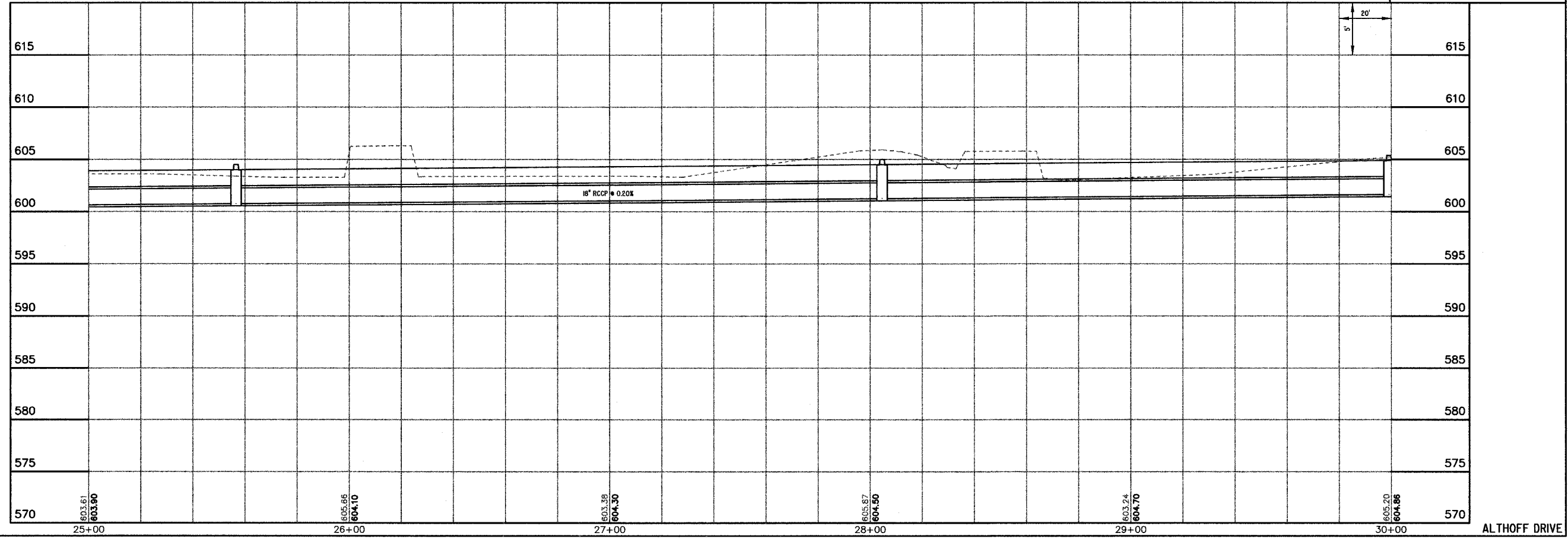


SCALES:
 1" = 20' HOR
 1" = 5' VER

BM #9
 CAP BOLT AT POINT OF "OPEN" ARROW ON FIRE HYDRANT AT SOUTHWEST CORNER OF HEARTLAND DENTAL SITE. ELEV. = 61.25

MILANO & GRUNLOH ENGINEERS, LLC
 14 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 Phone: (317) 347-7282
 Fax: (317) 342-3433
 Web Address: www.mgengineers.com
 Design Firm #: 184-00308

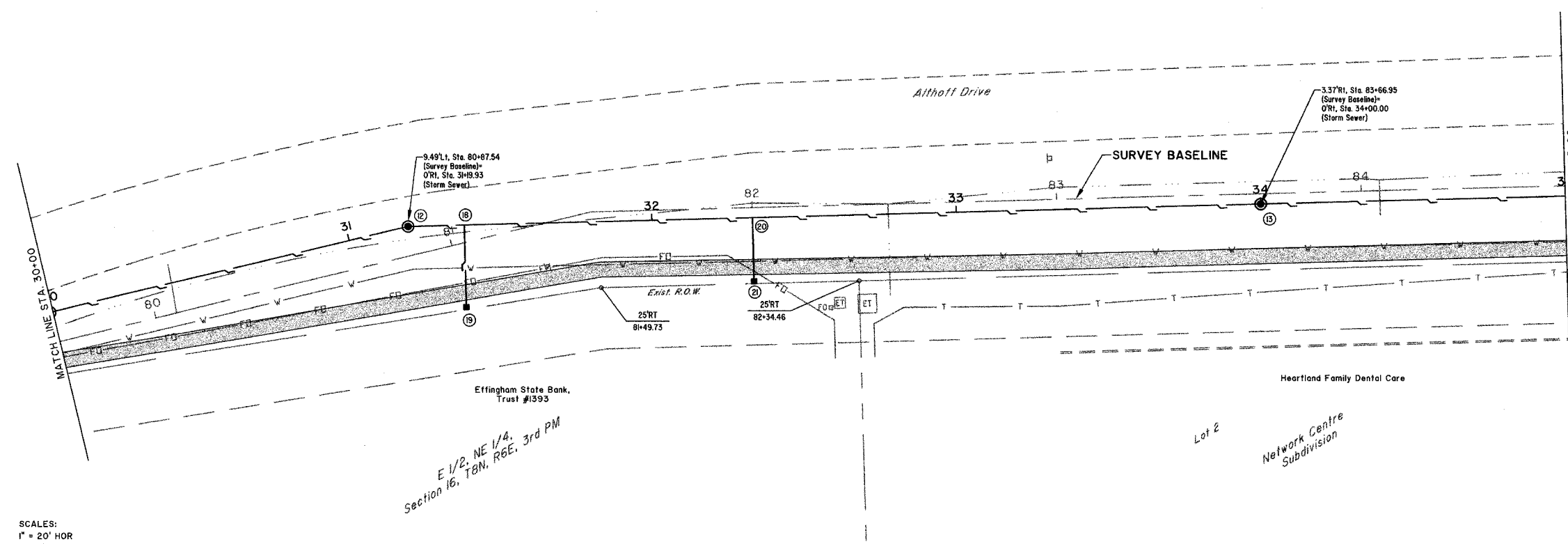
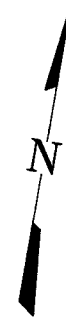
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 Plot date: 03/23/06 at 12:00 P.M. F.B. 58,54,549



ALTHOFF DRIVE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
881	05-0087-03-2P	EFFINGHAM	54	23
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95473



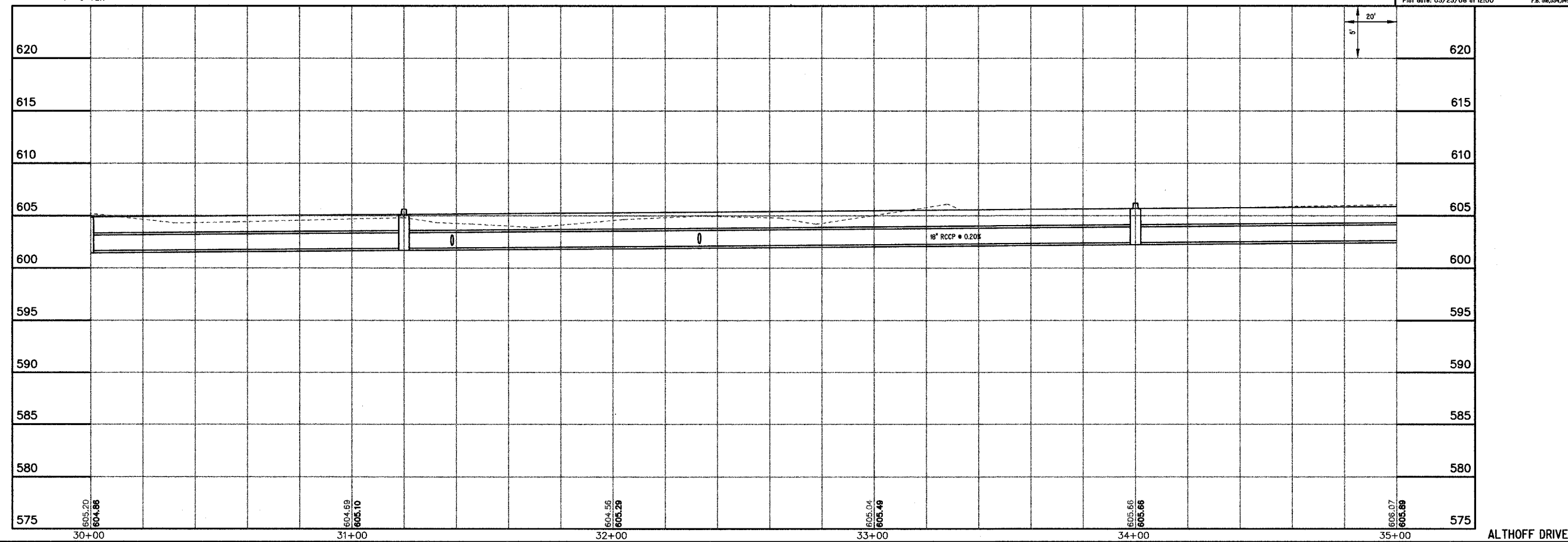
SCALES:
 1" = 20' HOR
 1" = 5' VER

BM #9
 CAP BOLT AT POINT OF "OPEN" ARROW
 ON FIRE HYDRANT AT SOUTHWEST CORNER
 OF HEARTLAND DENTAL SITE.
 ELEV.=68.25

M
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engineering
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MLAND & GRUNLOH ENGINEERS, LLC
 84 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 Phone: (217) 347-7262
 (800) 677-2774
 Fax: (217) 342-3453
 Web Address: www.mylandeng.com
 Design Firm #: 84-00308

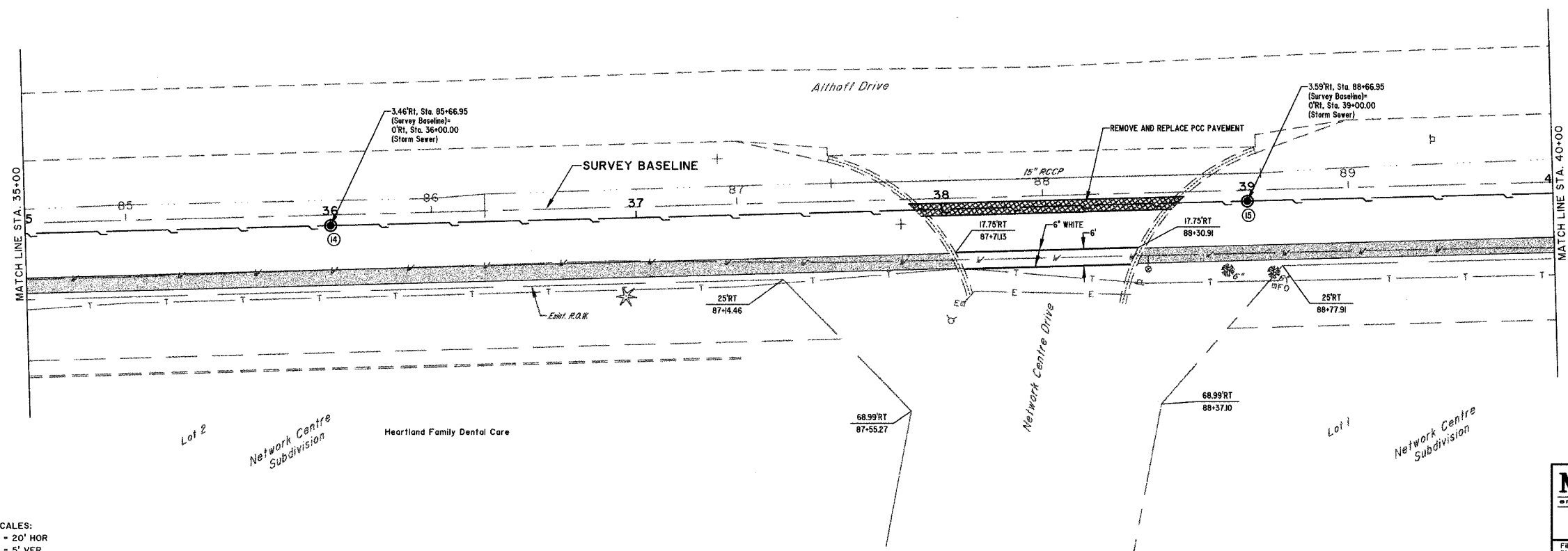
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 Plot date: 03/23/06 at 12:00 P.M. 38,334,949



ALTHOFF DRIVE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A.	05-00087-03-SP	EFFINGHAM	54	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

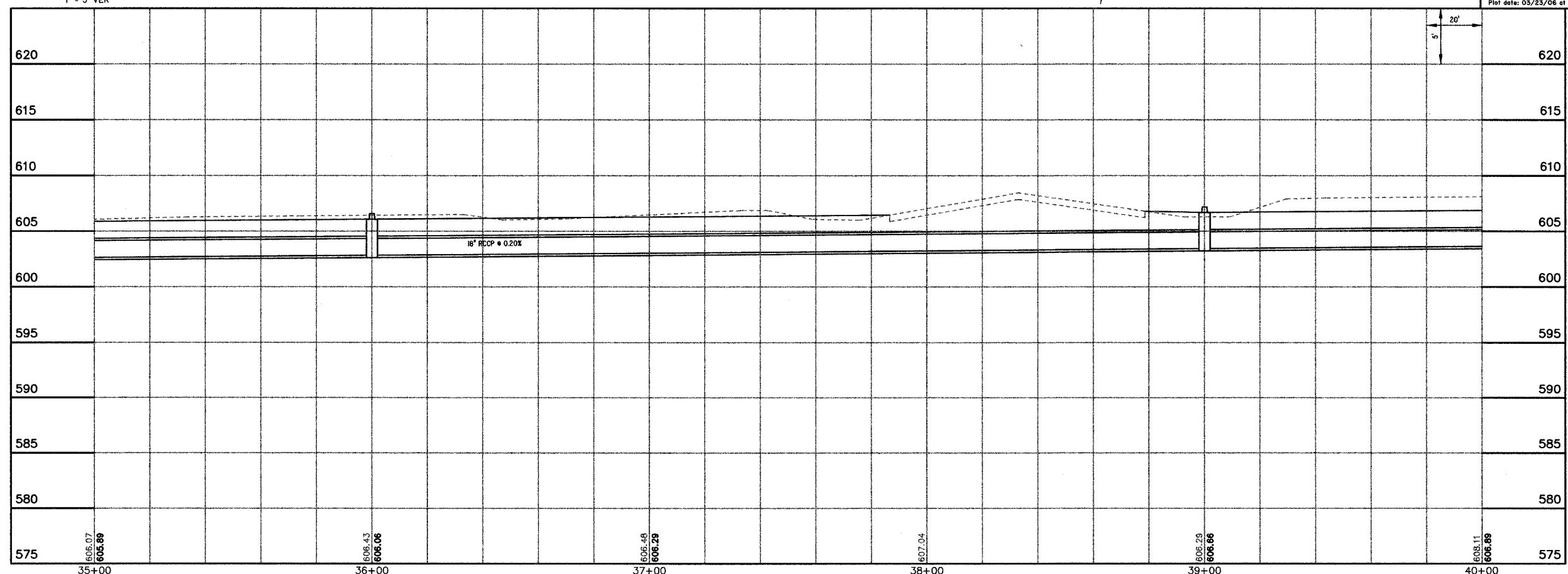
CONTRACT #95473



SCALES:
 1" = 20' HOR
 1" = 5' VER

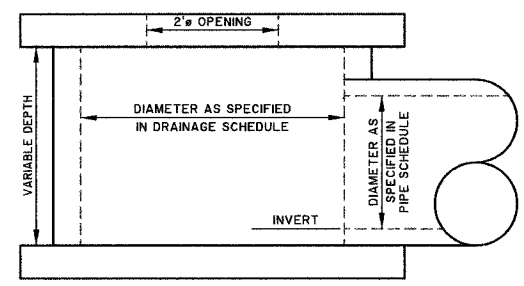
BM #9
 CAP BOLT AT POINT OF "OPEN" ARROW ON FIRE HYDRANT AT SOUTHWEST CORNER OF HEARTLAND DENTAL SITE. ELEV. = 68.25

MILANO B. GRUNLOH ENGINEERS, LLC
 14 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 Phone: (618) 347-7232
 (618) 677-2714
 Fax: (618) 342-3433
 Web Address: www.mge-engineers.com
 Design Firm #: 194-00306
 File name: S:\DWG\05\050008\dwg\Section 3.dwg
 Plot date: 03/23/06 at 12:00 P.M. 58.534.549

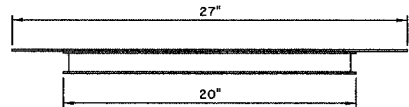
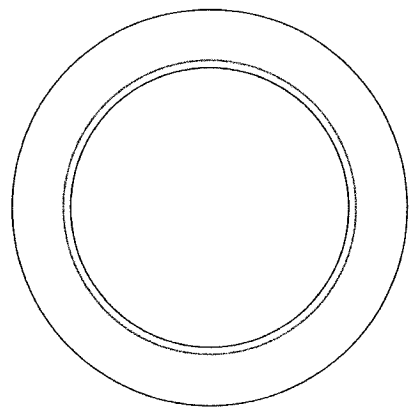


ALTHOFF DRIVE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L. F.A.	05-0007-03-SP	EFFINGHAM	54	26
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95473				

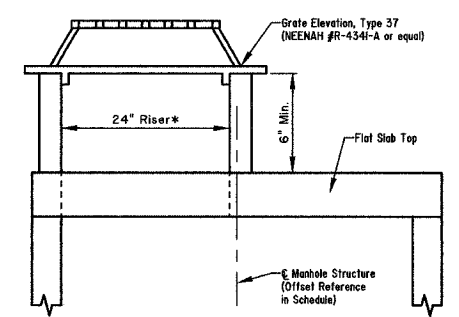
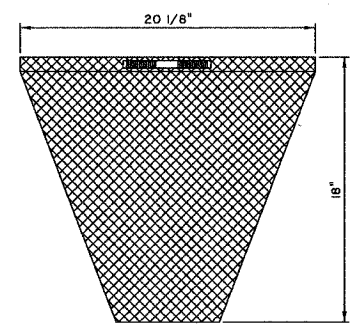


DETAIL OF RESTRICTED DEPTH MANHOLE



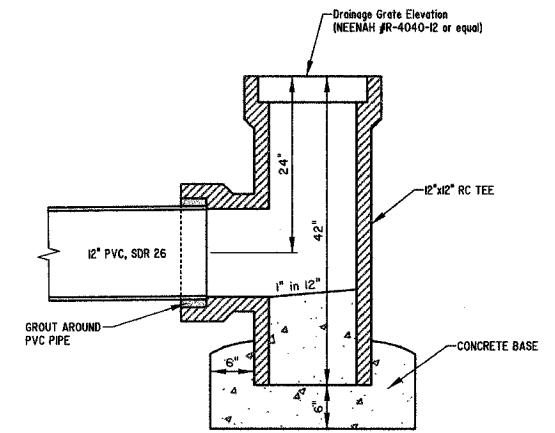
INLET PROTECTION FILTER

GENERAL NOTES:
 FRAME: Top flange fabricated from 1/8" flat stock. Base rim fabricated from 1 1/2" x 1/2" x 1/8" channel. All domestic steel conforming to ASTM-A36.
 SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel strap and lock.

