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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

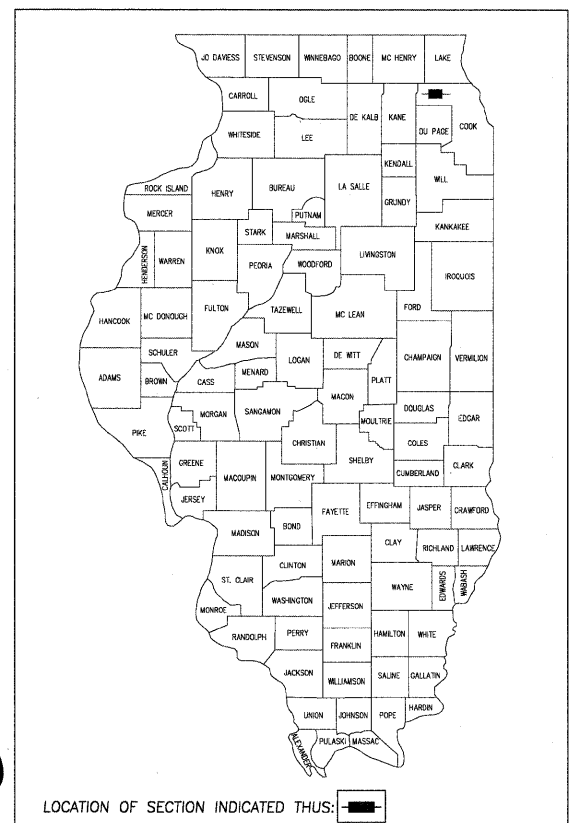
# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

## DISTRICT 1 HIGHWAY SAFETY IMPROVEMENT PROJECT TRAFFIC SIGNAL MODERNIZATION VARIOUS INTERSECTIONS ON IL RTE 19 (IRVING PARK RD) FROM EAST AV TO BARTLETT RD & US RTE 20 (LAKE ST) AT PARK AVENUE VILLAGES OF STREAMWOOD, HANOVER PARK, & BARTLETT, ILLINOIS COOK COUNTY

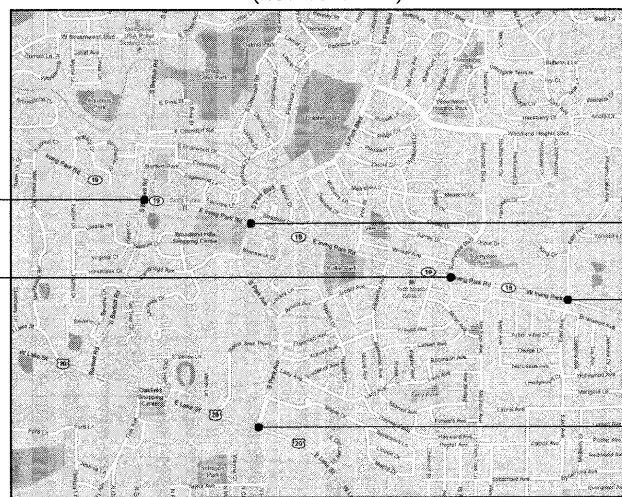
**SECTION: 2010-005TS  
JOB NO. D-91-450-10**

*FAU 1312/  
FAP 345*

*PROJECT: HSIP-0005(831)*



**LOCATION MAP  
(NOT TO SCALE)**



SIGNED: Kevin L. Belgrave  
DATE: 10/12/2010

EXPIRES: 11/30/2011

**GHA GEWALT HAMILTON  
ASSOCIATES, INC.**  
850 Forest Edge Drive • Vernon Hills, IL 60061  
Consulting Engineers & Surveyors  
847-478-9700  
FAX: 847-478-9701

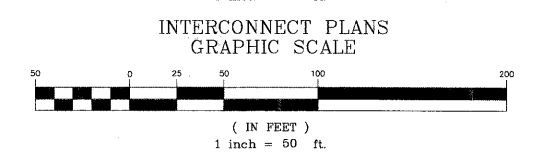
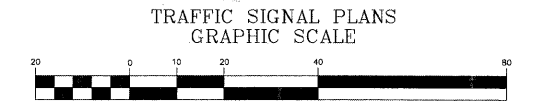
**CONTRACT NO. 60K23**

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS  
Call 48 hours before you dig  
(Excluding Sat., Sun., & Holidays)  
1-800-892-0123

**IDOT STANDARDS:**

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
001006	DECIMAL OF AN INCH OF A FOOT
442201-03	CLASS C AND D PATCHES
701001-02	OFF-ROAD OPERATIONS 2L, 2W, >15' AWAY
701006-03	OFF-ROAD OPERATIONS 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS
701501-06	URBAN LANE CLOSURE 2L, 2W UNDIVIDED
701606-07	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-07	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-04	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAIL
720006-02	SIGN PANEL ERECTION DETAIL
780001-02	TYPICAL PAVEMENT MARKINGS
814001-02	HANDHOLE
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
857006-01	SUPERVISED RAILROAD INTERCONNECT CIRCUIT
862001-01	UNINTERRUPTIBLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-04	STEEL MAST ARM ASSEMBLY AND POLE, 16' THROUGH 55'
878001-07	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS

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 BELOW SCALES MAY BE USED.



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED: Oct 29 2010  
Dennis M. O'Keefe, P.E.  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 10 2010  
Scott E. Stitt, P.E.  
Acting ENGINEER OF DESIGN AND ENVIRONMENT

December 10 2010  
Christina M. Reed, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

FILE NAME = 4085.862-866-DT1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TITLE SHEET</b>	SCALE: N.A.	SHEET NO. OF SHEETS	STA. TO STA.	F.A.P. RTES VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 1	ILLINOIS FED. AID PROJECT
PLOT SCALE = 1" = .0833'		CHECKED - KLB	REVISED -							CONTRACT # 60K23				
PLOT DATE = 10/12/2010		DATE - 10/12/2010	REVISED -											

SUMMARY OF QUANTITIES			LOCATION OF WORK		FAH 1312 0021										FAP 345		FAH 1312	
					IL ROUTE 19 (IRVING PARK ROAD) AT BARTLETT ROAD		IL ROUTE 19 (IRVING PARK ROAD) AT PARK AVENUE/PARK BOULEVARD		IL ROUTE 19 (IRVING PARK ROAD) AT LINCOLN AVENUE/SUNNYDALE BOULEVARD		IL ROUTE 19 (IRVING PARK ROAD) AT EAST AVENUE		U.S. ROUTE 20 AT PARK AVENUE		INTERCONNECT - IL ROUTE 19 (IRVING PARK ROAD) FROM BARTLETT ROAD TO EAST AVENUE			
					TYPE		TRAFFIC SIGNALS		TRAFFIC SIGNALS		TRAFFIC SIGNALS		TRAFFIC SIGNALS		TRAFFIC SIGNALS			
NO.	CODE NO.	ITEM	UNIT	TOTAL	90% FED. 10% STATE	100% VILLAGE OF STREAMWOOD *	90% FED. 5% STATE 5% STREAMWOOD *	100% VILLAGE OF STREAMWOOD *	90% FED. 5% STATE 5% STREAMWOOD *	100% VILLAGE OF STREAMWOOD *	90% FED. 5% STATE 2.5% STREAMWOOD 2.5% HANOVER PARK	100% VILLAGE OF STREAMWOOD *	90% FED. 6.67% STATE 3.33% STREAMWOOD	100% VILLAGE OF STREAMWOOD *	90% FED. 10% STATE			
1.	20200100	EARTH EXCAVATION	CU YD	18	2		6		6		4							
2.	31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	38	6		12		10		10							
3.	40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	10					10									
4.	40800010	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	5					5									
5.	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	2,280	650		255		385		990							
6.	42400800	DETECTABLE WARNINGS	SQ FT	348	52		96		104		96							
7.	44000600	SIDEWALK REMOVAL	SQ FT	2,015	545		400		440		630							
8.	20004562	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	540	70		120		210		140							
9.	44003100	MEDIAN REMOVAL	SQ FT	90					90									
10.	44201789	CLASS D PATCHES, TYPE II, 12 INCH	SQ YD	10					10									
11.	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5.00	0.25		2.00		2.00		0.25		0.25			0.25		
12.	67100100	MOBILIZATION	L SUM	1.00	0.10		0.30		0.30		0.10		0.10			0.10		
13.	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1.00	0.10		0.30		0.30		0.10		0.10			0.10		
14.	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1.00	0.10		0.30		0.30		0.10		0.10			0.10		
15.	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.00	0.10		0.30		0.30		0.10		0.10			0.10		
16.	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1.00	0.10		0.30		0.30		0.10		0.10			0.10		
17.	72000100	SIGN PANEL - TYPE 1	SQ FT	30.00			15.00		15.00									
18.	72000200	SIGN PANEL - TYPE 2	SQ FT	85.00			30.00		55.00									
19.	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,360	205		645				510							
20.	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	504					504									
21.	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	24					24									
22.	78300100	PAVEMENT MARKING REMOVAL	SQ FT	1,515	75		575		600		265							
23.	81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	738			280		458									
24.	81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	101			41		35			25						
25.	81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	198			82		116									
26.	81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	50			25		25									
27.	81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	634			420		214									
28.	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	742			415		327									
29.	81030000	CLEANING EXISTING CONDUIT	FOOT	7,438												7,438		
30.	81400100	HANDHOLE	EACH	9			5		4									
31.	81400200	HEAVY-DUTY HANDHOLE	EACH	5			3		2									
32.	81400300	DOUBLE HANDHOLE	EACH	4			2		2									
33.	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1,047			441		581									
34.	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	4	1						1		25			1		
35.	85100100	PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1						1						
36.	85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	3	1		1		1									
37.	85700505	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL	EACH	1							1							
38.	86400100	TRANSCEIVER - FIBER OPTIC	EACH	4	1		1		1		1							
39.	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2,777	237		1,273		1,110		157							
40.	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	3,806	225		1,345	324	990	485	166	271						
41.	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3,650			1,598		1,793				259					
42.	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,147			1,525		622									
43.	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	3,854			1,990		1,864									
44.	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	499	141		161		111		86							
45.	87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3					2				1					
46.	87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	16	4		4		2		4		2					
47.	87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1									1					
48.	87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1					1									
49.	87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	4			2		2									
50.	87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2			1		1									
51.	87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1			1											
52.	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	36			16		16				4					
53.	87800150	CONCRETE FOUNDATION, TYPE C	FOOT	8			4		4									
54.	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	90			46		44									
55.	87900200	DRILL EXISTING HANDHOLE	EACH	2					1				1					
56.	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	27	4		8		8		4		3					
57.	88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4					2				2					
58.	88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	15	4		4		2		4		1					
59.	88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	15	4		4		2		4		1					
60.	88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1									1					

