

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	1
		ILLINOIS	CONTRACT NO. 60K18	

D-91-444-10



FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 326 : IL 47/IL 176  
AT IL 176 (NORTH & SOUTH JCT)

SECTION: 105 N-4

**CHANNELIZATION, TRAFFIC SIGNAL MODERNIZATION**

PROJECT: *CMF-0326(081)*

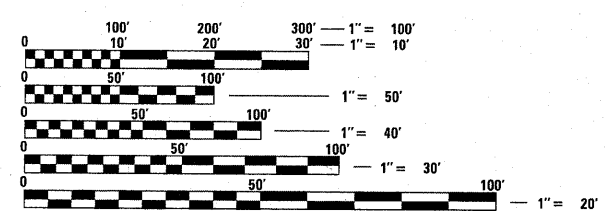
**MCHENRY COUNTY**

**C-91-444-10**

THIS PROJECT IS LOCATED  
IN UNINCORPORATED MCHENRY COUNTY

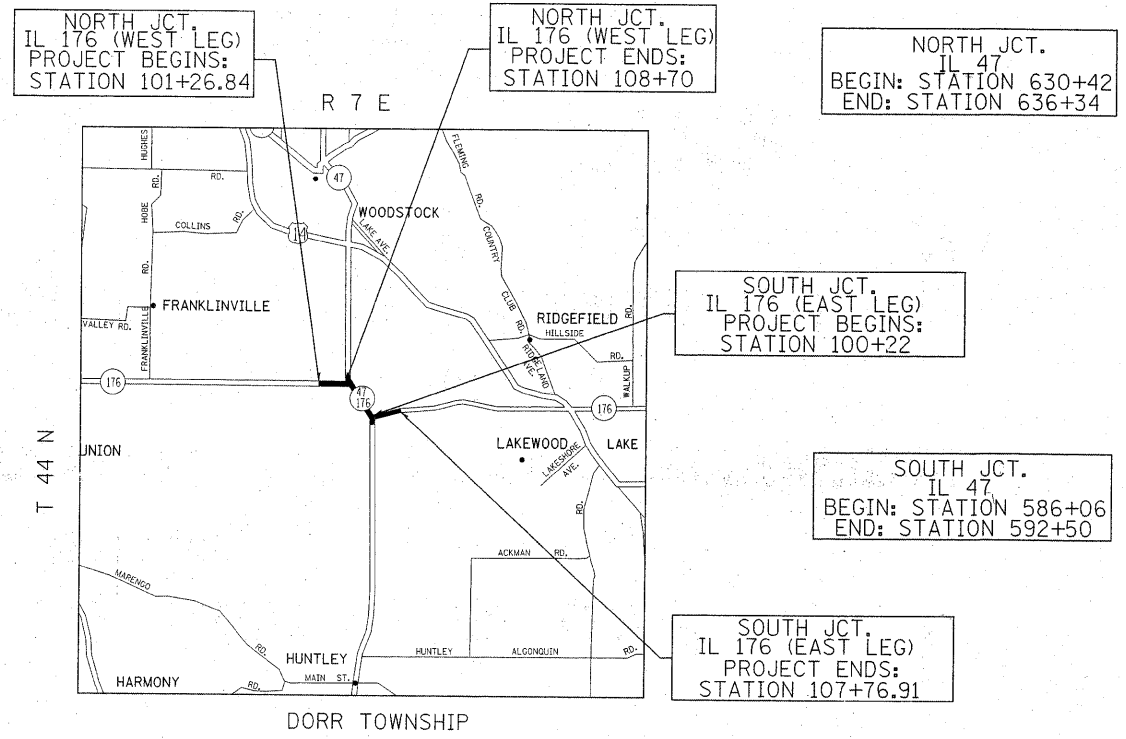
**TRAFFIC DATA FOR ILL 176**

ADT (2007) = 10,500 VPD  
SPEED LIMIT = 55 MPH



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

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



PROJECT ENGINEER: DAN WILGREEN /(847) 705-4240  
PROJECT MANAGER KEN ENG /(847) 705-4247

CONTRACT NO. 60K18

GROSS LENGTH OF PROJECT = NET LENGTH OF PROJECT = 2734 FEET = .52 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED December 22, 2010

Diane M. O'Keefe *se*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 4, 2011  
Scott E. Stitt *PE, Ia*  
acting ENGINEER OF DESIGN AND ENVIRONMENT

February 4, 2011  
Christine M. Reed *Ia*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

INDEX OF SHEETS

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GENERAL NOTES

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STANDARD NO.	DESCRIPTION
000001-00	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND D PATCHES
482011-03	HOT-MIX ASPHALT SHOULDER STRIPS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
701011-02	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY > 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS, DAY ONLY > 45 MPH
701311-03	LANE CLOSURE, 2L, 2W SLOW, MOVING OPERATIONS- DAY ONLY,
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRICAL, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND MCHENRY COUNTY.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40 MM) WHERE THE SPEED LIMIT IS 45 MPH (45 KM/H) OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (45 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER. A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON AREA TRAFFIC FIELD ENGINEER AT (847) 438-2300 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING.

THE RESIDENT ENGINEER SHALL VERIFY ALL EXISTING PAVEMENT MARKINGS BEFORE MILLING

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTIES AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

PRIOR TO EMBANKMENT PLACEMENT, ALL VEGETATION, LOOSE MATERIAL, AND UNSTABLE MATERIAL SHOULD BE REMOVED TO DEPTH ENCOUNTERED AND REPLACED WITH SUITABLE EMBANKMENT MATERIAL. ANY EMBANKMENT WIDENING ON EXISTING SLOPES SHOULD BE BENCHED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

FILE NAME =	USER NAME = WILGREENDP	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, STATE STANDARDS &amp; GENERAL NOTES IL RTE. 47 AT IL RTE. 176 (NORTH &amp; SOUTH JCT.)</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\wilgreendp\d0206766\44410-Design.dgn		DRAWN -	REVISED -		326	105 N-4	MCHENRY	60	2			
	PLOT SCALE = 50,0000 ' / IN.	CHECKED -	REVISED -		CONTRACT NO. 60K18							
	PLOT DATE = 12/30/2010	DATE -	REVISED -		SCALE: 1"=50'	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES				URBAN 80% FED. 20% STATE CONSTRUCTION TYPE CODE					SUMMARY OF QUANTITIES				URBAN 80% FED. 20% STATE CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0004	0004	0021			CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0004	0004	0021		
				ROADWAY	LANDSCAPING	TRAFFIC SIGNALS										ROADWAY	LANDSCAPING
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	16	16					70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1				
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	598	598					70300100	SHORT TERM PAVEMENT MARKING	FOOT	1345	1345				
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	3651		3651				70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SO FT	508	508				
25000210	SEEDING, CLASS 2A	ACRE	0.75		0.75				70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	9635	9635				
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	68		68				70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	2057	2057				
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	68		68				70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	837	837				
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	68		68				70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	571	571				
25100630	EROSION CONTROL BLANKET	SO YD	3651	3651					70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	183	183				
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	75	75					70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	449	449				
28000305	TEMPORARY DITCH CHECKS	FOOT	50	50					* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	508	508				
28000400	PERIMETER EROSION BARRIER	FOOT	1667	1667					* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	9635	9635				
31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SO YD	744	744					* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	2057	2057				
20200100	EARTH EXCAVATION	CU YD	711	711					* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	837	837				
35501326	HOT-MIX ASPHALT BASE COURSE, 10 1/2"	SO YD	1611	1611					* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	571	571				
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	6	6					* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	183	183				
40600300	AGGREGATE (PRIME COAT)	TON	26	26					* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	110	110				
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	20	20					78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	95	95				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	82	82					* 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2			2		
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	1435	1435					* 85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1			1		
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SO YD	11200	11200					* 85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1			1		
44000200	DRIVEWAY PAVEMENT REMOVAL	SO YD	85	85					* 86000100	MASTER CONTROLLER	EACH	1			1		
44004250	PAVED SHOULDER REMOVAL	SO YD	617	617					* 86400100	TRANSCEIVER - FIBER OPTIC	EACH	2			2		
44201789	CLASS D PATCHES, TYPE II, 12 INCH	SO YD	128	128					* 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1391			1391		
44201794	CLASS D PATCHES, TYPE III, 12 INCH	SO YD	120	120					* 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	174			174		
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SO YD	559	559					* 87900200	DRILL EXISTING HANDHOLE	EACH	4			4		
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	80	80													
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SO YD	744	744													
60107600	PIPE UNDERDRAINS 4"	FOOT	400	400													
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6													
67100100	MOBILIZATION	L SUM	1	1													
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1													
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1													
										* SPECIALTY ITEMS							

SUMMARY OF QUANTITIES			URBAN 80% FED. 20% STATE	CONSTRUCTION TYPE CODE					SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE							
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0004 ROADWAY	0004 LANDSCAPING	0021 TRAFFIC SIGNALS				CODE NO	ITEM	UNIT	TOTAL QUANTITIES						
* 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4			4													
* 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	7			7													
* 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4			4													
* 88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1			1													
* 88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2			2													
* 88030310	SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1			1													
* 88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8			8													
* 88500100	INDUCTIVE LOOP DETECTOR	EACH	22			22													
* 88600100	DETECTOR LOOP, TYPE I	FOOT	1177			1177													
* 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	490			490													
* 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2			2													
* 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1			1													
X2020110	GRADING AND SHAPING SHOULDERS	UNIT	40	40															
X4021000	TEMPORARY ACCESS (PRIVATE ENTRANCE)	EACH	1	1															
* X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	2			2													
* X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	978			978													
Z0001050	AGGREGATE SUBGRADE 12"	SO YD	1611	1611															
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1															
Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	103	103															
* Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	2			2													

\* SPECIALTY ITEMS

# LEGEND

- ① EXIST. HMA BASE COURSE 12''±
- ② EXIST. PCC BASE COURSE 8''±
- ③ EXIST. HMA SURFACE 3''±
- ④ EXIST. HMA SURFACE 7''±
- ⑤ EXIST. AGGREGATE SUB-BASE
- ⑥ EXIST. ASPHALT SHOULDER
- ⑦ EXIST. AGGREGATE SHOULDER
- ⑧ PROP. HMA SURFACE REMOVAL, 2''
- ⑨ PROP. HMA SURFACE COURSE, MIX D, N70, 2''
- ⑩ PROP. AGGREGATE SUBGRADE, 12''
- ⑪ PROP. HMA BASE COURSE, 10 1/2'' (IN 3 LIFTS)
- ⑫ PROP. SUB-BASE GRANULAR MATERIAL, TYPE B, 4''
- ⑬ PROP. HMA SHOULDER, 8'' (IN 2 LIFTS)
- ⑭ PROP. PAVED SHOULDER REMOVAL
- ⑮ PROP. AGGREGATE WEDGE SHOULDER, TYPE B
- ⑯ PROP. AGGREGATE SHOULDER, TYPE B, 6''
- ⑰ PROP. GRADING AND SHAPING SHOULDERS
- ⑱ PROP. DITCH (SEE CROSS SECTIONS)
- ⑳ PROP. PIPE UNDERDRAINS, 4''

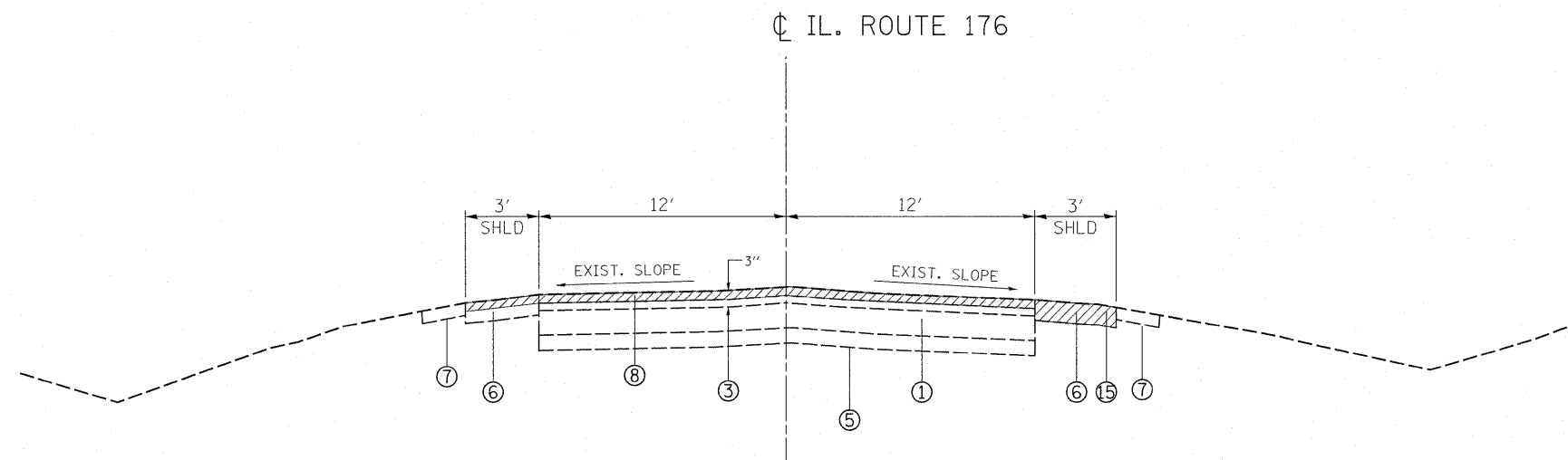
### NOTE:

PIPE UNDERDRAINS TO BE INSTALLED ALONG THE OUTSIDE EDGE OF THE PROPOSED WIDENING, 30 INCHES BELOW THE PROPOSED PAVEMENT GRADE AT THE FOLLOWING LOCATIONS:

- IL 176 (EAST LEG): STA. 101+00 TO STA. 102+00 LT. AND STA. 106+00 TO STA. 107+00 LT.
- IL 176 (WEST LEG): STA. 102+50 TO STA. 103+50 RT. AND STA. 107+00 TO STA. 108+00 RT.

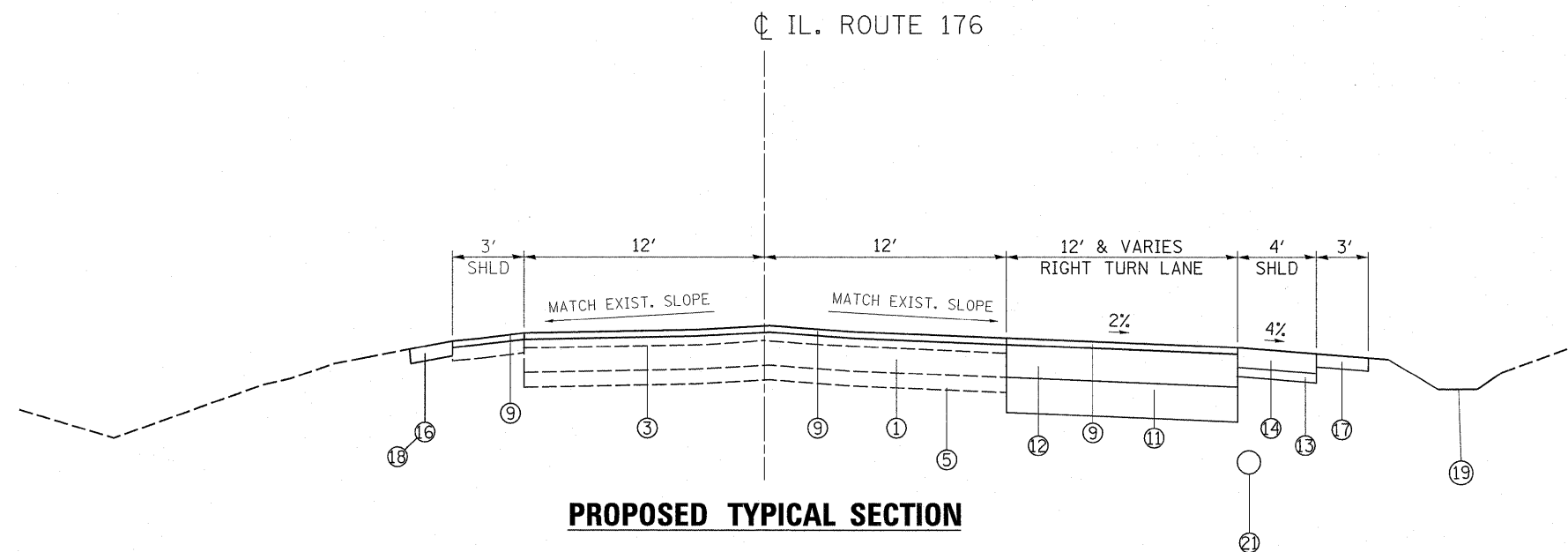
HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS @ Ndes
PAVEMENT RESURFACING AND WIDENING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2" (IL-9.5 mm)	4% @ 70 GYR.
HOT-MIX ASPHALT BASE COURSE, 10 1/2" (HMA BINDER IL-19.0 mm)	4% @ 70 GYR.
SHOULDERS	
HMA SHOULDER, 8" (HMA BINDER IL-19.0 mm)	4% @ 70 GYR.
PAVEMENT PATCHING	
CLASS D PATCHING, 12" (HMA BINDER IL-19.0 mm)	4% @ 70 GYR.

- THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SQ.YD./IN
- THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.



### EXISTING TYPICAL SECTION

STA 101+26.84 TO STA 108+70 (WEST LEG FACING EAST)  
STA 100+22 TO STA 104+00 (EAST LEG FACING WEST)

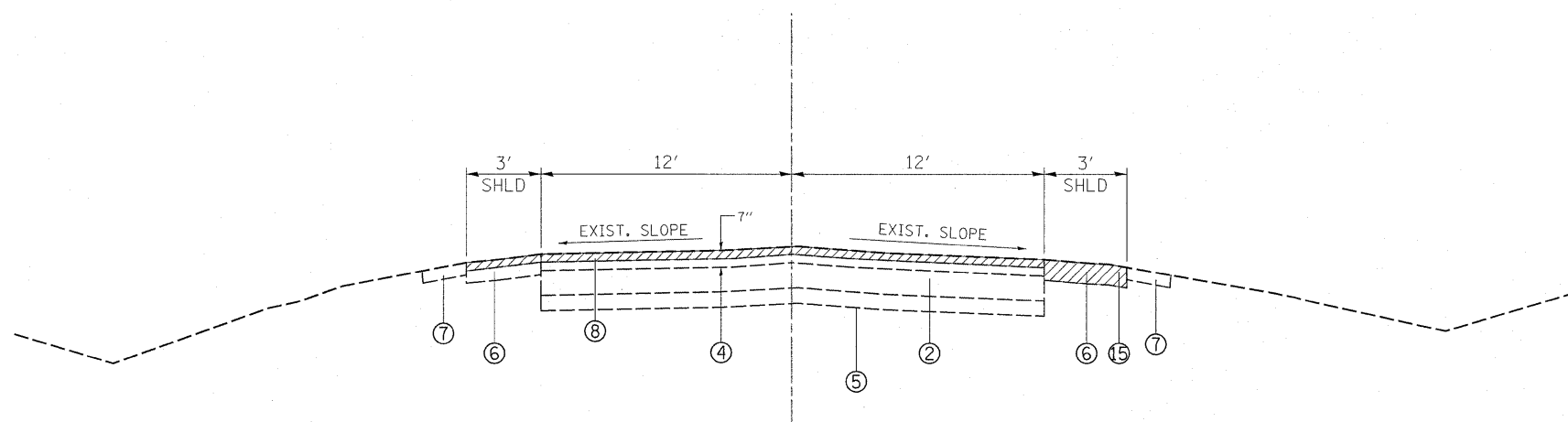


### PROPOSED TYPICAL SECTION

STA 101+26.84 TO STA 108+70 (WEST LEG FACING EAST)  
STA 100+22 TO STA 104+00 (EAST LEG FACING WEST)

FILE NAME = D144410-Design.dgn	USER NAME = WILGREENDP	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EXISTING AND PROPOSED TYPICAL SECTIONS IL RTE. 47 AT IL RTE. 176 (NORTH &amp; SOUTH JCT.)</b>	F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 5	
PLOT SCALE = 50.2367' / IN.	CHECKED -	REVISED -	SCALE: NONE			SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60K18			
PLOT DATE = 12/29/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT								

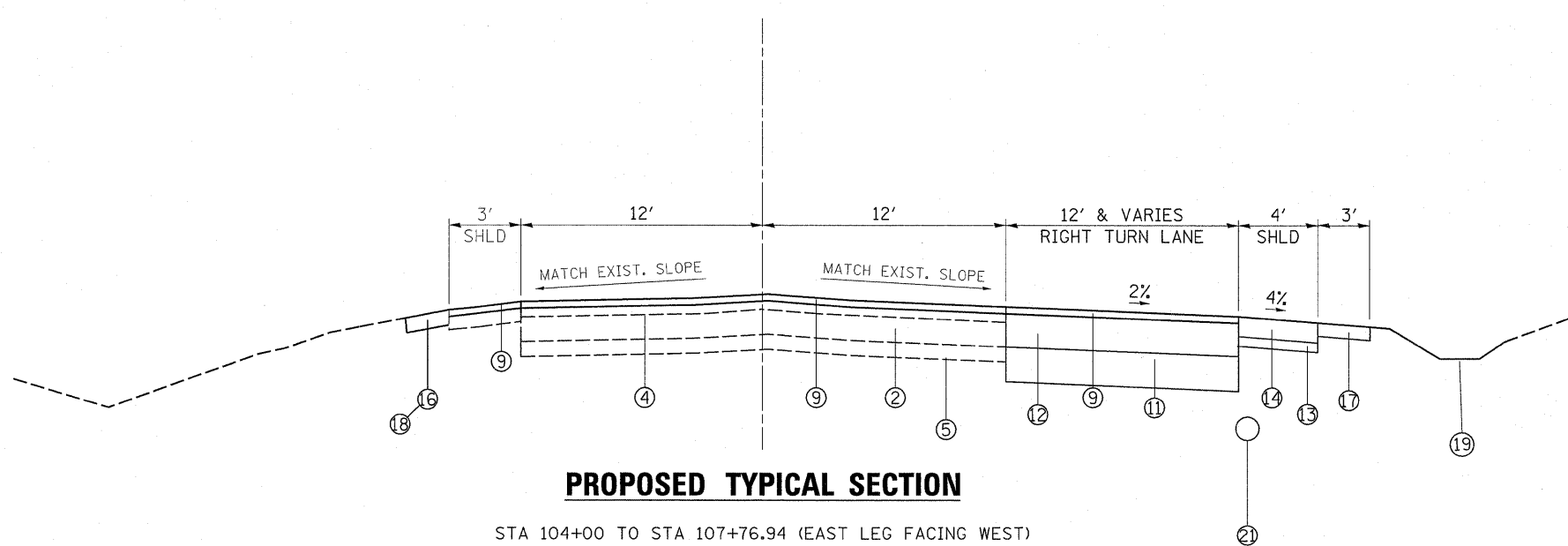
IL. ROUTE 176



**EXISTING TYPICAL SECTION**

STA 104+00 TO STA 107+76.94 (EAST LEG FACING WEST)

IL. ROUTE 176



**PROPOSED TYPICAL SECTION**

STA 104+00 TO STA 107+76.94 (EAST LEG FACING WEST)

**LEGEND**

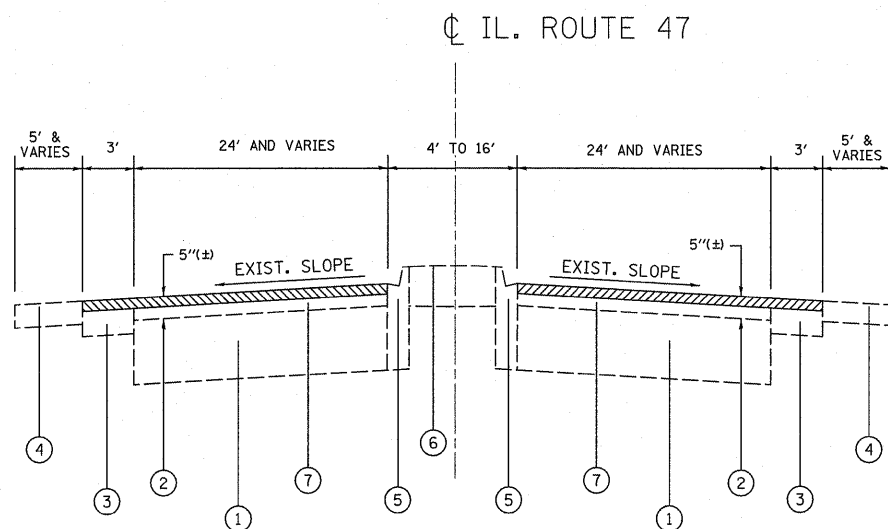
- ① EXIST. HMA BASE COURSE 12''±
- ② EXIST. PCC BASE COURSE 8''±
- ③ EXIST. HMA SURFACE 3''±
- ④ EXIST. HMA SURFACE 7''±
- ⑤ EXIST. AGGREGATE SUB-BASE
- ⑥ EXIST. ASPHALT SHOULDER
- ⑦ EXIST. AGGREGATE SHOULDER
- ⑧ PROP. HMA SURFACE REMOVAL, 2''
- ⑨ PROP. HMA SURFACE COURSE, MIX D, N70, 2''
- ⑩ PROP. AGGREGATE SUBGRADE, 12''
- ⑪ PROP. HMA BASE COURSE, 10 1/2'' (IN 3 LIFTS)
- ⑫ PROP. SUB-BASE GRANULAR MATERIAL, TYPE B, 4''
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- ⑮ PROP. AGGREGATE WEDGE SHOULDER, TYPE B
- ⑯ PROP. AGGREGATE SHOULDER, TYPE B, 6''
- ⑰ PROP. GRADING AND SHAPING SHOULDERS
- ⑱ PROP. DITCH (SEE CROSS SECTIONS)
- ⑲ PROP. PIPE UNDERDRAINS, 4''

**NOTE:**

PIPE UNDERDRAINS TO BE INSTALLED ALONG THE OUTSIDE EDGE OF THE PROPOSED WIDENING, 30 INCHES BELOW THE PROPOSED PAVEMENT GRADE AT THE FOLLOWING LOCATIONS:

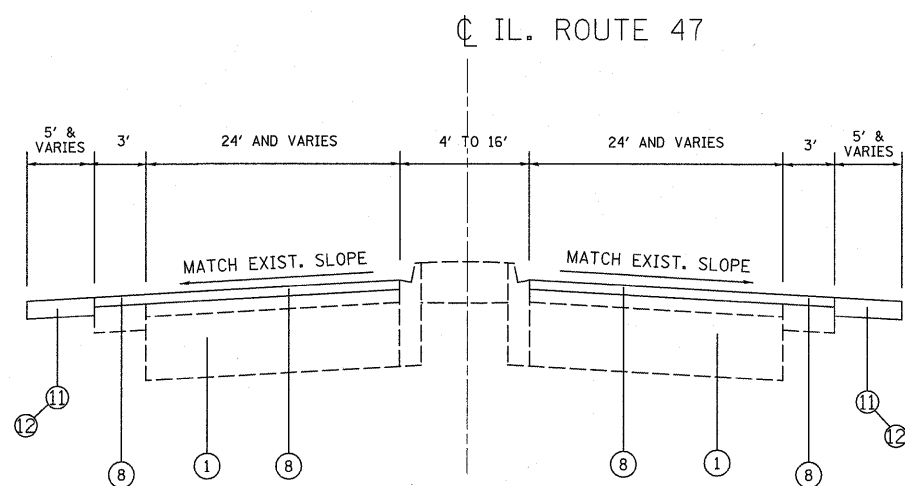
- IL 176 (EAST LEG): STA. 101+00 TO STA. 102+00 LT. AND STA. 106+00 TO STA. 107+00 LT.
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FILE NAME = D144410-Design.dgn	USER NAME = WILGREENDP	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EXISTING AND PROPOSED TYPICAL SECTIONS IL RTE. 47 AT IL RTE. 176 (NORTH &amp; SOUTH JCT.)</b>			F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 6
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -					CONTRACT NO. 60K18				
PLOT DATE = 12/29/2010	DATE -	REVISED -	SCALE: NONE			SHEET NO. OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT				



**EXISTING TYPICAL SECTION**

STA 586+06 TO STA 592+50  
 STA 630+42 TO STA 636+34



**PROPOSED TYPICAL SECTION**

STA 586+06 TO STA 592+50  
 STA 630+42 TO STA 636+34

**LEGEND**

- ① EXIST. P.C. CONCRETE BASE COURSE, 9''±
- ② EXIST. HOT-MIX ASPHALT SURFACE COURSE, 5''±
- ③ EXIST. HOT-MIX ASPHALT SHOULDERS
- ④ EXIST. AGGREGATE SHOULDERS
- ⑤ EXIST. CONCRETE CURB AND GUTTER
- ⑥ EXIST. CONCRETE MEDIAN SURFACE
- ⑦ PROP. HOT-MIX ASPHALT SURFACE REMOVAL, 2''
- ⑧ PROP. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2''
- ⑪ PROP. AGGREGATE WEDGE SHOULDERS, TYPE B
- ⑫ PROP. GRADING AND SHAPING SHOULDERS

NOTE:

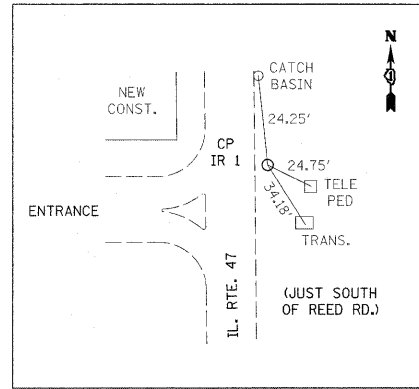
MILLING OF ROADWAY TO BE DONE BEFORE PAVEMENT PATCHING

FILE NAME = ct\pw_work\pwidot\wilgreendp\d0206766\044410-Design.dgn	USER NAME = WILGREENDP	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EXISTING AND PROPOSED TYPICAL SECTIONS IL RTE. 47 AT IL RTE. 176 (NORTH &amp; SOUTH JCT.)</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -					326	105 N-4	MCHENRY	60	7
	PLOT DATE = 12/29/2010	DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
								CONTRACT NO. 60K18				

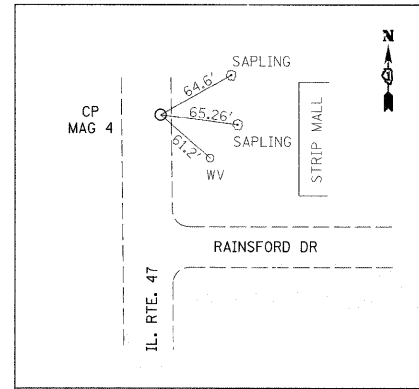
**SCHEDULE OF QUANTITIES (EARTHWORK)**

1	2	3	4	5	6	7
IL 176	Earth Excavation (Cu. Yd.)	Unsuitable Material (Cu. Yd.)	Embankment (Cu. Yd.)	Adjustment for Shrinkage (Cu. Yd.)	Furnished Excavation (Cu. Yd.)	Top Soil Furnish and Place (Sq. Yd.)
East Leg (Sta. 100+22 to Sta. 107+77)	357.74	274.90	188.73	304.08	115.35	1,887.00
West Leg (Sta. 101+27 to Sta. 108+70)	353.23	322.58	169.40	300.25	130.85	1,764.00
<b>TOTAL</b>	<b>710.97</b>	<b>597.48</b>	<b>358.13</b>	<b>604.32</b>	<b>246.19</b>	<b>3,651.00</b>
Column 1: Location from plans			Column 5: Earth excavation that is to be used as fill			
Column 2: Cut quantities after unsuitable material is removed			material in the embankment, shrinkage factor			
			was determined to be 15%			
Column 3: Material that is determined to be either unstable			Column 6: Column 5 - Column 4, Positive Quantity = extra			
or unsuitable from use in embankment. (Aggregate			excavation, negative quantity = furnished			
shoulder and topsoil excavated at 6" average depth)			excavation needed.			
Column 4: Fill quantities after unsuitable material is removed			Column 7: Topsoil furnish and place = Area of seeding			

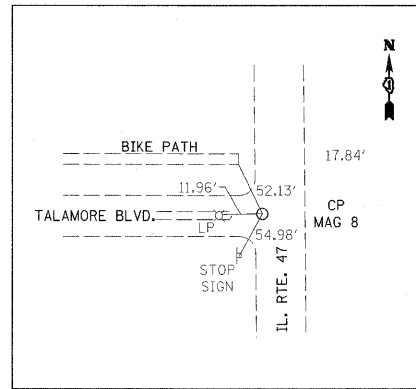




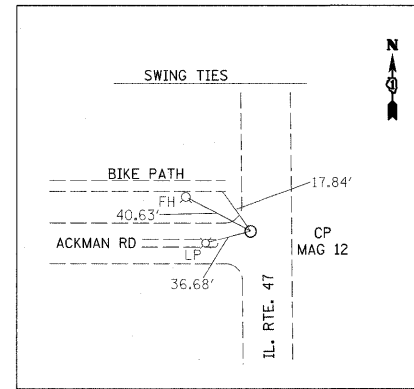
**CONTROL POINT #1**  
 STA. 354+41.56, 42.68' RT.  
 N 2008648.226  
 E 959728.152  
 ELEV. 888.8224



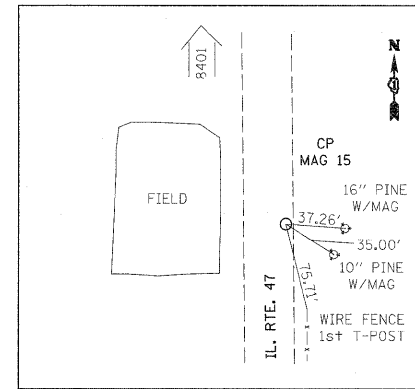
**CONTROL POINT #4**  
 STA. 376+91.28, 41.49' RT.  
 N 2010811.256  
 E 960171.510  
 ELEV. 872.6668



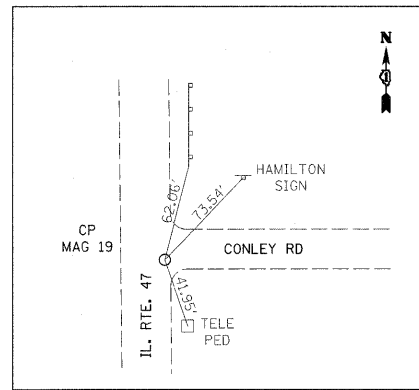
**CONTROL POINT #8**  
 STA. 400+53.97, 47.84' LT.  
 N 2013172.213  
 E 960044.336  
 ELEV. 868.1052



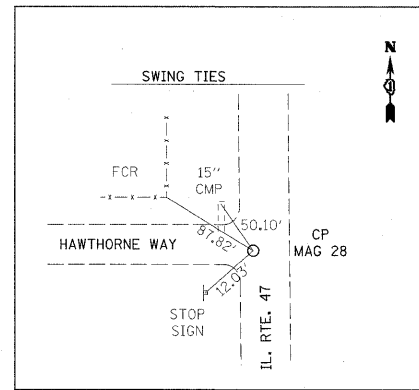
**CONTROL POINT #12**  
 STA. 423+03.07, 42.17' LT.  
 N 2015421.868  
 E 960019.202  
 ELEV. 875.1350



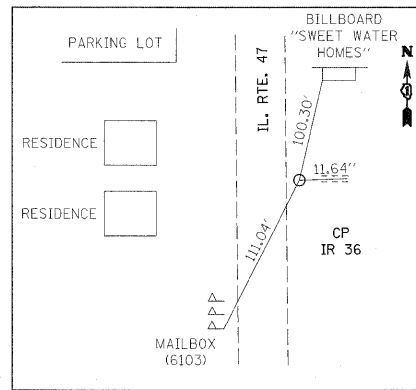
**CONTROL POINT #15**  
 STA. 444+74.00, 19.14' RT.  
 N 2017592.131  
 E 960114.099  
 ELEV. 877.9921



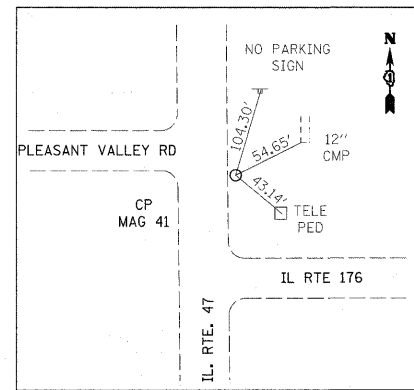
**CONTROL POINT #19**  
 STA. 479+17.36, 30.00' RT.  
 N 2021035.751  
 E 960141.852  
 ELEV. 861.8536



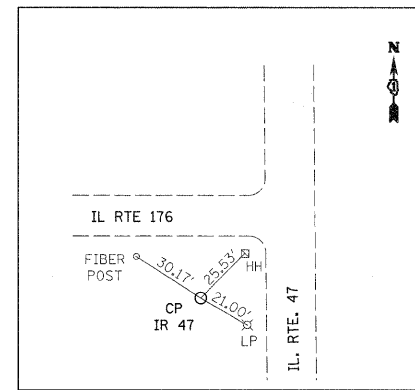
**CONTROL POINT #28**  
 STA. 543+50.45, 26.05' LT.  
 N 2027468.661  
 E 960067.332  
 ELEV. 881.7024



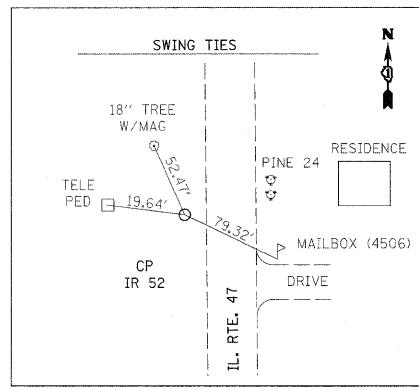
**CONTROL POINT #36**  
 STA. 572+75.57, 21.96' RT.  
 N 2030393.897  
 E 960107.674  
 ELEV. 920.0076



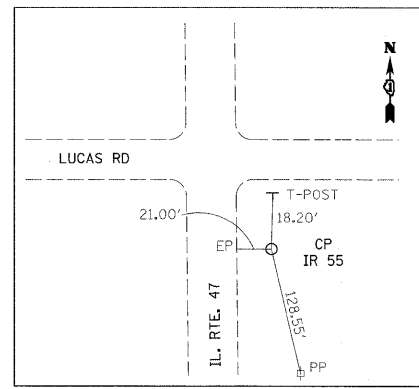
**CONTROL POINT #41**  
 STA. 594+38.33, 28.72' RT.  
 N 2032497.371  
 E 959765.142  
 ELEV. 912.6566



