

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	1

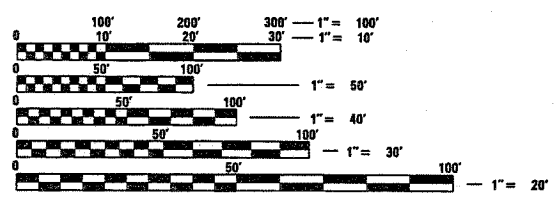
D-91-111-05

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**STANDARDS**

701006-02 701011-01 701101-01 701301-02 814001  
 702001-05 424001-04 857001 880006 701801-03  
 780001-01 701501-03 701601-04 701701-04



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.

Prepared by Terry Rammacher Traffic Engineer Date July 1, 2005

**CONTRACT NO. 62907**

**STATE OF ILLINOIS**

**DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED FEDERAL AID HIGHWAY**

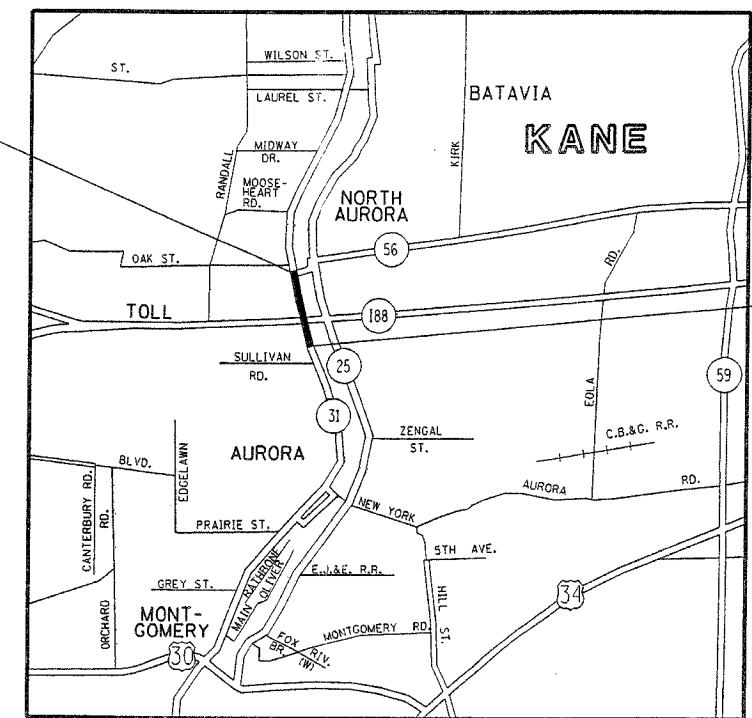
**DISTRICT 1  
 CONGESTION MITIGATION AIR QUALITY  
 FIBER OPTIC COMMUNICATION NETWORKS  
 FAU ROUTE 3902 - IL. 31 (LINCOLN WAY) FROM  
 IL. 56 (STATE ST.) TO LOVEDALE LANE  
 SECTION 2005-003 TS  
 KANE COUNTY  
 C-91-111-05  
 PROJECT: CMM-3902(001)**

LOCATION MAP (NOT TO SCALE)



LOCATION OF SECTION INDICATED THUS: -

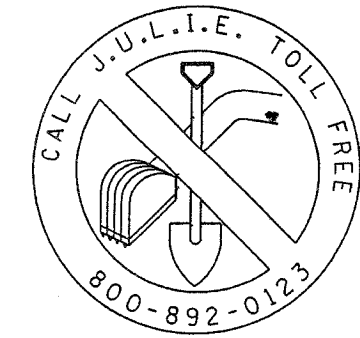
PROJECT BEGIN



PROJECT ENDS

IMPROVEMENT LOCATED IN THE CITY OF NORTH AURORA

BATAVIA TOWNSHIP LOCATION MAP



STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED July 1, 2005

Debra M. O'Keefe  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 19, 2005  
Mike Hine  
 ENGINEER OF DESIGN AND ENVIRONMENT

August 19, 2005  
Victor Modest  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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Rev.

DISTRICT ONE - BUREAU OF TRAFFIC - TERRY RAMMACHER/DARYLE DREW (847) 705-4420

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	2
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	
CONTRACT NO. 62907				

SUMMARY OF QUANTITIES			URBAN 80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT		Y031-1F IL. 31 @ IL. 56	Y031-1F IL. 31 @ AIRPORT RD.	Y031-1F IL. 31 @ I-88	Y031-1F IL. 31 @ LOVEDALE	Y031-1F IL. 31 Interconnect IL. 56 TO LOVEDALE
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	1	1	1	1	
67100100	MOBILIZATION	L SUM	1					1
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.20	0.20	0.20	0.20	0.20
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	0.20	0.20	0.20	0.20	0.20
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.20	0.20	0.20	0.20	0.20
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.20	0.20	0.20	0.20	0.20
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	470	200	270			
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	200	130	70			
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	706		706			
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	36		36			
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	755					755
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	107		62			45
81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	222					222
81301010	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE 10"x8"x4"	EACH	2					2
81400100	HANDHOLE	EACH	11		3			8
81400300	DOUBLE HANDHOLE	EACH	1					1
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	4240		690			3550
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	4	1	1	1	1	
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	3		1	1	1	
85700305	FULL-ACTUATED CONTROLLER AND TYPE V CABINE, SPECIAL	EACH	1	1				
86000105	MASTER CONTROLLER (SPECIAL)	EACH	1					1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	4	1	1	1	1	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	480		480			
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	725		725			

SUMMARY OF QUANTITIES			URBAN 80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
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87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	960		960			
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	140		140			
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2215	805	590		820	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	400	190	50	60	100	
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1		1			
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1		1			
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1		1			
87700140	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT.	EACH	2		2			
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	12		12			
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	4		4			
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30		30			
87900200	DRILL EXISTING HANDHOLE	EACH	10					10
X8800020	SIGNAL HEAD , LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8	2	3	1	2	
X8800035	SIGNAL HEAD , LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2		2			
X8800040	SIGNAL HEAD , LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4	4				
X8800045	SIGNAL HEAD , LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4	4				
X8800060	SIGNAL HEAD , LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	2				
X8805280	SIGNAL HEAD , LED, 2-FACE, 1-3 SECTION, 1-5, SECTION BRACKET MOUNTED	EACH	1	1				
X8805320	SIGNAL HEAD , LED, 3-FACE, 2-3-SECTION, 1-5 SECTION BRACKET MOUNTED	EACH	1		1			
XX004678	SIGNAL HEAD , LED, 3-FACE, 3 SECTION, BRACKET MOUNTED	EACH	2		2			
X8810610	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	12	8	4			
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	16	6	4	2	4	

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\*SPECIALTY ITEMS

Rev.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SUMMARY OF QUANTITIES  
ILL. 31 FROM  
ILL. 56 TO LOVEDALE LN.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	3
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	
CONTRACT NO. 62907				

SUMMARY OF QUANTITIES			URBAN 80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT		Y031-1F IL. 31 @ IL. 56	Y031-1F IL. 31 @ AIRPORT RD.	Y031-1F IL. 31 @ I-88	Y031-1F IL. 31 @ LOVEDALE	Y031-1F IL. 31 Interconnect IL. 56 TO LOVEDALE
88500100	INDUCTIVE LOOP DETECTOR	EACH	21	8	4		9	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	12	8	4			
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1			
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	350	190		60	100	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	4	1	1	1	1	
89502380	REMOVE EXISTING HANDHOLE	EACH	4	1	1	1	1	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	5		5			
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	4785				4785	
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	4	1	1	1	1	
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	4785				4785	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	400	190	50	60	100	
X0325096	OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM	1					1

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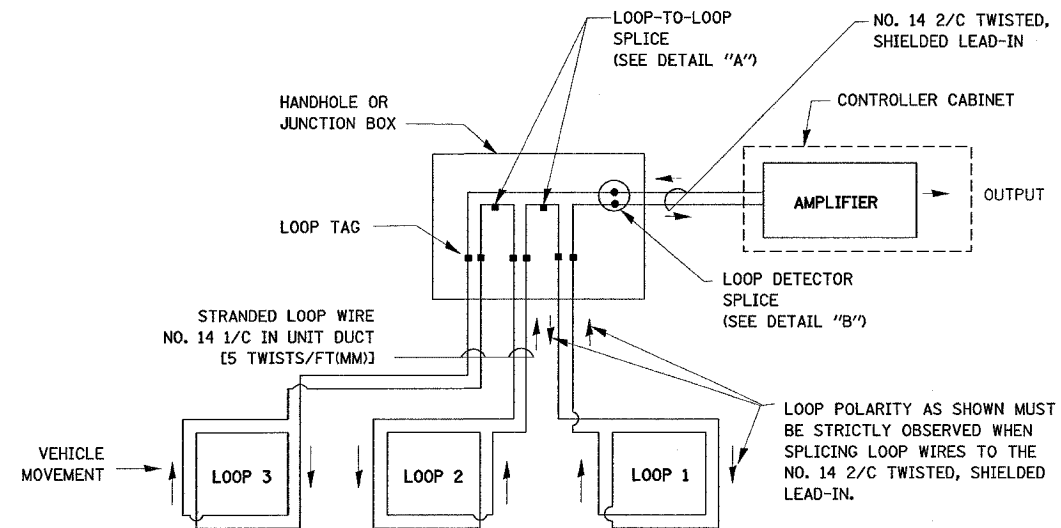
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SUMMARY OF QUANTITIES  
ILL. 31 FROM  
ILL. 56 TO LOVEDALE LN.

F.A.B. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003-TS	KANE	20	4
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62907				

**LOOP DETECTOR NOTES**

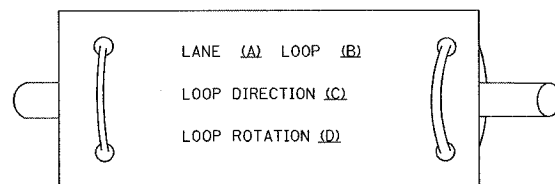
1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED 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.
3. 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.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. 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.
6. 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.
7. 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.



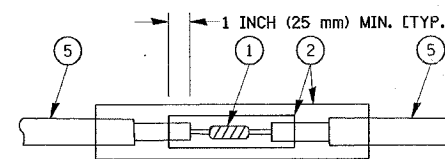
**DETECTOR LOOP WIRING SCHEMATIC**

- 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.

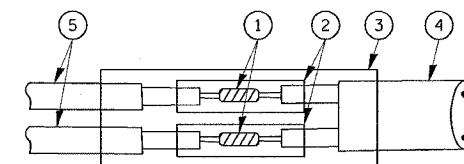
**LOOP LEAD-IN CABLE TAG**



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



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**LOOP DETECTOR SPLICE**

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED CABLE.
- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS**

SCALE: VERT. NONE  
HORIZ.  
DATE 1-01-02

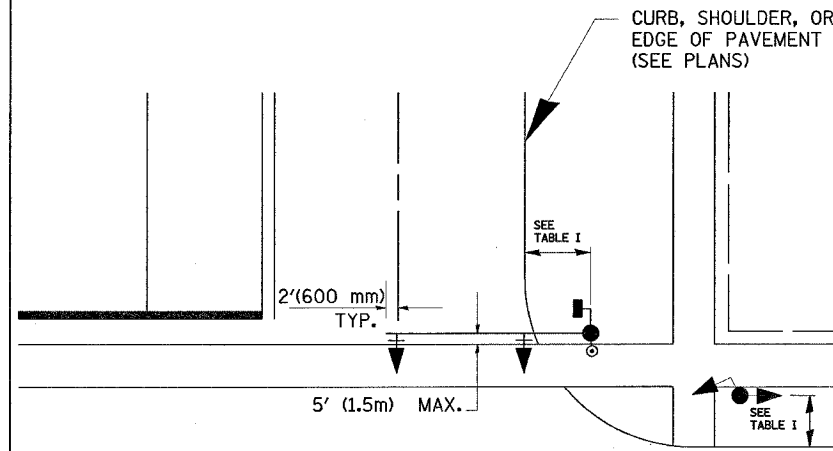
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DESIGNED BY: DAD  
CHECKED BY: DAZ  
SHEET 1 OF 4

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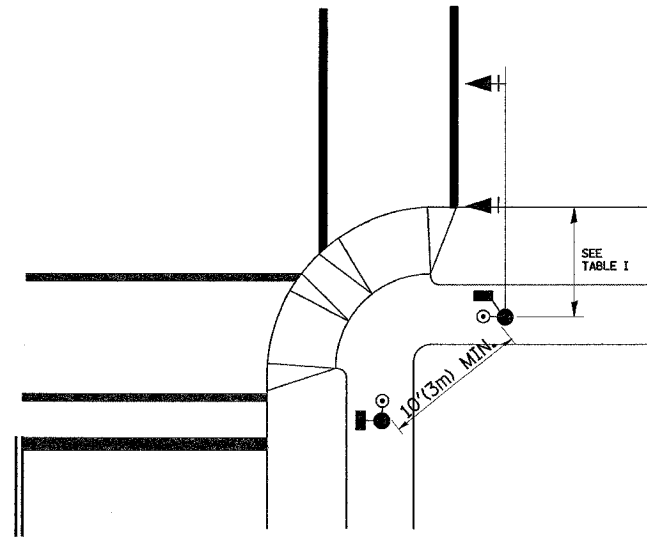
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003-TS	KANE	20	5
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62907				

### TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



### PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

### NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.  
 AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.  
 PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:  
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.  
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.  
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.  
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).  
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

### PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

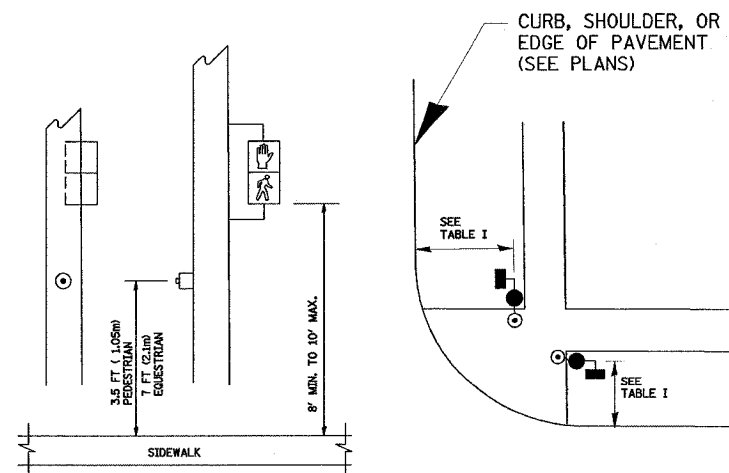


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

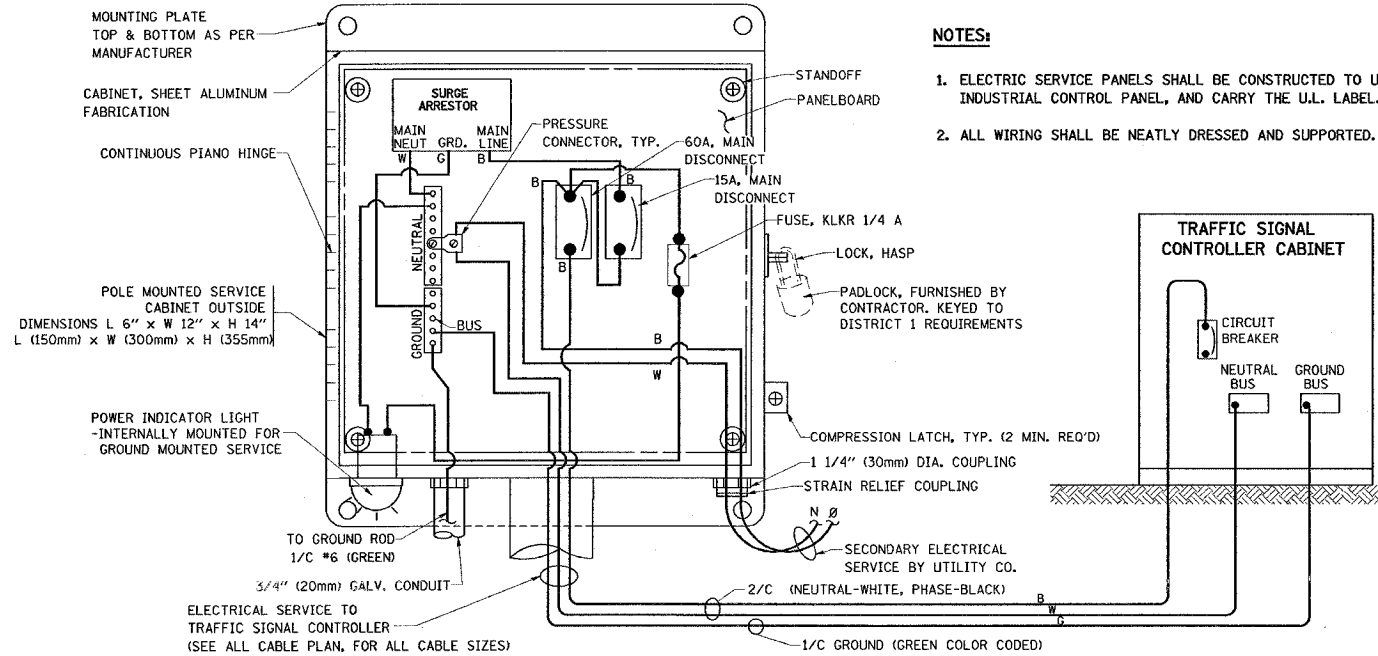
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DISTRICT 1  
 STANDARD TRAFFIC SIGNAL  
 DESIGN DETAILS