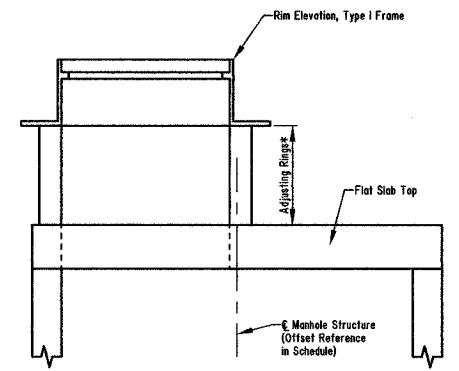


* Incidental to the cost of the Manhole structure

TYPE 37 GRATE



GRADED INLET (SPECIAL)



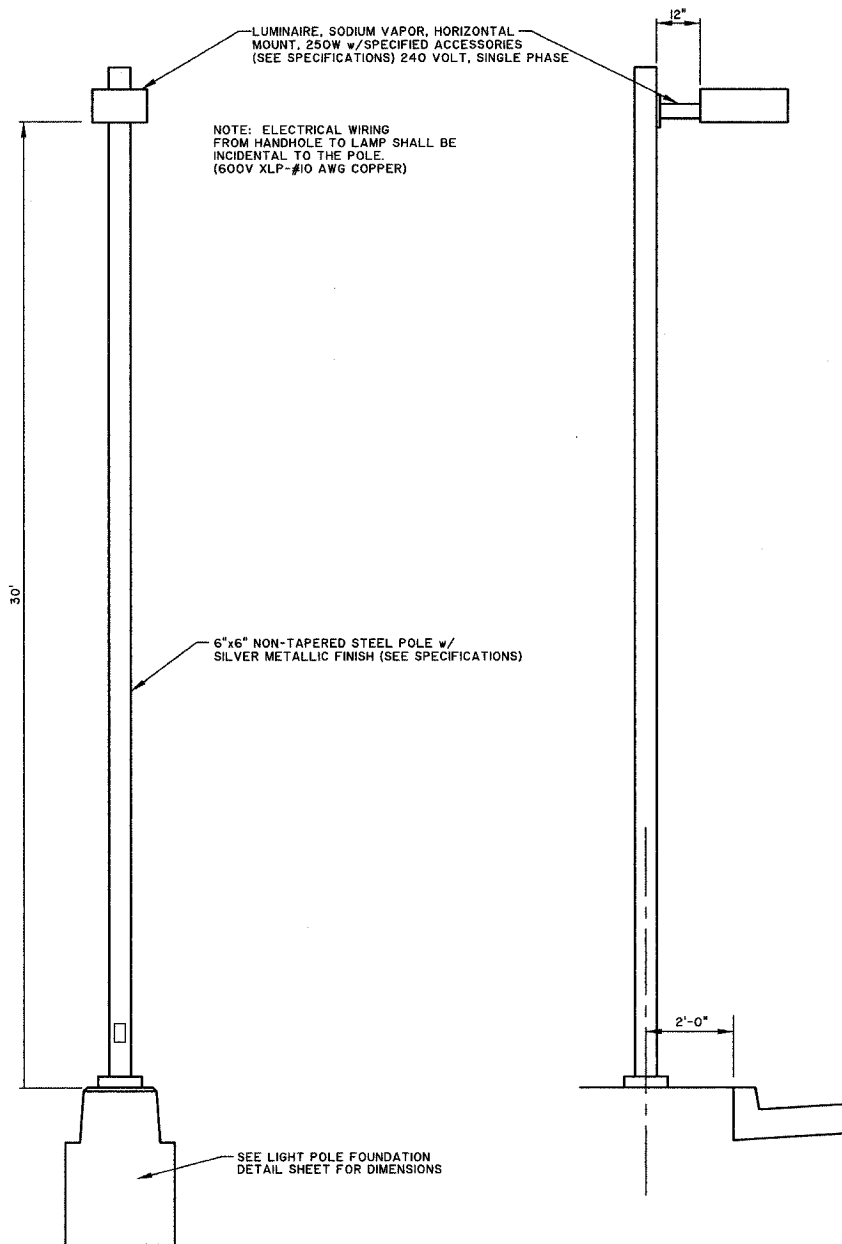
* Incidental to the cost of the Manhole structure

TYPE I FRAME & LID

MILANO & GRUNLOH ENGINEERS, LLC
 84 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 PHONE: (217) 347-7262
 (800) 677-2754
 FAX #: (217) 342-3433

STORM SEWER DETAILS
 TECHNOLOGY DRIVE, SECTION 3
 CITY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05008.dwg Quantities.dwg
 Plot date: 03/23/06 at 12:00



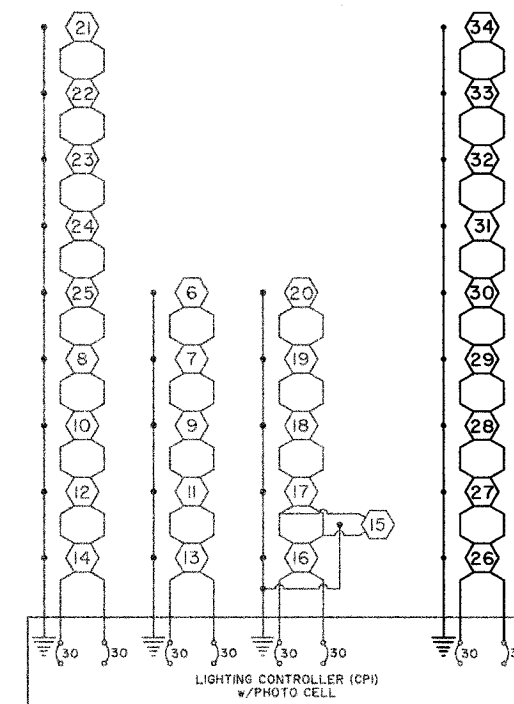
LIGHT POLE DETAIL
Locations L4 thru L13

EXISTING LIGHT SCHEDULE

POINT NO.	LIGHT STANDARD			DESCRIPTION
	UNIT	LOCATION		
L15	I	STA. 234+00.00 20.53'RT		LIGHT ASSEMBLY
CPI	I	STA. 233+90.00 58.50'RT		CONTROLLER PANEL
L16	I	STA. 234+25.35 63.64'LT		LIGHT ASSEMBLY
L17	I	STA. 303+70.00 17.58'RT		LIGHT ASSEMBLY
L18	I	STA. 305+20.00 17.58'RT		LIGHT ASSEMBLY
L19	I	STA. 306+70.00 17.58'RT		LIGHT ASSEMBLY
L20	I	STA. 308+20.00 17.58'RT		LIGHT ASSEMBLY

PROPOSED LIGHT SCHEDULE

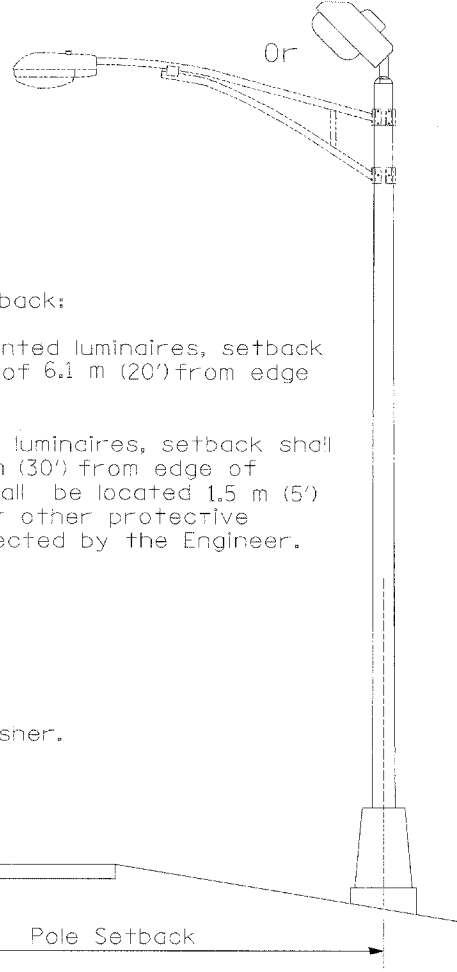
POINT NO.	LIGHT STANDARD			DESCRIPTION
	UNIT	LOCATION		
HH1	I	STA. 309+70.00 25.58'RT		HANDHOLE
L26	I	STA. 309+70.00 17.58'RT		LIGHT ASSEMBLY
L27	I	STA. 311+20.00 17.58'RT		LIGHT ASSEMBLY
L28	I	STA. 312+70.00 17.58'RT		LIGHT ASSEMBLY
L29	I	STA. 314+20.00 17.58'RT		LIGHT ASSEMBLY
L30	I	STA. 315+70.00 17.58'RT		LIGHT ASSEMBLY
L31	I	STA. 317+20.00 17.58'RT		LIGHT ASSEMBLY
L32	I	STA. 318+70.00 17.58'RT		LIGHT ASSEMBLY
L33	I	STA. 320+20.00 34.31'RT		LIGHT ASSEMBLY
L34	I	STA. 320+20.00 32.96'LT		LIGHT ASSEMBLY



WIRING DIAGRAM

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
05-00007-03-54	EFFINGHAM	54	28

CONTRACT #95493



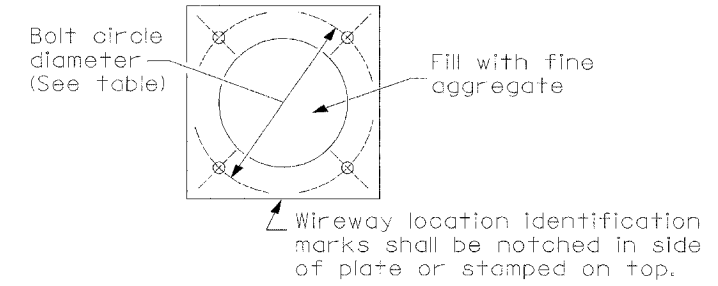
LIGHT POLE MOUNTING HEIGHT	BOLT CIRCLE DIAMETER	STEEL FOUNDATION			CONCRETE FOUNDATION		
		SHAFT DIAMETER	SHAFT DEPTH	TOP PLATE (min)	SHAFT DIAMETER	SHAFT DEPTH	ANCHOR ROD LENGTH ①
<9.1 m (30')	292 (11.5)	220 (8 5/8)	1.83 m (6')	300 x 300 x 25 12 x 12 x 1	610 (24)	1.52 m (5'-0")	1.45 m (4'-9")
9.4 m - 10.7 m (31'-35')	292 (11.5)	220 (8 5/8)	1.83 m (6')	300 x 300 x 25 12 x 12 x 1	610 (24)	1.67 m (5'-6")	1.60 m (5'-3")
10.9 m - 12.2 m (36'-40')	381 (15) ③	220 (8 5/8)	1.83 m (6') ②	375 x 375 x 31 15 x 15 x 1 1/4	762 (30)	1.83 m (6'-0")	1.75 m (5'-9")
12.5 m - 13.7 m (41'-45')	381 (15) ③	220 (8 5/8)	1.83 m (6') ②	375 x 375 x 31 15 x 15 x 1 1/4	762 (30)	1.98 m (6'-6")	1.90 m (6'-3")
14.0 m - 15.2 m (46'-50')	381 (15) ③	220 (8 5/8)	2.44 m (8')	375 x 375 x 31 15 x 15 x 1 1/4	762 (30)	2.13 m (7'-0")	2.00 m (6'-9")

- ① Length does not include 100(4)hook
- ② 220 mm x 2.44 m (8 5/8" x 8'-0") for Twin luminaires
- ③ Bolt circle diam. shall be 430 (17) when a TB3-17 transformer base is used

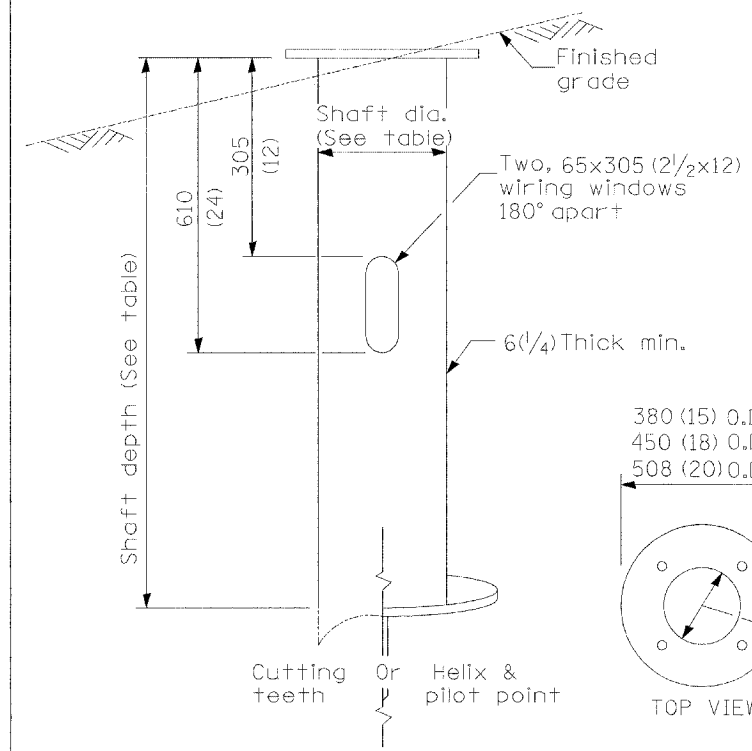
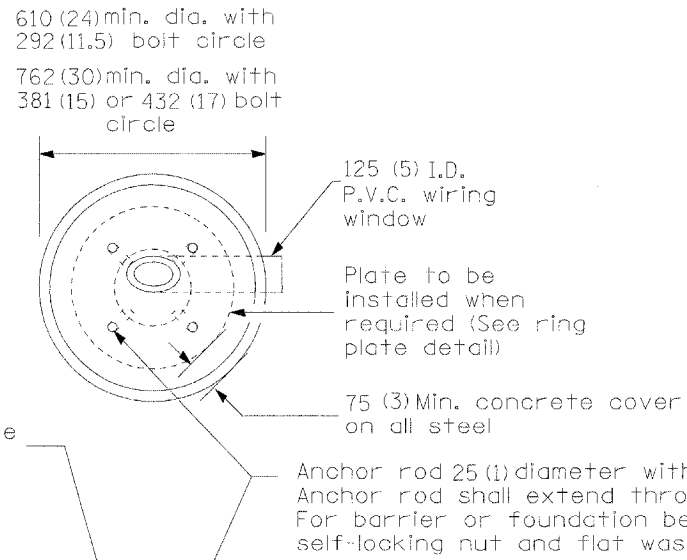
Pole Foundation Setback:

For horizontal mounted luminaires, setback shall be a minimum of 6.1 m (20') from edge of pavement.

For vertical mount luminaires, setback shall be a minimum of 9 m (30') from edge of pavement. Poles shall be located 1.5 m (5') behind guardrail or other protective barriers, or as directed by the Engineer.

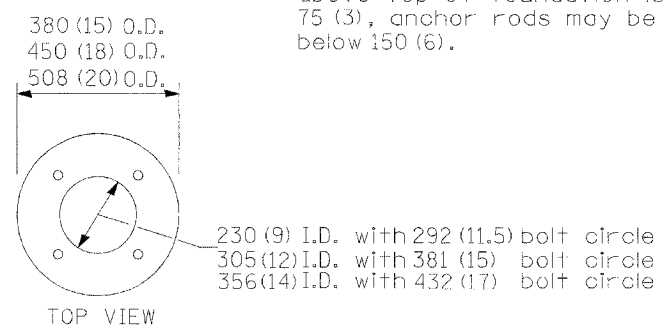


Length above foundation shall be adjusted to accommodate breakaway devices furnished by the contractor for a specific installation.