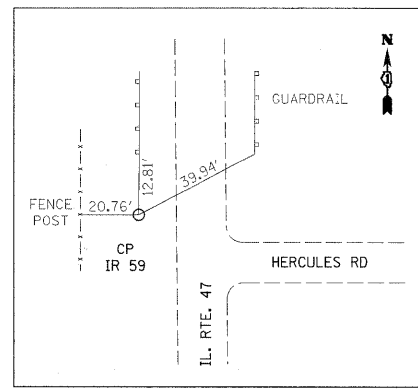
**CONTROL POINT #47**  
 STA. 633+07.53, 85.39' LT.  
 N 2035492.597  
 E 957286.435  
 ELEV. 907.3021



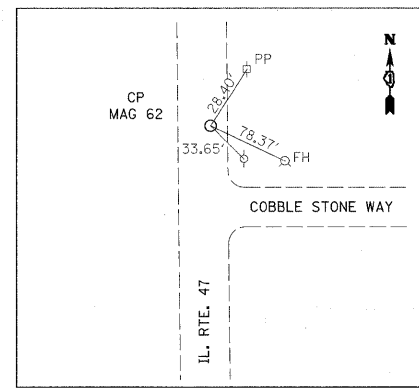
**CONTROL POINT #52**  
 STA. 666+74.74, 21.38' LT.  
 N 2038877.094  
 E 957227.189  
 ELEV. 936.0100



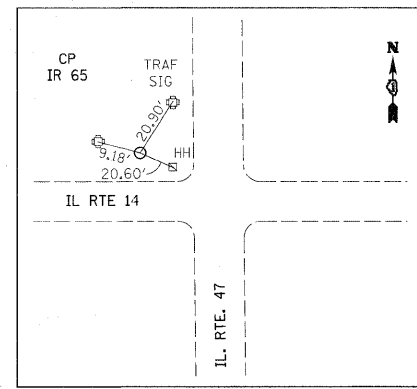
**CONTROL POINT #55**  
 STA. 689+61.70, 35.93' RT.  
 N 2041163.860  
 E 957291.919  
 ELEV. 932.7500



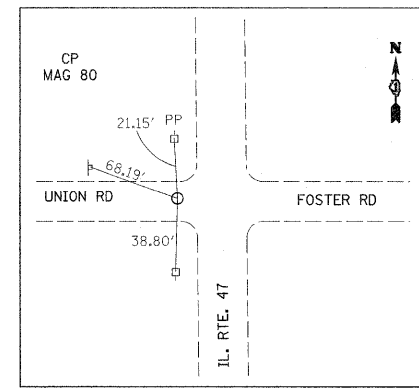
**CONTROL POINT #59**  
 STA. 726+17.12, 16.12' LT.  
 N 2044819.274  
 E 957236.918  
 ELEV. 929.7100



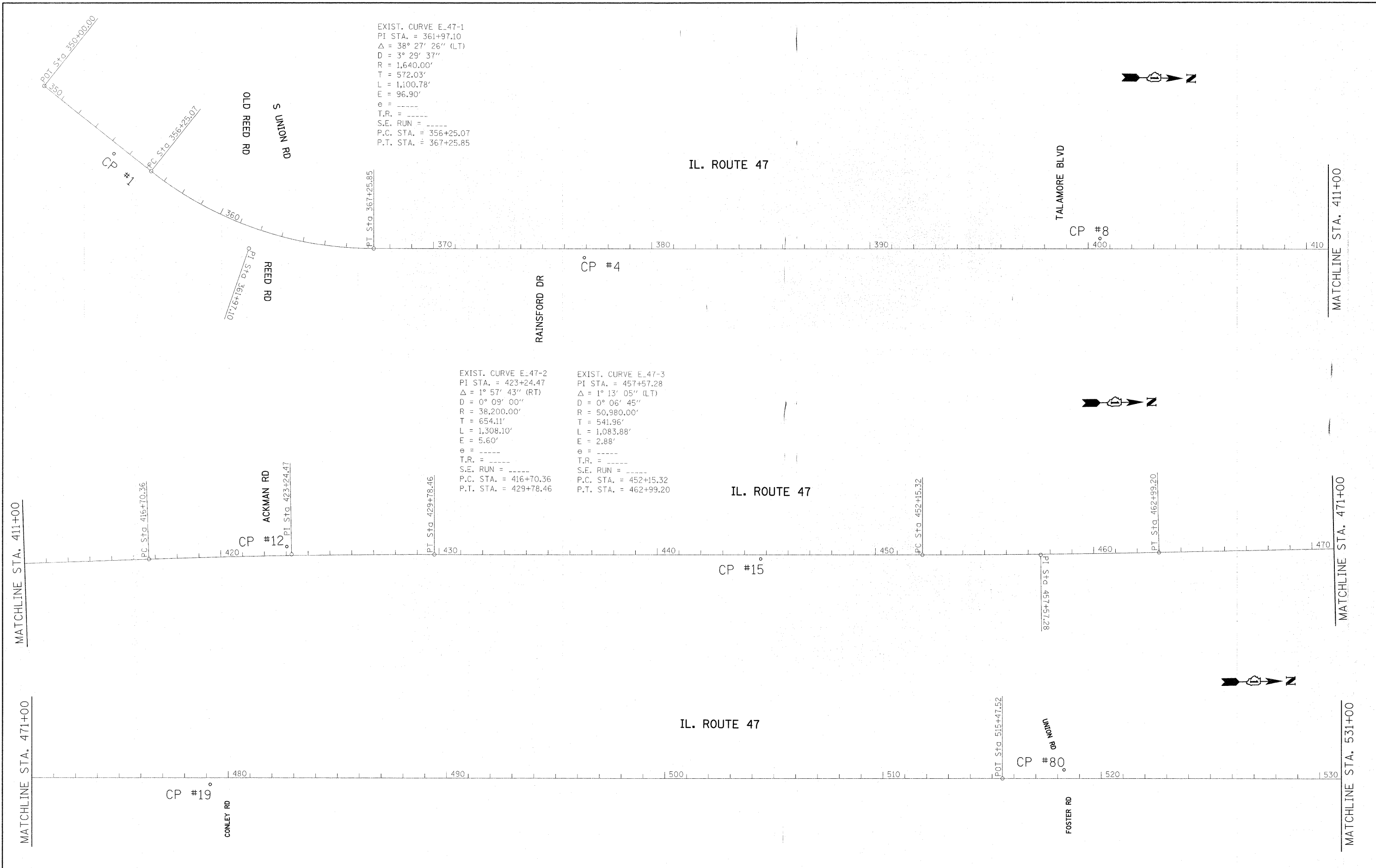
**CONTROL POINT #62**  
 STA. 755+31.05, 25.24' RT.  
 N 2047733.299  
 E 957265.435  
 ELEV. 928.1661



**CONTROL POINT #65**  
 STA. 779+86.67, 66.82' LT.  
 N 2050188.055  
 E 957153.253  
 ELEV. 948.5838



**CONTROL POINT #80**  
 STA. 518+29.43, 39.85' LT.  
 N 2024947.611  
 E 960954.520  
 ELEV. 859.903



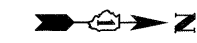
FILE NAME =	USER NAME = ulrichd	DESIGNED -	REVISED -
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	PLOT SCALE = 200.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 12/28/2010	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ALIGNMENT, TIES AND BENCHMARKS  
 IL. RTE. 47 AT IL. RTE. 176 (NORTH & SOUTH JCT.)**

SCALE: 1"=200'    SHEET NO.    OF    SHEETS    STA.    TO    STA.

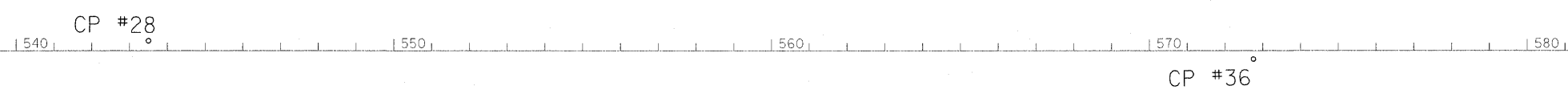
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326/IL 47	105 N-4	McHENRY	60	10
CONTRACT NO. 60K18			ILLINOIS FED. AID PROJECT	



IL. ROUTE 47

MATCHLINE STA. 531+00

MATCHLINE STA. 588+00



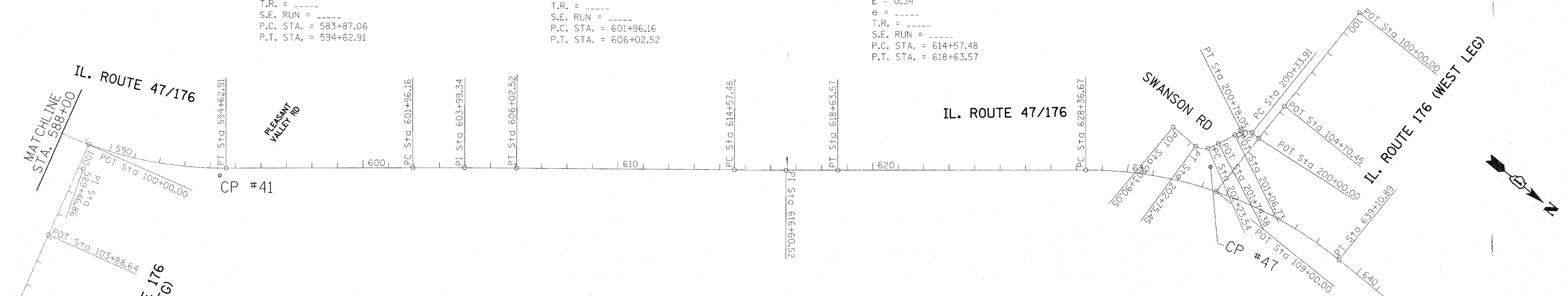
EXIST. CURVE E\_47-4  
 PI STA. = 589+46.86  
 $\Delta = 39^\circ 05' 16''$  (LT)  
 $D = 3^\circ 38' 00''$   
 $R = 1,577.00'$   
 $T = 559.81'$   
 $L = 1,075.85'$   
 $E = 96.41'$   
 $e =$  -----  
 $T.R. =$  -----  
 $S.E. RUN =$  -----  
 $P.C. STA. = 583+87.06$   
 $P.T. STA. = 594+62.91$

EXIST. CURVE E\_47-5  
 PI STA. = 603+99.34  
 $\Delta = 0^\circ 31' 03''$  (RT)  
 $D = 0^\circ 07' 38''$   
 $R = 45,000.00'$   
 $T = 203.19'$   
 $L = 406.37'$   
 $E = 0.46'$   
 $e =$  -----  
 $T.R. =$  -----  
 $S.E. RUN =$  -----  
 $P.C. STA. = 601+96.16$   
 $P.T. STA. = 606+02.52$

EXIST. CURVE E\_47-6  
 PI STA. = 616+60.52  
 $\Delta = 0^\circ 23' 16''$  (LT)  
 $D = 0^\circ 05' 44''$   
 $R = 60,000.00'$   
 $T = 203.05'$   
 $L = 406.10'$   
 $E = 0.34'$   
 $e =$  -----  
 $T.R. =$  -----  
 $S.E. RUN =$  -----  
 $P.C. STA. = 614+57.48$   
 $P.T. STA. = 618+63.57$

EXIST. CURVE E\_SWNSN-1  
 PI STA. = 200+58.71  
 $\Delta = 65^\circ 04' 18''$  (LT)  
 $D = 147^\circ 24' 35''$   
 $R = 38.87'$   
 $T = 24.80'$   
 $L = 44.14'$   
 $E = 7.24'$   
 $e =$  -----  
 $T.R. =$  -----  
 $S.E. RUN =$  -----  
 $P.C. STA. = 200+33.91$   
 $P.T. STA. = 200+78.05$

EXIST. CURVE E\_SWNSN-2  
 PI STA. = 202+51.53  
 $\Delta = 53^\circ 08' 31''$  (RT)  
 $D = 102^\circ 21' 52''$   
 $R = 55.97'$   
 $T = 27.99'$   
 $L = 51.91'$   
 $E = 6.61'$   
 $e =$  -----  
 $T.R. =$  -----  
 $S.E. RUN =$  -----  
 $P.C. STA. = 202+23.54$   
 $P.T. STA. = 202+75.45$



**BENCHMARK #238**  
 ELEV. 919.33

SET "□" ON NORTHEAST CORNER OF IL. RTE. 47 WITH IL. RTE. 176 ON NORTHWEST CORNER OF CONCRETE PAD FOR TRAFFIC CAB.

**BENCHMARK #242**  
 ELEV. 897.52

SET 4' REBAR ALONG WEST SIDE OF IL. RTE. 47 ADJACENT FROM CORNER OF WIRE FENCE WITH WOODPOST CORNER ±42' OFFSET.

**BENCHMARK #245**  
 ELEV. 903.74

SET NAIL ON EAST FACE WOODSTOCK/ MARENGO SIGN ON EAST SIDE OF IL. RTE.47 SECOND LIGHTPOLE SOUTH OF IL. RTE. 176 (WEST)

**BENCHMARK #271**  
 ELEV. 920.21

NAIL SET IN NORTHWEST FACE OF POWERPOLE ALONG SOUTH SIDE OF IL. RTE.176 (EAST) ADJACENT TO SIGN READING "IDOT ADOPT A HIGHWAY".

EXIST. CURVE E\_47-7  
 PI STA. = 633+95.56  
 $\Delta = 39^\circ 01' 43''$  (RT)  
 $D = 3^\circ 38' 00''$   
 $R = 1,577.00'$   
 $T = 558.89'$   
 $L = 1,074.22'$   
 $E = 96.11'$   
 $e =$  -----  
 $T.R. =$  -----  
 $S.E. RUN =$  -----  
 $P.C. STA. = 628+36.67$   
 $P.T. STA. = 639+10.89$

**BENCHMARK #236**  
 ELEV. 915.50

SET NAIL IN EAST FACE OF POWERPOLE ALONG WEST SIDE OF IL. RTE. 47 FIRST POLE SOUTH OF JUNCTION SIGN NORTH BOUND

**BENCHMARK #239**  
 ELEV. 919.97

SET RAILROAD SPIKE ALONG WEST SIDE OF IL. RTE. 47 IN EAST FACE OF FIRST POWERPOLE NORTH OF PLEASANT VALLEY ROAD SIGN HEADING NORTH BOUND.

**BENCHMARK #243**  
 ELEV. 901.66

SET 60D ALONG EAST SIDE OF IL. RTE. 47 IN A 4x4 WOODPOST ON NORTH SIDE OF FIELD ENTRANCE 45± OFF EDGE OF PAVEMENT.

**BENCHMARK #246**  
 ELEV. 906.24

SET 60D ALONG EAST SIDE OF IL. RTE. 47 IN A 4x4 WOODPOST ON NORTH SIDE OF FIELD ENTRANCE 45± OFF EDGE OF PAVEMENT.

**BENCHMARK #272**  
 ELEV. 918.65

RAILROAD SPIKE IN NORTH FACE OF POWERPOLE ADJACENT TO SIGN "ST. AUBIN NUSERIES 1/4 MILE" ON SOUTH SIDE OF IL. RTE. 176 (EAST).

**BENCHMARK #237**  
 ELEV. 919.67

SET "X" ACROSS FROM FIRST POWERPOLE NORTH OF CRAIG WOODS GOLF CLUB IN CENTER MEDIAN. (SOUTH END)

**BENCHMARK #240**  
 ELEV. 909.31

SET "□" ON EAST SIDE CURB LINE OF MEDIAN ±300' NORTH OF PLEASANT VALLEY ROAD.

**BENCHMARK #244**  
 ELEV. 901.50

SET "X" ALONG EAST SIDE OF IL. RTE. 47 FIRST LIGHTPOLE NORTH OF FIELD ENTRANCE SOUTHWEST CORNER OF BASE.

**BENCHMARK #247**  
 ELEV. 912.19

RAILROAD SPIKE IN WEST FACE OF FIFTH POWERPOLE NORTH OF IL. RTE 176 (WEST) AND IL. RTE. 47 JUNCTION ON EAST SIDE OF IL. RTE. 47.

**BENCHMARK #276**  
 ELEV. 907.59

IRON ROD SET ALONG SOUTH SIDE OF IL. RTE. 176 (WEST) 2± OFF EDGE OF PAVEMENT APPROXIMATELY 100' EAST OF "JUNCTION IL. RTE. 47" SIGN GOING EAST BOUND.

**BENCHMARK #277**  
 ELEV. 907.11

NAIL SET IN FENCE POST ALONG NORTH SIDE OF IL. RTE. 176 ADJACENT TO COMMONWEALTH EDISON ENTERANCE "PRIVATE BRIDGE" ON SOUTH SIDE OF IL. RTE. 176 (WEST)

FILE NAME =	USER NAME = ulrichkd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ALIGNMENT, TIES AND BENCHMARKS IL. RTE. 47 AT IL. RTE. 176 (NORTH &amp; SOUTH JCT.)</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pw\work\p\ulrichkd\d0206787\0144	110-sh-t-ATB.dgn	DRAWN -	REVISED -		326/IL 47	105 N-4	McHENRY	60	11				
	PLOT SCALE = 200.0000' / IN.	CHECKED -	REVISED -		SCALE: 1"=200'				CONTRACT NO. 60K18				
	PLOT DATE = 12/20/2010	DATE -	REVISED -		SHEET NO. OF SHEETS STA. TO STA.				ILLINOIS FED. AID PROJECT				

EXIST. CURVE E\_47-8  
 PI STA. = 663+18.82  
 $\Delta = 0^\circ 15' 57''$  (RT)  
 $D = 0^\circ 03' 57''$   
 $R = 87,000.00'$   
 $T = 201.83'$   
 $L = 403.66'$   
 $E = 0.23'$   
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 661+16.99  
 P.T. STA. = 665+20.65



MATCHLINE STA. 650+00

IL. ROUTE 47

MATCHLINE STA. 710+00

650 | 660 | 670 | 680 | 690 | 700

P.C. Sta. 661+16.99  
 P.I. Sta. 663+18.82  
 P.T. Sta. 665+20.65

CP #52

CP #55

LUCAS RD

EXIST. CURVE E\_47-9  
 PI STA. = 710+08.68  
 $\Delta = 0^\circ 31' 41''$  (LT)  
 $D = 0^\circ 01' 46''$   
 $R = 194,000.00'$   
 $T = 893.77'$   
 $L = 1,787.54'$   
 $E = 2.06'$   
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 701+14.90  
 P.T. STA. = 719+02.44

EXIST. CURVE E\_47-10  
 PI STA. = 744+79.88  
 $\Delta = 0^\circ 14' 52''$  (RT)  
 $D = 0^\circ 03' 37''$   
 $R = 95,000.00'$   
 $T = 205.34'$   
 $L = 410.68'$   
 $E = 0.22'$   
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 742+74.54  
 P.T. STA. = 746+85.22

EXIST. CURVE E\_47-11  
 PI STA. = 762+49.64  
 $\Delta = 0^\circ 31' 50''$  (LT)  
 $D = 0^\circ 07' 38''$   
 $R = 45,000.00'$   
 $T = 208.35'$   
 $L = 416.70'$   
 $E = 0.48'$   
 $e =$  -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 760+41.29  
 P.T. STA. = 764+57.99



MATCHLINE STA. 710+00

IL. ROUTE 47  
(EASTWOOD DRIVE)

MATCHLINE STA. 770+00

710 | 720 | 730 | 740 | 750 | 760

P.T. Sta. 719+02.44

CP #59

HERCULES RD

P.C. Sta. 742+74.54

P.I. Sta. 744+79.88

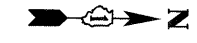
P.T. Sta. 746+85.22

COBBLESTONE WAY

CP #62

P.C. Sta. 760+41.29

P.T. Sta. 764+57.99



IL. ROUTE 47  
(EASTWOOD DRIVE)

US 14  
(NORTHWEST HIGHWAY)

CP #65

P.O.T. Sta. 783+68.50

MATCHLINE STA. 770+00

FILE NAME =	USER NAME = ulrichkd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ALIGNMENT, TIES AND BENCHMARKS IL. RTE. 47 AT IL RTE. 176 (NORTH &amp; SOUTH JCT.)</b>			F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pwork\puidot\ulrichkd\40206787\DI14	10-shr-ATB.dgn	DRAWN -	REVISED -		326/L 47	105 N-4	McHENRY	60	12			
	PLOT SCALE = 200.0000' / IN.	CHECKED -	REVISED -		SCALE: 1"=200'			CONTRACT NO. 60K18				
	PLOT DATE = 12/20/2010	DATE -	REVISED -		SHEET NO. OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT				

PLAN	DATE
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY

PROFILE	DATE
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY
NO.	BY

EXIST. CURVE E-47-A  
 P1 STA. = 589+46.86  
 $\Delta = 39^\circ 05' 16''$  (LT)  
 $D = 3^\circ 38' 00''$   
 $R = 1577.00'$   
 $T = 559.81'$   
 $L = 1,075.85'$   
 $E = 96.41'$   
 T.R. RUN = 583+81.06  
 S.E. STA. = 594+62.91  
 P.T. STA. = 594+62.91

**IL. 47 PROJECT LIMIT**  
**STA. 586 + 06**

**IL. 47 PROJECT LIMIT**  
**STA. 592 + 50**

IL. ROUTE 47  
 STA 589+13.58 IL. ROUTE 47 = SOUTH  
 STA 100+00 IL. ROUTE 176 SOUTH

IL. ROUTE 47/176

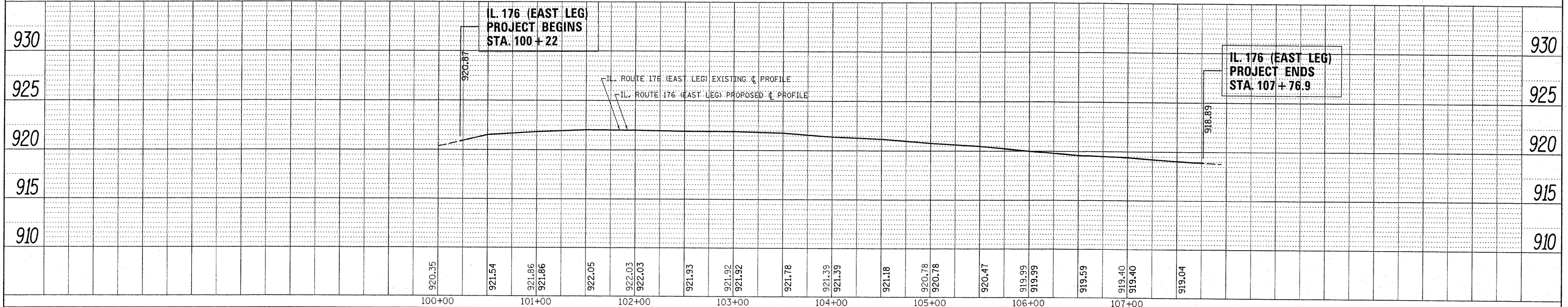
**IL. 176 (EAST LEG)**  
**PROJECT BEGINS**  
**STA. 100 + 22**

**IL. 176 (EAST LEG)**  
**PROJECT BEGINS**  
**STA. 100 + 22**

**IL. 176 (EAST LEG)**  
**PROJECT ENDS**  
**STA. 107 + 76.9**

**IL. 176 (EAST LEG)**  
**PROJECT ENDS**  
**STA. 107 + 76.9**

- ① WIDENING  
 PROP. HMA SURFACE COURSE, MIX "D", N70, 2"  
 PROP. HMA BASE COURSE, 10 1/2"  
 PROP. AGGREGATE SUBGRADE, 12"
- ② RESURFACING  
 PROP. HMA SURFACE REMOVAL, 2"  
 PROP. HMA SURFACE COURSE, MIX "D", N70, 2"

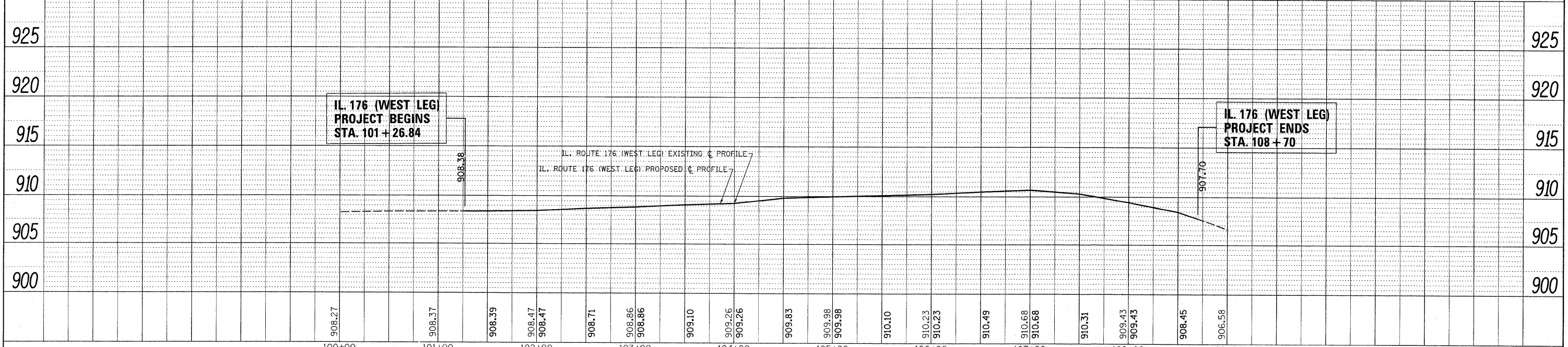
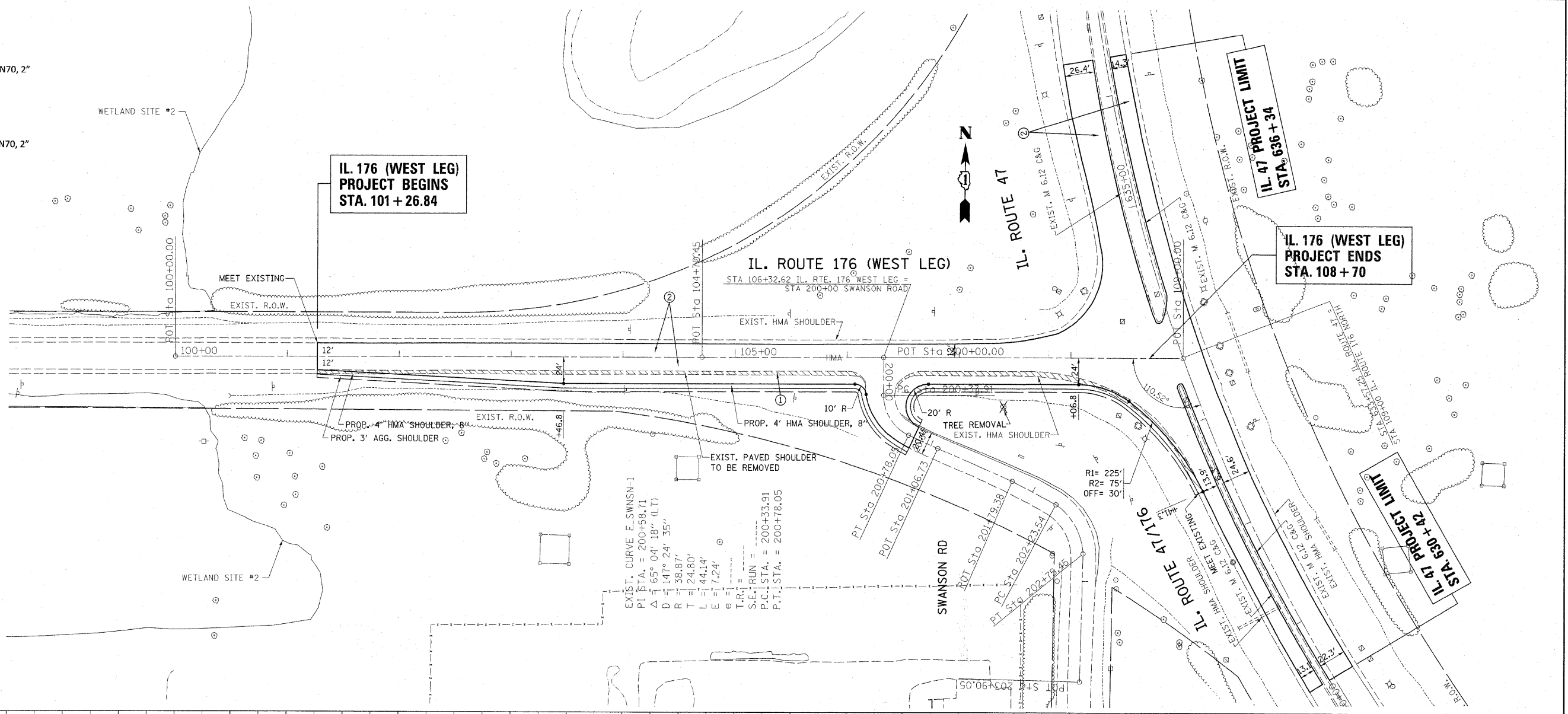


FILE NAME =	USER NAME = ulrichk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				ROADWAY PLAN & PROFILE				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pwork\psidot\ulrichk\d0206787\01444\0-shi-pln-pr-f.dgn	PLOT SCALE = 50,0000 / IN.	DRAWN -	REVISED -					IL. RTE. 47 AT IL RTE. 176 (EAST LEG)				326	105 N-4	MCHENRY	60	13	
PLOT DATE = 12/20/2010	DATE -	CHECKED -	REVISED -					SCALE: 1"=50'				SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 60K18	
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT									

- ① WIDENING  
PROP. HMA SURFACE COURSE, MIX "D", N70, 2"  
PROP. HMA BASE COURSE, 10 1/2"  
PROP. AGGREGATE SUBGRADE, 12"
- ② RESURFACING  
PROP. HMA SURFACE REMOVAL, 2"  
PROP. HMA SURFACE COURSE, MIX "D", N70, 2"

PLAN	SURVEYED	DATE
	ALIGNED	BY
	RT. OF WAY	
	CHECKED	
	CAD FILE NAME	
NOTE BOOK NO.		

PROFILE	SURVEYED	DATE
	GRADES	BY
	NOTED	
	STRUCTURE NOTATIONS	
NOTE BOOK NO.		



FILE NAME =	USER NAME = ulrichkd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ROADWAY PLAN &amp; PROFILE</b> <b>IL. RTE. 47 AT IL. RTE 176 (WEST LEG)</b>			F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 14
ct:\pwork\pwsdot\ulrichkd\0206787\01444	dhht-plnprf.dgn	DRAWN -	REVISED -		SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 60K18		
		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

THE CONTRACTOR WILL BE REQUIRED TO IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES IMMEDIATELY AFTER STRIPPING OF EXISTING VEGETATION.

NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE SITE OTHER THAN THROUGH SEDIMENTATION/STILLING BASINS. THE CONTRACTOR WILL ADJUST HIS OPERATIONS AND IMPLEMENT EROSION CONTROL MEASURES ACCORDINGLY.

THE QUANTITIES SHOWN FOR TEMPORARY DITCH CHECKS ARE MEASURED AS EACH, REGARDLESS OF TYPE OR CONFIGURATION USED.

THE CONTRACTOR SHALL SURROUND ALL EARTH STOCKPILES WITH SILT FENCE AND SHALL BE PAID FOR AS PERIMETER EROSION BARRIER, EROSION CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR AND ENGINEER WITHIN 24 HOURS OR ANY STORM EXCEEDING 0.5 INCH OF PRECIPITATION.

STOCKPILES OF SOIL AND OTHER BUILDING MATERIALS TO REMAIN IN PLACE MORE THAN THREE (3) DAYS SHALL BE FURNISHED WITH EROSION AND SEDIMENT CONTROL MEASURES (I.E. PERIMETER SILT FENCE). STOCKPILES TO REMAIN IN PLACE FOR 21 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.

ALL CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM STORM WATER PERMIT.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PREVENT POLLUTION OF STORM WATER AND SHALL FOLLOW IEPA & IDOT CONSTRUCTION MEMORANDUM NO. 95-60.

THE CONTRACTOR SHALL APPLY TEMPORARY EROSION CONTROL SEEDING TO ALL ERODIBLE BARE EARTH AREAS WITHIN THE CONTRACT LIMITS EACH WEEK, REGARDLESS OF WEATHER CONDITIONS OR PROGRESS OF THE WORK. UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ERODIBLE EMBANKMENT AND EXCAVATION AREAS WHERE WORK IS IN PROGRESS SHALL BE INCLUDED ON THE AREAS TO BE SEEDED. SEE SPECIAL PROVISION FOR TEMPORARY EROSION CONTROL SEEDING.

REFER TO LANDSCAPING PLAN FOR AREA TO BE SEEDED.

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL REVISED FEBRUARY 2002.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ALL ADJACENT STREETS MUST BE KEPT CLEAR OF DEBRIS, INSPECTED DAILY AND CLEANED WHEN NECESSARY.

ALL EROSION CONTROL MEASURES MUST BE INSPECTED WEEKLY AND AFTER EACH 1/2 " RAIN EVENT.

PRIORITY SHALL BE GIVEN TO THE COMPLETION AND STABILIZATION OF THE DETENTION AREAS. WORK IN THESE AREAS SHALL NOT BE PROLONGED IN ATTEMPT THAT ALL FINAL GRADING AND STABILIZATION CAN TAKE PLACE AT ONE TIME.

THE CONDITION OF THE CONSTRUCTION SITE FOR WINTER SHUTDOWN SHALL BE ADDRESSED EARLY IN THE FALL GROWING SEASON SO THAT SLOPES AND OTHER BARE EARTH AREAS MAY BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATIVE COVER FOR PROPER EROSION AND SEDIMENT CONTROL.

SILT FENCE IS TO BE INSTALLED FOLLOWING THE COMPLETION AND STABILIZATION OF THE STORM WATER FACILITIES AND IS TO REMAIN IN PLACE UNTIL THE CONTRIBUTING AREA IS STABILIZED.

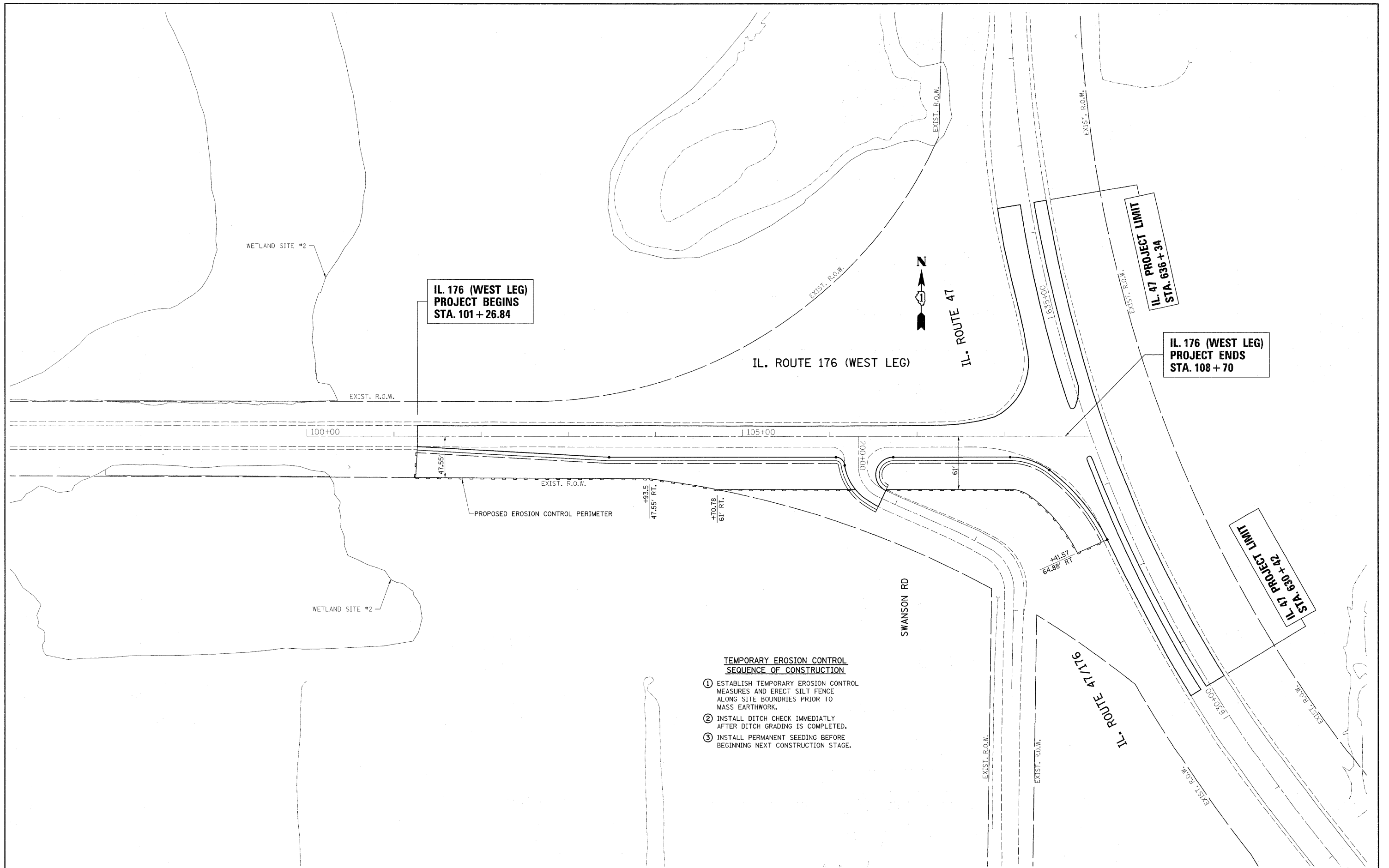
IN AREAS WHERE WORK IS COMPLETE, PERMANENT STABILIZATION SHALL OCCUR WITHIN 7 DAYS OF COMPLETION.

