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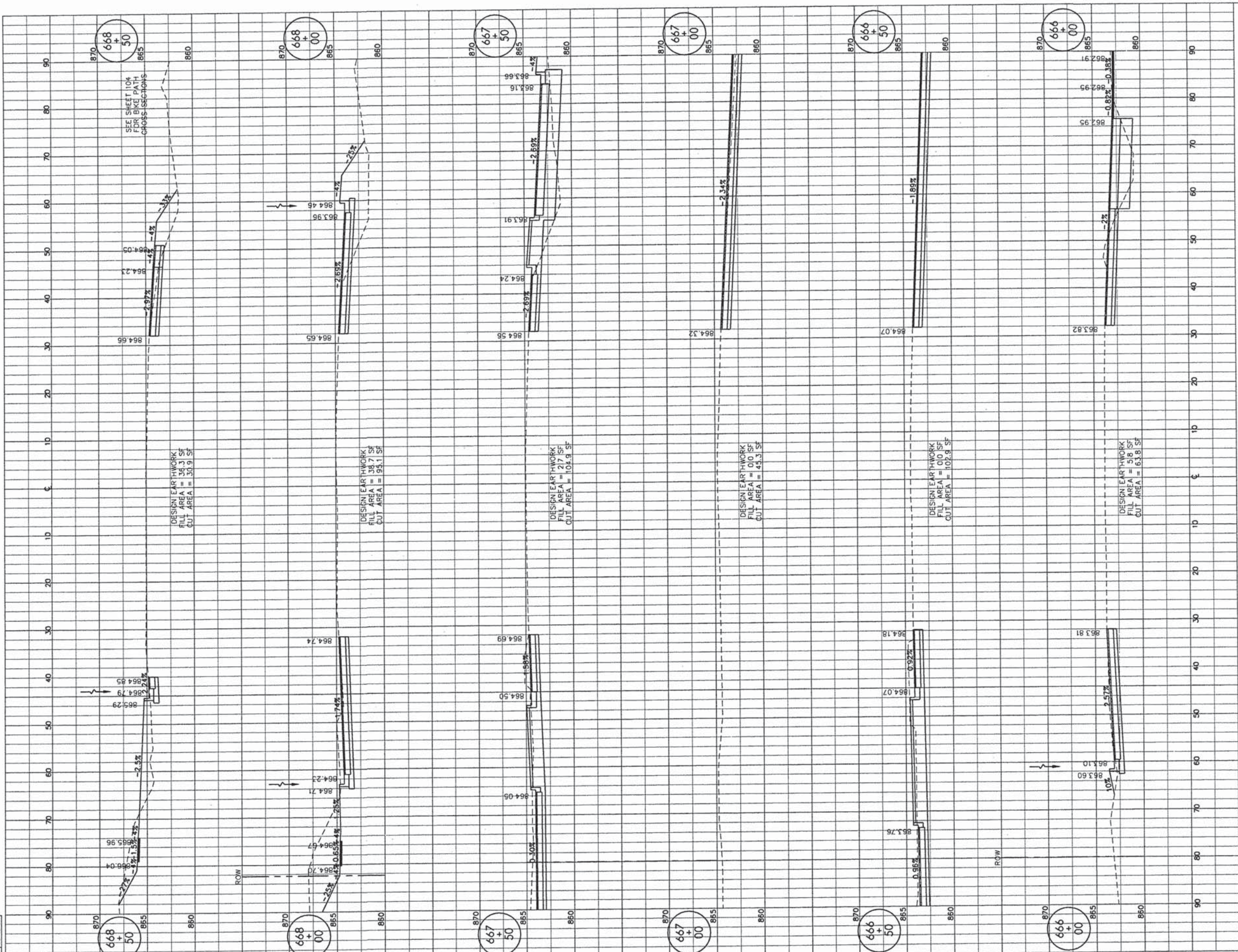
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**ARC DESIGN**  
 RESOURCES INC.

CROSS SECTIONS - EAST STATE STREET

F.A.U. RTE. 5149	SECTION 04-00345-00-CH	COUNTY WINNEBAGO	TOTAL SHEETS 129	SHEET NO. 101
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





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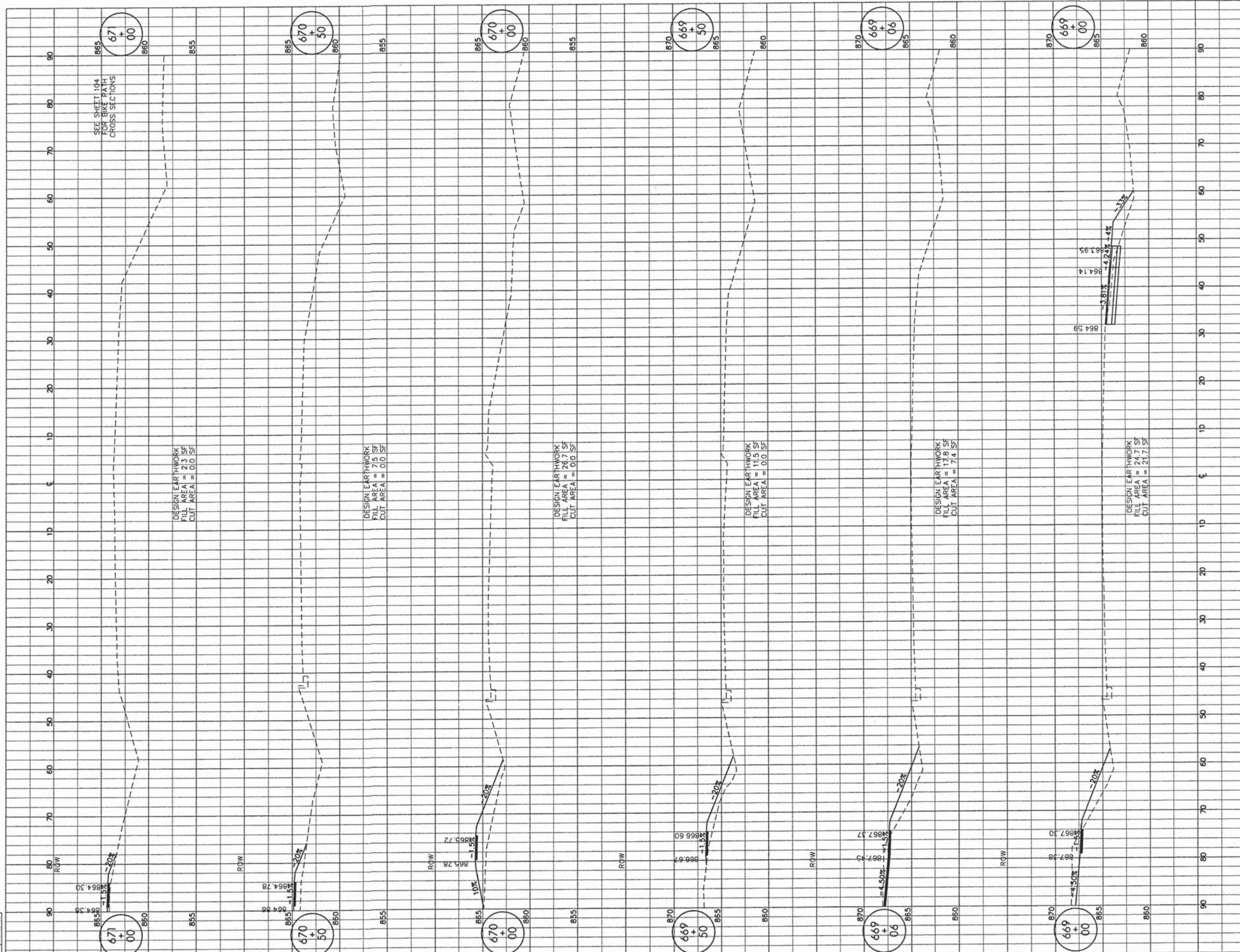
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**ARC DESIGN**  
RESOURCES INC.

CROSS SECTIONS - EAST STATE STREET

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	102
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





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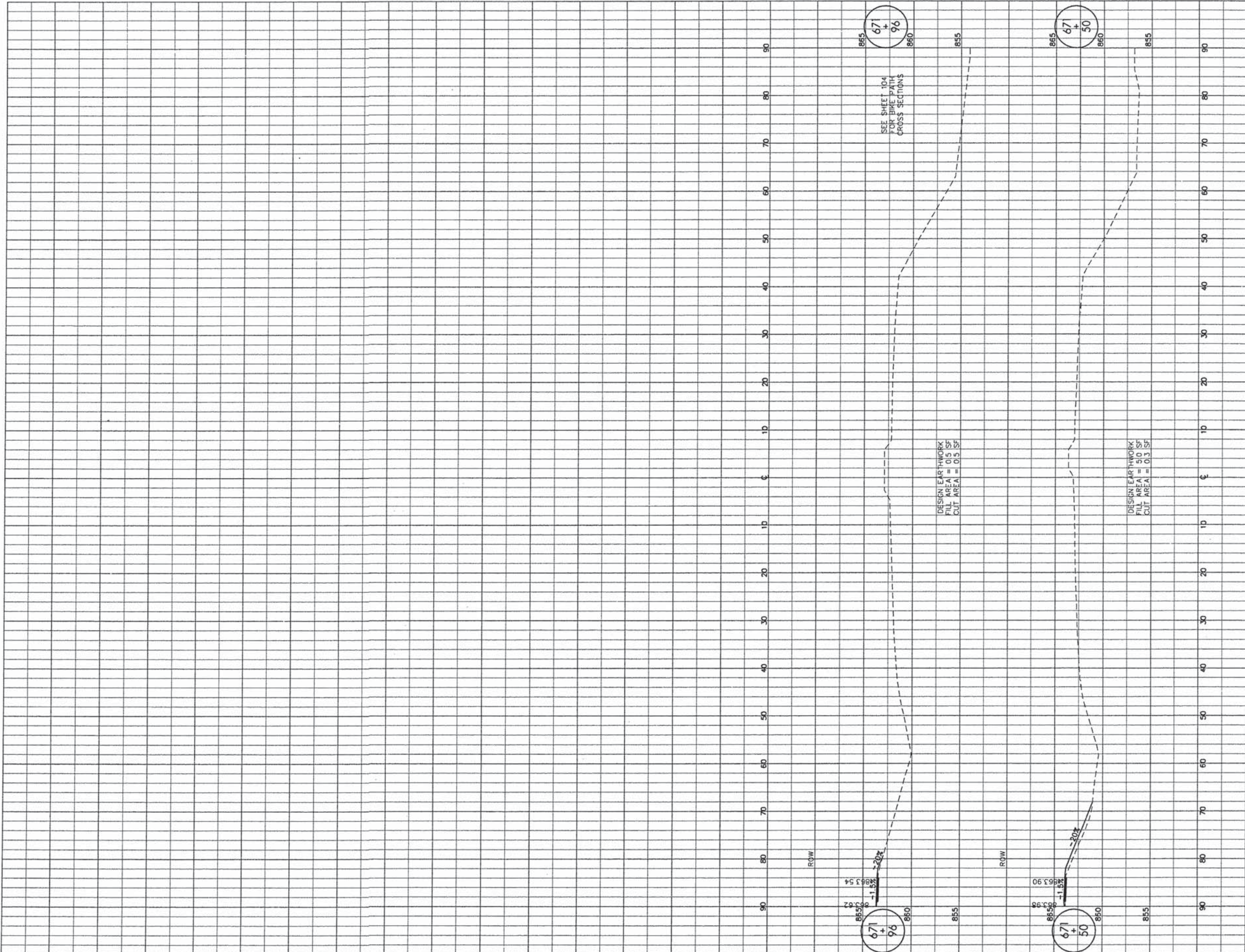
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CROSS SECTIONS - EAST STATE STREET

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	103
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





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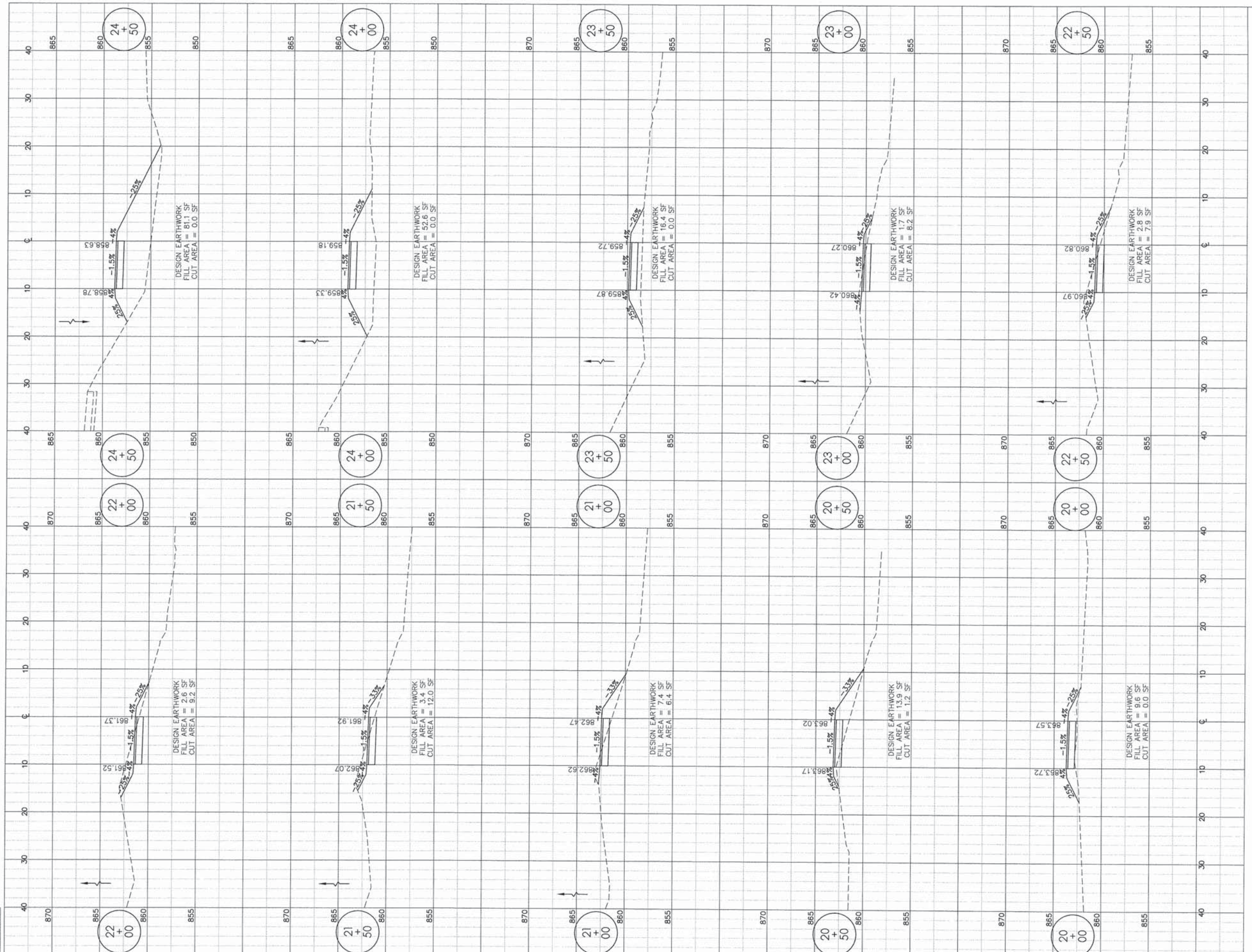
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CROSS SECTIONS - EAST STATE STREET BIKE PATH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	104

ILLINOIS FED. AID PROJECT





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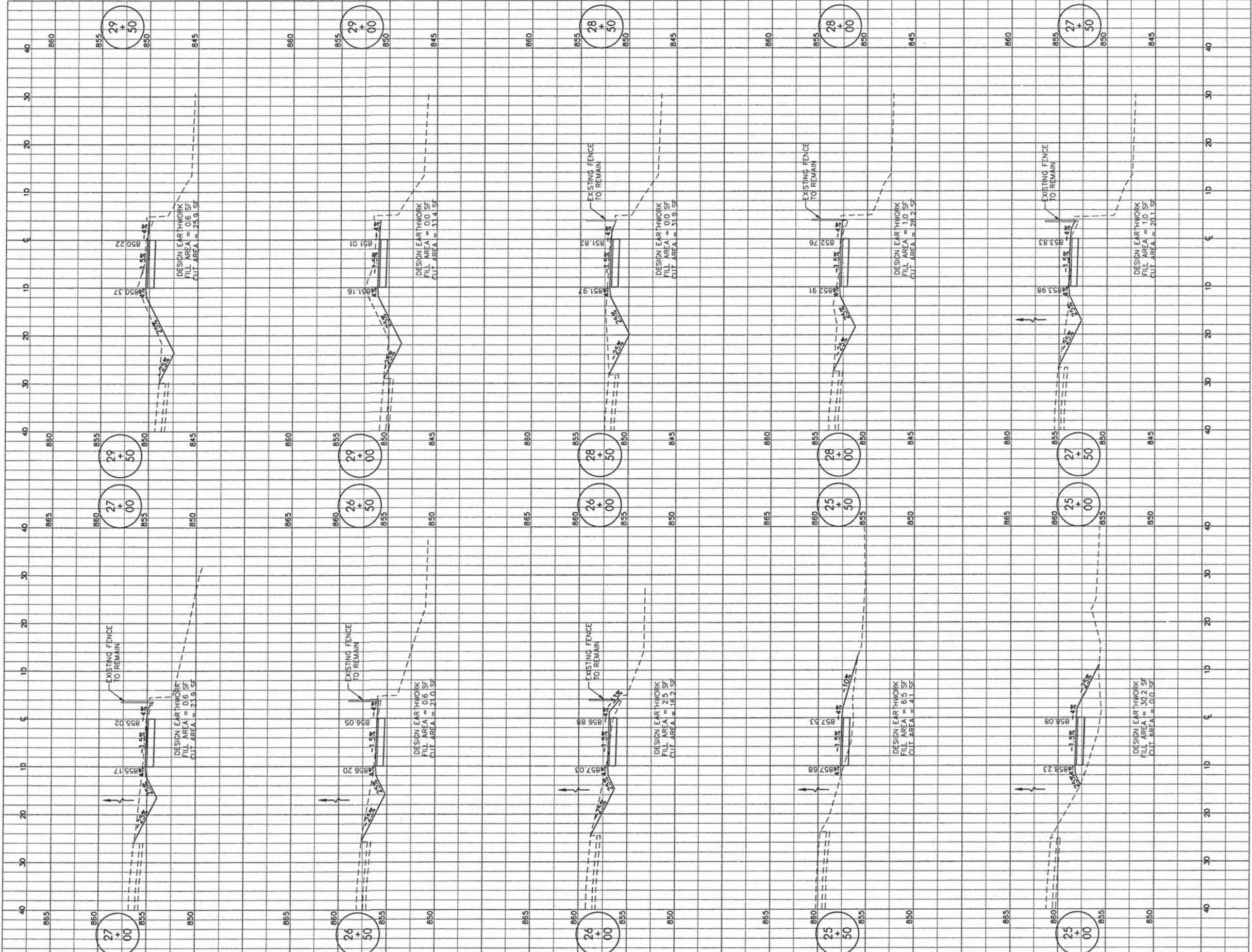
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CROSS SECTIONS - EAST STATE STREET BIKE PATH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	105
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





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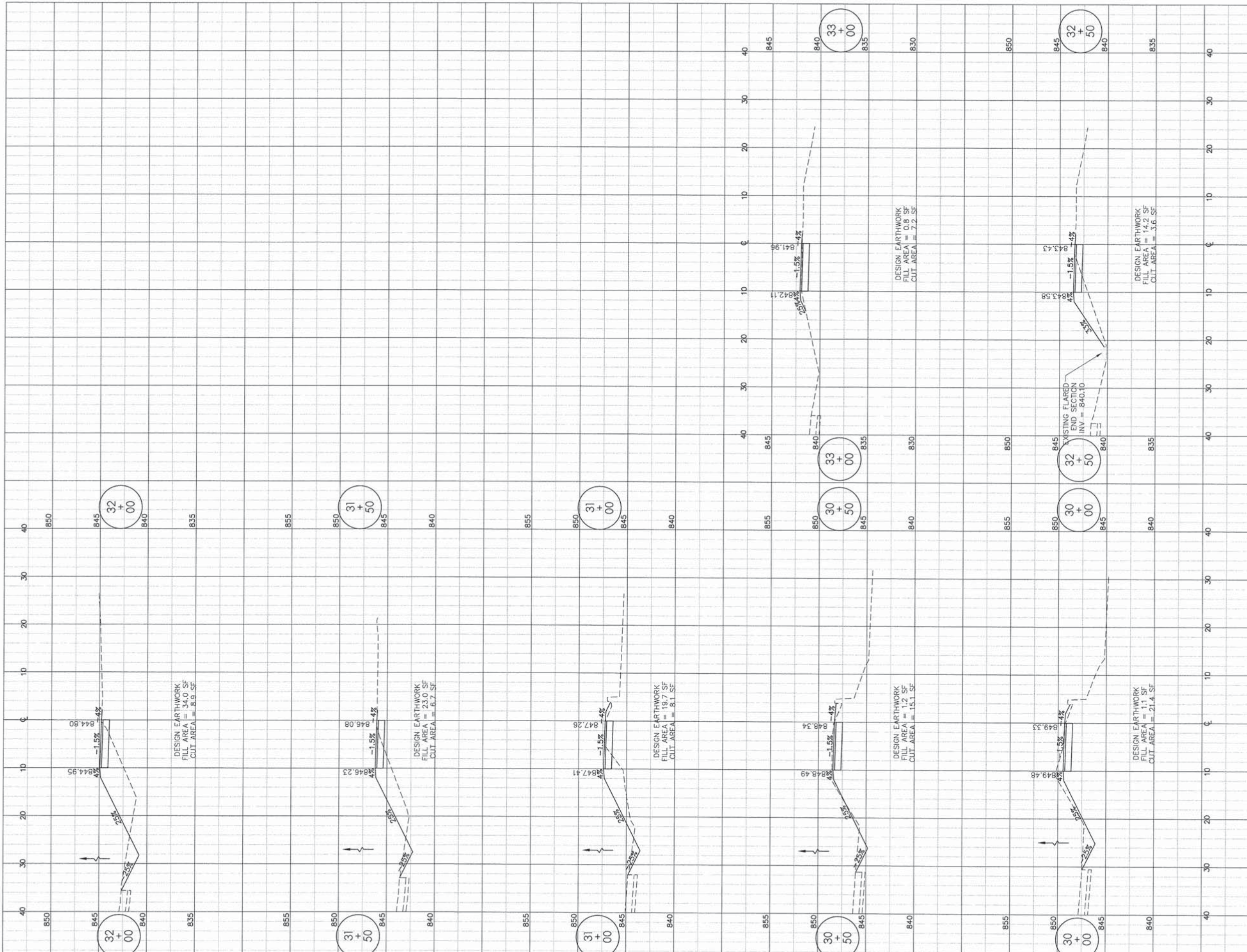
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CROSS SECTIONS - EAST STATE STREET BIKE PATH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	106
CONTRACT NO. 85616				