\* 100% OF THE COST SHALL BE PAID BY THE VILLAGE OF STREAMWOOD  
 \*\* SPECIALTY ITEM

SUMMARY OF QUANTITIES			LOCATION OF WORK		FAU 1312 0021						FAP 345		FAU 1312	
					IL ROUTE 19 (IRVING PARK ROAD) AT BARTLETT ROAD		IL ROUTE 19 (IRVING PARK ROAD) AT PARK AVENUE/PARK BOULEVARD		IL ROUTE 19 (IRVING PARK ROAD) AT LINCOLN AVENUE/SUNNYDALE BOULEVARD		IL ROUTE 19 (IRVING PARK ROAD) AT EAST AVENUE		U.S. ROUTE 20 AT PARK AVENUE	
NO.	CODE NO.	ITEM	UNIT	URBAN TOTAL	TRAFFIC SIGNALS		TRAFFIC SIGNALS		TRAFFIC SIGNALS		TRAFFIC SIGNALS		TRAFFIC SIGNALS	
					90% FED. 10% STATE	100% VILLAGE OF STREAMWOOD *	90% FED. 5% STATE 5% STREAMWOOD	100% VILLAGE OF STREAMWOOD *	90% FED. 5% STATE 5% STREAMWOOD	100% VILLAGE OF STREAMWOOD *	90% FED. 5% STATE 2.5% STREAMWOOD 2.5% HANDOVER PARK	100% VILLAGE OF STREAMWOOD *	90% FED. 6.67% STATE 3.33% STREAMWOOD	100% VILLAGE OF STREAMWOOD *
61.	88030330	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED	EACH	1										
62.	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	20										
63.	88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4										
64.	88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	42										
65.	88500100	INDUCTIVE LOOP DETECTOR	EACH	38										
66.	88600100	DETECTOR LOOP, TYPE I	FOOT	1,645										
* 67.	88700200	LIGHT DETECTOR	EACH	4										
* 68.	88700300	LIGHT DETECTOR AMPLIFIER	EACH	2										
69.	88800100	PEDESTRIAN PUSH-BUTTON	EACH	28										
70.	89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	2										
71.	89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	1										
72.	89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1										
73.	89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	17,028	214									
74.	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	4										
75.	89502380	REMOVE EXISTING HANDHOLE	EACH	18										
76.	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	18										
* 77.	Z0033054	CONFIRMATION BEACON	EACH	2										
78.	Z0033090	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	8,910										
79.	X0323412	REMOVE EXISTING SERVICE INSTALLATION	EACH	2										
80.	X0324232	PAINT NEW MAST ARM POLE, UNDER 40 FEET	EACH	7										
* 81.	X0325037	PAINT NEW SIGNAL POST	EACH	12										
* 82.	X0325141	PAINT NEW MAST ARM POLE, 40 FEET AND OVER	EACH	1										
83.	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	2										
84.	Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1										
85.	X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	4										
86.	X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	5										
87.	X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	8,910										
88.	X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1,471	129									
89.	X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	809										
* 90.	XX000406	BRICK PAVEMENT REMOVAL AND REPLACEMENT	SQ FT	1,295										
* 91.	Z0076600	TRAINEES	— HOUR	—										

\* 100% OF THE COST SHALL BE PAID BY THE VILLAGE OF STREAMWOOD  
 \* \* SPECIALTY ITEM

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

PAY ITEM	AIR VOIDS
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 GYRATIONS
CLASS D PATH (HMA BINDER IL-19 mm), 10"	4% @ 70 GYRATIONS

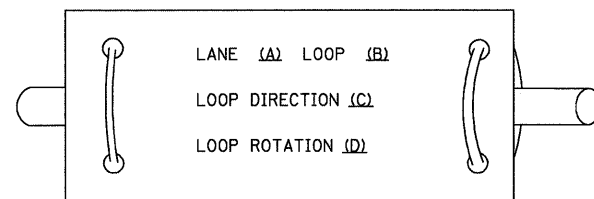
NOTE: THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.  
 FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

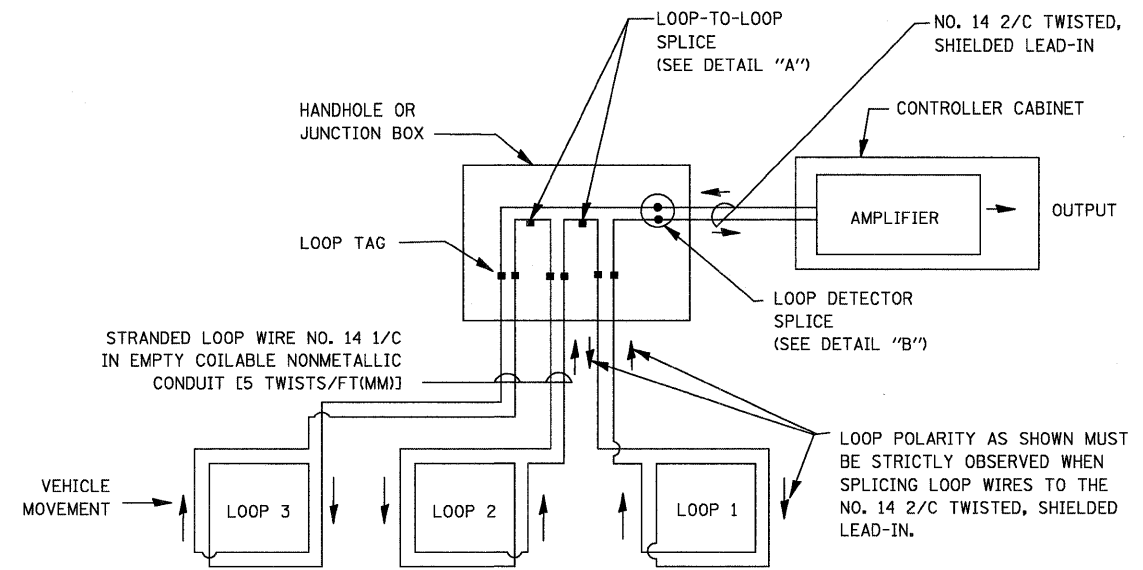
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
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.

**LOOP LEAD-IN CABLE TAG**

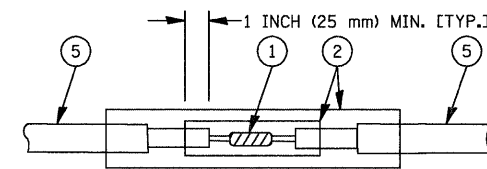


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

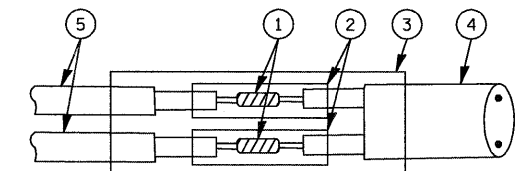


**DETECTOR LOOP WIRING SCHEMATIC**

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

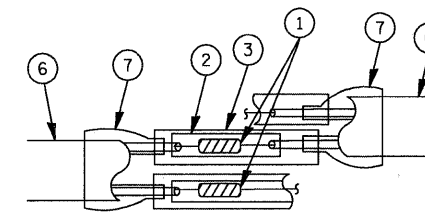


DETAIL "A"  
LOOP-TO-LOOP SPLICE

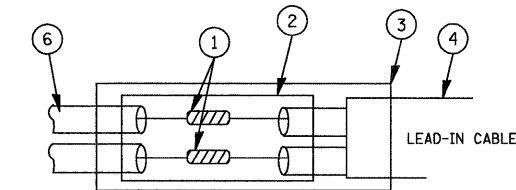


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**LOOP DETECTOR SPLICE**

- 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.
- 6 PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

LATEST REVISION DATE: 10-28-09

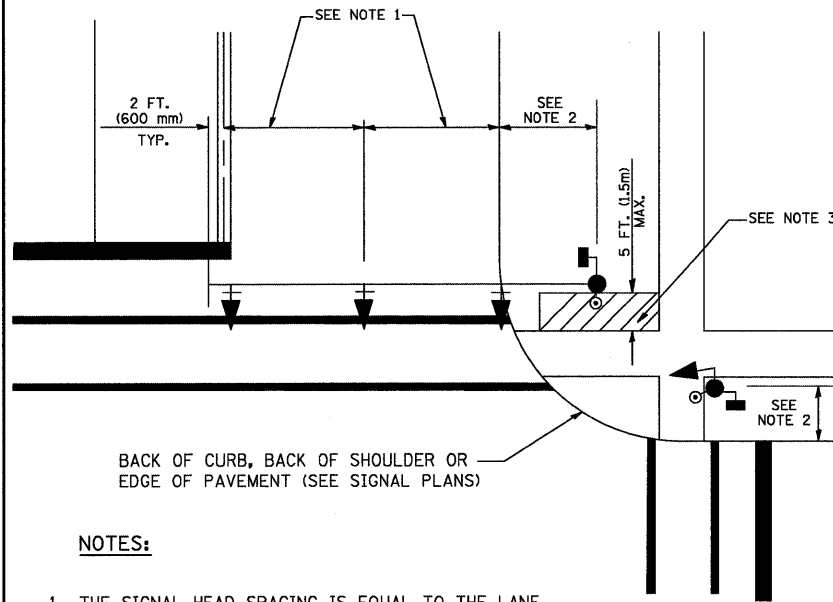
FILE NAME = 4085.862-866-DT1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1" = .0833'	DRAWN - ZCW	REVISED -		SCALE N.A.	SHEET NO. 1 OF 6 SHEETS	STA.	TO STA.	2010-005TS	COOK	32	4
	PLOT DATE = 10/12/2010	CHECKED - KLB	REVISED -								CONTRACT #:	60K23

GHA #4085.862-866

ILLINOIS FED. AID PROJECT

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

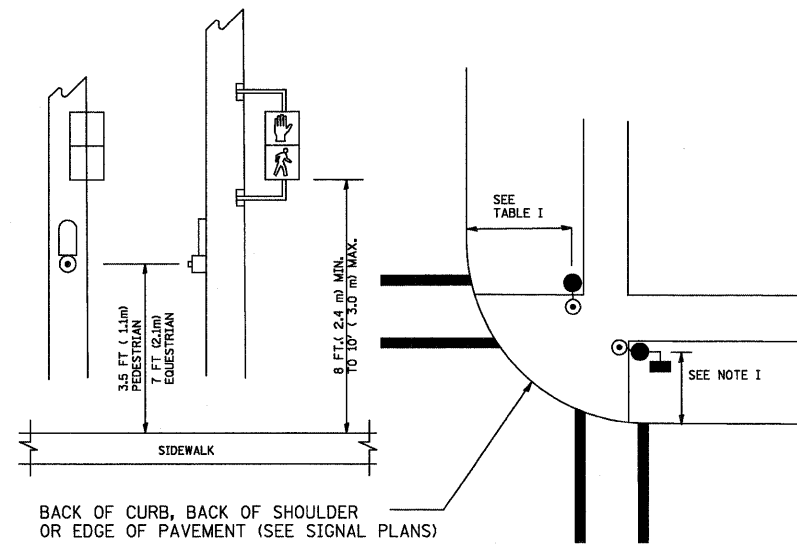
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