COMPLETED SLOPES SHALL BE SEEDED AND MULCHED (OR BLANKETED, IF APPLICABLE) AS THE EXCAVATION PROCEEDS TO THE EXTENT CONSIDERED DESIRABLE AND PRACTICAL. PERMANENT SEEDING SHALL BE USED WHENEVER POSSIBLE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PROLONG FINAL GRADING AND SHAPING SO THAT THE ENTIRE PROJECT CAN BE PERMANENTLY SEEDED AT ONE TIME. NO WORK SHALL BE PERFORMED IN FLOWING WATER. WATER IN AND NEAR THE CRITICAL AREAS SHOULD BE ISOLATED FROM CONCENTRATED FLOWS OR STREAM FLOW. THE STREAM BANKS SHOULD BE STABILIZED AT THE END OF EACH DAY. ONCE WORK IN THIS AREA BEGINS, PRIORITY SHALL BE GIVEN TO THE COMPLETION OF THE WORK AND FINAL STABILIZATION OF ALL DISTURBED AREAS.

FILE NAME =	USER NAME = WILGREENDP	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EROSION CONTROL NOTES</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct\pw_work\pwidot\wilgreendp\d0286766\	44410-Design\dgn	DRAWN -	REVISED -		<b>IL RTE. 47 AT IL RTE. 176 (NORTH &amp; SOUTH JCT.)</b>				326	105 N-4	MCHENRY	60	15
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	ILLINOIS FED. AID PROJECT	
	PLOT DATE = 12/28/2010	DATE -	REVISED -										CONTRACT NO. 60K18







- TEMPORARY EROSION CONTROL SEQUENCE OF CONSTRUCTION**
- ① ESTABLISH TEMPORARY EROSION CONTROL MEASURES AND ERECT SILT FENCE ALONG SITE BOUNDRIES PRIOR TO MASS EARTHWORK.
  - ② INSTALL DITCH CHECK IMMEDIATLY AFTER DITCH GRADING IS COMPLETED.
  - ③ INSTALL PERMANENT SEEDING BEFORE BEGINNING NEXT CONSTRUCTION STAGE.

FILE NAME =  
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

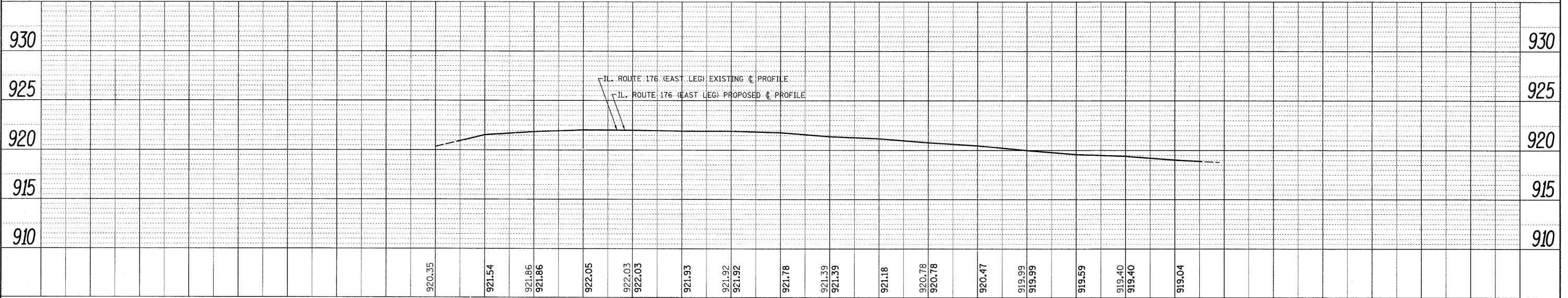
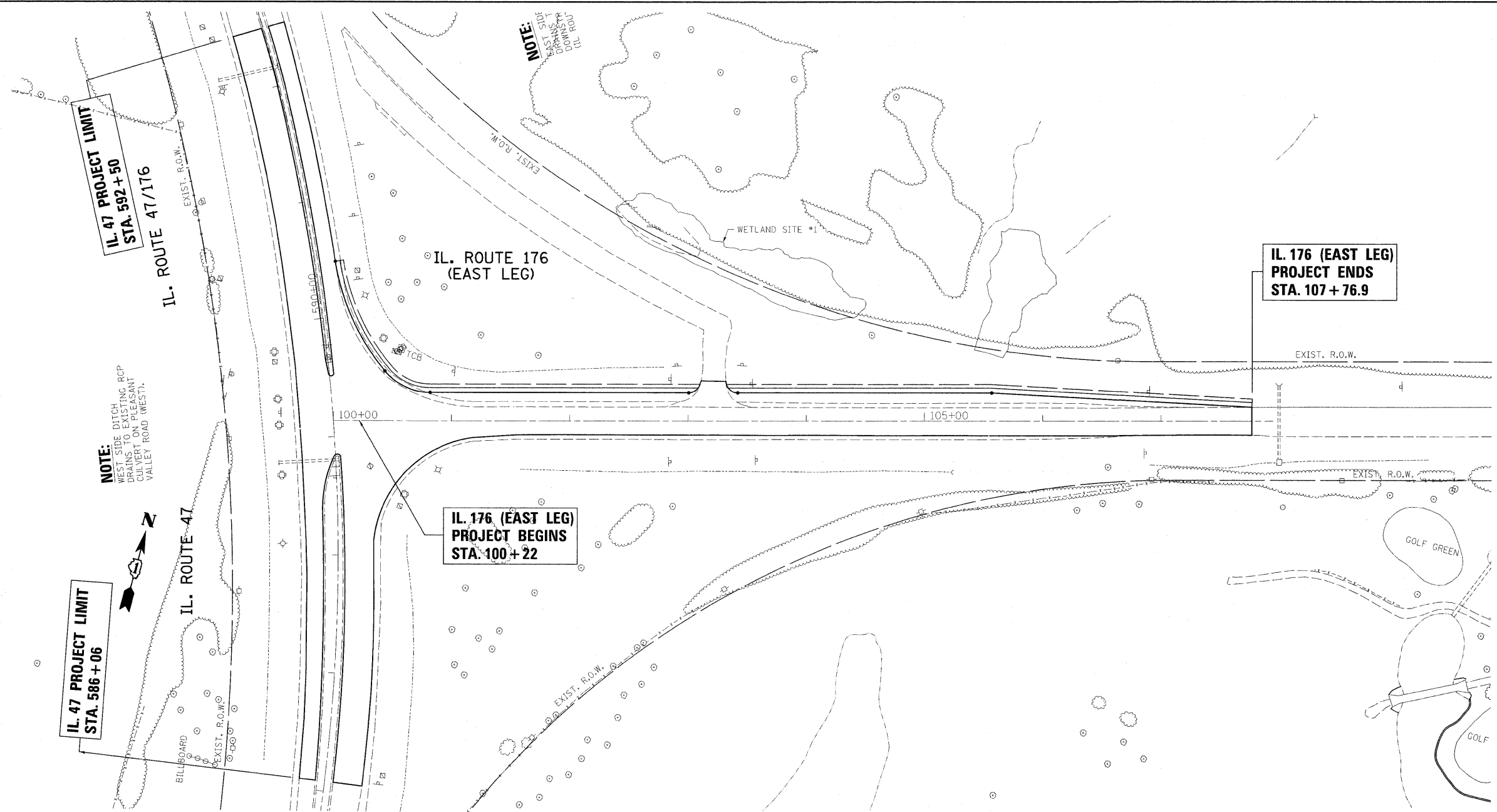
**EROSION CONTROL PLAN  
IL. RTE. 47 AT IL. RTE. 176 (WEST LEG)**

SCALE: 1" = 50'    SHEET NO.    OF    SHEETS    STA.    TO    STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	McHENRY	60	17
CONTRACT NO. 60K18				
ILLINOIS FED. AID PROJECT				

PLAN	DESIGNED	BY	DATE
NOTE BOOK NO.	ALIGNED		
	CHECKED		
	DATE		

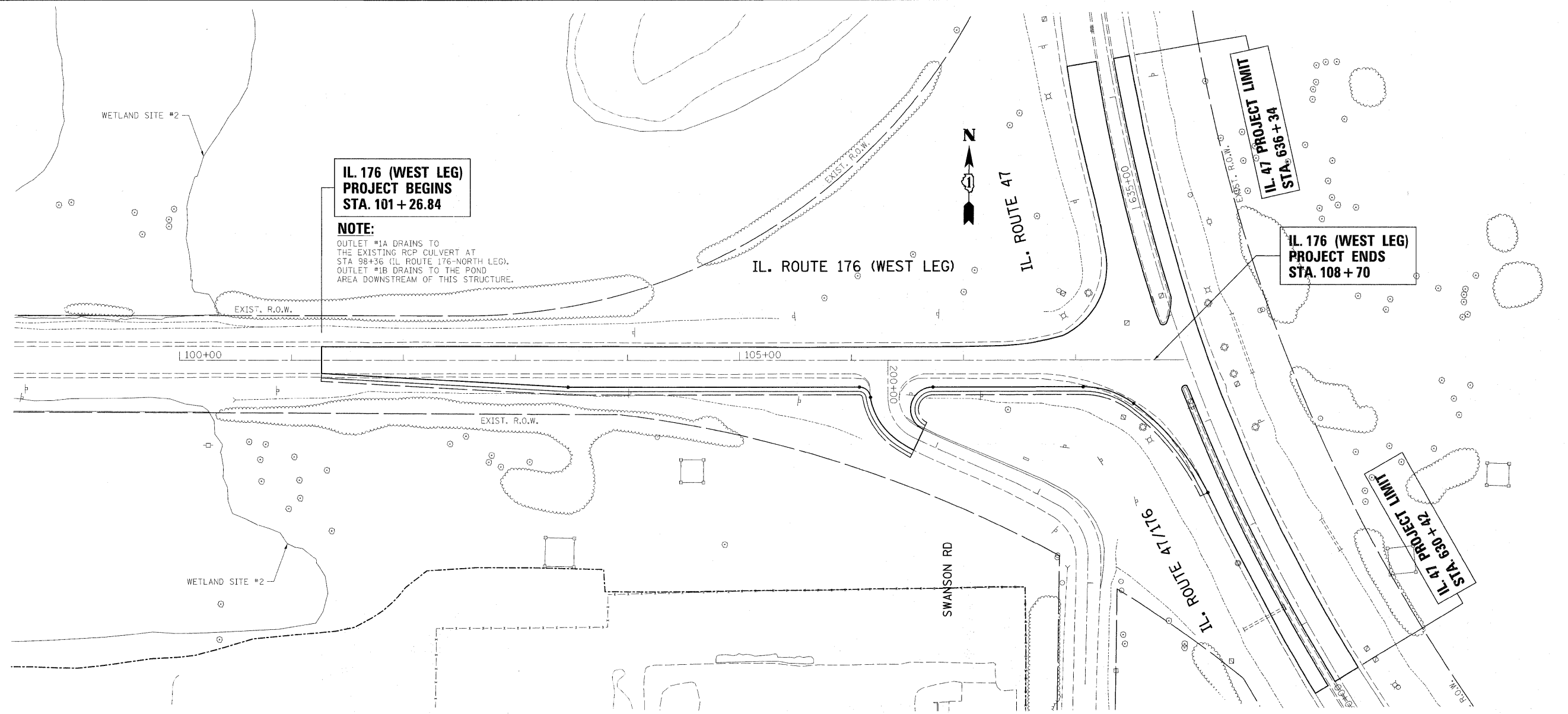
PROFILE	DESIGNED	BY	DATE
NOTE BOOK NO.	GRADES		
	CHECKED		
	DATE		



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ci:\pwork\pwork\ulrichk\d0286787\014440\sh-t-drain.dgn		DRAWN -	REVISED -		SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
		CHECKED -	REVISED -							CONTRACT NO. 60K18		
		DATE -	REVISED -									

DATE	
BY	
REVIEWED	
PLANNED	
NOTED	
NO.	
FILE NAME	

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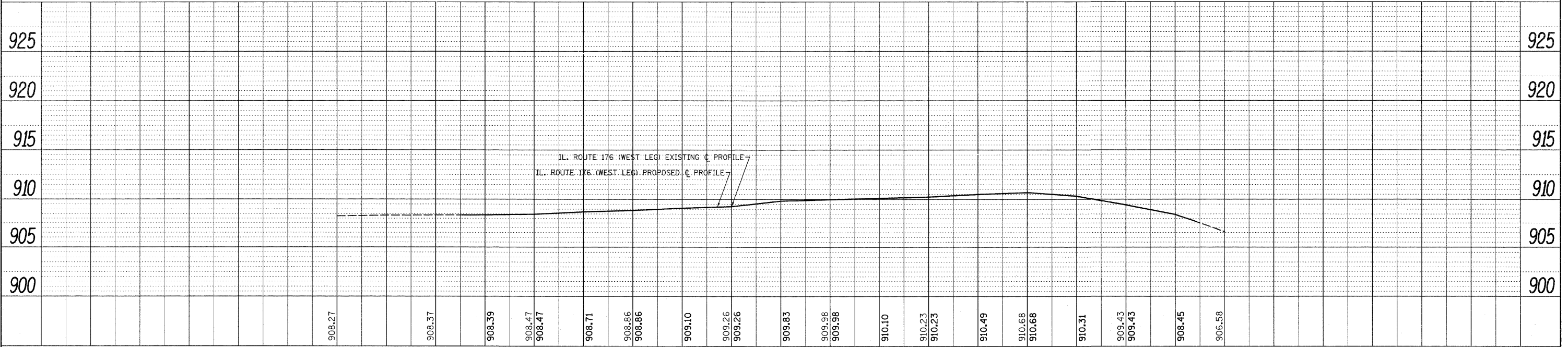


**IL. 176 (WEST LEG)  
PROJECT BEGINS  
STA. 101+26.84**

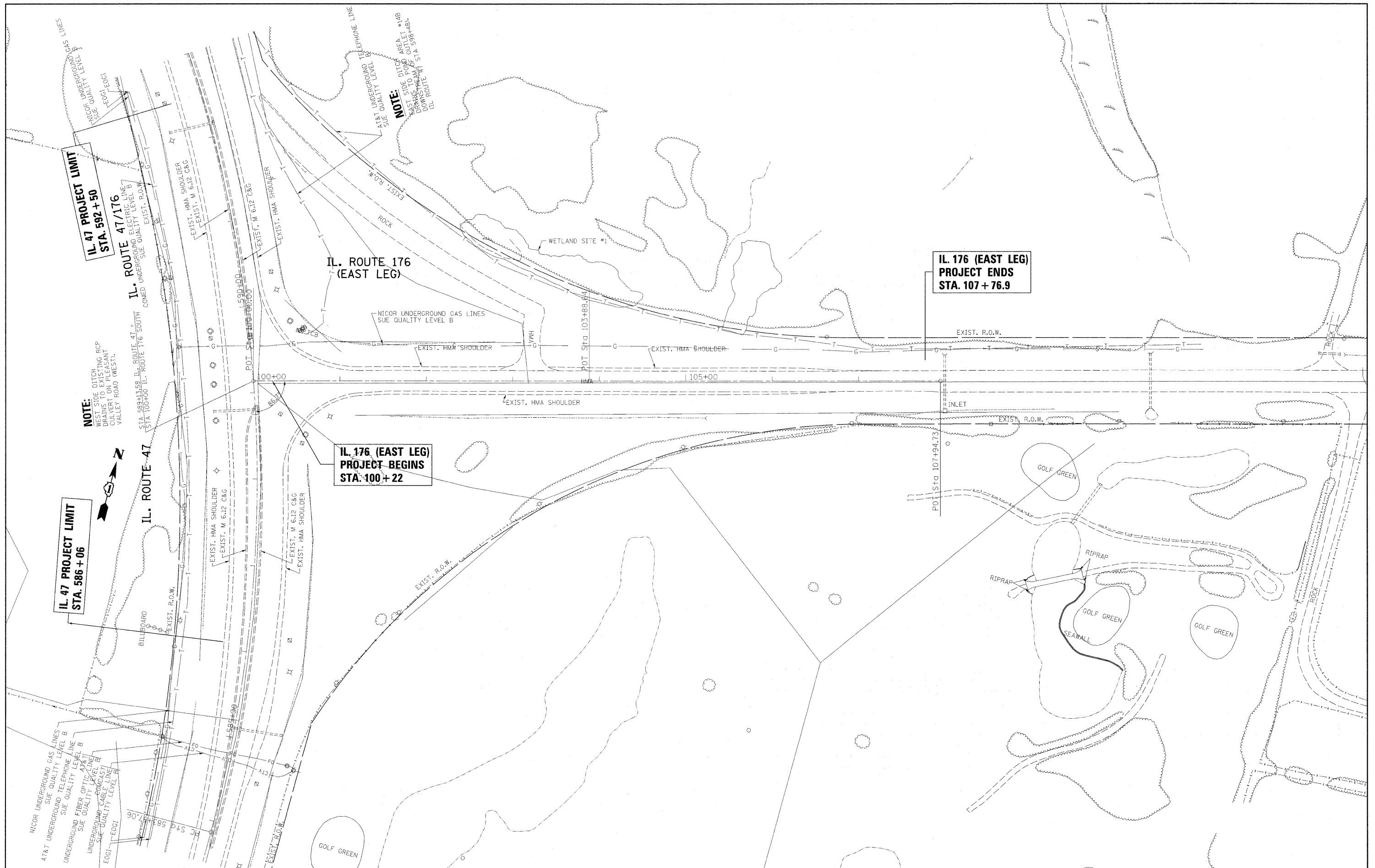
**NOTE:**  
OUTLET #1A DRAINS TO  
THE EXISTING RCP CULVERT AT  
STA. 98+36 (IL. ROUTE 176-NORTH LEG).  
OUTLET #1B DRAINS TO THE POND  
AREA DOWNSTREAM OF THIS STRUCTURE.

**IL. 176 (WEST LEG)  
PROJECT ENDS  
STA. 108+70**

**IL. 47 PROJECT LIMIT  
STA. 630+42**



FILE NAME =	USER NAME = ulrichkd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>DRAINAGE PLAN &amp; PROFILE IL. RTE. 47 AT IL. RTE 176 (WEST LEG)</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
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PLOT DATE = 12/20/2010		DATE -	REVISED -									ILLINOIS FED. AID PROJECT							



**NOTE:**  
WEST SIDE DITCH  
DRAINS TO EXISTING RCP  
CULVERT ON PLEASANT  
VALLEY ROAD (WEST).

**NOTE:**  
AT&T UNDERGROUND TELEPHONE LINE  
SUE QUALITY LEVEL B  
#148  
LAST SIDE DITCH AREA  
DRAINS TO MAIN OUTLET  
DRAINAGE AT STA 598+46.  
IL ROUTE

**IL. 47 PROJECT LIMIT  
STA. 586 + 06**

**IL. 47 PROJECT LIMIT  
STA. 592 + 50**

**IL. 176 (EAST LEG)  
PROJECT BEGINS  
STA. 100 + 22**

**IL. 176 (EAST LEG)  
PROJECT ENDS  
STA. 107 + 76.9**

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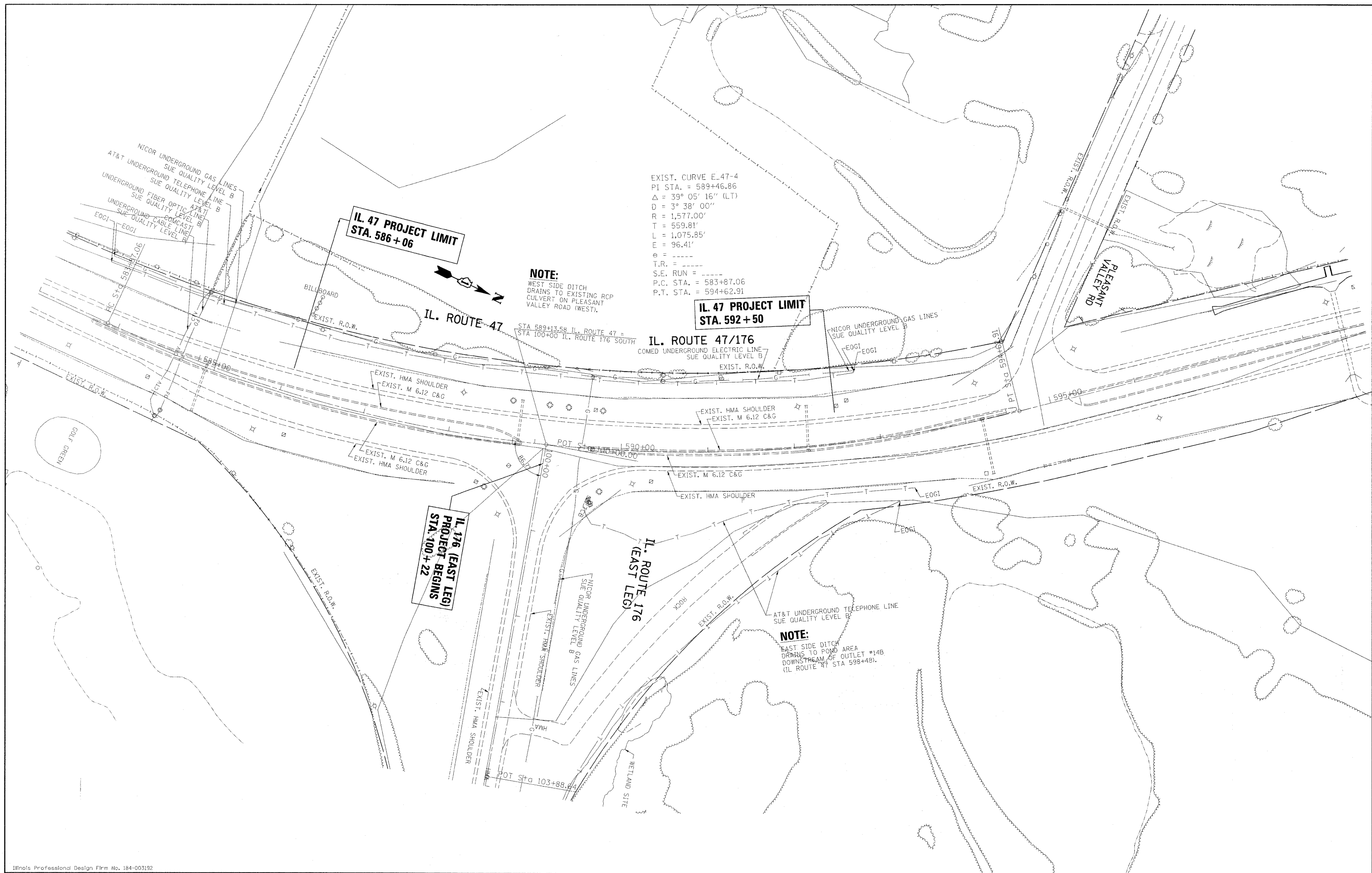
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING UTILITIES PLAN SHEET  
IL. RTE. 47 AT IL. RTE. 176 (EAST LEG)**  
SCALE: 1"= 50'  
SHEET NO. 2 OF 4 SHEETS  
STA. 583+00.00 TO STA. 598+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	20
CONTRACT NO. 60K18				
ILLINOIS FED. AID PROJECT				



Illinois Professional Design Firm No. 184-003192

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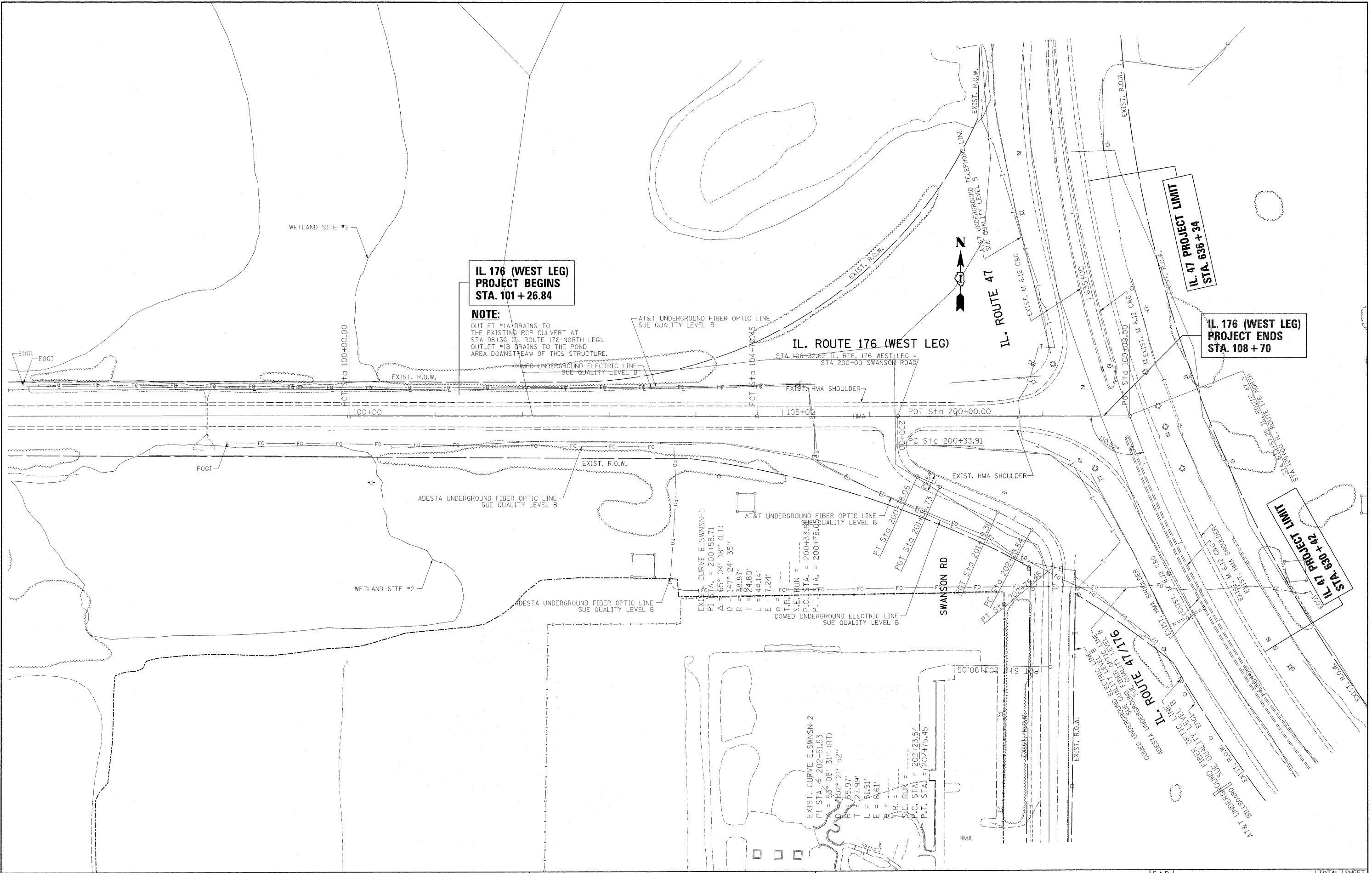
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

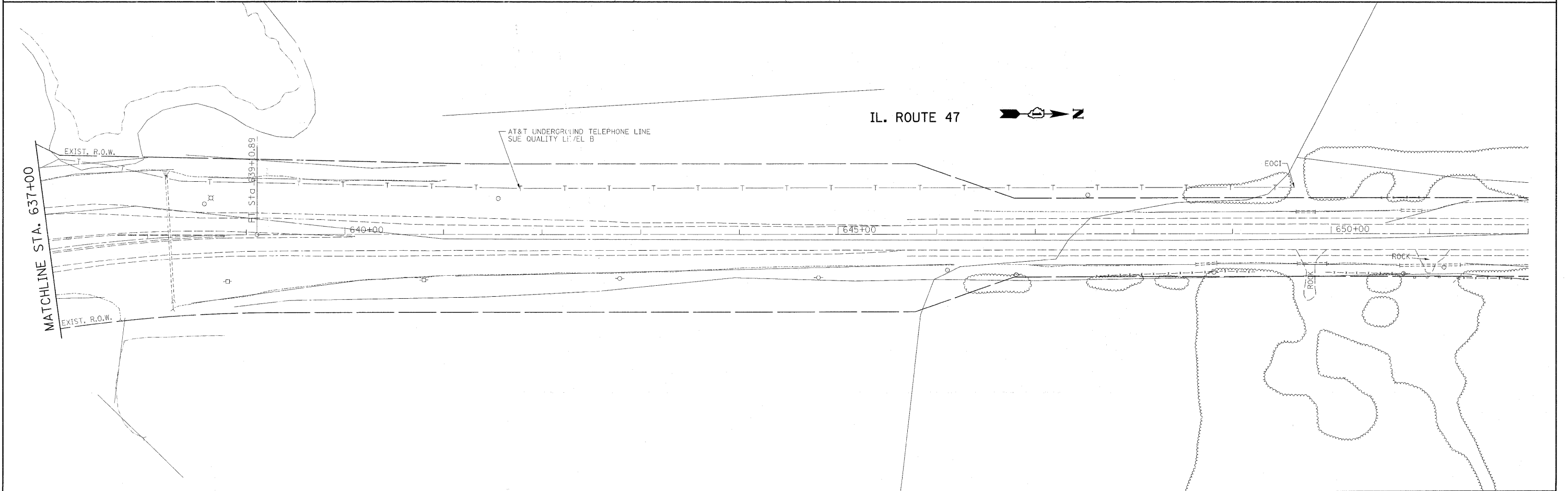
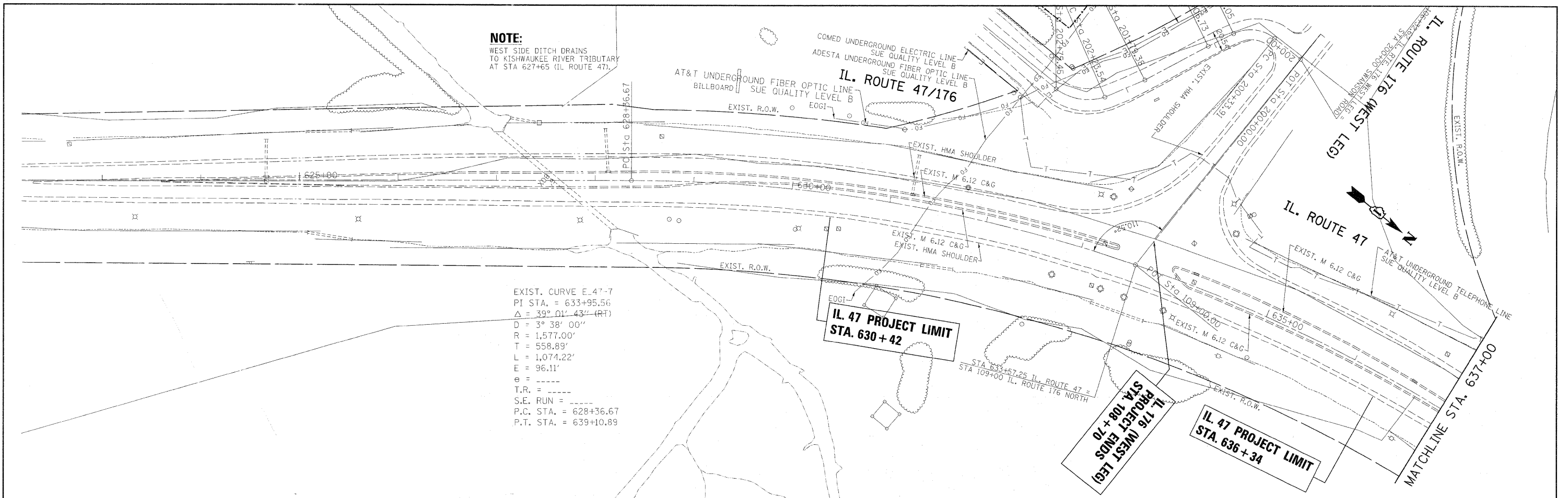
**EXISTING UTILITIES PLAN SHEET  
 IL. RTE. 47 AT IL. RTE. 176 (EAST LEG)**

SCALE: 1" = 50'    SHEET NO. 1 OF 4 SHEETS    STA. 583+00.00 TO STA. 598+00.00

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 21
			CONTRACT NO. 60K18	
ILLINOIS FED. AID PROJECT				



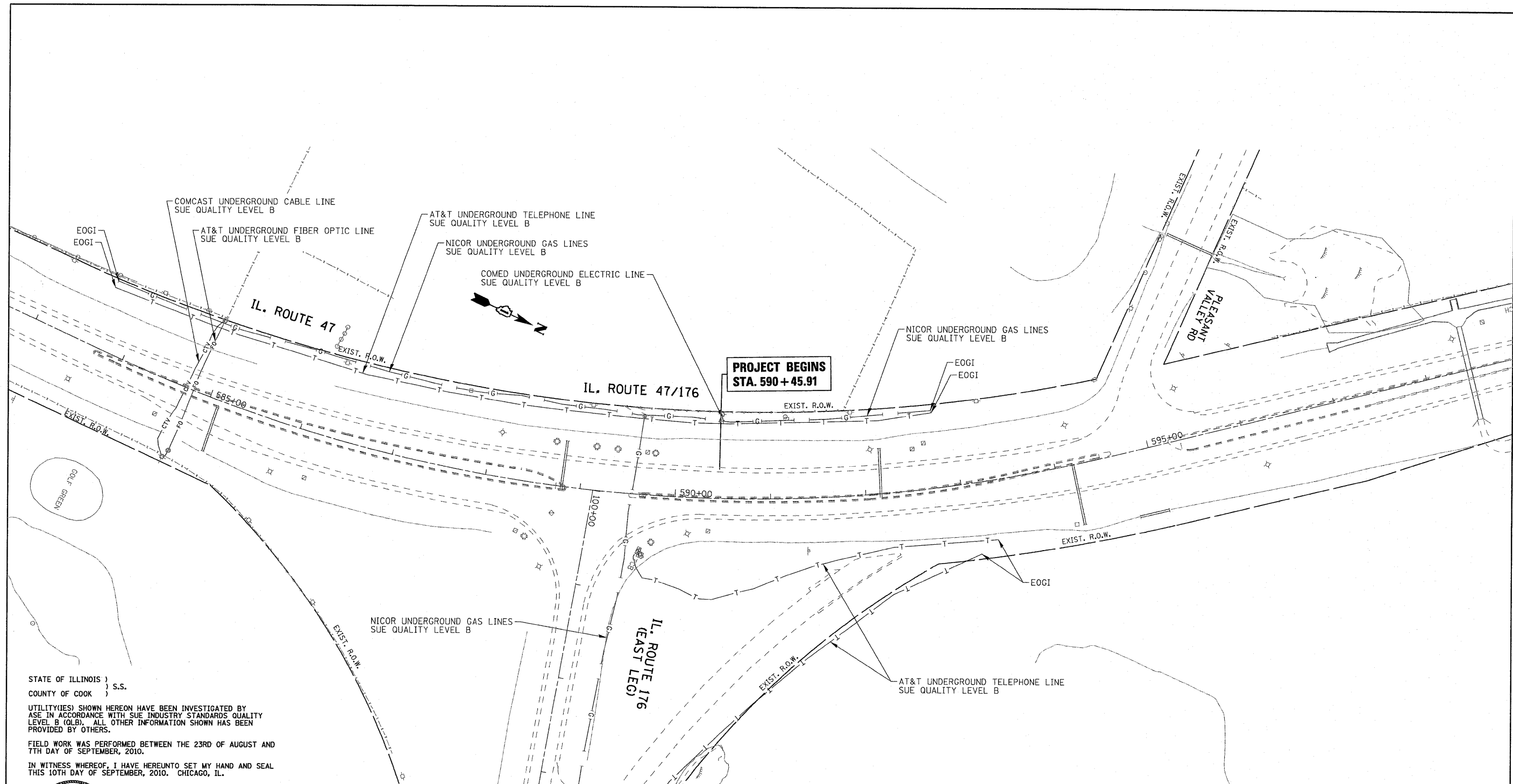
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PLOT SCALE = 50.0000' / IN. = 12/20/2010					DRAWN -	REVISIONS	SCALE: 1" = 50'	SHEET NO. 3 OF 4 SHEETS	STA. 583+00.00 TO STA. 598+00.00	CONTRACT NO. 60K18			
CHECKED -					REVISED -	ILLINOIS FED. AID PROJECT							
DATE -					REVISED -								



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	PLOT SCALE = 50,000% // IN.	DRAWN -	REVISED -		SCALE: 1"= 50'	SHEET NO. 4 OF 4 SHEETS	STA. 583+00.00 TO STA. 598+00.00	CONTRACT NO. 60K18				
	PLOT DATE = 12/20/2010	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									







**PROJECT BEGINS  
STA. 590 + 45.91**

STATE OF ILLINOIS }  
COUNTY OF COOK } S.S.  
UTILITIES SHOWN HEREON HAVE BEEN INVESTIGATED BY  
ASE IN ACCORDANCE WITH SUE INDUSTRY STANDARDS QUALITY  
LEVEL B (QLB). ALL OTHER INFORMATION SHOWN HAS BEEN  
PROVIDED BY OTHERS.  
FIELD WORK WAS PERFORMED BETWEEN THE 23RD OF AUGUST AND  
7TH DAY OF SEPTEMBER, 2010.  
IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL  
THIS 10TH DAY OF SEPTEMBER, 2010. CHICAGO, IL.



*Steven M. Rienks*  
STEVEN M. RIENKS - ILLINOIS PROFESSIONAL  
ENGINEER NUMBER 62-044619  
MY LICENSE EXPIRES 11/30/2011

**LEGEND**

- T — EXISTING UNDERGROUND TELEPHONE
- W — EXISTING UNDERGROUND WATER
- E — EXISTING UNDERGROUND ELECTRIC
- G — EXISTING UNDERGROUND GAS
- CTV — EXISTING UNDERGROUND CABLE TV
- EOGI END OF GEOPHYSICAL LOCATION

**NOTES:**

1. HORIZONTAL CONTROL, VERTICAL CONTROL, CENTERLINE ALIGNMENT, TOPOGRAPHIC FEATURES, AND UTILITY LINE WORK (EXCEPTING SUE QUALITY LEVEL B DESIGNATIONS) WERE SUPPLIED BY ILLINOIS DEPARTMENT OF TRANSPORTATION.
2. COMCAST CATV WAS NOT IDENTIFIED WITH JULIE AS AN IMPACTED UTILITY.

**AMERICAN**  
SURVEYING & ENGINEERING, P.C.  
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GEODESISTS • MAPPING SCIENTISTS  
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Dixons: 815-288-6231 / Fax 815-288-6277  
Aurora: 603-897-4105 / Fax 630-897-4121  
Illinois Professional Design Firm No. 184-003192

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		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. ROUTE 47 @ IL. ROUTE 176 (EAST LEG)  
SUE INVESTIGATION OF UNDERGROUND UTILITIES**

SCALE: 1" = 50'  
SHEET NO. 1 OF 4 SHEETS  
STA. 583+00.00 TO STA. 598+00.00

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 25
CONTRACT NO. 60K18				ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS )  
 COUNTY OF COOK ) S.S.