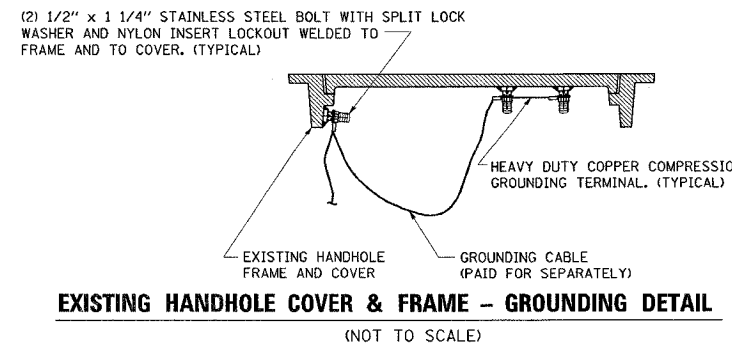
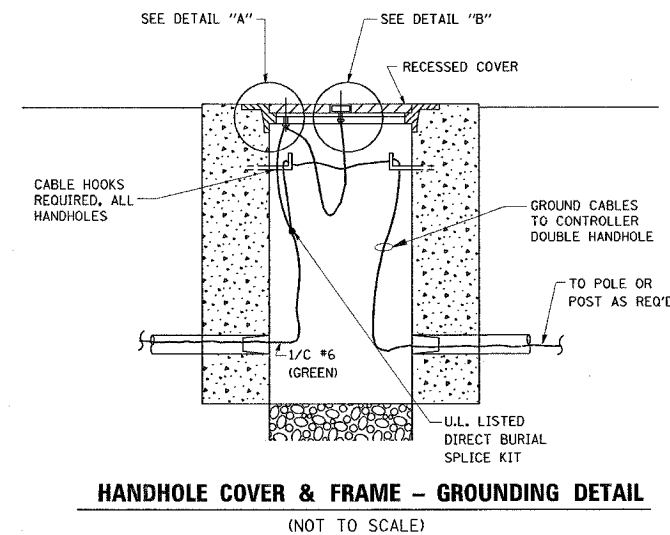
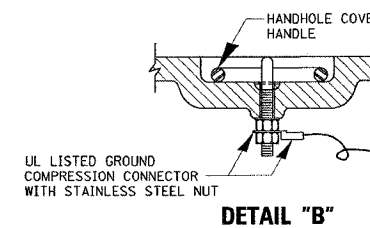
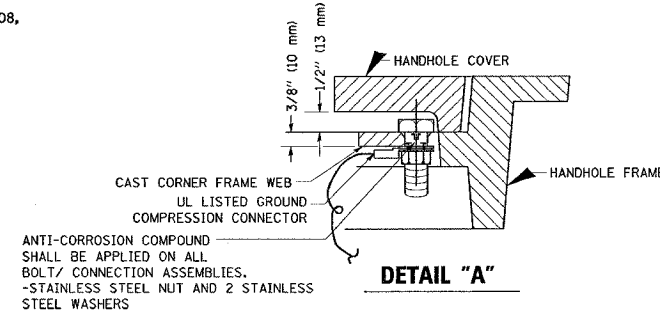
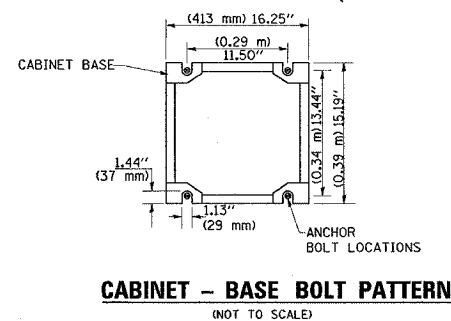
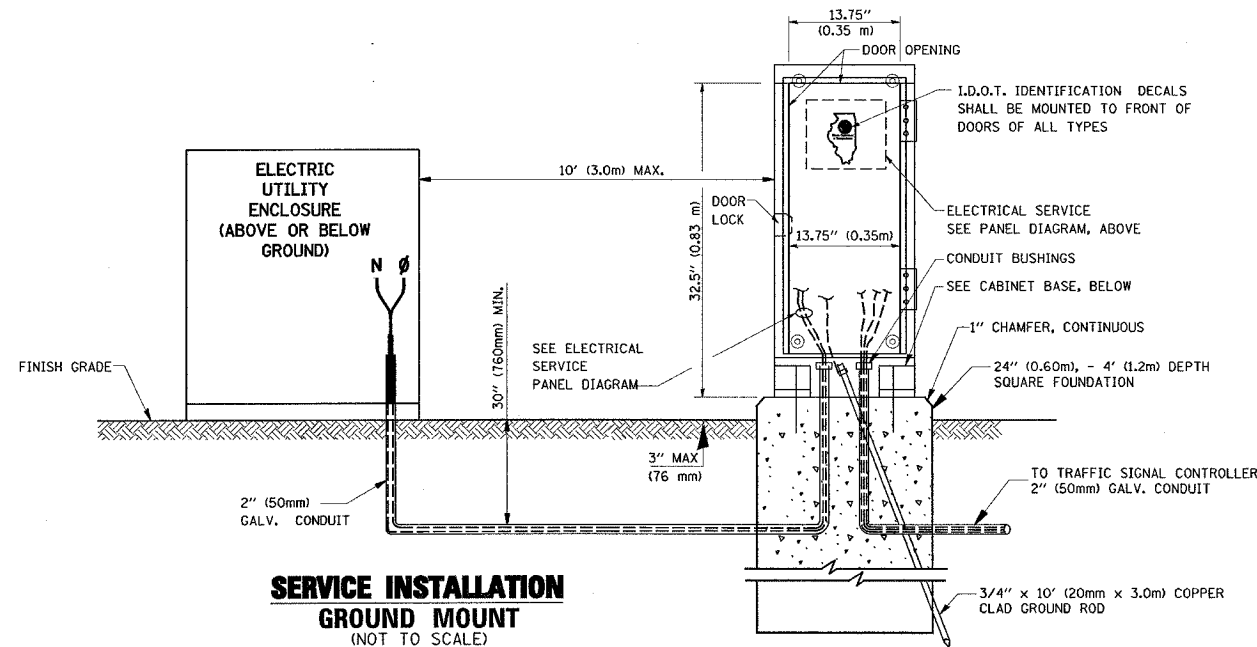
SCALE: VERT. NONE  
 HORIZ.  
 DATE 1-01-02

DRAWN BY: RWP  
 DESIGNED BY: DAD  
 CHECKED BY: DAZ  
 SHEET 2 OF 4

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003-TS	KANE	20	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				



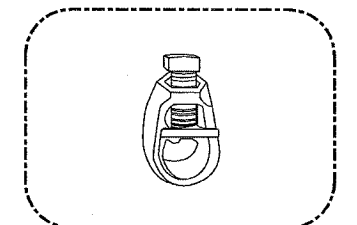
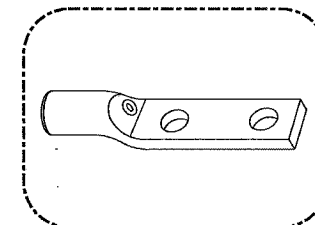
**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



**NOTES:**

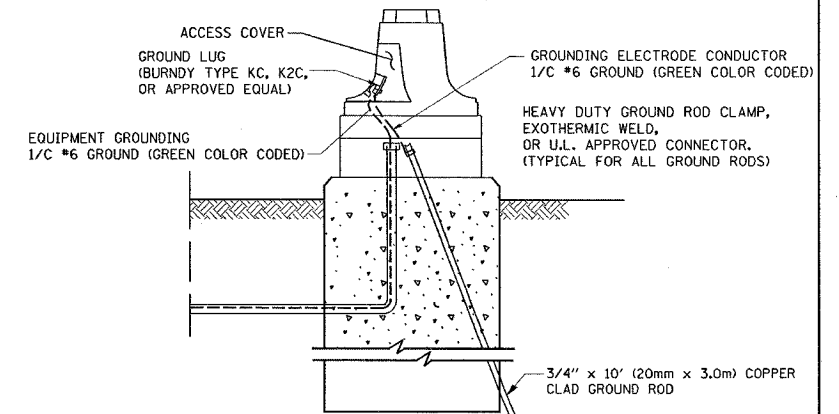
**GROUNDING SYSTEM**

- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
- THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



**NOTES:**

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

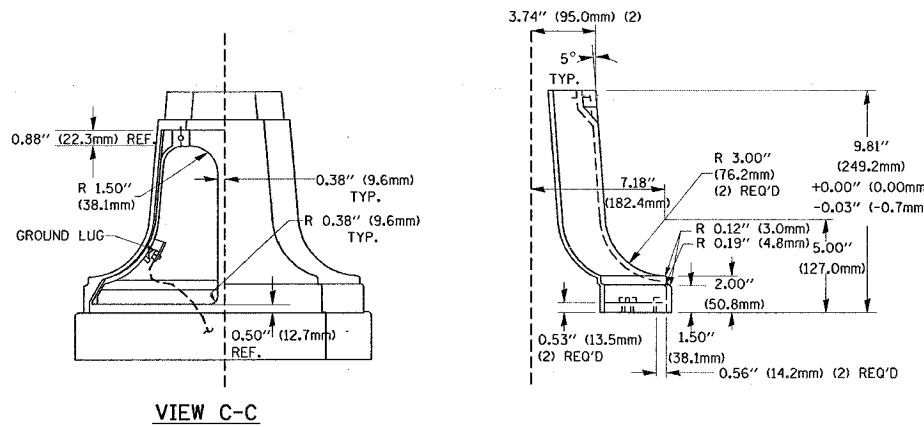
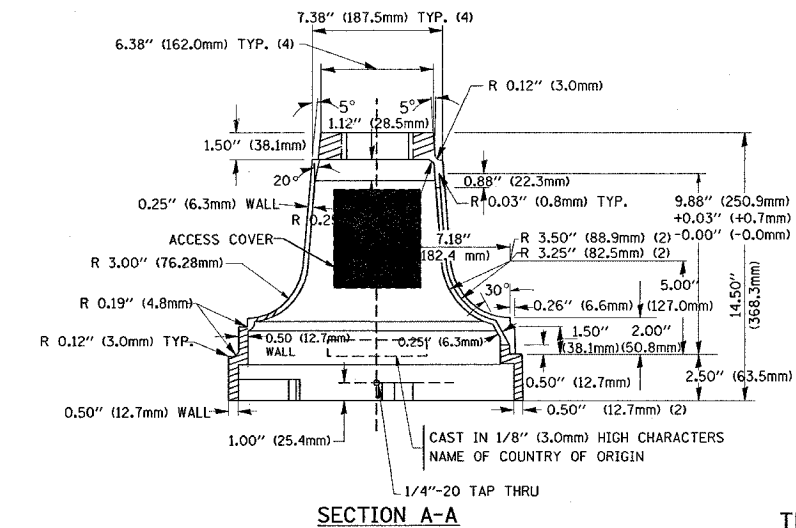
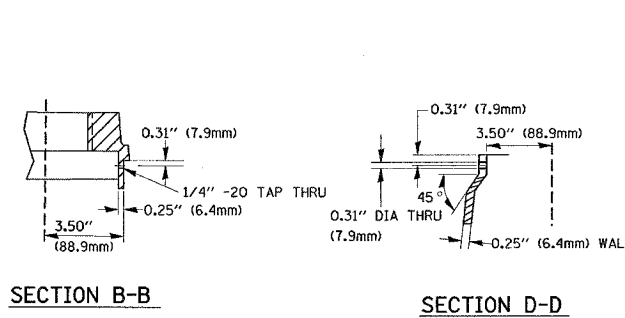
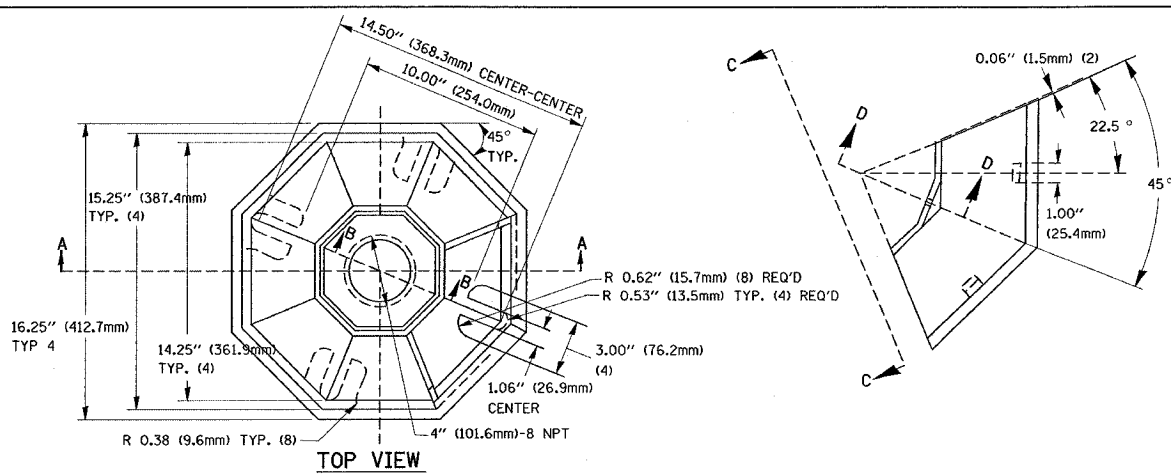