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

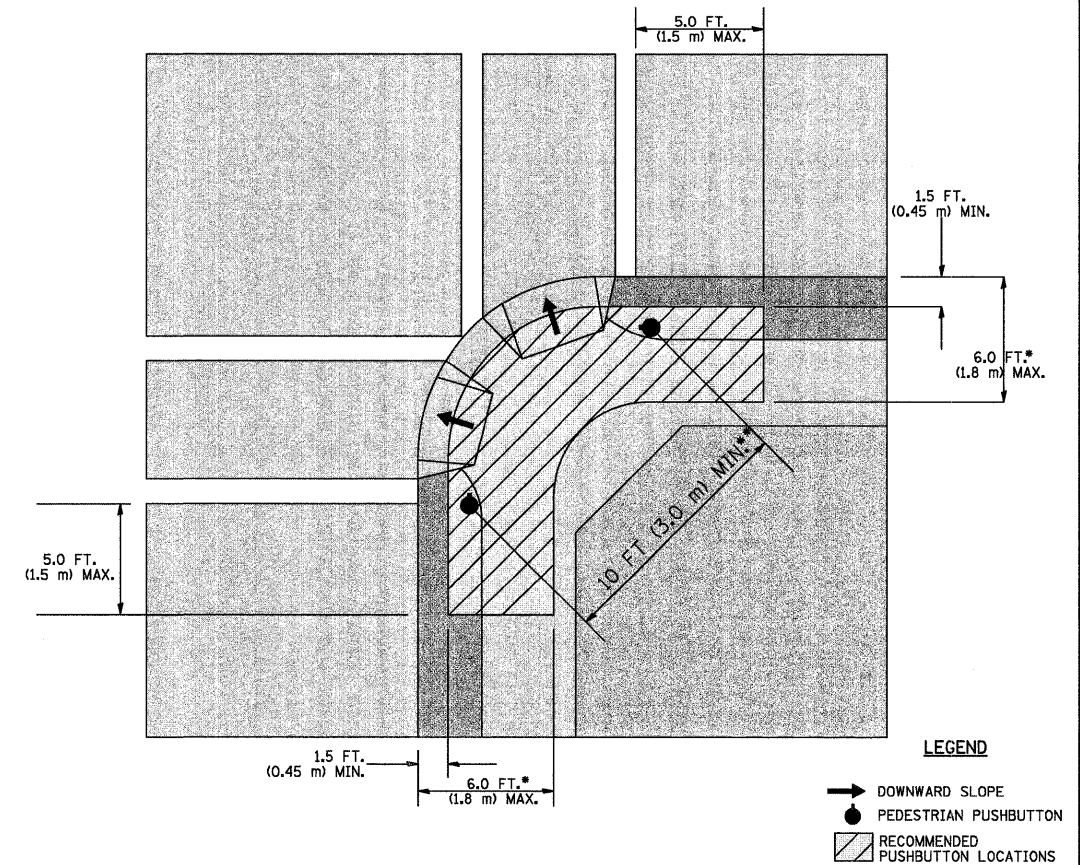
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

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

**RECOMMENDED PUSHBUTTON LOCATIONS**



**LEGEND**

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

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

**NOTES:**

PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.

THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.

THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.

THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.

THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

LATEST REVISION DATE: 10-28-09

FILE NAME = 4085.862-866-DT1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
		DRAWN - ZCW	REVISED -
	PLOT SCALE = 1" = .0833'	CHECKED - KLB	REVISED -
	PLOT DATE = 10/12/2010	DATE - 10/12/2010	REVISED -

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

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

**NOTES:**

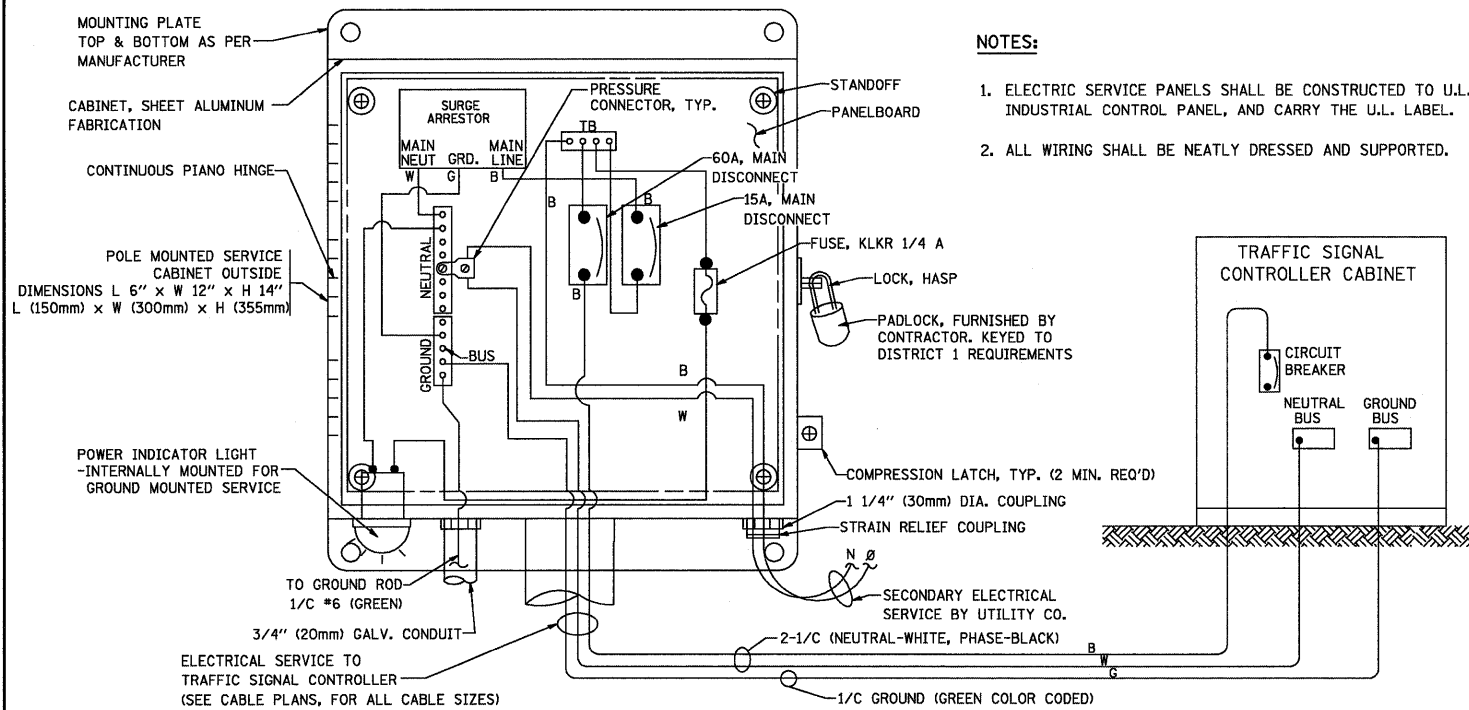
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM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

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

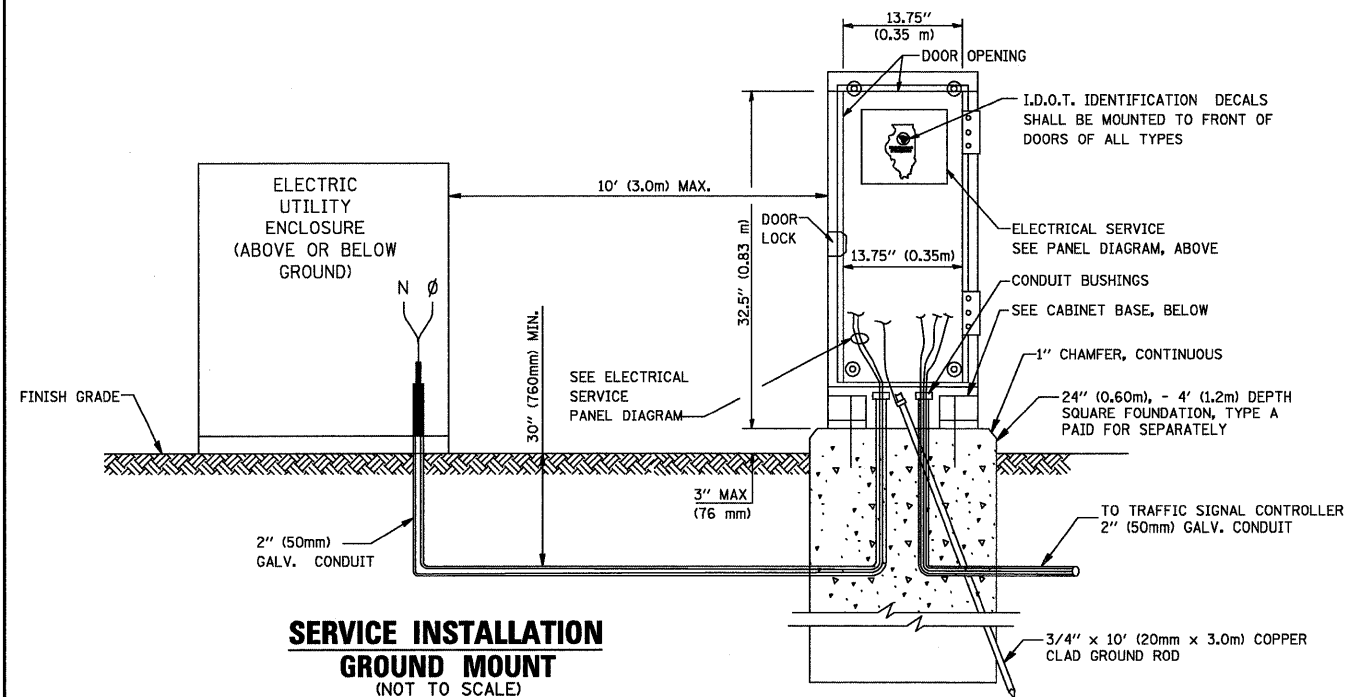
**DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: N.A. SHEET NO. 2 OF 6 SHEETS STA. TO STA.

GHA #4085.862-866		FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		VARIES	2010-005TS	COOK	32	5
				CONTRACT #:	60K23	
ILLINOIS FED. AID PROJECT						

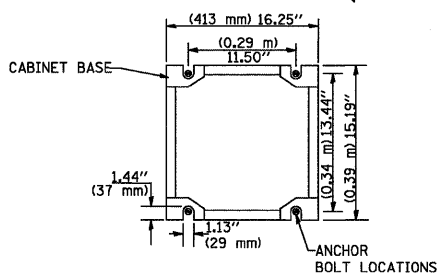


**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



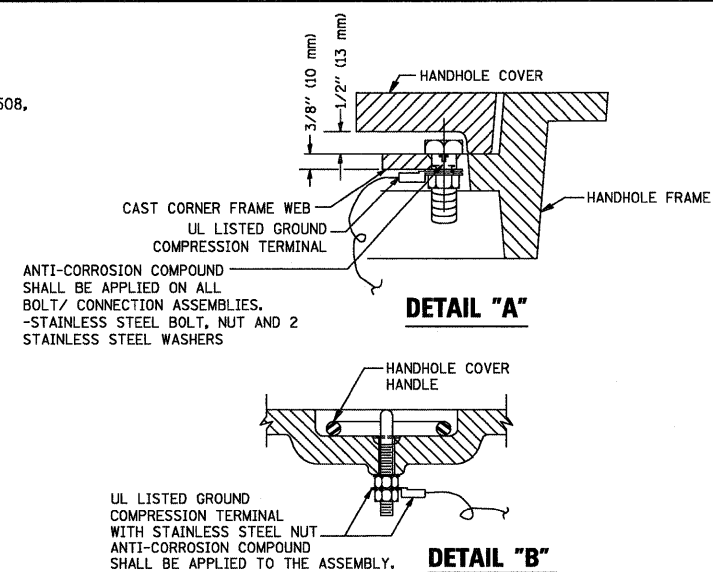
**SERVICE INSTALLATION GROUND MOUNT**  
 (NOT TO SCALE)

**CABINET - BASE BOLT PATTERN**  
 (NOT TO SCALE)



**NOTES:**

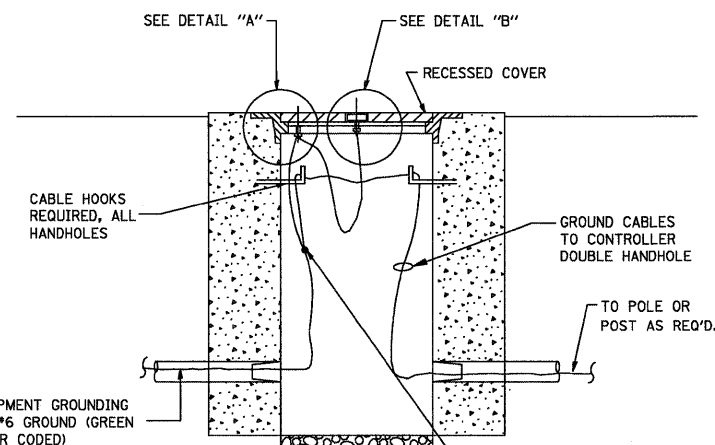
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