UTILITY(IES) SHOWN HEREON HAVE BEEN INVESTIGATED BY ASE IN ACCORDANCE WITH SUE INDUSTRY STANDARDS QUALITY LEVEL B (QLB). ALL OTHER INFORMATION SHOWN HAS BEEN PROVIDED BY OTHERS.

FIELD WORK WAS PERFORMED BETWEEN THE 23RD OF AUGUST AND 7TH DAY OF SEPTEMBER, 2010.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL THIS 10TH DAY OF SEPTEMBER, 2010. CHICAGO, IL.



*Steven M. Riens*  
 STEVEN M. RIENS - ILLINOIS PROFESSIONAL ENGINEER  
 ENGINEER NUMBER 62-044619  
 MY LICENSE EXPIRES 11/30/2011

WETLAND SITE #2

**PROJECT BEGINS  
 STA. 101 + 26.84**

AT&T UNDERGROUND FIBER OPTIC LINE  
 SUE QUALITY LEVEL B  
 COMED UNDERGROUND ELECTRIC LINE  
 SUE QUALITY LEVEL B

IL. ROUTE 176 (WEST LEG)

IL. ROUTE 47

AT&T UNDERGROUND TELEPHONE LINE  
 SUE QUALITY LEVEL B

**PROJECT ENDS  
 STA. 632 + 41.57**

ADESTA UNDERGROUND FIBER OPTIC LINE  
 SUE QUALITY LEVEL B

AT&T UNDERGROUND FIBER OPTIC LINE  
 SUE QUALITY LEVEL B  
 COMED UNDERGROUND ELECTRIC LINE  
 SUE QUALITY LEVEL B

ADESTA UNDERGROUND FIBER OPTIC LINE  
 SUE QUALITY LEVEL B

COMED UNDERGROUND ELECTRIC LINE  
 SUE QUALITY LEVEL B

ADESTA UNDERGROUND FIBER OPTIC LINE  
 SUE QUALITY LEVEL B

AT&T UNDERGROUND FIBER OPTIC LINE  
 SUE QUALITY LEVEL B

**LEGEND**

- T — EXISTING UNDERGROUND TELEPHONE
- W — EXISTING UNDERGROUND WATER
- E — EXISTING UNDERGROUND ELECTRIC
- G — EXISTING UNDERGROUND GAS
- CTV — EXISTING UNDERGROUND CABLE TV
- EOGI END OF GEOPHYSICAL LOCATION

**NOTES:**

1. HORIZONTAL CONTROL, VERTICAL CONTROL, CENTERLINE ALIGNMENT, TOPOGRAPHIC FEATURES, AND UTILITY LINE WORK (EXCEPTING SUE QUALITY LEVEL B DESIGNATIONS) WERE SUPPLIED BY ILLINOIS DEPARTMENT OF TRANSPORTATION.

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 Dixon 815-288-6231 / Fax 815-288-6277  
 Aurora 603-897-4105 / Fax 630-897-4121  
 Illinois Professional Design Firm No. 184-003192

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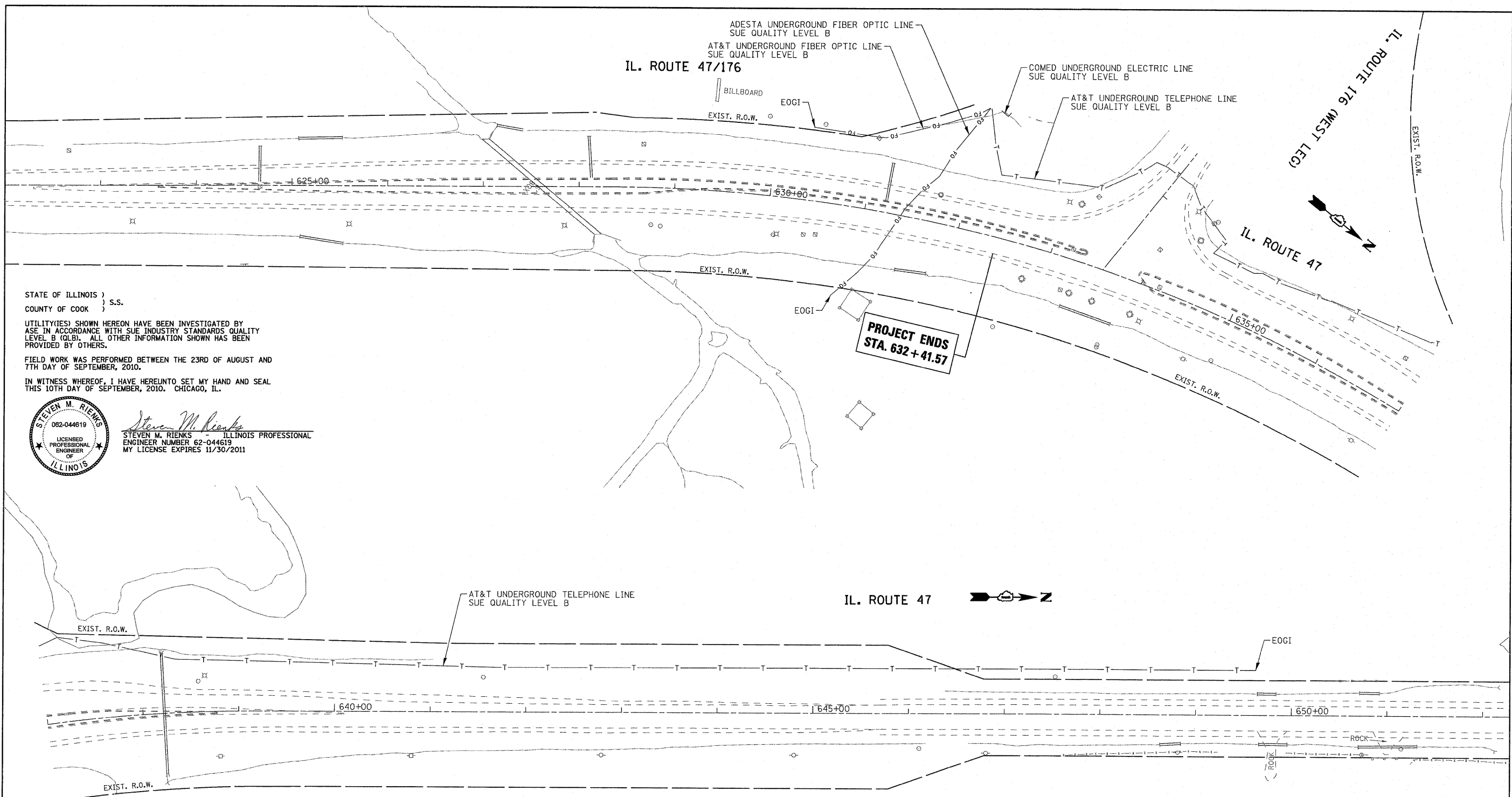
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL. ROUTE 47 @ IL. ROUTE 176 (West LEG)  
 SUE INVESTIGATION OF UNDERGROUND UTILITIES

SCALE: 1" = 50' SHEET NO. 3 OF 4 SHEETS STA. 583+00.00 TO STA. 598+00.00

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 26
CONTRACT NO. 60K18				ILLINOIS FED. AID PROJECT

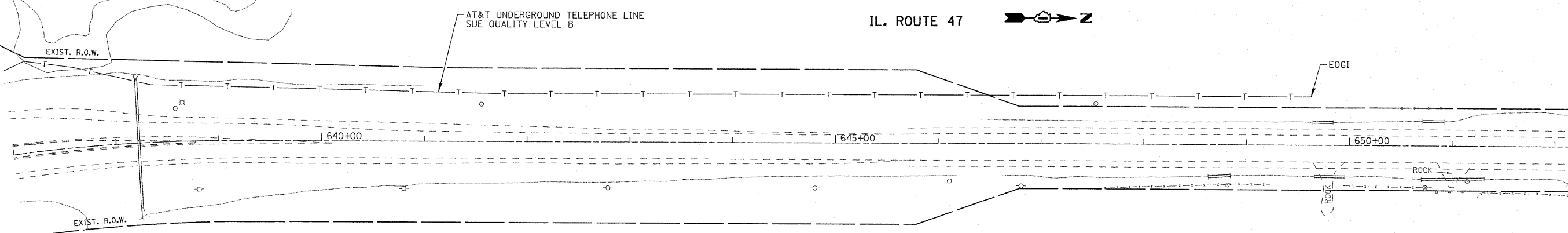


STATE OF ILLINOIS )  
COUNTY OF COOK ) S.S.  
UTILITY(IES) SHOWN HEREON HAVE BEEN INVESTIGATED BY  
ASE IN ACCORDANCE WITH SUE INDUSTRY STANDARDS QUALITY  
LEVEL B (QLB). ALL OTHER INFORMATION SHOWN HAS BEEN  
PROVIDED BY OTHERS.  
FIELD WORK WAS PERFORMED BETWEEN THE 23RD OF AUGUST AND  
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IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL  
THIS 10TH DAY OF SEPTEMBER, 2010. CHICAGO, IL.



*Steven M. Rienks*  
STEVEN M. RIENKS - ILLINOIS PROFESSIONAL  
ENGINEER NUMBER 62-044619  
MY LICENSE EXPIRES 11/30/2011

**PROJECT ENDS  
STA. 632 + 41.57**



**LEGEND**

- T — EXISTING UNDERGROUND TELEPHONE
- W — EXISTING UNDERGROUND WATER
- E — EXISTING UNDERGROUND ELECTRIC
- G — EXISTING UNDERGROUND GAS
- CTV — EXISTING UNDERGROUND CABLE TV
- EOGI END OF GEOPHYSICAL LOCATION

**NOTES:**

1. HORIZONTAL CONTROL, VERTICAL CONTROL, CENTERLINE ALIGNMENT, TOPOGRAPHIC  
FEATURES, AND UTILITY LINE WORK (EXCEPTING SUE QUALITY LEVEL B DESIGNATIONS)  
WERE SUPPLIED BY ILLINOIS DEPARTMENT OF TRANSPORTATION.

**AMERICAN**  
SURVEYING & ENGINEERING, P.C.  
SURVEYORS • ENGINEERS  
GEODESISTS • MAPPING SCIENTISTS  
Chicago: 312-277-2000 / Fax 312-277-2002  
Dixon: 815-288-6231 / Fax 815-288-6277  
Aurora: 603-897-4105 / Fax 630-897-4121  
Illinois Professional Design Firm No. 184-003192

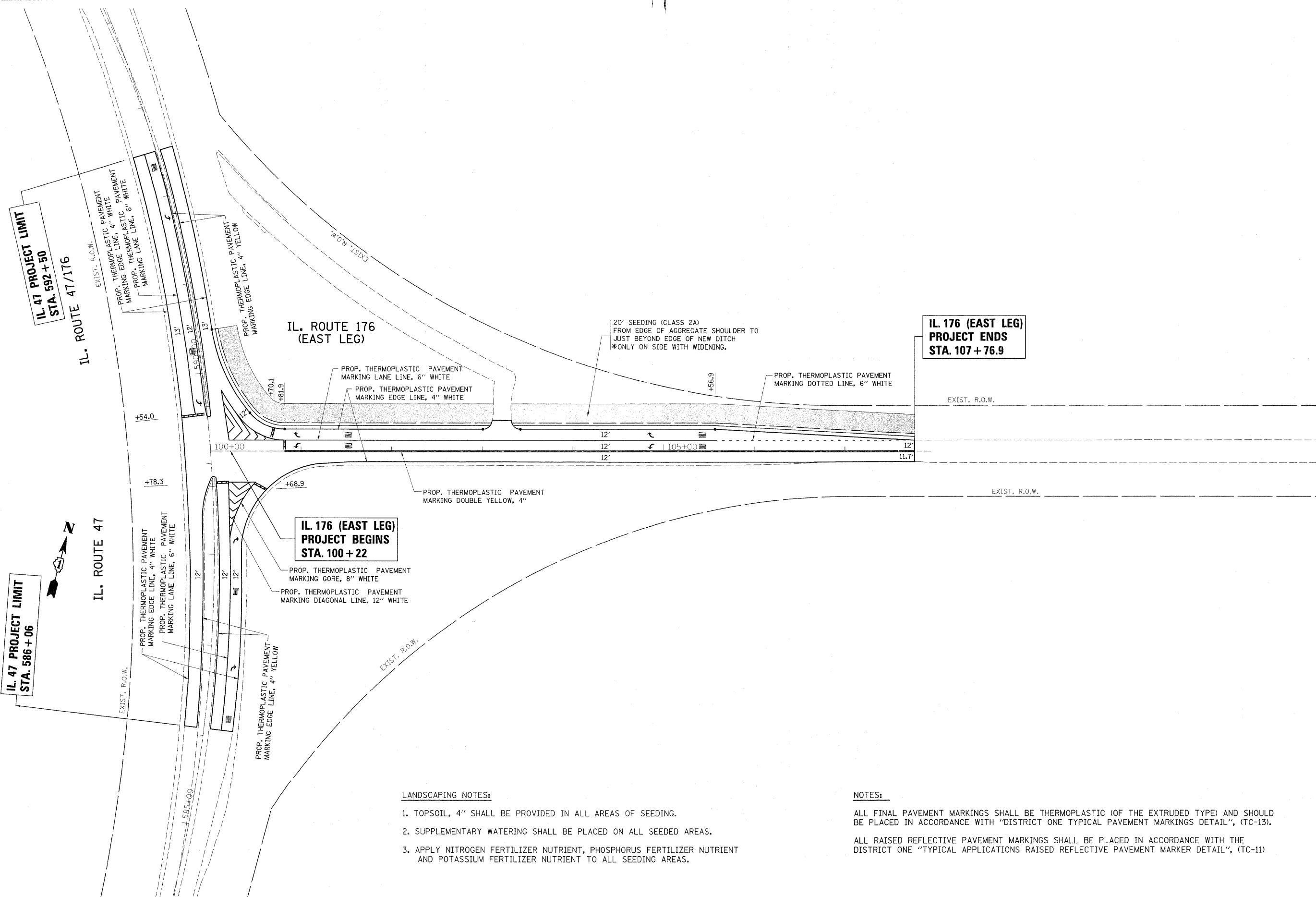
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		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. ROUTE 47 @ IL. ROUTE 176 (West LEG)  
SUE INVESTIGATION OF UNDERGROUND UTILITIES**

SCALE: 1" = 50'    SHEET NO. 4 OF 4 SHEETS    STA. 583+00.00 TO STA. 598+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	27
CONTRACT NO. 60K18				
ILLINOIS FED. AID PROJECT				



**LANDSCAPING NOTES:**

1. TOPSOIL, 4" SHALL BE PROVIDED IN ALL AREAS OF SEEDING.
2. SUPPLEMENTARY WATERING SHALL BE PLACED ON ALL SEEDED AREAS.
3. APPLY NITROGEN FERTILIZER NUTRIENT, PHOSPHORUS FERTILIZER NUTRIENT AND POTASSIUM FERTILIZER NUTRIENT TO ALL SEEDING AREAS.

**NOTES:**

ALL FINAL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (OF THE EXTRUDED TYPE) AND SHOULD BE PLACED IN ACCORDANCE WITH "DISTRICT ONE TYPICAL PAVEMENT MARKINGS DETAIL", (TC-13).  
 ALL RAISED REFLECTIVE PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE DISTRICT ONE "TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKER DETAIL", (TC-11)

FILE NAME =  
 D144410-shk-pmk.dgn

USER NAME = ulrichkd  
 PLOT SCALE = 50.0000' / IN.  
 PLOT DATE = 12/20/2010

DESIGNED -  
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 CHECKED -  
 DATE -

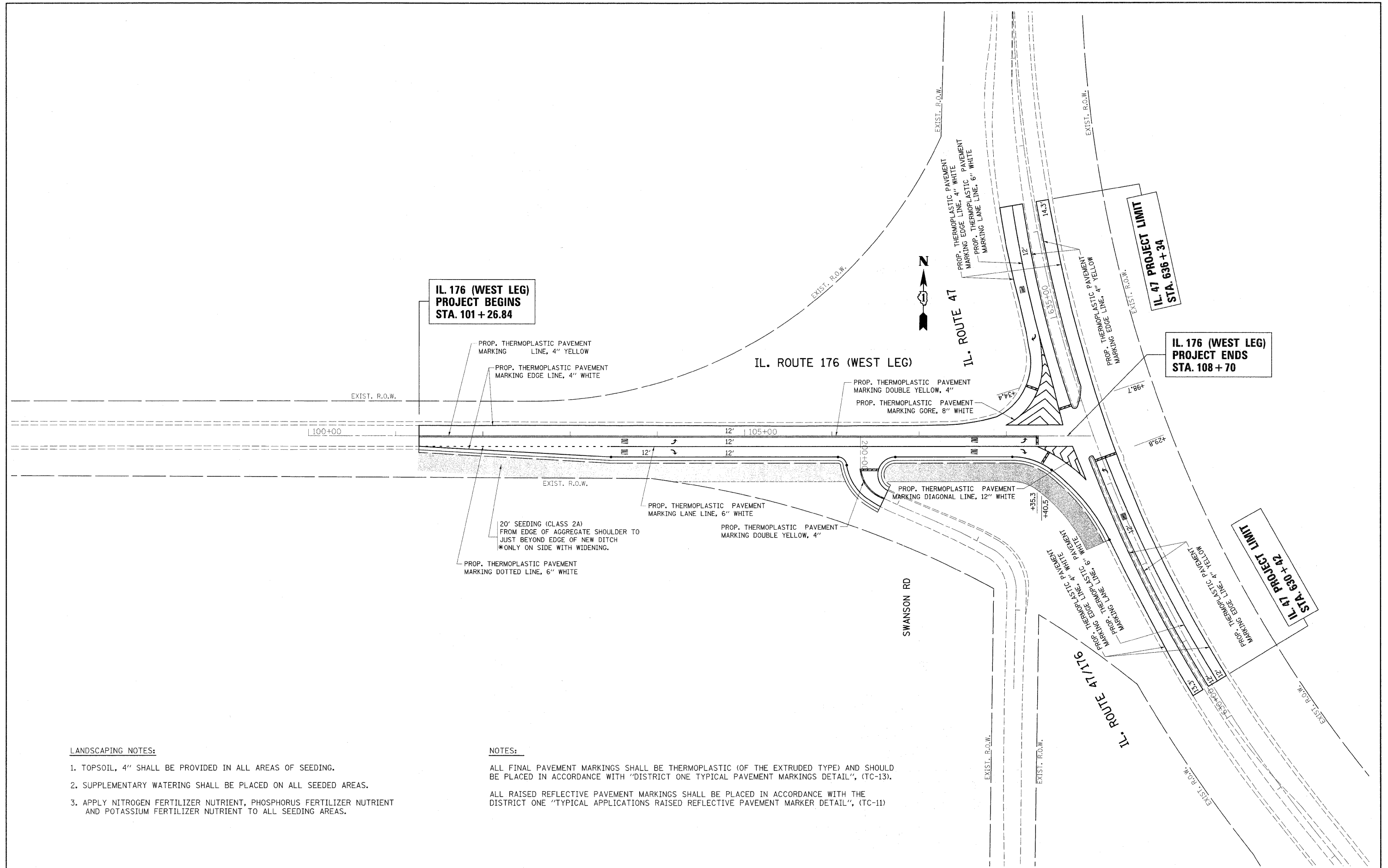
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED PAVEMENT MARKING & LANDSCAPING PLAN  
 IL. RTE. 47 AT IL RTE. 176 (EAST LEG)**

SCALE: 1"= 50'    SHEET NO.    OF    SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	NO.
326	105 N-4	McHENRY	60	28
CONTRACT NO. 60K18				
ILLINOIS FED. AID PROJECT				



**IL. 176 (WEST LEG)  
PROJECT BEGINS  
STA. 101 + 26.84**

**IL. 176 (WEST LEG)  
PROJECT ENDS  
STA. 108 + 70**

**IL. 47 PROJECT LIMIT  
STA. 636 + 34**

**IL. 47 PROJECT LIMIT  
STA. 630 + 42**

**LANDSCAPING NOTES:**

1. TOPSOIL, 4" SHALL BE PROVIDED IN ALL AREAS OF SEEDING.
2. SUPPLEMENTARY WATERING SHALL BE PLACED ON ALL SEEDED AREAS.
3. APPLY NITROGEN FERTILIZER NUTRIENT, PHOSPHORUS FERTILIZER NUTRIENT AND POTASSIUM FERTILIZER NUTRIENT TO ALL SEEDING AREAS.

**NOTES:**

ALL FINAL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (OF THE EXTRUDED TYPE) AND SHOULD BE PLACED IN ACCORDANCE WITH "DISTRICT ONE TYPICAL PAVEMENT MARKINGS DETAIL", (TC-13).

ALL RAISED REFLECTIVE PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE DISTRICT ONE "TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKER DETAIL", (TC-11)

FILE NAME = D144418-aht-pmk.dgn
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USER NAME = ujrchkd
PLOT SCALE = 50.0000' / IN.
PLOT DATE = 12/28/2010

DESIGNED -	REVISD -
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CHECKED -	REVISD -
DATE -	REVISD -

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

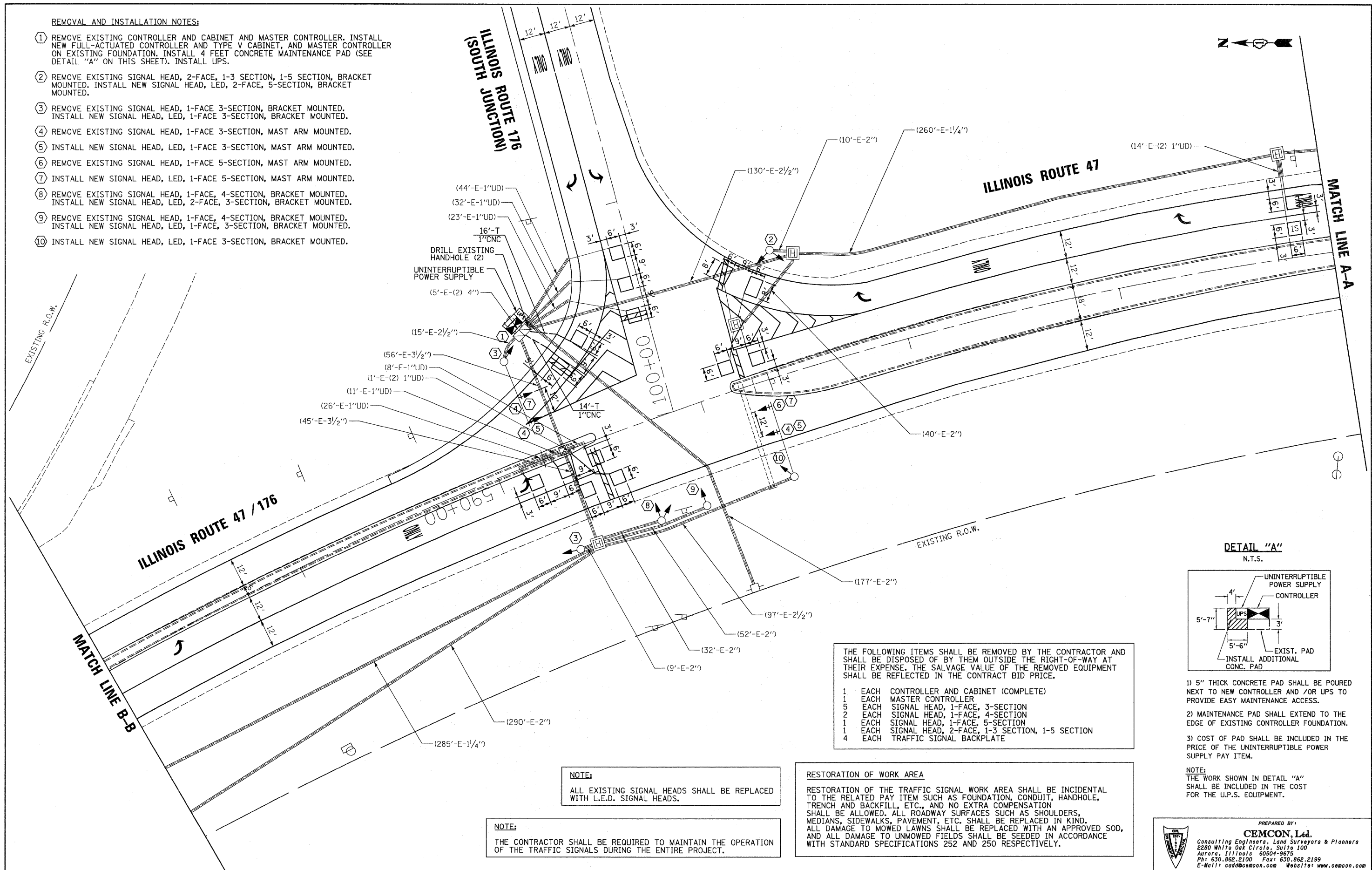
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>PROPOSED PAVEMENT MARKING &amp; LANDSCAPING PLAN IL. RTE. 47 AT IL. RTE. 176 (WEST LEG)</b>			
SCALE: 1" = 50'	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 29
CONTRACT NO. 60K18			ILLINOIS FED. AID PROJECT	

**REMOVAL AND INSTALLATION NOTES:**

- ① REMOVE EXISTING CONTROLLER AND CABINET AND MASTER CONTROLLER. INSTALL NEW FULL-ACTUATED CONTROLLER AND TYPE V CABINET, AND MASTER CONTROLLER ON EXISTING FOUNDATION. INSTALL 4 FEET CONCRETE MAINTENANCE PAD (SEE DETAIL "A" ON THIS SHEET). INSTALL UPS.
- ② REMOVE EXISTING SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED.
- ③ REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, BRACKET MOUNTED.
- ④ REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
- ⑤ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
- ⑥ REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
- ⑦ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
- ⑧ REMOVE EXISTING SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED.
- ⑨ REMOVE EXISTING SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED.
- ⑩ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, BRACKET MOUNTED.



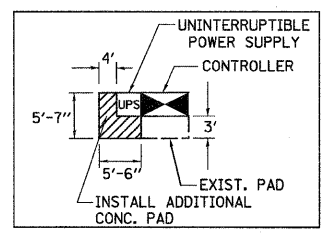
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 1 EACH CONTROLLER AND CABINET (COMPLETE)
  - 1 EACH MASTER CONTROLLER
  - 5 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
  - 2 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
  - 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
  - 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
  - 4 EACH TRAFFIC SIGNAL BACKPLATE

**NOTE:**  
ALL EXISTING SIGNAL HEADS SHALL BE REPLACED WITH L.E.D. SIGNAL HEADS.

**NOTE:**  
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

**RESTORATION OF WORK AREA**  
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**DETAIL "A"**  
N.T.S.



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.

**NOTE:**  
THE WORK SHOWN IN DETAIL "A" SHALL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.

FILE NAME = \MICROST\3520\93\ RTE 47 EAST SIG.DGN  
USER NAME = RDS  
PLOT SCALE = 1"=20'  
PLOT DATE = 12-17-10

DESIGNED - KK  
DRAWN - RDS  
CHECKED - BPT  
DATE - 12-17-10

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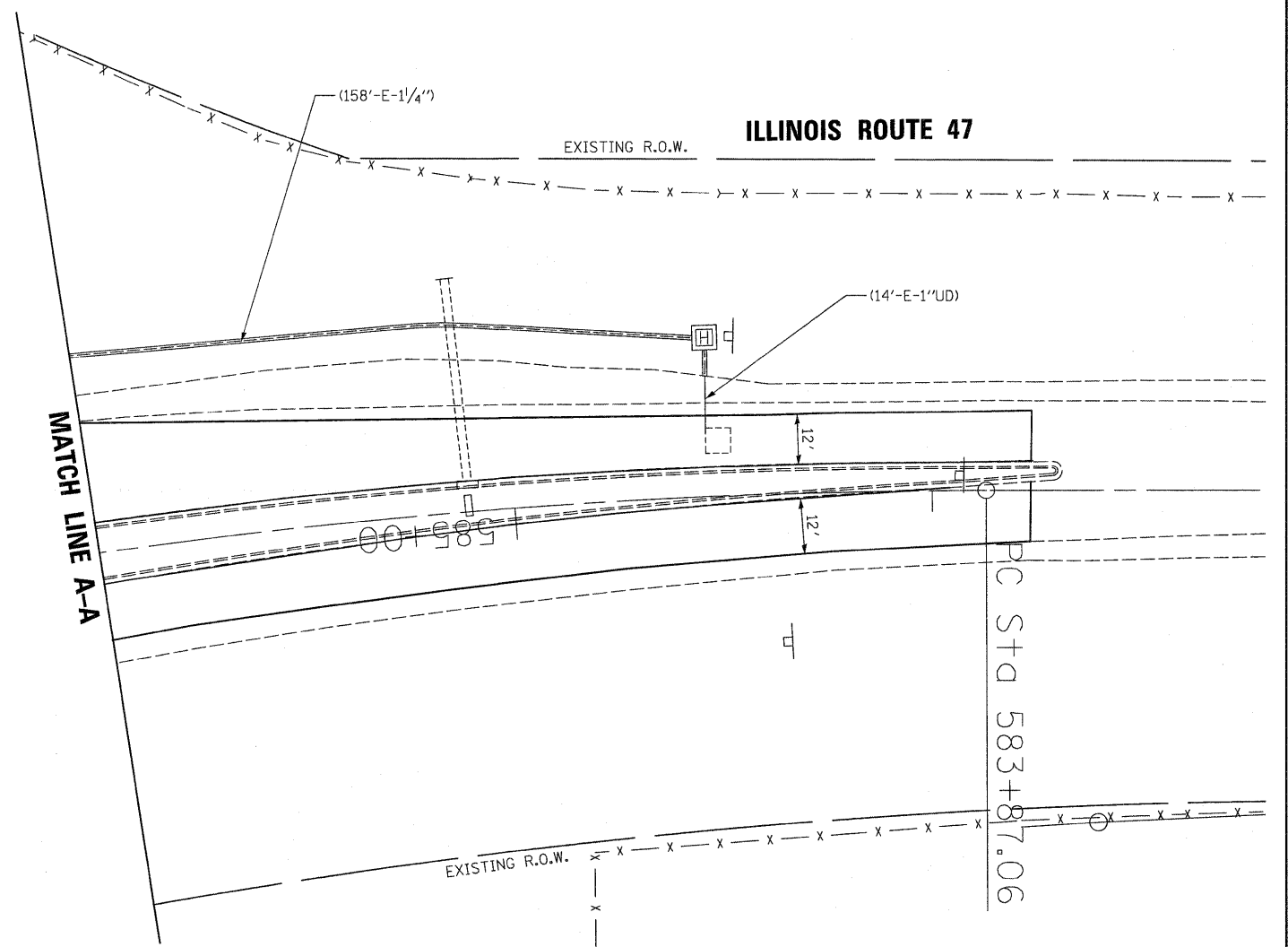
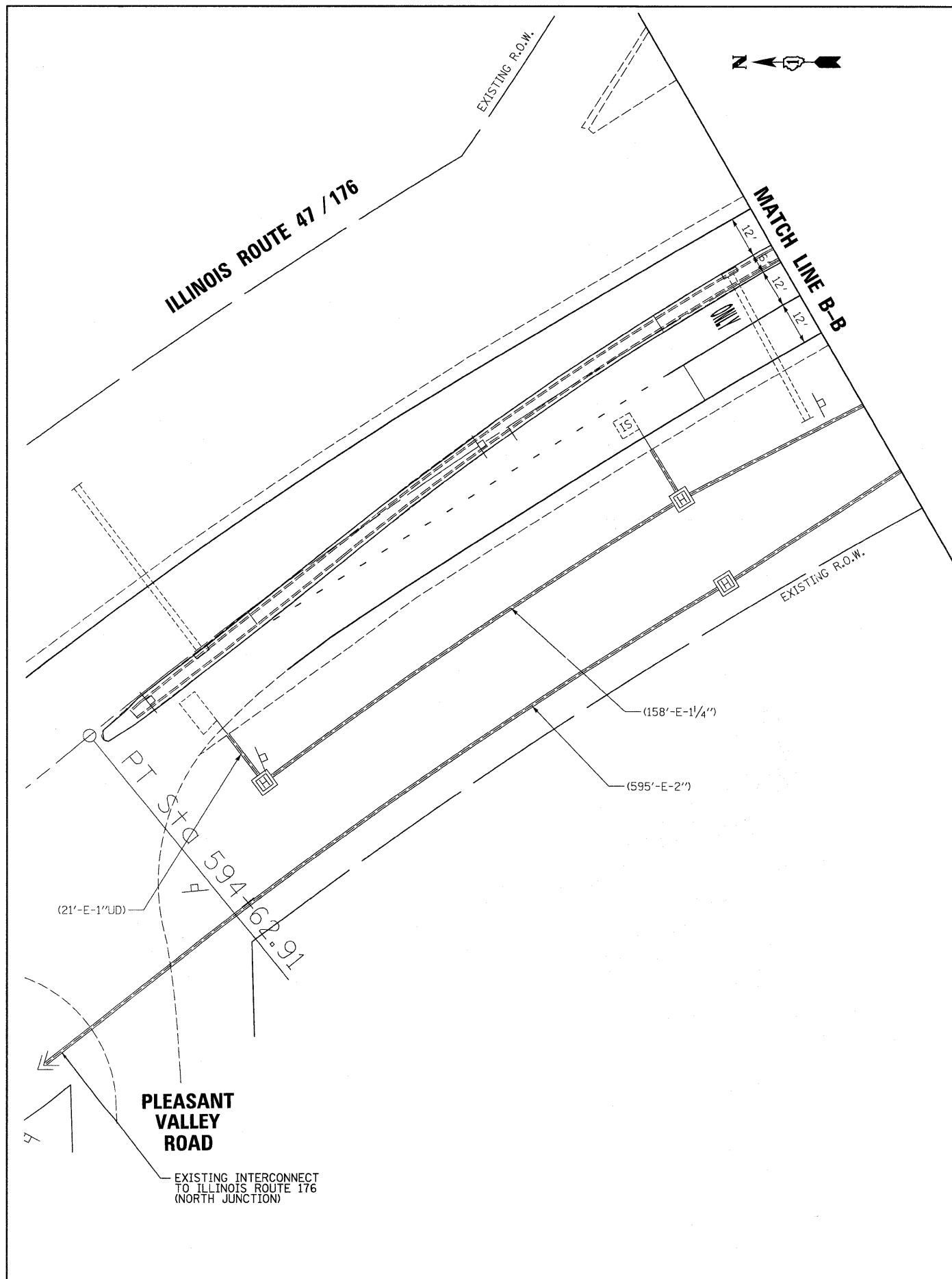
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN**  
**ILLINOIS ROUTE 47 / 176 AT ILLINOIS ROUTE 176 (SOUTH JUNCTION)**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:  
**CEMCON, Ltd.**  
Consulting Engineers, Land Surveyors & Planners  
2280 White Oak Circle, Suite 100  
Aurora, Illinois 60504-9675  
Ph: 630.882.2100 Fax: 630.862.2199  
E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	McHENRY	60	30
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60K18	



**RESTORATION OF WORK AREA**

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

PREPARED BY:  
**CEMCON, Ltd.**  
 Consulting Engineers, Land Surveyors & Planners  
 2280 White Oak Circle, Suite 100  
 Aurora, Illinois 60504-9675  
 Ph: 630.862.2100 Fax: 630.862.2199  
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = MICROSTA352893\ RTE 47 EAST SIG.DGN	USER NAME = RDS	DESIGNED - KK	REVISED -
	PLOT SCALE = 1"=20'	DRAWN - RDS	REVISED -
	PLOT DATE = 12-17-10	CHECKED - BPT	REVISED -
		DATE - 12-17-10	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

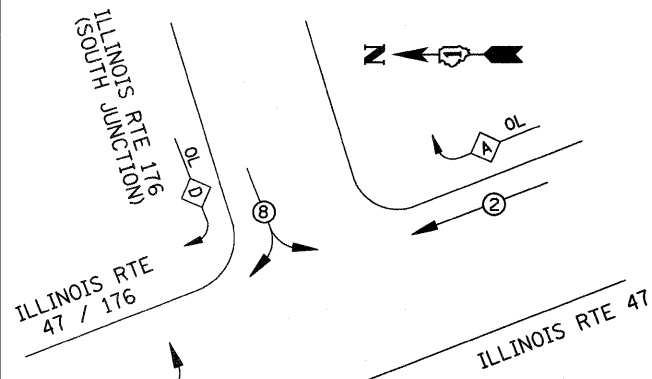
**TRAFFIC SIGNAL MODIFICATION PLAN  
 ILLINOIS ROUTE 47 / 176 AT ILLINOIS ROUTE 176 (SOUTH JUNCTION)**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

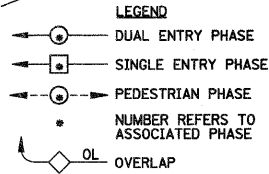
F.A.P. RTE. 326	SECTION 105 N-4	COUNTY McHENRY	TOTAL SHEETS 60	SHEET NO. 31
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CONTRACT NO. 60K18

**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**RIGHT TURN OVERLAP DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 8
D	= 8	+ 1

**SCHEDULE OF QUANTITIES**

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1
MASTER CONTROLLER	EACH	1
TRANSCIVER - FIBER OPTIC	EACH	1
DRILL EXISTING HANDHOLE	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	435
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	23
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	11
DETECTOR LOOP, TYPE 1	FOOT	602
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	23
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL I	SQ FT	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	521

**RESTORATION OF WORK AREA**

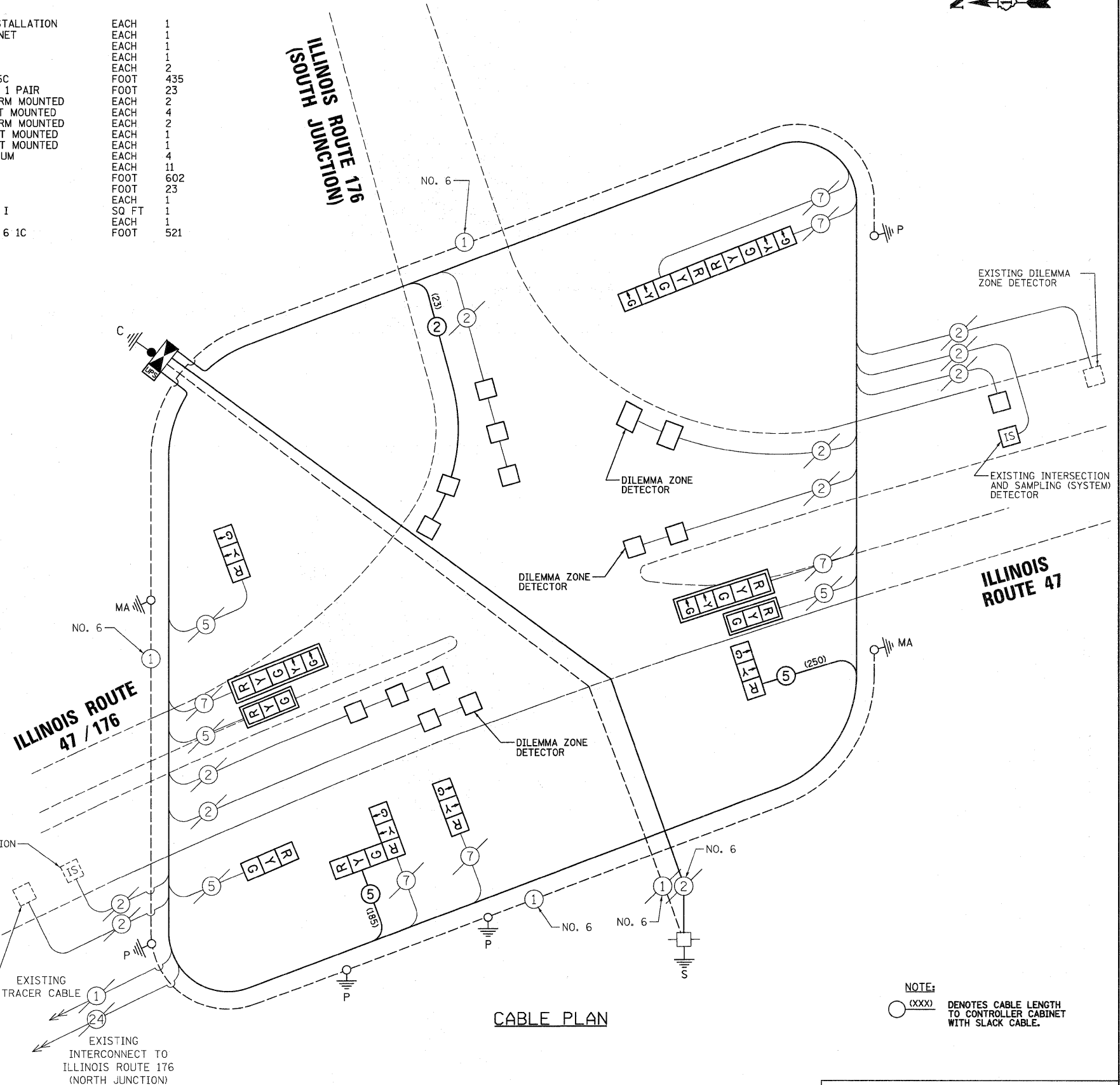
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	331.6

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 W. CENTER COURT  
SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
COMPANY: COMED

FILE NAME =	USER NAME = RDS	DESIGNED - KK	REVISED -
\\MICROST\352093\ RTE 47 EAST CAB.DGN		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-17-10	DATE - 12-17-10	REVISED -



**CABLE PLAN**

NOTE:  
○ (XXX) DENOTES CABLE LENGTH TO CONTROLLER CABINET WITH SLACK CABLE.