REVISIONS	
NAME	DATE

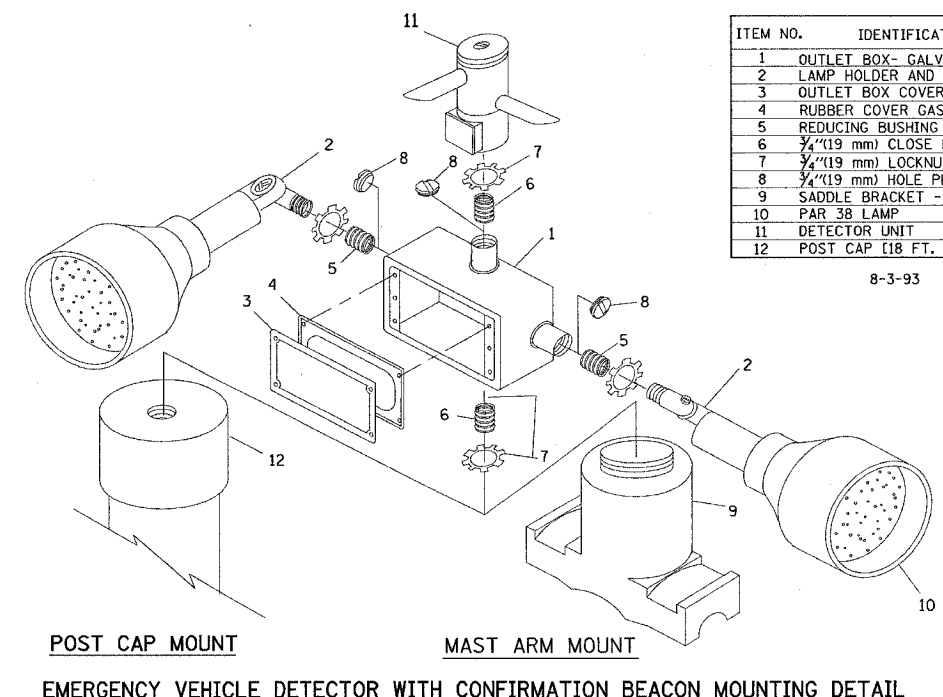
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT 1**  
**STANDARD TRAFFIC SIGNAL**  
**DESIGN DETAILS**

SCALE: VERT. NONE  
 HORIZ. DATE 1-01-02  
 DESIGNED BY: DAD  
 CHECKED BY: DAZ  
 SHEET 3 OF 4

F.A.B. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003-TS	KANE	20	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				



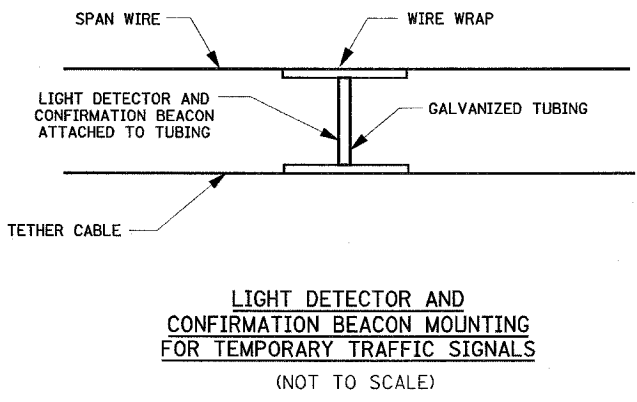
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



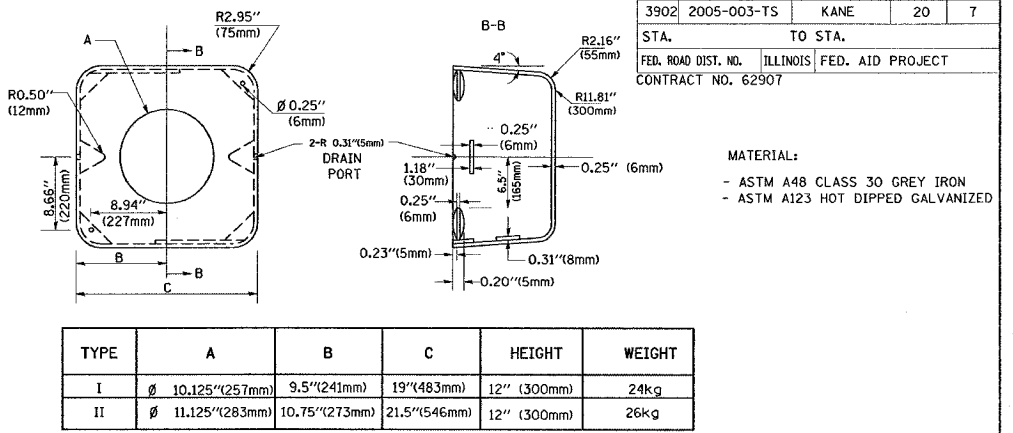
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.00344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4 (19 mm) CLOSE NIPPLE
7	3/4 (19 mm) LOCKNUT
8	3/4 (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

- 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-O-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.



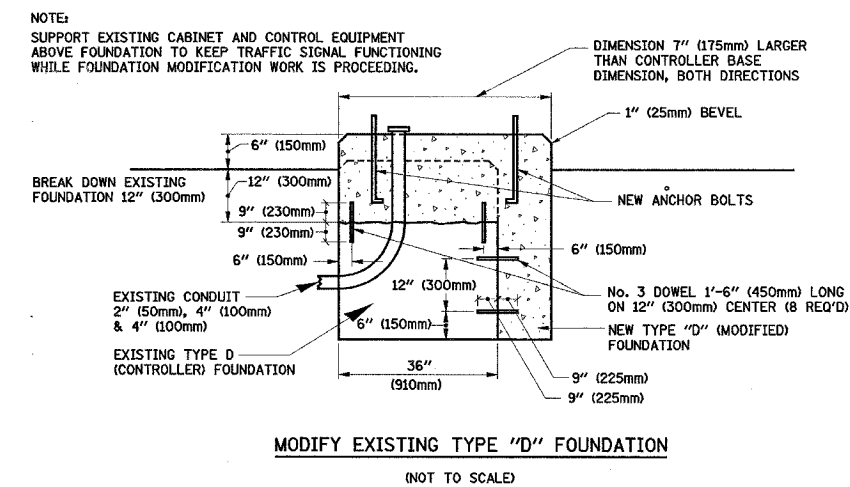
LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS (NOT TO SCALE)



TYPE	A	B	C	HEIGHT	WEIGHT
I	∅ 10.125 (257mm)	9.5 (241mm)	19 (483mm)	12 (300mm)	24kg
II	∅ 11.125 (283mm)	10.75 (273mm)	21.5 (546mm)	12 (300mm)	26kg

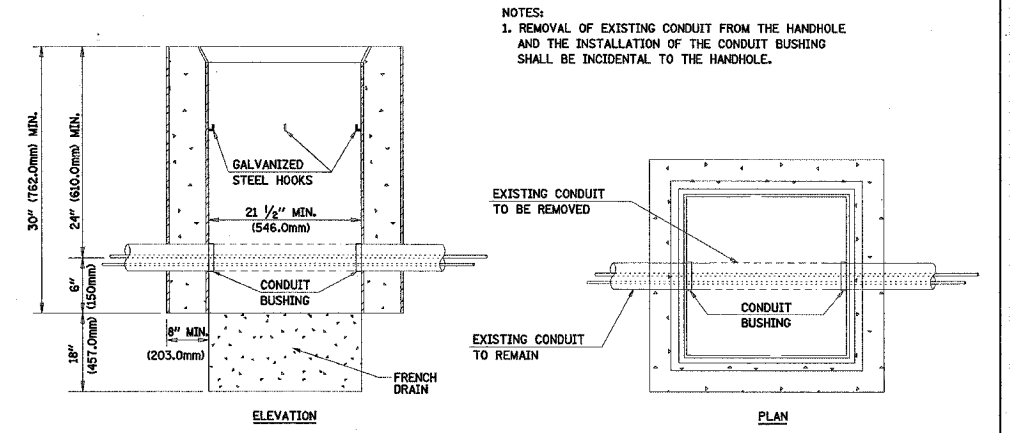
MATERIAL:  
- ASTM A48 CLASS 30 GREY IRON  
- ASTM A123 HOT DIPPED GALVANIZED

SHROUD DETAIL



MODIFY EXISTING TYPE "D" FOUNDATION

NOT TO SCALE



DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT N.T.S.

REVISIONS	
NAME	DATE

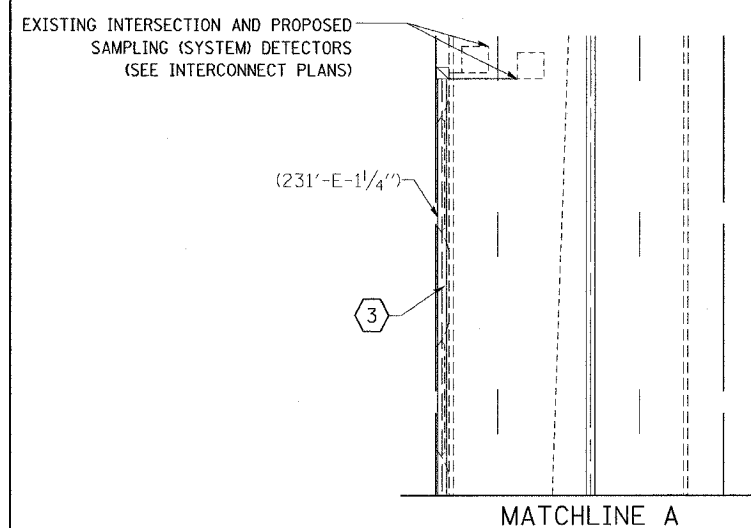
ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT 1  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS

SCALE: VERT. NONE  
HORIZ. NONE  
DATE 1-01-02  
DRAWN BY: RWP  
DESIGNED BY: DAD  
CHECKED BY: DAZ  
SHEET 4 OF 4

c:\projects\tr-office\0136000\131.m32

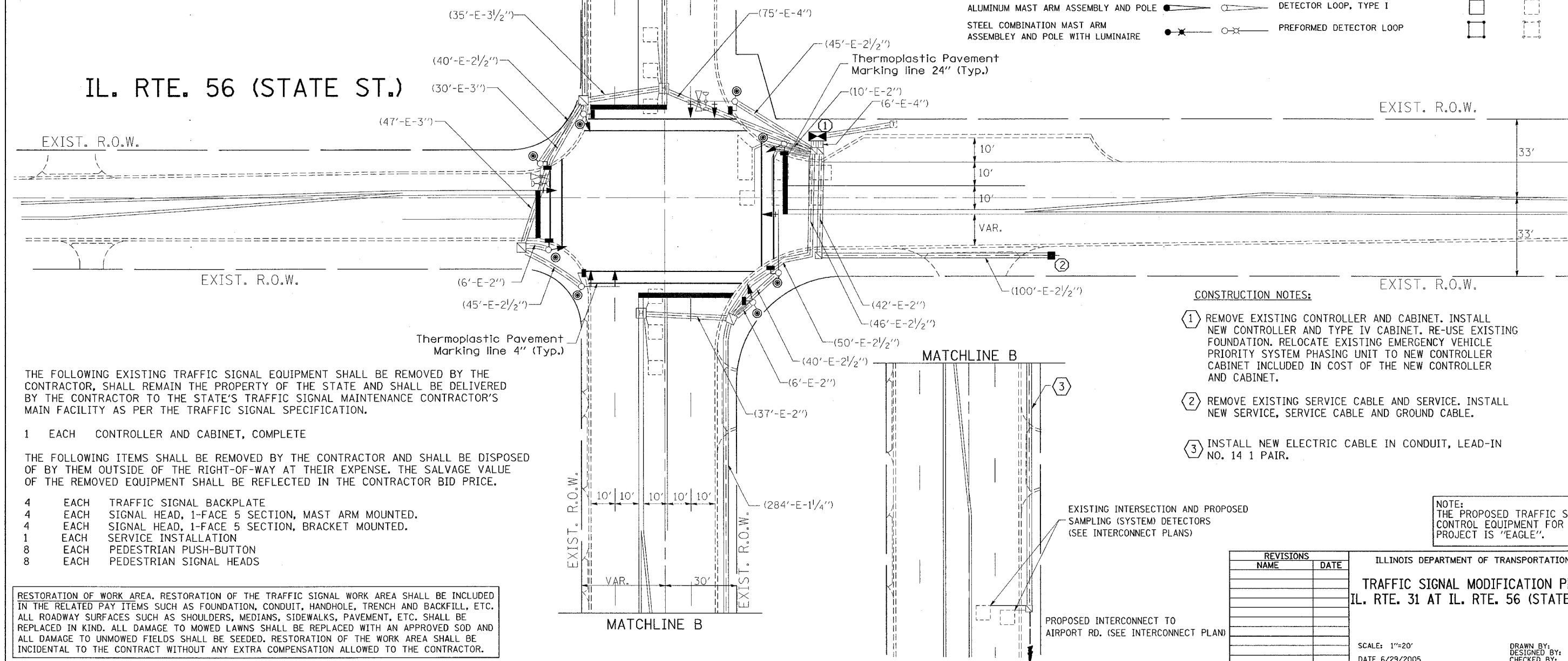
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62907



**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING		PROPOSED	EXISTING
CONTROLLER CABINET			EMERGENCY VEHICLE SYSTEM DETECTOR		
RAILROAD CONTROL CABINET			CONFIRMATION BEACON		
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT			JUNCTION BOX		
TELEPHONE CONNECTION			HANDHOLE		
SIGNAL HEAD			HEAVY DUTY HANDHOLE		
SIGNAL HEAD WITH BACKPLATE			DOUBLE HANDHOLE		
SIGNAL HEAD OPTICALLY PROGRAMMED			G.S. CONDUIT IN TRENCH OR PUSHED		
SIGNAL HEAD PEDESTRIAN			COMMON TRENCH	CT	
SIGNAL POST			UNIT DUCT	UD	
WOOD POLE			PEDESTRIAN PUSHBUTTON DETECTOR		
STEEL MAST ARM ASSEMBLY AND POLE			DETECTOR LOOP, TYPE I		
ALUMINUM MAST ARM ASSEMBLY AND POLE			PREFORMED DETECTOR LOOP		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE					



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATION.

- 1 EACH CONTROLLER AND CABINET, COMPLETE

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

- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH SIGNAL HEAD, 1-FACE 5 SECTION, MAST ARM MOUNTED.
- 4 EACH SIGNAL HEAD, 1-FACE 5 SECTION, BRACKET MOUNTED.
- 1 EACH SERVICE INSTALLATION
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 8 EACH PEDESTRIAN SIGNAL HEADS

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC. 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. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE CONTRACT WITHOUT ANY EXTRA COMPENSATION ALLOWED TO THE CONTRACTOR.

**CONSTRUCTION NOTES:**

- 1 REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- 2 REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.
- 3 INSTALL NEW ELECTRIC CABLE IN CONDUIT, LEAD-IN NO. 14 1 PAIR.