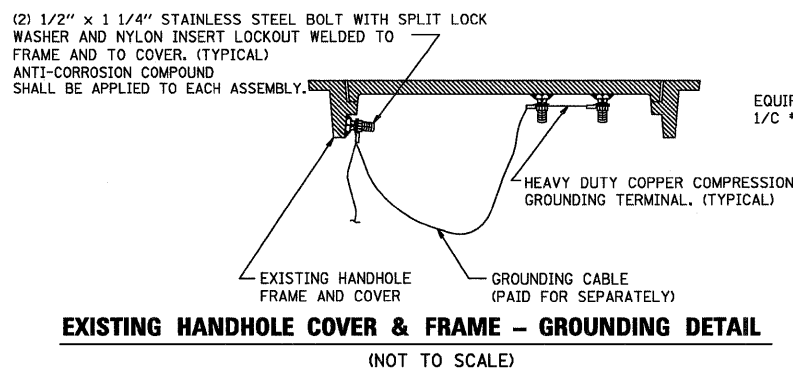
**NOTES:**

**GROUNDING SYSTEM**

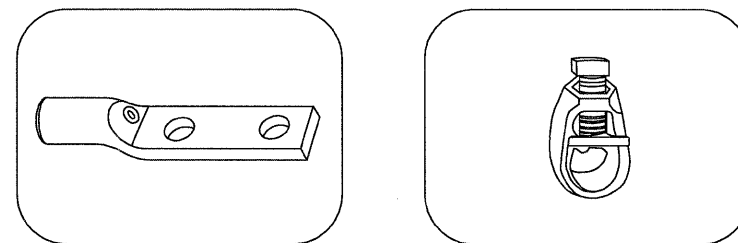
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4\"/>
- 2. 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.
- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



**HANDHOLE COVER & FRAME - GROUNDING DETAIL**  
 (NOT TO SCALE)



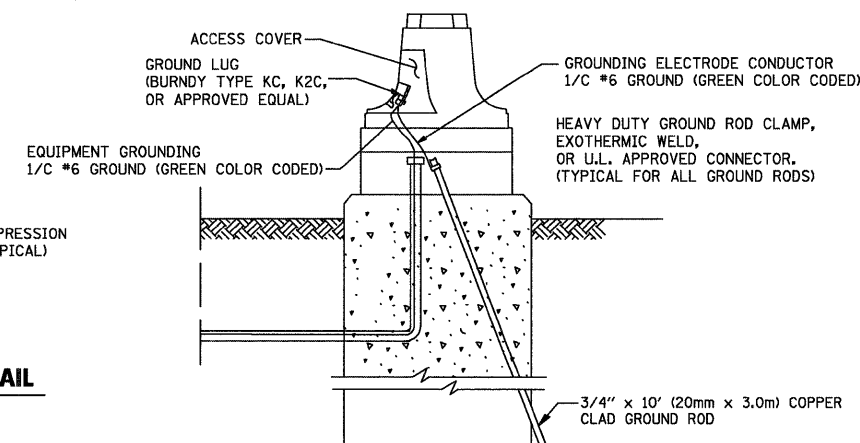
**EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL**  
 (NOT TO SCALE)



HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YCHA OR APPROVED EQUAL)  
 3/4\"/>

**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.



**MAST ARM POLE / POST-GROUNDING DETAIL**  
 (NOT TO SCALE)

LATEST REVISION DATE: 10-28-09

FILE NAME = 4085.862-866-D1.dwg

USER NAME = ZACH WALLSTEN  
 PLOT SCALE = 1\"/>

DESIGNED - JRD  
 DRAWN - ZCW  
 CHECKED - KLB  
 DATE - 10/12/2010

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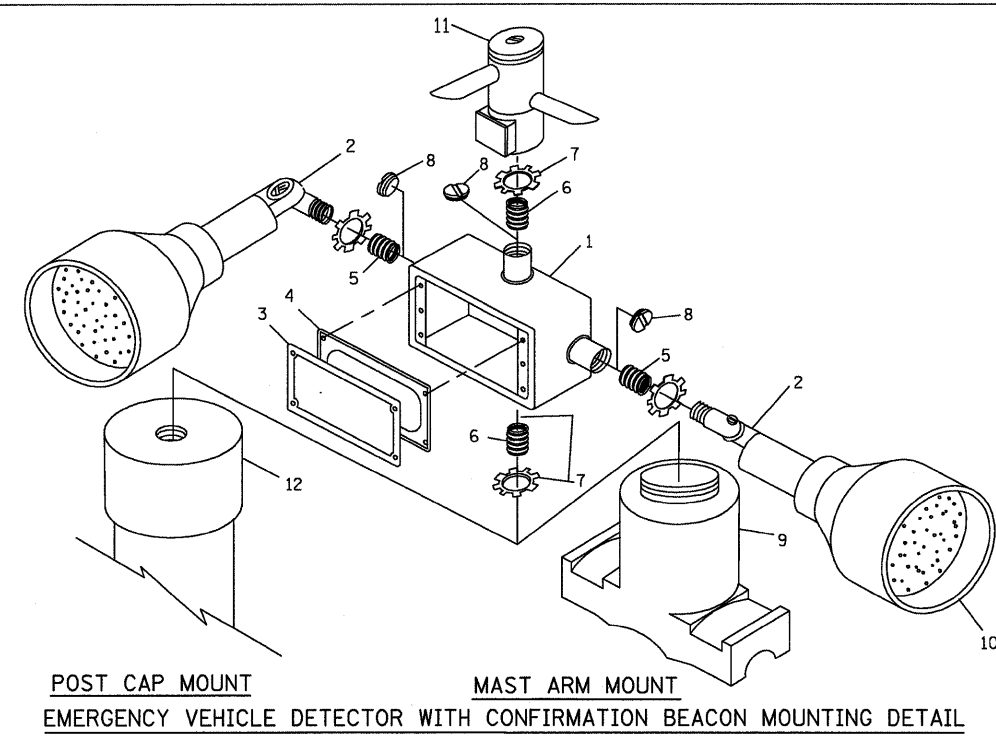
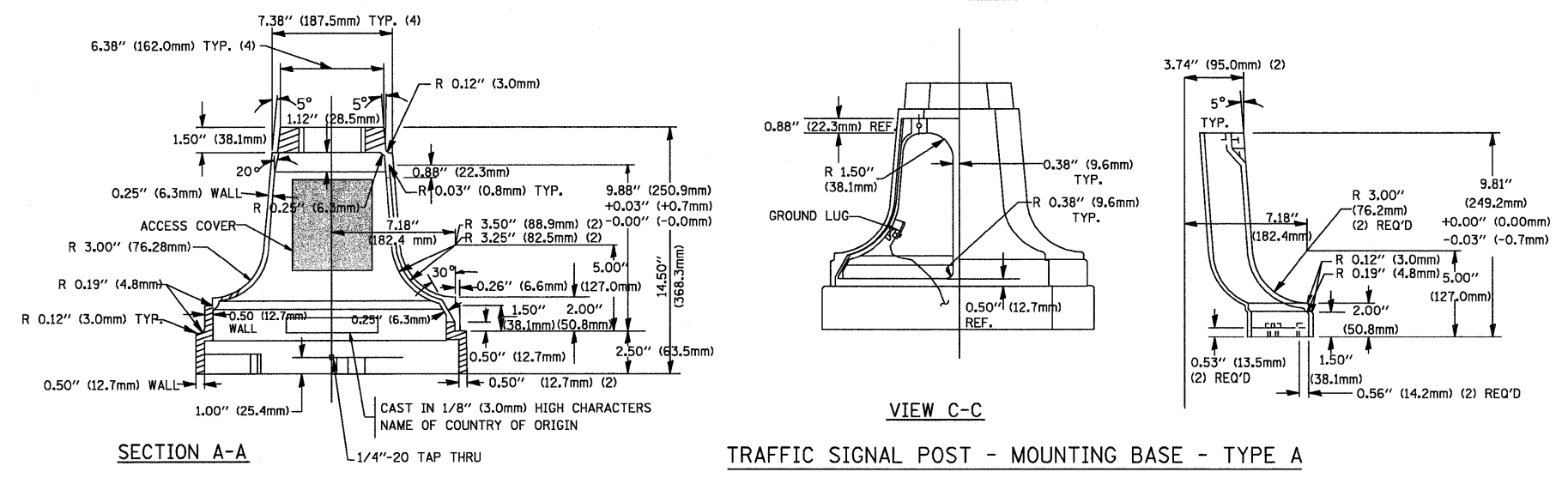
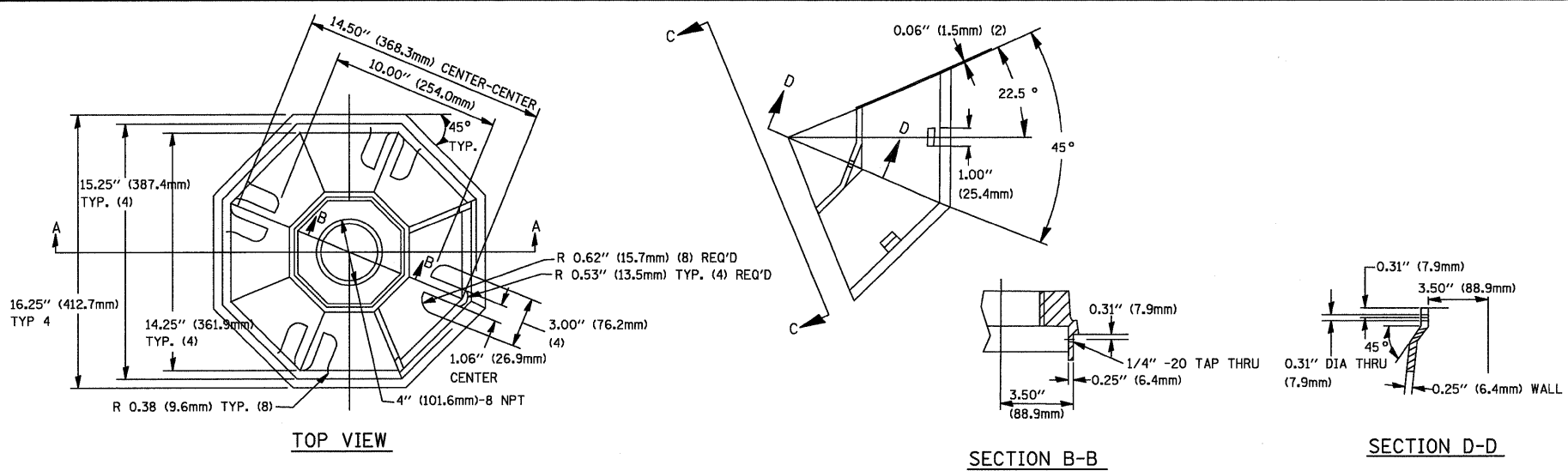
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1**  
**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: N.A. SHEET NO. 3 OF 6 SHEETS STA. TO STA.