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM  
ILLINOIS ROUTE 47 / 176 AT ILLINOIS ROUTE 176 (SOUTH JUNCTION)**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:  
**CEMCON, Ltd.**  
Consulting Engineers, Land Surveyors & Planners  
2280 White Oak Circle, Suite 100  
Aurora, Illinois 60504-9875  
Ph: 630.882.2100 Fax: 630.882.2199  
E-Mail: add@cemcon.com Website: www.cemcon.com

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY McHENRY	TOTAL SHEETS 60	SHEET NO. 32
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60K18	



**RESTORATION OF WORK AREA**

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 5 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
- 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH TRAFFIC SIGNAL POST

**NOTE:**

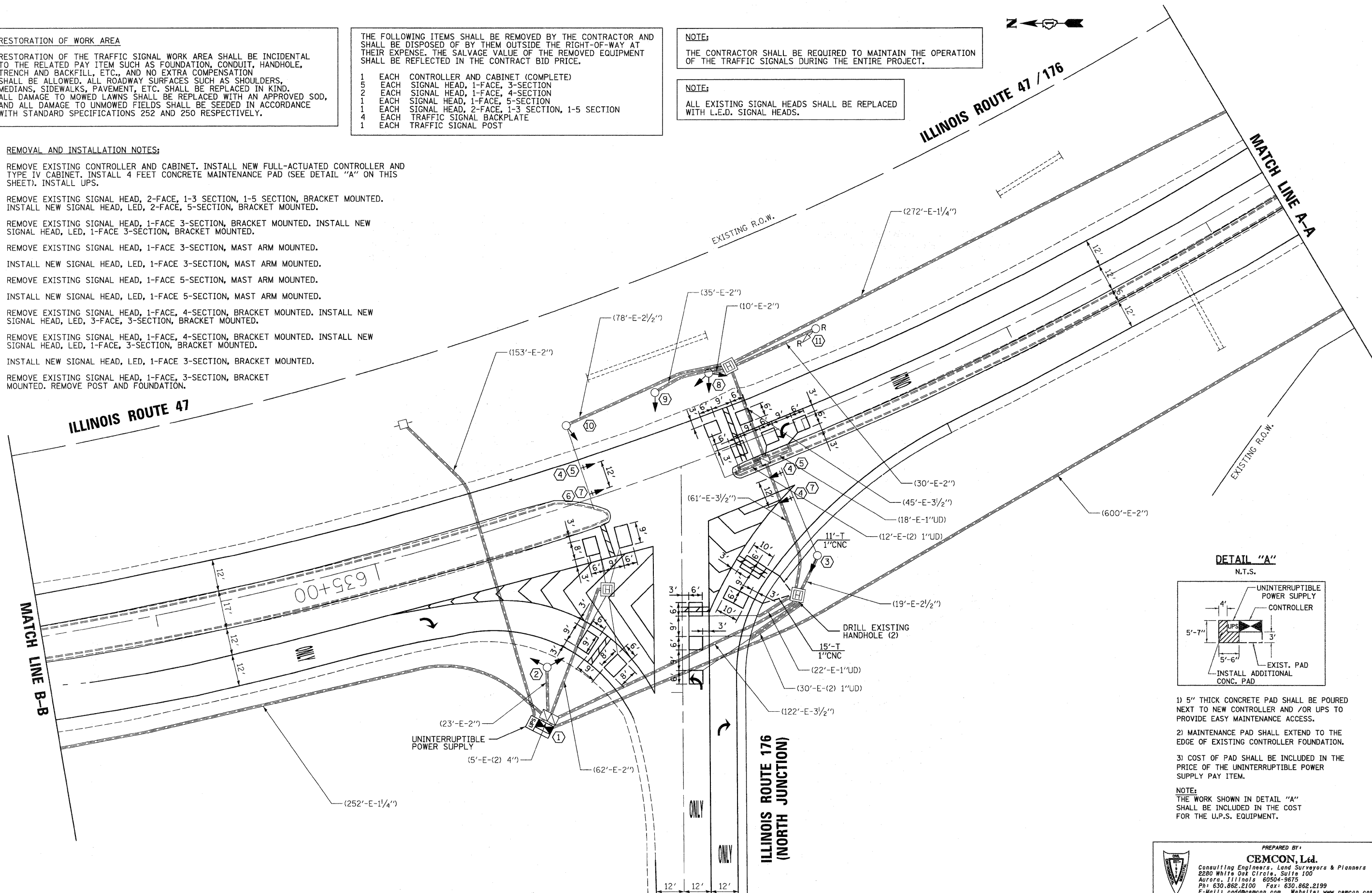
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

**NOTE:**

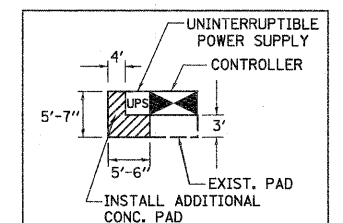
ALL EXISTING SIGNAL HEADS SHALL BE REPLACED WITH L.E.D. SIGNAL HEADS.

**REMOVAL AND INSTALLATION NOTES:**

- ① REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL-ACTUATED CONTROLLER AND TYPE IV CABINET. INSTALL 4 FEET CONCRETE MAINTENANCE PAD (SEE DETAIL "A" ON THIS SHEET). INSTALL UPS.
- ② REMOVE EXISTING SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED.
- ③ REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, BRACKET MOUNTED.
- ④ REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
- ⑤ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
- ⑥ REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
- ⑦ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
- ⑧ REMOVE EXISTING SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED.
- ⑨ REMOVE EXISTING SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED.
- ⑩ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, BRACKET MOUNTED.
- ⑪ REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED. REMOVE POST AND FOUNDATION.



**DETAIL "A"**  
N.T.S.



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
  - 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
  - 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.
- NOTE:**  
THE WORK SHOWN IN DETAIL "A" SHALL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.

FILE NAME = \MICROST\3520\3\ RTE 47 WEST SIG.DGN

USER NAME = RDS  
PLOT SCALE = 1"=20'  
PLOT DATE = 12-17-10

DESIGNED - KK  
DRAWN - RDS  
CHECKED - BPT  
DATE - 12-17-10

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REVISED -  
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REVISED -

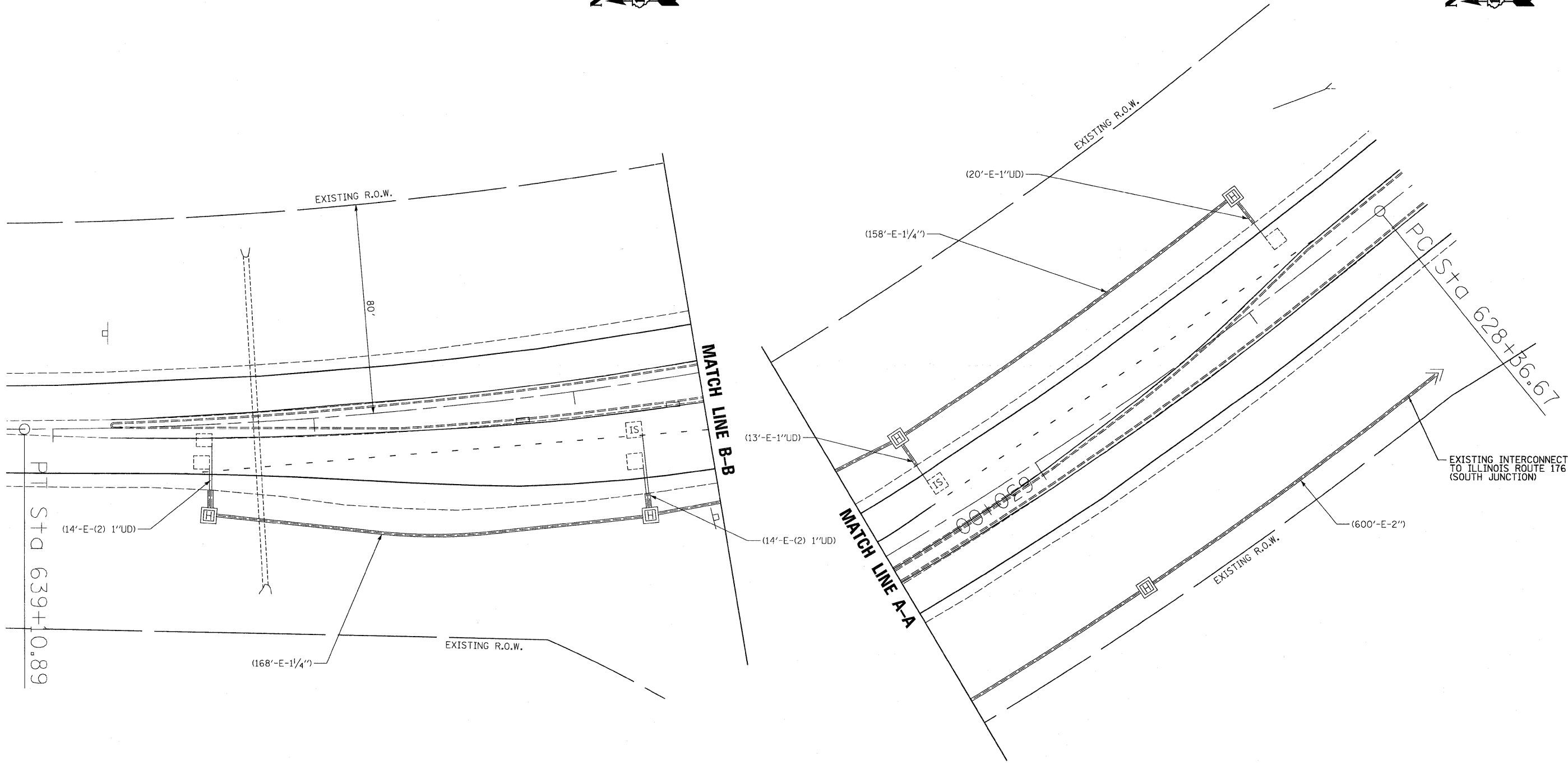
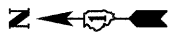
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN  
ILLINOIS ROUTE 47 /176 AT ILLINOIS ROUTE 176 (NORTH JUNCTION)**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:  
**CEMCON, Ltd.**  
Consulting Engineers, Land Surveyors & Planners  
2280 White Oak Circle, Suite 100  
Aurora, Illinois 60504-9875  
Ph: 630.862.2100 Fax: 630.862.2199  
E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY McHENRY	TOTAL SHEETS 60	SHEET NO. 33
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60K18	



**RESTORATION OF WORK AREA**

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

PREPARED BY:  
**CEMCON, Ltd.**  
 Consulting Engineers, Land Surveyors & Planners  
 2280 White Oak Circle, Suite 100  
 Aurora, Illinois 60504-9675  
 Ph: 630.862.2100 Fax: 630.862.2199  
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME =  
 \MICROST\352093\ RTE 47 WEST SIG.DGN

USER NAME = RDS  
 DESIGNED - KK  
 DRAWN - RDS  
 CHECKED - BPT  
 DATE - 12-17-10

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

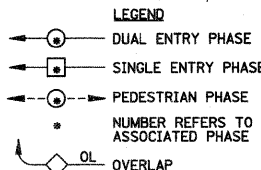
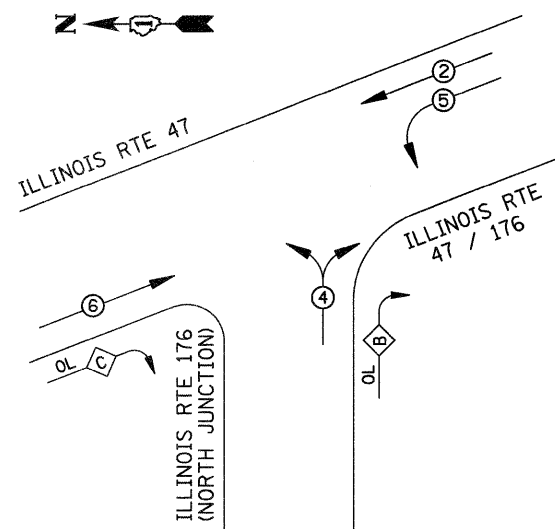
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN  
 ILLINOIS ROUTE 47 / 176 AT ILLINOIS ROUTE 176 (NORTH JUNCTION)**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	McHENRY	60	34
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

CONTROLLER SEQUENCE



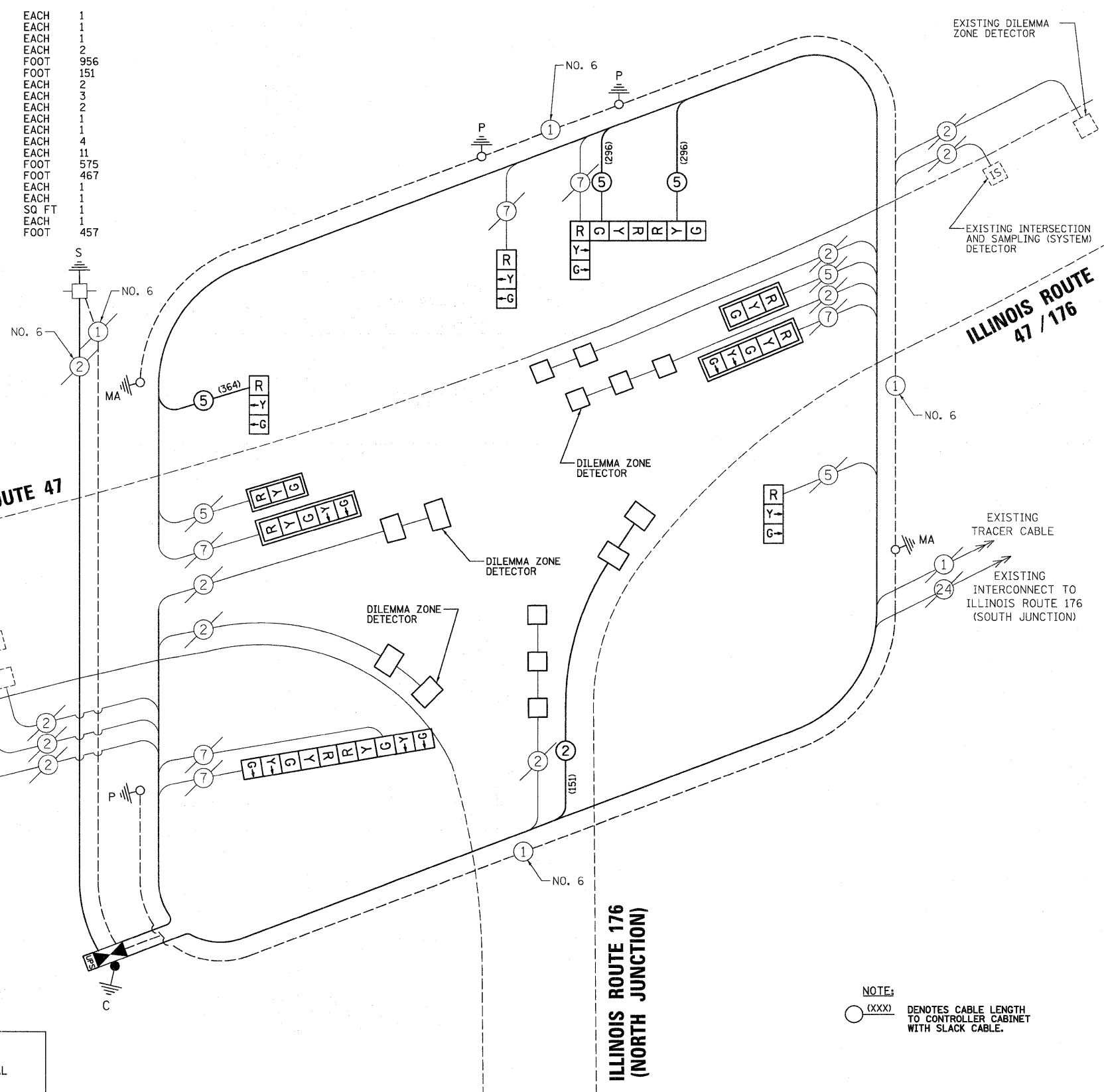
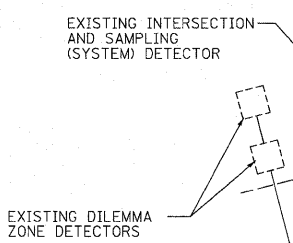
PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
C	= 6	+ 4

SCHEDULE OF QUANTITIES

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
DRILL EXISTING HANDHOLE	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	956
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	151
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	11
DETECTOR LOOP, TYPE 1	FOOT	575
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	467
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL I	SQ FT	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	457



CABLE PLAN

**RESTORATION OF WORK AREA**

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	84	-	0.05	-
FLASHER	-	-	-	0.50	-

ENERGY COSTS TO: TOTAL = 336.1

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 W. CENTER COURT  
SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
COMPANY: COMED

FILE NAME =	USER NAME = RDS	DESIGNED - KK	REVISED -
\\MICROST\352093\ RTE 47 WEST CAB.DGN		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-17-10	DATE - 12-17-10	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

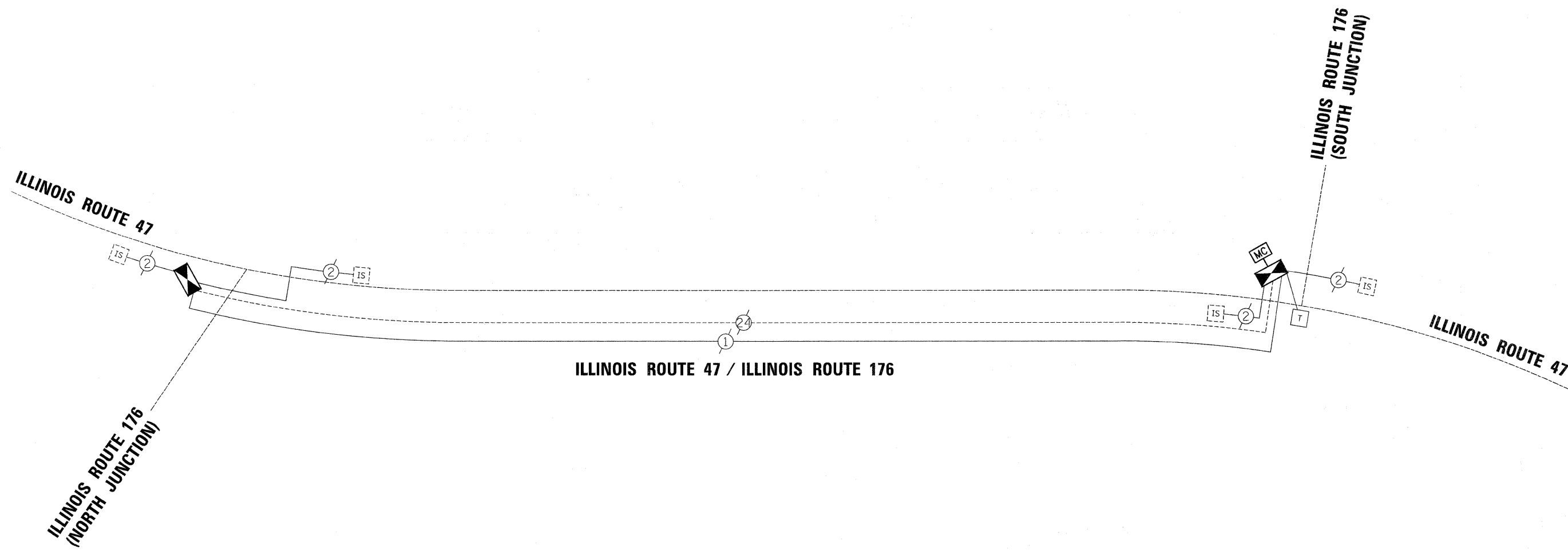
SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM  
ILLINOIS ROUTE 47 / 176 AT ILLINOIS ROUTE 176 (NORTH JUNCTION)

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:  
**CEMCON, Ltd.**  
Consulting Engineers, Land Surveyors & Planners  
2280 White Oak Circle, Suite 100  
Aurora, Illinois 60504-9875  
Ph: 630.862.2100 Fax: 630.862.2199  
E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	McHENRY	60	35

CONTRACT NO. 60K18  
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT



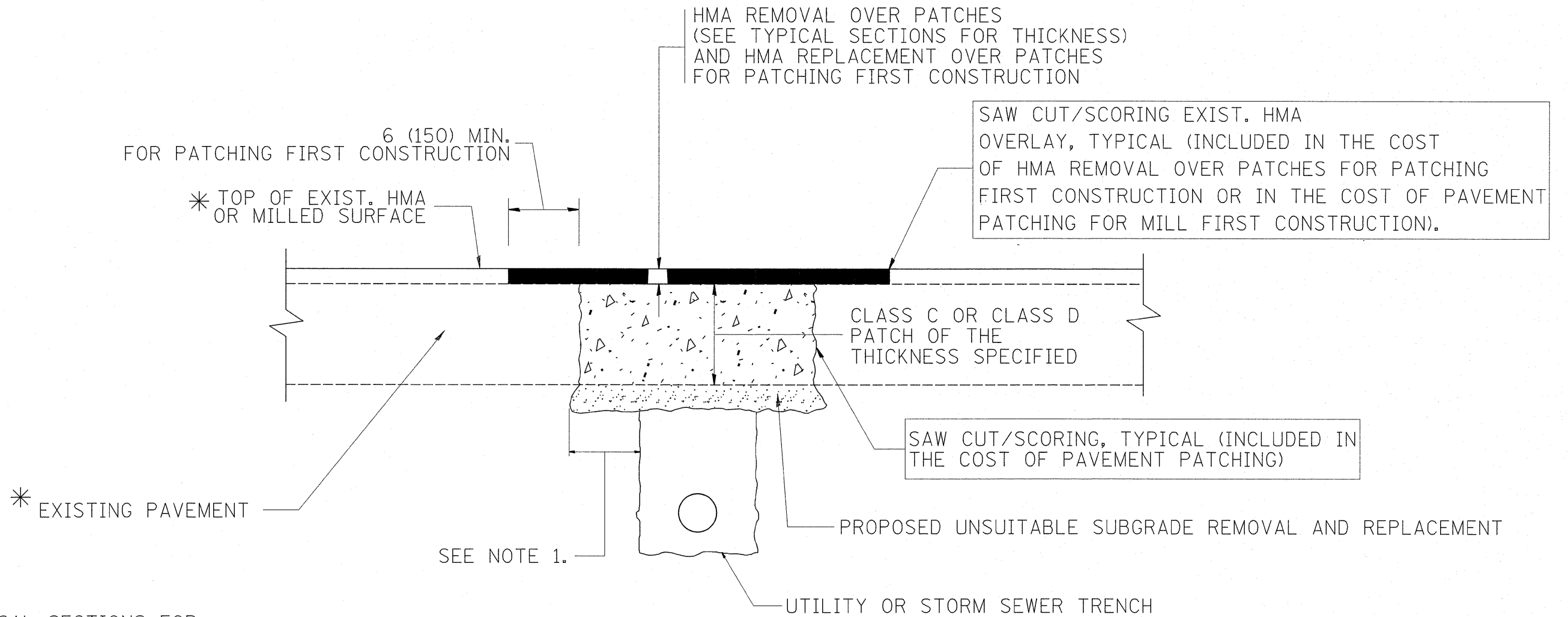
PREPARED BY:  
**CEMCON, Ltd.**  
 Consulting Engineers, Land Surveyors & Planners  
 2280 White Oak Circle, Suite 100  
 Aurora, Illinois 60504-9675  
 Ph: 630.862.2100 Fax: 630.862.2199  
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = MICROST\352093\	USER NAME = RDS	DESIGNED - KK	REVISED -
	PLOT SCALE = 1"=20'	DRAWN - RDS	REVISED -
	PLOT DATE = 12-17-10	CHECKED - BPT	REVISED -
		DATE - 12-17-10	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

INTERCONNECT SCHEMATIC			
ILLINOIS ROUTE 47 FROM ILLINOIS ROUTE 176 (SOUTH JUNCTION) TO ILLINOIS ROUTE 176 (NORTH JUNCTION)			
SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	McHENRY	60	36
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60K18	



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**NOTES:**

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

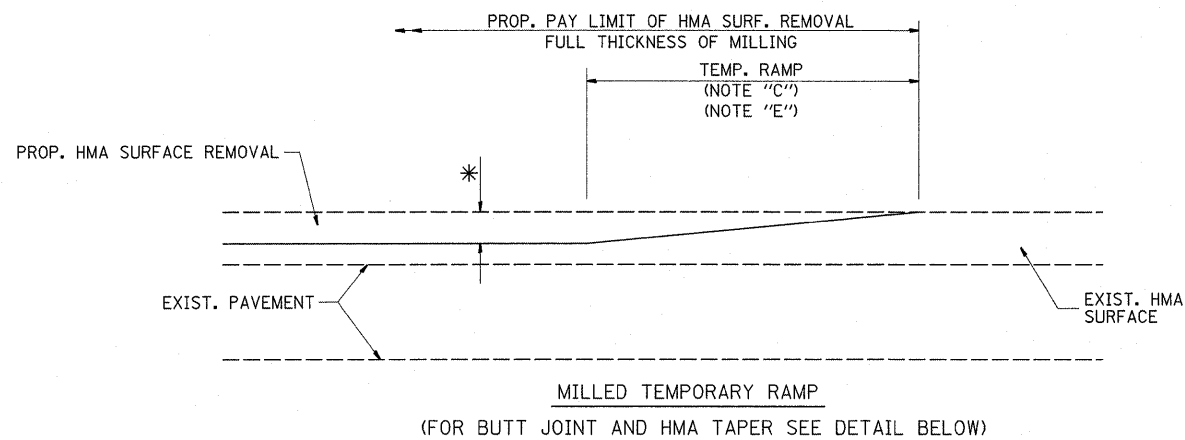
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

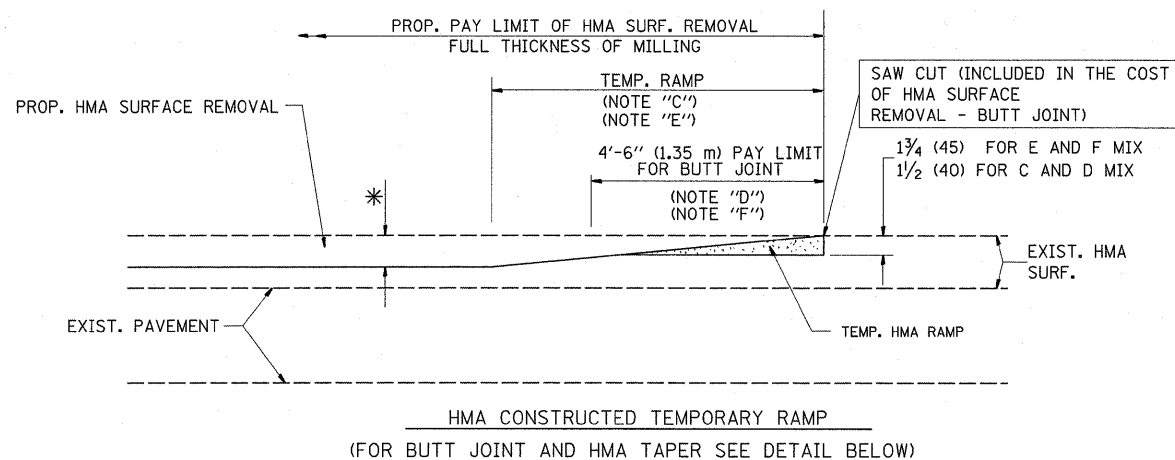
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

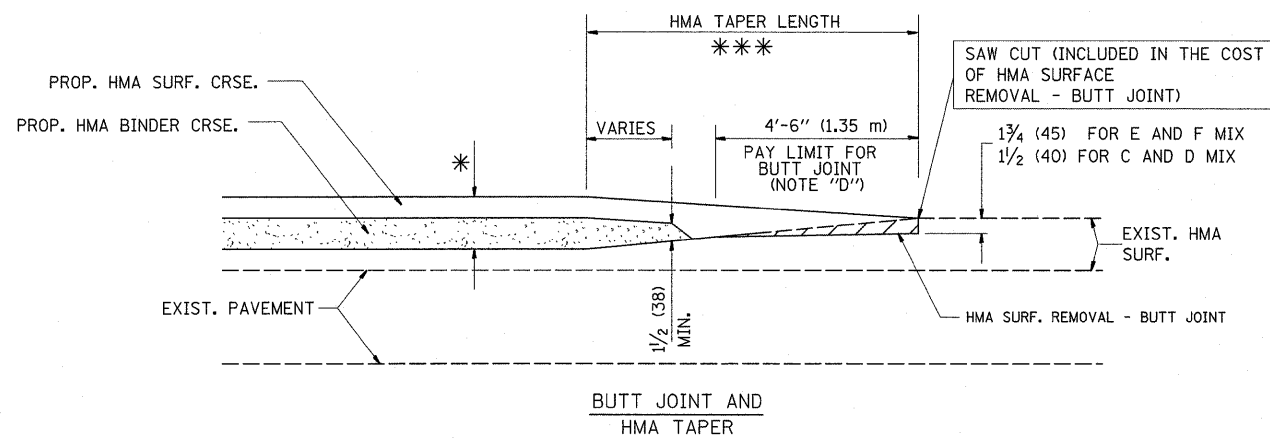
FILE NAME =	USER NAME = VeltchkovV	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw_work\pwidot\velchkovv\d0206766\st15td.dgn		DRAWN -	REVISED - R. BORO 01-01-07			326	105 N-4	MCHENRY	60	37
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED - R. BORO 09-04-07			<b>BD400-04 (BD-22)</b>		CONTRACT NO. 60K18		
PLOT DATE = 12/28/2010		DATE - 10-25-94	REVISED - K. ENG 10-27-08			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.	