NOTE: THE PROPOSED TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT IS "EAGLE".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**TRAFFIC SIGNAL MODIFICATION PLAN**  
**ILL. RTE. 31 AT IL. RTE. 56 (STATE ST.)**

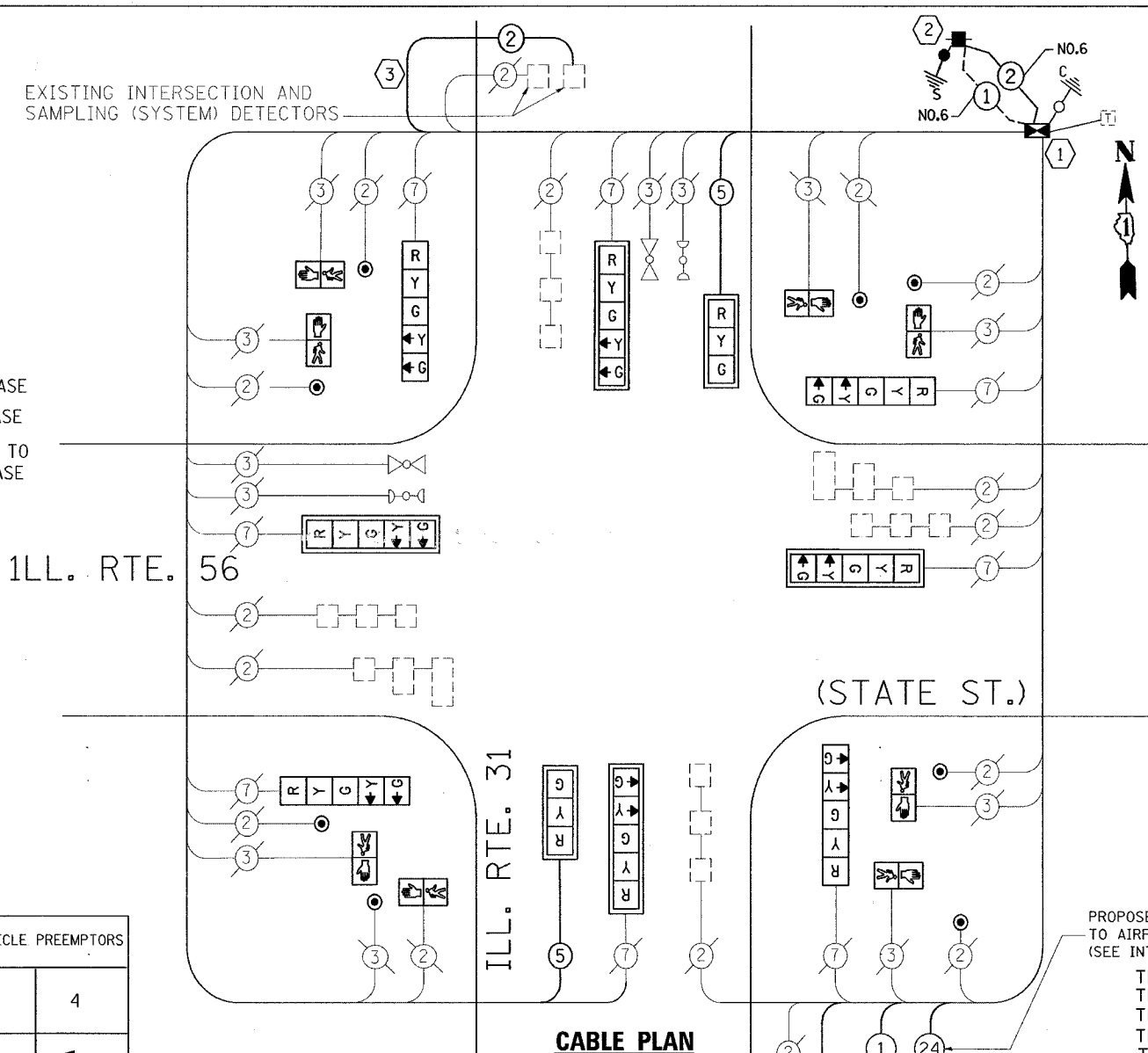
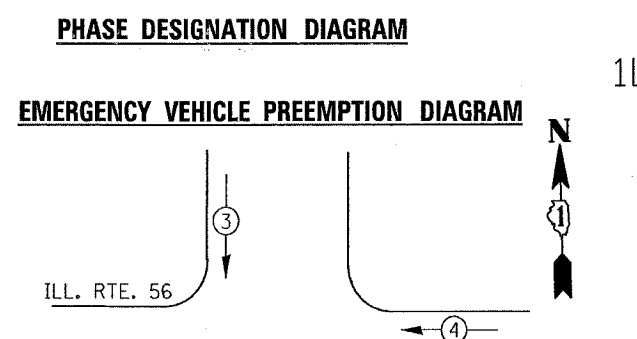
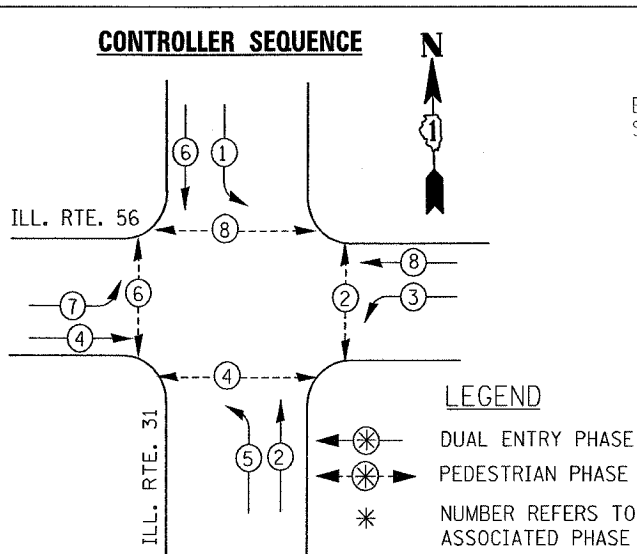
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DATE 6/29/2005

DRAWN BY: BCK  
DESIGNED BY: SM  
CHECKED BY: DAD

PLOT DATE = 6/29/2005  
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USER NAME = kenshappkegbo



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				



**CABLE PLAN LEGEND**

EXISTING	PROPOSED	EXISTING	PROPOSED	DESCRIPTION
(G)	(G)	(2)	(2)	8" (200mm) TRAFFIC SIGNAL SECTION
(R)	(R)	(24)	(24)	12" (300mm) TRAFFIC SIGNAL SECTION
(W)	(W)	(R)	(R)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(P)	(P)	(Y)	(Y)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(C)	(C)	(G)	(G)	CONTROLLER CABINET
(S)	(S)	(Y)	(Y)	SERVICE INSTALLATION
(T)	(T)	(G)	(G)	TELEPHONE CONNECTION
(V)	(V)	(Y)	(Y)	VEHICLE DETECTOR, INDUCTION LOOP
(M)	(M)	(G)	(G)	MAGNETIC DETECTOR
(E)	(E)	(Y)	(Y)	EMERGENCY VEHICLE LIGHT DETECTOR
(B)	(B)	(G)	(G)	CONFIRMATION BEACON
(D)	(D)	(Y)	(Y)	PUSHBUTTON DETECTOR
(1)	(1)	(G)	(G)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		(H)	(H)	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C).
		(P)	(P)	GROUND ROD AT POST (P), OR MAST ARM POLE (MA).
		(S)	(S)	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

NOTE: DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.

NOTE: FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F

NOTE: SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD

NOTE: RAILROAD CONTROL CABINET

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	135	17	0.50	85.0
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
TOTAL =					504.2

ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: 847-816-5331  
PHONE: 847-816-5331  
COMPANY: COMMONWEALTH EDISON

**EXISTING INTERSECTION AND PROPOSED SAMPLING (SYSTEM) DETECTORS (SEE INTERCONNECT PLANS)**

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-H-2' (6m-H-0.6m)=
E - M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	.20
THERMOPLASTIC PAVEMENT MARKING LINE 4"	FOOT	200
THERMOPLASTIC PAVEMENT MARKING LINE 24"	FOOT	130
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE V CABINET (SPECIAL)	EACH	1
TRANSCIVER-FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1 C	FOOT	190
ELECTRIC CABLE IN CONDUIT, LEAD-IN NO. 14 1 PAIR	FOOT	805
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2 C	FOOT	190
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	425
INDUCTIVE LOOP DETECTOR	EACH	10
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	190
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED.	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED.	EACH	4
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED.	EACH	4
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	8
TRAFFIC SIGNAL BACKPLATE	EACH	6

**CONSTRUCTION NOTES:**

- REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.
- INSTALL NEW ELECTRIC CABLE IN CONDUIT, LEAD-IN NO. 14 1 PAIR.

THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

PROPOSED INTERCONNECT TO AIRPORT RD. (SEE INTERCONNECT PLAN).

NOTE: RELOCATION OF THE LIGHT DETECTOR AMPLIFIER(S) FROM THE OLD CONTROLLER CABINET TO THE NEW CABINET IS NECESSARY. THE COST OF THIS WORK SHALL BE INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.

PLT DATE = 6/29/2005  
FILE NAME = c:\projects\trf\1131388\1131.mxd  
PLOT SCALE = 20/0000 7' IN.  
REFERENCE = 01/04

ILLINOIS DEPARTMENT OF TRANSPORTATION

**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES**

ILL. RTE. 31 @ IL. 56 (STATE ST.)

SCALE: 1"=20'  
DATE 6/29/2005

DRAWN BY BCK  
DESIGNED BY BCK  
CHECKED BY BCK

REVISIONS	
NAME	DATE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62907				

**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING	PROPOSED	EXISTING
CONTROLLER CABINET				
RAILROAD CONTROL CABINET				
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				
TELEPHONE CONNECTION				
SIGNAL HEAD				
SIGNAL HEAD WITH BACKPLATE				
SIGNAL HEAD OPTICALLY PROGRAMMED				
SIGNAL HEAD PEDESTRIAN				
SIGNAL POST				
WOOD POLE				
STEEL MAST ARM ASSEMBLY AND POLE				
ALUMINUM MAST ARM ASSEMBLY AND POLE				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				
EMERGENCY VEHICLE SYSTEM DETECTOR				
CONFIRMATION BEACON				
JUNCTION BOX				
HANDHOLE				
HEAVY DUTY HANDHOLE				
DOUBLE HANDHOLE				
G.S. CONDUIT IN TRENCH OR PUSHED				
COMMON TRENCH	CT			
UNIT DUCT	UD			
PEDESTRIAN PUSHBUTTON DETECTOR				
DETECTOR LOOP, TYPE I				
PREFORMED DETECTOR LOOP				

**CONSTRUCTION NOTES:**

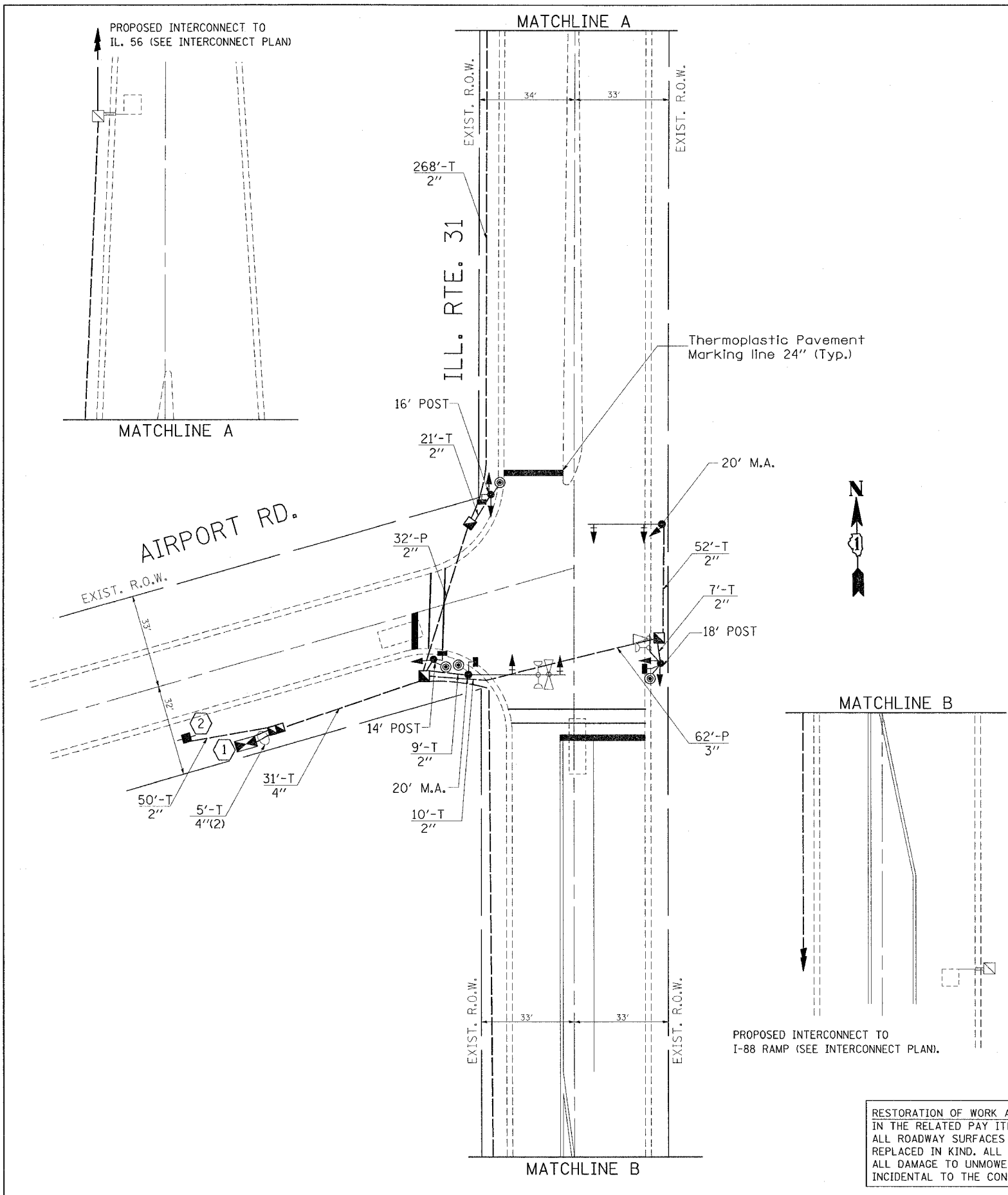
- ALL EXISTING CONCRETE POST FOUNDATIONS ARE TO BE REMOVED AND REPLACE.
- 1 REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON NEW FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- 2 REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.

NOTE:  
THE PROPOSED TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT IS "EAGLE".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL MODERNIZATION PLAN**  
**IL. RTE. 31 AT AIRPORT RD.**  
SCALE: 1"=20'  
DATE 8/11/2005  
DRAWN BY BCK  
DESIGNED BY BCK  
CHECKED BY BCK

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC. 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. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE CONTRACT WITHOUT ANY EXTRA COMPENSATION ALLOWED TO THE CONTRACTOR.

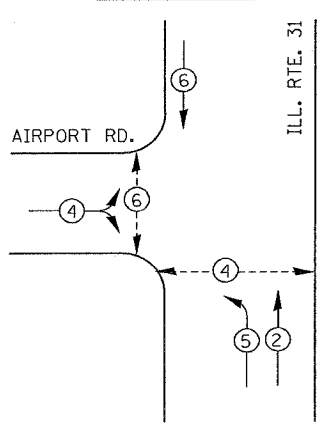


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 PLOT USER = ken  
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 USER NAME = ken

11:11:06 08/11/2005

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				

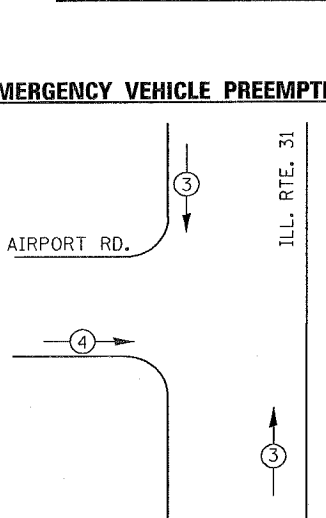
**CONTROLLER SEQUENCE**



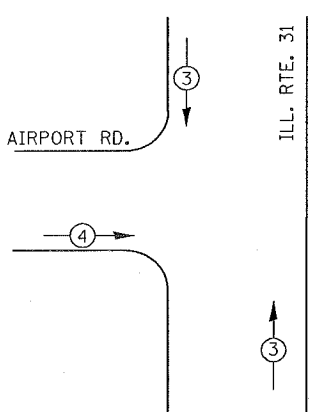
**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