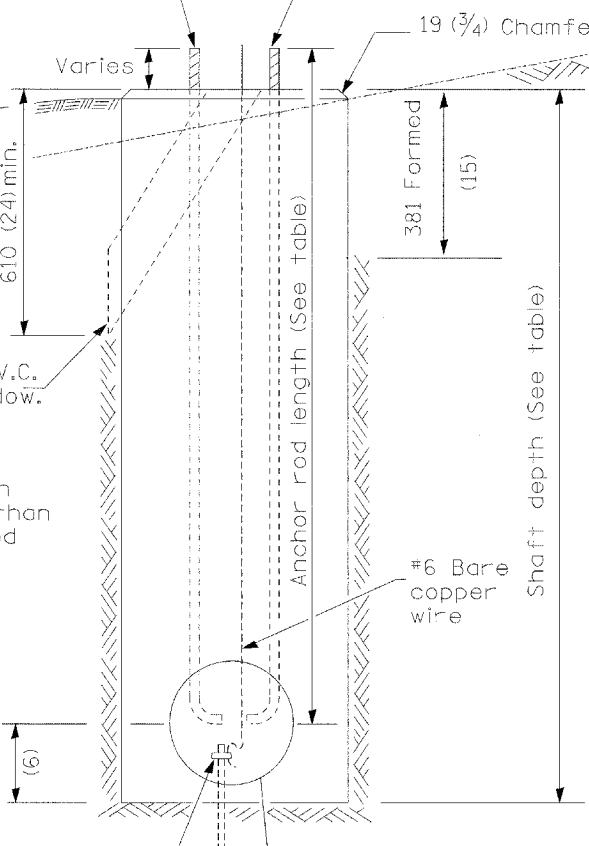
Use dirt removed from foundation to meet 1.52m (5 ft.) chord fill around foundation top. Grade dirt level with bottom of concrete chamfer.

- ④ If the required anchor rod length above top of foundation is less than 75 (3), anchor rods may be lowered below 150 (6).



RING PLATE DETAIL
(When rock is encountered and foundation is shallower)

Cast bronze clamp
16 mm x 3 m (5/8" x 10') Copperclad grounding electrode. When foundation is set in rock, install ground electrode in cable trench.



Notes:

- 1) Wireway may be on front, back or side of foundation as required by the trenching. Place door of transformer base on wireway side to minimize the number of unit duct bends.
- 2) Top of schedule 40 125 (5) I.D. PVC wiring window, shall be flush with the top of foundation for drainage.
- 3) All foundations are designed to be located on slopes not exceeding 2:1 where soils have an unconfined compressive strength of at least 1.0 TSF. The contractor shall verify the soil strength during drilling for concrete foundations or by monitoring installation resistance on steel foundations and notify the engineer if other conditions are encountered.
- 4) Anchor rod shall be increased to 31 (1 1/4) diameter for 15.24 (50') mounting height or above.
- 5) TB3-17 transformer base is not to be used on metal foundation

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

CONCRETE FOUNDATION

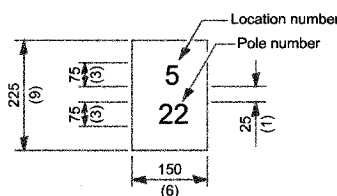
DATE	REVISIONS
10/7/02	Bridge Office depth calc.

LIGHT POLE FOUNDATION

LG007-836

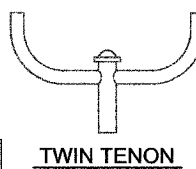
"Install and orient arm bracket over pole tenon and firmly hand tighten the two set screws. Use third hole in arm bracket as a guide to drill a 8.3 (2 1/8") diameter hole through tenon. Install and tighten self-tapping screw. Tighten set screws an additional (1/4 to 1/2) turn with hex key (not provided). Install locknuts on set screws if threaded projection allows."

Pole shall meet AASHTO Standard Specifications for 128.72 km (80 mph) wind loading and 40.82 kg (90 lb.), .37 m² (4.0 sq. ft.) E.P.A. luminaire.

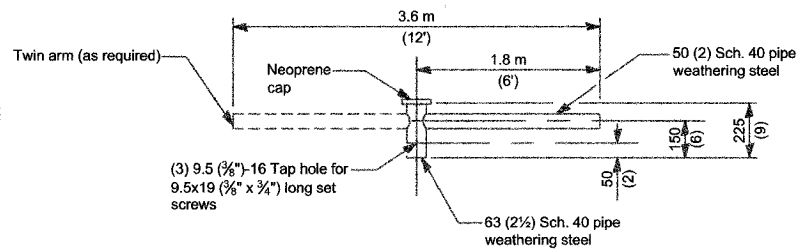


The contractor shall furnish and install a light pole identification of each new light pole, as shown above, incidental to the respective light pole pay item. The numerals shall be 75 (3) series "D", black, screened on silver-white type B pressure sensitive reflective sheeting conforming to the requirements of section T602.01 of the Standard Specifications for Traffic Control Items. The numerals shall conform to the FHWA "Standard Alphabets for Highway Signs".

The light pole identification shall be applied to sign base material as specified in section 1085.05 of the Standard Specifications, approximately 180 (7) above the adjacent pavement grade visible to approaching traffic in accordance with Highway Standard 2319.

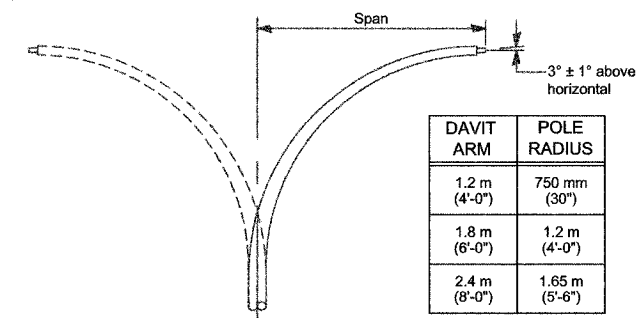


TWIN TENON

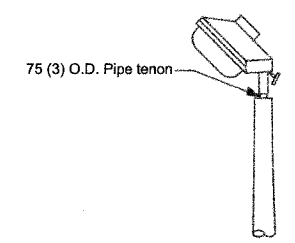


TENON MOUNT BRACKET ARM

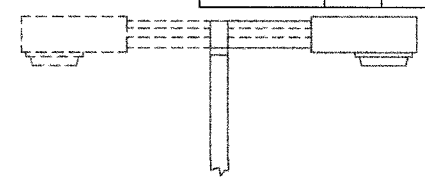
NOTE: Single or twin arm assembly shall be tilted 3° above horizontal.



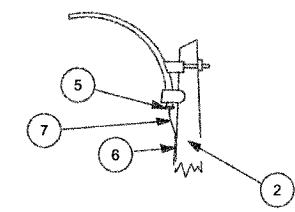
DAVIT ARM (and or) DAVIT ARM-TWIN



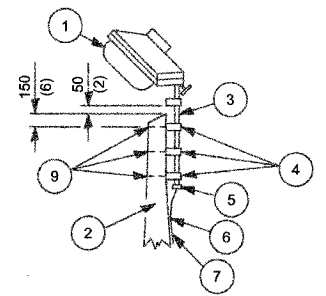
TENON



SHORT BRACKET
 SHORT BRACKET - TWIN

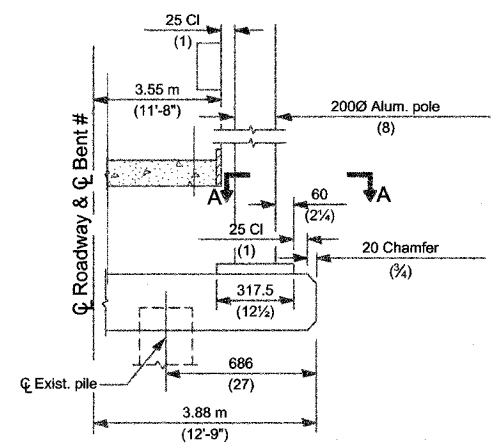


MAST ARM

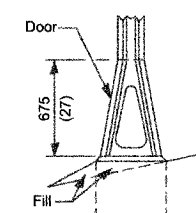


TENON

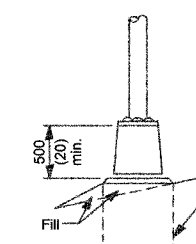
- 1 Luminaire
- 2 Wood pole, class 3 or better
- 3 63 (2 1/2) Galv. steel conduit
- 4 Single offset pole band
- 5 Conduit bushing
- 6 Cable clamps on 600 (24) centers
- 7 2/c #12 Type use cable
- 8 25 (1) Galv. steel conduit 3m (10') in length
- 9 16 (5/8) hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- 10 Conduit clamps on 900 (36) centers
- 11 Unit duct
- 12 Threaded reducer
- 13 "C" Condulet, threaded
- 14 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



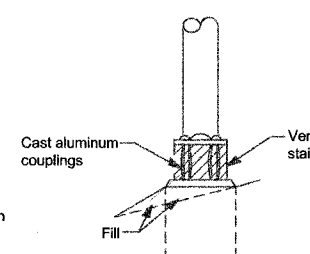
BENT # (Looking)



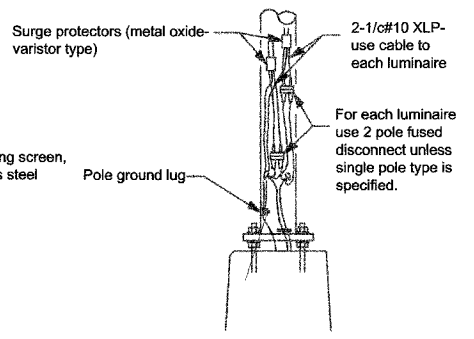
STAINLESS STEEL FLAIR BASE



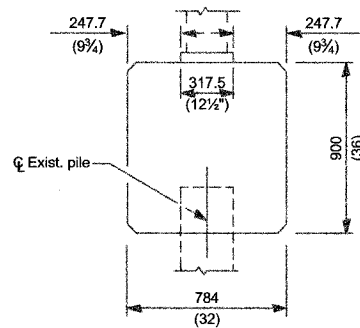
TRANSFORMER BASE



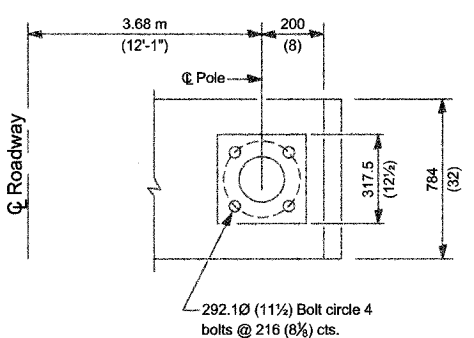
BREAKAWAY COUPLING



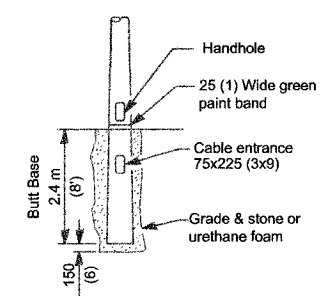
ANCHOR



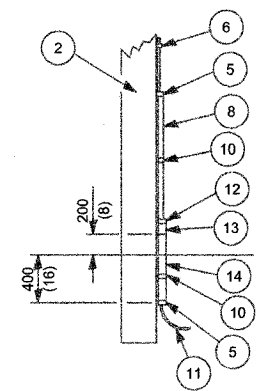
BRIDGE PIER MOUNT



SECTION A-A



BUTT BASE



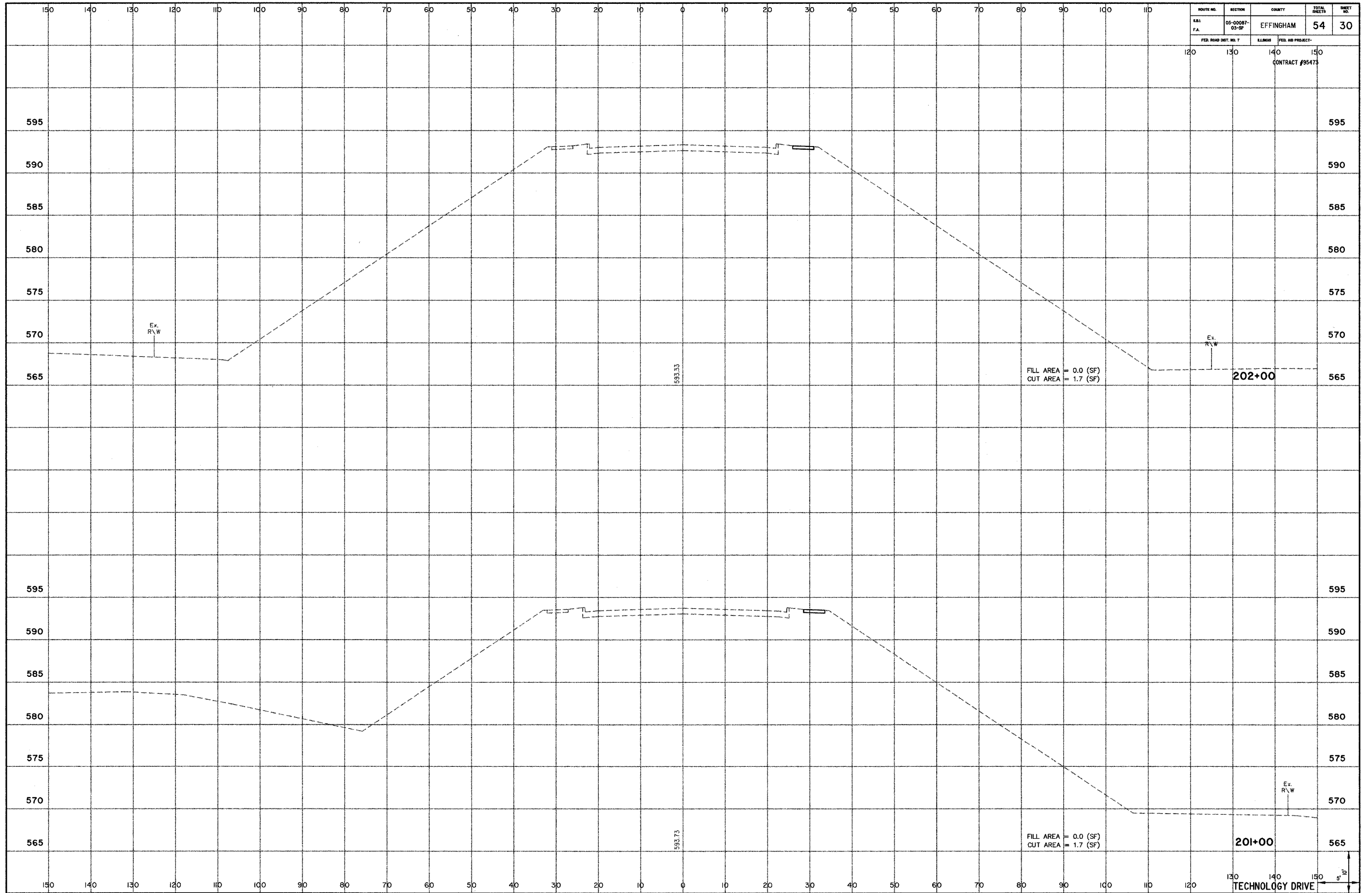
POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.5 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

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

MILANO & GRUNLOH ENGINEERS, INC.
 14 WEST WASHINGTON
 P.O. BOX 897
 EFFINGHAM, ILLINOIS 62401
 PHONE: (217) 347-7262
 (800) 677-2794
 FAX #: (217) 342-3433

POLE STANDARDS
 TECHNOLOGY DRIVE, SECTION 3
 EFFINGHAM, ILLINOIS

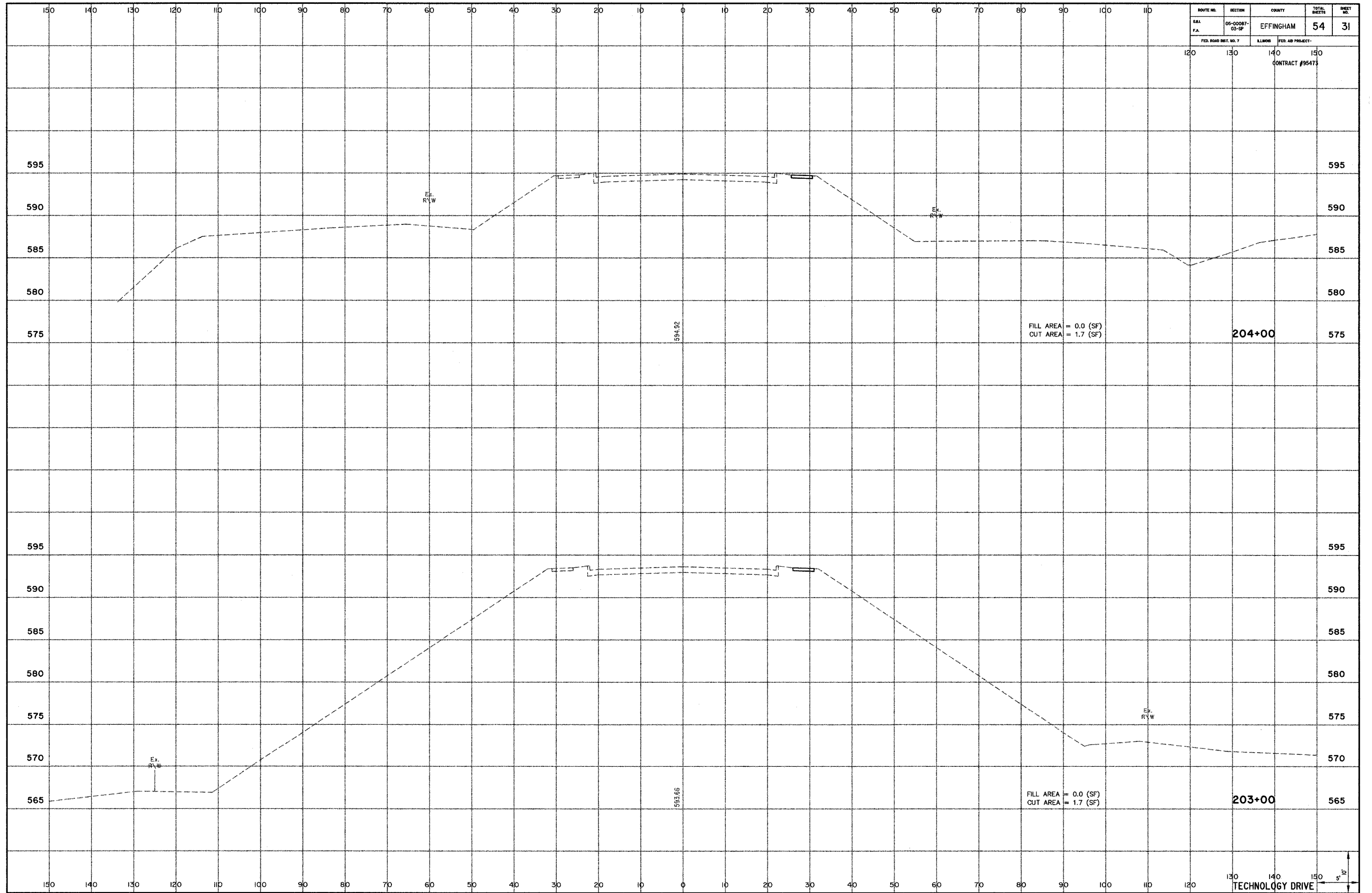


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R&L F.A.	05-00087- 03-SP	EFFINGHAM	54	30
FED. ROAD DIST. NO. 7		ELMOR	FED. AID PROJECT-	
		120	130	140 150
		CONTRACT #95473		