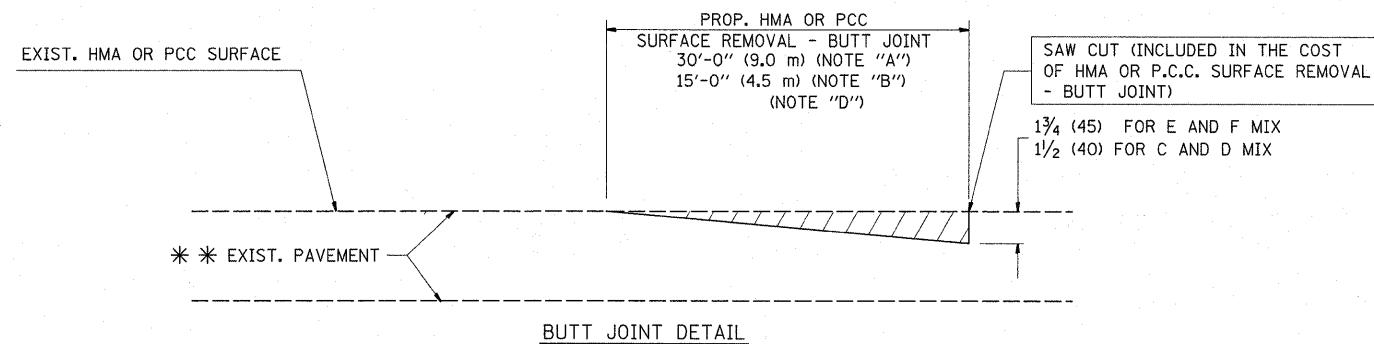
OPTION 1



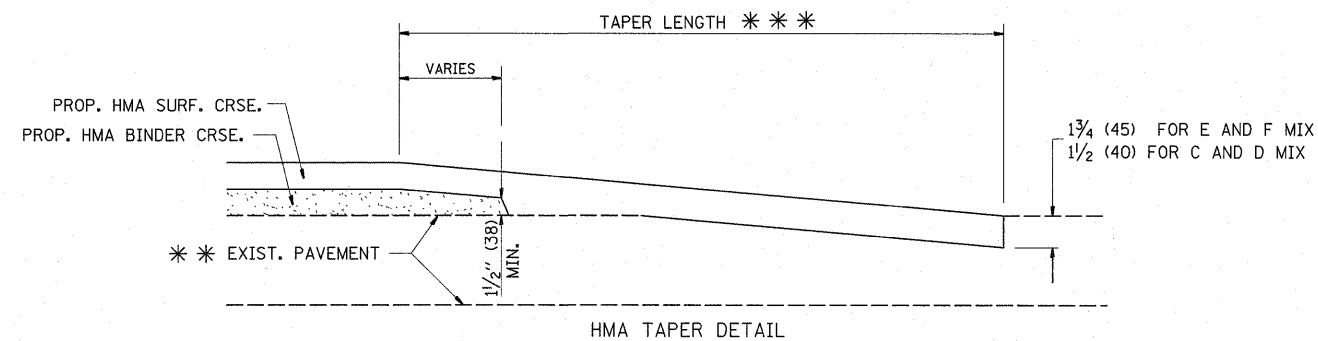
OPTION 2  
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER  
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER  
FOR RESURFACING ONLY

\*\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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

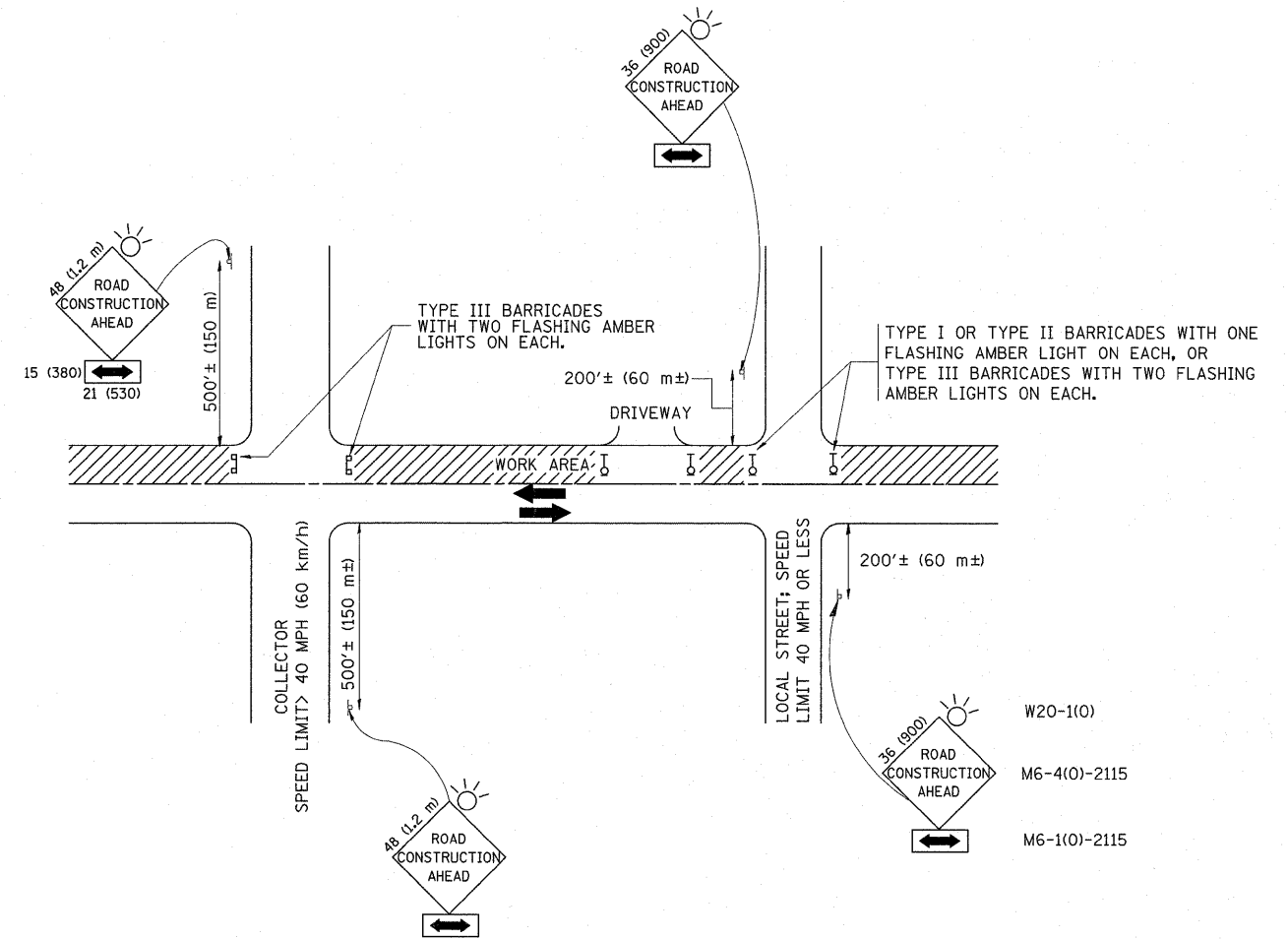
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PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED - M. GOMEZ 04-06-01
PLOT DATE = 12/28/2010		DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND  
HMA TAPER DETAILS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	38
BD400-05 BD32			CONTRACT NO. 60K18	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

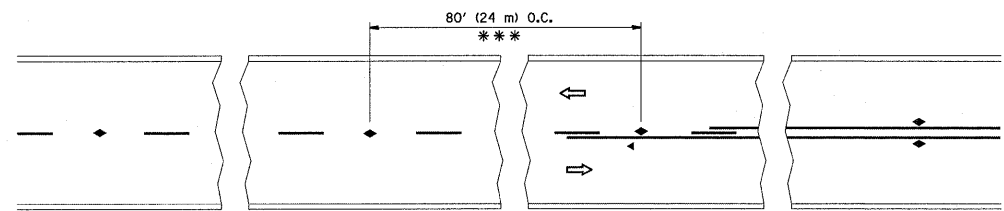
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PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED - A. HOUSEH 10-15-96
PLOT DATE = 12/28/2010		DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR  
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

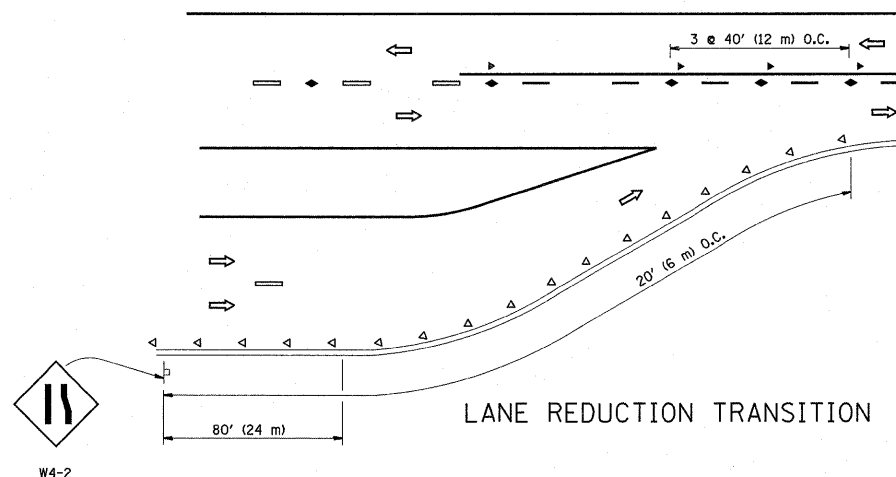
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	39
TC-10			CONTRACT NO. 60K18	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

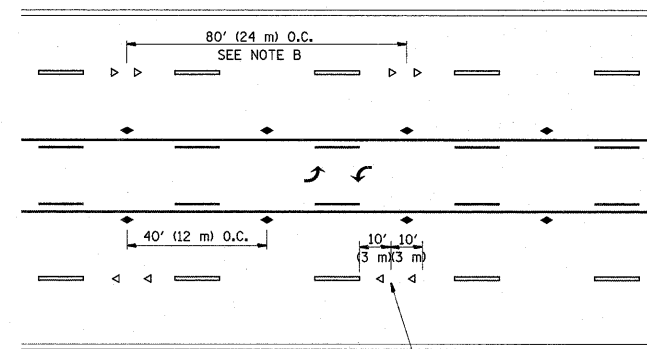


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

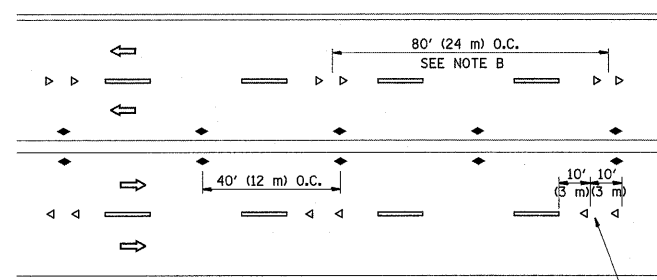


LANE REDUCTION TRANSITION



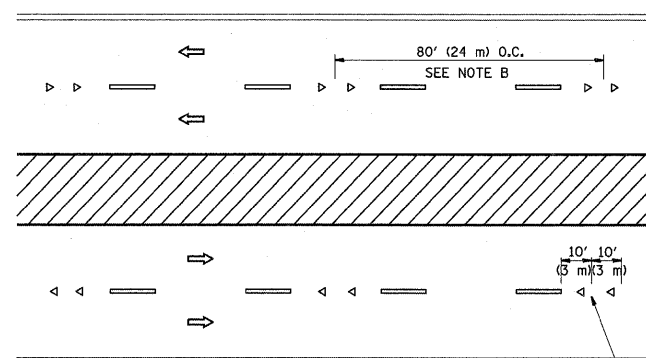
SEE NOTE A

TWO-WAY LEFT TURN



SEE NOTE A

MULTI-LANE/UNDIVIDED



SEE NOTE A

MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

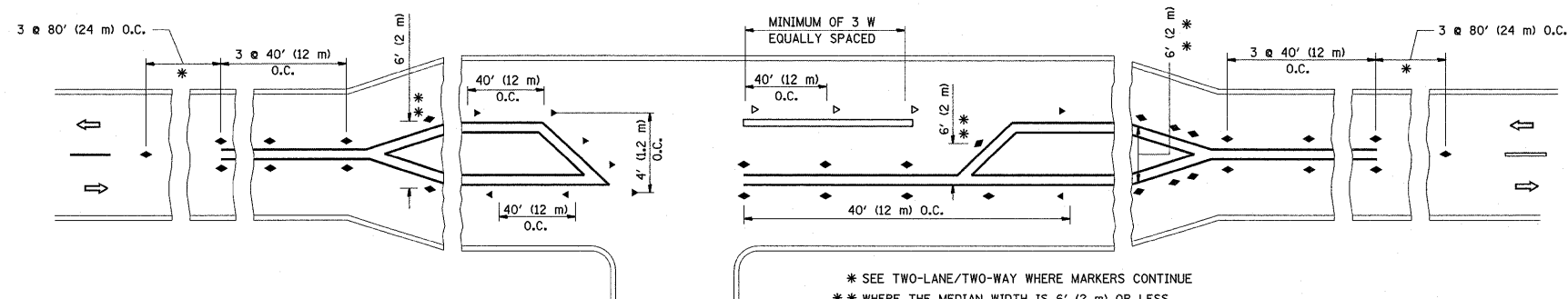
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

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

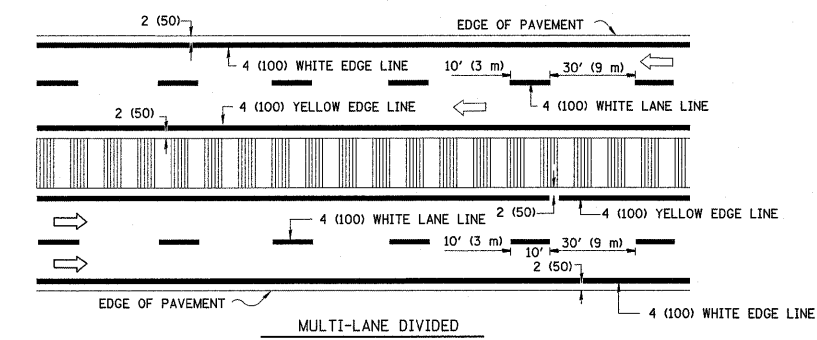
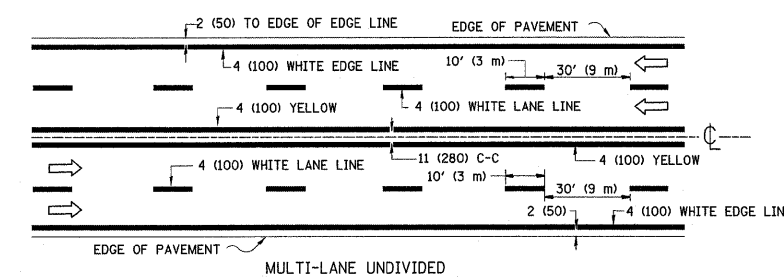
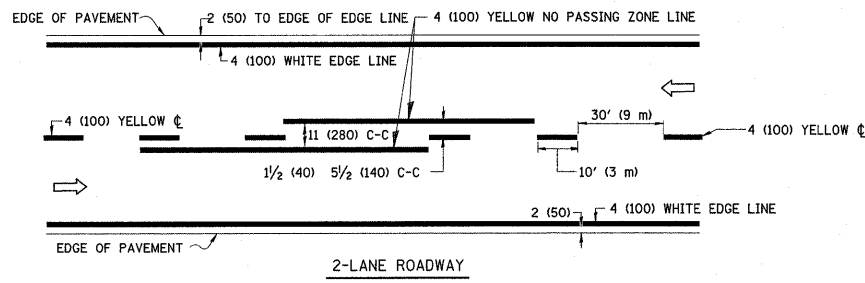
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	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 12/28/2010	DATE -	REVISED - C. JUCTUS 09-09-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS			
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

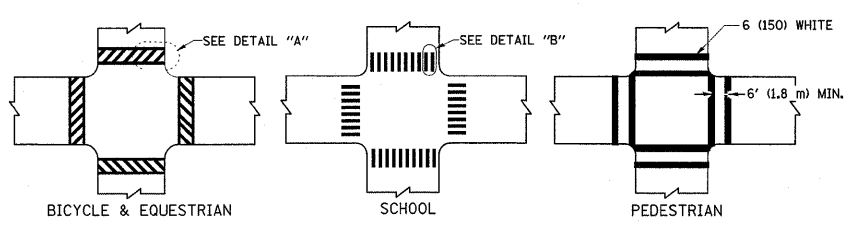
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	40
TC-11			CONTRACT NO. 60K18	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



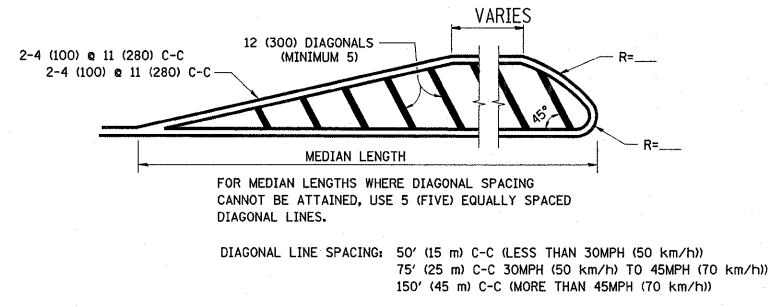
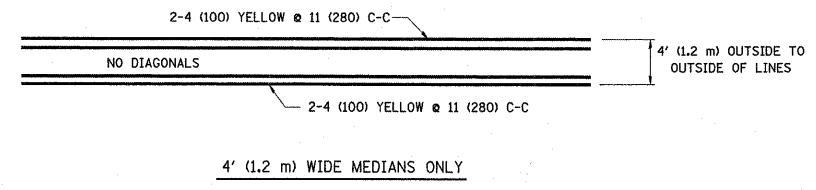


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

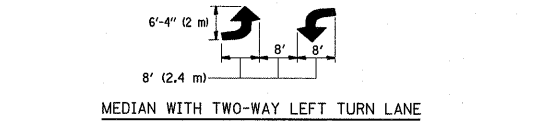
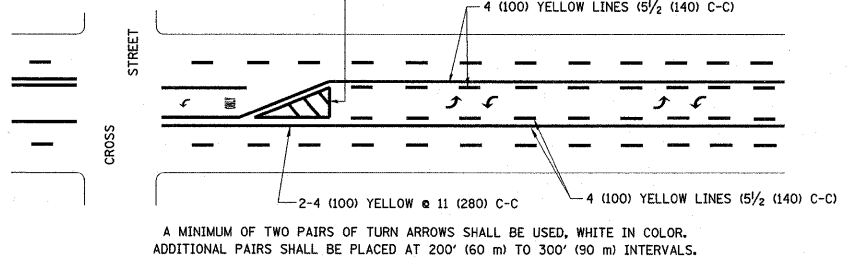
**TYPICAL LANE AND EDGE LINE MARKING**



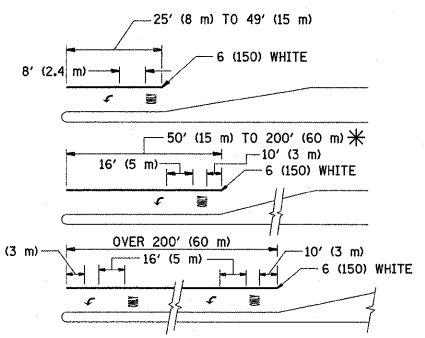
**TYPICAL CROSSWALK MARKING**



**MEDIANS OVER 4' (1.2 m) WIDE**



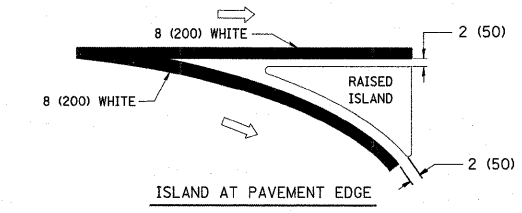
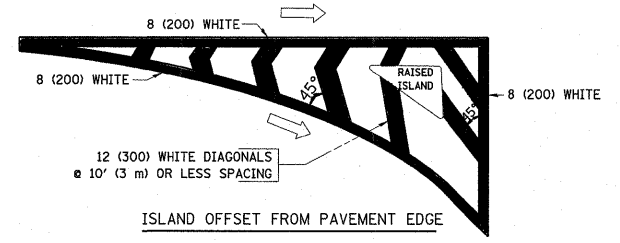
**TYPICAL PAINTED MEDIAN MARKING**



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 \* AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
 \* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

**TYPICAL LEFT (OR RIGHT) TURN LANE**

**TYPICAL TURN LANE MARKING**

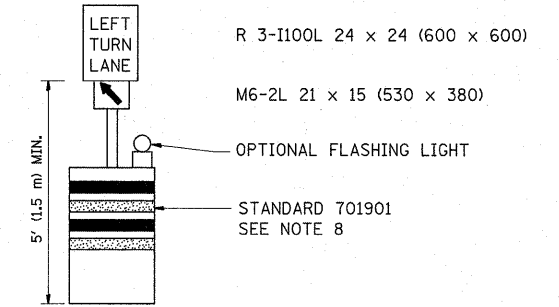
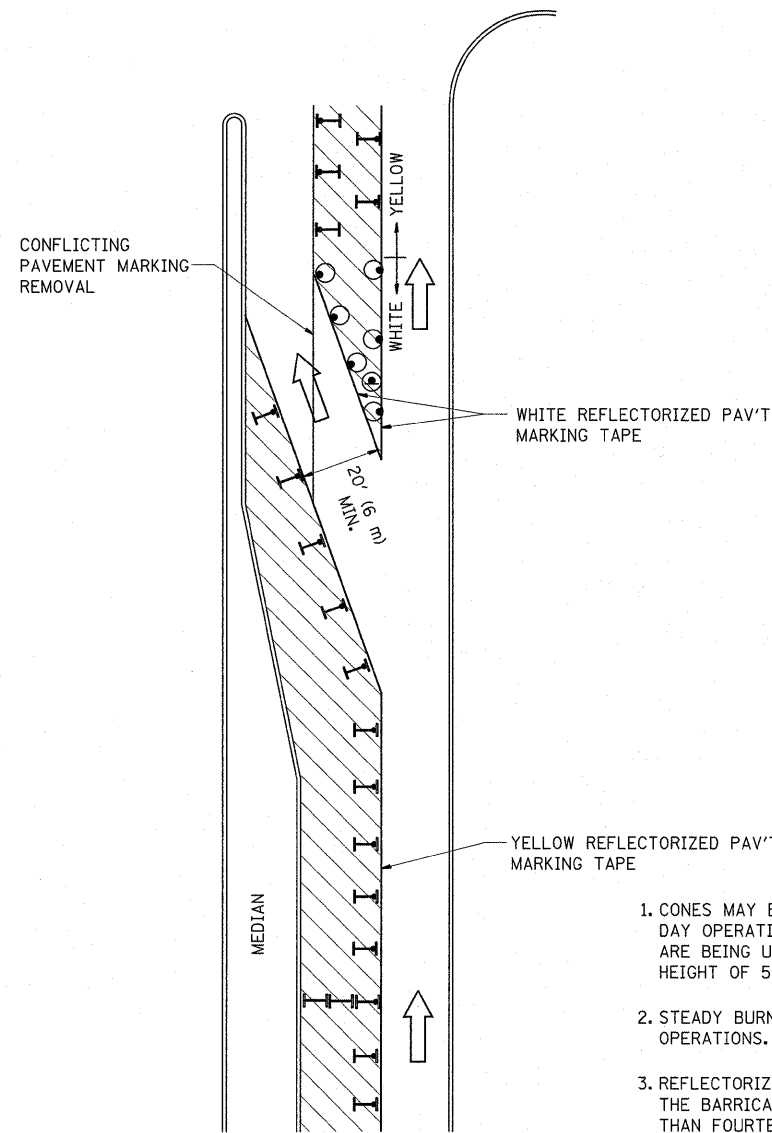


**TYPICAL ISLAND MARKING**

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100)	SKIP-DASH	WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
LANE LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	5 (125) ON FREEWAYS	SKIP-DASH	WHITE	
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID IN PAIRS	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
TWO WAY LEFT TURN MARKING	8' (2.4m) LEFT ARROW		WHITE	
CROSSWALK LINES (PEDESTRIAN)	2 @ 6 (150)	SOLID	WHITE	NOT LESS THAN 6' (1.8 m) APART
A. DIAGONALS (BIKE & EQUESTRIAN)	12 (300) @ 45°	SOLID	WHITE	2' (600) APART
B. LONGITUDINAL BARS (SCHOOL)	12 (300) @ 90°	SOLID	WHITE	2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

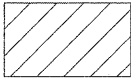







**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHR 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

**LEGEND**

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

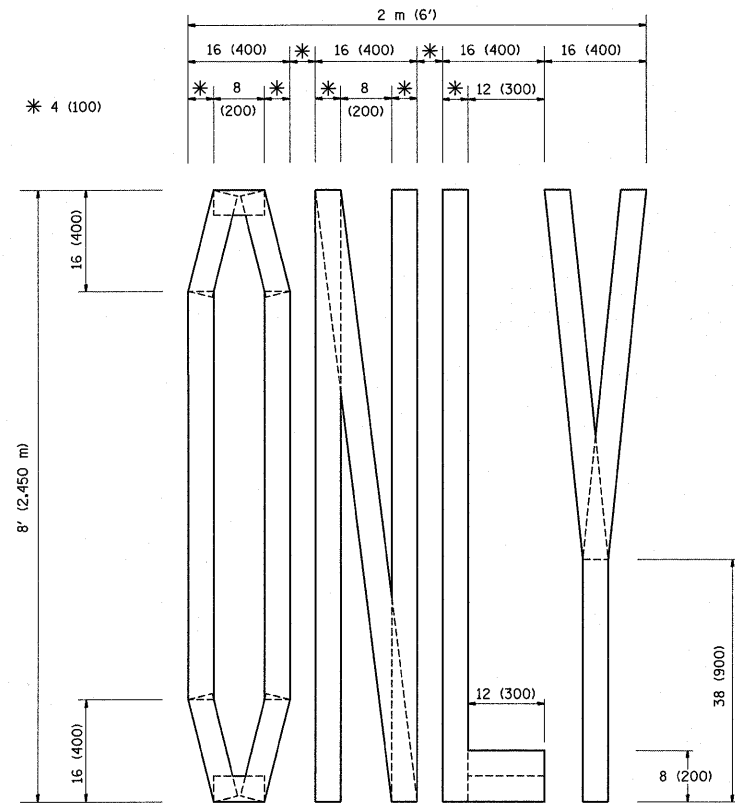
FILE NAME =	USER NAME = VelichkovV	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
ct:\pw_work\pwidot\velichkovv\d0206766\st15.tol.dgn		REVISED - A. HOUSEH 11-07-95	REVISED -
PLOT SCALE = 50.0000' / IN.		REVISED - A. HOUSEH 10-12-96	REVISED -
PLOT DATE = 12/28/2010		REVISED - T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

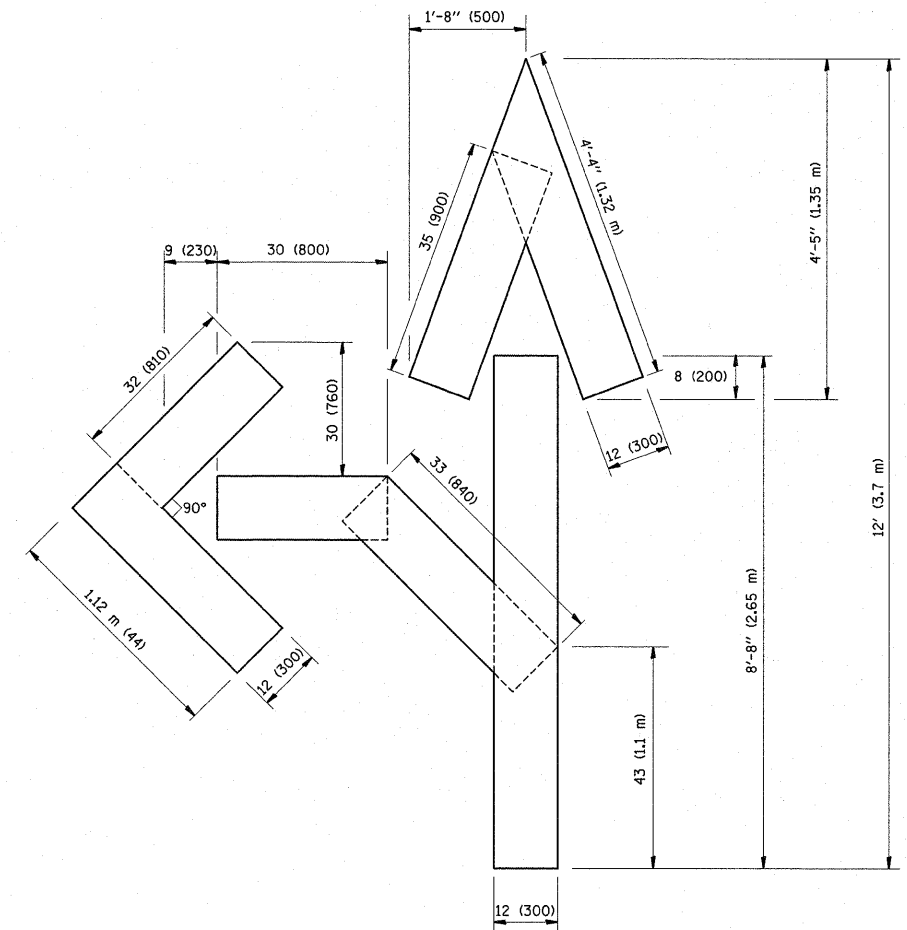
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

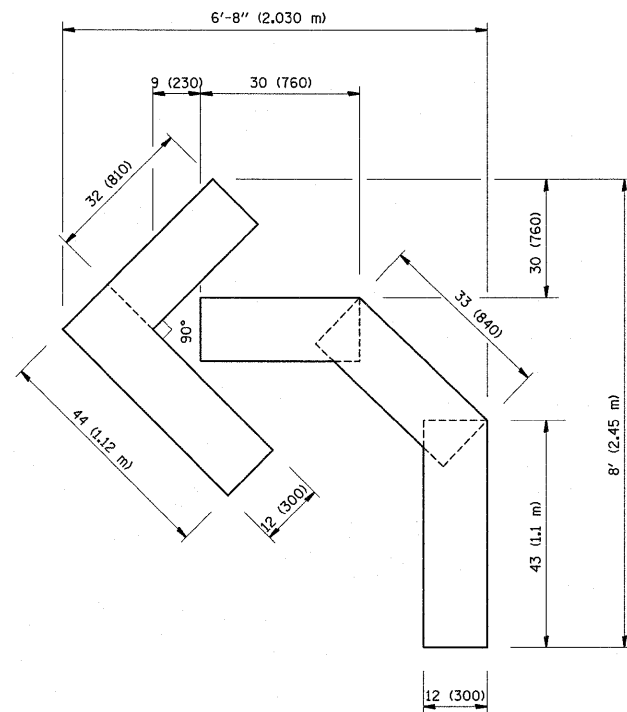
F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 42
TC-14		CONTRACT NO. 60K18		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



QUANTITY  
 4 (100) LINE = 64.1 ft. (19.7 m)  
 21.1 sq. ft. (1.97 sq. m)



QUANTITY  
 4 (100) LINE = 82.5 ft. (25.3 m)  
 27.5 sq. ft. (2.53 sq. m)



QUANTITY  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.39 sq. m)

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

FILE NAME =	USER NAME = velichkovVV	DESIGNED -	REVISED - T. RAMMACHER 06-05-96
ct:\pw_work\pwidot\velichkovvv\d0205766\1stStd.dgn		DRAWN -	REVISED - T. RAMMACHER 11-04-97
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED - T. RAMMACHER 03-02-98
PLOT DATE = 12/28/2010		DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

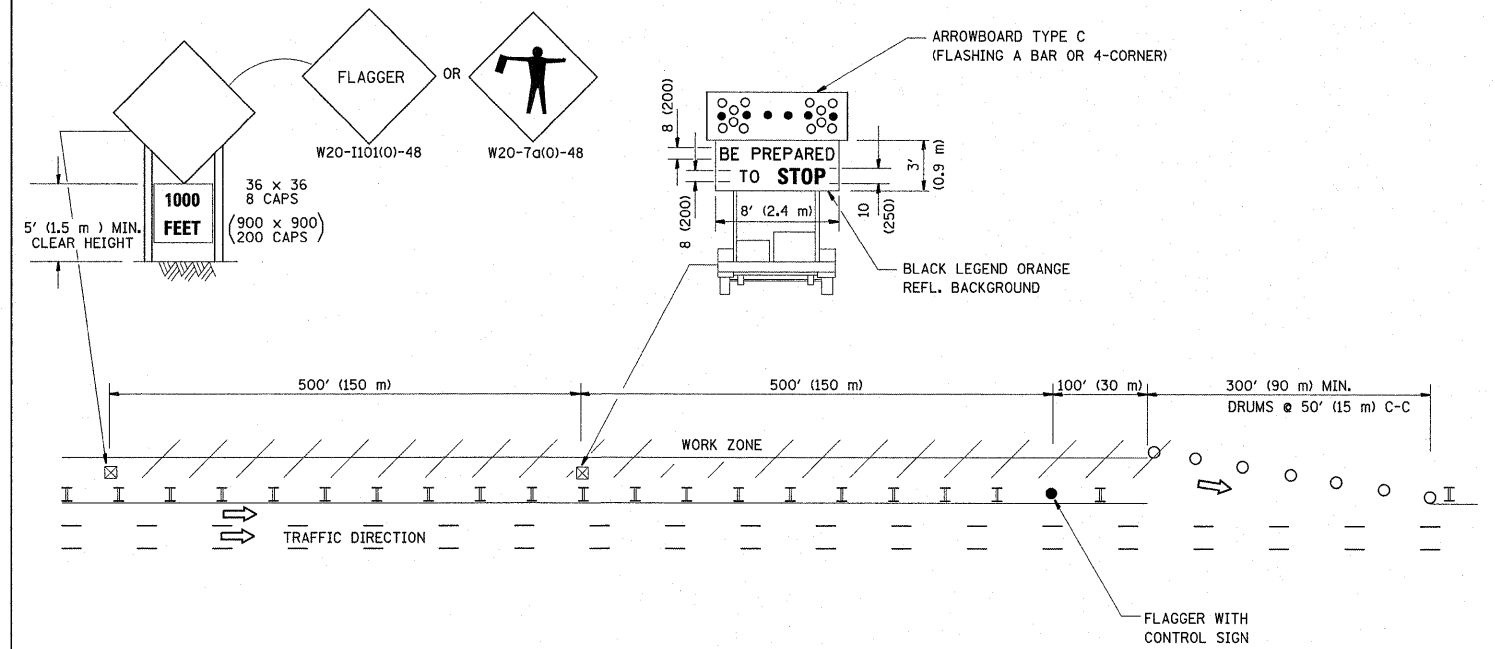
PAVEMENT MARKING LETTERS AND SYMBOLS  
 FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

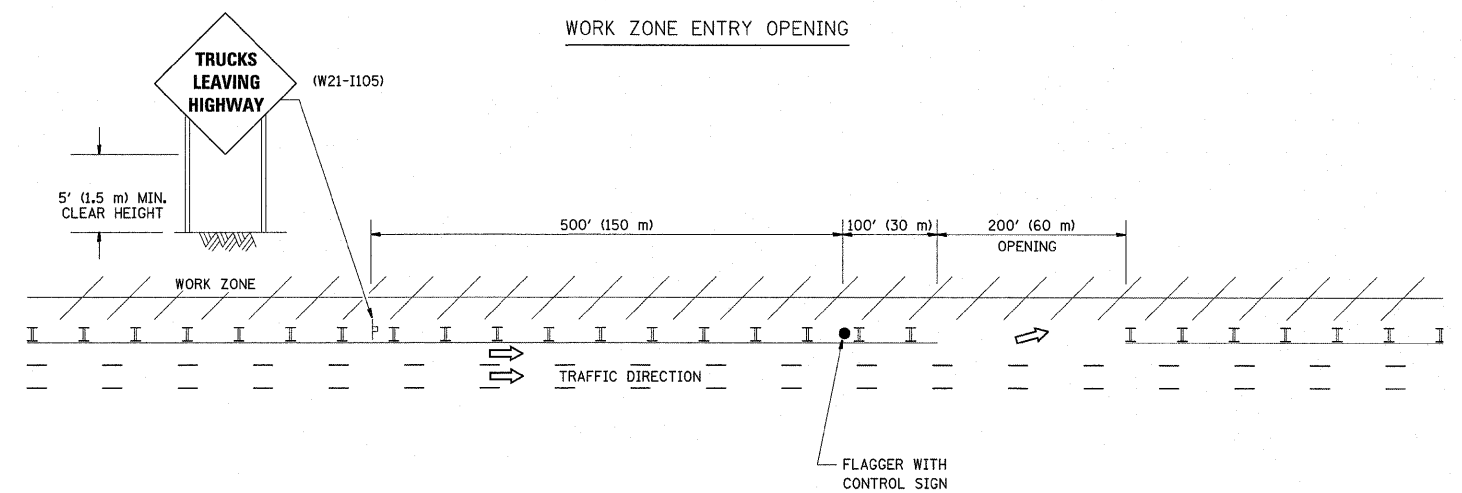
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	43
TC-16			CONTRACT NO. 60K18	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = VelichkovVV	DESIGNED -	REVISED - J.A.F. 04-03
ct:\pw_work\pwsdot\velichkovvv\d0206766\1stStd.dgn		DRAWN -	REVISED - J.A.F. 02-06
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED - S.P.B. 01-07
PLOT DATE = 12/28/2010		DATE -	REVISED - S.P.B. 12-09

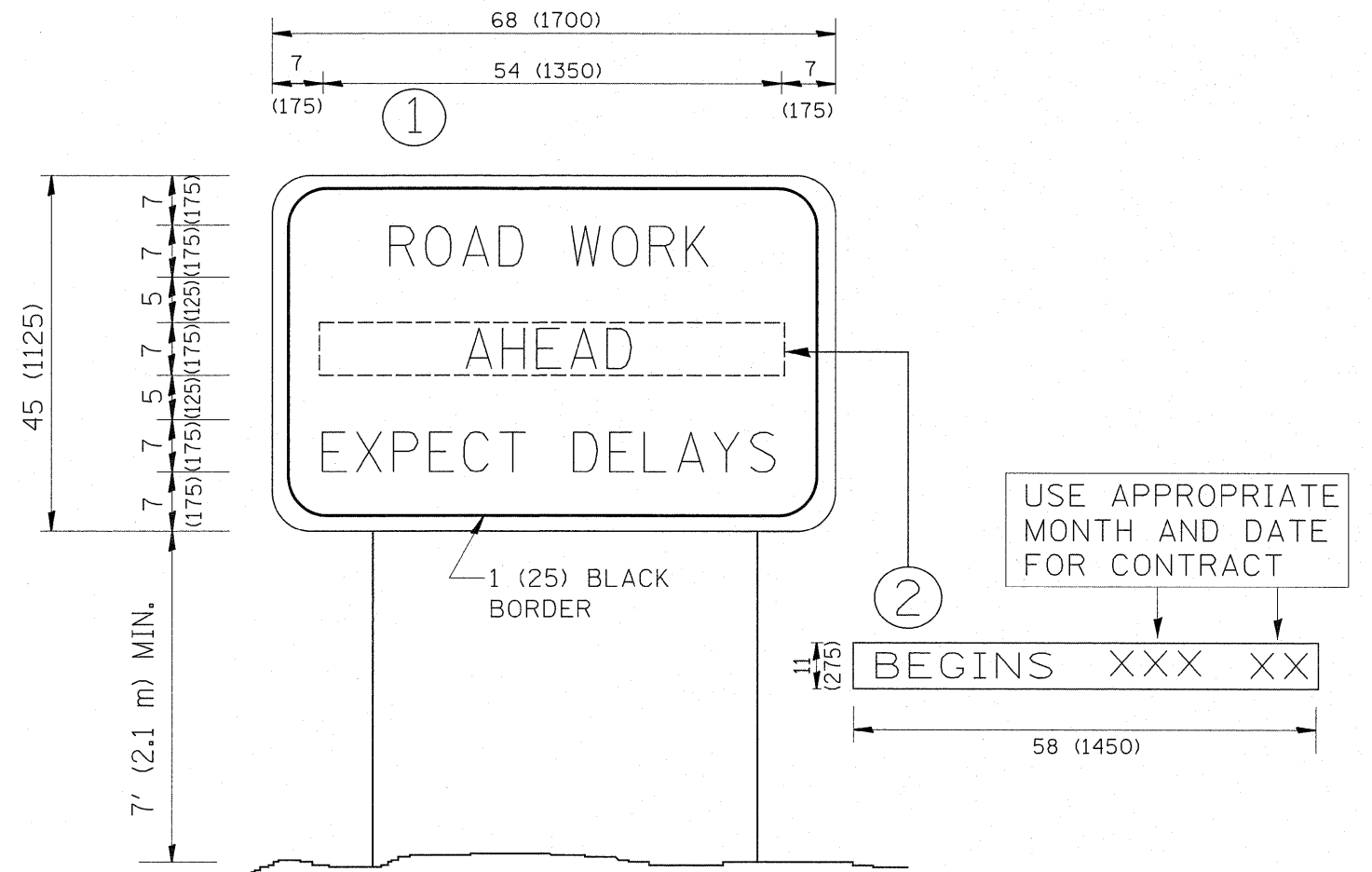
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS  
AT WORK ZONE OPENINGS

SCALE: NONE

SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	44
TC-18			CONTRACT NO. 60K18	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				



**NOTES:**

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

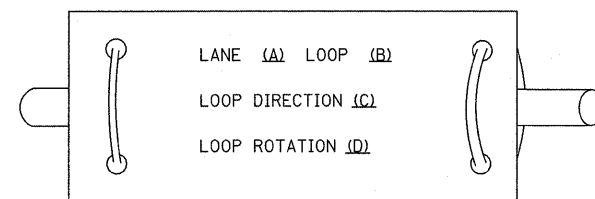
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = VelichkovVV	DESIGNED -	REVISED - R. MIRS 09-15-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ARTERIAL ROAD INFORMATION SIGN</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw_work\pwsdot\velichkovvv\d0206766\1ststd.dgn		DRAWN -	REVISED - R. MIRS 12-11-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	326	105 N-4	MCHENRY	60	45
		CHECKED -	REVISED - T. RAMMACHER 02-02-99					<b>TC-22</b>			<b>CONTRACT NO. 60K18</b>	
		DATE -	REVISED - C. JUCIUS 01-31-07					FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				
PLOT SCALE = 50.0000' / IN.		PLOT DATE = 12/28/2010										