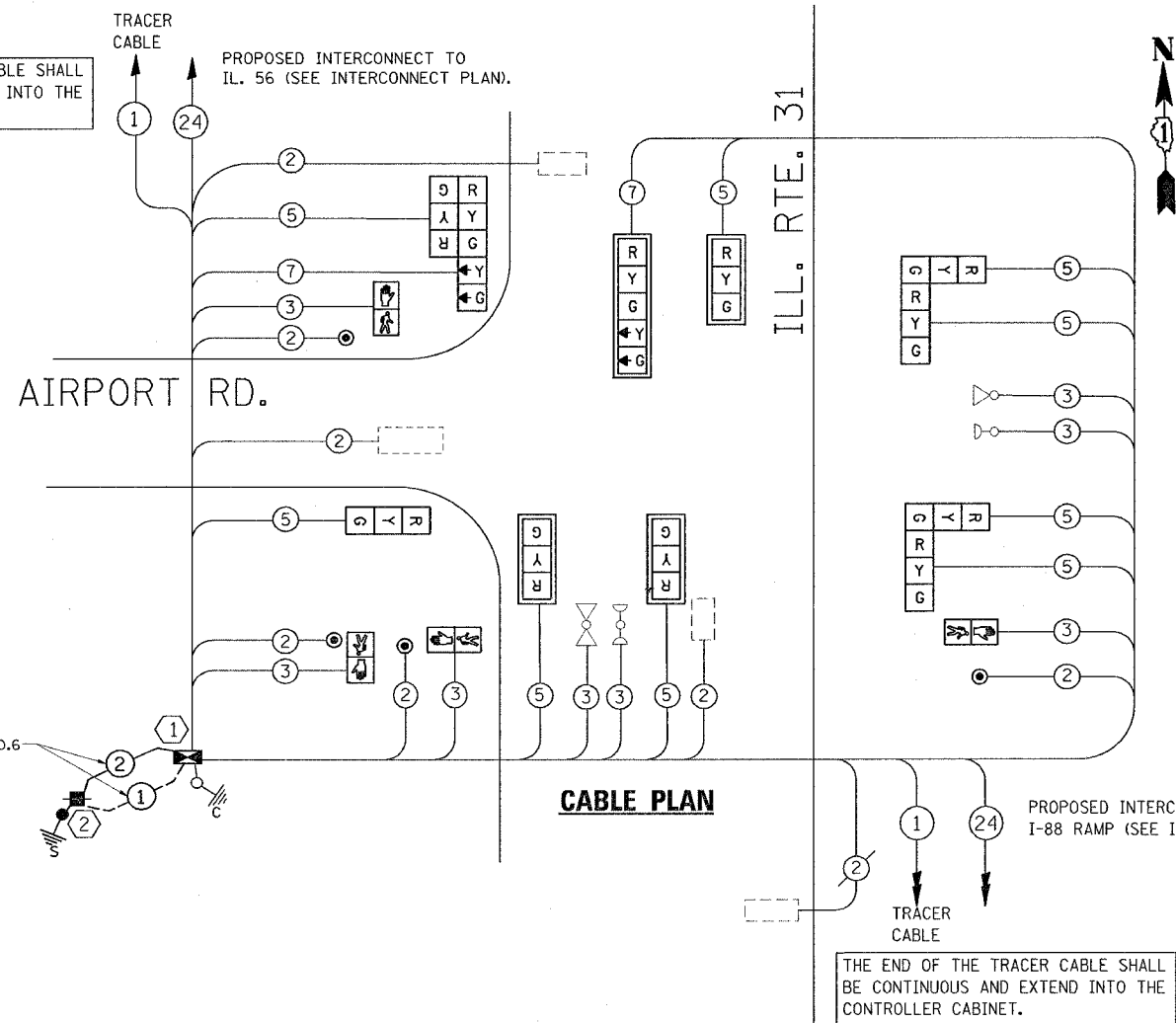
**EMERGENCY VEHICLE PREEMPTION DIAGRAM**



**CONSTRUCTION NOTES:**

- REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON NEW FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.

THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.



**CABLE PLAN LEGEND**

- |   |   |
|---|---|
| 8" (200mm) TRAFFIC SIGNAL SECTION   | 12" (300mm) TRAFFIC SIGNAL SECTION                                  |
| 12" (300mm) PEDESTRIAN SIGNAL SECTION   | 12" (300mm) PEDESTRIAN SIGNAL SECTION                               |
| CONTROLLER CABINET  | SERVICE INSTALLATION  |
| TELEPHONE CONNECTION  | VEHICLE DETECTOR, INDUCTION LOOP                                    |
| MAGNETIC DETECTOR   | EMERGENCY VEHICLE LIGHT DETECTOR                                    |
| CONFIRMATION BEACON   | PUSHBUTTON DETECTOR   |
| DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)                  |
| FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F   | SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD           |
| RAILROAD CONTROL CABINET  | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C). |
| GROUND ROD AT POST (P), OR MAST ARM POLE (MA).  | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                         |

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY	ITEM	UNIT	QUANTITY
TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	.20	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	LSUM	.20	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT.	EACH	2
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	.20	CONCRETE FOUNDATION, TYPE A	FOOT	12
TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	.20	CONCRETE FOUNDATION, TYPE D	FOOT	4
THERMOPLASTIC PAVEMENT MARKING LINE 4"	FOOT	270	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30
THERMOPLASTIC PAVEMENT MARKING LINE 24"	FOOT	70	SERVICE INSTALLATION, POLE MOUNT	EACH	1
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	656	MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	36	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	690
CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	62	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1	REMOVE EXISTING HANDHOLE	EACH	1
TRANSCEIVER-FIBER OPTIC	EACH	1	REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1 C	FOOT	50	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED.	EACH	3
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2 C	FOOT	50	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED.	EACH	2
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO 14 1 PAIR	FOOT	590	SIGNAL HEAD, L.E.D., 2-FACE, 3-SECTION, BRACKET MOUNTED.	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	480	SIGNAL HEAD, L.E.D., 2-FACE, 1 5-SECTION, 1 3-SECTION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	725	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED.	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	970	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	140	PEDESTRIAN PUSH-BUTTON	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	4	INDUCTIVE LOOP DETECTOR	EACH	4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1	TRAFFIC SIGNAL BACKPLATE	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1			

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

TYPE	NO. LAMPS	WATTAGE INCAND.	LED	*OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	135	17	0.50	85.00
(YELLOW)	10	135	25	0.25	62.50
(GREEN)	10	135	15	0.25	37.50
ARROW	4	135	12	0.10	4.80
PED. SIGNAL	4	90	25	1.00	100.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:	TOTAL =				389.80

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2'
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)±
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE: RELOCATION OF THE LIGHT DETECTOR AMPLIFIER(S) FROM THE OLD CONTROLLER CABINET TO THE NEW CABINET IS NECESSARY. THE COST OF THIS WORK SHALL BE INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES**  
**ILL. RTE. 31 @**  
**AIRPORT ROAD**

SCALE: 1"=20'  
DATE 8/10/2005

DRAWN BY BCK  
DESIGNED BY: BCK  
CHECKED BY BCK

PLOT DATE = 8/10/2005  
FILE NAME = c:\projects\off\1131131.dwg  
PLOT SCALE = 20.0000 / IN.  
USER NAME = kmthphxjgjb

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	12
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62907				

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATION.

- 1 EACH CONTROLLER AND CABINET, COMPLETE

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

- 2 EACH SIGNAL HEAD, 1-FACE 3 SECTION
- 1 EACH SIGNAL HEAD, 1 FACE 3 SECTION MAST ARM MOUNTED
- 1 EACH SIGNAL HEAD, 1 FACE 5 SECTION MAST ARM MOUNTED
- 2 EACH SIGNAL HEAD, 2-FACE 3 SECTION
- 2 EACH SIGNAL HEAD, 2 FACE 1-3 SECTION, 1-5 SECTION
- 3 EACH TRAFFIC SIGNAL POST
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 1 EACH SERVICE INSTALLATION
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 4 EACH PEDESTRIAN SIGNAL HEADS

**CONSTRUCTION NOTES:**

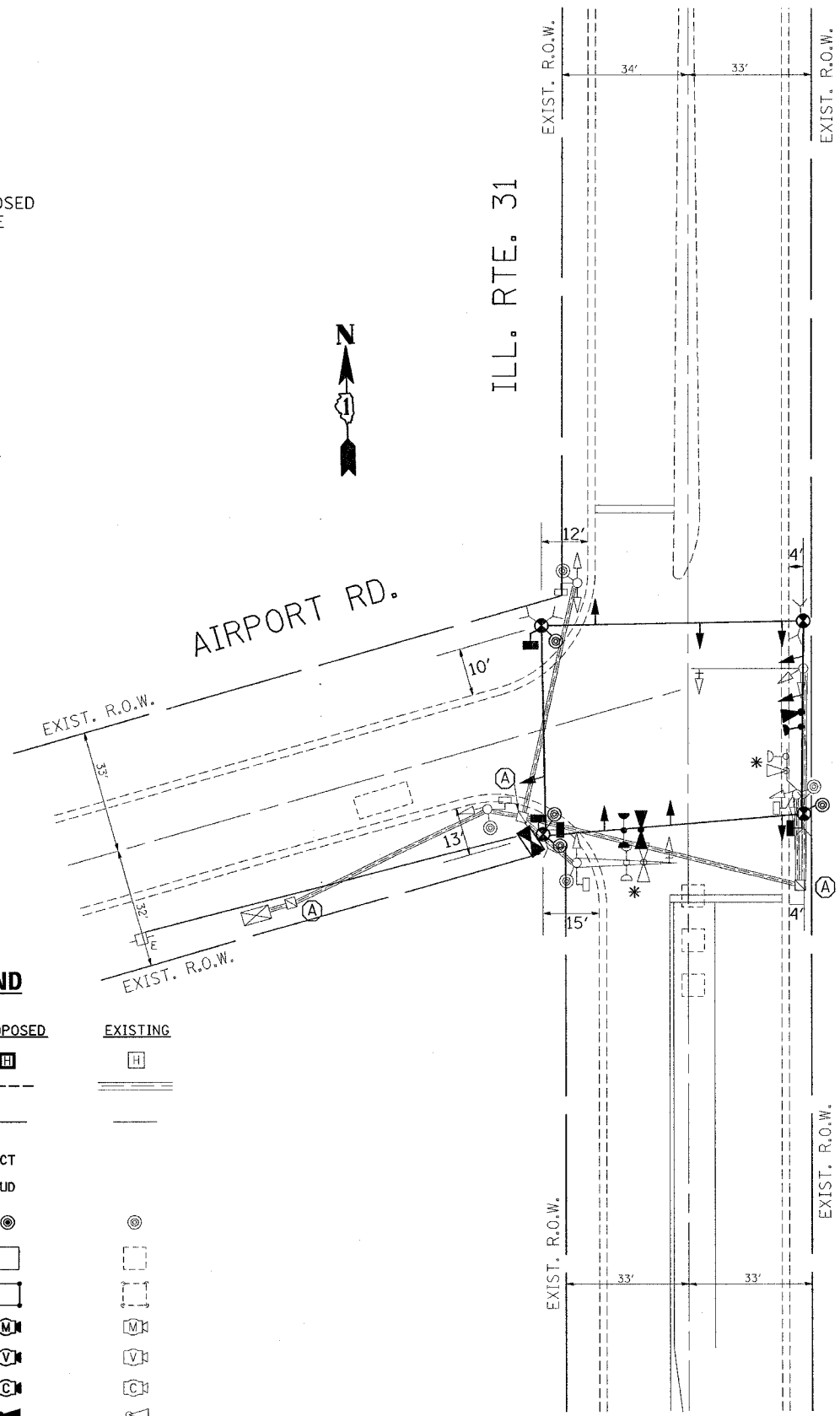
ALL EXISTING CABLES AND CONDUIT ARE TO BE ABANDONED.  
ALL EXISTING CONCRETE POST FOUNDATIONS ARE TO BE REMOVED AND REPLACE.

\* THE REMOVAL AND RE-INSTALLATION OF THE EXISTING EVP SHALL BE INCLUDED IN THE PRICE OF THE NEW CONTROLLER AT AIRPORT ROAD.

(A) EXISTING HANDHOLE TO BE REMOVED

**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR. EVP WILL BE PAID FOR SEPARATELY.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES. RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS. SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL. AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



**TEMPORARY TRAFFIC SIGNAL AND REMOVAL LEGEND**

	PROPOSED	EXISTING		PROPOSED	EXISTING
TEMPORARY CONTROLLER CABINET	[Symbol]	[Symbol]	HEAVY-DUTY HANDHOLE	[Symbol]	[Symbol]
TEMPORARY SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	[Symbol]	[Symbol]	G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION	[Symbol]	[Symbol]	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	[Symbol]	[Symbol]
TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION	[Symbol]	[Symbol]	COMMON TRENCH	CT	[Symbol]
TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED	[Symbol]	[Symbol]	UNIT DUCT	UD	[Symbol]
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	[Symbol]	[Symbol]	TEMPORARY PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED	[Symbol]	[Symbol]	DETECTOR LOOP, TYPE I	[Symbol]	[Symbol]
STEEL MAST ARM ASSEMBLY AND POLE	[Symbol]	[Symbol]	PREFORMED DETECTOR LOOP	[Symbol]	[Symbol]
ALUMINUM MAST ARM ASSEMBLY AND POLE	[Symbol]	[Symbol]	MICROWAVE VEHICLE SENSOR	[Symbol]	[Symbol]
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	[Symbol]	[Symbol]	VIDEO DETECTOR	[Symbol]	[Symbol]
EXISTING STREET LIGHT, FOUNDATION AND LUMINAIRE TO REMAIN	[Symbol]	[Symbol]	CLOSED CIRCUIT TV	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]	EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
			CONFIRMATION BEACON	[Symbol]	[Symbol]
			REMOVAL	[Symbol]	[Symbol]
			RELOCATE	[Symbol]	[Symbol]

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TEMPORARY TRAFFIC SIGNAL  
INSTALLATION AND REMOVE  
EXISTING TRAFFIC SIGNAL EQUIPMENT**

SCALE: 1"=20'  
DATE 7/8/2005

DRAWN BY BCK  
DESIGNED BY BCK  
CHECKED BY BCK

PLOT DATE = 7/8/2005  
FILE NAME = c:\projects\tr-ef\1013880\110.mxd  
PLOT SCALE = 20.0000 7/7 IN.  
USER NAME = kerr@phoenixg

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62907				

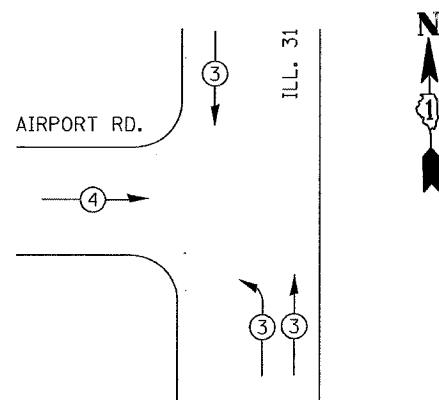
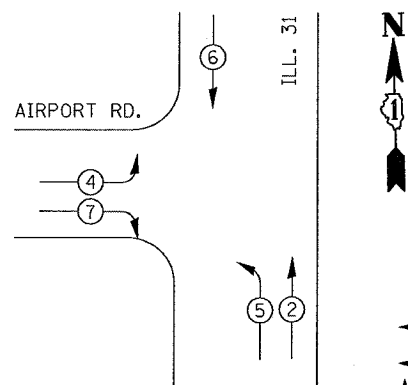
### TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT
- TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION, 12" (300 mm)
- 12" (300 MM) PEDESTRIAN SIGNAL SECTION
- INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- PEDESTRIAN PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- MICROWAVE VEHICLE SENSOR
- EMERGENCY VEHICLE SYSTEM DETECTOR
- CONFIRMATION BEACON