FILL AREA = 0.0 (SF)
CUT AREA = 1.7 (SF)

FILL AREA = 0.0 (SF)
CUT AREA = 1.7 (SF)

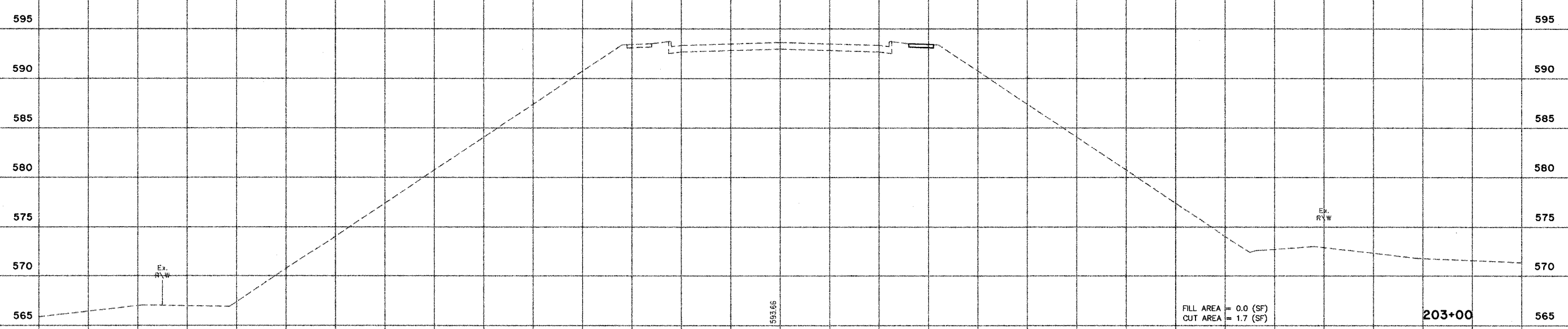
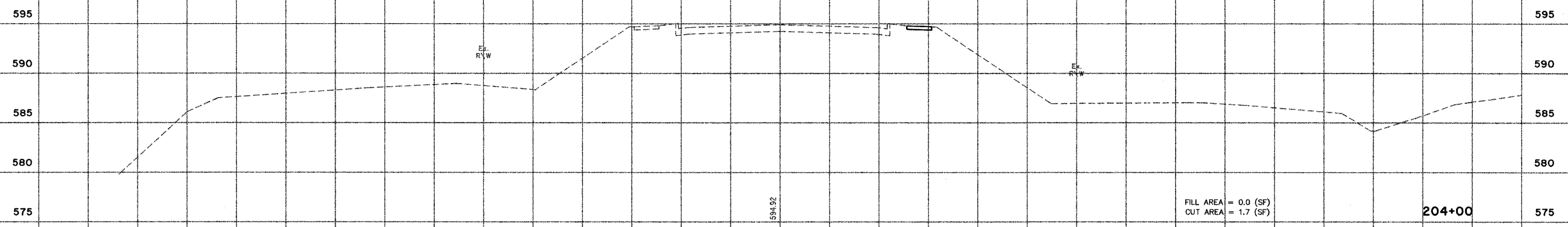
TECHNOLOGY DRIVE



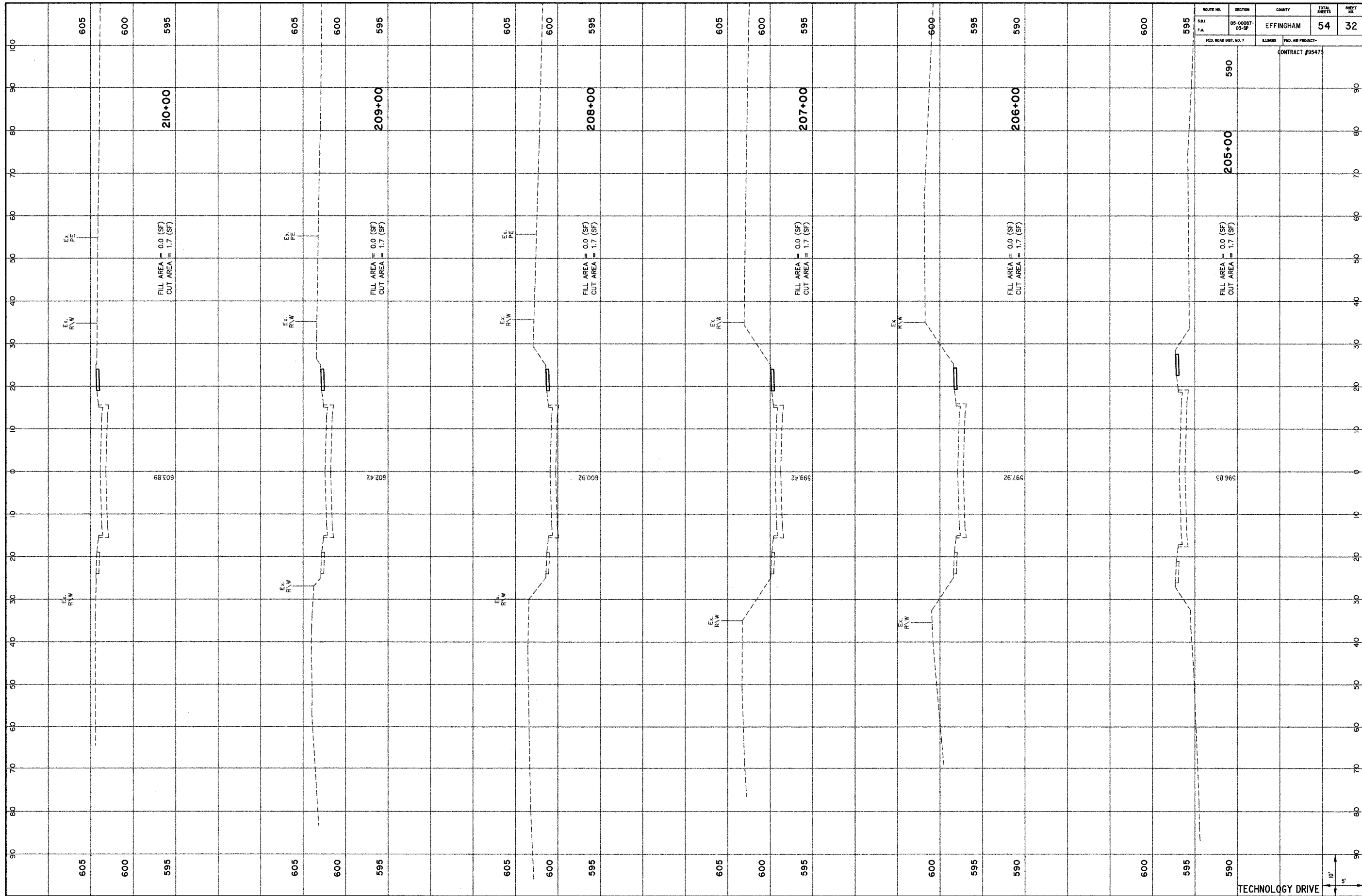
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
140	05-00087-03-07	EFFINGHAM	54	31

FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT
120	130	140 150

CONTRACT #95473



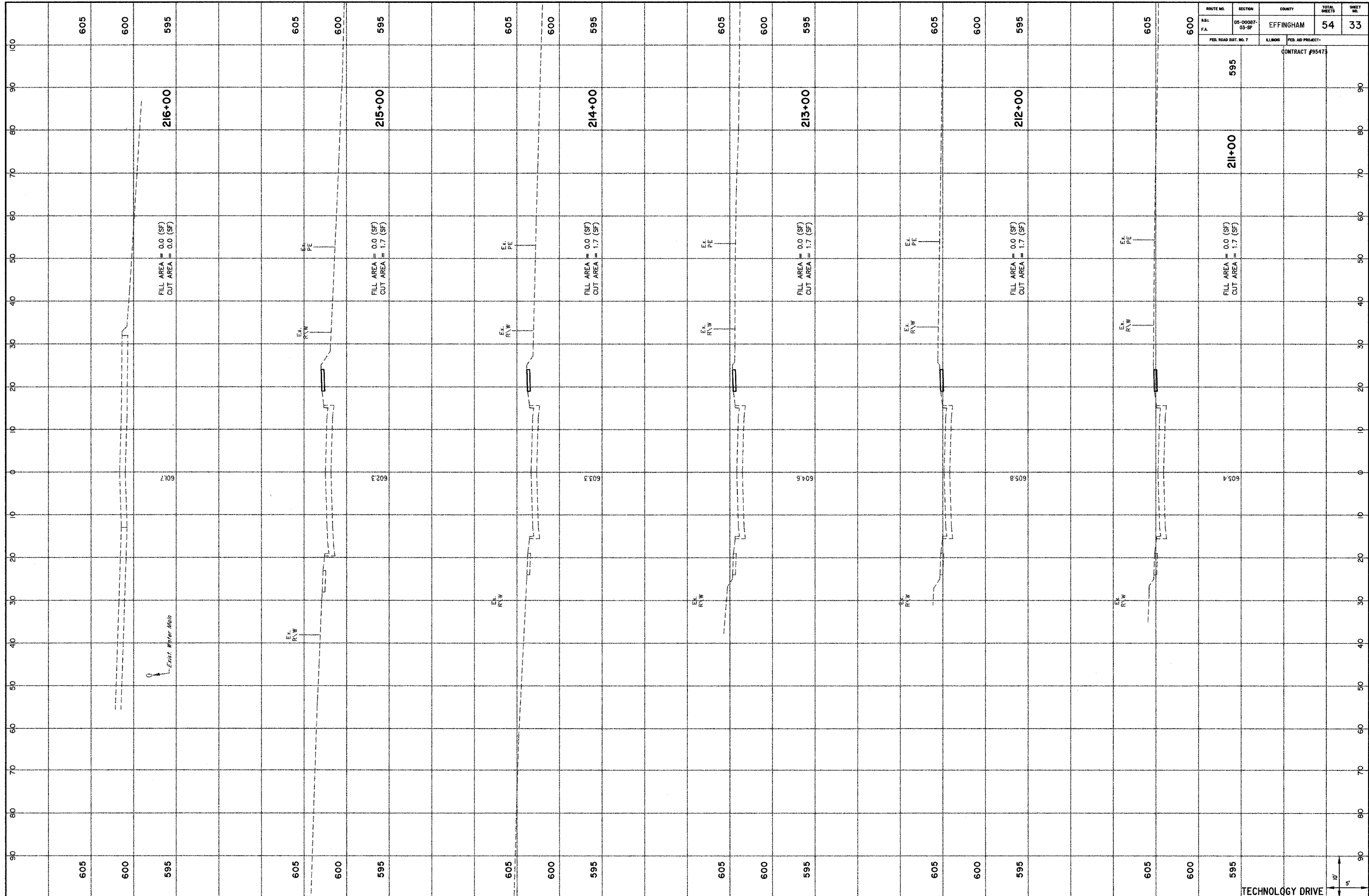
130 140 150
 TECHNOLOGY DRIVE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
241	05-00087-03-SF	EFFINGHAM	54	32
F.A.				
FED. ROAD DIST. NO. 7		FED. AID PROJECT-		
		CONTRACT #95473		

TECHNOLOGY DRIVE

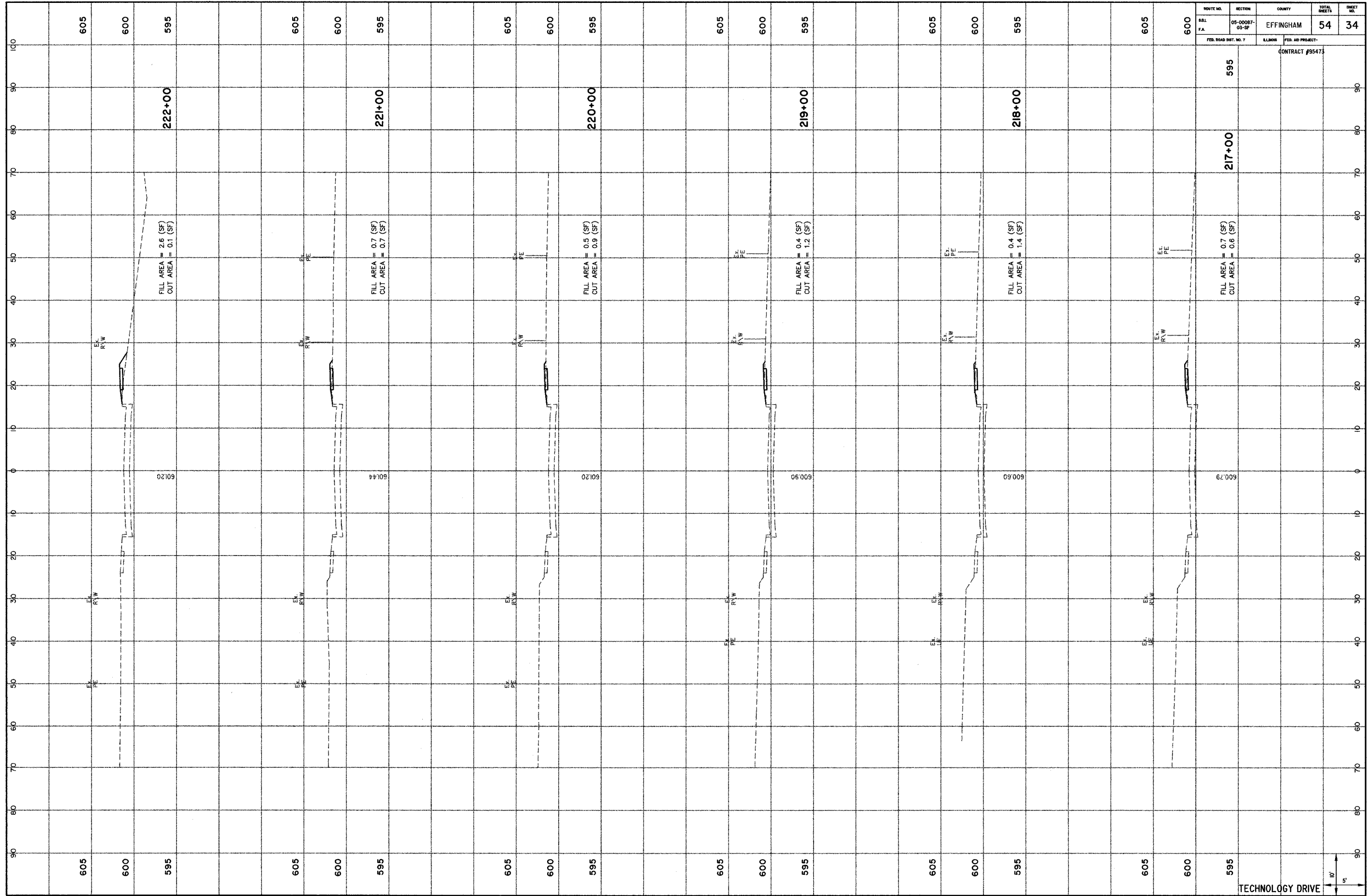




ROUTE NO. F.A.	SECTION 05-0008T-03-SF	COUNTY EFFINGHAM	TOTAL SHEETS 54	SHEET NO. 33
FED. ROAD DIST. NO. 7		PER. AD. PROJECT- CONTRACT #95473		