ILLINOIS FED. AID PROJECT





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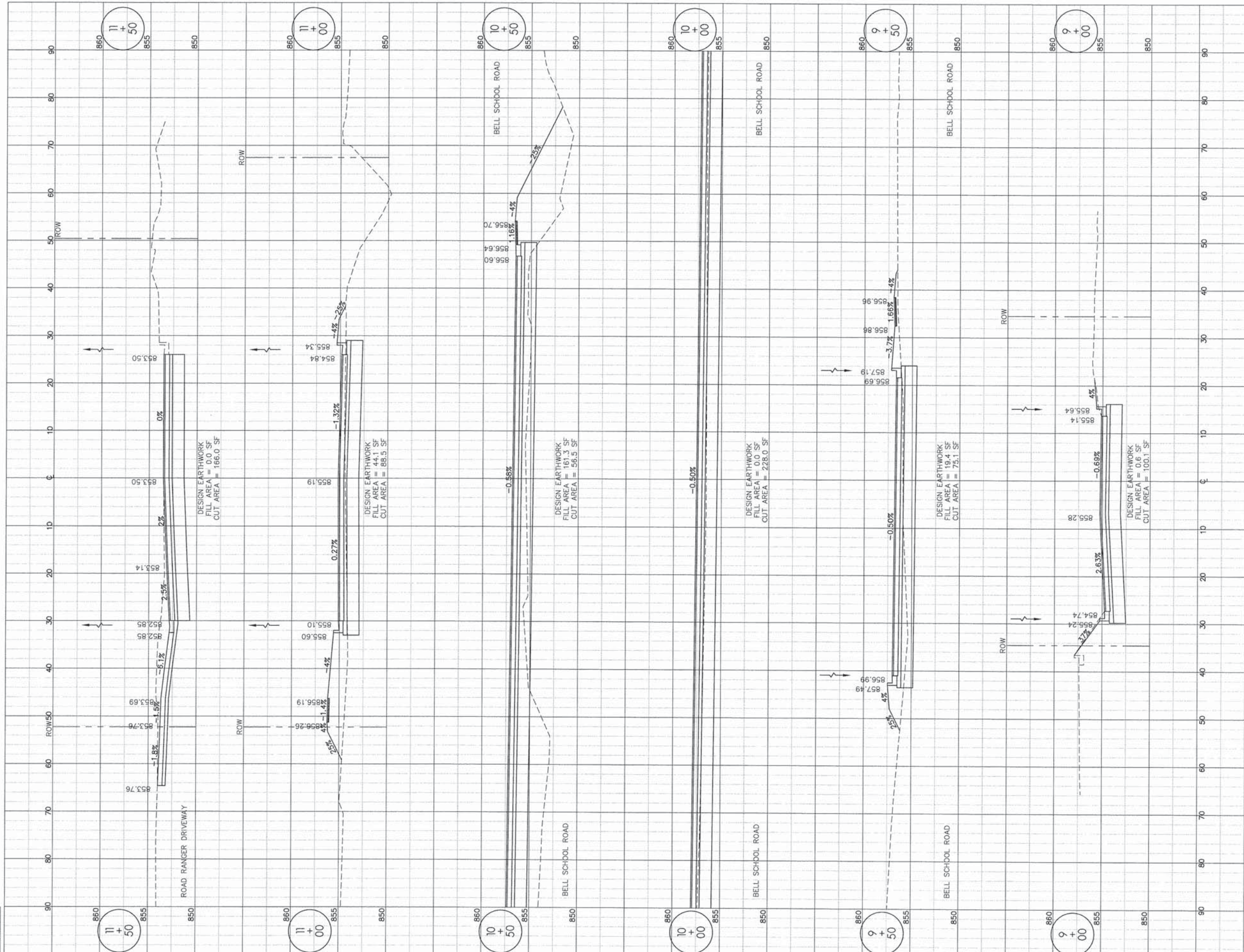
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CROSS SECTIONS - WALTON STREET

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	107
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





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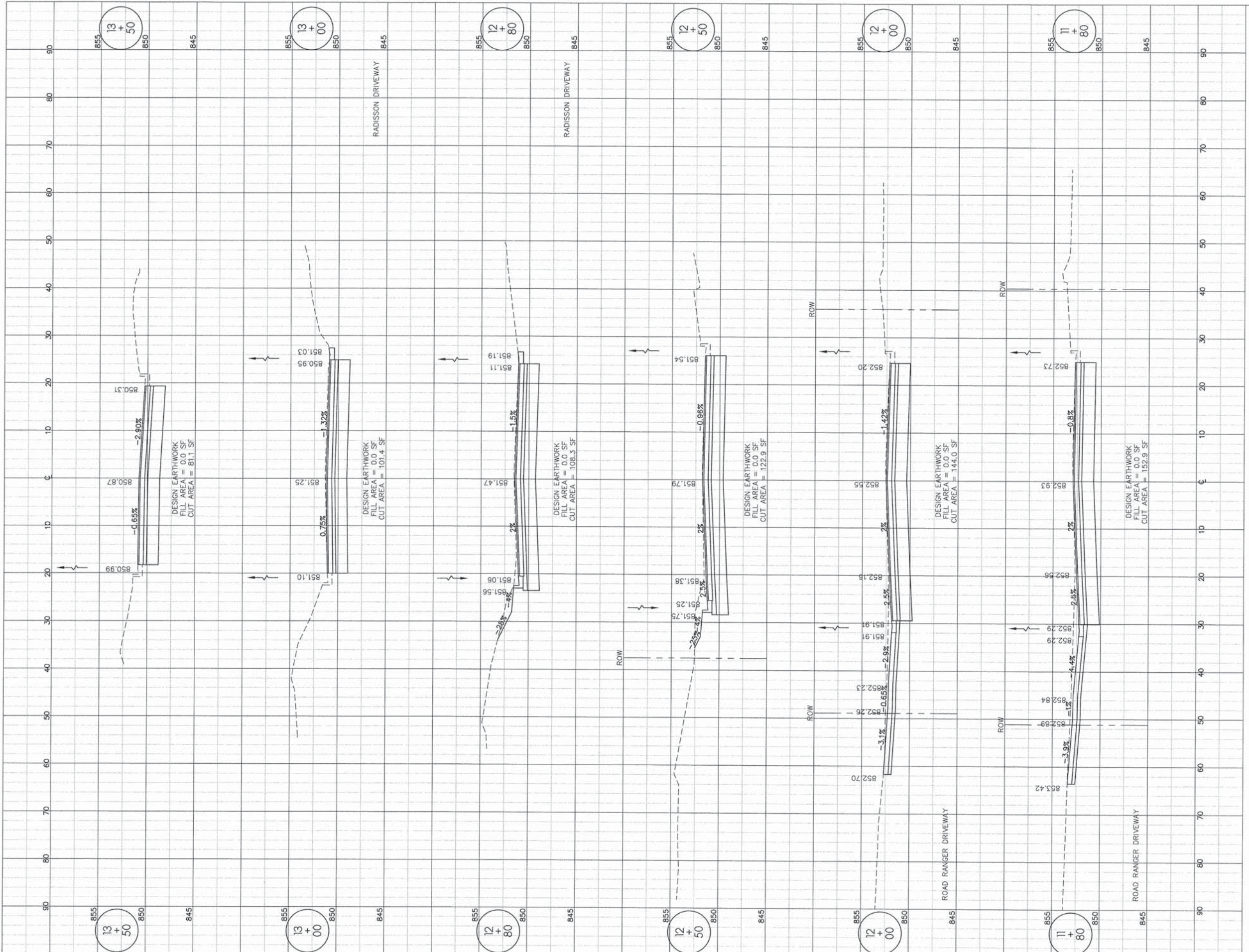
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CROSS SECTIONS - WALTON STREET

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	108
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





LAYOUT	MWH	12/10/10
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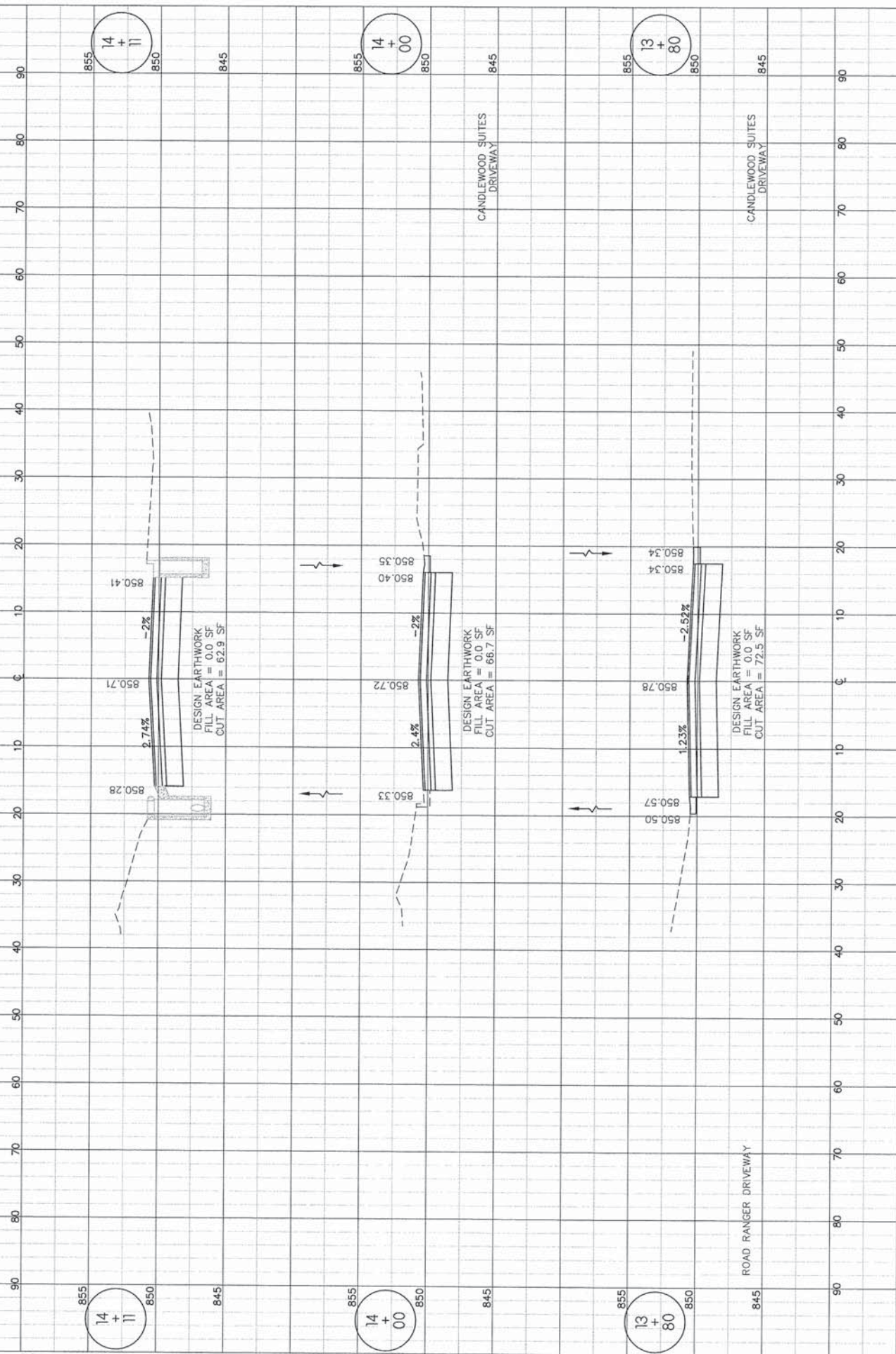
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CROSS SECTIONS - WALTON STREET

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	109
CONTRACT NO. 85616				

ILLINOIS FED. AID PROJECT





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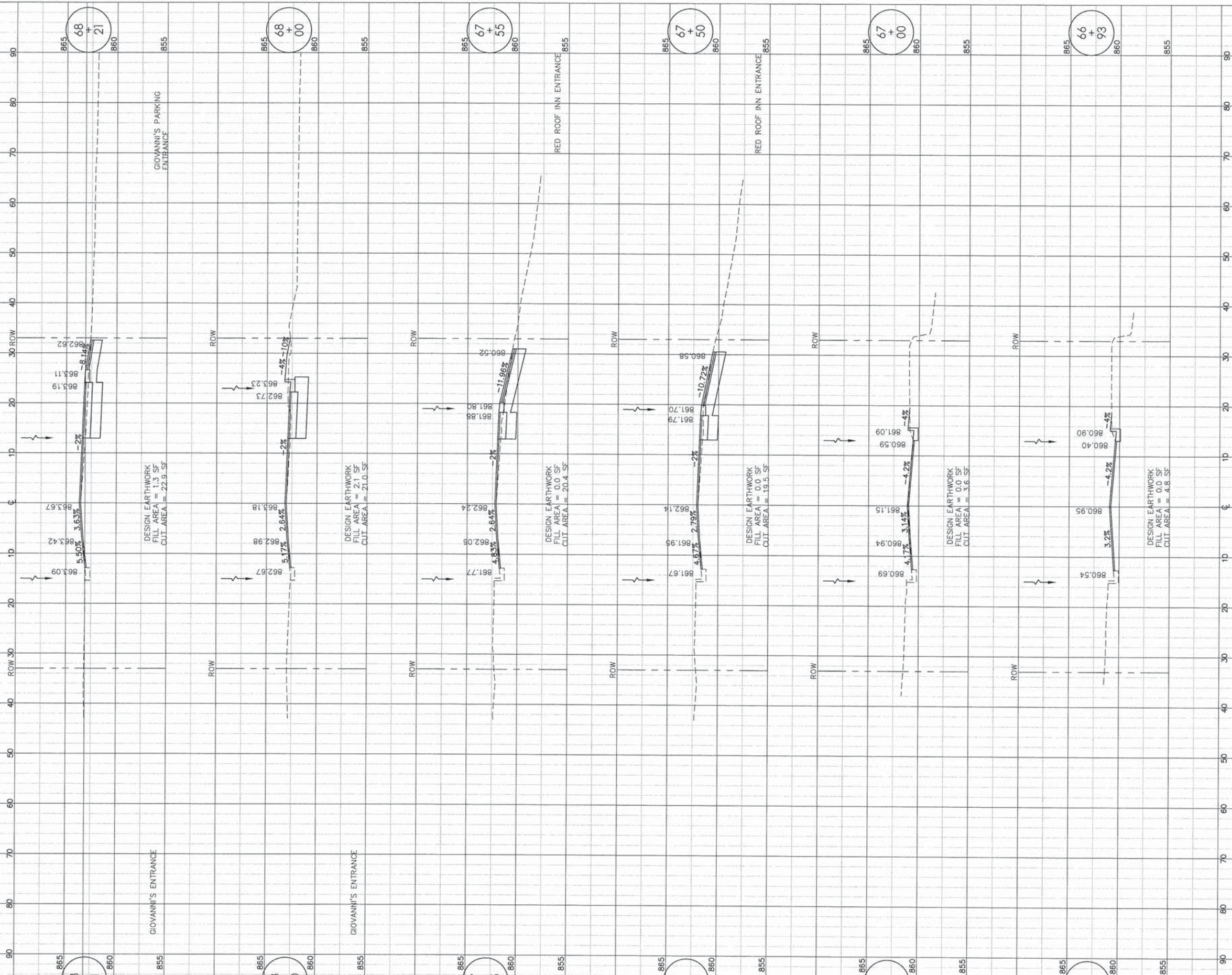
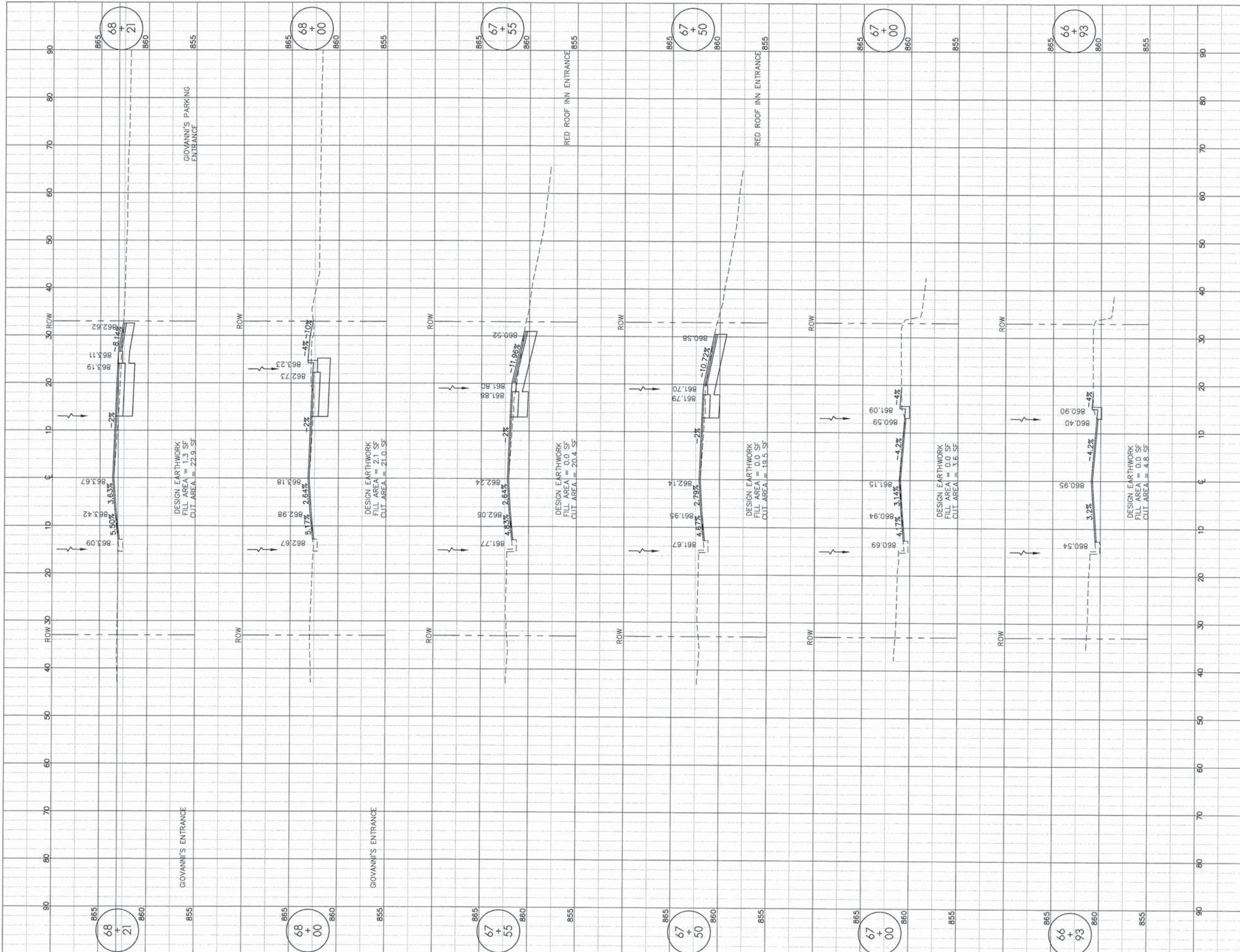
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CROSS SECTIONS - ARGUS DRIVE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	110
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





LAYOUT	MWH	12/10/10
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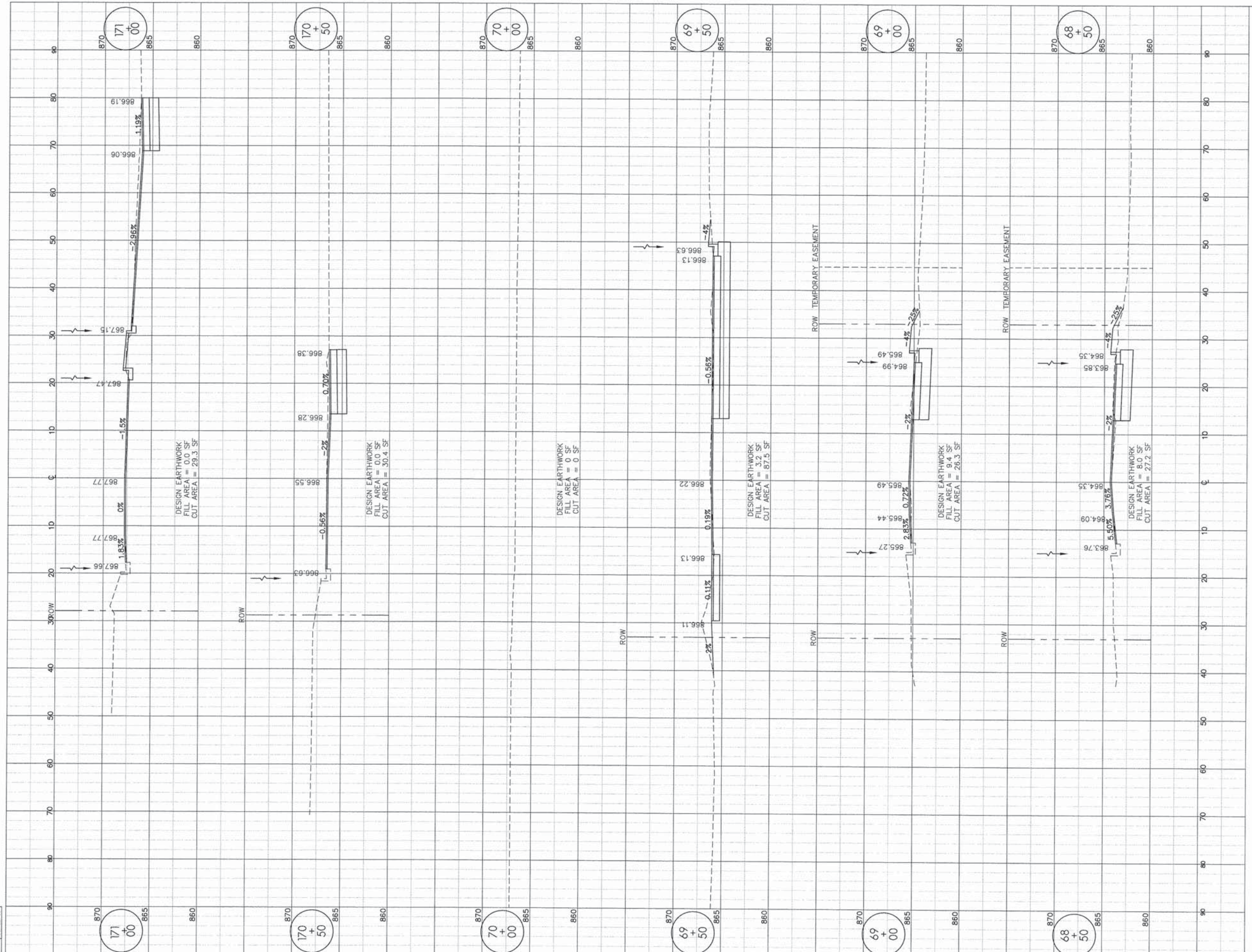
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CROSS SECTIONS - ARGUS DRIVE & POTAWATOMI TRAIL

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	III
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