### LEGEND

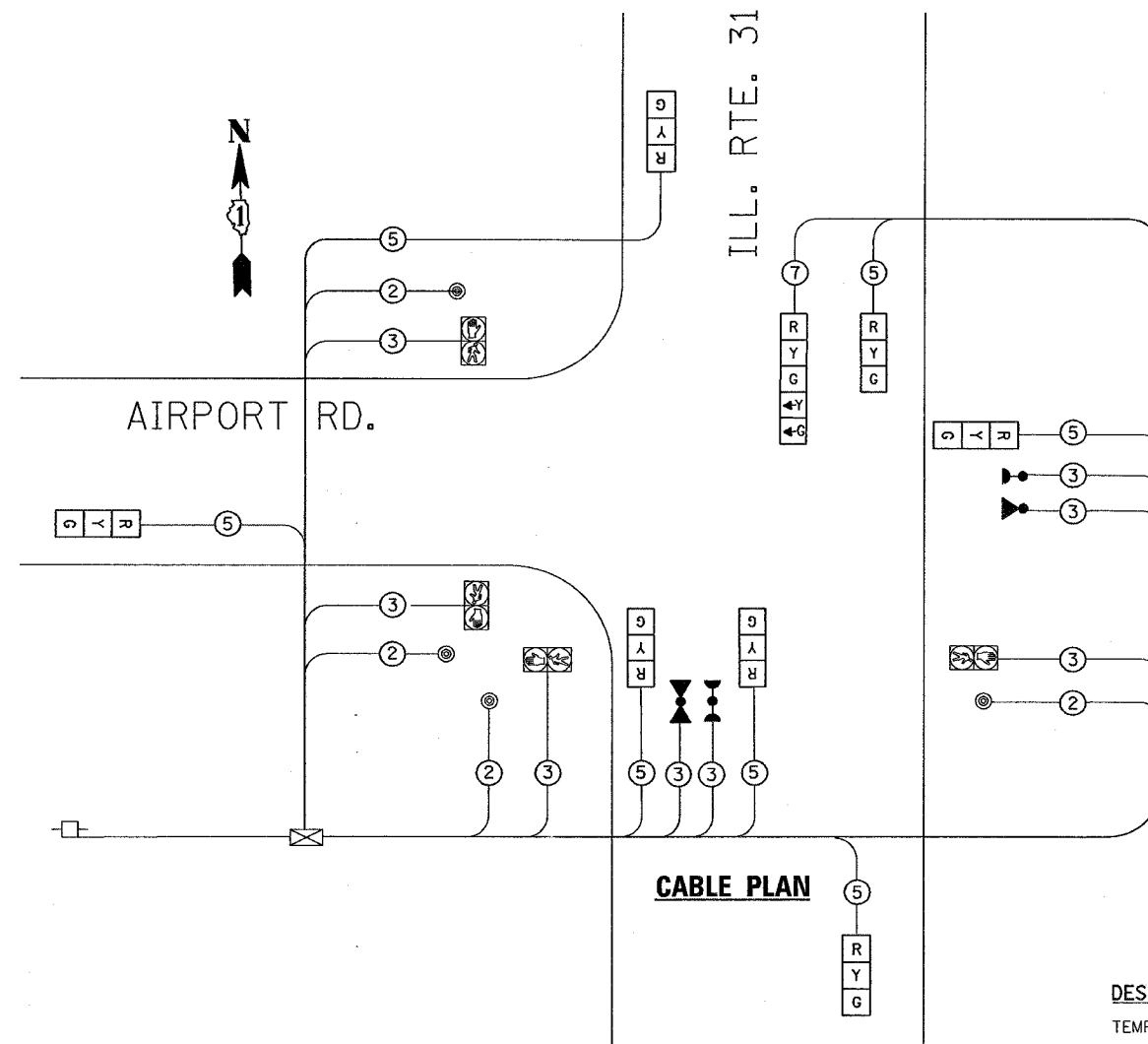
- DUAL ENTRY PHASE
- PROTECTED LEFT TURN PHASE
- OVERLAP
- PEDESTRIAN PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE

### TEMPORARY PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑ ↓	→

### EMERGENCY VEHICLE PREEMPTION SEQUENCE



### CABLE PLAN

### SCHEDULE OF QUANTITIES

DESCRIPTION	QTY.	UNIT
TEMPORARY TRAFFIC SIGNAL INSTALLATION	1	EACH

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	8	135	17	0.50	68.00
(YELLOW)	8	135	25	0.25	50.00
(GREEN)	8	135	15	0.25	30.00
ARROW	2	135	12	0.10	2.40
PED. SIGNAL	4	90	25	1.00	100.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 350.40
ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096					
ENERGY SUPPLY CONTACT:					
PHONE: 847-816-5331					
COMPANY: COMMONWEALTH EDISON					

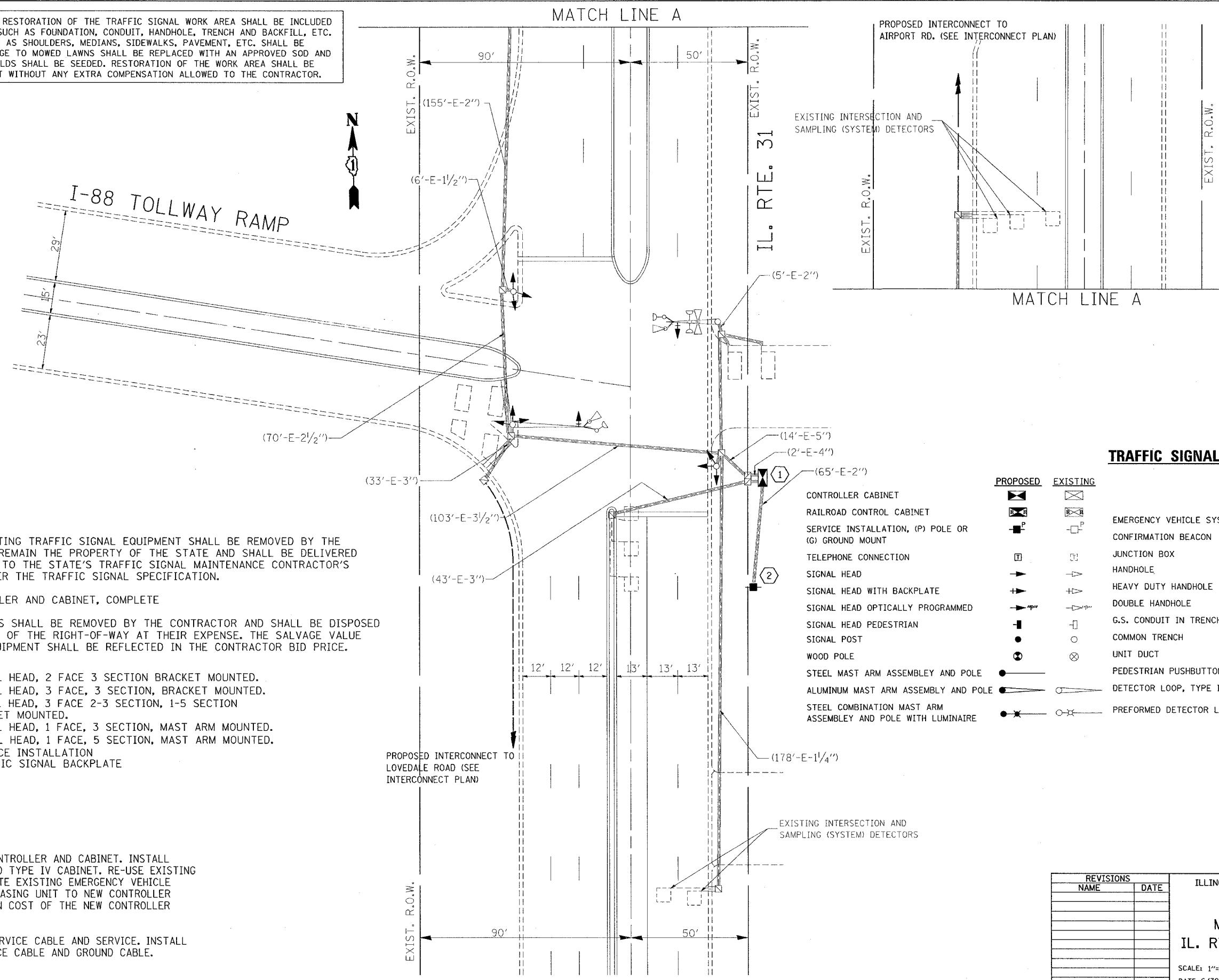
FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2'
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		
		TEMPORARY CABLE PLAN, TEMPORARY EMERGENCY VEHICLE PREEMPTION AND TEMPORARY PHASE DESIGNATION DIAGRAM	
		SCALE: 1"=20'	
		DATE 6/30/2005	
		DRAWN BY BCK DESIGNED BY BCK CHECKED BY BCK	

PLOT DATE = 6/29/2005  
 FILE NAME = c:\projects\at-traffic\0136800\131.dwg  
 PLOT SCALE = 28.0000 / IN.  
 USER NAME = hantphuegbc

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC. 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. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE CONTRACT WITHOUT ANY EXTRA COMPENSATION ALLOWED TO THE CONTRACTOR.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	14
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62907				



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATION.

- 1 EACH CONTROLLER AND CABINET, COMPLETE
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE OF THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR BID PRICE.
- 1 EACH SIGNAL HEAD, 2 FACE 3 SECTION BRACKET MOUNTED.
- 2 EACH SIGNAL HEAD, 3 FACE, 3 SECTION, BRACKET MOUNTED.
- 1 EACH SIGNAL HEAD, 3 FACE 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
- 1 EACH SIGNAL HEAD, 1 FACE, 3 SECTION, MAST ARM MOUNTED.
- 1 EACH SIGNAL HEAD, 1 FACE, 5 SECTION, MAST ARM MOUNTED.
- 1 EACH SERVICE INSTALLATION
- 2 EACH TRAFFIC SIGNAL BACKPLATE

- CONSTRUCTION NOTES:**
- 1 REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
  - 2 REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.

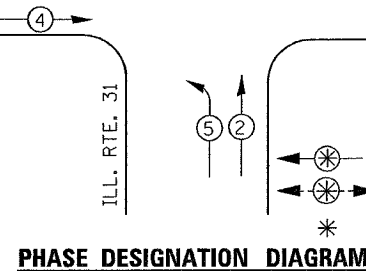
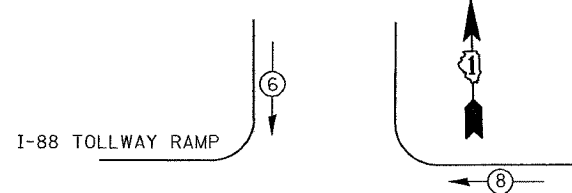
TRAFFIC SIGNAL LEGEND		PROPOSED	EXISTING
CONTROLLER CABINET			
RAILROAD CONTROL CABINET			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT			
TELEPHONE CONNECTION			
SIGNAL HEAD			
SIGNAL HEAD WITH BACKPLATE			
SIGNAL HEAD OPTICALLY PROGRAMMED			
SIGNAL HEAD PEDESTRIAN			
SIGNAL POST			
WOOD POLE			
STEEL MAST ARM ASSEMBLY AND POLE			
ALUMINUM MAST ARM ASSEMBLY AND POLE			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			
EMERGENCY VEHICLE SYSTEM DETECTOR			
CONFIRMATION BEACON			
JUNCTION BOX			
HANDHOLE			
HEAVY DUTY HANDHOLE			
DOUBLE HANDHOLE			
G.S. CONDUIT IN TRENCH OR PUSHED			
COMMON TRENCH	CT		
UNIT DUCT	UD		
PEDESTRIAN PUSHBUTTON DETECTOR			
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP			

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<b>TRAFFIC SIGNAL MODERNIZATION PLAN</b> <b>IL. RTE. 31 AT I-88 TOLLWAY</b>  SCALE: 1"=20' DATE 6/30/2005  DRAWN BY BCK DESIGNED BY BCK CHECKED BY BCK

PLOT DATE = 6/30/2005  
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 PLOT SCALE = 20.00000 / IN.  
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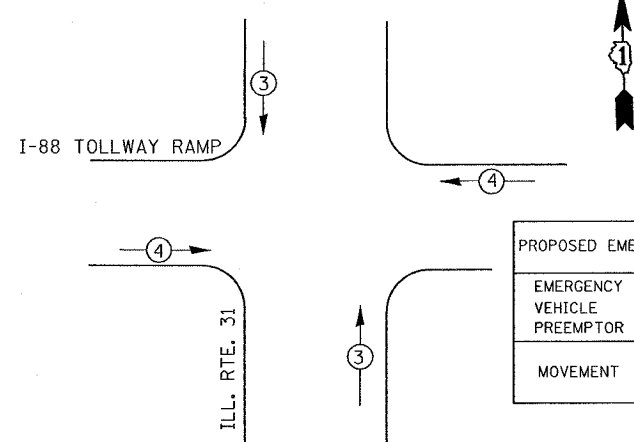
F.A.I.L. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				

**CONTROLLER SEQUENCE**



**LEGEND**  
 DUAL ENTRY PHASE  
 PEDESTRIAN PHASE  
 \* NUMBER REFERS TO ASSOCIATED PHASE

**EMERGENCY VEHICLE PREEMPTION DIAGRAM**



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →

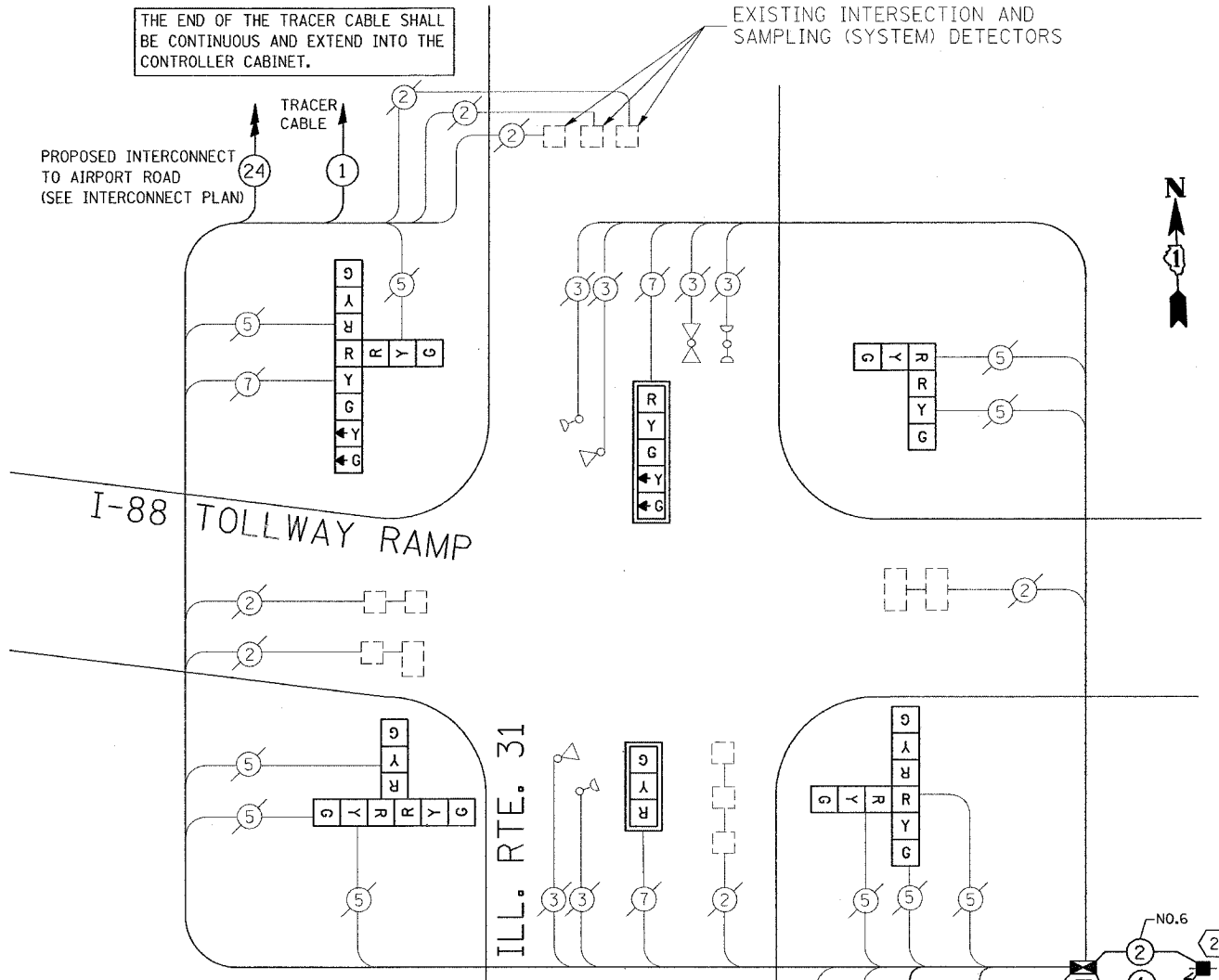
**CONSTRUCTION NOTES:**

- REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	.20
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET(SPECIAL)	EACH	1
TRANSCEIVER-FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1 C	FOOT	60
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2 C	FOOT	60
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED.	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED.	EACH	1
SIGNAL HEAD, L.E.D., 2-FACE, 3-SECTION, BRACKET MOUNTED.	EACH	1
SIGNAL HEAD, L.E.D., 3-FACE, 2-3 SECTION, 1- 5 SECTION BRACKET MOUNTED.	EACH	1
SIGNAL HEAD, L.E.D., 3-FACE, 3-SECTION, BRACKET MOUNTED.	EACH	2
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	60
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1
TRAFFIC SIGNAL BACKPLATE	EACH	2

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'±L-2'±
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m±L-0.6m)±	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)



**CABLE PLAN**

**CABLE PLAN LEGEND**

- |          |          |   |
|----------|----------|---|
| EXISTING | PROPOSED |   |
|          |          | 8" (200mm)  |
|          |          | TRAFFIC SIGNAL SECTION  |
|          |          | 12" (300mm)   |
|          |          | TRAFFIC SIGNAL SECTION  |
|          |          | 12" (300mm)   |
|          |          | PEDESTRIAN SIGNAL SECTION   |
|          |          | 12" (300mm)   |
|          |          | PEDESTRIAN SIGNAL SECTION   |
|          |          | CONTROLLER CABINET  |
|          |          | SERVICE INSTALLATION  |
|          |          | TELEPHONE CONNECTION  |
|          |          | VEHICLE DETECTOR, INDUCTION LOOP  |
|          |          | MAGNETIC DETECTOR   |
|          |          | EMERGENCY VEHICLE LIGHT DETECTOR  |
|          |          | CONFIRMATION BEACON   |
|          |          | PUSHBUTTON DETECTOR   |
|          |          | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
|          |          | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)  |
|          |          | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F   |
|          |          | SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD   |
|          |          | RAILROAD CONTROL CABINET  |
|          |          | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C).   |
|          |          | GROUND ROD AT POST (P), OR MAST ARM POLE (MA).  |
|          |          | GROUND ROD AT ELECTRIC SERVICE INSTALLATION   |

NOTE: THE PROPOSED TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT IS "EAGLE".