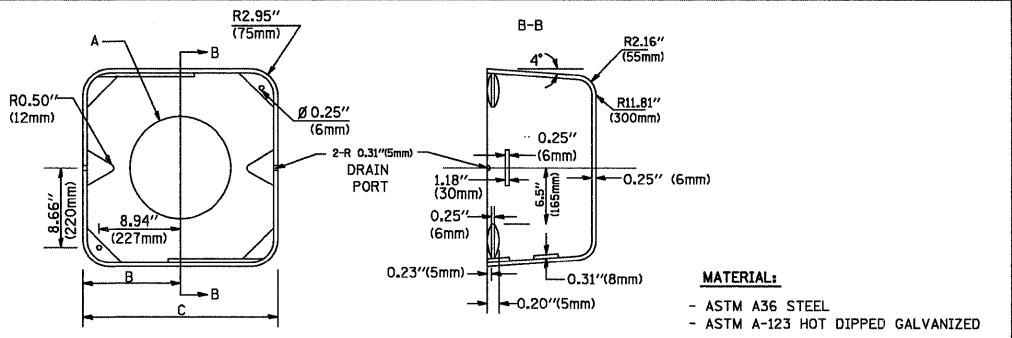
FAP RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 6
CONTRACT # 60K23			ILLINOIS FED. AID PROJECT	

GHA #4085.862-866



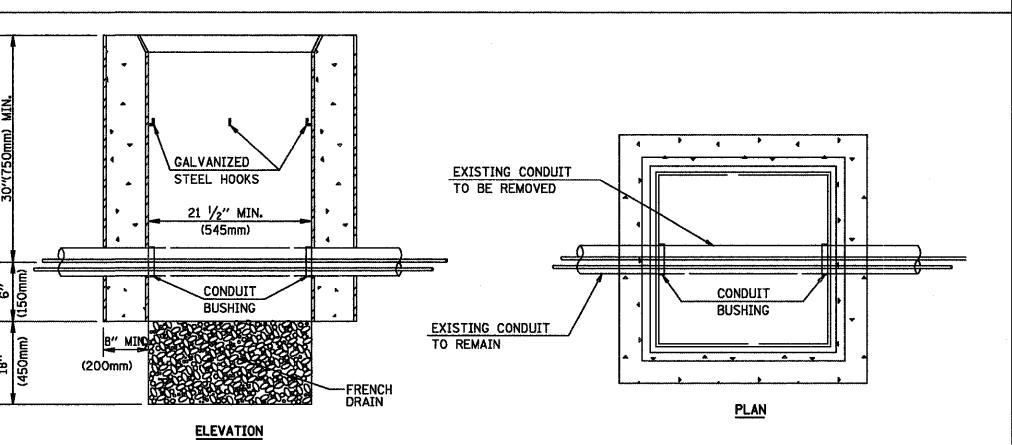
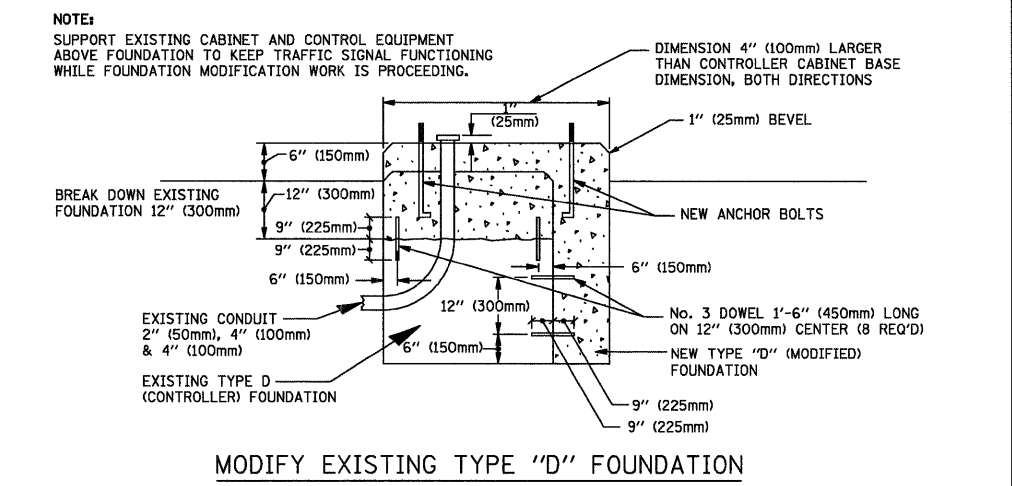
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR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

- NOTES:**
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
  - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-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.



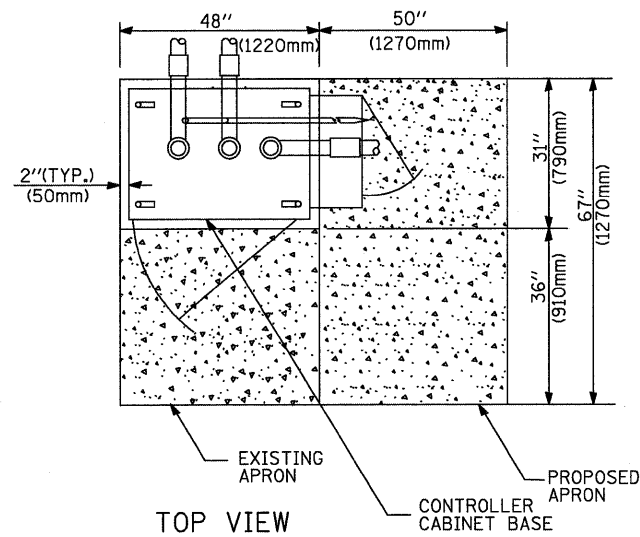
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	18.5\" (470mm)	37\" (940mm)	7\"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

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

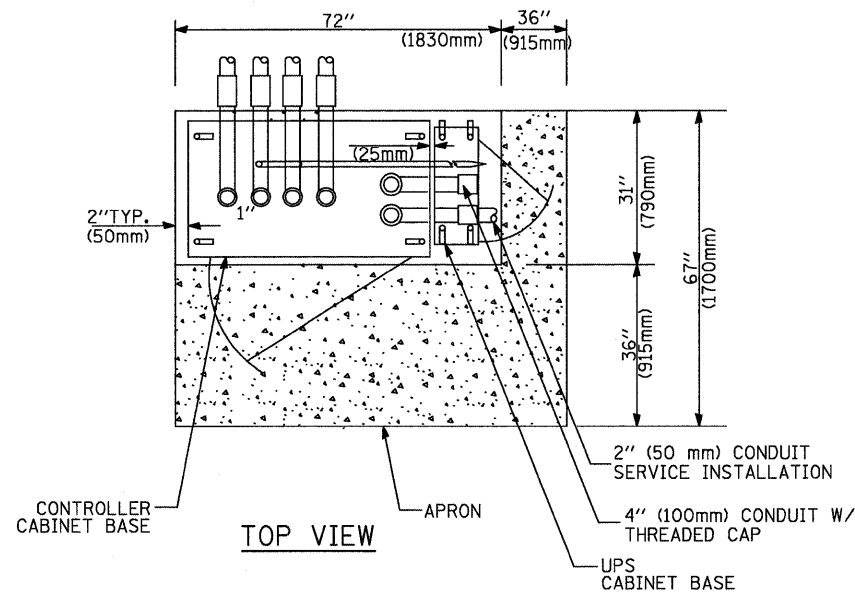


- NOTES:**
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
  - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

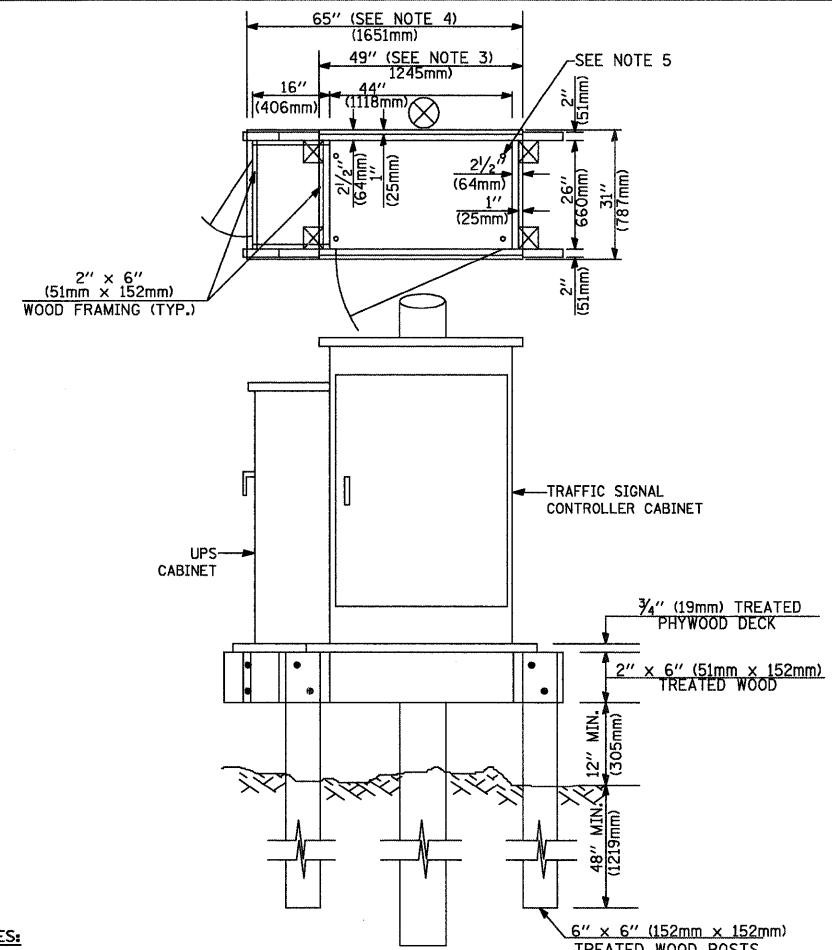
LATEST REVISION DATE: 10-28-09



TOP VIEW



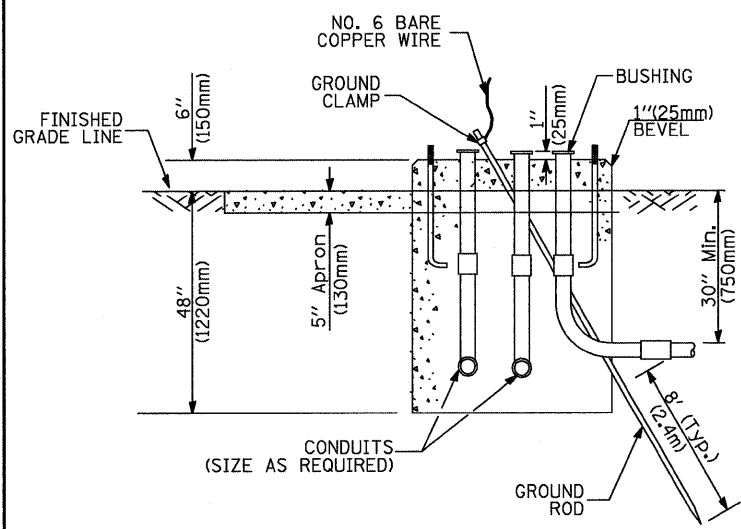
TOP VIEW



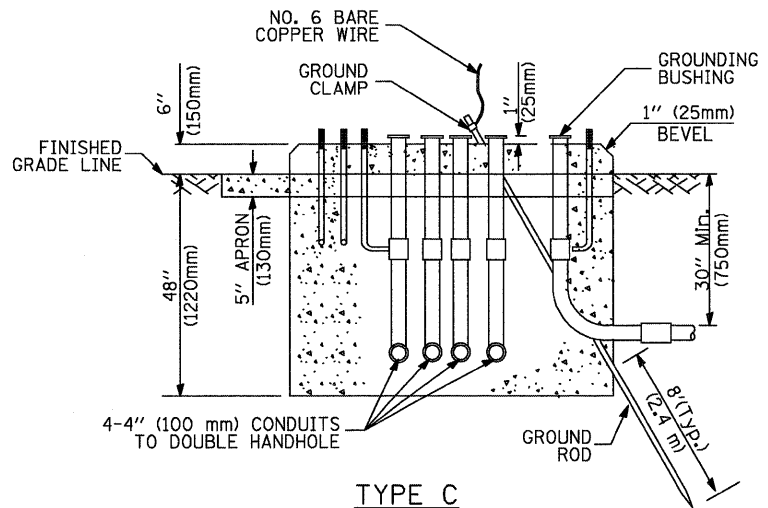
NOTES:

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

TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM



TYPE D FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET



TYPE C FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

LATEST REVISION DATE: 06-30-10

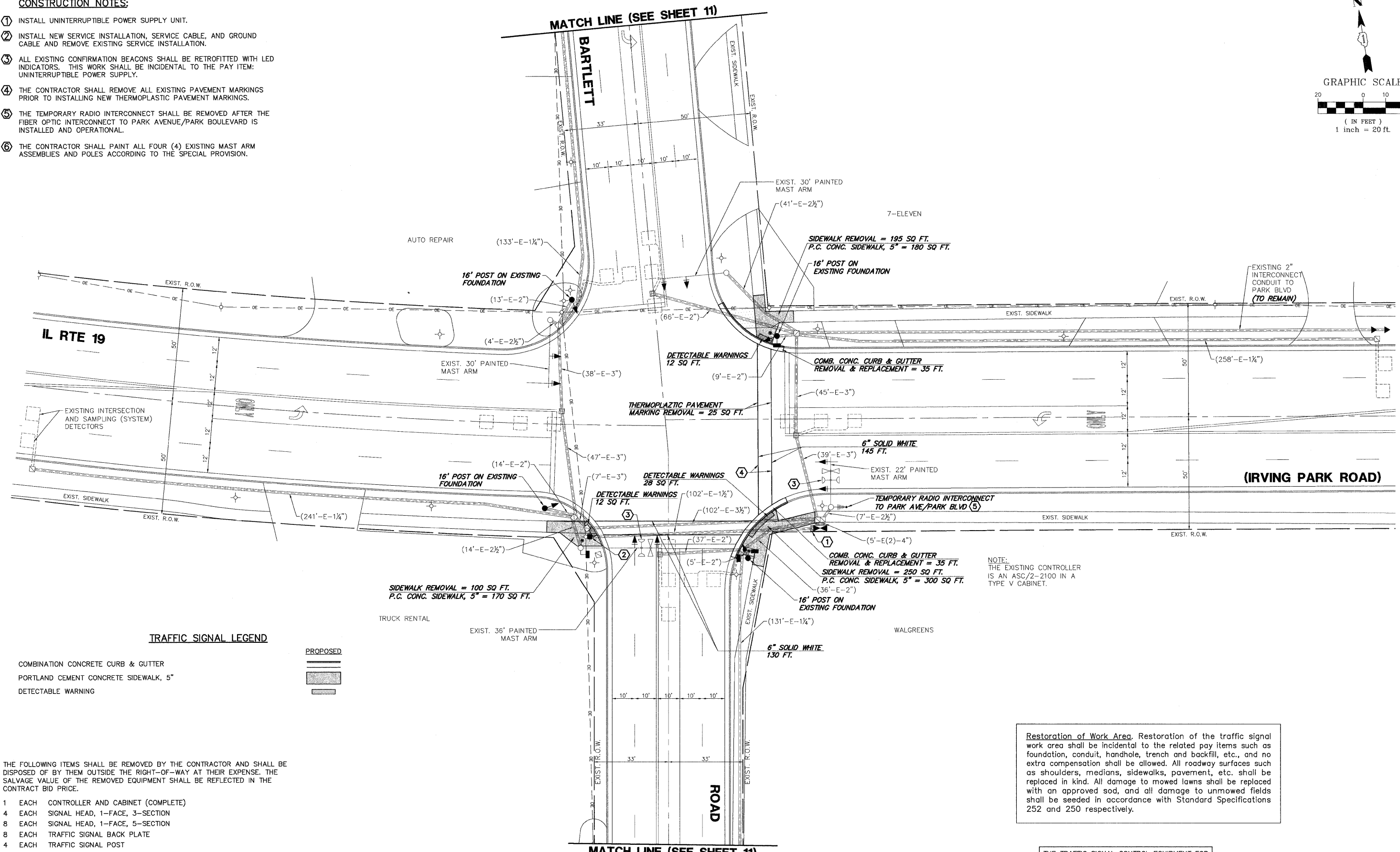
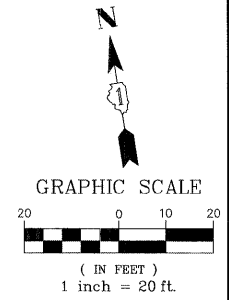


# TRAFFIC SIGNAL LEGEND

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

**CONSTRUCTION NOTES:**

- ① INSTALL UNINTERRUPTIBLE POWER SUPPLY UNIT.
- ② INSTALL NEW SERVICE INSTALLATION, SERVICE CABLE, AND GROUND CABLE AND REMOVE EXISTING SERVICE INSTALLATION.
- ③ ALL EXISTING CONFIRMATION BEACONS SHALL BE RETROFITTED WITH LED INDICATORS. THIS WORK SHALL BE INCIDENTAL TO THE PAY ITEM: UNINTERRUPTIBLE POWER SUPPLY.
- ④ THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS PRIOR TO INSTALLING NEW THERMOPLASTIC PAVEMENT MARKINGS.
- ⑤ THE TEMPORARY RADIO INTERCONNECT SHALL BE REMOVED AFTER THE FIBER OPTIC INTERCONNECT TO PARK AVENUE/PARK BOULEVARD IS INSTALLED AND OPERATIONAL.
- ⑥ THE CONTRACTOR SHALL PAINT ALL FOUR (4) EXISTING MAST ARM ASSEMBLIES AND POLES ACCORDING TO THE SPECIAL PROVISION.



**TRAFFIC SIGNAL LEGEND**

- COMBINATION CONCRETE CURB & GUTTER
- PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- DETECTABLE WARNING

PROPOSED



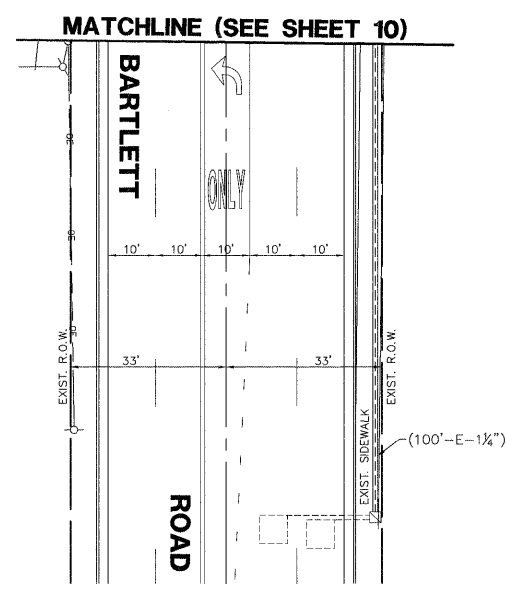
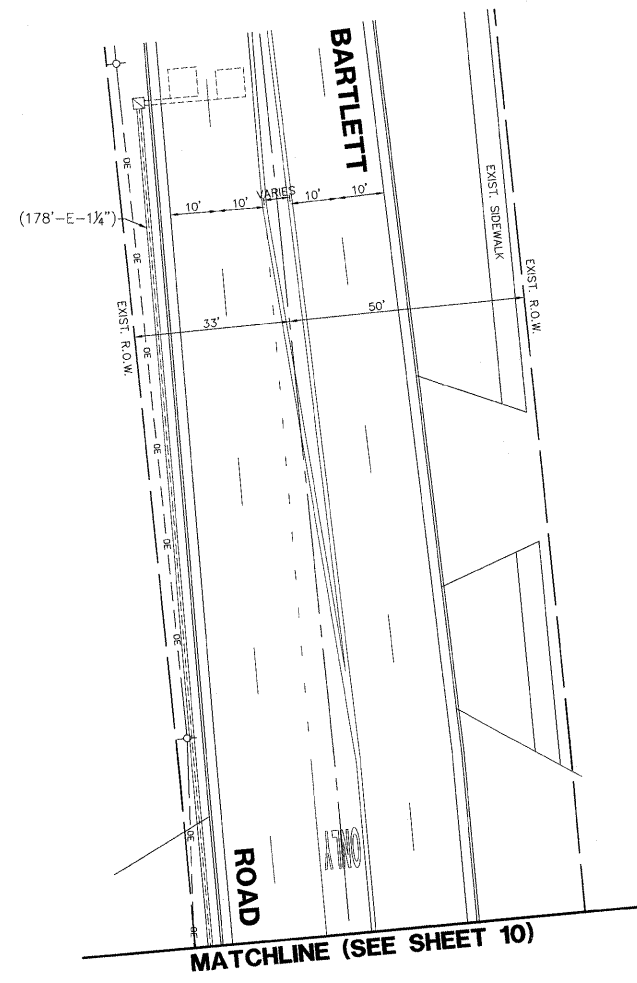
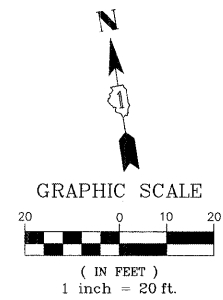
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 8 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 8 EACH TRAFFIC SIGNAL BACK PLATE
- 4 EACH TRAFFIC SIGNAL POST
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION
- 4 EACH INCANDESCENT CONFIRMATION BEACON

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = 4085.862-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL MODERNIZATION PLAN IL ROUTE 19 (IRVING PARK ROAD) AT BARTLETT ROAD</b>				FAP RTE VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 10	CONTRACT # 60K23	GH# 4085.862
	PLOT SCALE = 1" = .08'	DRAWN - ZCW	REVISED -		SCALE 1"=20'	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT					
	PLOT DATE = 10/12/2010	CHECKED - KLB	REVISED -												
		DATE - 10/12/2010	REVISED -												



FILE NAME = 4085.862-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL MODERNIZATION PLAN IL ROUTE 19 (IRVING PARK ROAD) AT BARTLETT ROAD</b>			F&P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1" = .08'	CHECKED - KLB	REVISED -		SCALE 1"=20'	SHEET NO.	OF	SHEETS	STA.	TO STA.	COOK	32
PLOT DATE = 10/12/2010	DATE - 10/12/2010	REVISED -	REVISED -							CONTRACT #: 60K23		
											ILLINOIS FED. AID PROJECT	

GHA #4085.862

**SCHEDULE OF QUANTITIES**

IL ROUTE 19 (IRVING PARK ROAD) AT BARTLETT ROAD

NO.	QUANT.	UNIT	DESCRIPTION
1.	2	CU YD	EARTH EXCAVATION
2.	6	SQ YD	SUB-BASE GRANULAR MATERIAL, TYPE B 4"
3.	650	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
4.	52	SQ FT	DETECTABLE WARNINGS
5.	545	SQ FT	SIDEWALK REMOVAL
6.	70	FOOT	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT
7.	0.25	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
8.	0.10	L SUM	MOBILIZATION
9.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
10.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
11.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
12.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
13.	205	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 6"
14.	75	SQ FT	THERMOPLASTIC PAVEMENT MARKING REMOVAL
15.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
* 16.	1	EACH	PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT
17.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
18.	1	EACH	TRANSCIVER - FIBER OPTIC
19.	237	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
20.	225	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
21.	141	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
22.	4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
23.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
24.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
25.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
26.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
27.	1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
28.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
29.	11	EACH	INDUCTIVE LOOP DETECTOR
30.	4	EACH	PEDESTRIAN PUSH-BUTTON
* 31.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
32.	214	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
33.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
34.	1	EACH	REMOVE EXISTING SERVICE INSTALLATION
* 35.	4	EACH	PAINT NEW SIGNAL POST
36.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
37.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY
38.	129	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C