LAYOUT MWH 12/10/10  
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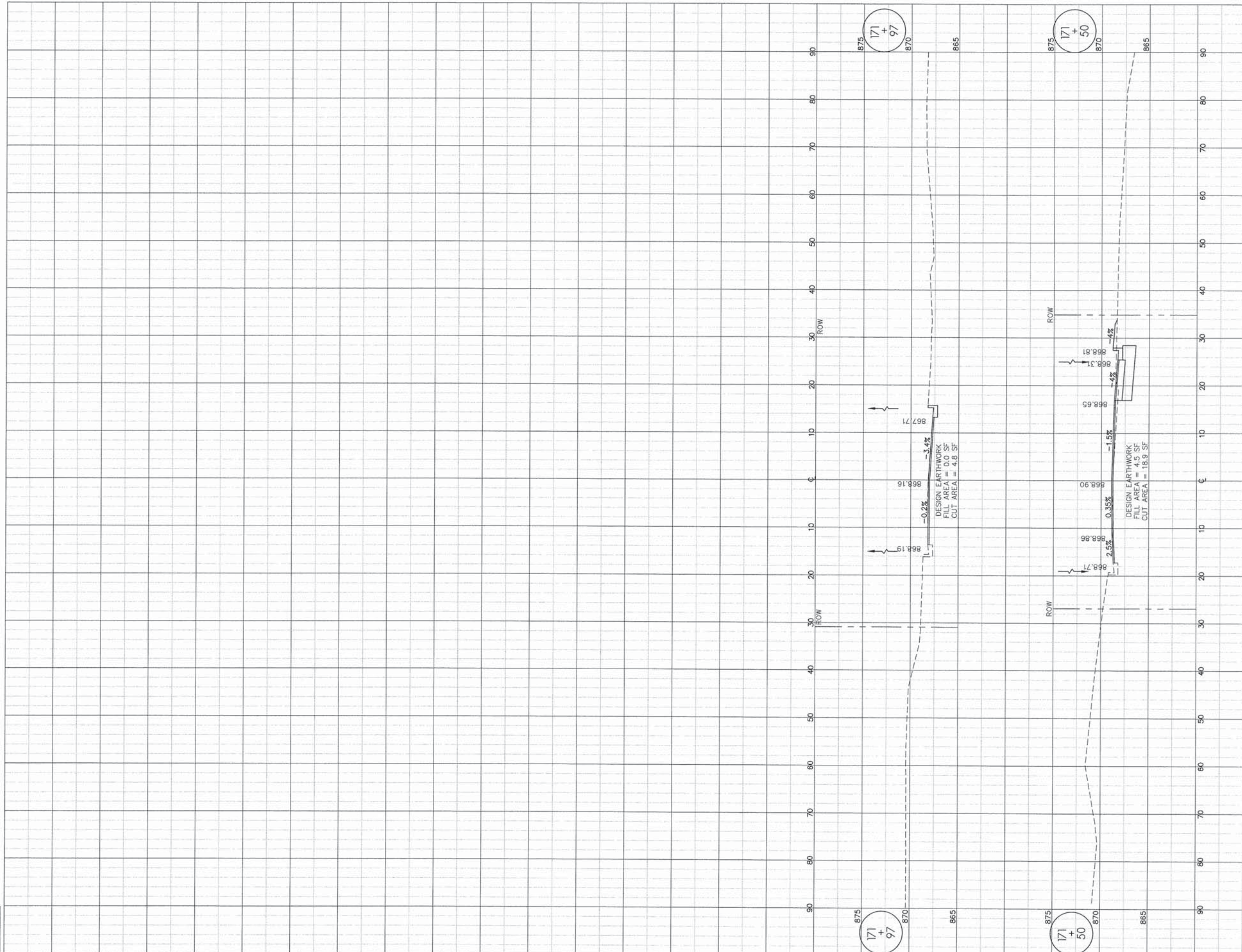
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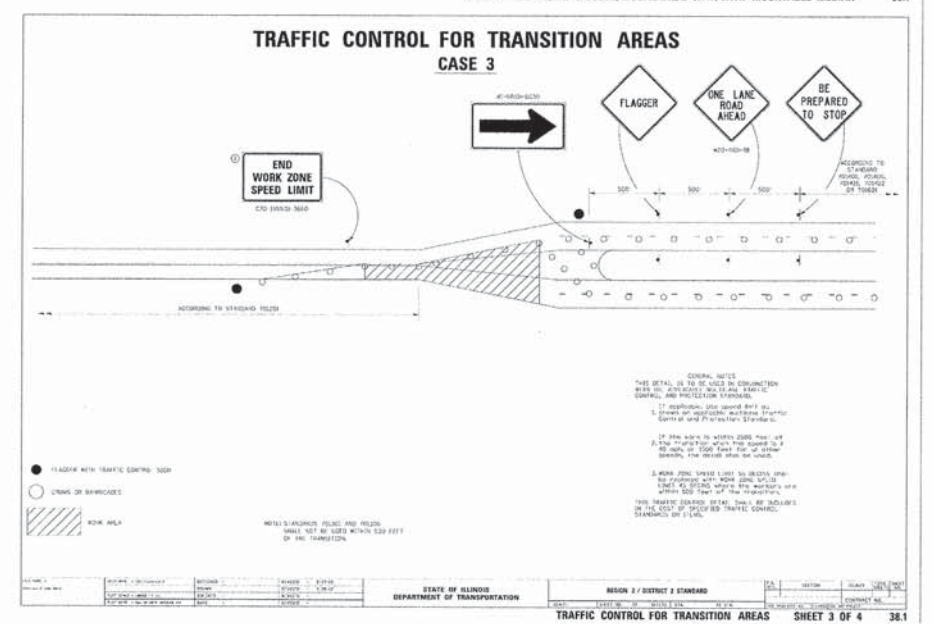
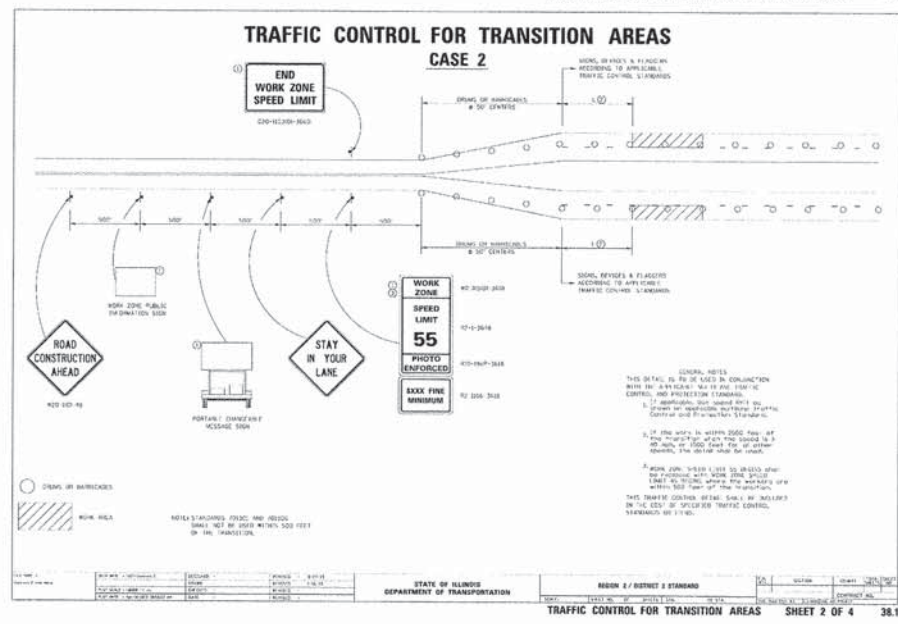
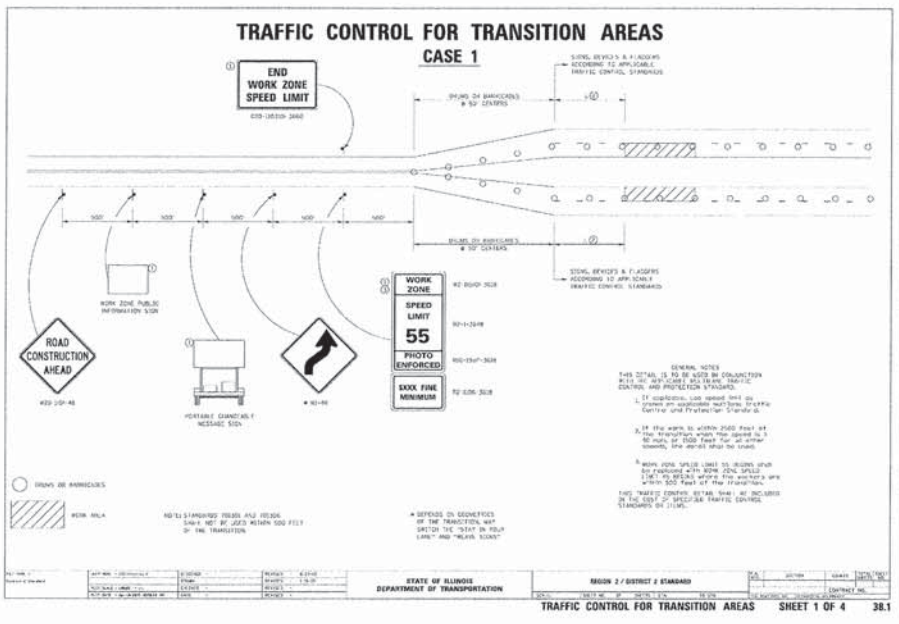
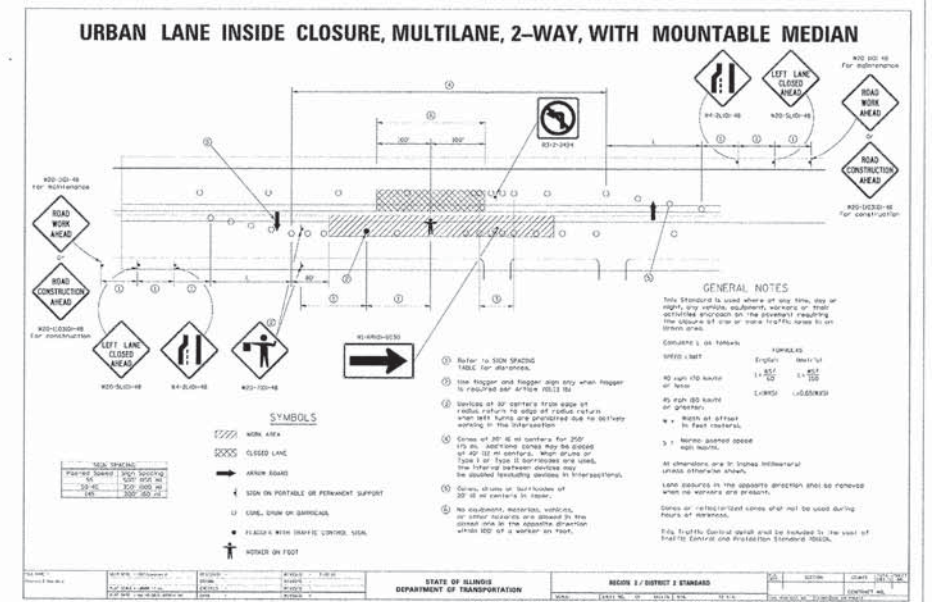
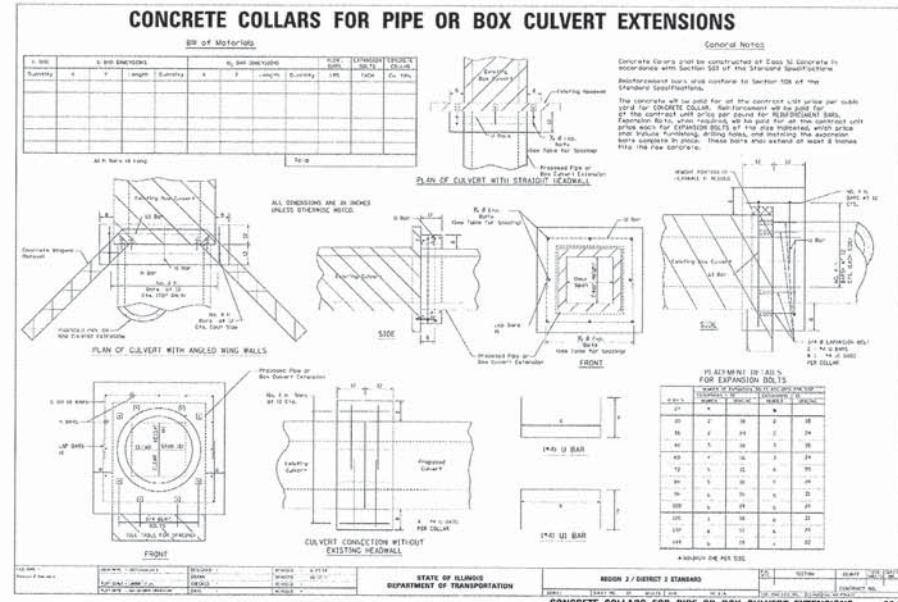
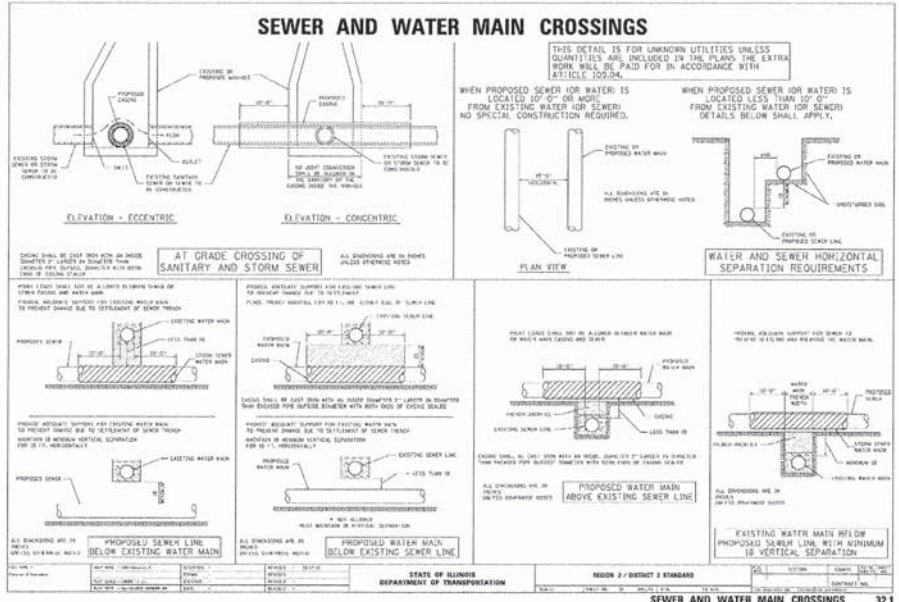
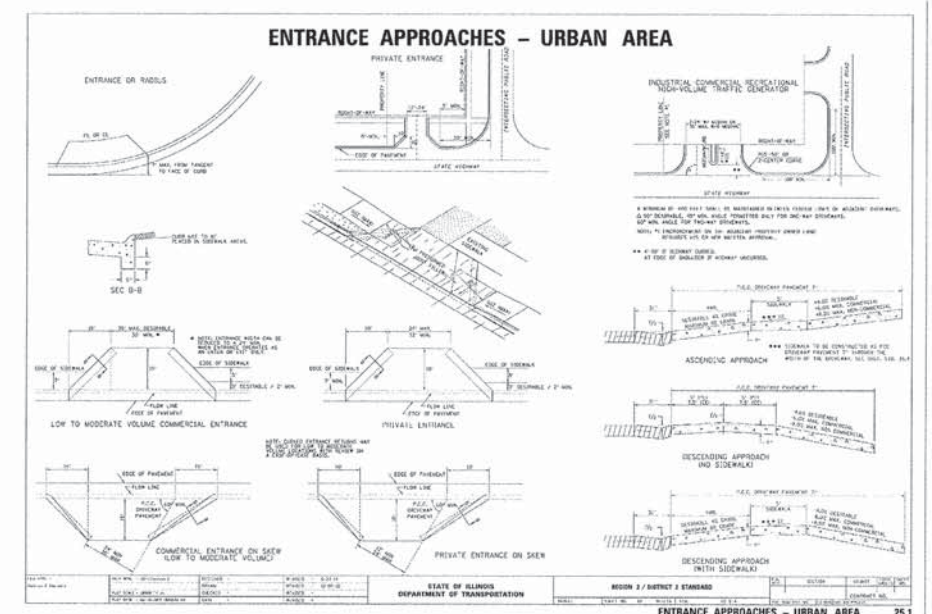
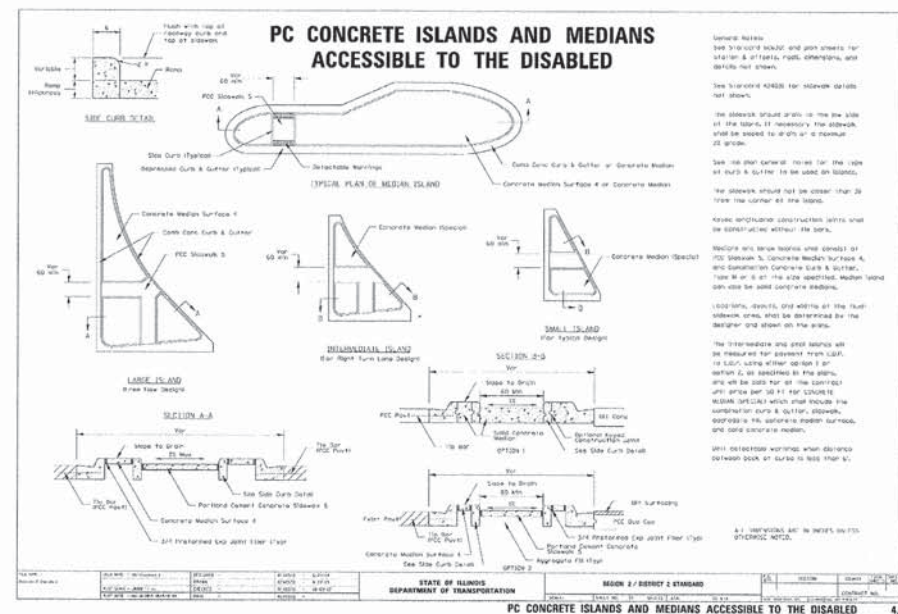
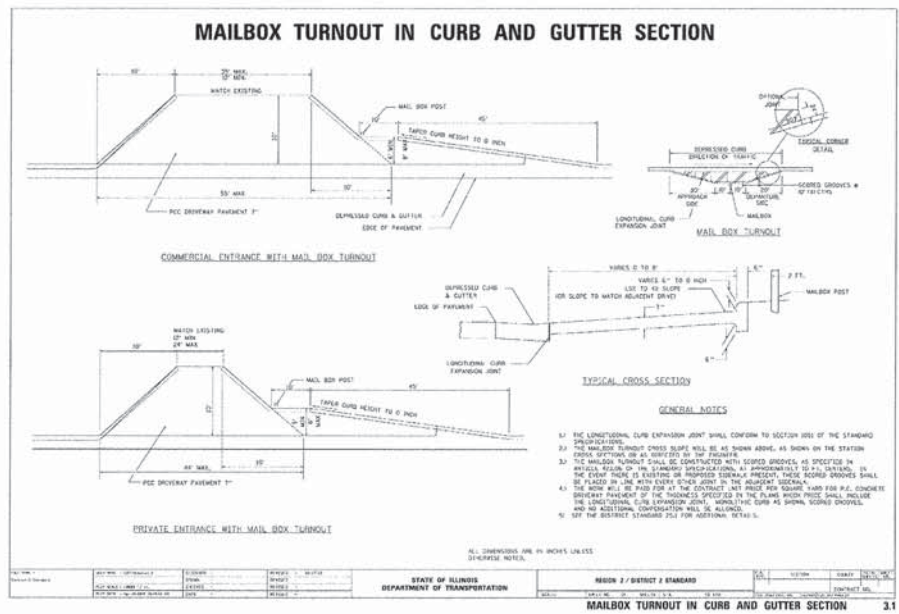


CROSS SECTIONS - ARGUS DRIVE & POTAWATOMI TRAIL

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	112
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				







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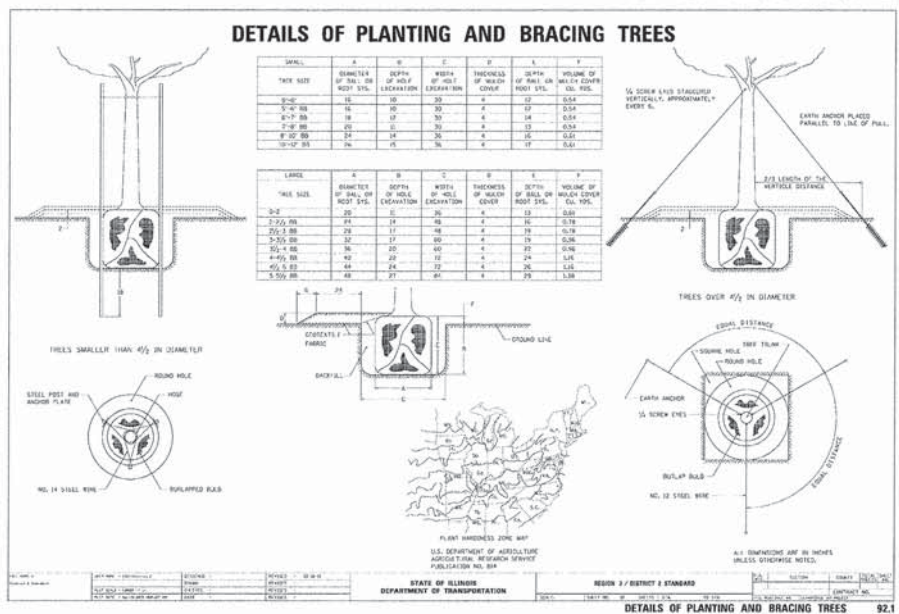
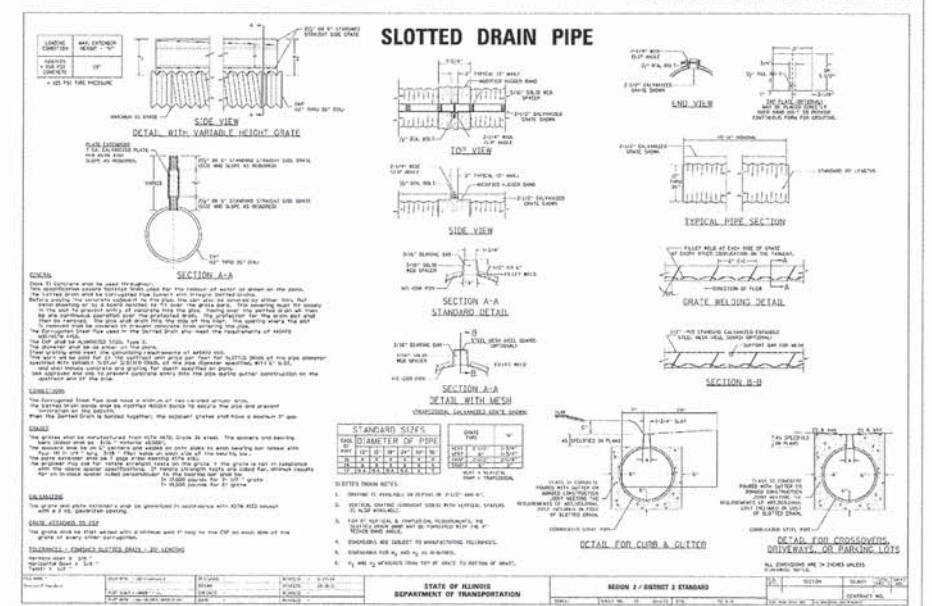
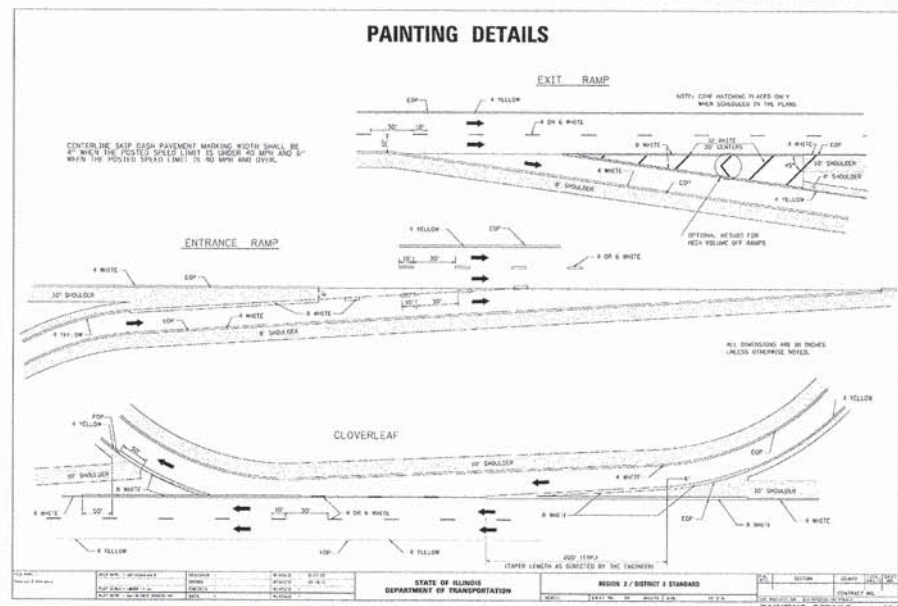
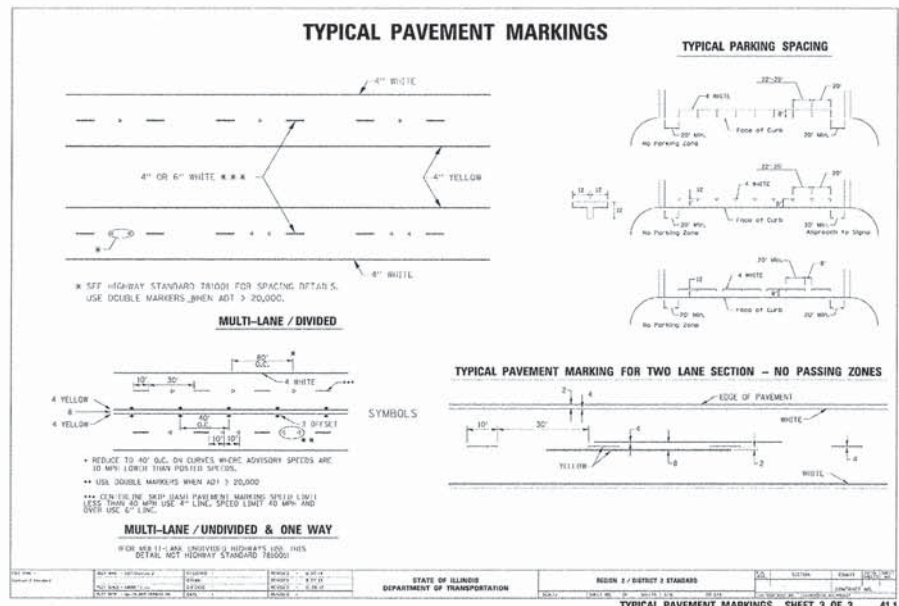
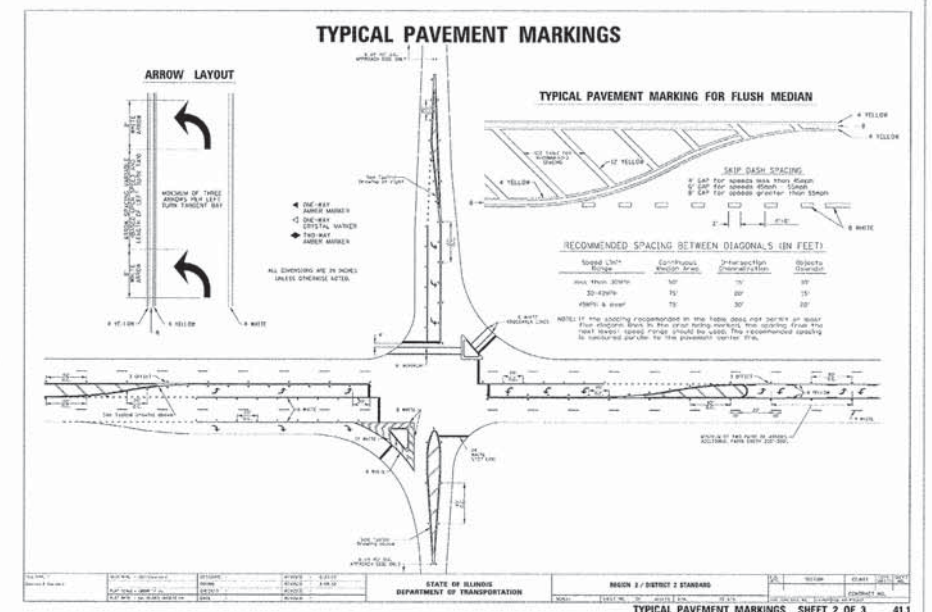
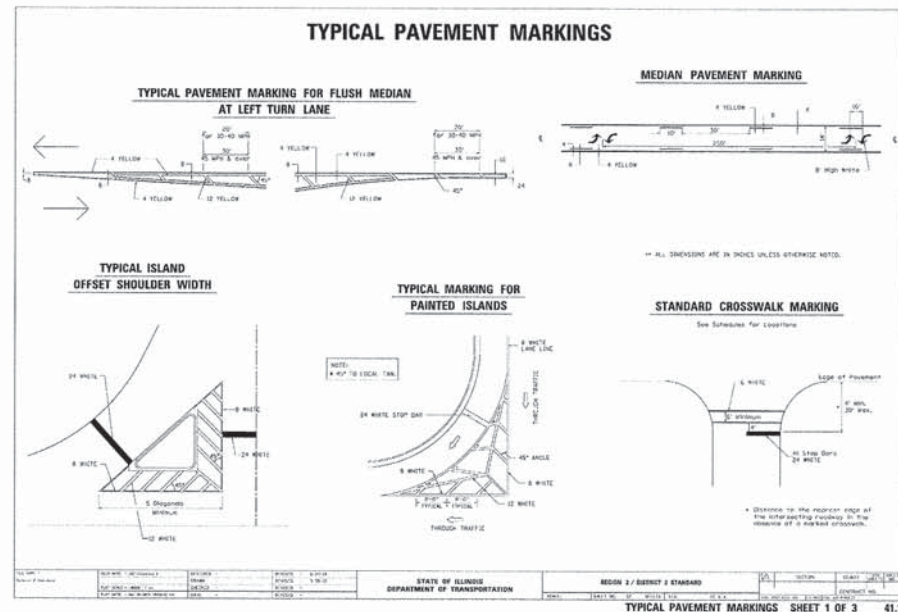
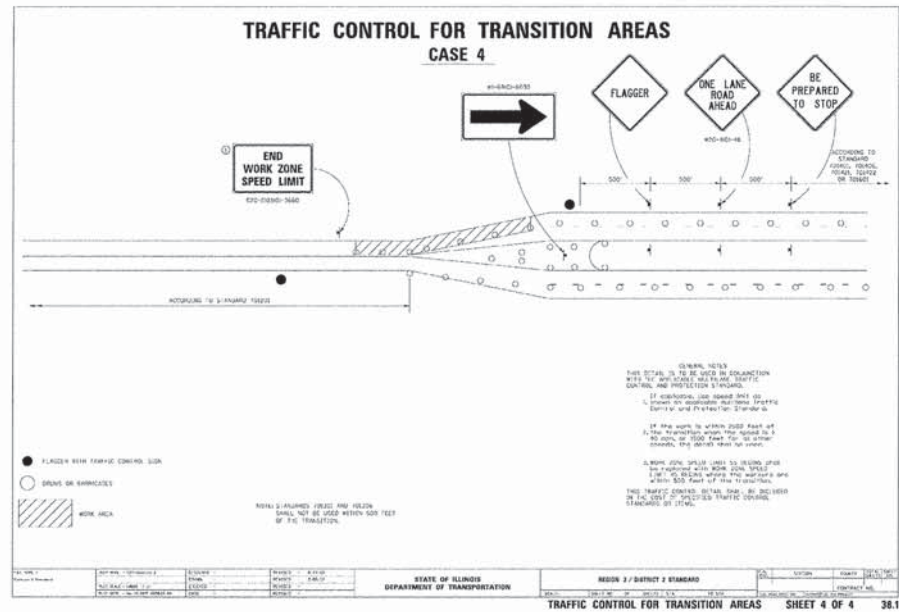
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IDOT DISTRICT 2 STANDARDS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	113
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