TECHNOLOGY DRIVE

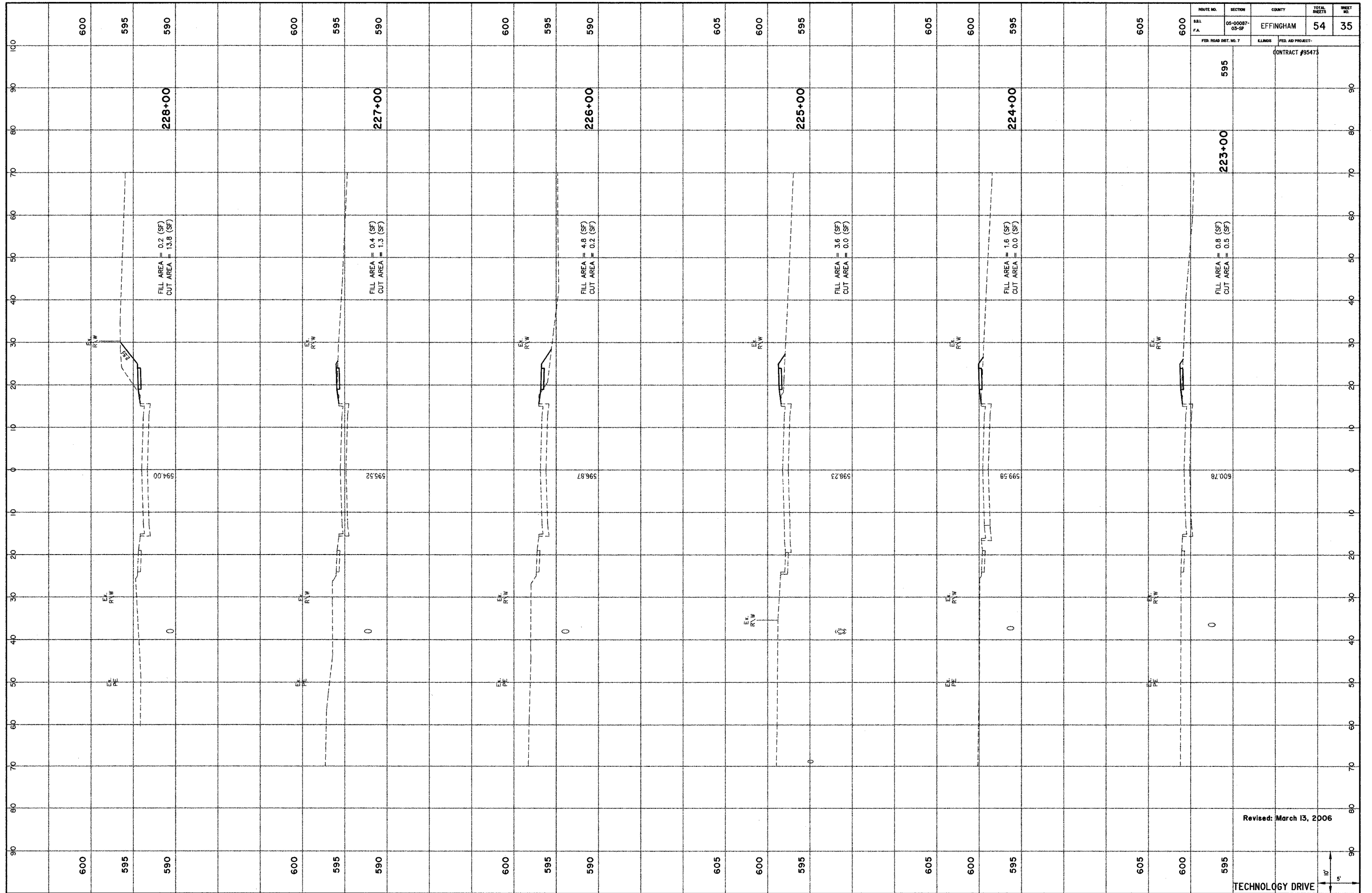




ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
581	05-00087-03-SF	EFFINGHAM	54	34

FED. ROAD DIST. NO. 7
 ELLIOTT
 FED. AID PROJECT
 CONTRACT #95473

TECHNOLOGY DRIVE
 10'
 5'

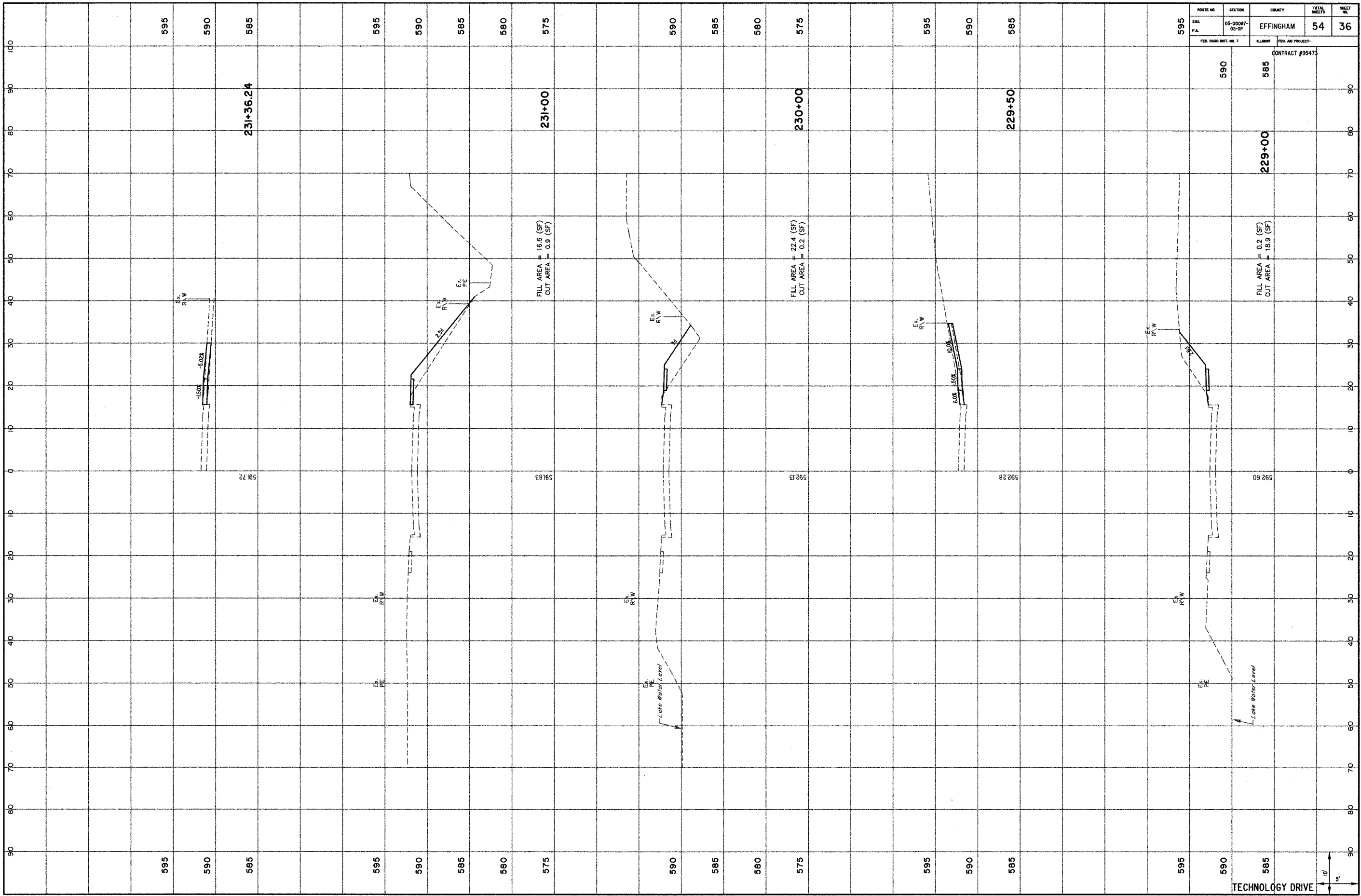


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
600	05-00087-03-02	EFFINGHAM	54	35
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		
CONTRACT #95473				

Revised: March 13, 2006

TECHNOLOGY DRIVE





90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100

595
590
585
595
590
585
580
575
590
585
580
575
595
590
585
595
590
585

231+36.24

FILL AREA = 16.6 (SF)
CUT AREA = 0.9 (SF)

FILL AREA = 22.4 (SF)
CUT AREA = 0.2 (SF)

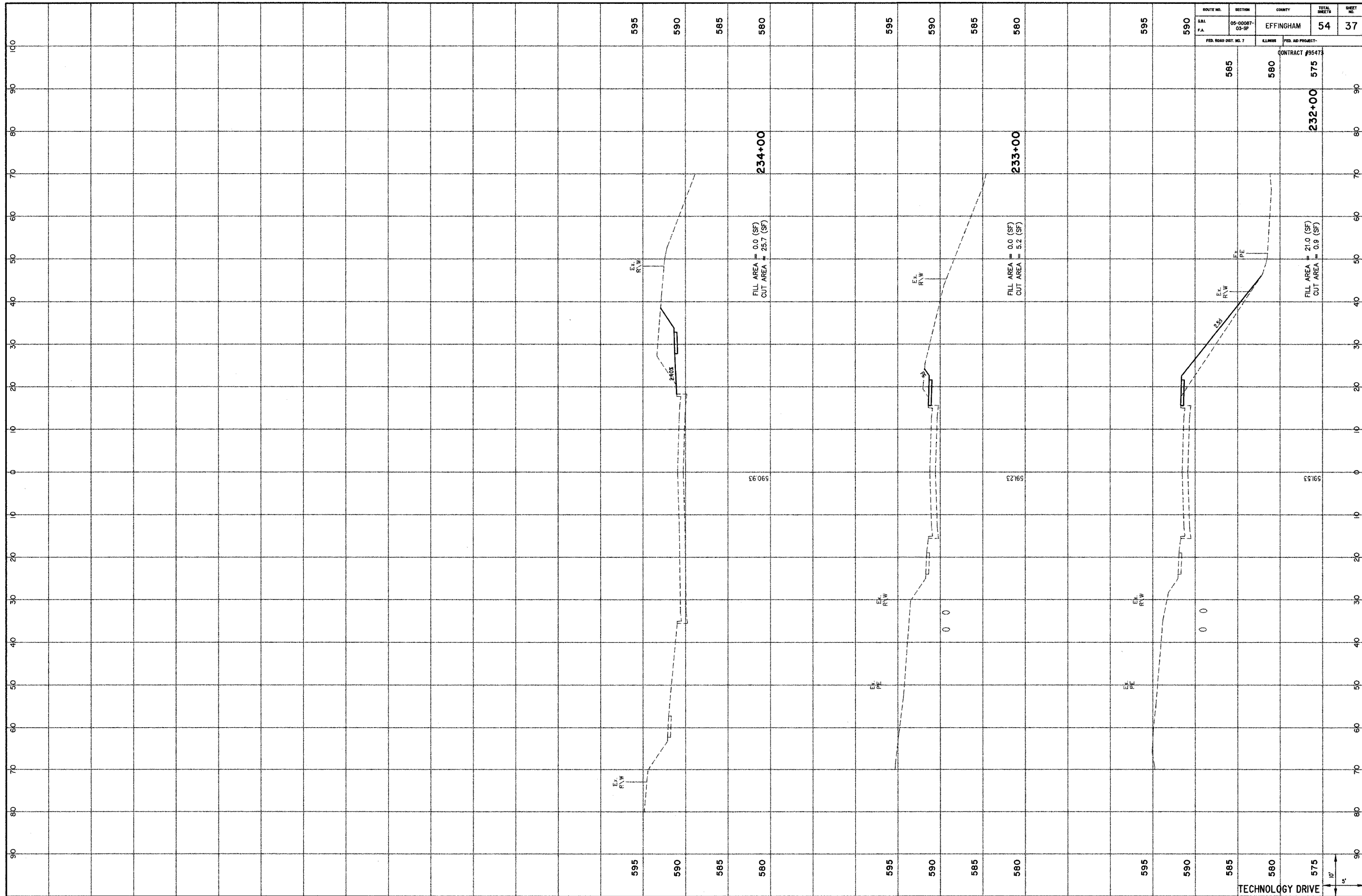
FILL AREA = 0.2 (SF)
CUT AREA = 18.9 (SF)

TECHNOLOGY DRIVE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
595	05-00087-03-07	EFFINGHAM	54	36
FED. ROAD DIST. NO. 7		LANDS	FED. AID PROJECT-	
		CONTRACT #95473		

590	585	229+00	592.60
595	590	229+50	592.28
595	590	230+00	592.13
595	590	231+00	591.83
595	590	231+36.24	591.72

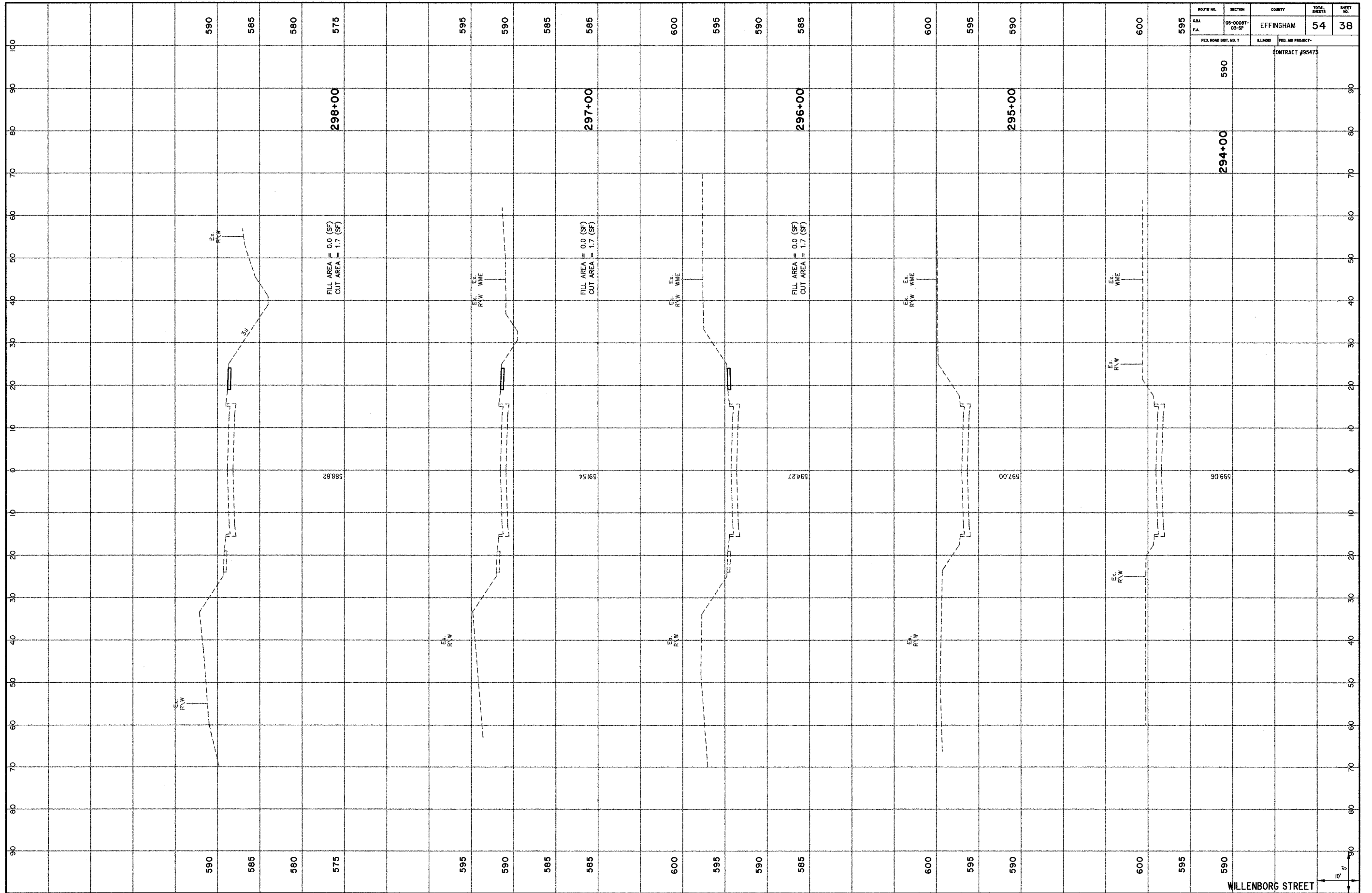


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
581	05-00087-03-02	EFFINGHAM	54	37

FED. ROAD DIST. NO. 7	KLINER	FED. AID PROJECT-
		CONTRACT #95473

585	580	575
	232+00	

TECHNOLOGY DRIVE

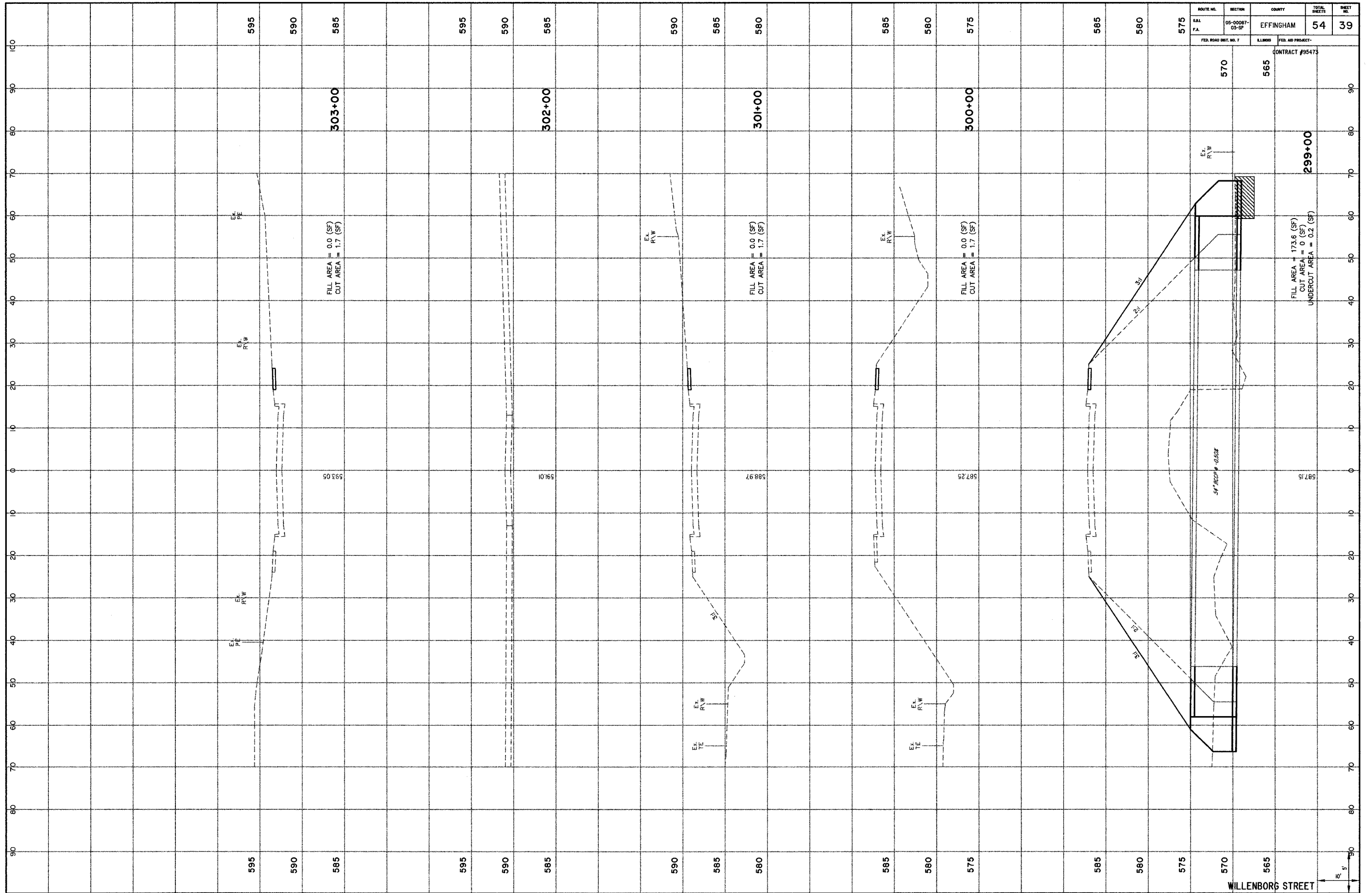


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
05-00087-03-07		EFFINGHAM	54	38