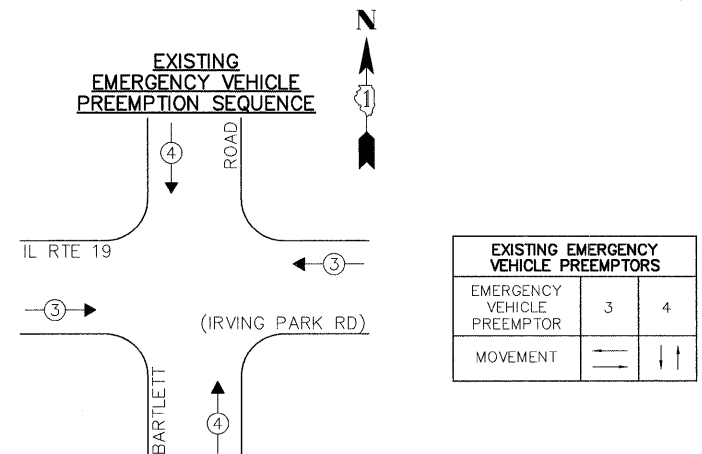
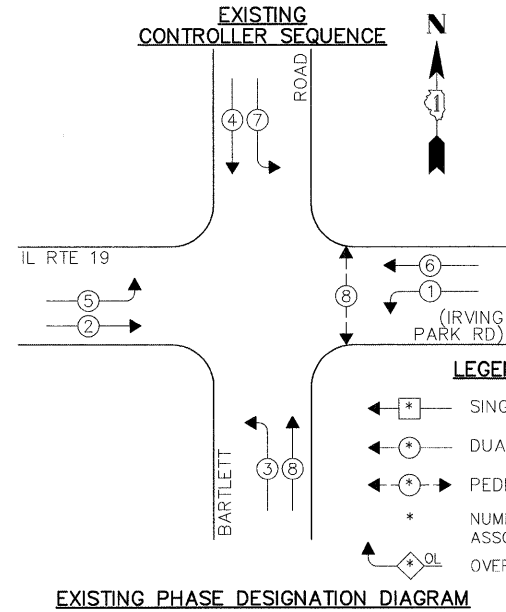
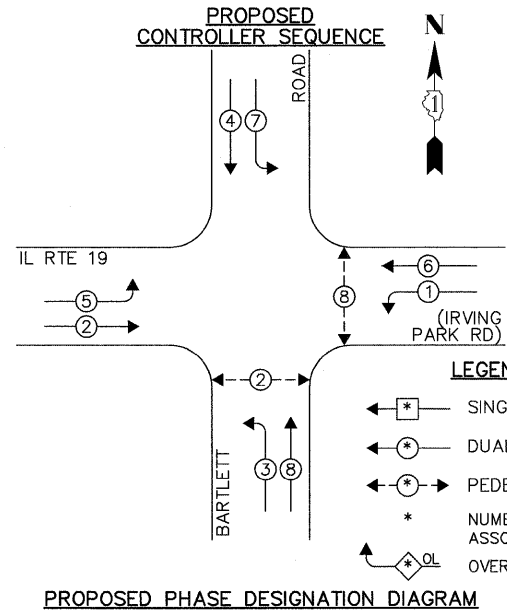
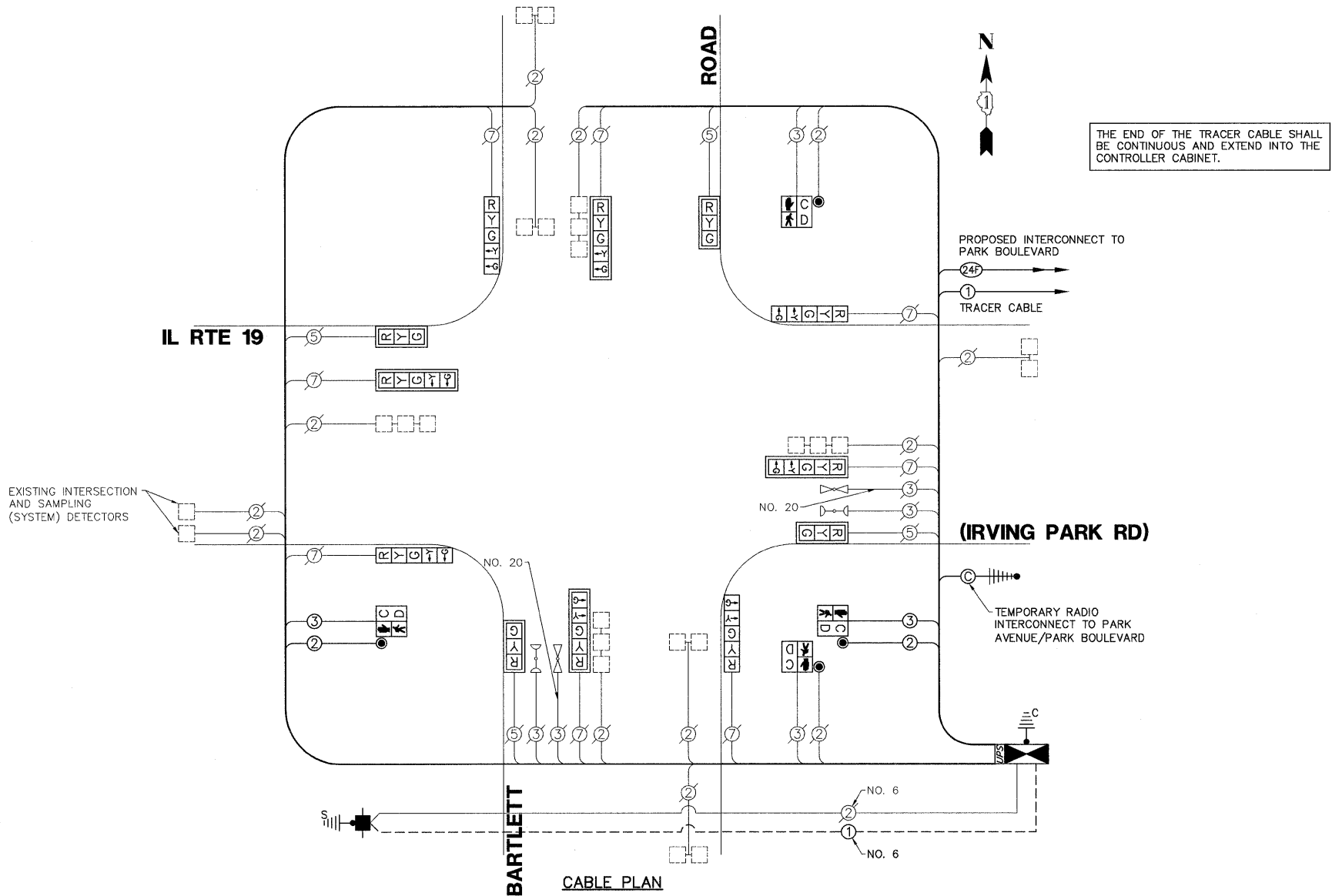
\* 100% OF COST TO THE VILLAGE OF STREAMWOOD

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	30.0
SIGNAL (GREEN)	12	135	15	0.25	72.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					448.2

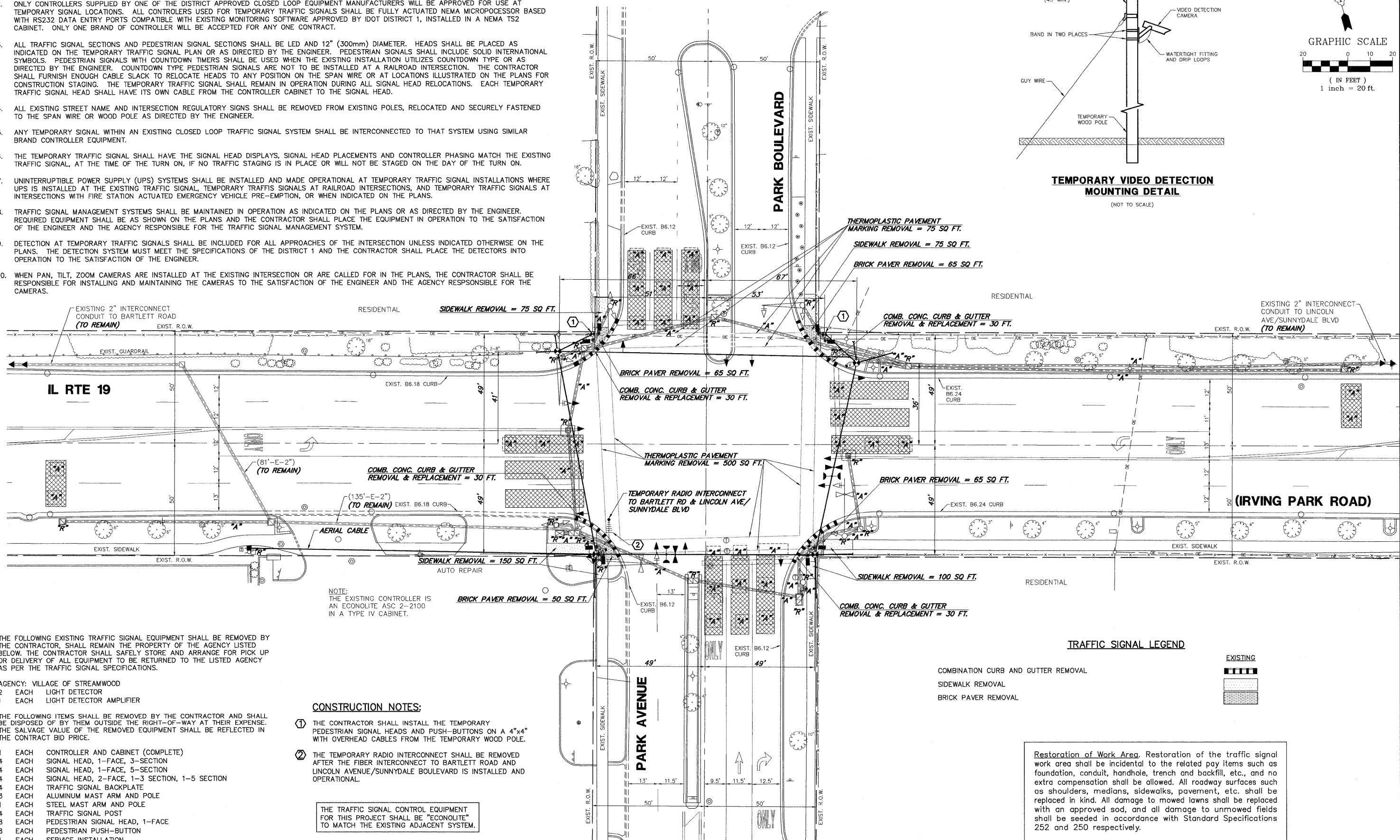
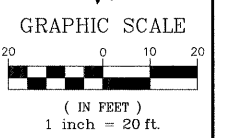
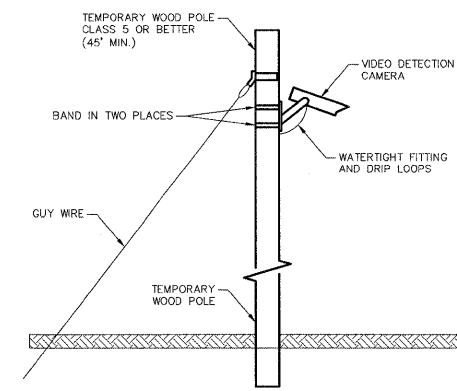
ENERGY COSTS - BILLED TO: IDOT - DISTRICT 1  
 (ADDRESS) 201 W. CENTER COURT  
 (ADDRESS) SCHAUMBURG, IL 60196-1096  
 ENERGY SUPPLY - CONTACT: -  
 PHONE: -  
 COMPANY: COM-ED



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

**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.
- 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 TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. 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 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 CONTROLLER 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.
- UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF THE DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: VILLAGE OF STREAMWOOD  
 2 EACH LIGHT DETECTOR  
 1 EACH LIGHT DETECTOR AMPLIFIER

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

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 4 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 3 EACH ALUMINUM MAST ARM AND POLE
- 1 EACH STEEL MAST ARM AND POLE
- 4 EACH TRAFFIC SIGNAL POST
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION

**CONSTRUCTION NOTES:**

- THE CONTRACTOR SHALL INSTALL THE TEMPORARY PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS ON A 4"x4" WITH OVERHEAD CABLES FROM THE TEMPORARY WOOD POLE.
- THE TEMPORARY RADIO INTERCONNECT SHALL BE REMOVED AFTER THE FIBER INTERCONNECT TO BARTLETT ROAD AND LINCOLN AVENUE/SUNNYDALE BOULEVARD IS INSTALLED AND OPERATIONAL.