LAYOUT 12/10/10  
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IDOT DISTRICT 2 STANDARDS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	114
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				



### INLETS, SPECIAL

**NOTES**

THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS II CONCRETE. THE HEIGHT OF THE BOX MAY BE CONSTRUCTED & SHIPPED TO ALLOW FOR FIELD ADJUSTMENTS.

OPTIONAL CONSTRUCTION JOINT

3 SAND CUSHION IF PRECAST

NO. 4 BARS AT 12 CTS.

**DETAIL OF FRAME & GRATE**

CLASS II CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 60201 THROUGH 60204 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4000 PSI AFTER 28 DAYS.

THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL, SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE CAST IRON STEPS OR GRATE, THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.

THIS GRATE TO BE USED WITHOUT CURB BOX WHEN INLET IS IN DRIVEWAY.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 02-21-14	SECTION	COUNTY	TOTAL SHEETS
REVISED - 02-13-13			
REVISED - 02-13-13			
REVISED - 02-13-13			
SCALE: 1/8" = 1'-0"	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO.
<b>REGION 2 / DISTRICT 2 STANDARD</b>			
<b>INLETS, SPECIAL 10.2</b>			

### DOUBLE INLET, SPECIAL

**NOTES**

THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS II CONCRETE. THE HEIGHT OF THE BOX MAY BE CONSTRUCTED & SHIPPED TO ALLOW FOR FIELD ADJUSTMENTS.

OPTIONAL CONSTRUCTION JOINT

3 SAND CUSHION IF PRECAST

NO. 4 BARS AT 12 CTS.

**DETAIL OF FRAME & GRATE**

CLASS II CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 60201 THROUGH 60204 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4000 PSI AFTER 28 DAYS.

THE CONTRACT UNIT PRICE EACH FOR INLET SPECIAL SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE CAST IRON STEPS OR GRATE, THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.

THIS GRATE TO BE USED WITHOUT CURB BOX WHEN INLET IS IN DRIVEWAY.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 02-21-14	SECTION	COUNTY	TOTAL SHEETS
REVISED - 02-13-13			
REVISED - 02-13-13			
REVISED - 02-13-13			
SCALE: 1/8" = 1'-0"	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO.
<b>REGION 2 / DISTRICT 2 STANDARD</b>			
<b>DOUBLE INLET, SPECIAL 12.2</b>			

### FRAME AND GRATE FOR INLETS, SPECIAL

**NOTES**

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

R 3067 OR EQUIVALENT  
APPROXIMATE WEIGHT - 465 LBS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

R 3290-A OR EQUIVALENT  
APPROXIMATE WEIGHT OF CAST IRON FRAME & GRATE - 530 LBS.

THIS GRATE TO BE USED WITHOUT CURB BOX WHEN INLET IS IN DRIVEWAY.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 02-21-14	SECTION	COUNTY	TOTAL SHEETS
REVISED - 02-20-13			
REVISED - 02-20-13			
REVISED - 02-20-13			
SCALE: 1/8" = 1'-0"	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO.
<b>REGION 2 / DISTRICT 2 STANDARD</b>			
<b>FRAME AND GRATE FOR INLETS, SPECIAL 13.2a</b>			

### FRAME AND GRATE FOR INLETS, SPECIAL

**NOTES**

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

R 3290-A OR EQUIVALENT  
APPROXIMATE WEIGHT OF CAST IRON FRAME & GRATE - 530 LBS.

THIS GRATE TO BE USED WITHOUT CURB BOX WHEN INLET IS IN DRIVEWAY.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 02-21-14	SECTION	COUNTY	TOTAL SHEETS
REVISED - 02-20-13			
REVISED - 02-20-13			
REVISED - 02-20-13			
SCALE: 1/8" = 1'-0"	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO.
<b>REGION 2 / DISTRICT 2 STANDARD</b>			
<b>FRAME AND GRATE FOR INLETS, SPECIAL 13.2b</b>			

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

**LEGEND**

WORK AREA

LANE OPEN TO TRAFFIC

TYPE 1 OR 2 BARRICADE OR DRUM WITH FLASHING ORNING LIGHT

DRUM OR BARRICADE WITH STEADY BLANK LIGHT

SDM (SEE DETAIL)

TYPE 1 OR 2 CHECK BARRICADE WITH STEADY LIGHT BURN

**GENERAL NOTES**

CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING (DURING DAY OPERATIONS). CONES SHALL BE A MINIMUM OF 20 IN HEIGHT.

STEADY BURNING LIGHTS MAY NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE NONDIRECTIONAL.

TEMPORARY PAVEMENT MARKING SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.

THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" 40-300 24 X 24 AND 40-24 12 X 12 SHALL BE USED.

THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OF ITEMS. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 02-21-14	SECTION	COUNTY	TOTAL SHEETS
REVISED - 02-21-14			
REVISED - 02-21-14			
REVISED - 02-21-14			
SCALE: 1/8" = 1'-0"	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO.
<b>REGION 2 / DISTRICT 2 STANDARD</b>			
<b>Traffic Control and Protection at Turn Bays (To Remain Open to Traffic) 94.2</b>			

### CATCH BASIN OR INLETS TO BE ADJUSTED OR RECONSTRUCTED (DETAILS FOR CURB & GUTTER REPLACEMENT)

**NOTES**

CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, STANDARD 606001 AND THIS DRAWING.

CLASS II CONCRETE SHALL BE USED THROUGHOUT. A HOLE 1-1/2" IN DIAMETER AND 9" DEEP SHALL BE DRILLED IN THE EXISTING CONCRETE CURB AS SHOWN. A 1-1/4" X 18" SMOOTH DOWEL BAR SHALL BE GROUDED IN THE HOLE LONGITUDINALLY.

JOINTS OF A TYPE SIMILAR TO THAT IN THE UNDERLYING PAVEMENT EXPANSION OR CONTRACTION SHALL BE INSTALLED IN THE CONCRETE CURB IN ALIGNMENT WITH THE JOINTS IN THE PAVEMENT.

THE PROPOSED CONFIGURATION OF THE CURB AND GUTTER SHALL MATCH THAT REMOVED.

THE LOCATION OF THE DOWEL BAR SHALL BE DETERMINED BY THE ENGINEER.

ALL EXISTING TIE BARS IN EDGE OF PAVEMENT SLAB THRU REPLACEMENT AREA SHALL BE CUT OFF.

THE WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS AND INCLUDES THE REMOVAL AND REPLACEMENT OF SOD, CONCRETE PAVEMENT AND/OR CURB AND GUTTER ADJACENT TO CATCH BASINS OR INLETS TO BE ADJUSTED OR RECONSTRUCTED AND SHALL BE INCLUDED IN THE PRICE ITEM OF CATCH BASINS OR INLETS TO BE ADJUSTED OR RECONSTRUCTED AS SPECIFIED.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

WHEN "A" IS GREATER THAN 2'-0", 2-NO. 4 BARS SHALL BE PLACED AS SHOWN.

SAME REPAIR AS INDICATED ON OTHER SIDE OF FRAME AND GRATE.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 02-20-11	SECTION	COUNTY	TOTAL SHEETS
REVISED - 02-20-11			
REVISED - 02-20-11			
REVISED - 02-20-11			
SCALE: 1/8" = 1'-0"	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO.
<b>REGION 2 / DISTRICT 2 STANDARD</b>			
<b>CATCH BASIN OR INLETS TO BE ADJUSTED OR RECONSTRUCTED 17.4</b>			

12/10/10  
 02/12/13  
 02/12/13  
 02/12/13

FILE NAME =	USER NAME = #USER#	DESIGNED - DPA	REVISED - -
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		DATE - #DATE#	REVISED - -

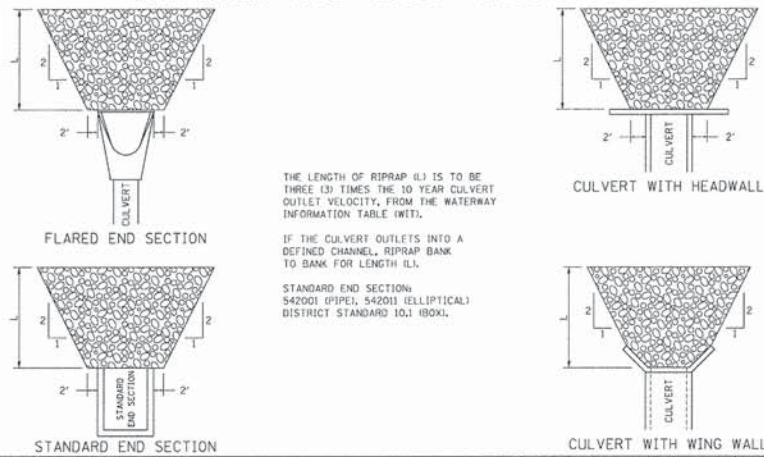


IDOT DISTRICT 2 STANDARDS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	115
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				



# RIPRAP AT END SECTIONS



THE LENGTH OF RIPRAP (L) IS TO BE THREE (3) TIMES THE 10 YEAR CULVERT OUTLET VELOCITY, FROM THE WATERWAY INFORMATION TABLE (WIT).

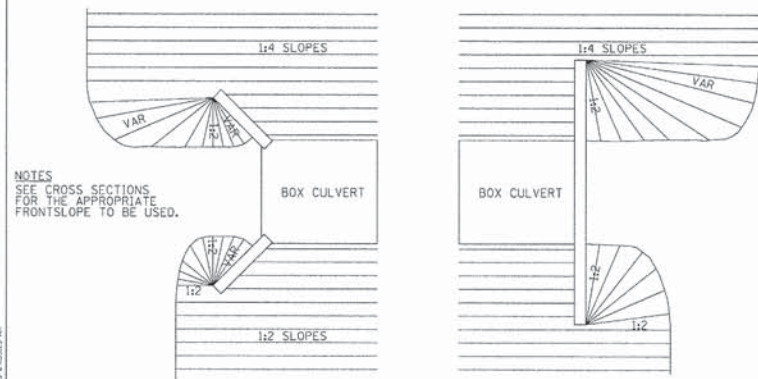
IF THE CULVERT OUTLETS INTO A DEFINED CHANNEL, RIPRAP BANK TO BANK FOR LENGTH (L).

STANDARD END SECTION: 542001 (PIPE), 542011 (ELLIPTICAL), DISTRICT STANDARD 10.1 (BOX).

REVISED - 11-12-14	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 2-10-14					
REVISED -					
REVISED -					

RIPRAP AT END SECTIONS 19.4

# GRADING AROUND WINGWALLS

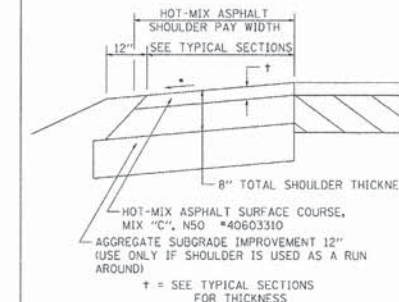


NOTES: SEE CROSS SECTIONS FOR THE APPROPRIATE FRONTSLOPE TO BE USED.

REVISED - 5-27-09	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED -					
REVISED -					
REVISED -					

GRADING AROUND WINGWALLS 20.4

# HOT-MIX ASPHALT SHOULDER



GENERAL NOTES: THE HOT-MIX ASPHALT SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 \*40603310. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 \*40603310 AND SQUARE YARD FOR HOT-MIX ASPHALT SHOULDERS OF THE THICKNESS SPECIFIED.

USE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 \*40603310. WHEN RESURFACING EXISTING HOT-MIX ASPHALT SHOULDERS, THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 \*40603310.

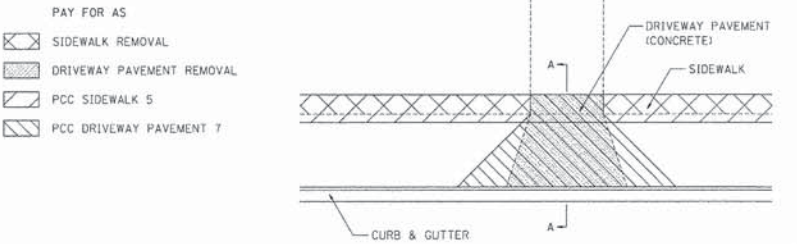
REMOVAL OF MATERIAL FOR PLACEMENT OF THE HOT-MIX ASPHALT SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

\*4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

REVISED - 3-12-13	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED -					
REVISED -					
REVISED -					

HOT-MIX ASPHALT SHOULDER 23.4a

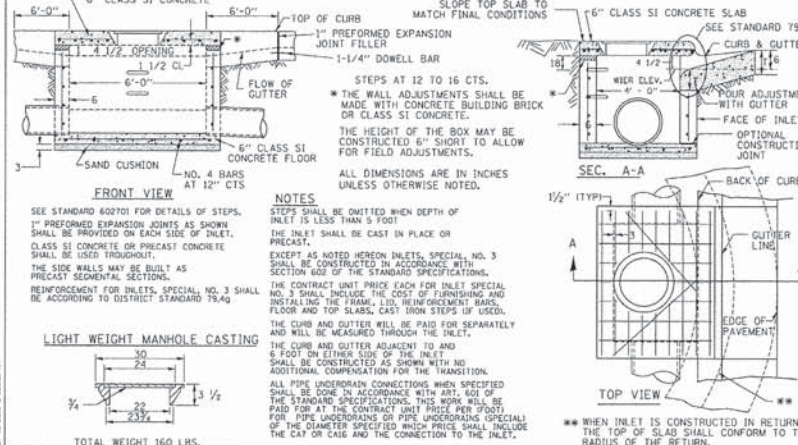
# SIDEWALK AND DRIVEWAY PAVEMENT PAY AREAS



REVISED - 6-27-14	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 10-03-11					
REVISED -					
REVISED -					

SIDEWALK AND DRIVEWAY PAVEMENT PAY AREAS 35.4

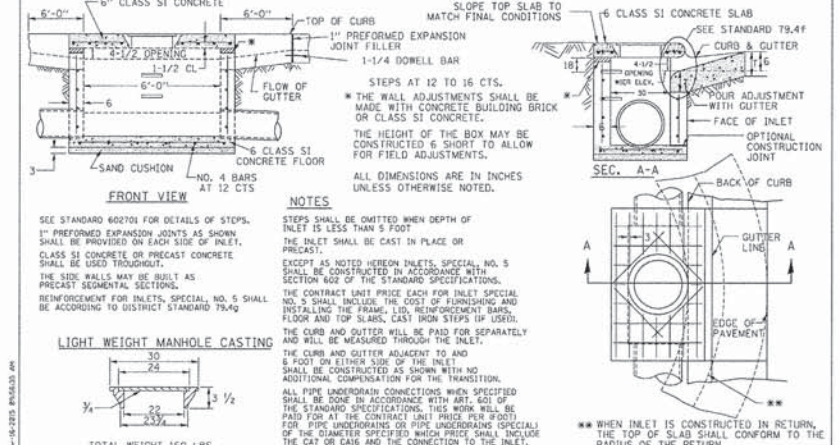
# INLETS, SPECIAL, NO. 3



REVISED - 8-27-13	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 10-03-11					
REVISED -					
REVISED -					

INLETS, SPECIAL, NO. 3 79.4

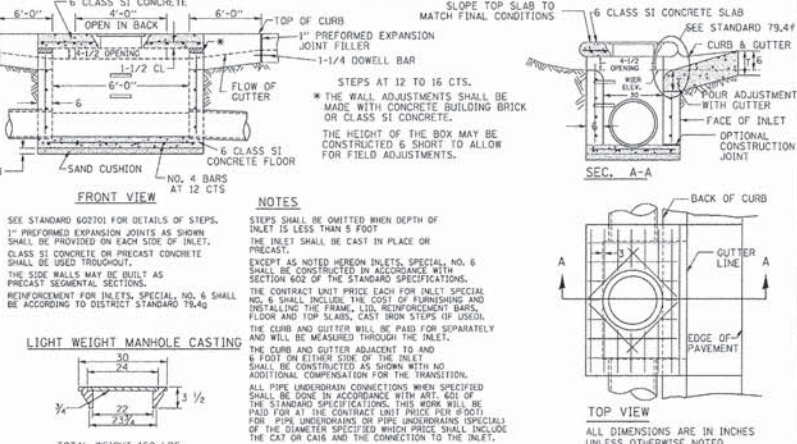
# INLETS, SPECIAL, NO. 5



REVISED - 8-27-13	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 10-04-11					
REVISED -					
REVISED -					

INLETS, SPECIAL, NO. 5 79.4b

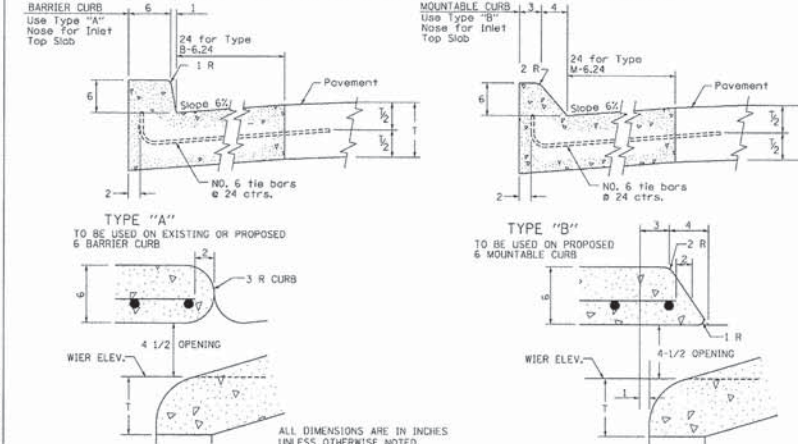
# INLETS, SPECIAL, NO. 6



REVISED - 8-27-13	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 10-05-11					
REVISED -					
REVISED -					