FED. ROAD DIST. NO. 7
 KLMOS
 FED. AID PROJECT-
 CONTRACT #95473

WILLENBORG STREET





ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RAI FA	05-0007- 03-SP	EFFINGHAM	54	39

FED. ROAD DIST. NO. 7
 FEDERAL PROJECT-
 CONTRACT #95473

STATION	570	565
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299+00

FILL AREA = 173.6 (SF)
 CUT AREA = 0 (SF)
 UNDERCUT AREA = 0.2 (SF)

587.15

587.25

588.97

591.01

593.05

595

590

585

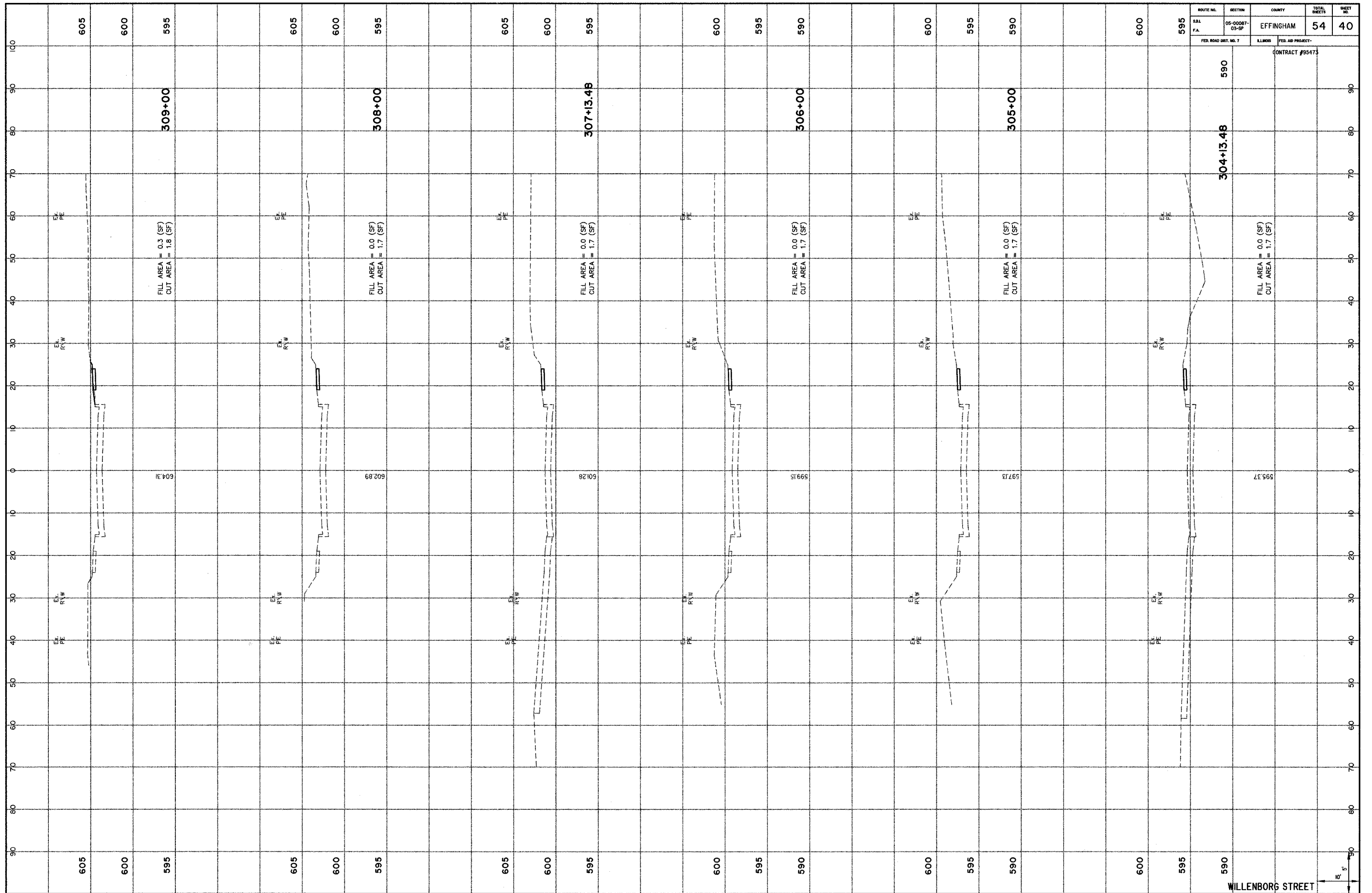
580

575

570

565

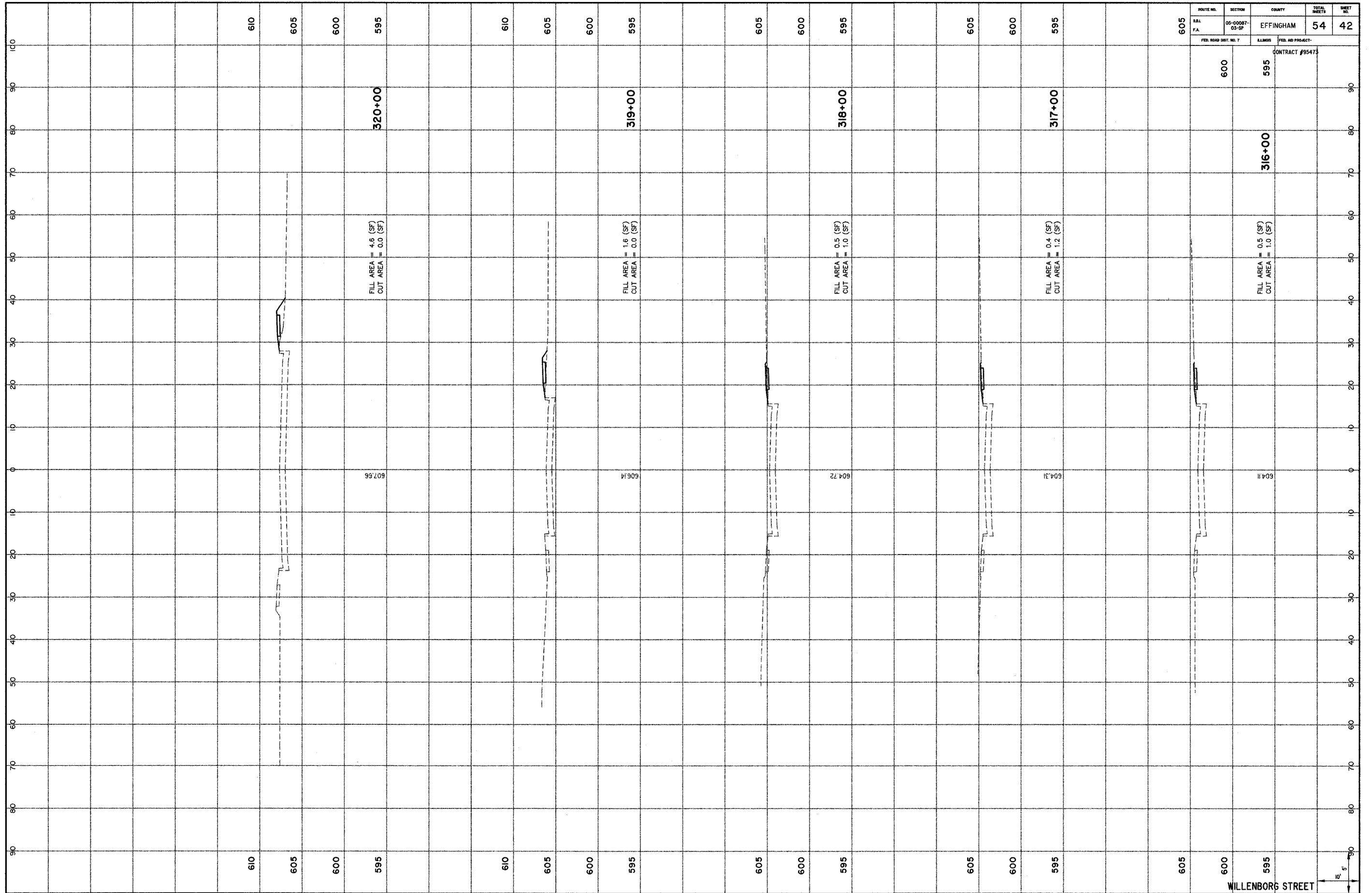
WILLENBORG STREET



WILLENBORG STREET



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
281 F.A.	05-00087- 03-02	EFFINGHAM	54	40
FED. ROAD DIST. NO. 7		FED. AID PROJECT-		
		ILLINOIS		
		CONTRACT #95473		



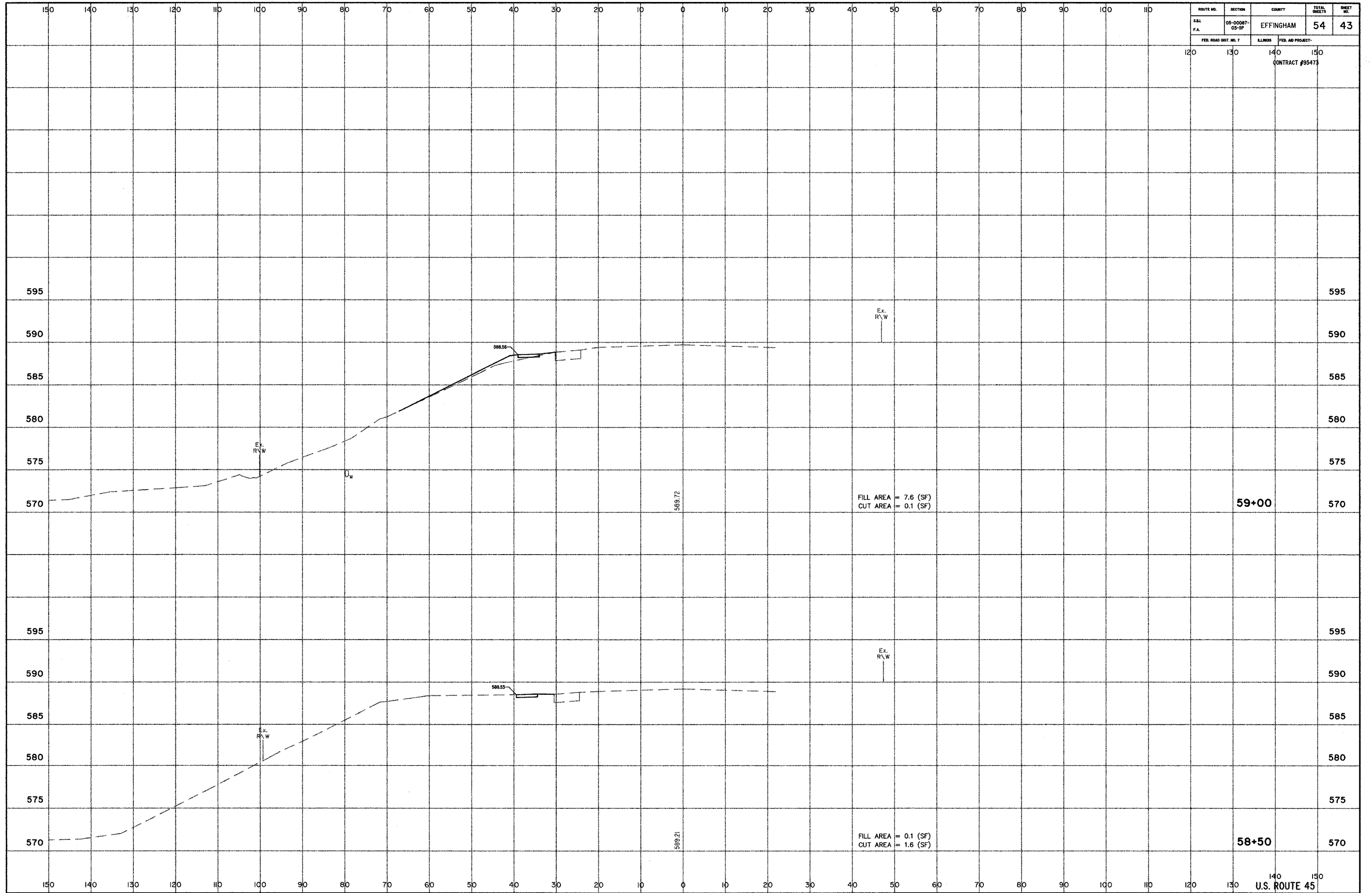
ROUTE NO. R.R. F.A.	SECTION 05-00087- 05-07	COUNTY EFFINGHAM	TOTAL SHEETS 54	SHEET NO. 42
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FED. ROAD DIST. NO. 7
 ELMOR
 FED. AID PROJECT-
 CONTRACT #95473

605	600	595	320+00	606.56	605	600	595	319+00	606.14	605	600	595	318+00	604.72	605	600	595	317+00	604.31	605	600	595	316+00	604.11
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WILLENBORG STREET





ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.L.	05-0007-05-SP	EFFINGHAM	54	43
F.A.		FED. ROAD DIST. NO. 7		
		ALIGN.	FED. AID PROJECT	
		120	130	140 150
		CONTRACT #95473		

59+00

58+50

FILL AREA = 7.6 (SF)
CUT AREA = 0.1 (SF)

FILL AREA = 0.1 (SF)
CUT AREA = 1.6 (SF)

569.72

569.21

588.56

588.55

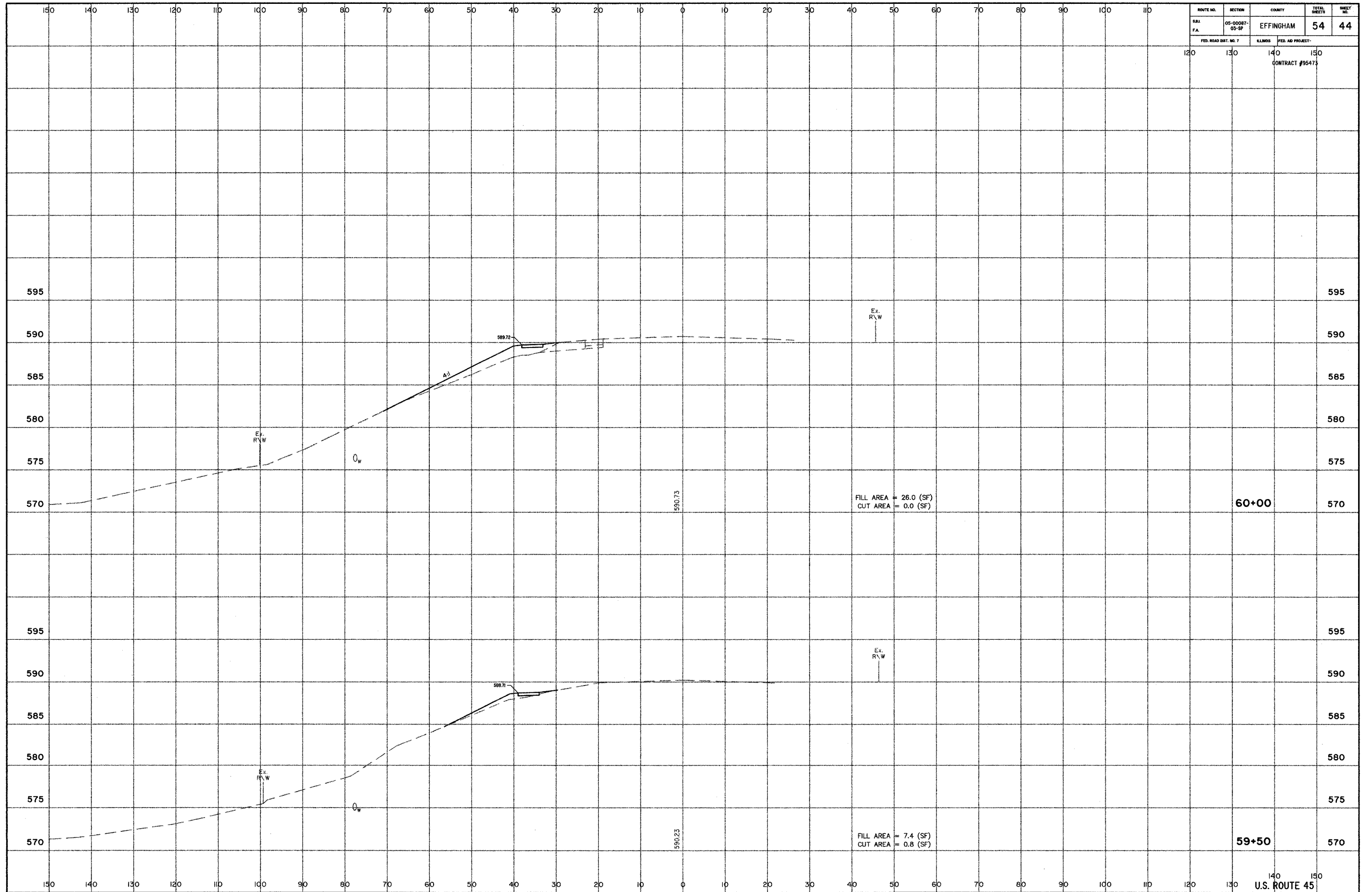
Ex. R/W

Ex. R/W

Ex. R/W

Ex. R/W

U.W.