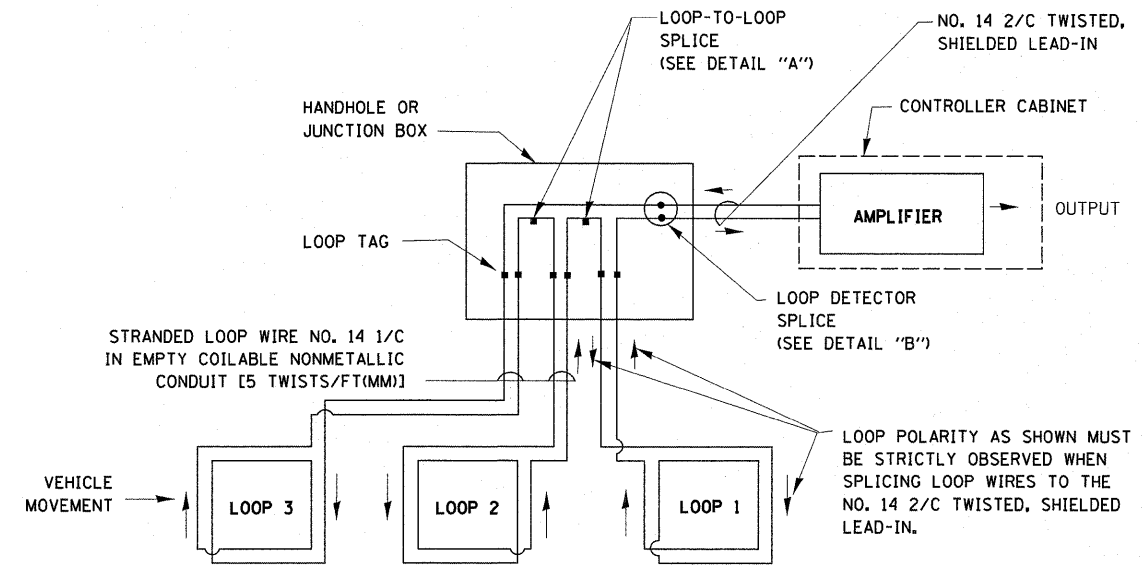
## LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

### LOOP LEAD-IN CABLE TAG

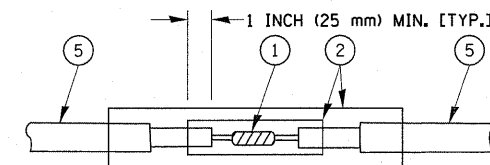


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

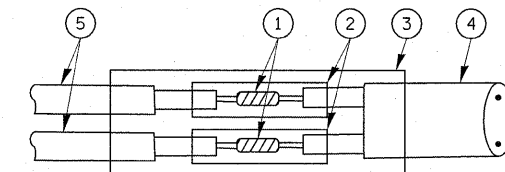


### DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm), IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

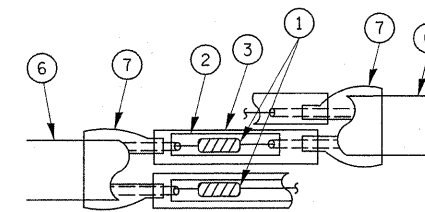


DETAIL "A"  
LOOP-TO-LOOP SPLICE

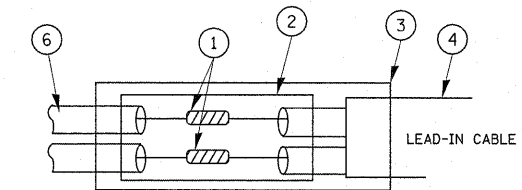


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

### TYPE I LOOP



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

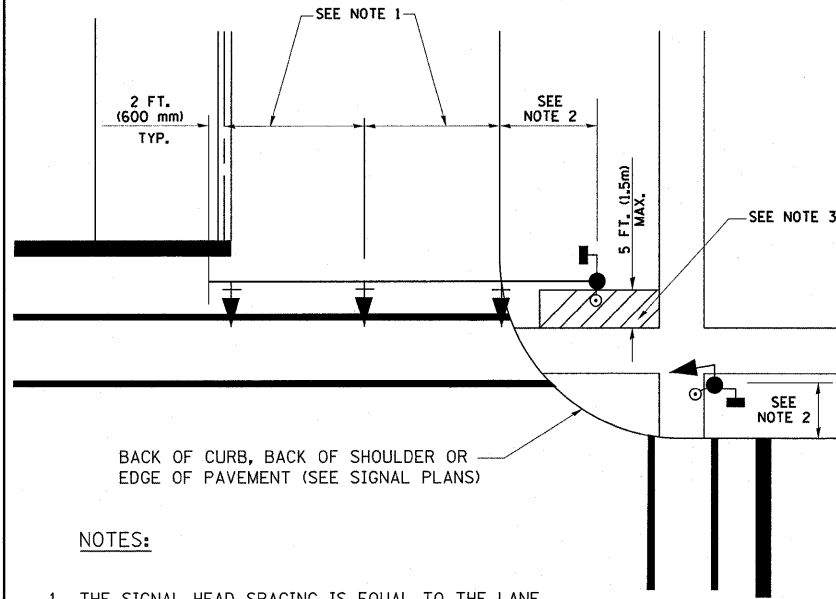
### LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- PREFORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = velichkovv	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 46
et:\pw_work\pwidot\velichkovv\d0206766\st5td.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 1 OF 6 SHEETS	STA. TO STA.	<b>TS-05</b>		CONTRACT NO. 60K18		
	PLOT DATE = 12/28/2010	CHECKED - DAD	REVISED -					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
		DATE - 10-28-09	REVISED -									

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

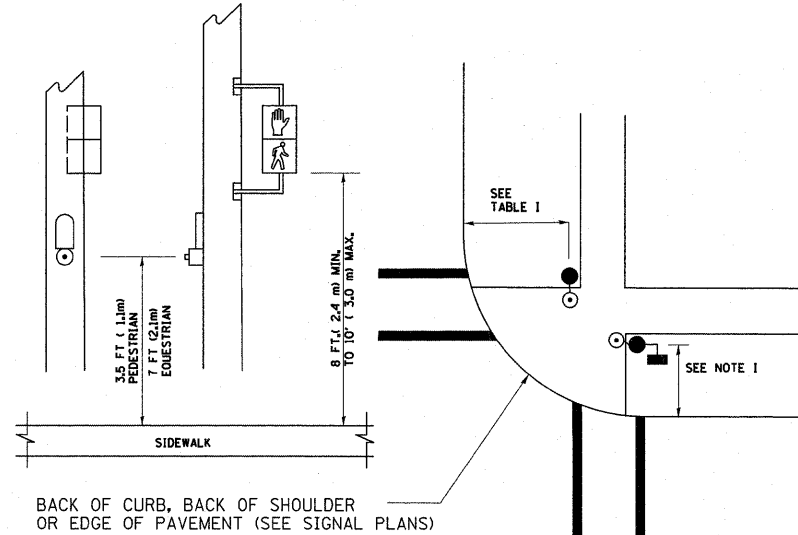
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

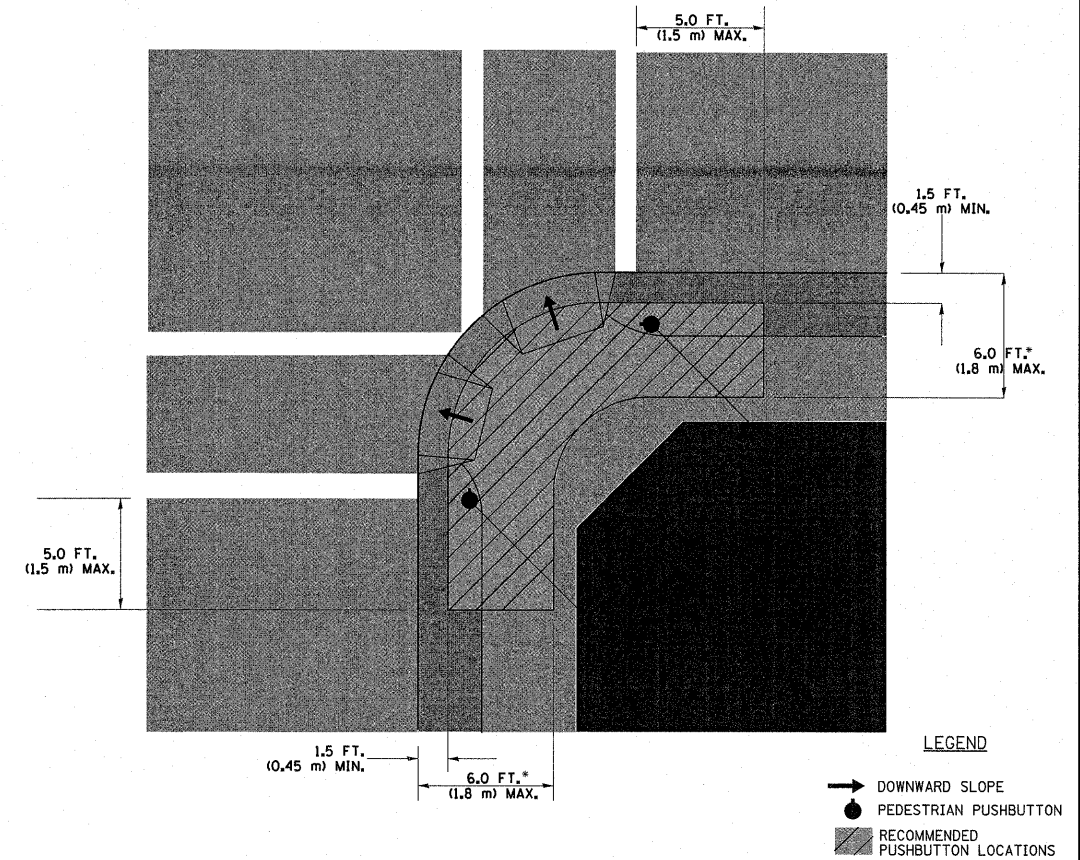
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT ( 1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

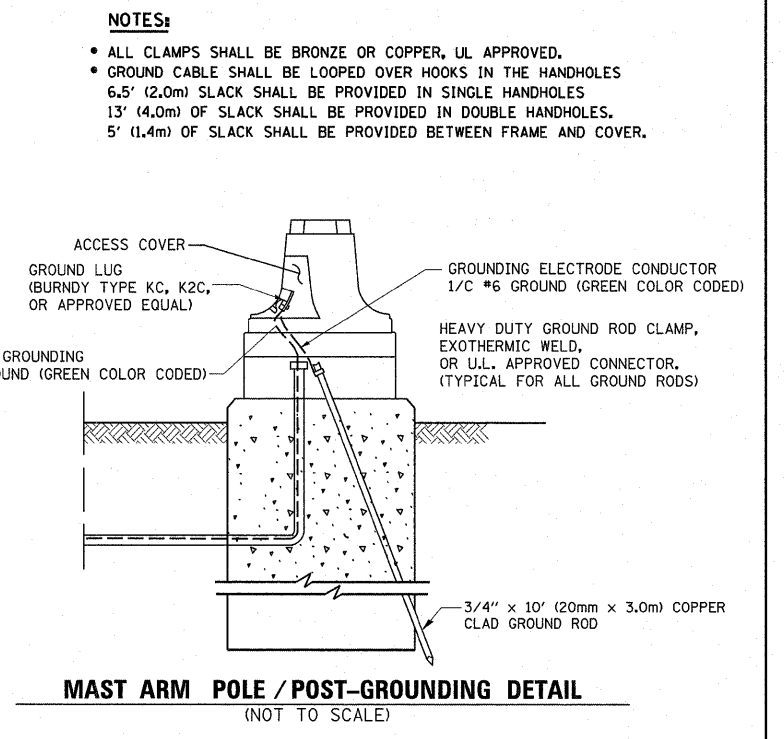
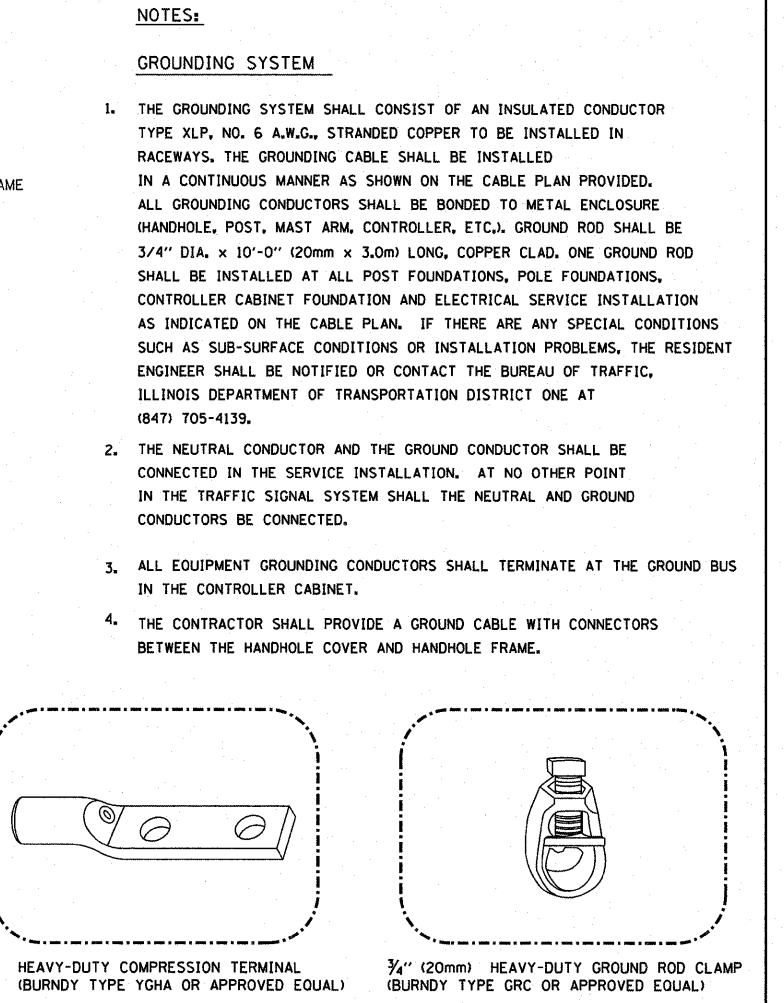
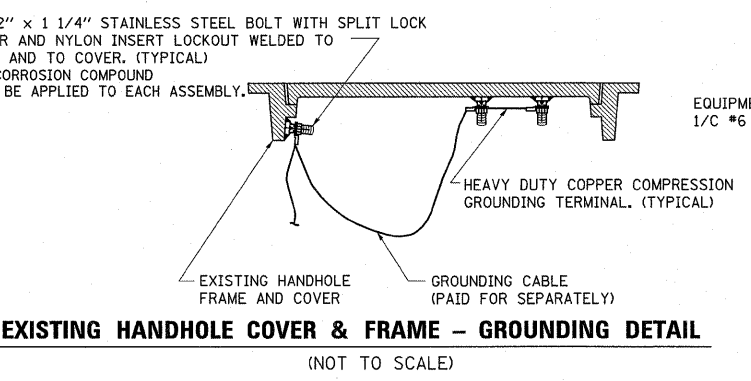
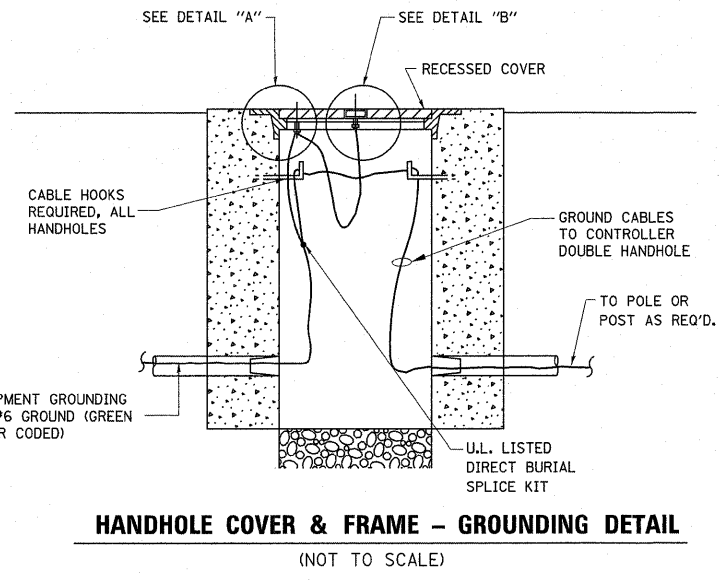
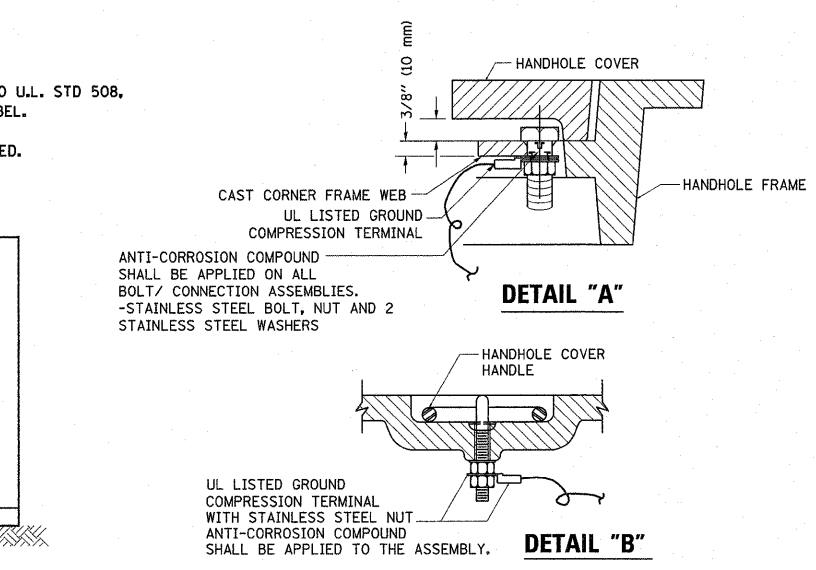
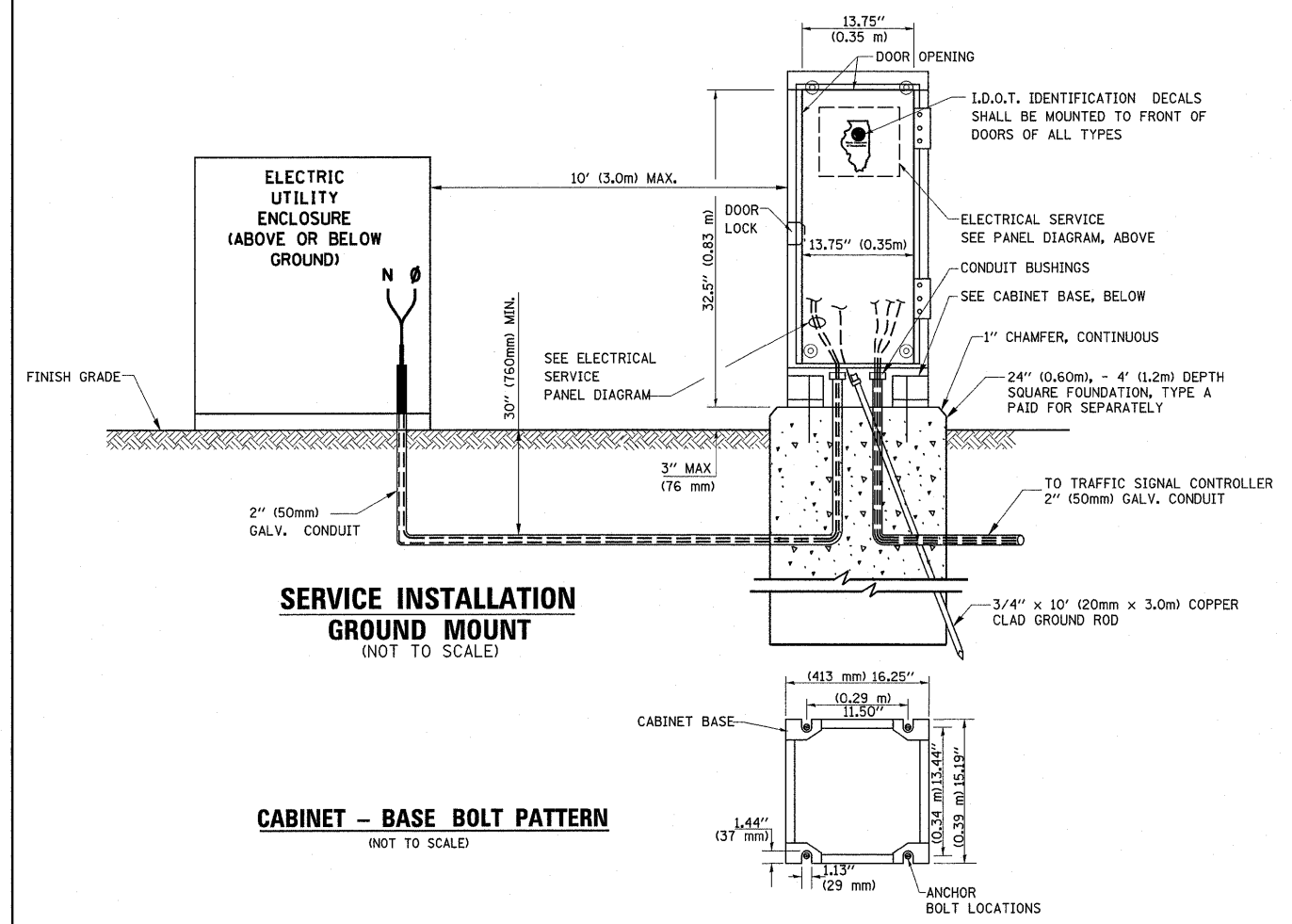
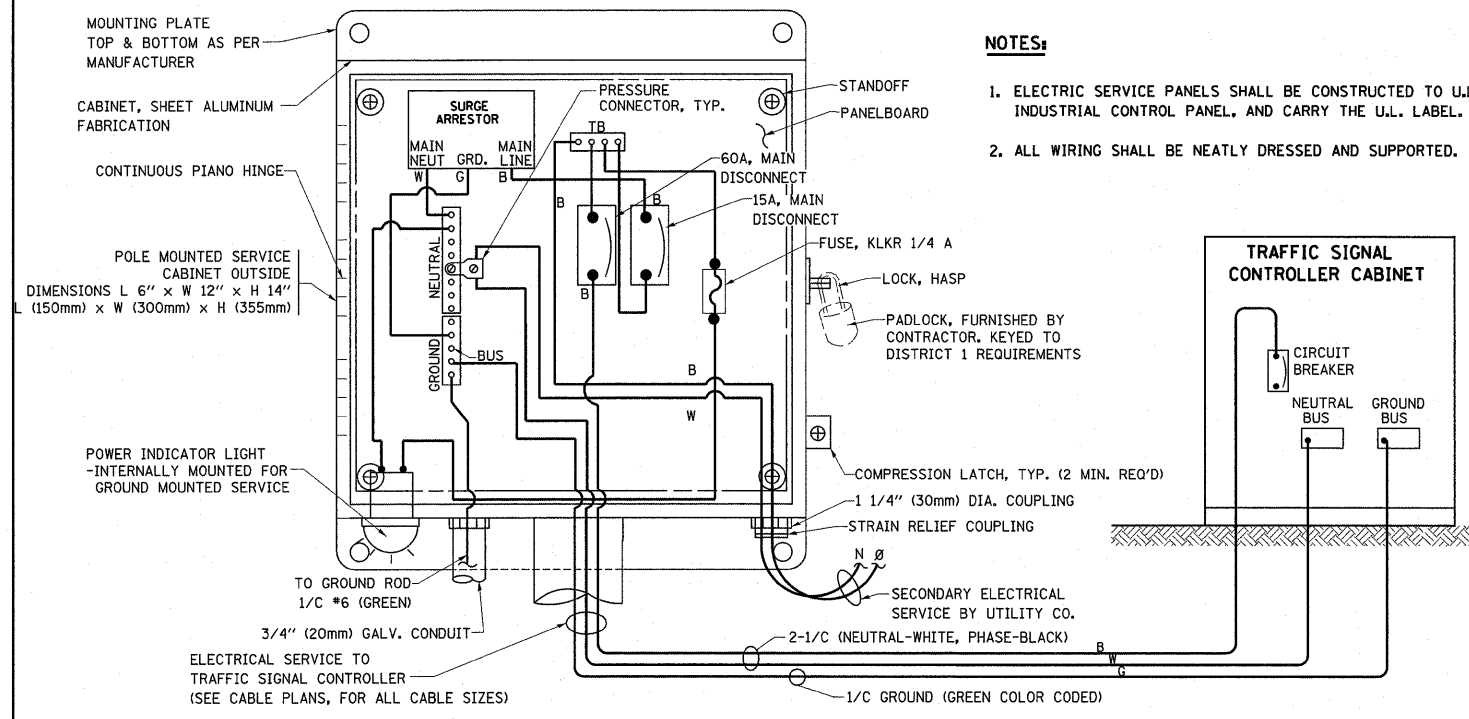
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

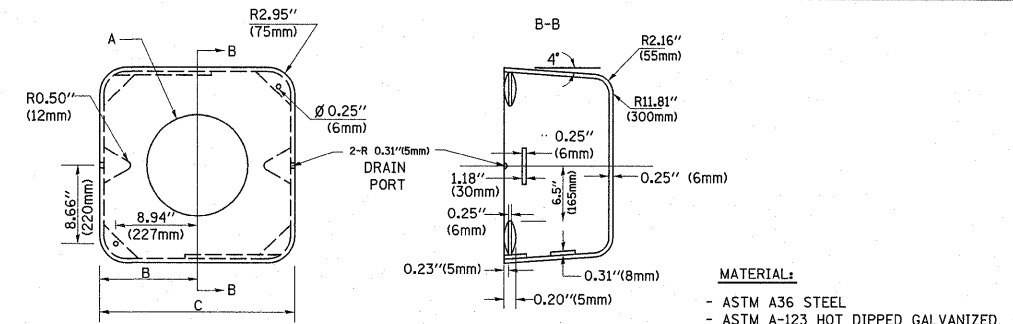
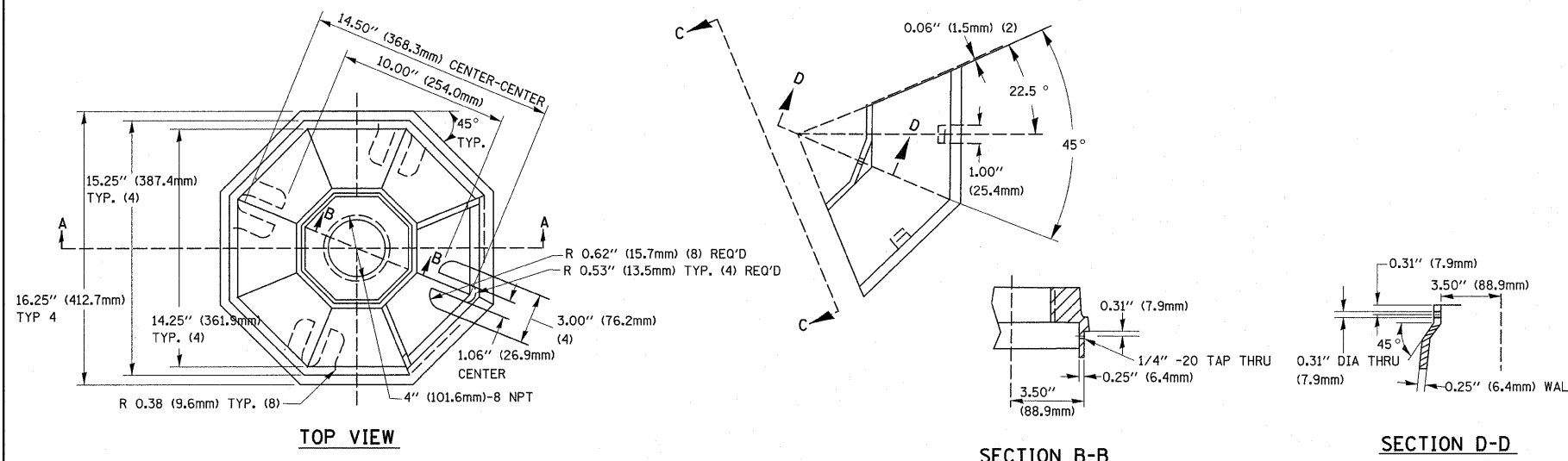
**NOTES:**

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD AFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.



FILE NAME =	USER NAME = velichkovVV	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 48
ct:\pwwork\pwwork\velichkovvv\d0206766\1st5td.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 3 OF 6 SHEETS	STA. TO STA.	<b>TS-05</b>		CONTRACT NO. 60K18		
	PLOT DATE = 12/28/2010	CHECKED - DAD	REVISED -					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
		DATE - 10-28-09	REVISED -									

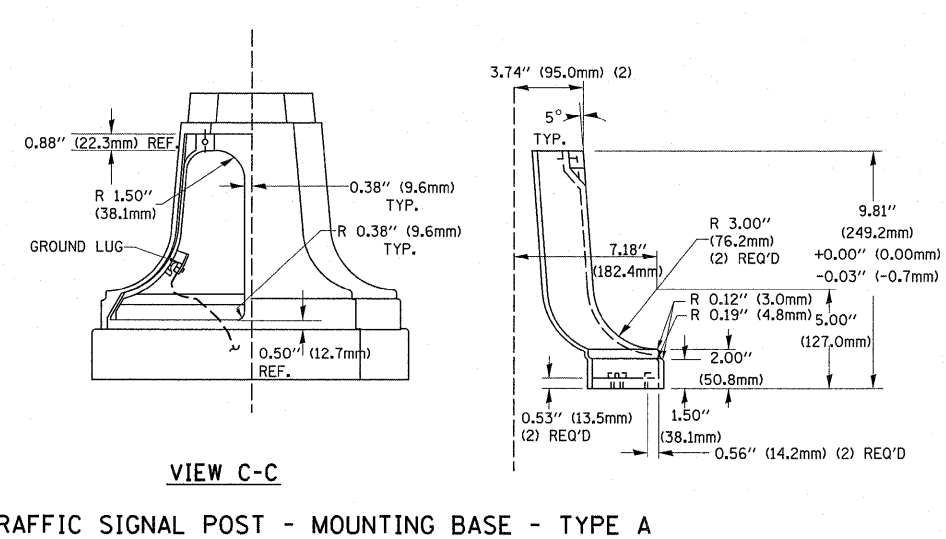
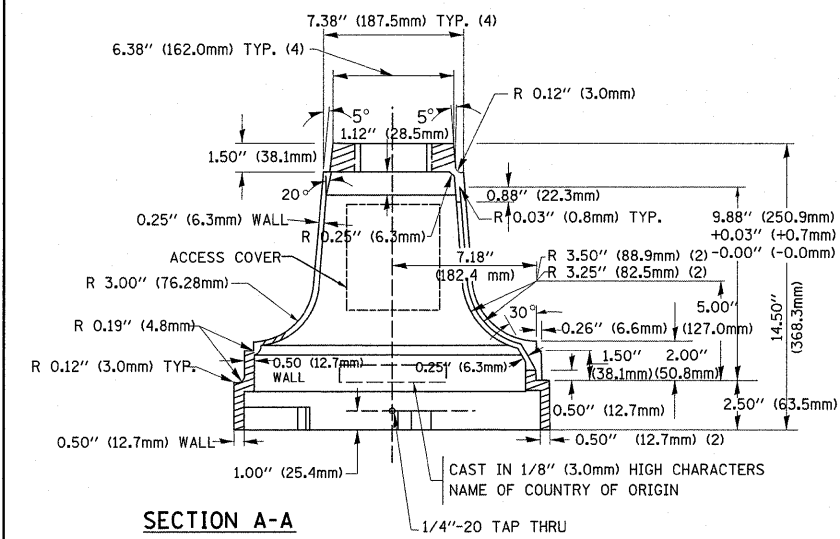




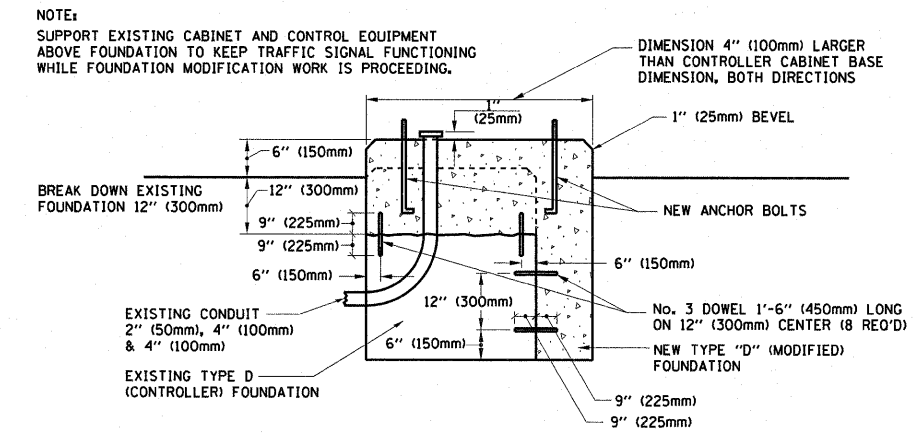
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIABLES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIABLES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIABLES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126 lbs (57 kg)

**SHROUD**

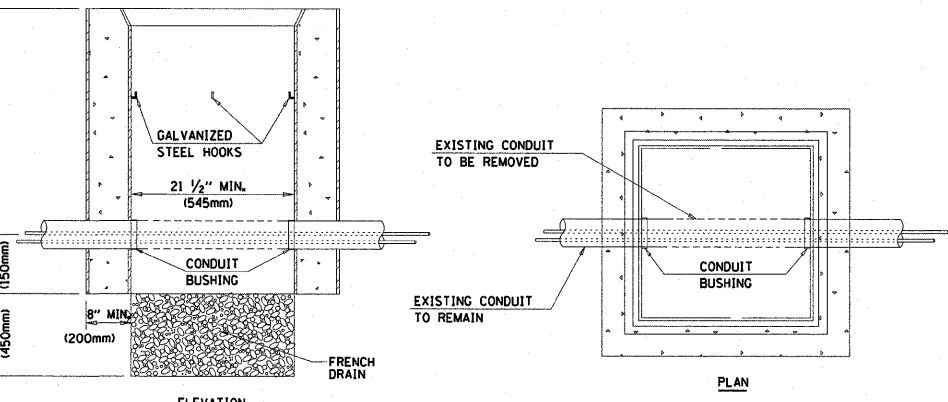
- NOTES:**
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
  - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
  - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



**TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A**

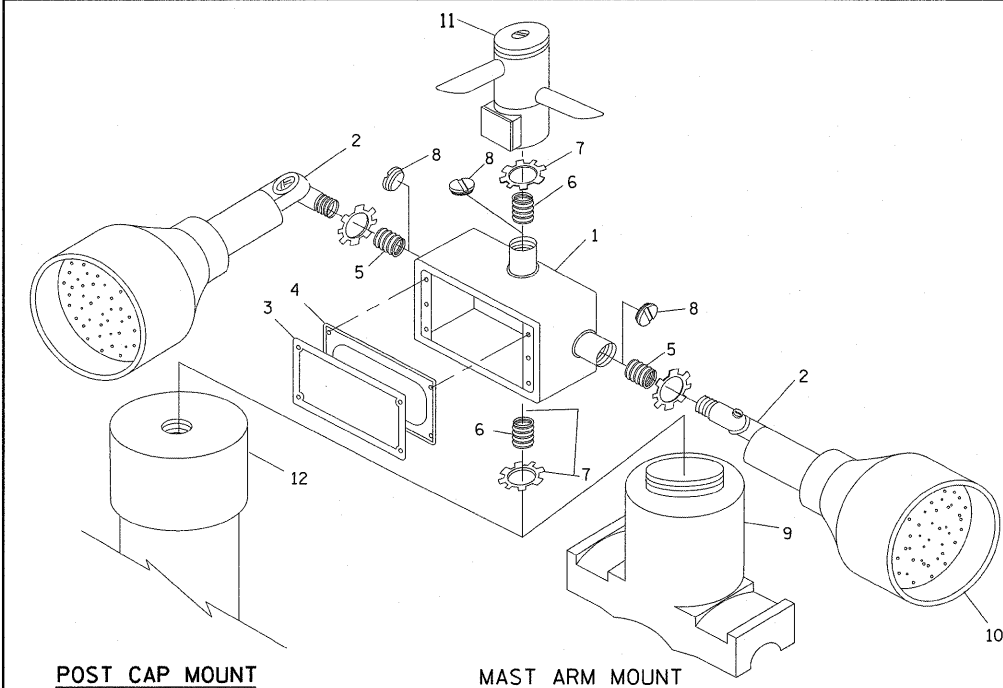


**MODIFY EXISTING TYPE "D" FOUNDATION**



**HANDHOLE TO INTERCEPT EXISTING CONDUIT**

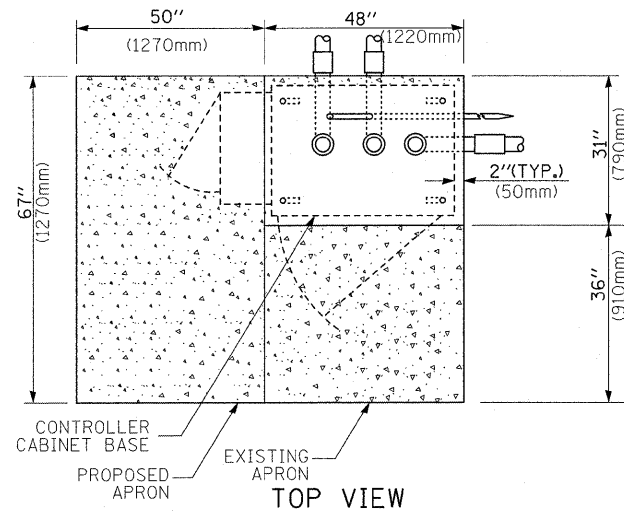
- NOTES:**
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
  - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.