INLETS, SPECIAL, NO. 6 79.4c

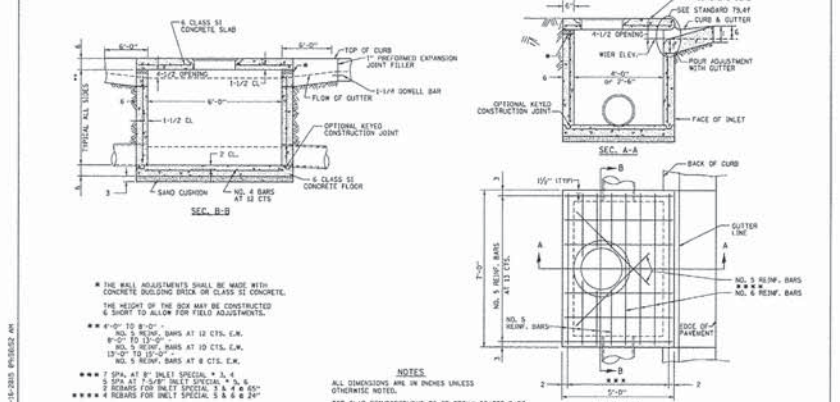
# NOSE TYPE FOR INLET TOP SLAB



REVISED - 4-14-15	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 10-05-11					
REVISED -					
REVISED -					

NOSE TYPE FOR INLET TOP SLAB 79.4f

# INLETS, SPECIAL, NO. 3, 4, 5, 6 REINFORCEMENT DETAIL



REVISED - 8-07-13	REGION 2 / DISTRICT 2 STANDARD	F.A. RITE	SECTION	COUNTY	TOTAL SHEET NO.
REVISED - 10-05-11					
REVISED -					
REVISED -					

INLETS, SPECIAL, NO. 3, 4, 5, 6 REINFORCEMENT DETAIL 79.4g

LAYOUT 12/10/10  
DRAWN MWH 02/12/13  
REVIEWED DPA 02/12/13

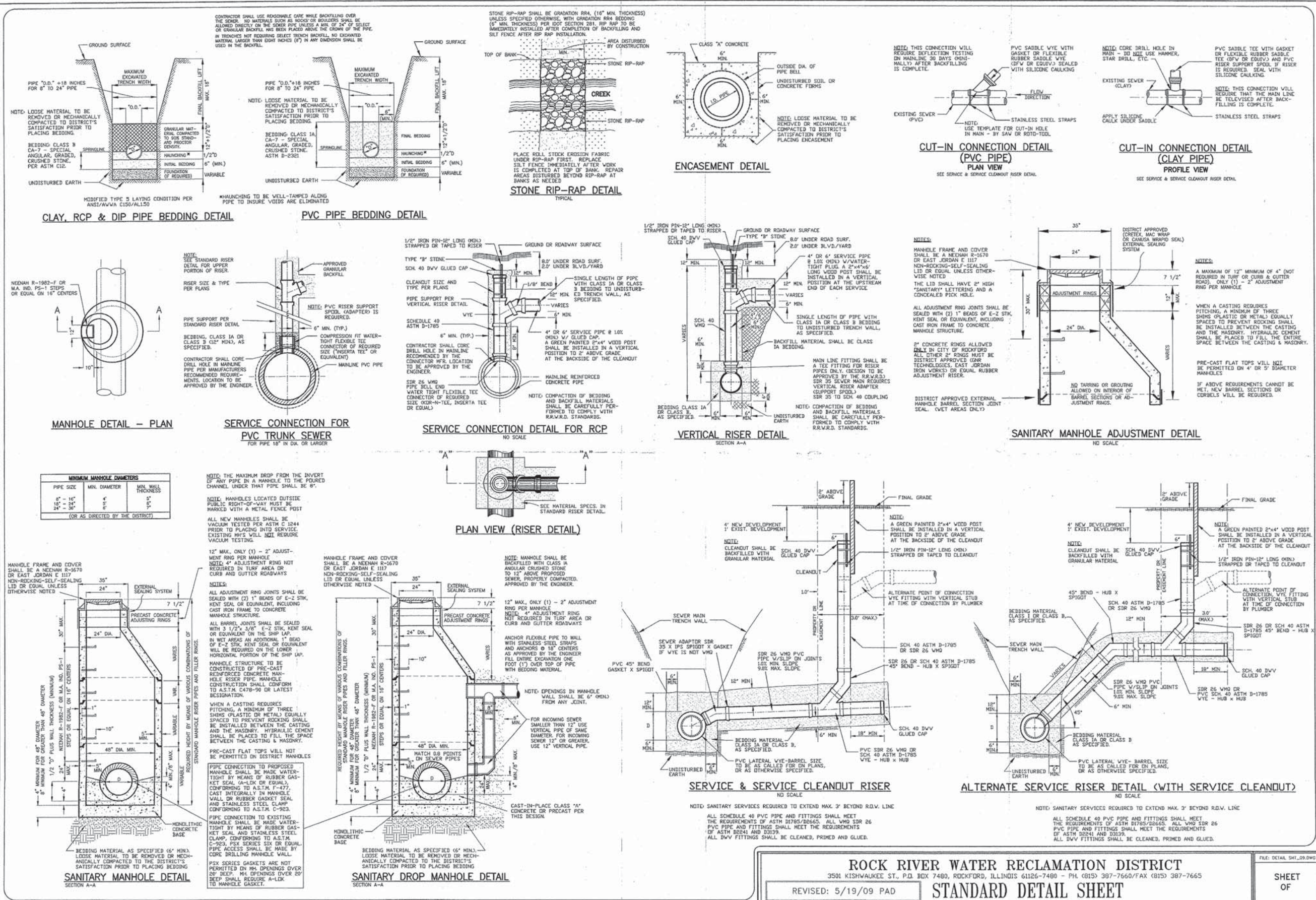
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		DRAWN - MWH	REVISED -
		CHECKED - DPA	REVISED -
		DATE - #DATE#	REVISED -



IDOT DISTRICT 2 STANDARDS

F.A.U. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	129	116
CONTRACT NO. 85616				
ILLINOIS FED. AID PROJECT				





**ROCK RIVER WATER RECLAMATION DISTRICT**  
 3501 KISHWAUKEE ST., P.O. BOX 7480, ROCKFORD, ILLINOIS 61126-7480 - PH. (815) 387-7660/FAX (815) 387-7665  
 REVISED: 5/19/09 PAD **STANDARD DETAIL SHEET**








FILE: DETAIL\_SHI\_09.DWG  
 SHEET OF

12/10/10	LAYOUT
02/12/13	MRH
02/12/13	DRN
02/12/13	REVIEWED
02/12/13	DPA

FILE NAME =	USER NAME = #USER#	DESIGNED - DPA	REVISED -	<b>ARC DESIGN</b> RESOURCES INC.	<b>ROCK RIVER WATER RECLAMATION DISTRICT</b> STANDARD DETAILS	F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILES#	PLOT SCALE = #SCALE#	DRAWN - MWH	REVISED -			5149	04-00345-00-CH	WINNEBAGO	129	117	
	PLOT DATE = #DATE#	CHECKED - DPA	REVISED -			CONTRACT NO. 85616					
		DATE - #DATE#	REVISED -			ILLINOIS FED. AID PROJECT					



**LIGHTING SYMBOLS LEGEND:**

-  NEW 130 WATT LED LUMINAIRE, POLE AND FOUNDATION
-  NEW JUNCTION BOX
-  EXISTING OUTDOOR ROADWAY LIGHTING CONSOLE
-  NEW OUTDOOR ROADWAY LIGHTING CONSOLE
-  TEMPORARY OVERHEAD POWER
-  PROPOSED COILABLE UNDERGROUND CONDUIT AND WIRE
-  HANDHOLE, COMPOSITE CONCRETE

**GENERAL NOTES:**

1. PRIOR TO THE INSTALLATION OF NEW CABLE DUCT, CONDUITS, JUNCTION BOXES, LIGHT STANDARD FOUNDATIONS AND APPURTENANCES THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING LIGHTING CONDUITS, CABLES AND UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL VERIFY ALL OF THE DATA SHOWN ON THE CONTRACT PLANS AND REFERENCE DRAWINGS WHICH WOULD AFFECT HIS WORK UNDER THIS CONTRACT AND THE OPERATION OF THE EXISTING ROADWAY LIGHTING SYSTEMS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS.
4. ALL NEW CABLE DUCT, CONDUIT, JUNCTION BOXES AND APPURTENANCES ARE ILLUSTRATED DIAGRAMMATICALLY. THE ACTUAL LOCATION IN THE FIELD SHALL MEET WITH THE APPROVAL OF THE ENGINEER.
5. THE SCALE SHOWN ON THE PLANS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZED PLANS.
6. ELECTRICAL MATERIALS SHALL BE NEW AND OF THE TYPES AND KINDS APPROVED BY THE FOLLOWING ORGANIZATIONS:  
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION  
INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
ILLUMINATING ENGINEERING SOCIETY  
AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
U.S. DEPARTMENT OF TRANSPORTATION  
UNDERWRITERS LABORATORIES  
AMERICAN NATIONAL STANDARDS INSTITUTE  
INSULATED CABLE ENGINEERS ASSOCIATION
7. CABLE DUCT SHALL BE INSTALLED BY TRENCHING UNLESS SPECIFICALLY SHOWN ON THE PLANS AS BEING BORED OR PUSHED IN.
8. CONDUIT AND CABLE DUCT SHALL BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH UNDERDRAINS.

**GENERAL NOTES (CONTINUED):**

9. THE CONTRACTOR IS ADVISED THAT IN EVENT OF SNOW HE WILL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF ANY MAINTENANCE OF TRAFFIC PROTECTIVE DEVICES REQUIRED FOR HIS OPERATIONS THAT WOULD INTERFERE WITH SNOW REMOVAL OPERATIONS PERFORMED BY THE AUTHORITY.
10. WHERE MULTIPLE CABLE DUCTS OR CONDUITS ADJACENT TO EACH OTHER ARE INSTALLED IN A COMMON TRENCH, TRENCH AND BACKFILL WILL NOT BE PAID FOR EACH CABLE DUCT.
11. ALL PITS USED FOR INSTALLING PUSHED JACKED STEEL CONDUIT UNDER EXISTING ROADWAYS SHALL BE LOCATED FIVE FOOT MINIMUM CLEAR FROM THE EDGE OF THE SHOULDER. LOCATIONS OF THE CONDUIT CROSSINGS SHOWN ARE APPROXIMATE AND MAY BE SHIFTED AS NECESSARY TO MEET THE MINIMUM CLEARANCE REQUIREMENTS. THE PITS MUST BE ADEQUATELY GUARDED TO PROTECT THE MOTORIST.
12. ALL DISTURBED AREAS WHERE RESTORATION IS NOT COVERED BY APPLICABLE SECTIONS OF THE SPECIAL PROVISIONS SHALL BE RESTORED WITH TOPSOIL AND GRASS SEEDING. DAMAGED SHOULDER AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER. THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. SEPARATE PAYMENT WILL NOT BE MADE.
13. MAINTENANCE OF THE EXISTING ROADWAY LIGHTING INCLUDED WITHIN THE LIMITS OF THE IMPROVEMENT PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR BEGINNING ON THE DATE WORK ON THE PROJECT BEGINS AND AS REQUIRED IN THE SPECIAL PROVISIONS. TURNOVER MEETING(S) TO ESTABLISH THE CONDITIONS OF THE ROADWAYS AND THE PENDING WORK REQUIREMENTS WILL BE SCHEDULED WITH IDOT AND THE CITY AT THE PRE-CONSTRUCTION MEETING BY THE CONTRACTOR.

ILLINOIS DEPARTMENT OF TRANSPORTATION LUMINAIRE PERFORMANCE TABLE STATE ST. AND BELL SCHOOL ROAD INTERSECTION		
GIVEN CONDITIONS		
ROADWAY DATA:	PAVEMENT WIDTHS	80 FT
	NUMBER OF LANES	8
	IES SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	0.07
LIGHT POLE DATA:	MOUNTING HEIGHT	40 FT
	MAST ARM LENGTH	15
	POLE SET-BACK FROM EDGE OF PAVEMENT	VARIES
LUMINAIRE DATA:	LAMP TYPE	130W LED AND 400W MH
	LAMP LUMENS	14000
	IES VERTICAL DISTRIBUTION	SHORT
	IES CONTROL OF DISTRIBUTION	CUTOFF
	IES LATERAL DISTRIBUTION	R3
	TOTAL LIGHT LOSS FACTOR	0.765 (LED) AND .684 (MH)
LAYOUT DATA:	SPACING	~90 FT.
	CONFIGURATION	4 FIXTURES MOUNTED TO COMBINATION TRAFFIC SIGNAL/LIGHT POLES AND 7 SINGLE MAST ARM AND 1 TWIN MAST ARM FIXTURES AROUND THE PERIMETER OF THE INTERSECTION
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LINE	11 FT.

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED IES DISTRIBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON THE GIVEN CONDITIONS LISTED ABOVE.

ILLUMINATION:	AVERAGE HORIZONTAL ILLUMINATION, (EAVE) FC	SEE CALCULATION SUMMARY
	UNIFORMITY RATIO, (EAVE/EMIN)	SEE CALCULATION SUMMARY
LUMINANCE:	AVERAGE LUMINANCE: (LAVE) cd/m2	SEE CALCULATION SUMMARY
	UNIFORMITY RATIOS: (LAVE/LMIN)	SEE CALCULATION SUMMARY
	(LMAX/LMIN)	SEE CALCULATION SUMMARY
	MAXIMUM VEILING LUMINANCE RATIO: (LV/LAVE)	0.035

ILLINOIS DEPARTMENT OF TRANSPORTATION LUMINAIRE PERFORMANCE TABLE STATE ST.		
GIVEN CONDITIONS		
ROADWAY DATA:	PAVEMENT WIDTHS	80 FT
	NUMBER OF LANES	4
	MEDIAN WIDTH	XX-XX FT
	IES SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	0.07
LIGHT POLE DATA:	MOUNTING HEIGHT	40 FT
	MAST ARM LENGTH	15
	POLE SET-BACK FROM EDGE OF PAVEMENT	VARIES
LUMINAIRE DATA:	LAMP TYPE	130W LED
	LAMP LUMENS	14000
	IES VERTICAL DISTRIBUTION	SHORT
	IES CONTROL OF DISTRIBUTION	CUTOFF
	IES LATERAL DISTRIBUTION	R3
	TOTAL LIGHT LOSS FACTOR	0.765
LAYOUT DATA:	SPACING	140 FT
	CONFIGURATION	35 FIXTURES, 13 ON EACH SIDE OF ROAD IN A LINE
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LINE	11 FT

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED IES DISTRIBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON THE GIVEN CONDITIONS LISTED ABOVE.

ILLUMINATION:	AVERAGE HORIZONTAL ILLUMINATION, (EAVE) FC	SEE CALCULATION SUMMARY
	UNIFORMITY RATIO, (EAVE/EMIN)	SEE CALCULATION SUMMARY
LUMINANCE:	AVERAGE LUMINANCE: (LAVE) cd/m2	SEE CALCULATION SUMMARY
	UNIFORMITY RATIOS: (LAVE/LMIN)	SEE CALCULATION SUMMARY
	(LMAX/LMIN)	SEE CALCULATION SUMMARY
	MAXIMUM VEILING LUMINANCE RATIO: (LV/LAVE)	0.035

ILLINOIS DEPARTMENT OF TRANSPORTATION LUMINAIRE PERFORMANCE TABLE BELL SCHOOL ROAD		
GIVEN CONDITIONS		
ROADWAY DATA:	PAVEMENT WIDTHS	66 FT
	NUMBER OF LANES	4
	IES SURFACE CLASSIFICATION	R3
	Q-ZERO VALUE	0.07
LIGHT POLE DATA:	MOUNTING HEIGHT	40 FT
	MAST ARM LENGTH	15
	POLE SET-BACK FROM EDGE OF PAVEMENT	VARIES
LUMINAIRE DATA:	LAMP TYPE	130W LED
	LAMP LUMENS	14000
	IES VERTICAL DISTRIBUTION	SHORT
	IES CONTROL OF DISTRIBUTION	CUTOFF
	IES LATERAL DISTRIBUTION	R3
	TOTAL LIGHT LOSS FACTOR	0.765
LAYOUT DATA:	SPACING	130 FT
	CONFIGURATION	10 FIXTURES, 5 ON EACH SIDE OF ROAD IN A LINE
	LUMINAIRE OVERHANG OVER EDGE OF PAVEMENT LINE	11 FT

NOTE: VARIATIONS FROM THE ABOVE SPECIFIED IES DISTRIBUTION PATTERN MAY BE REQUESTED AND ACCEPTANCE OF VARIATIONS WILL BE SUBJECT TO REVIEW BY THE ENGINEER BASED ON HOW WELL THE PERFORMANCE REQUIREMENTS ARE MET.

PERFORMANCE REQUIREMENTS

NOTE: THESE PERFORMANCE REQUIREMENTS SHALL BE THE MINIMUM ACCEPTABLE STANDARDS OF PHOTOMETRIC PERFORMANCE FOR THE LUMINAIRE, BASED ON THE GIVEN CONDITIONS LISTED ABOVE.

ILLUMINATION:	AVERAGE HORIZONTAL ILLUMINATION, (EAVE) FC	SEE CALCULATION SUMMARY
	UNIFORMITY RATIO, (EAVE/EMIN)	SEE CALCULATION SUMMARY
LUMINANCE:	AVERAGE LUMINANCE: (LAVE) cd/m2	SEE CALCULATION SUMMARY
	UNIFORMITY RATIOS: (LAVE/LMIN)	SEE CALCULATION SUMMARY
	(LMAX/LMIN)	SEE CALCULATION SUMMARY
	MAXIMUM VEILING LUMINANCE RATIO: (LV/LAVE)	0.035

ROADWAY LIGHTING SUMMARY OF QUANTITIES			
SP	ITEM DESCRIPTION	UNITS	QUANTITY
	DESIGNATION		
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
82500360	LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 100AMP	EACH	1
X0007003	LIGHTING UNIT, ALUMINUM, COMPLETE, 40' M.H., SINGLE LUMINAIRE ARM (SPECIAL)	EACH	38
X0007002	LIGHTING UNIT, ALUMINUM, COMPLETE, 40' AND 16' M.H., DUAL LUMINAIRE ARMS (SPECIAL)	EACH	10
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	294
83600650	BREAK AWAY DEVICE COUPLING WITH STAINLESS STEEL SCREEN	EACH	196
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	29500
X8410102	TEMPORARY LIGHTING SYSTEM	L SUM	1
X8410118	MAINTENANCE OF TEMPORARY LIGHTING SYSTEM	L SUM	1
81028720	UNDERGROUND CONDUIT, COILABLE NON-METALIC CONDUIT, 1" DIA	FOOT	6500
81400730	HANDHOLE, COMPOSITE CONCRETE	EACH	8
X8211125	LUMINAIRE, LED, HORIZONTAL MOUNT, SPECIAL	EACH	66
X0007797	LUMINAIRE, SPECIAL	EACH	4



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LAYOUT	12/10/10
DRAWN	02/12/13
REVIEWED	02/12/13

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**STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL**

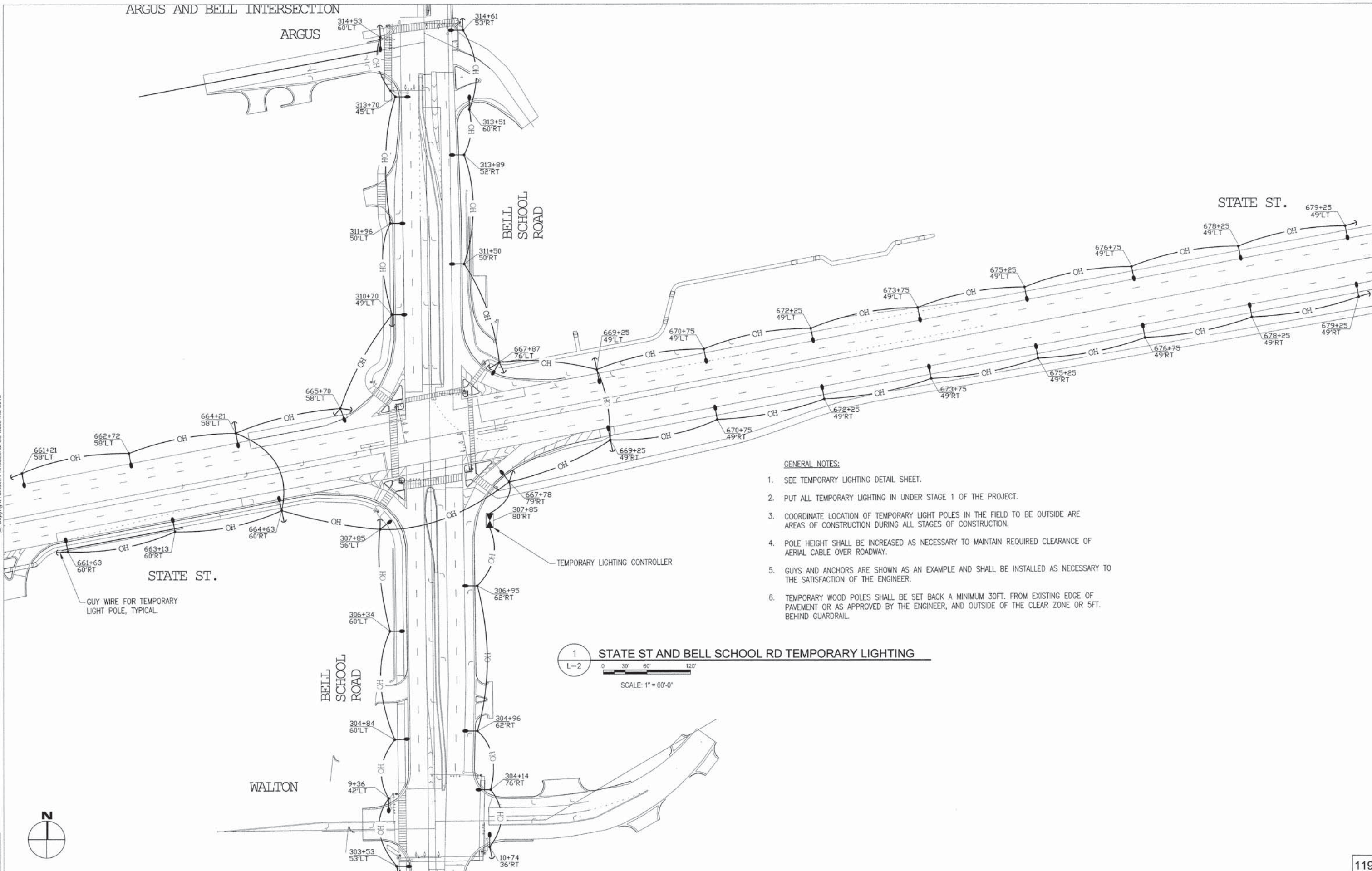
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#TOT#	#SNUM#
ILLINOIS FED. AID PROJECT				



ARGUS AND BELL INTERSECTION



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GENERAL NOTES:

1. SEE TEMPORARY LIGHTING DETAIL SHEET.
2. PUT ALL TEMPORARY LIGHTING IN UNDER STAGE 1 OF THE PROJECT.
3. COORDINATE LOCATION OF TEMPORARY LIGHT POLES IN THE FIELD TO BE OUTSIDE AREAS OF CONSTRUCTION DURING ALL STAGES OF CONSTRUCTION.
4. POLE HEIGHT SHALL BE INCREASED AS NECESSARY TO MAINTAIN REQUIRED CLEARANCE OF AERIAL CABLE OVER ROADWAY.
5. GUYS AND ANCHORS ARE SHOWN AS AN EXAMPLE AND SHALL BE INSTALLED AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.
6. TEMPORARY WOOD POLES SHALL BE SET BACK A MINIMUM 30FT. FROM EXISTING EDGE OF PAVEMENT OR AS APPROVED BY THE ENGINEER, AND OUTSIDE OF THE CLEAR ZONE OR 5FT. BEHIND GUARDRAIL.