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SAI	05-0007-03-SF	EFFINGHAM	54	44
F.A.		FED. ROAD DIST. NO. 7		
		KLINGS	FED. AID PROJECT	
		120	130	140 150
		CONTRACT #95473		

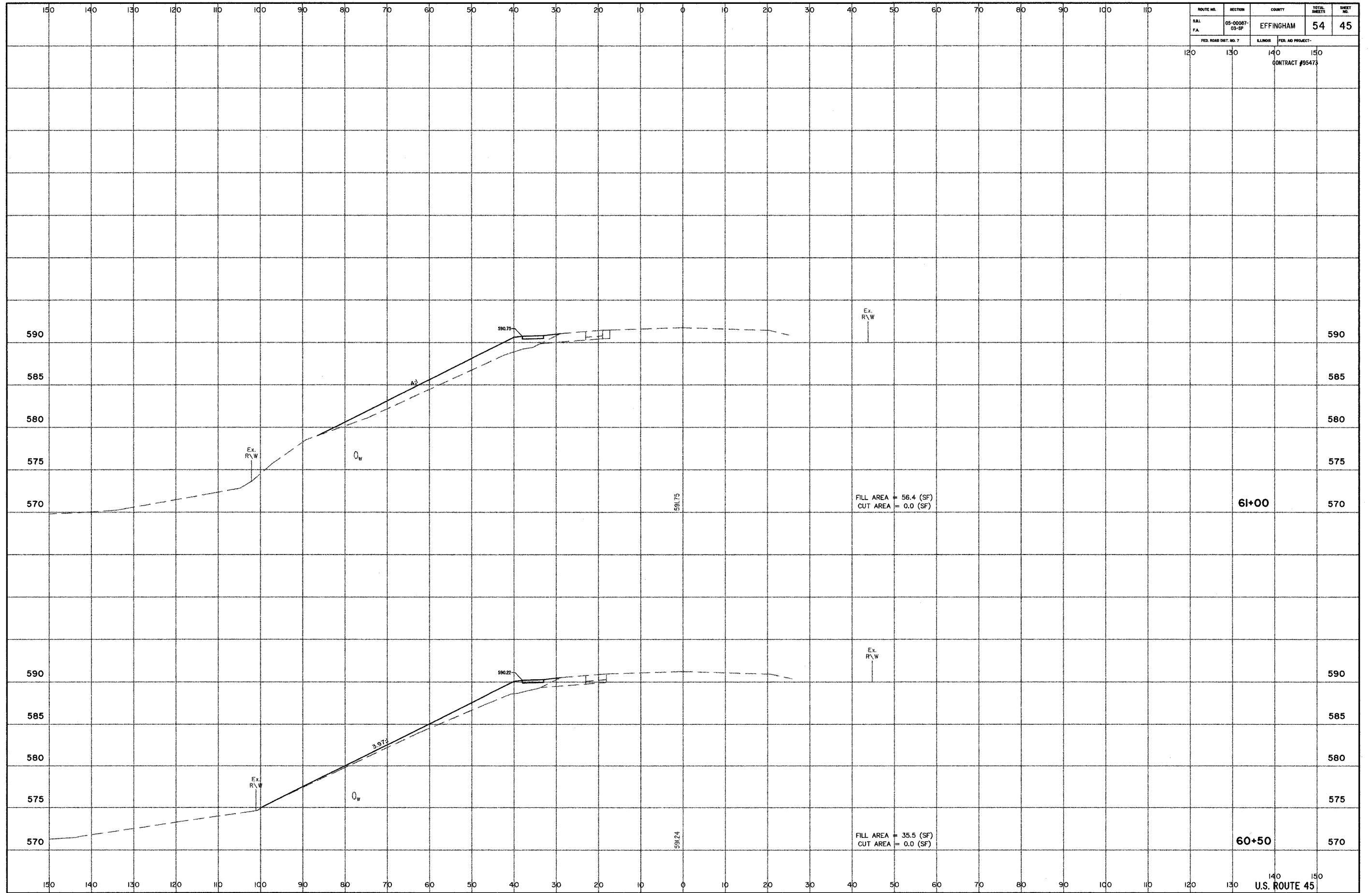
FILL AREA = 26.0 (SF)
CUT AREA = 0.0 (SF)

FILL AREA = 7.4 (SF)
CUT AREA = 0.8 (SF)

60+00

59+50

140 150
U.S. ROUTE 45

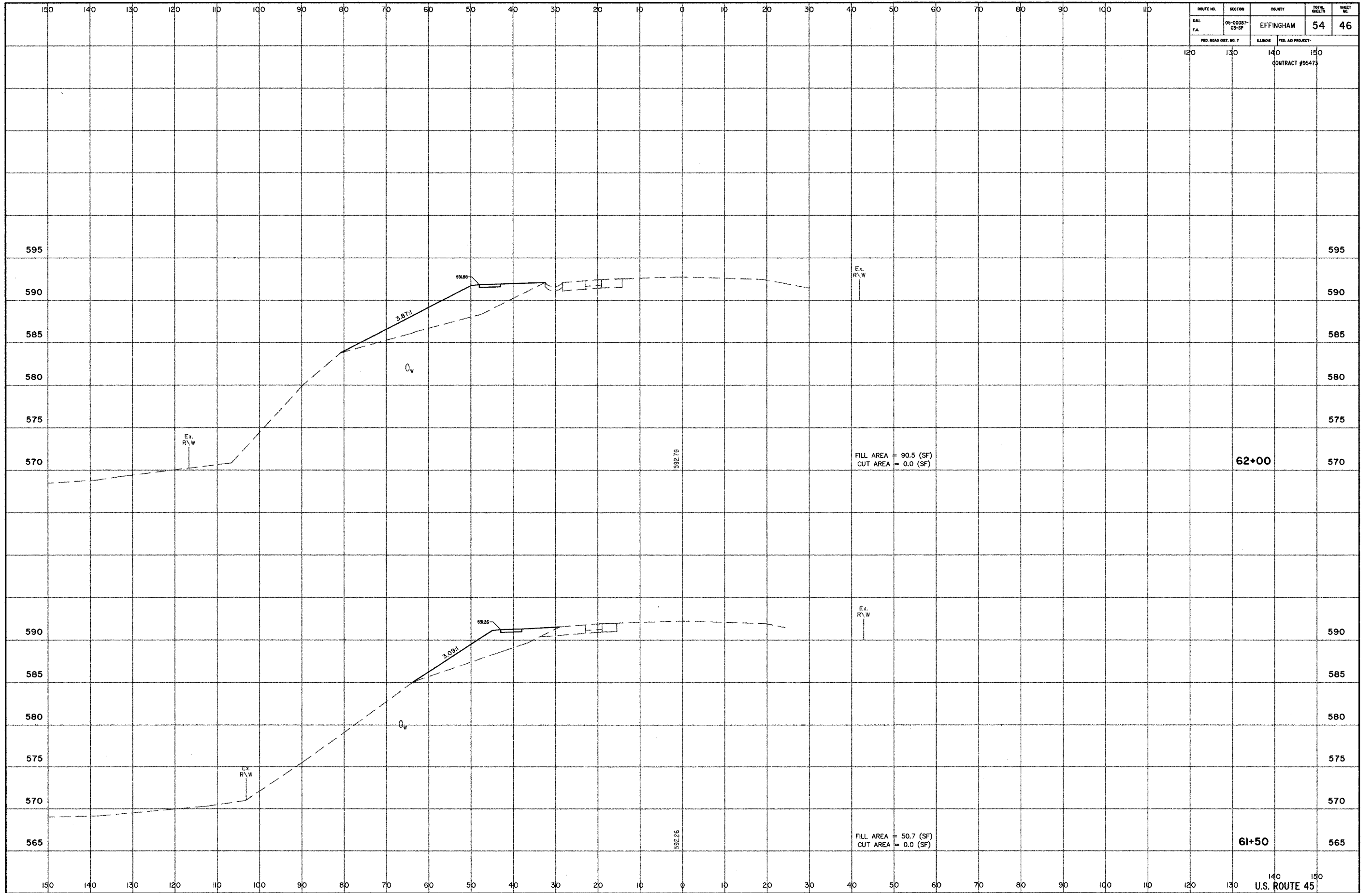


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
140	05-00067-03-07	EFFINGHAM	54	45
FED. ROAD DIST. NO. 7		FED. AID PROJECT		
120	130	140	150	
CONTRACT #95473				

FILL AREA = 56.4 (SF)
CUT AREA = 0.0 (SF)

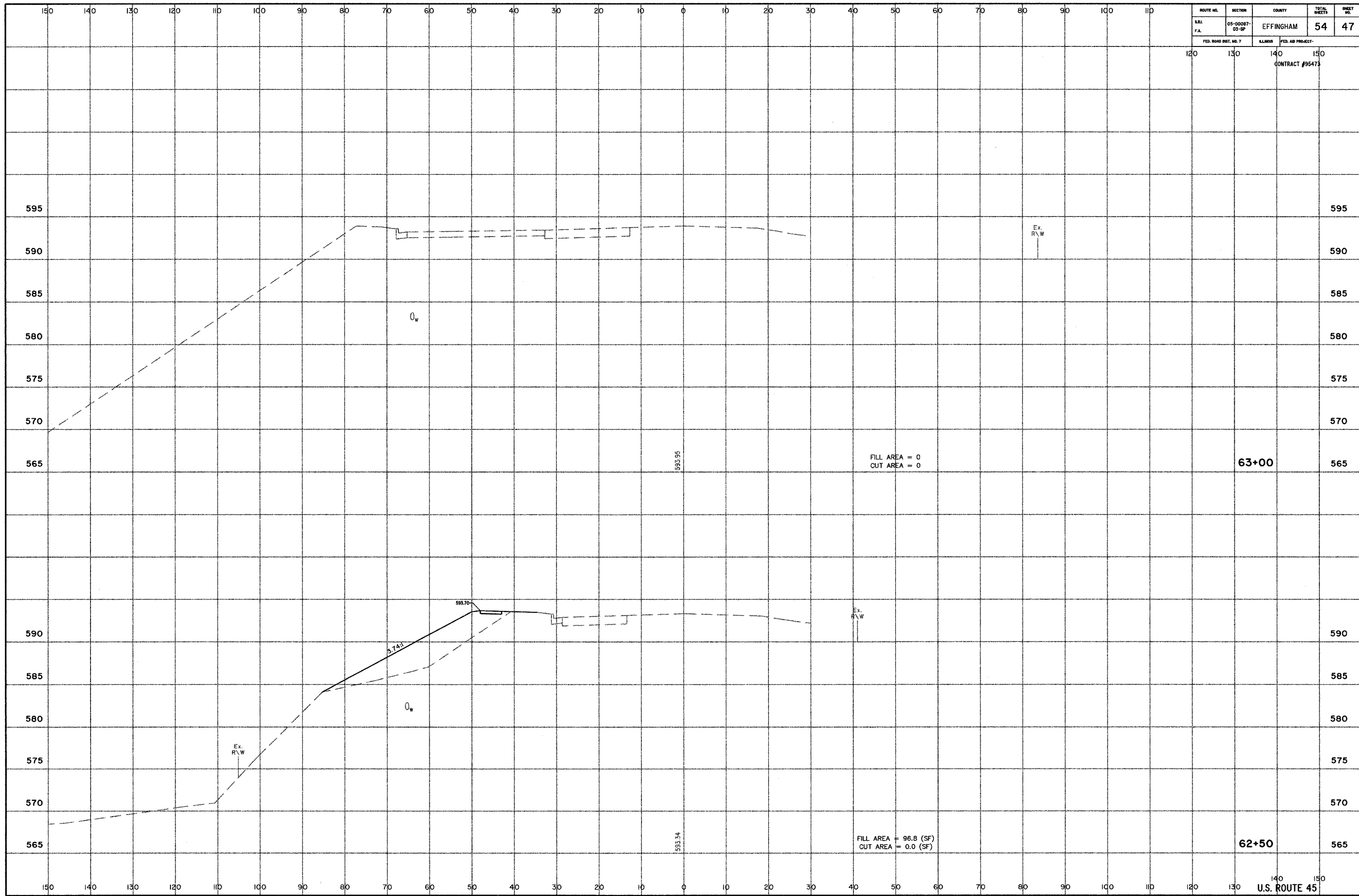
FILL AREA = 35.5 (SF)
CUT AREA = 0.0 (SF)

140 150
U.S. ROUTE 45



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.A.L.	05-00087-03-57	EFFINGHAM	54	46
F.A.				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
			120	130
			140	150
			CONTRACT #95473	

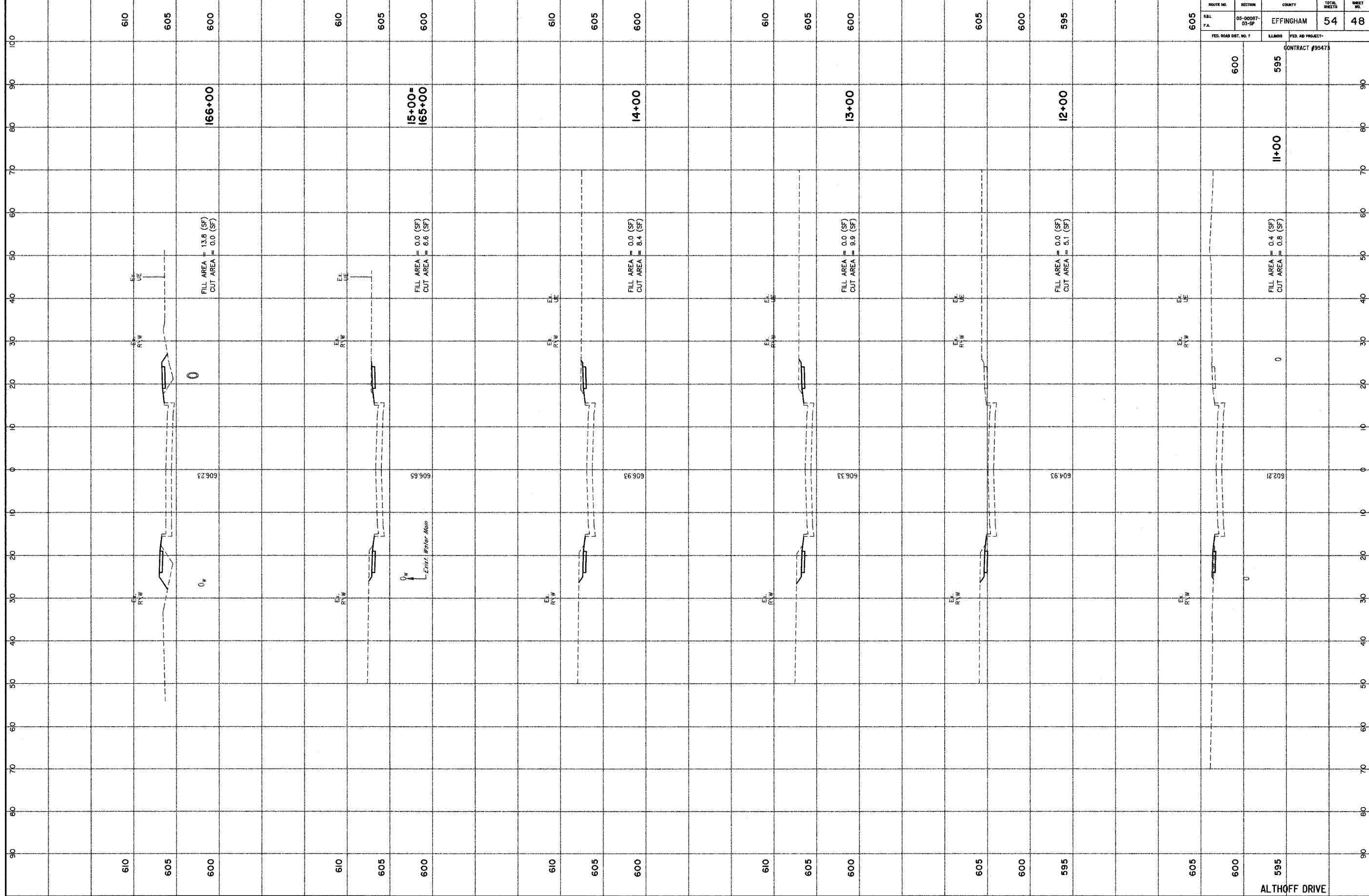
140 150
U.S. ROUTE 45



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.R.L.	05-00067-03-02	EFFINGHAM	54	47
F.A.				