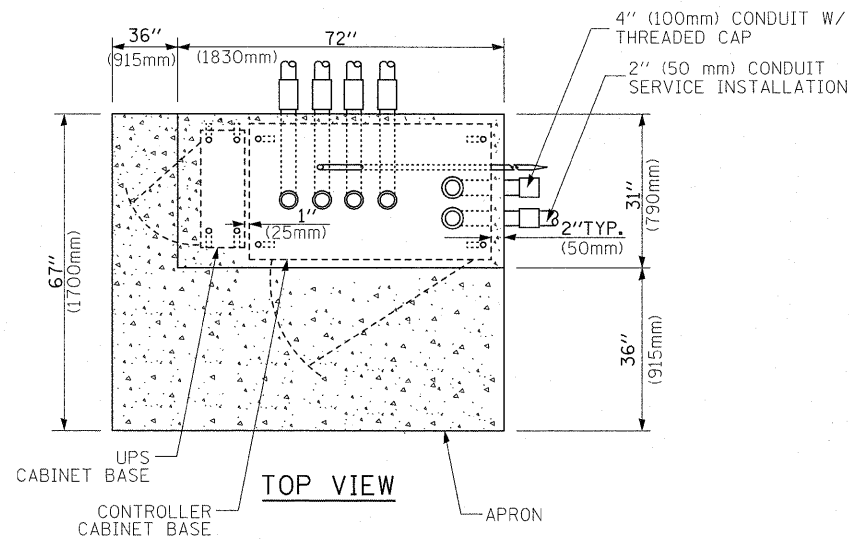
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

- NOTES:**
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
  - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
  - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

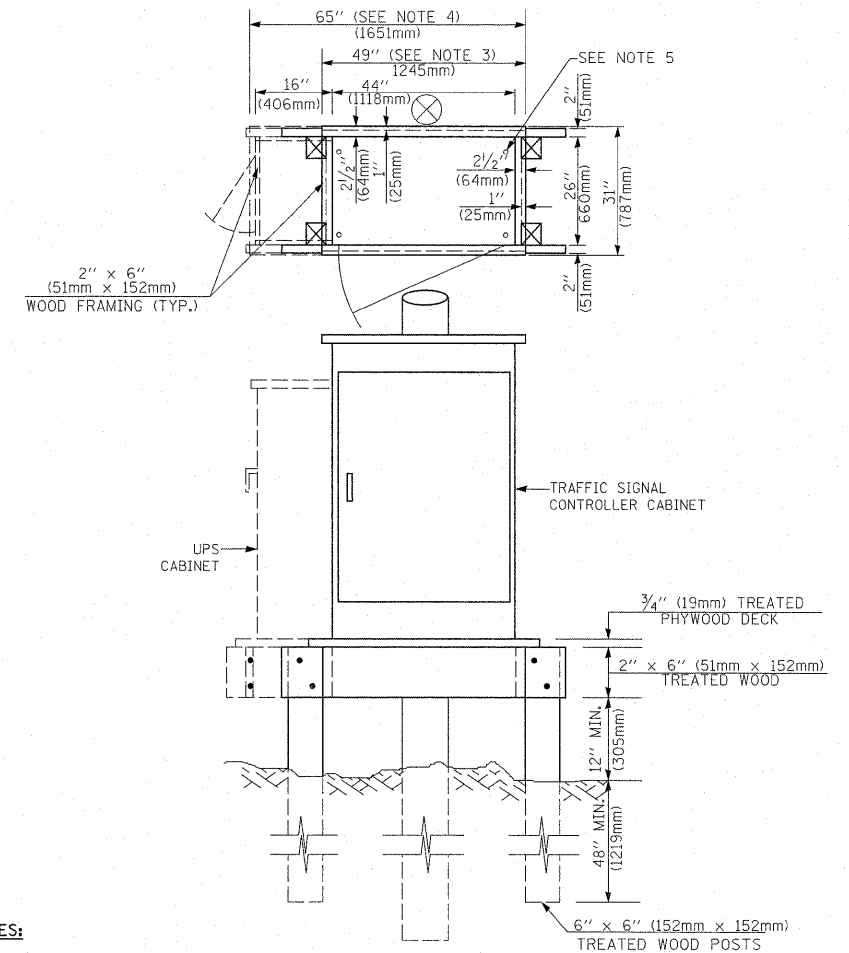
**POST CAP MOUNT MAST ARM MOUNT EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL**



TOP VIEW



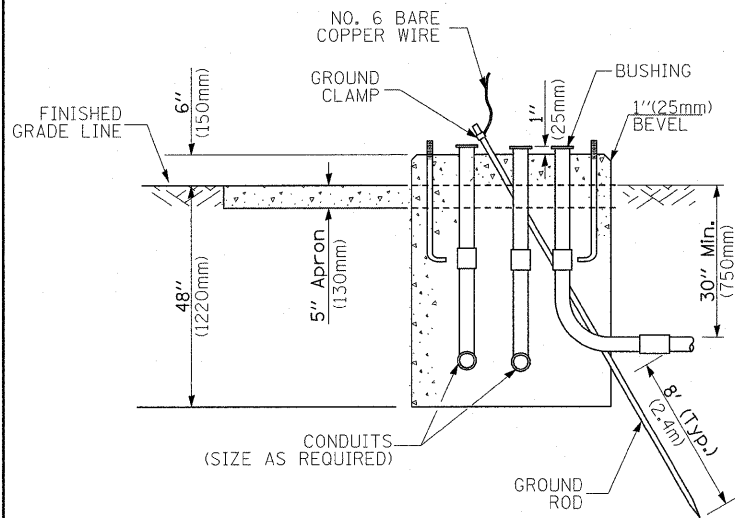
TOP VIEW



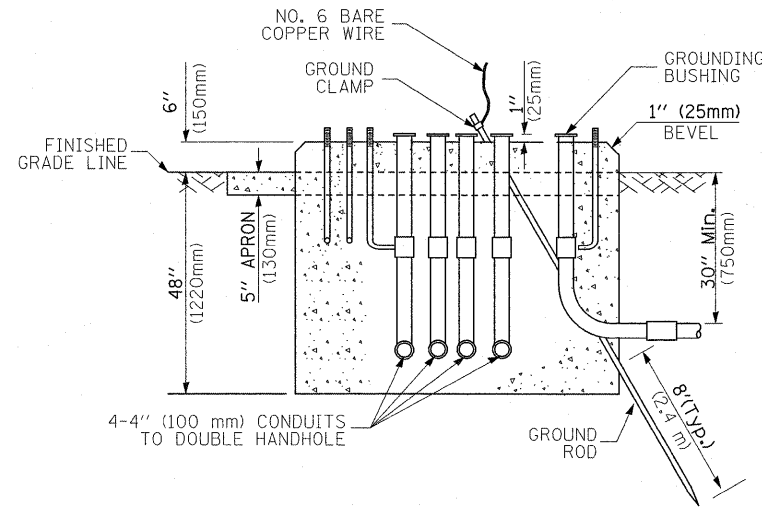
NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM



TYPE D FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET



TYPE C FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (QU) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

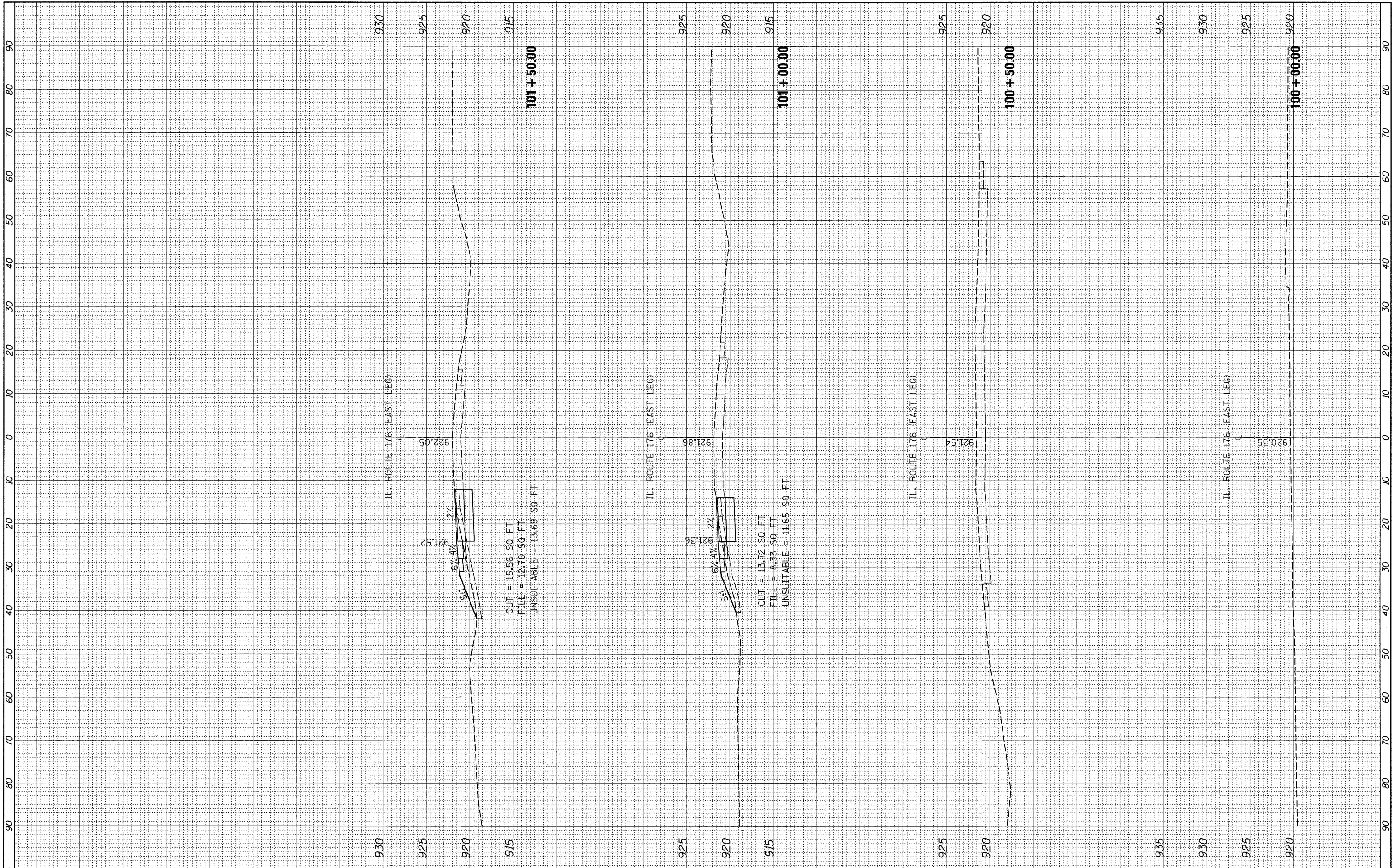
DEPTH OF MAST ARM FOUNDATIONS, TYPE E

# TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				<b>RAILROAD SYMBOLS</b>			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				EXISTING		PROPOSED	
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				RAILROAD CONTROL CABINET			
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT				RAILROAD CANTILEVER MAST ARM			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER				FLASHING SIGNAL			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED				CROSSING GATE			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)				CROSSBUCK			
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

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

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



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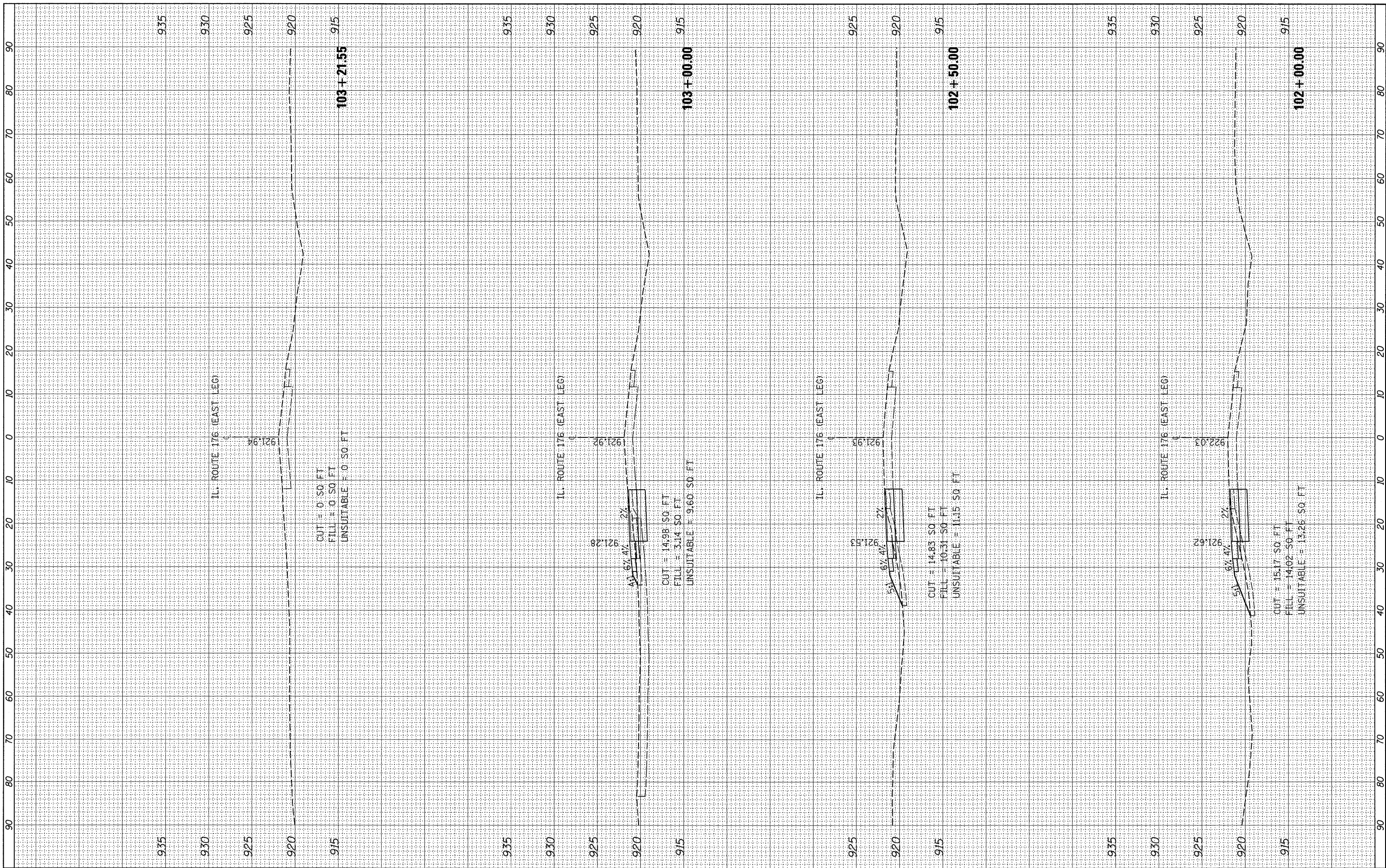
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 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
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326	105 N-4	MCHENRY	60	52
CONTRACT NO. 60K18			ILLINOIS FED. AID PROJECT	

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SURVEYED		
PLOTTED		
NOTE BOOK		
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ORIGINAL SURVEY	BY	DATE
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NOTE BOOK		
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

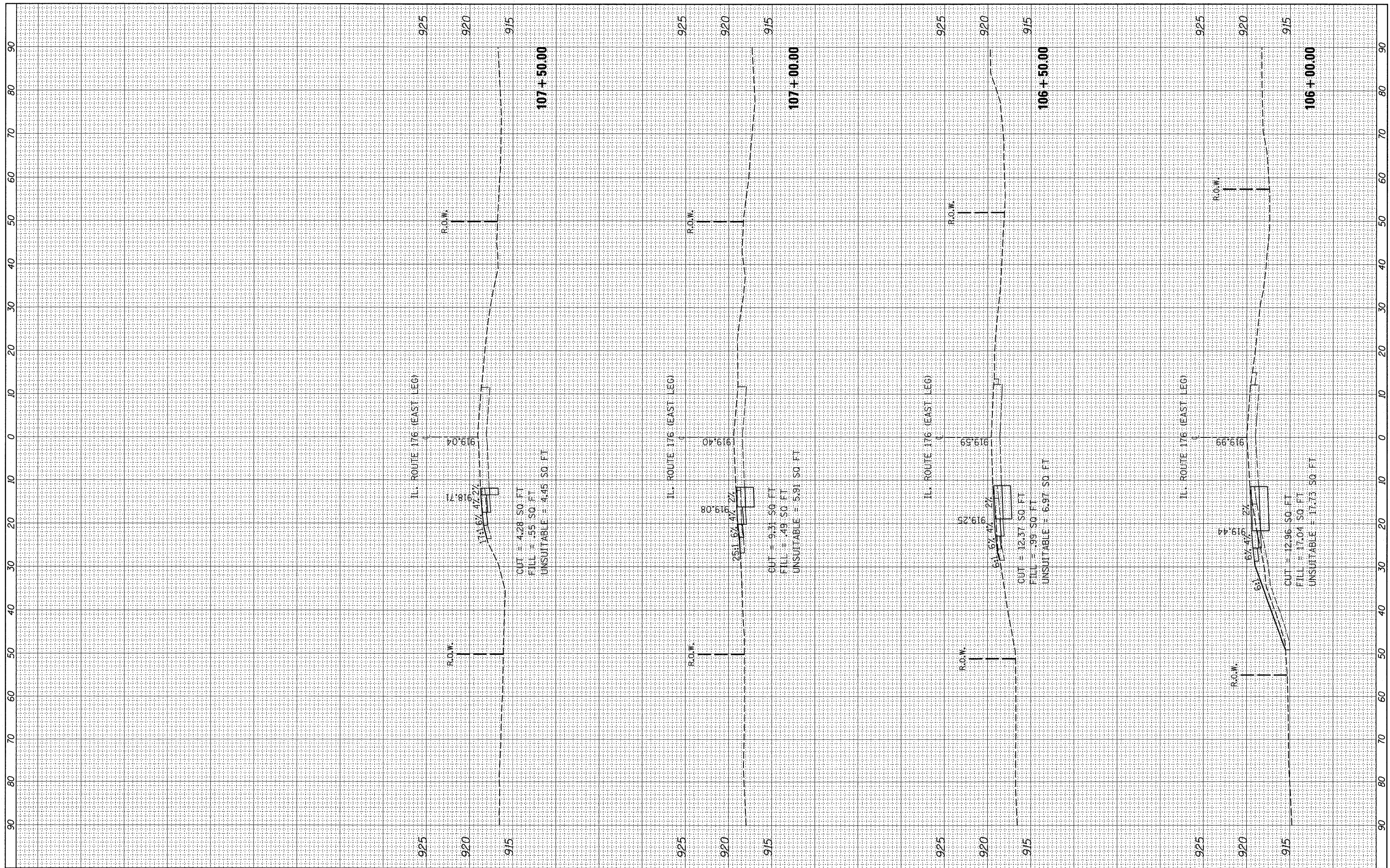
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CONTRACT NO. 60K18			ILLINOIS FED. AID PROJECT	



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NOTE BOOK	NOTE BOOK		
AREAS CHECKED	AREAS CHECKED		

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PLOTTED	PLOTTED		
NOTE BOOK	NOTE BOOK		
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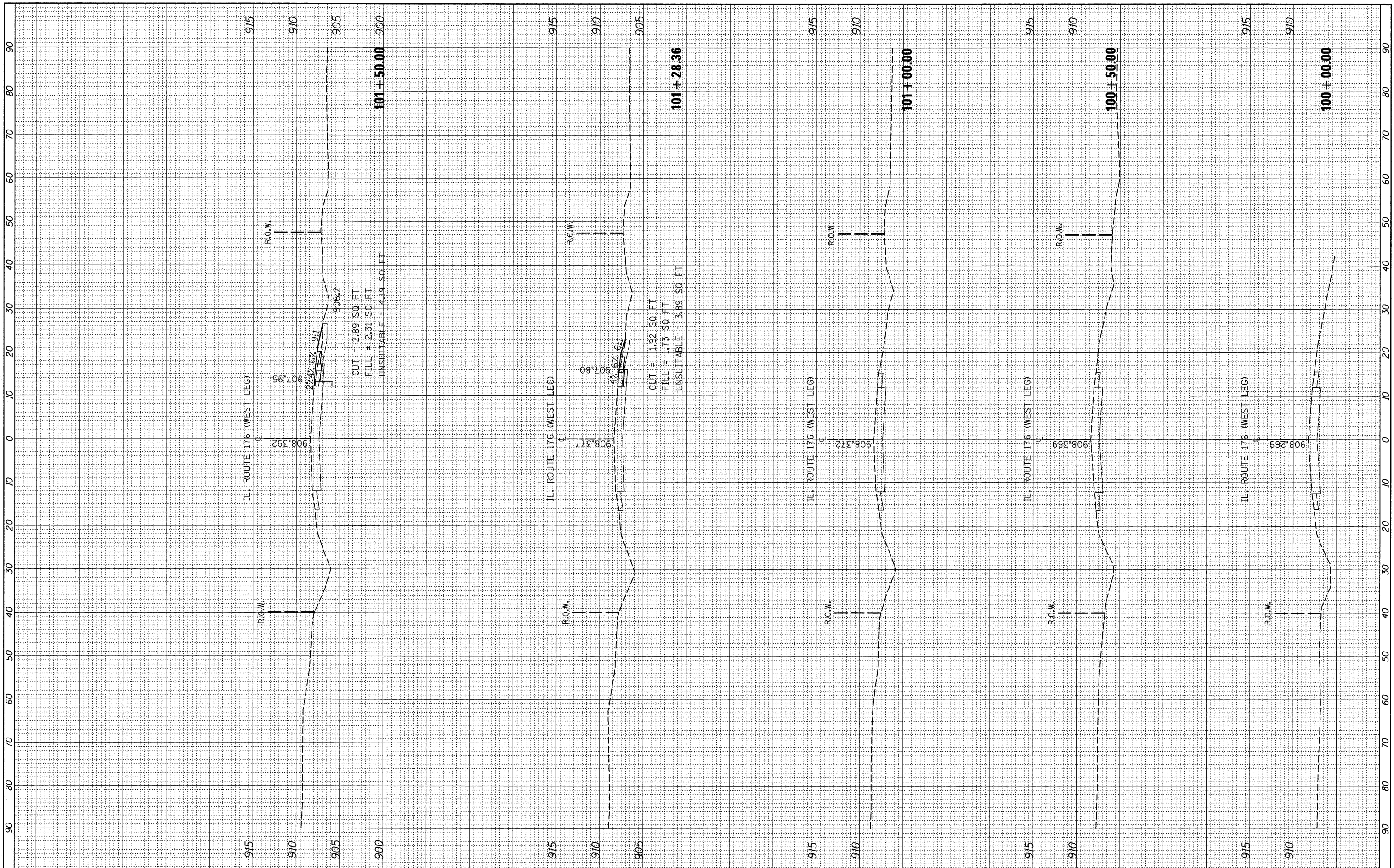
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
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CONTRACT NO. 60K18				
ILLINOIS FED. AID PROJECT				

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

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



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
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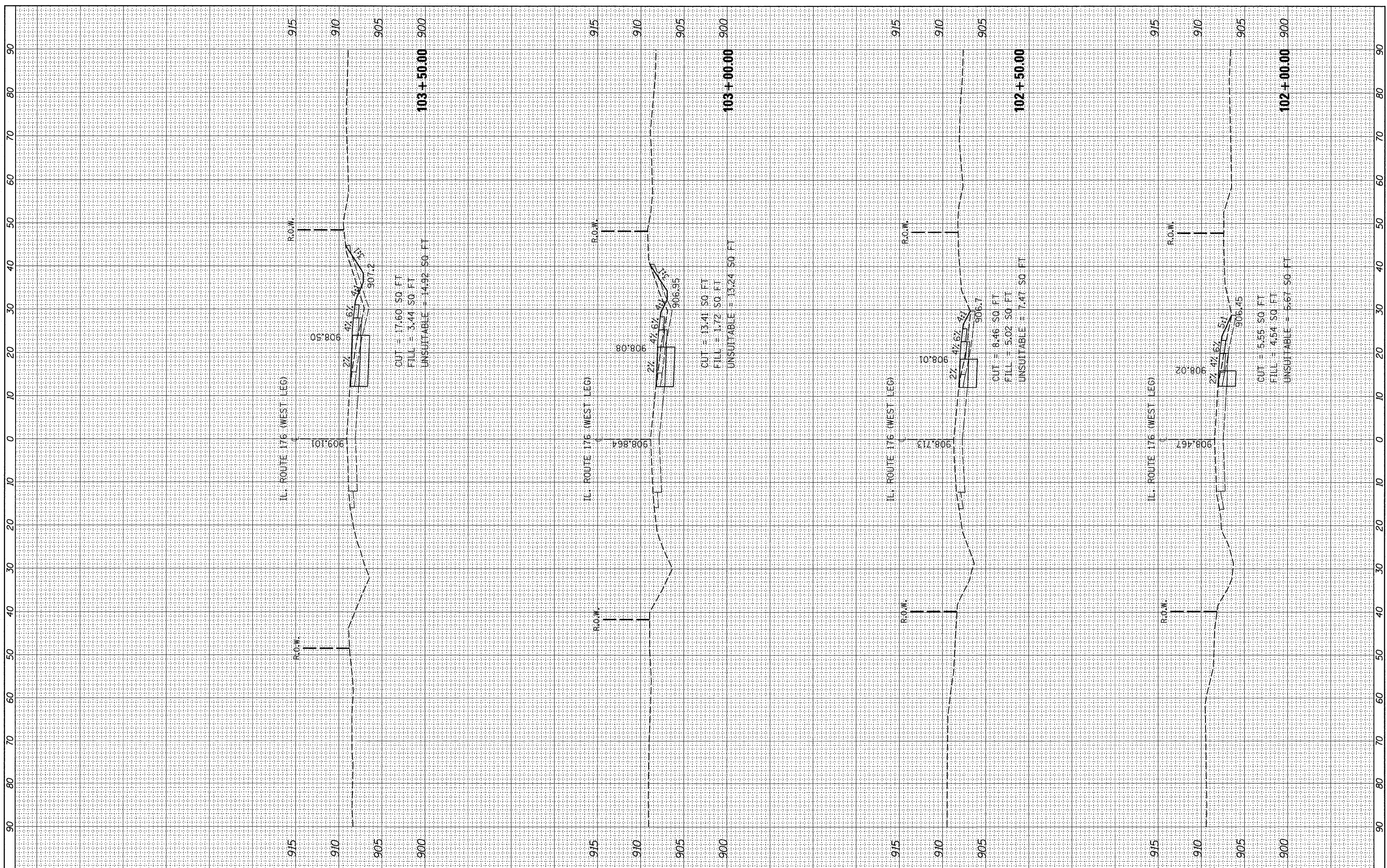
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	56
			CONTRACT NO.	60K18
ILLINOIS FED. AID PROJECT				



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

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



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USER NAME = WILGREENDP  
 PLOT SCALE = 10.0000' / IN.  
 PLOT DATE = 12/29/2010

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
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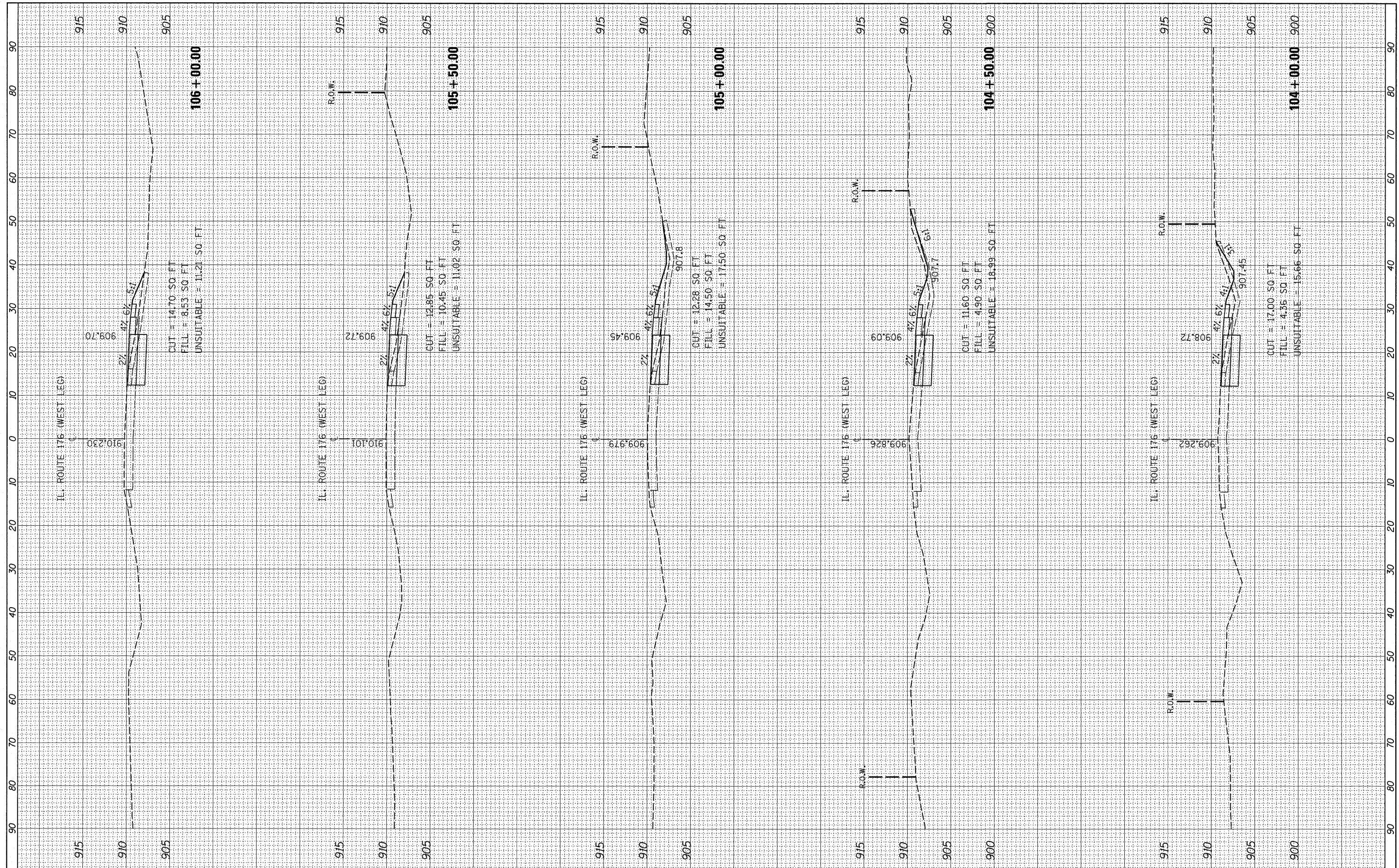
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**IL RTE. 47 AT IL RTE. 176 (WEST LEG)**  
 SCALE: SHEET NO. OF SHEETS STA. 102+00.00 TO STA. 103+50.00

F.A.P. RTE. 326	SECTION 105 N-4	COUNTY MCHENRY	TOTAL SHEETS 60	SHEET NO. 57
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60K18	

FINAL SURVEY	BY	DATE
SURVEY		
NOTE BOOK		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEY		
NOTE BOOK		
NO.		



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DATE -	REVISED -

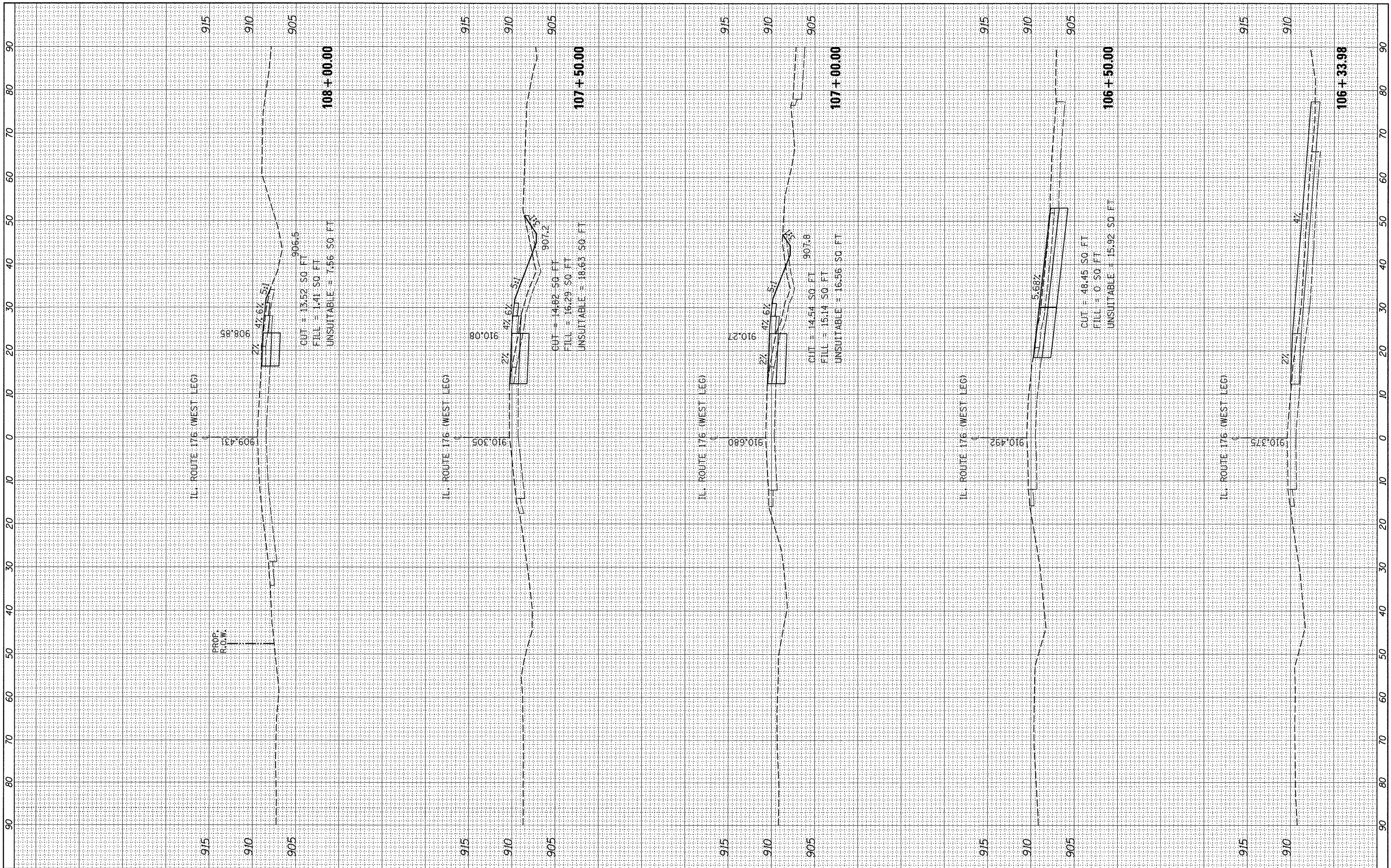
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS</b>			
<b>IL RTE. 47 AT IL RTE. 176 (WEST LEG)</b>			
SCALE:	SHEET NO.	OF SHEETS	STA. 104+00.00 TO STA. 106+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	58
				CONTRACT NO. 60K18
ILLINOIS FED. AID PROJECT				

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

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



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DATE -	REVISED -

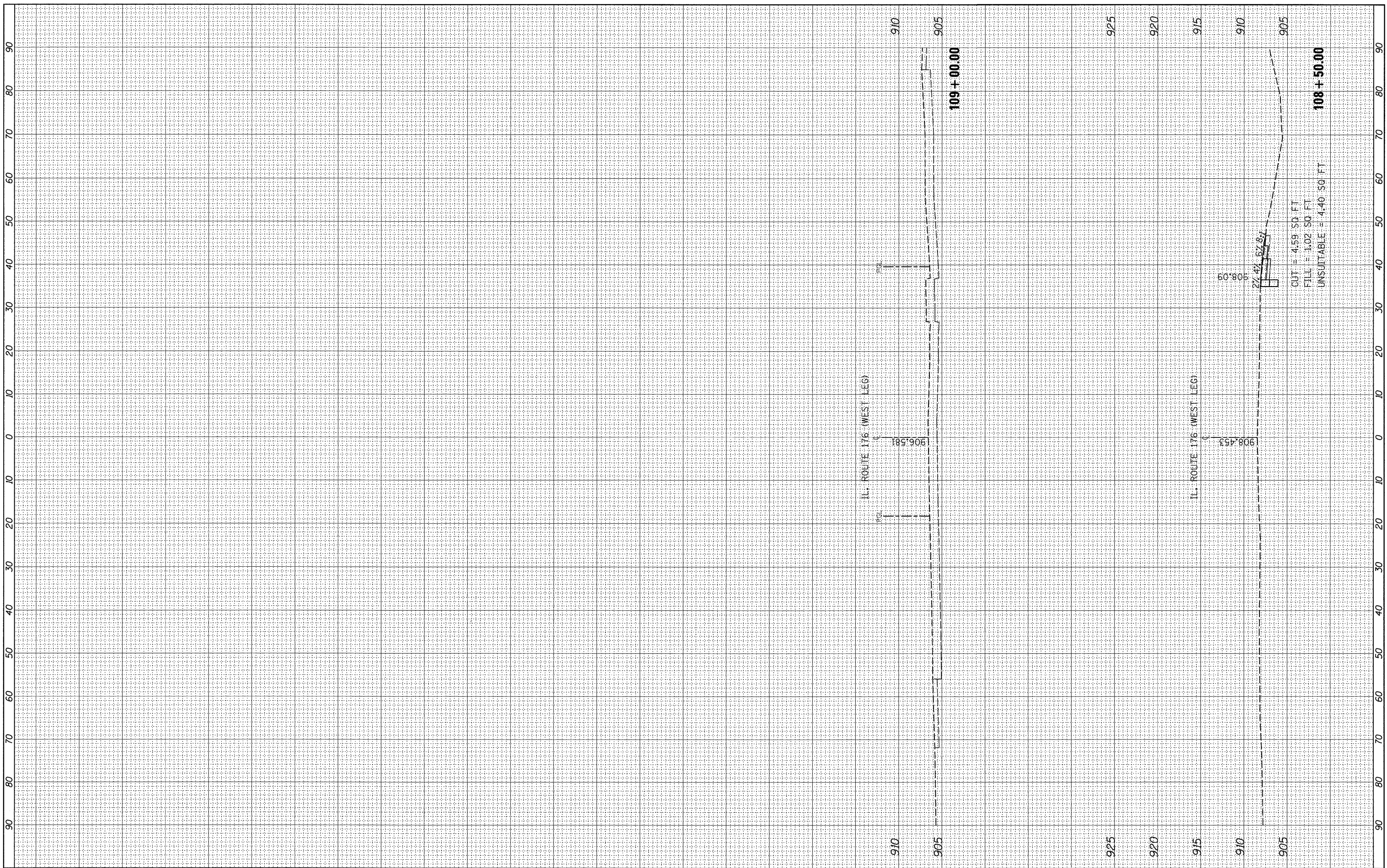
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**IL RTE. 47 AT IL RTE. 176 (WEST LEG)**  
 SCALE: SHEET NO. OF SHEETS STA. 106+33.98 TO STA. 108+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	59
			CONTRACT NO.	60K18
ILLINOIS FED. AID PROJECT				

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

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



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DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**  
**IL RTE. 47 AT IL RTE. 176 (WEST LEG)**

SCALE: SHEET NO. OF SHEETS STA. 108+50.00 TO STA. 109+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	105 N-4	MCHENRY	60	60
CONTRACT NO. 60K18			ILLINOIS FED. AID PROJECT	