1 STATE ST AND BELL SCHOOL RD TEMPORARY LIGHTING  
 L-2  
 SCALE: 1" = 60'-0"



LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

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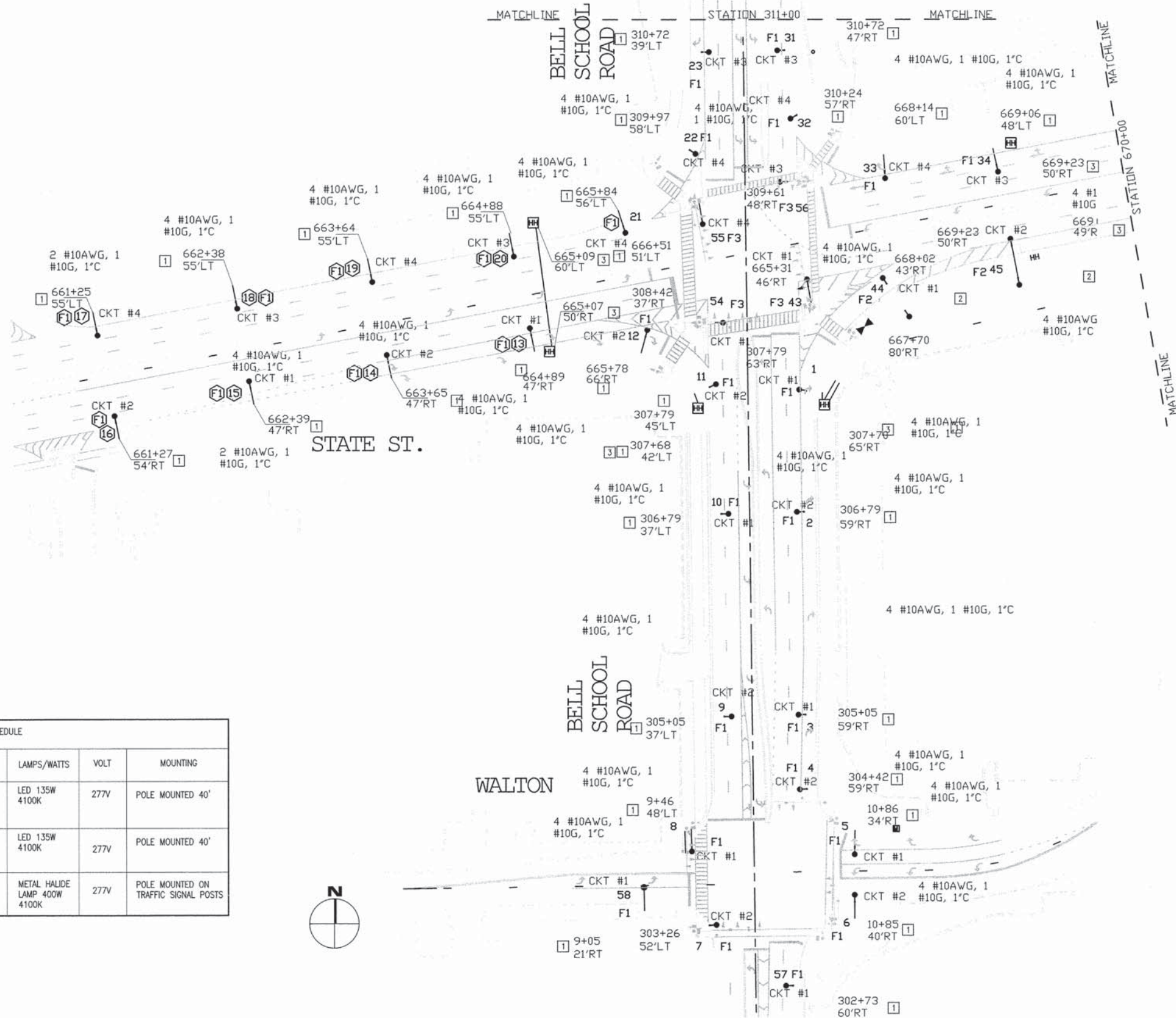
STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
 ROCKFORD, IL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#
ILLINOIS FED. AID PROJECT				





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- KEYED NOTE:**
- 1 SEE LIGHT POLE DETAIL A ON SHEET 124.
  - 2 SEE LIGHT POLE DETAIL B ON SHEET 124.
  - 3 ALL SPLICES ARE TO BE MADE IN THE LIGHT POLE AT THE LIGHT POLE HANDHOLE AND NOT IN THE GRADE HANDHOLES PER ARTICLE 817.03 OF THE STANDARD SPECIFICATIONS.

**NOTES:**

1. FIXTURES 43, 54, 55, & 56 ARE MOUNTED ON COMBINATION TRAFFIC SIGNAL/LIGHT POLES. LIGHTING FIXTURES ARE PROVIDED UNDER ELECTRICAL PAY ITEMS AND POLES, MAST ARM, AND FOUNDATION ARE PROVIDED UNDER TRAFFIC SIGNAL PAY ITEMS.

LIGHT FIXTURE SCHEDULE				
FIXTURE TYPE	MANUFACTURE & CATALOG NO.	LAMPS/WATTS	VOLT	MOUNTING
F1	LUMEC: DMS50-135W80KLED4K-R-LE3S	LED 135W 4100K	277V	POLE MOUNTED 40'
F2	LUMEC: DMS50-135W80KLED4K-R-LE3S TWIN HEAD	LED 135W 4100K	277V	POLE MOUNTED 40'
F3	LUMEC: DMS55-SG3-480-400MH	METAL HALIDE LAMP 400W 4100K	277V	POLE MOUNTED ON TRAFFIC SIGNAL POSTS



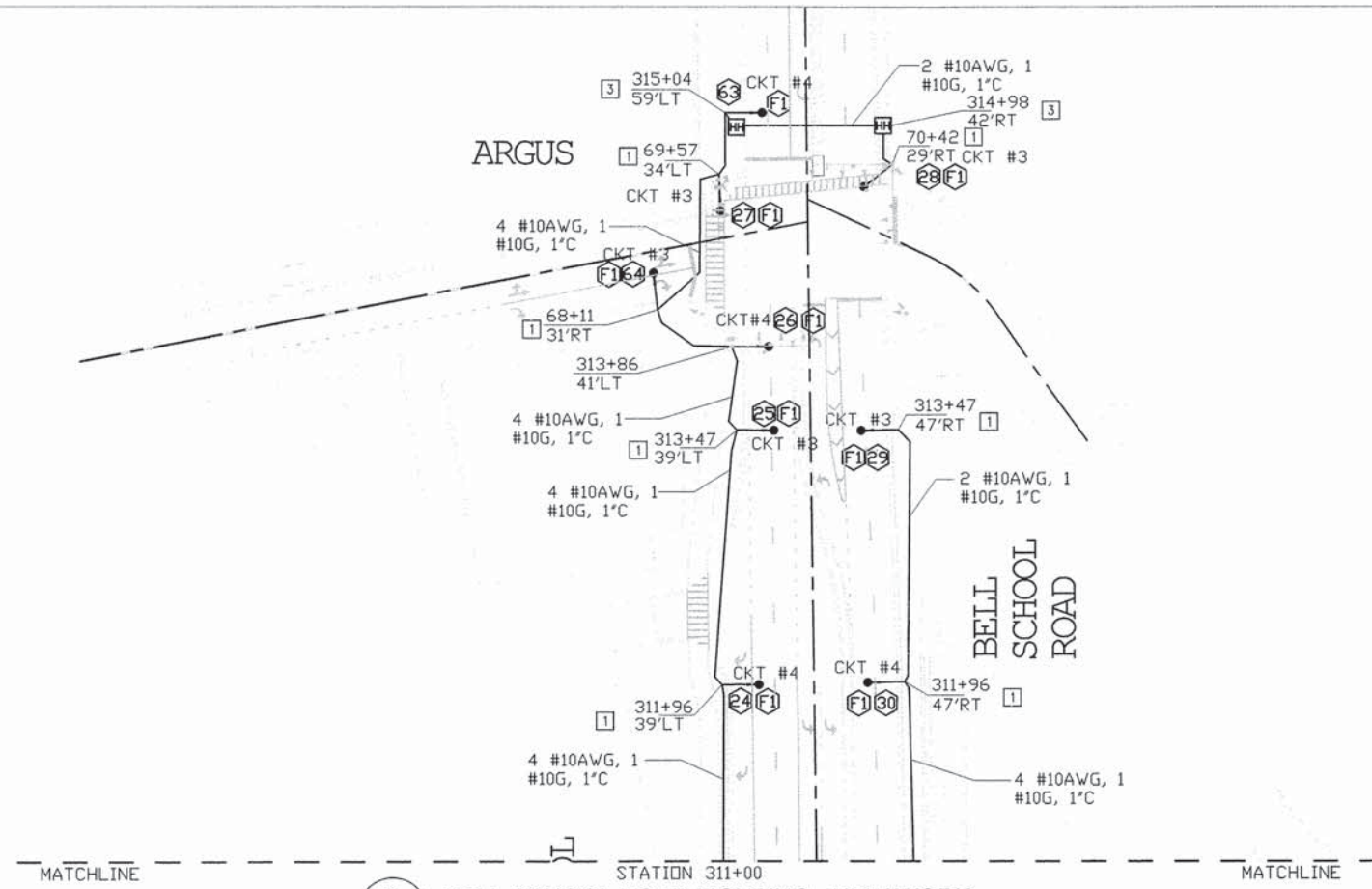
1 STATE STREET AND BELL SCHOOL RD LIGHTING - NEW WORK  
 L-3  
 SCALE: 1" = 50'-0"

LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

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STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
 ROCKFORD, IL

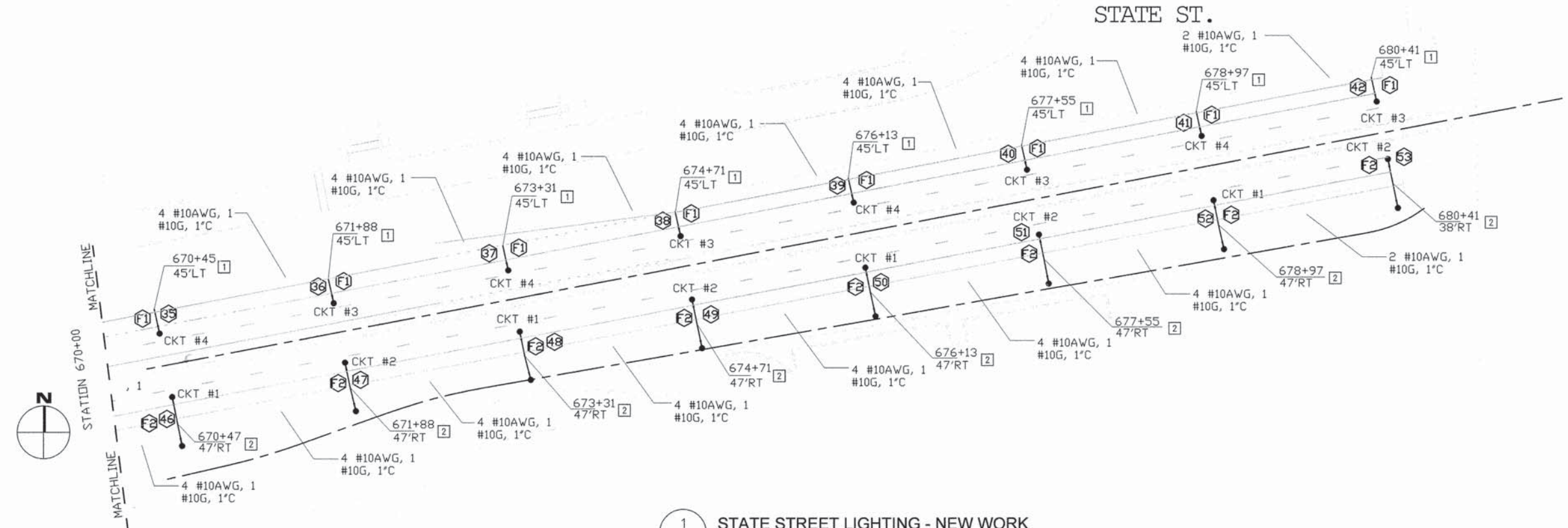




**2 BELL SCHOOL ROAD LIGHTING - NEW WORK**  
 L-4  
 SCALE: 1" = 50'-0"

**KEYED NOTE:**  
 1 SEE LIGHT POLE DETAIL A ON SHEET 124.  
 2 SEE LIGHT POLE DETAIL B ON SHEET 124.  
 3 ALL SPLICES ARE TO BE MADE IN THE LIGHT POLE AT THE LIGHT POLE HANDHOLE AND NOT IN THE IN-GRADE HANDLES PER ARTICLE 817.03 OF THE STANDARD SPECIFICATIONS.

**NOTES:**  
 1. FIXTURES 43, 54, 55, & 56 ARE MOUNTED ON COMBINATION TRAFFIC SIGNAL/LIGHT POLES. LIGHTING FIXTURES ARE PROVIDED UNDER ELECTRICAL PAY ITEMS AND POLES, MAST ARM, AND FOUNDATION ARE PROVIDED UNDER TRAFFIC SIGNAL PAY ITEMS.



**1 STATE STREET LIGHTING - NEW WORK**  
 L-4  
 SCALE: 1" = 50'-0"

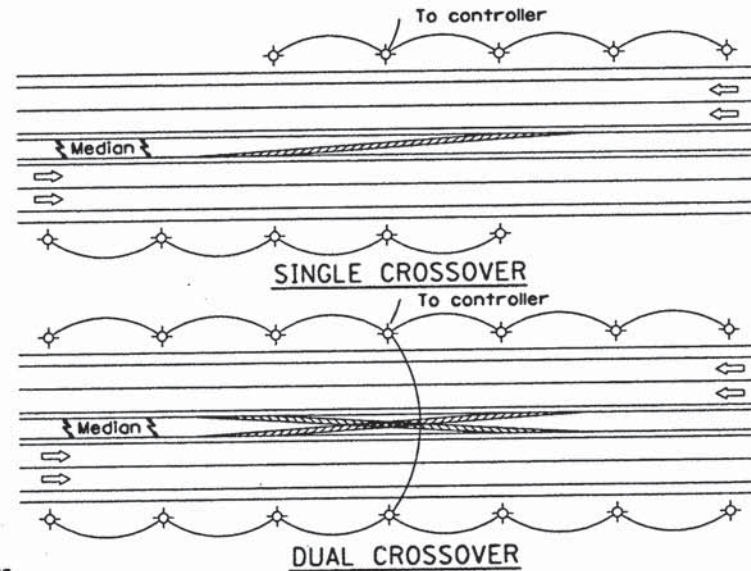
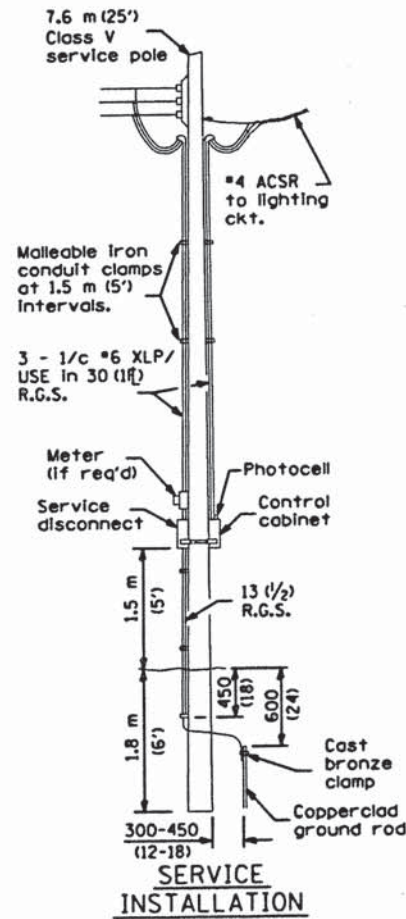
LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

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**STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
 ROCKFORD, IL**

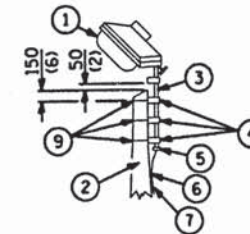
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#



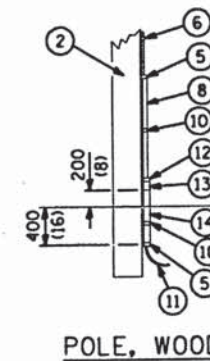
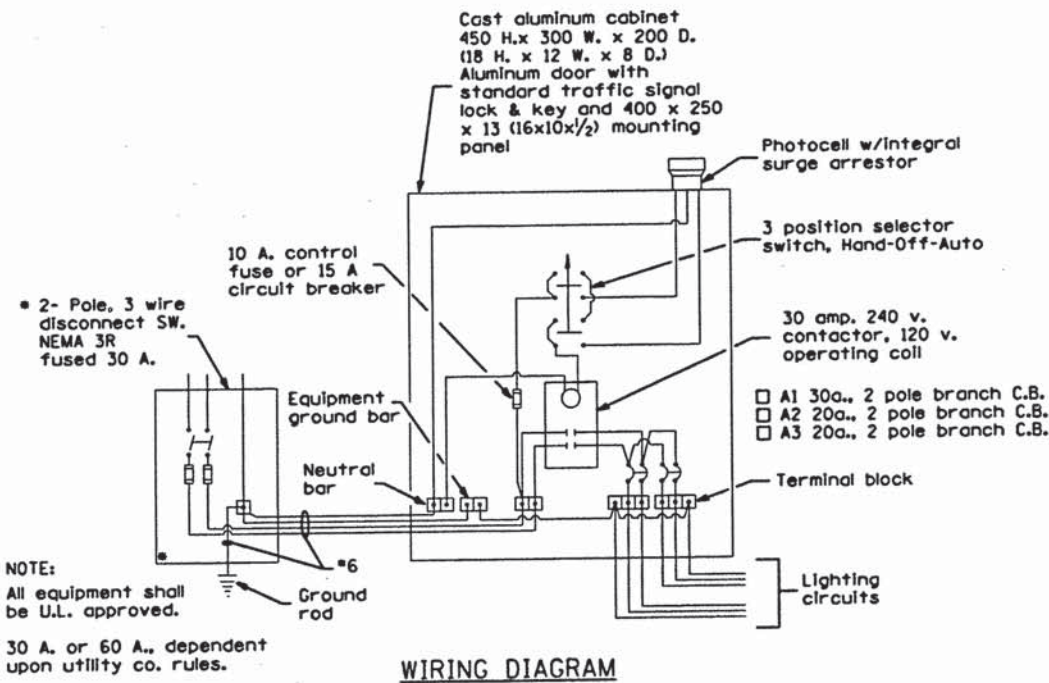


**NOTE:**  
 Min. Pole spacing 60 m (200')  
 Max. Pole spacing 75 m (250')  
 Setback shall be min. 9 m (30') or 1.5 m (5') back of ditch, unless breakaway type pole is used.

**NOTE:**  
 Luminaire(s) shall have a 2-pole inline weatherproof quick disconnect fuse holder.  
 Luminaire(s) shall be oriented and the mounting angle adjusted as recommended by the Engineer.  
 Connect luminaire equipment ground to ACSR messenger.



- ① Luminaire
- ② Wood pole, class 3 or better
- ③ 63 (2 1/2) Galv. steel conduit
- ④ Single offset pole band
- ⑤ Conduit bushing
- ⑥ Cable clamps on 600 (24) centers
- ⑦ 2/c #12 Type USE cable
- ⑧ 25 (1) Galv. steel conduit 3.0 m (10') in length
- ⑨ 16 (1)  $\emptyset$  hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- ⑩ Conduit clamps on 900 (36) centers
- ⑪ Unit duct
- ⑫ Threaded reducer
- ⑬ "C" Condulet, threaded
- ⑭ 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



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

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

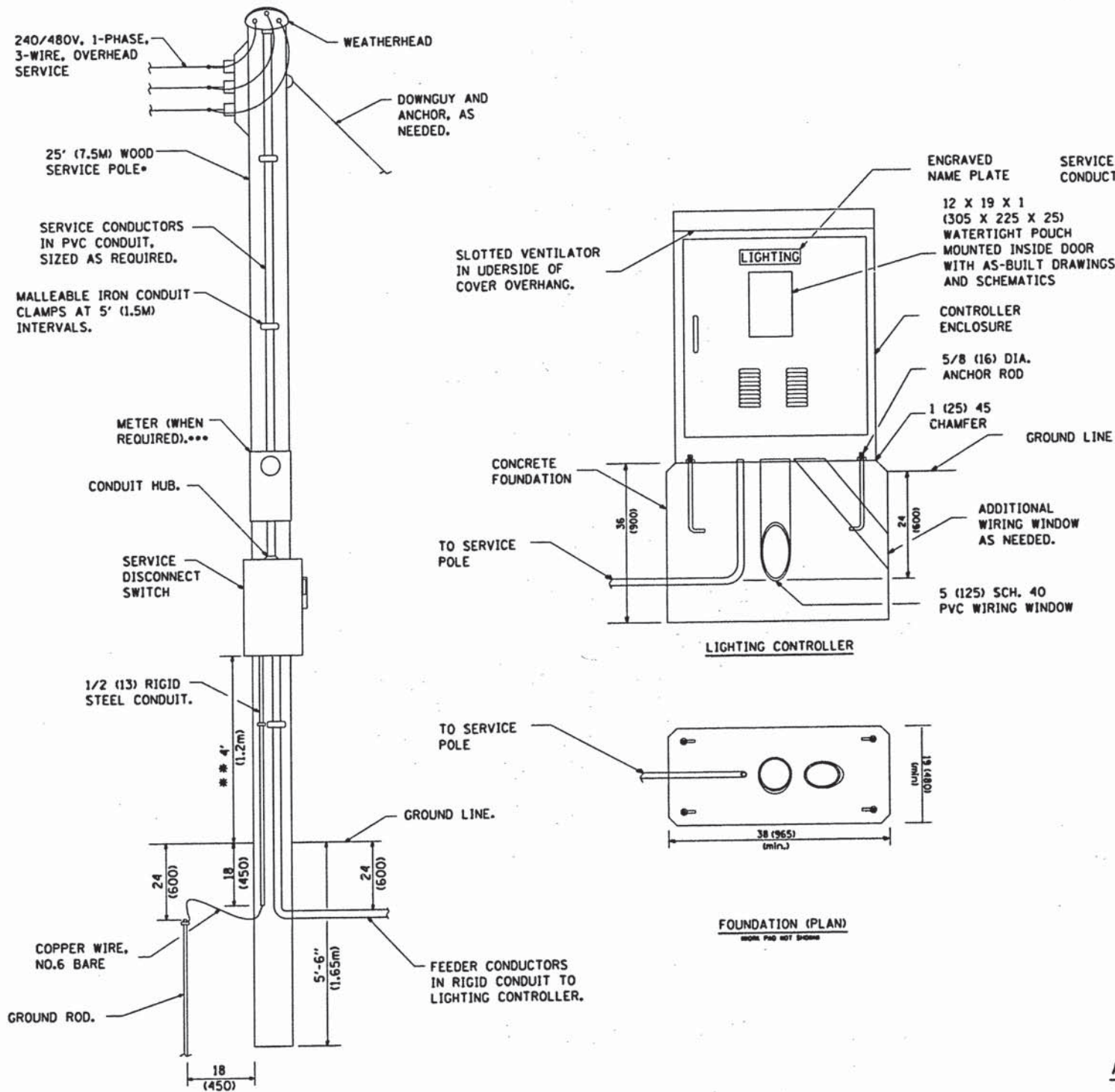
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DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

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#FILES#		DRAWN - MWH	REVISED - -
		CHECKED - DPA	REVISED - -
		DATE - #DATE#	REVISED - -

**TEMPORARY LIGHTING DETAILS**  
 STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
 ROCKFORD, IL

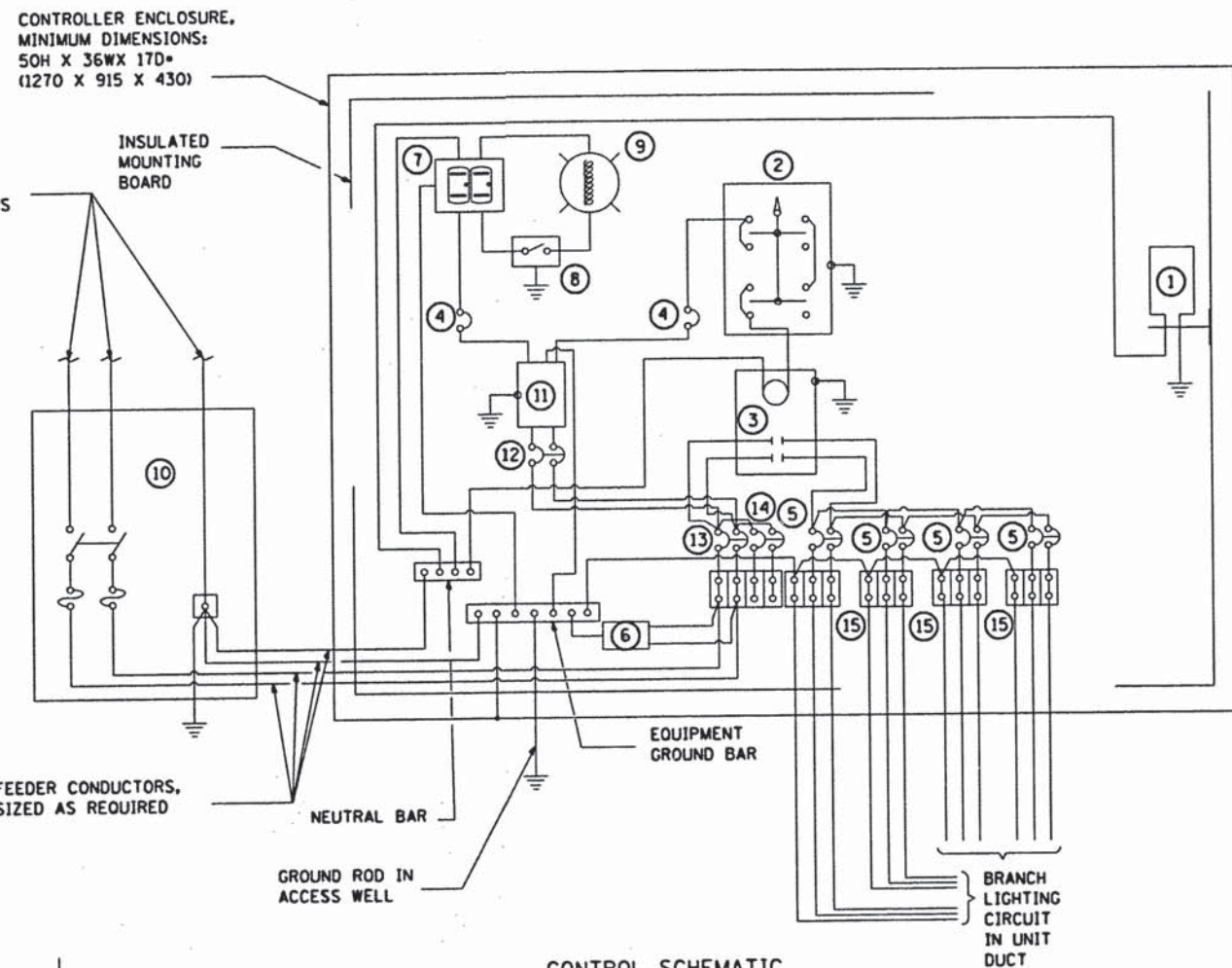
F.A.P. RTE. 5149	SECTION 04-00345-00-CH	COUNTY WINNEBAGO	TOTAL SHEETS #STOT#SNUM#	SHEET NO. 122
ILLINOIS FED. AID PROJECT				





**ELECTRIC SERVICE INSTALLATION**

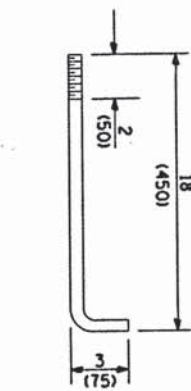
- SIZE LARGER AS NEEDED.
- OR AS DIRECTED BY UTILITY COMPANY.
- WHEN COLD SEQUENCING IS REQUIRED, PROVIDE A METER DISCONNECT SWITCH AS DIRECTED BY UTILITY COMPANY.