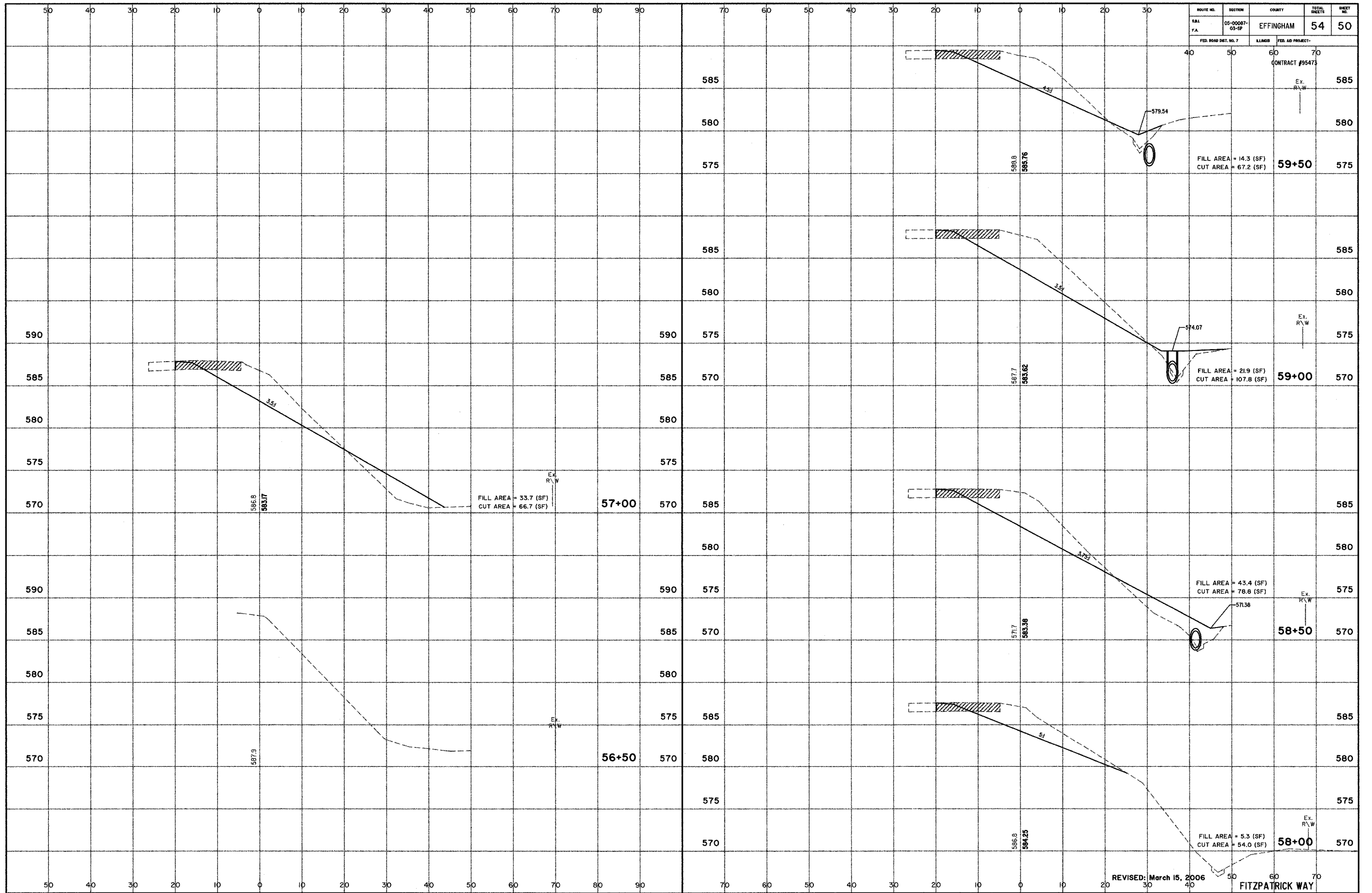
FED. ROAD DIST. NO. 7	ELMS	FED. AID PROJECT
	140	150
	CONTRACT #95473	

140 150
U.S. ROUTE 45



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
605	05-0007-03-07	EFFINGHAM	54	48
FED. ROAD DIST. NO. 7		LANDS	FED. AID PROJECT-	
600		595	CONTRACT #95473	

ALTHOFF DRIVE



FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT- CONTRACT #95473

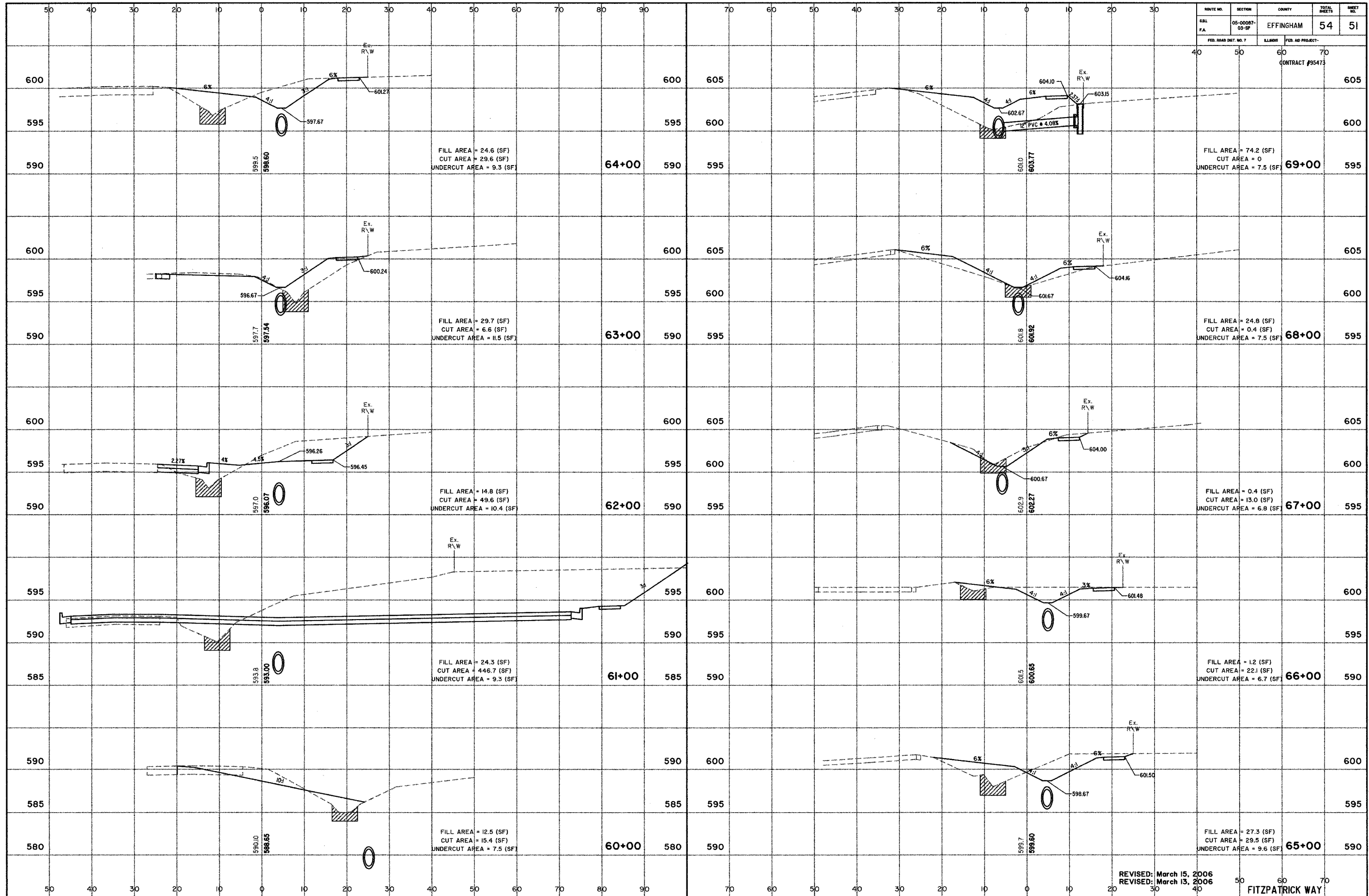
FILL AREA = 14.3 (SF)
CUT AREA = 67.2 (SF)

FILL AREA = 21.9 (SF)
CUT AREA = 107.8 (SF)

FILL AREA = 33.7 (SF)
CUT AREA = 66.7 (SF)

FILL AREA = 43.4 (SF)
CUT AREA = 78.8 (SF)

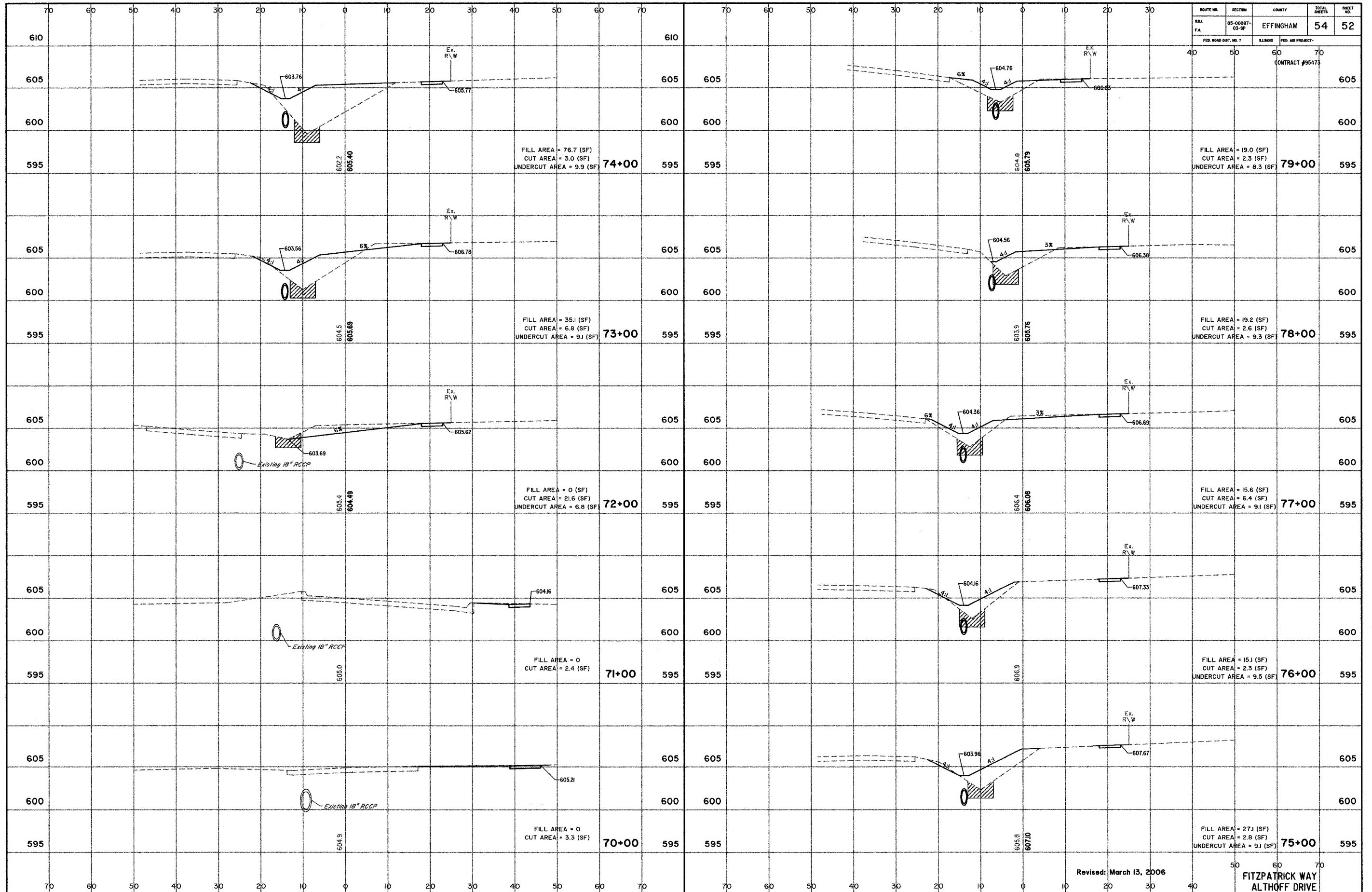
FILL AREA = 5.3 (SF)
CUT AREA = 54.0 (SF)



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBL F.A.	05-00087-03-SF	EFFINGHAM	54	51

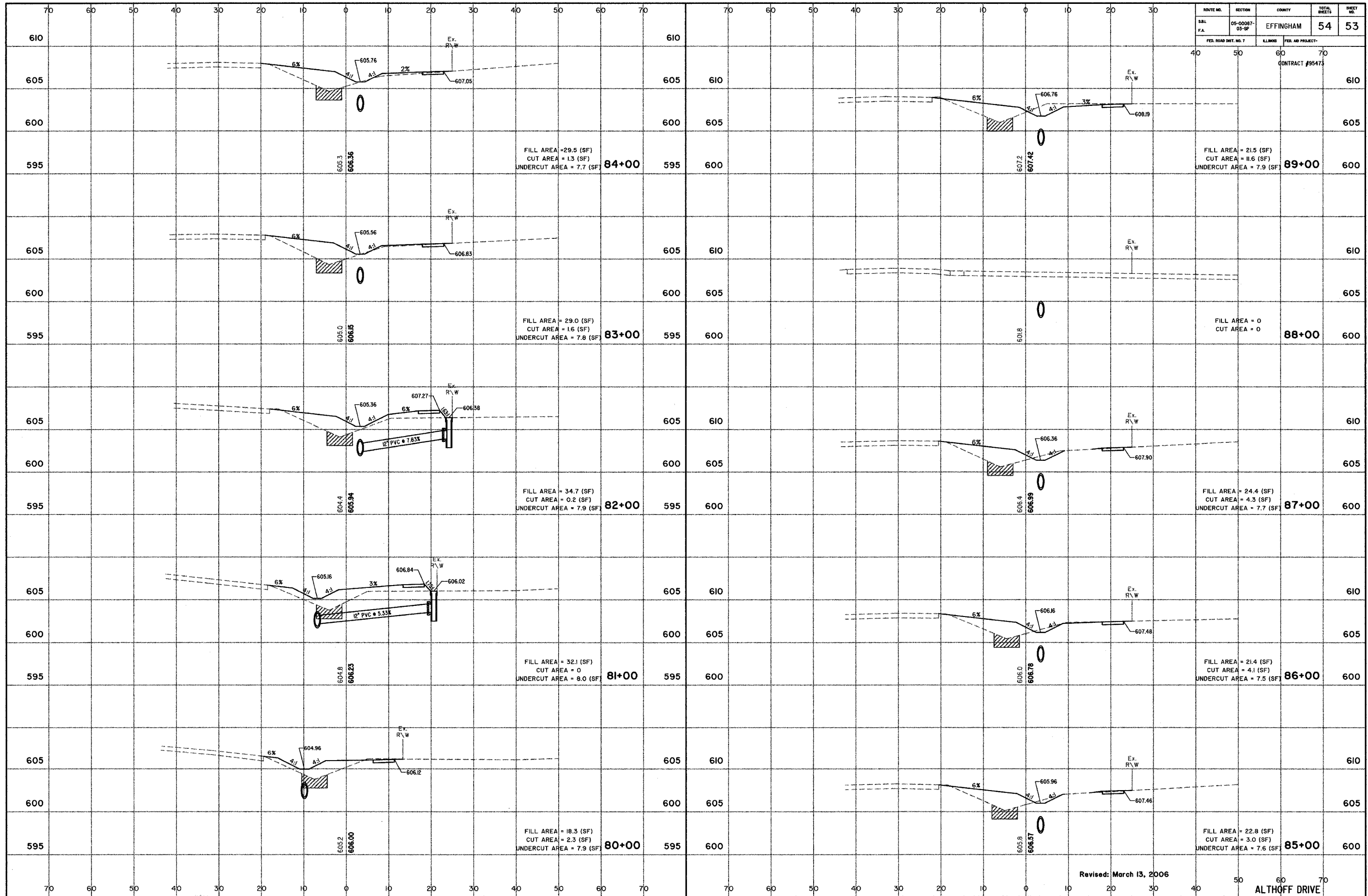
FED. ROAD DIST. NO. 7
 LLINRS 60 70
 PER. AD. PROJECT-
 CONTRACT #95473

REVISED: March 15, 2006
 REVISED: March 13, 2006
 50 60 70
 FITZPATRICK WAY



Revised: March 13, 2006

FITZPATRICK WAY
ALTHOFF DRIVE

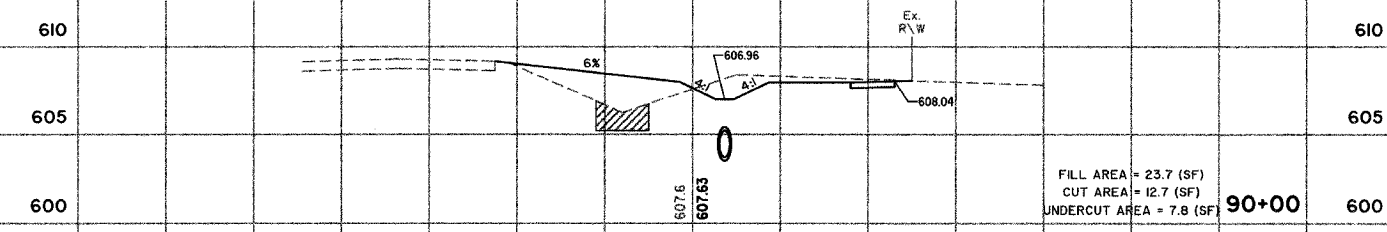
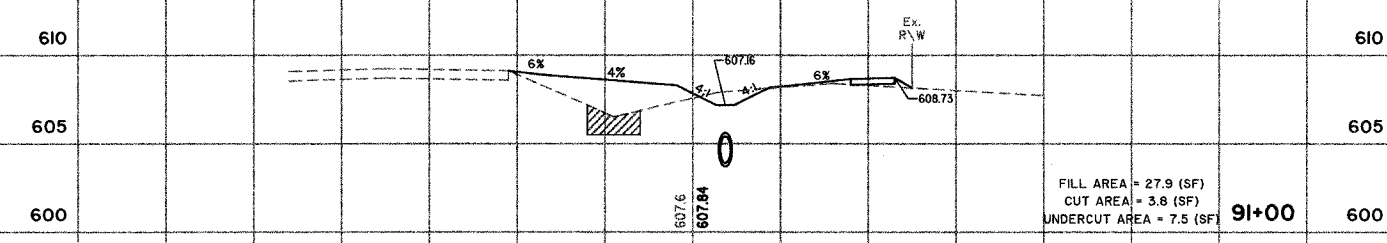


Revised: March 13, 2006

ALTHOFF DRIVE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DAL	05-000BT-03-SP	EFFINGHAM	54	54
F.A.		CONTRACT #95473		
FED. ROAD DIST. NO. 7		ILLINOIS		

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

Revised: March 13, 2006

ALTHOFF DRIVE