NOTE: RELOCATION OF THE LIGHT DETECTOR AMPLIFIER(S) FROM THE OLD CONTROLLER CABINET TO THE NEW CABINET IS NECESSARY. THE COST OF THIS WORK SHALL BE INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES**  
 ILL. RTE. 31 @  
 I-88 TOLLWAY  
 SCALE: 1"=20'  
 DATE 6/29/2005  
 DRAWN BY: BCK  
 DESIGNED BY: BCK  
 CHECKED BY: BCK

PLOT DATE = 6/29/2005  
 PLOT NAME = I:\Projects\ref\1013080\111.mxd  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = kmrshah@idot.gov

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	14	135	17	0.50	119.0
(YELLOW)	14	135	25	0.25	87.5
(GREEN)	14	135	15	0.25	52.5
ARROW	6	135	12	0.10	7.2
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 = 267.2
ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096					
ENERGY SUPPLY CONTACT: 847-816-5331					
PHONE: 847-816-5331					
COMPANY: COMMONWEALTH EDISON					

F.A.U. RTE. 3902	SECTION 2005-003 TS	COUNTY KANE	TOTAL SHEETS 20	SHEET NO. 16
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 62907		

**CONSTRUCTION NOTES:**

- 1 REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- 2 REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATION.

- 1 EACH CONTROLLER AND CABINET, COMPLETE

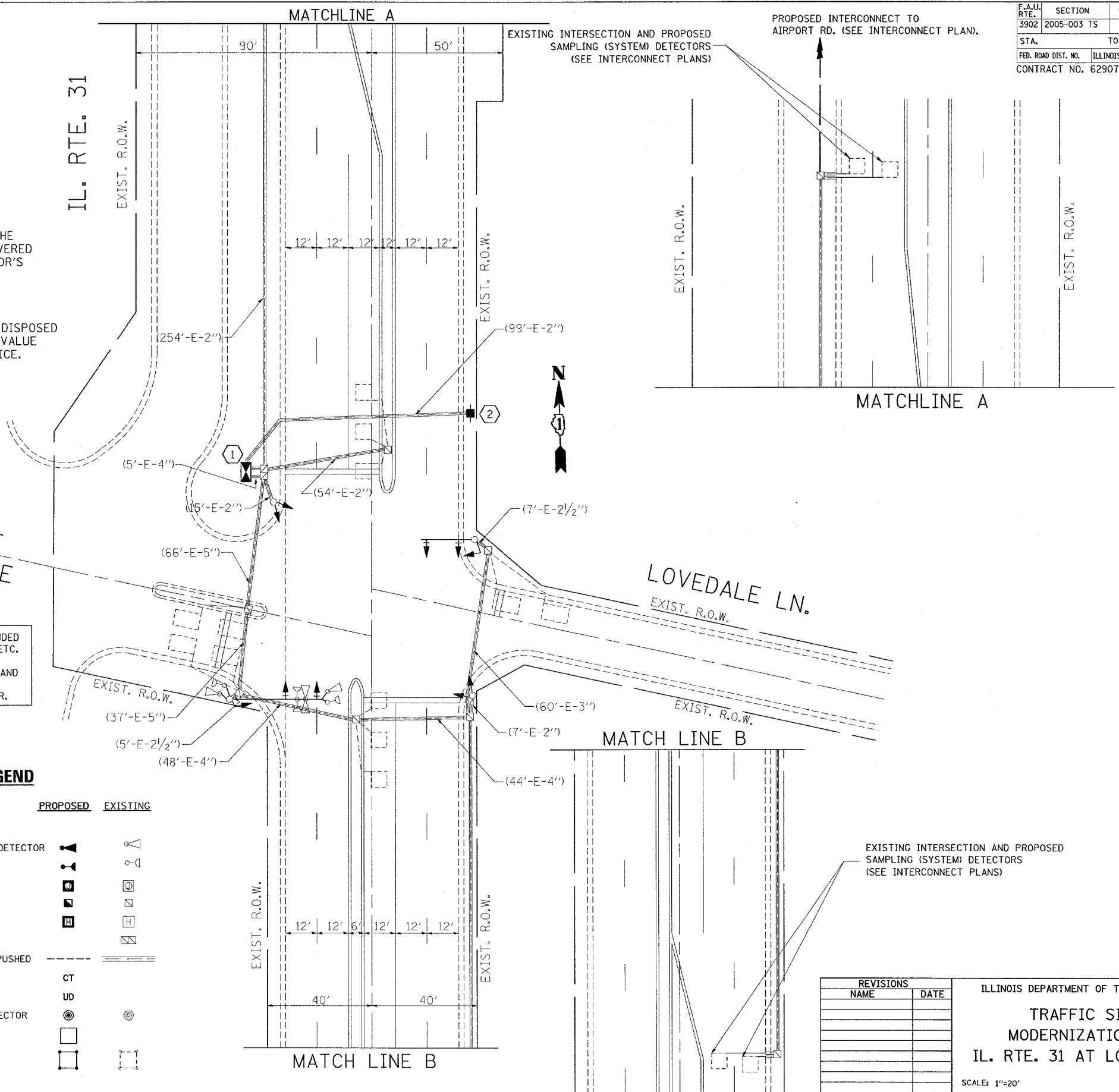
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE OF THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR BID PRICE.

- 2 EACH SIGNAL HEAD, 1-FACE 3 SECTION, BRACKET MOUNTED.
- 2 EACH SIGNAL HEAD, 1 FACE 3 SECTION, MAST ARM MOUNTED.
- 2 EACH SIGNAL HEAD, 1 FACE 5 SECTION, MAST ARM MOUNTED.
- 2 EACH SIGNAL HEAD, 2 FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
- 1 EACH SERVICE INSTALLATION
- 4 EACH TRAFFIC SIGNAL BACKPLATE

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC. 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. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE CONTRACT WITHOUT ANY EXTRA COMPENSATION ALLOWED TO THE CONTRACTOR.

**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING		PROPOSED	EXISTING
CONTROLLER CABINET			EMERGENCY VEHICLE SYSTEM DETECTOR		
RAILROAD CONTROL CABINET			CONFIRMATION BEACON		
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT			JUNCTION BOX		
TELEPHONE CONNECTION			HANDHOLE		
SIGNAL HEAD			HEAVY DUTY HANDHOLE		
SIGNAL HEAD WITH BACKPLATE			DOUBLE HANDHOLE		
SIGNAL HEAD OPTICALLY PROGRAMMED			G.S. CONDUIT IN TRENCH OR PUSHED		
SIGNAL HEAD PEDESTRIAN			COMMON TRENCH		
SIGNAL POST			UNIT DUCT		
WOOD POLE			PEDESTRIAN PUSHBUTTON DETECTOR		
STEEL MAST ARM ASSEMBLY AND POLE			DETECTOR LOOP, TYPE I		
ALUMINUM MAST ARM ASSEMBLY AND POLE			PREFORMED DETECTOR LOOP		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE					



REVISIONS	
NAME	DATE

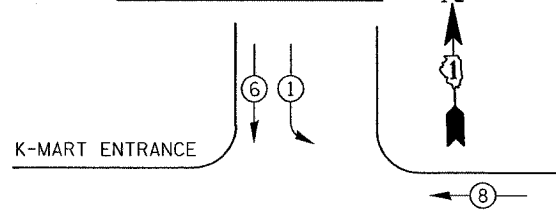
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL  
 MODERNIZATION PLAN**  
 IL. RTE. 31 AT LOVEDALE LN.  
 SCALE: 1"=20'  
 DATE 6/29/2005  
 DRAWN BY BCK  
 DESIGNED BY BCK  
 CHECKED BY BCK

DATE = 6/29/2005  
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 PLOT SCALE = 28.0000 / IN.  
 USER NAME = kent@aphivejo

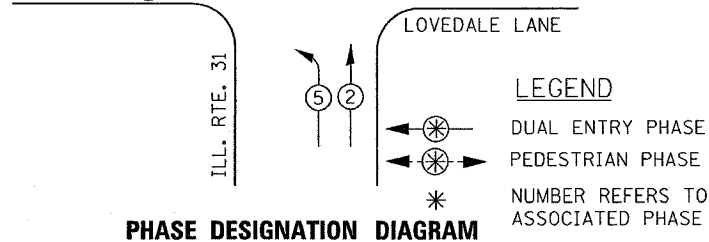


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				

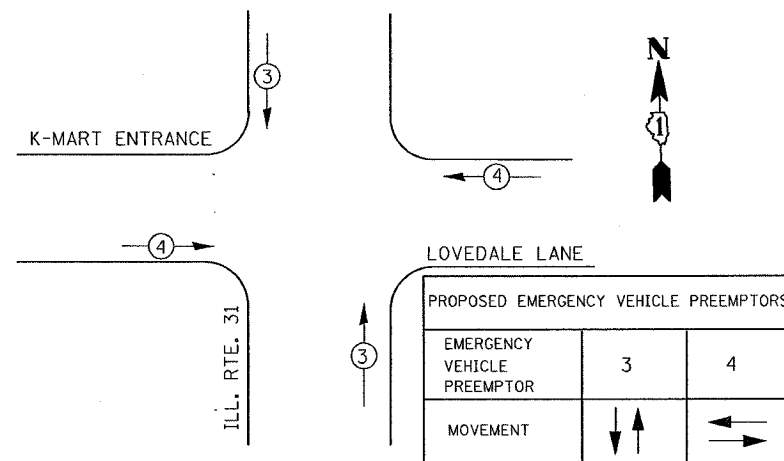
**CONTROLLER SEQUENCE**



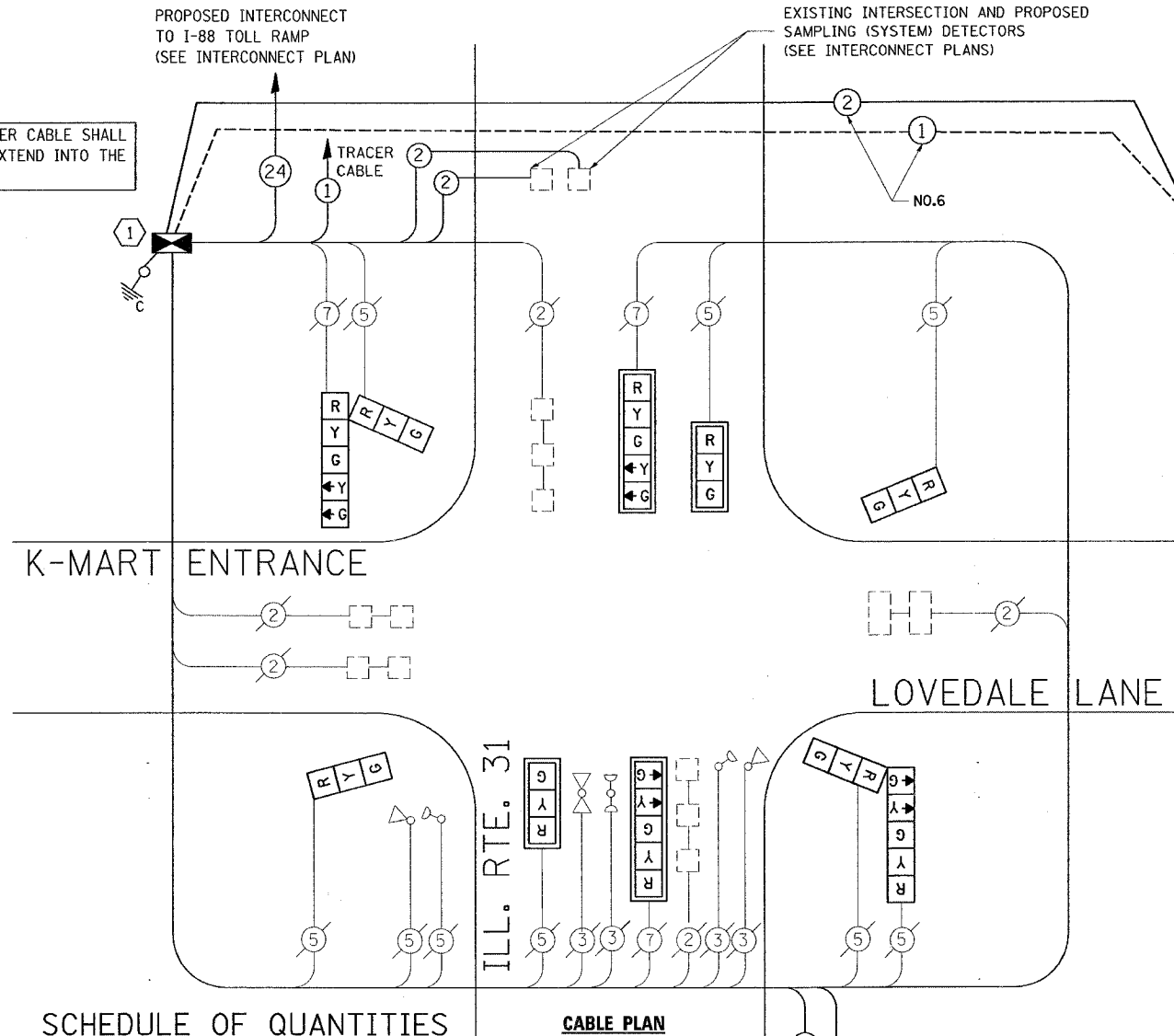
**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION DIAGRAM**



THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.