**CONTROL SCHEMATIC**

- |   |   |
|---|---|
| ① PHOTOCELL WITH INTEGRAL SURGE ARRESTER.                             | ⑧ SINGLE-POLE, SINGLE-THROW SWITCH.   |
| ② HAND-OFF-AUTO SELECTOR SWITCH.                                      | ⑨ INCANDESCENT LUMINAIRE, ENCLOSED AND GASKETED WITH 100 WATT LAMP.   |
| ③ 100 AMP, ELECTRICALLY HELD CONTACTOR.                               | ⑩ SERVICE DISCONNECT SWITCH -2-POLES, 3-WIRE, 100AMP, FUSED AT 100 AMP, SOILD NEUTRAL IN NEMA 4X ENCLOSURE HAVING LOCKABLE EXTERNAL HANDLE.   |
| ④ 15AMP, 1-POLE CIRCUIT BREAKER.                                      | ⑪ TRANSFORMER-1KVA, 480V PRIMARY, 120V/240V SECONDARY, SINGLE-PHASE, 60HZ.  |
| ⑤ 20 AMP, 2-POLE CIRCUIT BREAKER (TWO SPARES REQUIRED BUT NOT SHOWN). | ⑫ 15 AMP, 2-POLE CIRCUIT BREAKER.   |
| ⑥ SURGE ARRESTER.   | ⑬ 100 AMP, 2-POLE CIRCUIT BREAKER.  |
| ⑦ GFCI DUPLEX RECEPTACLE.   | ⑭ 30 AMP, 2-POLE CIRCUIT BREAKER.   |
|   | ⑮ ADJUST THE TERMINAL STRIPS ON THE LOAD SIDE OF THE BREAKERS TO ACCOMMODATE THE ACTUAL NUMBER OF WIRES CONNECTED, SEE SHEET 120, 121, & 126. |

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



**ANCHOR ROD**

**DETAIL**

LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

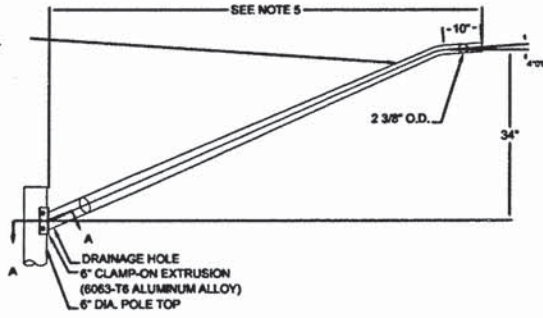
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**STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL**

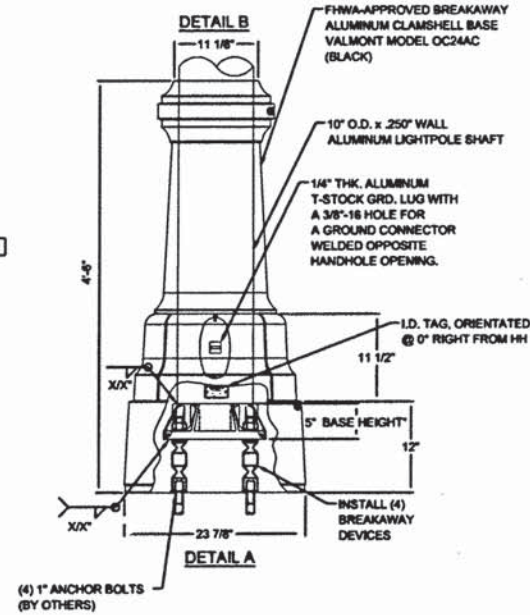
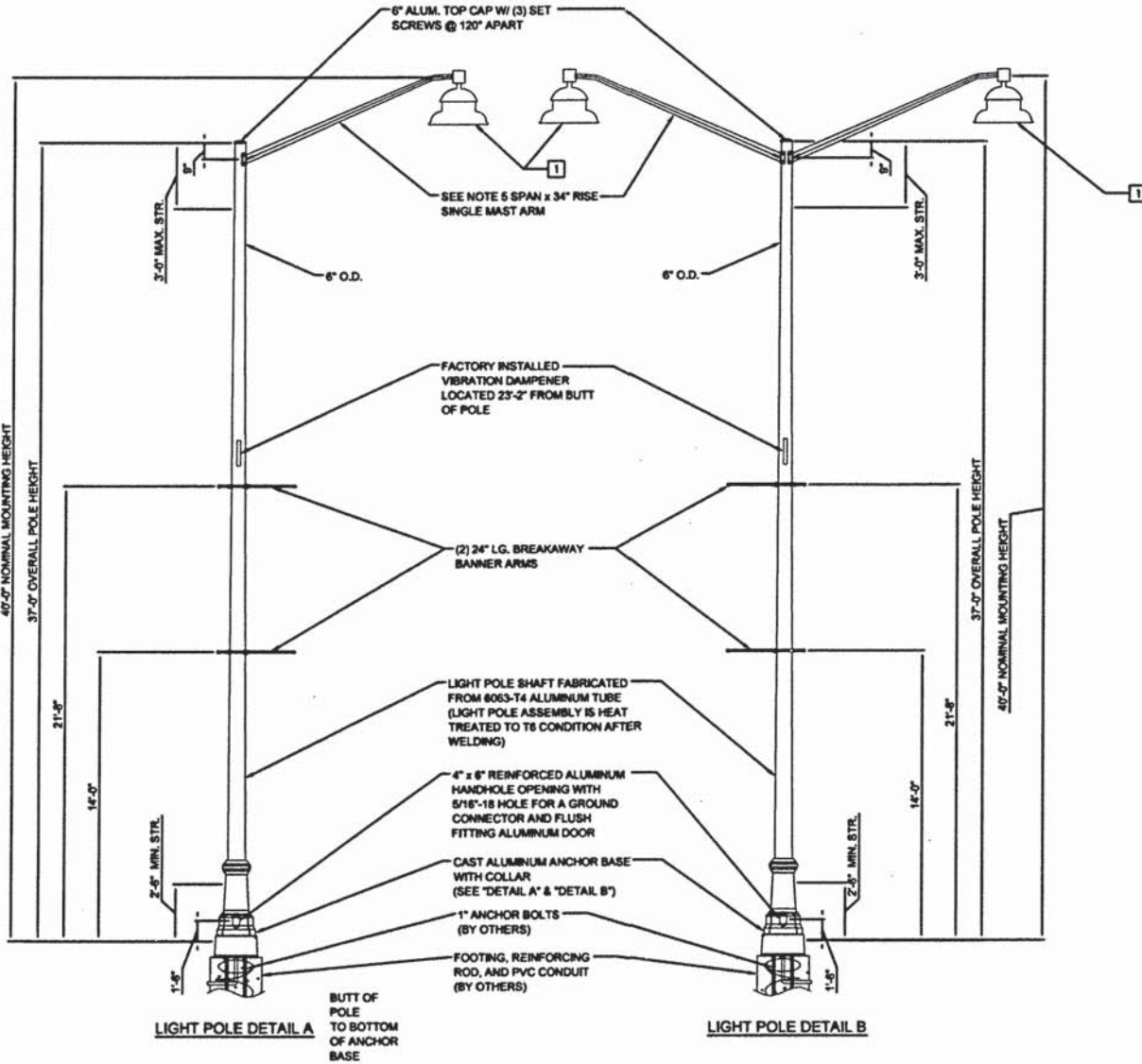
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#
[ILLINOIS] FED. AID PROJECT				



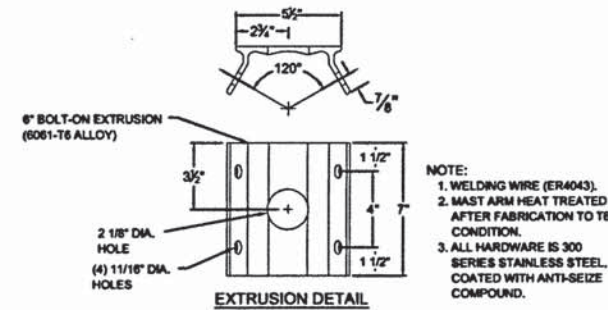
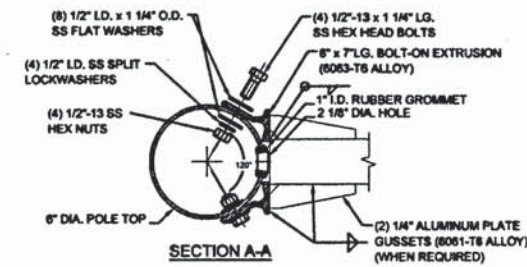
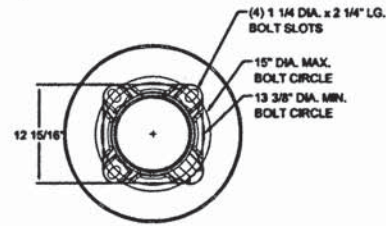
ARM MADE FROM 3 1/2" O.D. x .125" WALL  
(.188" WALL WHEN REQUIRED)  
ALUMINUM TUBE (6063-T6 ALLOY)  
TAPERED TO 2 3/8" O.D. AND  
FLATTENED TO 4 11/32" x 2 3/8"  
ELLIPTICAL CROSS SECTION  
SMOOTH POWDER BLACK FINISH  
TO MATCH THE LIGHT POLE



KEYED NOTE:  
1 PAID FOR AS LUMINAIRE, LED, HORIZONTAL MOUNT, LARGE.



- NOTES:
- UNITS SHALL BE MANUFACTURED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" CURRENT AT THE TIME THE PROJECT IS ADVERTISED. LIGHT POLES SHALL BE DESIGNED FOR 90 MPH WIND VELOCITY AND A MINIMUM DESIGN LIFE OF 50 YEARS.
  - POLES SHALL BE DESIGNED TO WITHSTAND LOADING OF 75 LB. LUMINAIRE WITH AN EPA OF 1.8 SQ. FT. INCLUDING ALL ATTACHMENTS.



- NOTES:
- REFER TO ROADWAY LIGHTING DETAIL LIGHT POLE FOUNDATION DETAIL.
  - REFER TO ROADWAY LIGHTING DETAIL POLE WIRING DETAIL.
  - REFER TO ROADWAY LIGHTING DETAIL CONDUIT TRENCH - PHOTOCELL MOUNTING.
  - REFER TO DETAIL A ON THIS SHEET.
  - SPAN LENGTH SHALL BE ADJUSTED SO THE LIGHT FIXTURES ARE ALIGNED EVENLY DOWN THE ROAD, SEE SPECIAL PROVISIONS.

LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

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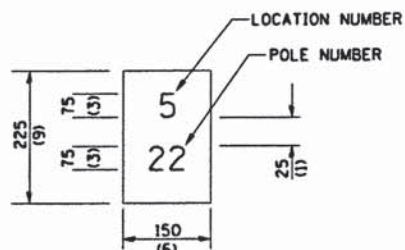
STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNJM#
ILLINOIS FED. AID PROJECT				



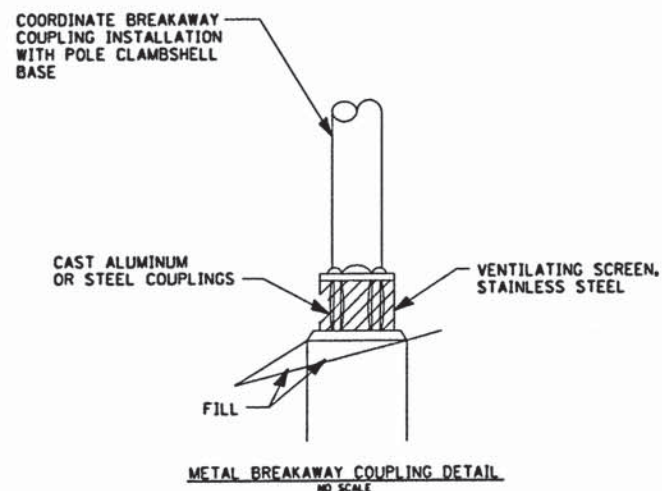
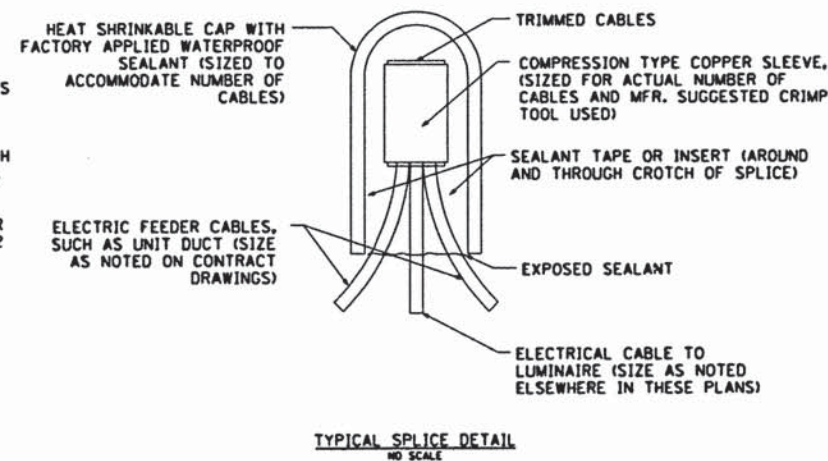
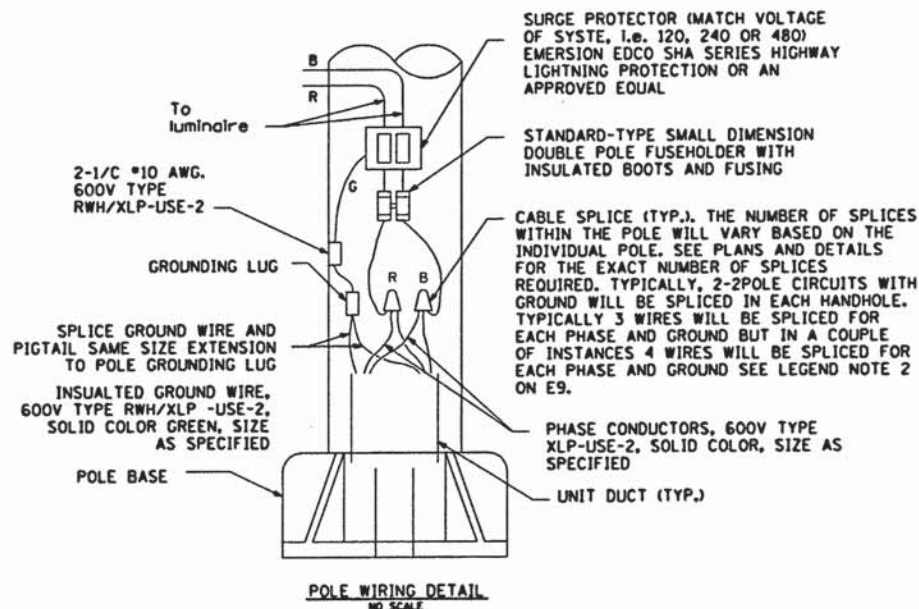
INSTALL AND ORIENT ARM BRACKET OVER POLE TENON AND FIRMLY HAND TIGHTEN THE TWO SET SCREWS. USE THIRD HOLE IN ARM BRACKET AS A GUIDE TO DRILL A 8.3 (3) DIAMETER HOLE THROUGH TENON. INSTALL AND TIGHTEN SELF-TAPPING SCREW. TIGHTEN SET SCREWS AN ADDITIONAL 1/4 TO 1/2 TURN WITH HEX KEY (NOT PROVIDED). INSTALL LOCKNUTS ON SET SCREWS IF THREADED PROJECTION ALLOWS.

POLE SHALL MEET ASSHTO STANDARD SPECIFICATIONS FOR 128.72KM (80 MPH) WIND LOADING AND 40.82KG (90 LB), .37 M<sup>2</sup> (4.0 SQ. FT.) E.P.A. LUMINAIRE.



THE CONTRACTOR SHALL FURNISH AND INSTALL A LIGHT POLE IDENTIFICATION OF EACH NEW LIGHT POLE, AS SHOWN ABOVE, INCIDENTAL TO THE RESPECTIVE LIGHT POLE PAY ITEM. THE NUMERALS SHALL BE 75(3) SERIES "D", BLACK, SCREENED ON SILVER-WHITE TYPE B PRESSURE SENSITIVE REFLECTIVE SHEETING CONFORMING TO THE REQUIREMENTS OF SECTION T602.01 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS. THE NUMERALS SHALL CONFORM TO THE FHWA "STANDARD ALPHABETS FOR HIGHWAY SIGNS".

THE LIGHT POLE IDENTIFICATION SHALL BE APPLIED TO SIGN BASE MATERIAL AS SPECIFIED IN SECTION 1069.06 OF THE STANDARD SPECIFICATIONS, APPROXIMATELY 180(7) ABOVE THE ADJACENT PAVEMENT GRADE VISIBLE TO APPROACHING TRAFFIC IN ACCORDANCE WITH HIGHWAY STANDARD 835001.



**NOTES:**

1. ALL TAPED SPLICES SHALL USE 2 LAYERS OF ELECTRICAL TAPE OVER 3 LAYERS OF RUBBER TAPE AS REQUIRED BY THE STANDARD SPECIFICATION. COAT THE FINISH TAPED SPLICE WITH BONDING COMPOUND.
2. ALL CABLE SPLICES SHALL BE TAPED UNLESS ANOTHER METHOD HAS BEEN SPECIFICALLY APPROVED BY THE ENGINEER.
3. THE NUMBER OF CABLES IN SPLICE MAY VARY.

**NOTES:**

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

LAYOUT	12/10/10
DRAWN	02/12/13
REVIEWED	02/12/13
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FILE NAME :	USER NAME : #USER#	DESIGNED - DPA	REVISED -
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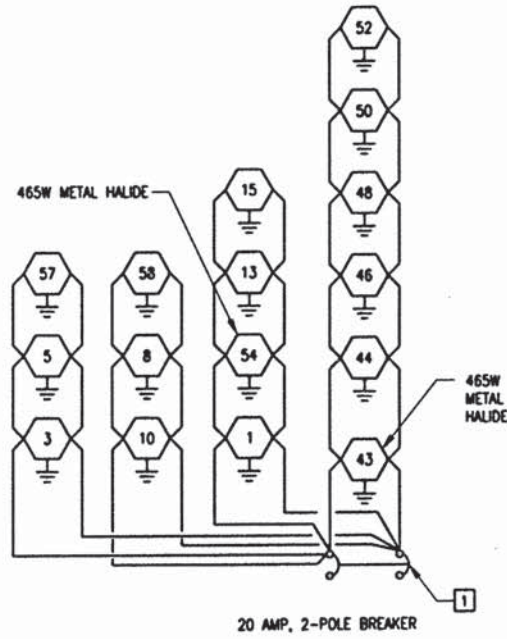
**STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT# #SNLUM#	125
ILLINOIS FED. AID PROJECT				

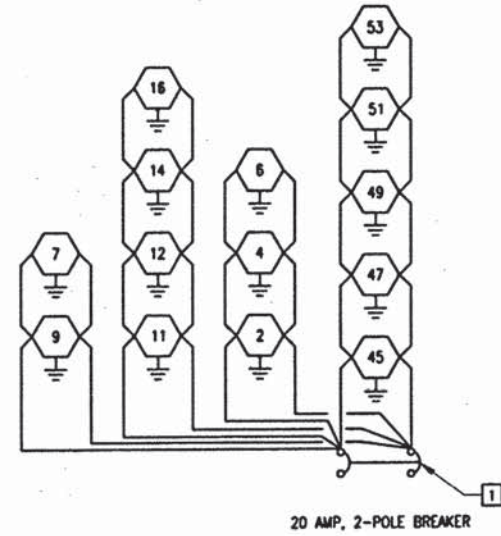


**GENERAL NOTES:**

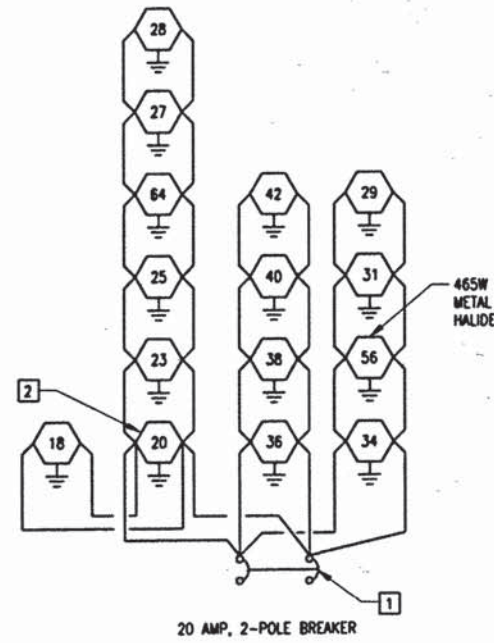
1. UNLESS OTHERWISE NOTED ALL LIGHTS ARE 130W LED.
2. ALL SPLICES ARE TO BE MADE IN THE LIGHT POLE AT THE POLE HANDHOLE AND NOT IN THE IN-GRADE HANDHOLES PER ARTICLE 1066.06 OF THE STANDARD SPECIFICATIONS.