**CABLE PLAN LEGEND**

EXISTING	PROPOSED	DESCRIPTION
⊙	G	8" (200mm) TRAFFIC SIGNAL SECTION
⊙	R	12" (300mm) TRAFFIC SIGNAL SECTION
⊙	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
⊙	⊙	12" (300mm) PEDESTRIAN SIGNAL SECTION
⊙	⊙	CONTROLLER CABINET
⊙	⊙	SERVICE INSTALLATION
⊙	⊙	TELEPHONE CONNECTION
⊙	⊙	VEHICLE DETECTOR, INDUCTION LOOP
⊙	⊙	MAGNETIC DETECTOR
⊙	⊙	EMERGENCY VEHICLE LIGHT DETECTOR
⊙	⊙	CONFIRMATION BEACON
⊙	⊙	PUSHBUTTON DETECTOR
⊙	⊙	DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
⊙	⊙	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
⊙	⊙	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
⊙	⊙	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
⊙	⊙	RAILROAD CONTROL CABINET
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C).
P	P	GROUND ROD AT POST (P), OR MAST ARM POLE (MA).
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	.20
TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	.20
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET(SPECIAL)	EACH	1
TRANSCIVER-FIBER OPTIC	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED.	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED.	EACH	2
SIGNAL HEAD, L.E.D., 2-FACE, 1 5-SECTION, 1 3-SECTION BRACKET MOUNTED.	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED.	EACH	2
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1 C	FOOT	100
ELECTRIC CABLE IN CONDUIT, LEAD-IN NO. 14 1 PAIR	FOOT	820
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2 C	FOOT	100
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	100
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1
TRAFFIC SIGNAL BACKPLATE	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	9

**CABLE PLAN**

EXISTING INTERSECTION AND PROPOSED SAMPLING (SYSTEM) DETECTORS (SEE INTERCONNECT PLANS)

**CONSTRUCTION NOTES:**

- REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.
- REMOVE EXISTING SERVICE CABLE AND SERVICE. INSTALL NEW SERVICE, SERVICE CABLE AND GROUND CABLE.

NOTE: RELOCATION OF THE LIGHT DETECTOR AMPLIFIER(S) FROM THE OLD CONTROLLER CABINET TO THE NEW CABINET IS NECESSARY. THE COST OF THIS WORK SHALL BE INCLUDED IN COST OF THE NEW CONTROLLER AND CABINET.

NOTE: THE PROPOSED TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT IS "EAGLE".

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	10	135	17	0.50	85.00
(YELLOW)	10	135	25	0.25	62.50
(GREEN)	10	135	15	0.25	37.50
ARROW	8	135	12	0.10	9.60
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 294.60
ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096					
ENERGY SUPPLY CONTACT: PHONE: 847-816-5331 COMPANY: COMMONWEALTH EDISON					

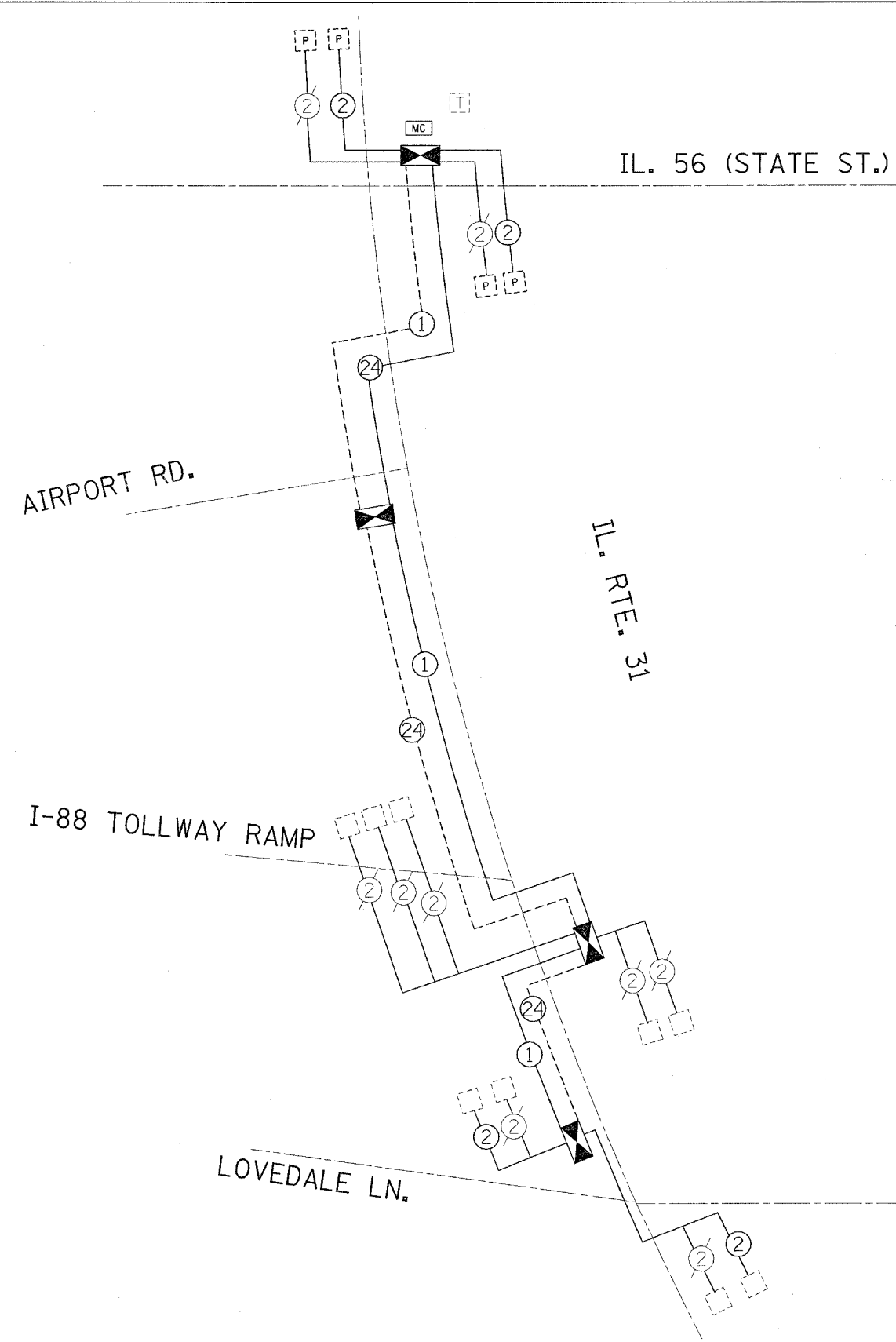
FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES**  
 ILL. RTE. 31 @  
 K-MART/LOVEDALE LANE  
 SCALE: 1"=20'  
 DATE 6/29/2005  
 DRAWN BY BCK  
 DESIGNED BY BCK  
 CHECKED BY BCK

PLOT DATE = 6/29/2005  
 FILE NAME = c:\p\projects\tr-ef\10136200\131.mxd  
 PLOT SCALE = 20.000000 / IN.  
 USER NAME = kashphuegbe

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62907				



**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601
.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
3082	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
752	FOOT	CONDUIT PUSH, 2" DIA., GALVANIZED STEEL
62	FOOT	CONDUIT PUSH, 3" DIA., GALVANIZED STEEL
45	FOOT	CONDUIT PUSH, 4" DIA., GALVANIZED STEEL
36	FOOT	CONDUIT TRENCH, 4" DIA., GALVANIZED STEEL
2	EACH	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 10"x8"x4"
9	EACH	HANDHOLE
1	EACH	DOUBLE HANDHOLE
4785	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
4785	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F
10	EACH	DRILL EXISTING HANDLOLE
3550	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	L SUM	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM
1	EACH	MASTER CONTROLLER (SPECIAL)

**INTERCONNECT SCHEMATIC LEGEND**

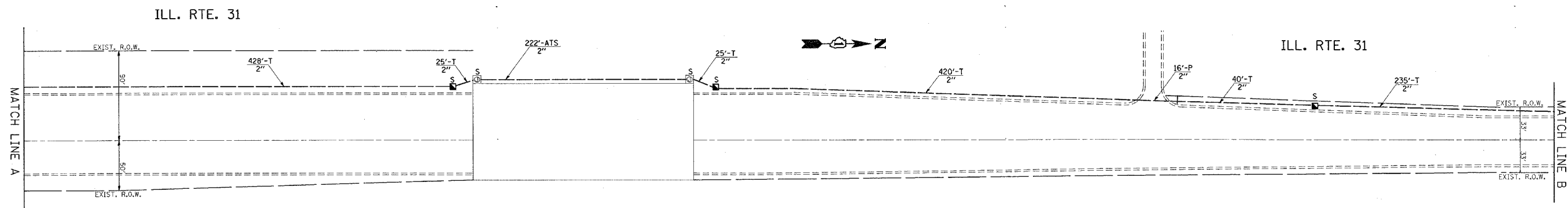
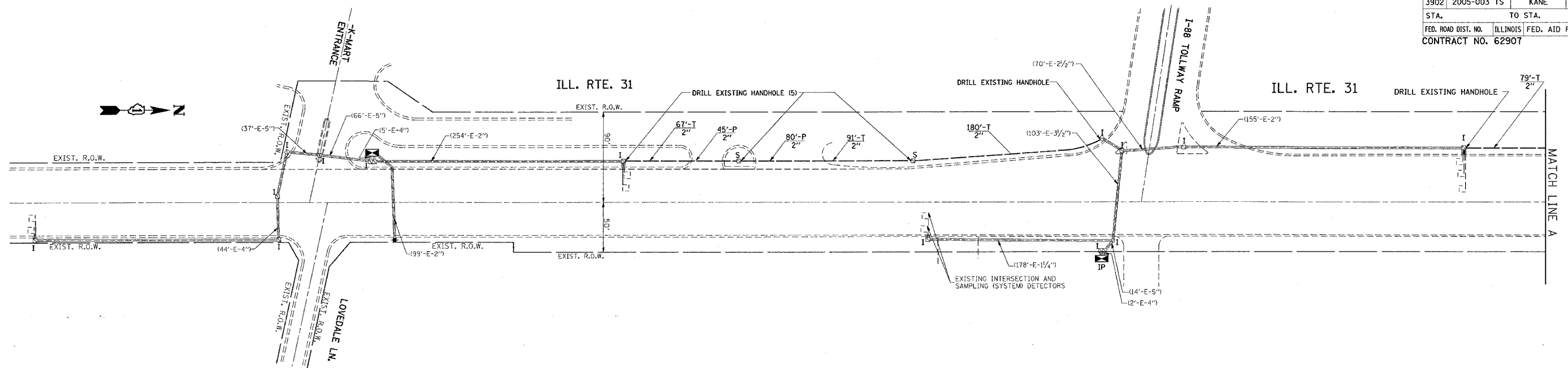
	PROPOSED	EXISTING
INTERSECTION CONTROLLER		
MASTER CONTROLLER		
MASTER MASTER CONTROLLER		
TELEPHONE CONNECTION		
INTERSECTION & SAMPLING (SYSTEM) DETECTORS		
PERFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		
EXISTING INTERSECTION LOOP DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS		
SAMPLING (SYSTEM) DETECTORS		
SAMPLING (SYSTEM) PERFORMED DETECTORS		
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS.		
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS		
FIBER OPTIC CABLE IN CONDUIT, NUMBER OF FIBERS AS NOTED		
INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED		
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1 PAIR		
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**INTERCONNECT SCHEMATIC**  
 IL.31 FROM IL. 56 (STATE ST.)  
 TO LOVEDALE RD.

SCALE: VERT. 1"=20"  
 HORIZ. 1"=20"  
 DATE 8/10/2005  
 DRAWN BY BCK  
 CREATED BY BCK  
 CHECKED BY DAD

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	19
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62907				



**INTERCONNECT PLAN LEGEND**

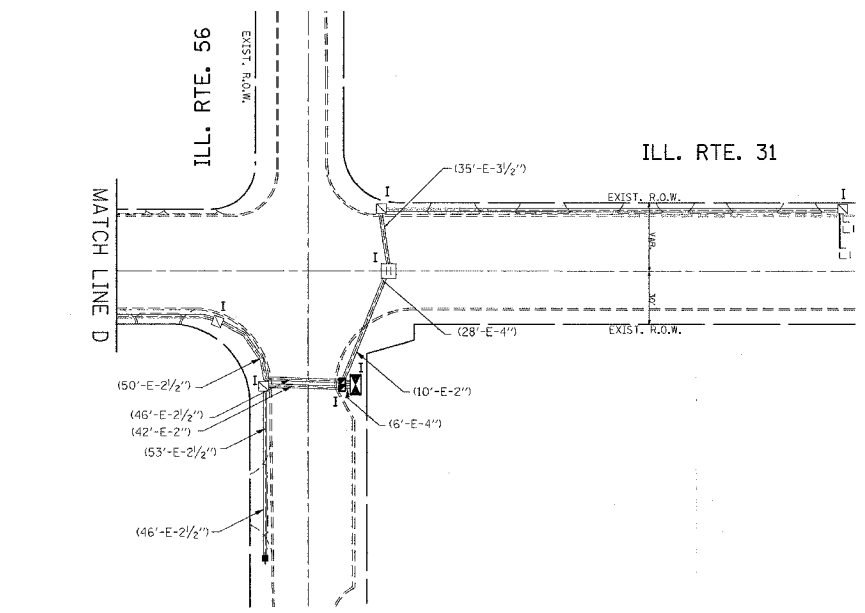
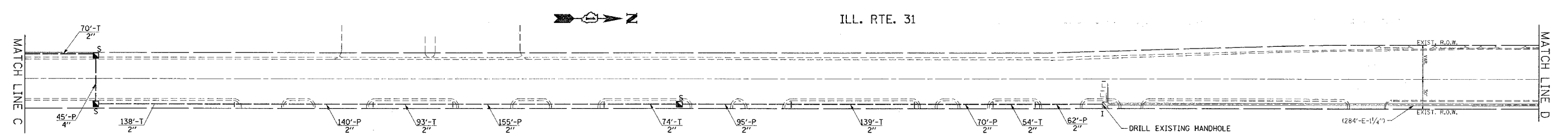
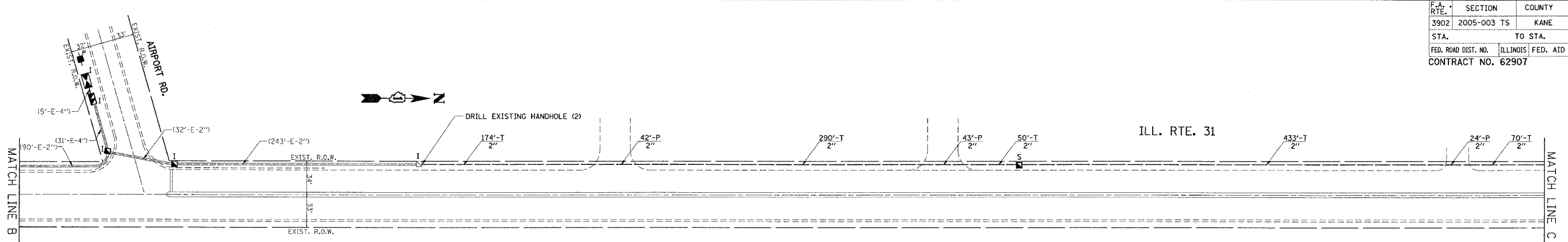
	PROPOSED	EXISTING
CONTROLLER CABINET		
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT		
TELEPHONE CONNECTION		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	
COMMON TRENCH	CT	
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP		
JUNCTION BOX		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL  
 INTERCONNECT PLAN  
 FOR ILL. RTE. 31 FROM  
 ILL. RTE. 56 TO LOVEDALE LN.**  
 SCALE: VERT. NONE  
 HORIZ. NONE  
 DATE 6/29/2005  
 DRAWN BY: BCK  
 DESIGNED BY: BCK  
 CHECKED BY: DAD

PLOT DATE = 6/29/2005  
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 USER NAME = kent\phayes\jbb

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3902	2005-003 TS	KANE	20	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 62907				



**INTERCONNECT PLAN LEGEND**

	PROPOSED	EXISTING
CONTROLLER CABINET	[Symbol]	[Symbol]
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
SYSTEM	S	I
INTERSECTION	IP	I
UNIT DUCT	UD	
COMMON TRENCH	CT	
DETECTOR LOOP, TYPE I	[Symbol]	[Symbol]
PREFORMED DETECTOR LOOP	[Symbol]	[Symbol]
JUNCTION BOX	[Symbol]	[Symbol]

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL INTERCONNECT PLAN**  
 FOR ILL. RTE. 31 FROM ILL. RTE. 56 TO LOVEDALE LN.  
 VERT. NONE  
 SCALE: HORIZ.  
 DATE 8/11/2005  
 DRAWN BY: BCK  
 DESIGNED BY: BCK  
 CHECKED BY: DAD

PLOT DATE = 8/11/2005  
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