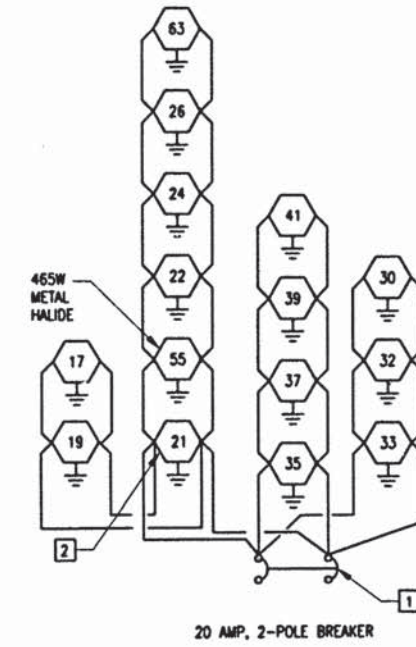
**CIRCUIT 1**  
CONTROLLER  
100 AMP, 480 VOLT, SINGLE  
PHASE, 5016 VA TOTAL LOAD



**CIRCUIT 2**  
CONTROLLER  
100 AMP, 480 VOLT, SINGLE  
PHASE, 5472 VA TOTAL LOAD



**CIRCUIT 3**  
CONTROLLER  
100 AMP, 480 VOLT, SINGLE  
PHASE, 6384 VA TOTAL LOAD



**CIRCUIT 4**  
CONTROLLER  
100 AMP, 480 VOLT, SINGLE  
PHASE, 5928 VA TOTAL LOAD

**KEYED NOTES:**

- 1 ADJUST TERMINAL STRIPS LOCATED ON THE LOAD SIDE OF THE CIRCUIT BREAKERS IN THE LIGHTING CONTROLLER TO ACCEPT THE NUMBER OF WIRES INDICATED ON THIS SHEET.
- 2 ALL LIGHT POLES TO HAVE (1 CONDUIT IN 1 CONDUIT OUT) WITHIN THE HANDHOLES EXCEPT THOSE CALLED OUT BY THIS KEYED NOTE. THOSE CALLED OUT HAVE (1 CONDUIT IN 2 CONDUITS OUT). FOR THESE POLES THREE WIRES ARE TO BE SPLICED TOGETHER FOR EACH CIRCUIT PHASE INSTEAD OF JUST 2.

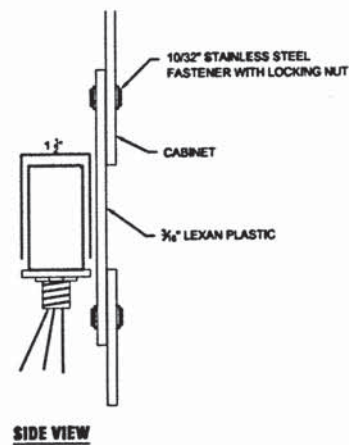
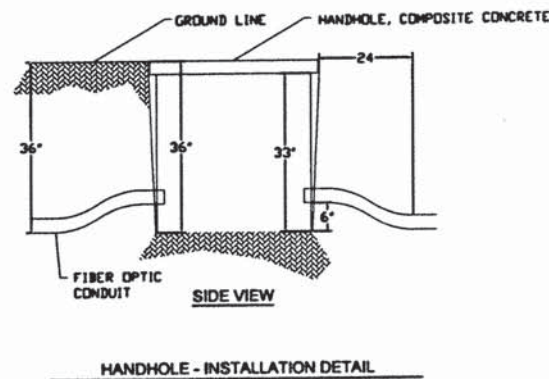
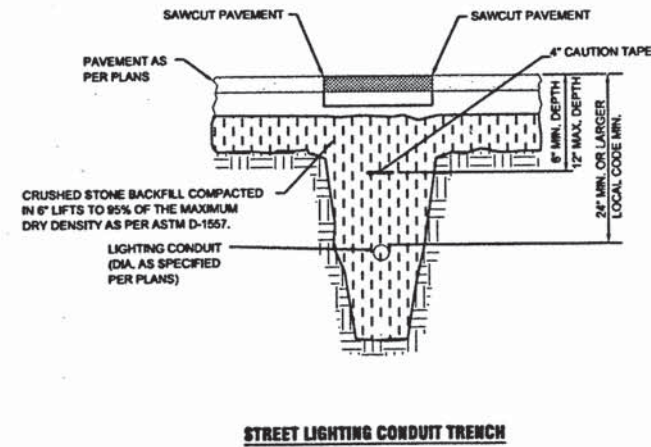
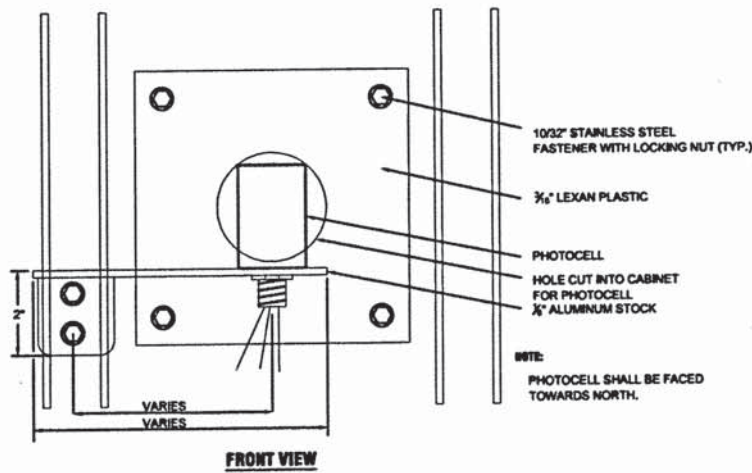
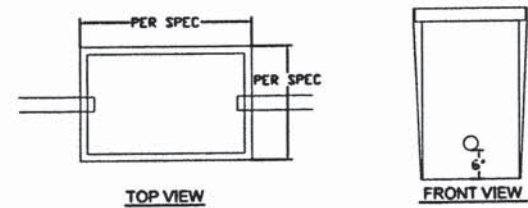
LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

FILE NAME =	USER NAME = #USER#	DESIGNED - DPA	REVISED -
#FILES#		DRAWN - MWH	REVISED -
		CHECKED - DPA	REVISED -
		DATE - #DATE1#	REVISED -

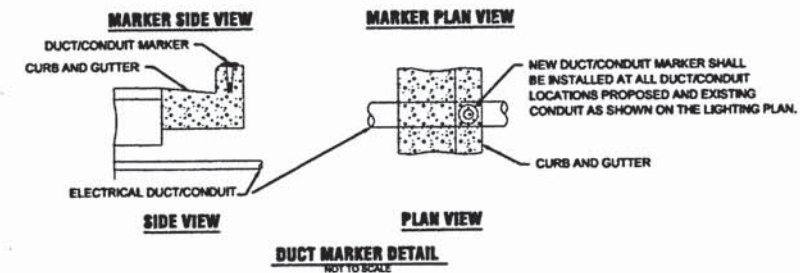
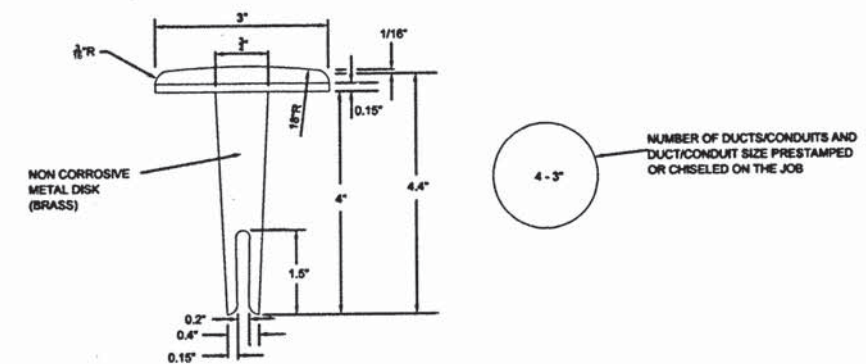
**STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#
ILLINOIS FED. AID PROJECT				





PHOTOCELL MOUNTING DETAIL



LAYOUT	12/10/10
DRAWN	MWH 02/12/13
REVIEWED	DPA 02/12/13

FILE NAME =	USER NAME = #USER#	DESIGNED - DPA	REVISED -
#FILES#		DRAWN - MWH	REVISED -
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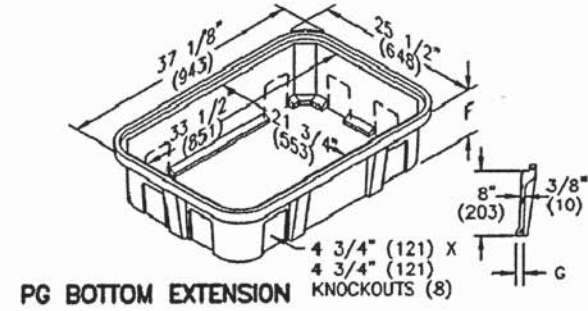
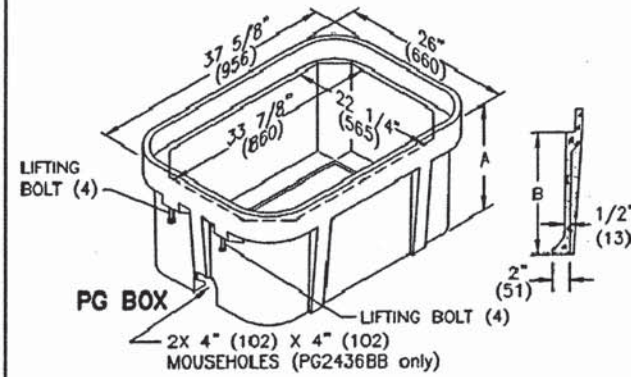
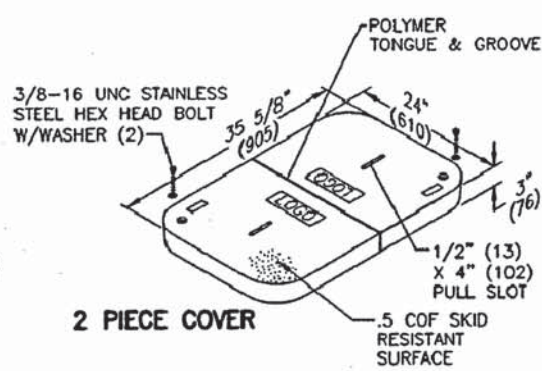
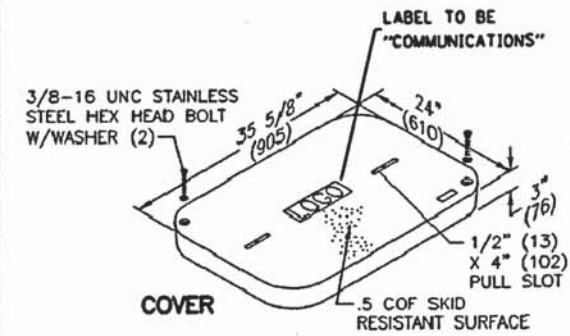
STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#
[ILLINOIS] FED. AID PROJECT				



**SPECIFICATIONS/DATA**

**24" x 36" PG Style (Stackable) Assembly and 24" x 36" PD Style Assembly**



**SPECIFICATIONS/DATA**

**24" x 36" PG Style (Stackable) Assembly and 24" x 36" PD Style Assembly**

Covers (Blank unless logo is specified)

DESCRIPTION	PART NO.	WEIGHT #	DESIGN/TEST LOAD #	ANSI TIER*
1/2" Bolt	PG2436CA00	100 (45 kg)	8,000 / 12,000	8
Basketed w/2 Bolts	PG2436BA00	100 (45 kg)	8,000 / 12,000	8
2-Piece w/2 Bolts	PG2436ES00	122 (55 kg)	8,000 / 12,000	8
Heavy Duty	PG2436WA00	100 (45 kg)	8,000 / 12,000	8
Heavy Duty w/2 Bolts	PG2436HA00	115 (52 kg)	15,000 / 22,500	15
Open Bottom Heavy Duty w/2 Bolts	PG2436H000	115 (52 kg)	15,000 / 22,500	15
Heavy Duty 2-Piece w/2 Bolts	PG2436HS00	140 (63 kg)	15,000 / 22,500	15
Heavy Duty 3-Piece Bolt	PG2436H000	122 (55 kg)	22,500 / 33,750	22

\* Covers with meter lids available upon request. See page 12 or page 56 for meter lid cover load rating explanation.  
\* Gasketed covers and bolt grommets must be used with a gasketed box. Gaskets reduce the inflow of fluids but do not make the enclosure water tight.

SEE NOTE 1

PG Boxes (Stackable with self-aligning, replaceable EZ Nut) \*\*24" - 42" Deep boxes must be used as bottom of any stack.

DESCRIPTION	PART NO.	WEIGHT #	DIMENSION A	DIMENSION B	DESIGN/TEST LOAD #	ANSI TIER*
Open Bottom	PG2436BA00	180 (81.6 kg)	24" (610 mm)	21" (533 mm)	22,500 / 33,750	22
	PG2436BA24	180 (81.6 kg)	24" (610 mm)	21" (533 mm)	22,500 / 33,750	22
	PG2436BA36	254 (115 kg)	36" (914 mm)	33" (838 mm)	22,500 / 33,750	22
Open Bottom w/2 Mouseholes	PG2436BB00	194 (88.0 kg)	30" (762 mm)	27" (686 mm)	22,500 / 33,750	22
	PG2436BB24	178 (80.7 kg)	24" (610 mm)	21" (533 mm)	22,500 / 33,750	22
	PG2436BB30	194 (88.0 kg)	30" (762 mm)	27" (686 mm)	22,500 / 33,750	22
	PG2436BB36	252 (114 kg)	36" (914 mm)	33" (838 mm)	22,500 / 33,750	22
Solid Bottom	PG2436DA00	228 (103.4 kg)	24 1/2" (622 mm)	21" (533 mm)	22,500 / 33,750	22
	PG2436DA18	171 (78 kg)	18 1/2" (469 mm)	15" (381 mm)	22,500 / 33,750	22
	PG2436DA24	228 (103.4 kg)	24 1/2" (622 mm)	21" (533 mm)	22,500 / 33,750	22
	PG2436DA30	238 (107.0 kg)	30 1/2" (775 mm)	27" (686 mm)	22,500 / 33,750	22
	PG2436DA36	282 (128 kg)	36 1/2" (927 mm)	33" (838 mm)	22,500 / 33,750	22

SEE NOTE 1

NOTE:  
1. OR APPROVED EQUAL.

**HANDHOLE - SPECIFICATION**

LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

FILE NAME =	USER NAME = #USER#	DESIGNED - DPA	REVISED -
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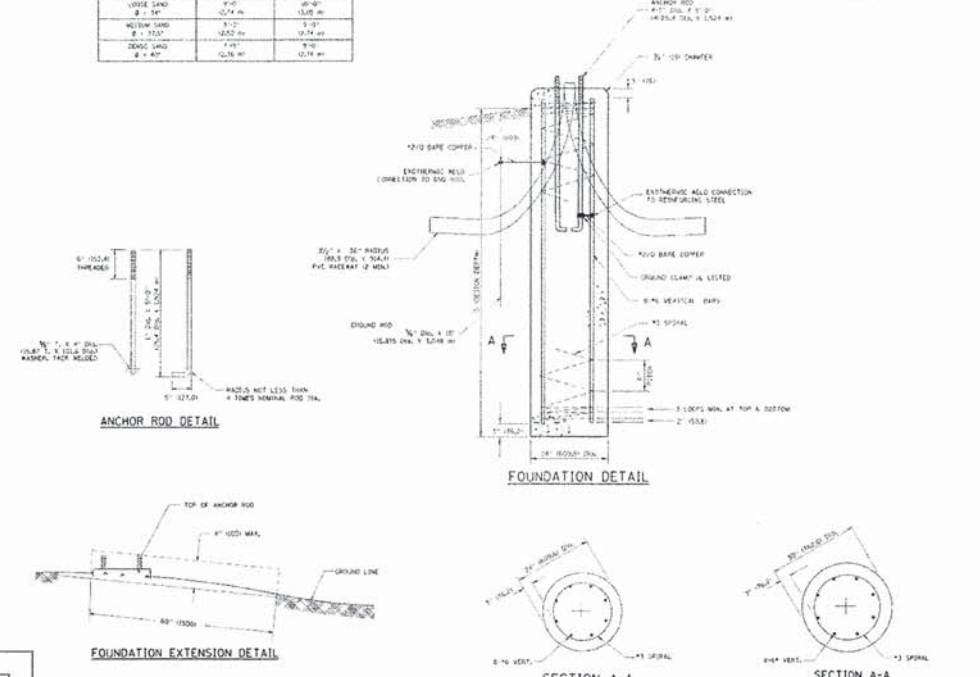
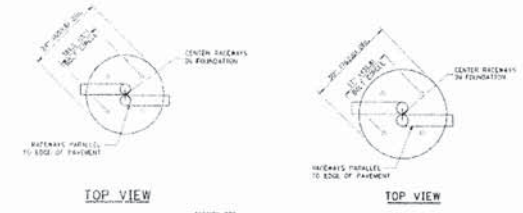
STATE STREET AND BELL SCHOOL ROAD INTERSECTION  
ROCKFORD, IL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#
ILLINOIS FED. AID PROJECT				



**LIGHT POLE FOUNDATION DEPTH TABLE**  
40 FT. (12,192 m) TO 47.5 FT. (14,478 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH '0' OF FOUNDATION	SINGLE ANCHOR ROD	TWIN ANCHOR RODS
SOFT CLAY D <sub>u</sub> = 0.175 TONS/SQ. FT.	12'-0"	14.5" DIA.	14.5" DIA.
MEDIUM CLAY D <sub>u</sub> = 0.275 TONS/SQ. FT.	9'-0"	14.5" DIA.	14.5" DIA.
STIFF CLAY D <sub>u</sub> = 0.50 TONS/SQ. FT.	7'-0"	14.5" DIA.	14.5" DIA.
LOOSE SAND D = 24"	9'-0"	14.5" DIA.	14.5" DIA.
MEDIUM SAND D = 30"	12'-0"	14.5" DIA.	14.5" DIA.
DENSE SAND D = 40"	12'-0"	14.5" DIA.	14.5" DIA.



- NOTES**
- ALL DIMENSIONS ARE IN INCHES/MILLIMETERS UNLESS OTHERWISE SHOWN.
  - THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
  - THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 4 IN. (102 mm) ABOVE THE FINISHED GRADE WITHIN A 40 IN. (1016 mm) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
  - THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
  - THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINE OR FORM SHALL BE USED TO PRODUCE A UNIFORM SURFACE SIZE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE COMPACTED 1% IN 100 mm.
  - THE CONCRETE SHALL BE CLASS 50 CONCRETE SHALL COMPLY ACCORDING TO ARTICLE 100.05 BEFORE LIGHT POLES ARE INSTALLED.
  - THE ANCHOR ROD SHALL BE A HOOK ROD TYPE, COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
  - THE ANCHOR RODS SHALL BE ACCORDING TO ASTM A193 OR ASTM A 307 OR ASTM A 307 AND WASHERS SHALL BE ACCORDING TO ASTM A 408.
  - ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANNEZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 210, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 210, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 100 MILS WELDS OF THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
  - THE ANCHOR RODS SHALL BE INCREASED A MINIMUM OF 3 INCHES (76 mm) WITH A MINIMUM OF 3 INCHES (76 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
  - ANCHOR RODS SHALL PROJECT 2 1/2\"/>
  - THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6\"/>
  - THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
  - THE RACEWAYS SHALL PROJECT 1\"/>

**LIGHT POLE FOUNDATION**  
40' (12,192 m) TO 47.5' (14,478 m) M.H. 15" (381 mm) BOLT CIRCLE

DESIGNED BY	DESIGNED	NO.	DESIGNED	NO.	DESIGNED	NO.	DESIGNED	NO.
DRAWN BY	DRAWN	NO.	DRAWN	NO.	DRAWN	NO.	DRAWN	NO.
CHECKED BY	CHECKED	NO.	CHECKED	NO.	CHECKED	NO.	CHECKED	NO.
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

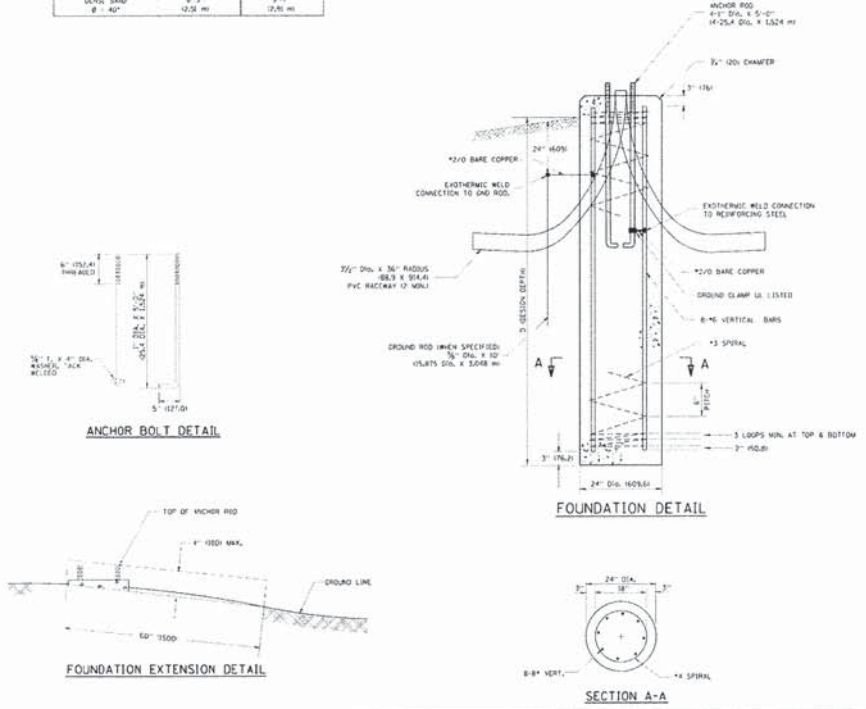
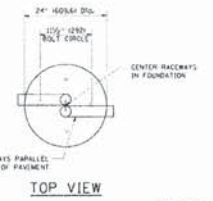
ROADWAY LIGHTING DETAIL  
LIGHT POLE FOUNDATION (RE-301)

SHEET NO. 04 OF 20 SHEETS 5'x8'

CONTRACT NO. 64555

**LIGHT POLE FOUNDATION DEPTH TABLE**  
30 FT. (9,144 m) TO 35 FT. (10,668 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH '0' OF FOUNDATION	SINGLE ANCHOR ROD	TWIN ANCHOR RODS
SOFT CLAY D <sub>u</sub> = 0.175 TONS/SQ. FT.	12'-0"	14.5" DIA.	14.5" DIA.
MEDIUM CLAY D <sub>u</sub> = 0.275 TONS/SQ. FT.	9'-0"	14.5" DIA.	14.5" DIA.
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  - THE ANCHOR RODS SHALL BE INCREASED A MINIMUM OF 3 INCHES (76 mm) WITH A MINIMUM OF 3 INCHES (76 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
  - ANCHOR RODS SHALL PROJECT 2 1/2\"/>
  - THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6\"/>
  - THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
  - THE RACEWAYS SHALL PROJECT 1\"/>

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DRAWN BY	DRAWN	NO.	DRAWN	NO.	DRAWN	NO.	DRAWN	NO.
CHECKED BY	CHECKED	NO.	CHECKED	NO.	CHECKED	NO.	CHECKED	NO.
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION  
30' (9,144 m) TO 35' (10,668 m) M.H. 15" (381 mm) BOLT CIRCLE

SHEET NO. 04 OF 20 SHEETS 5'x8'

CONTRACT NO. 64555

LAYOUT	MWH	12/10/10
DRAWN	MWH	02/12/13
REVIEWED	DPA	02/12/13

FILE NAME =	USER NAME = #USER#	DESIGNED - DPA	REVISED -
#FILES#		DRAWN - MWH	REVISED -
		CHECKED - DPA	REVISED -
		DATE - #DATE#	REVISED -

**STATE STREET AND BELL SCHOOL ROAD INTERSECTION**  
ROCKFORD, IL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5149	04-00345-00-CH	WINNEBAGO	#STOT#	#SNUM#
[ILLINOIS] FED. AID PROJECT				