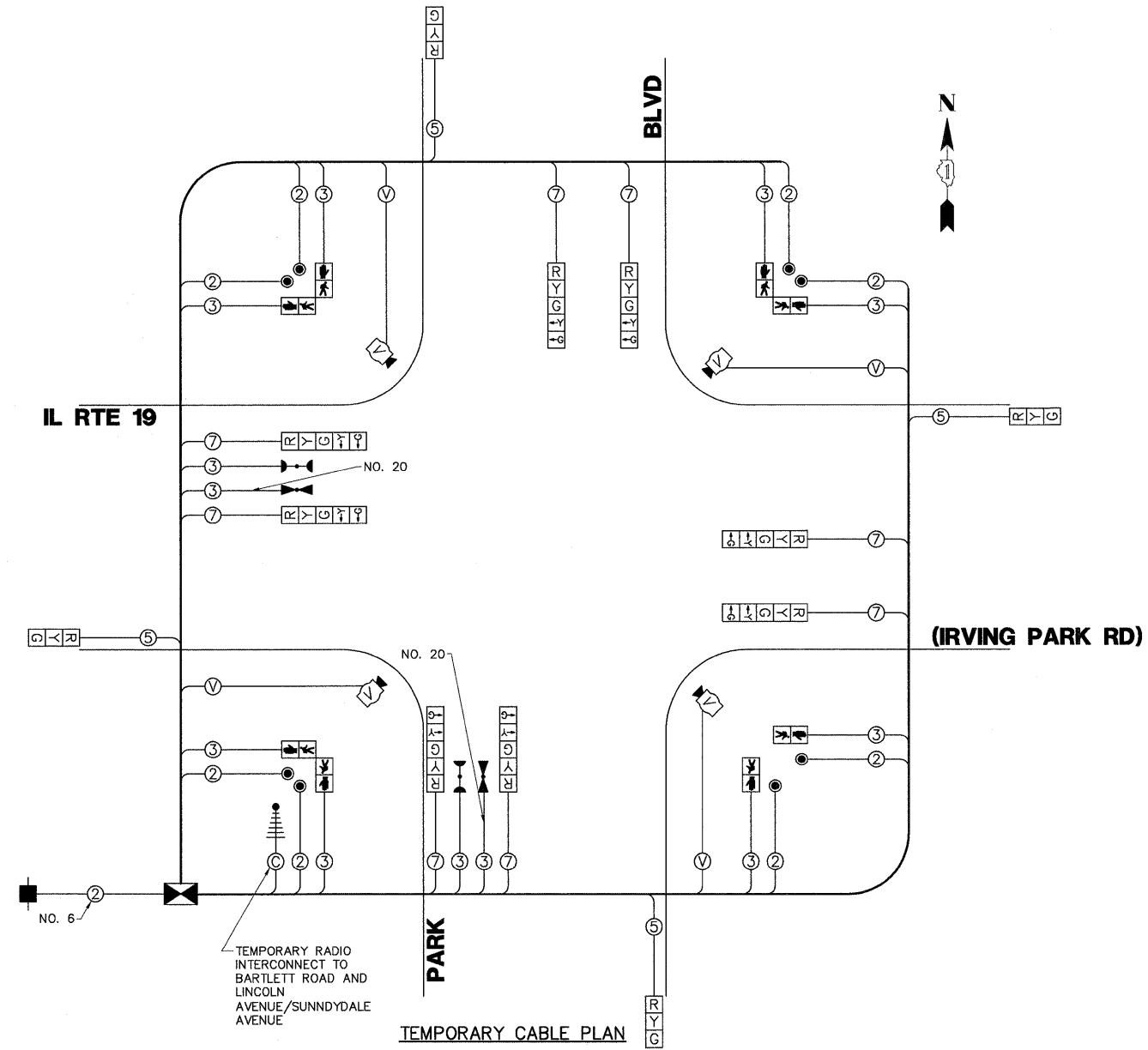
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TRAFFIC SIGNAL LEGEND**

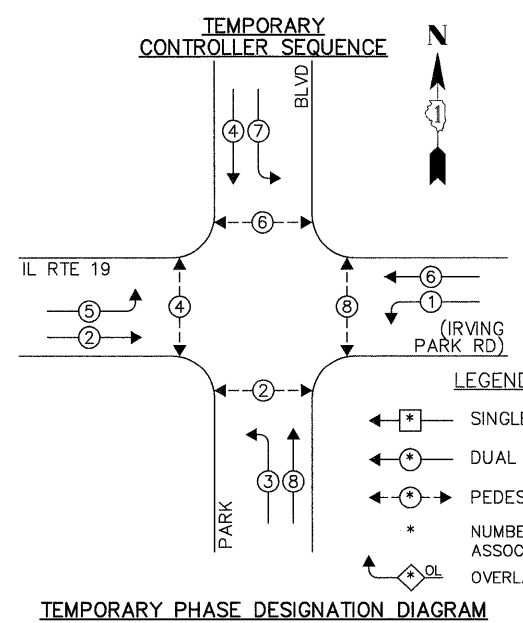


**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

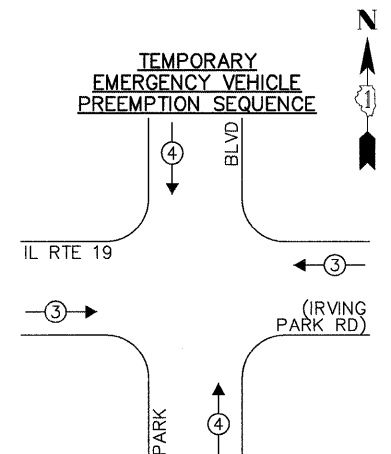
FILE NAME = 4085.863-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TEMPORARY TRAFFIC SIGNAL INSTALLATION & REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT IL RTE 19 (IRVING PARK RD) AT PARK AVE/PARK BLVD		FAP RTE VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 13
	PLOT SCALE = 1" = .0833'	DRAWN - ZCW	REVISED -					SCALE 1"=20'	SHEET NO. OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT	CONTRACT # 60K23	



TEMPORARY CABLE PLAN



TEMPORARY PHASE DESIGNATION DIAGRAM



TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	WATTAGE	L.E.D. % OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	30.0
SIGNAL (GREEN)	12	135	15	0.25	72.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
<b>TOTAL =</b>					<b>532.2</b>

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

ENERGY COSTS - BILLED TO: IDOT - DISTRICT 1  
 (ADDRESS) 201 W. CENTER COURT  
 (ADDRESS) SCHAUMBURG, IL 60196-1096  
 ENERGY SUPPLY - CONTACT: -  
 PHONE: -  
 COMPANY: COM-ED

DESIGNED - JRD  
 DRAWN - ZCW  
 CHECKED - KLB  
 DATE - 10/12/2010

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, & TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE  
 IL RTE 19 (IRVING PARK RD) AT PARK AVE/PARK BLVD

FILE NAME = 4085.862-866-CABLE.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	SCALE: N.A.	SHEET NO. OF SHEETS	STA. TO STA.	FAP. RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 14	CONTRACT # 60K23
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TEMPORARY EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	—

GHA #4085.863

ILLINOIS FED. AID PROJECT



**SCHEDULE OF QUANTITIES**

IL ROUTE 19 (IRVING PARK ROAD) AT PARK AVENUE/PARK BOULEVARD

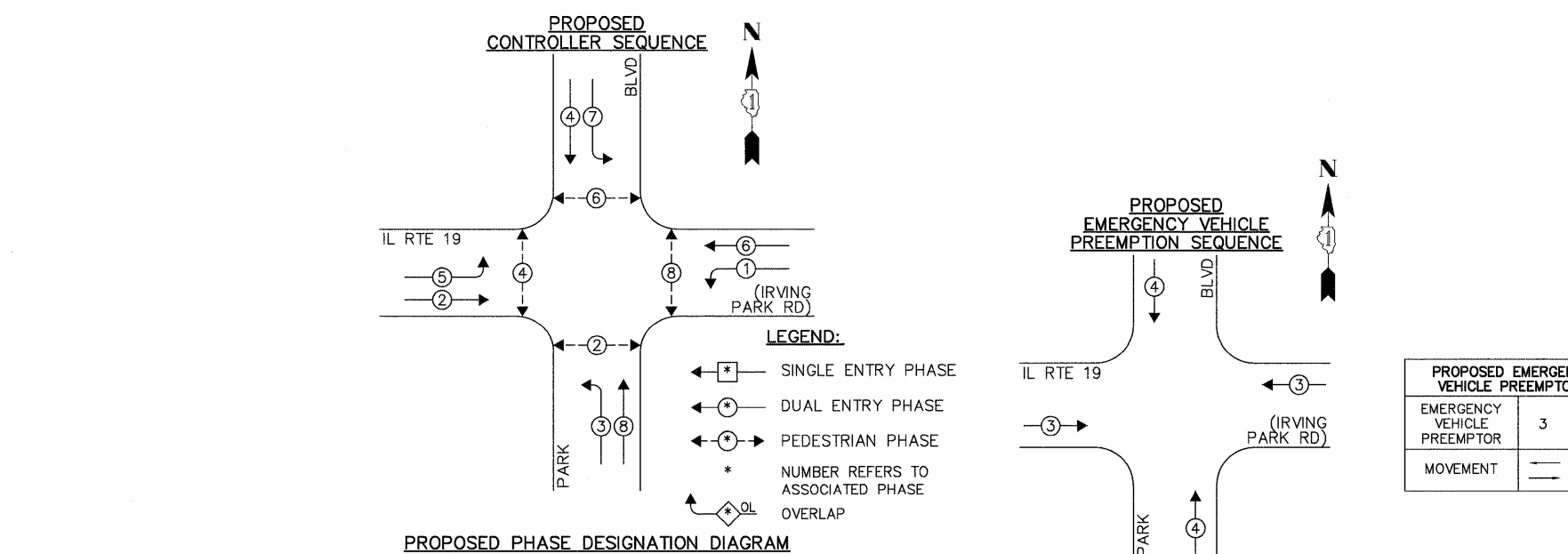
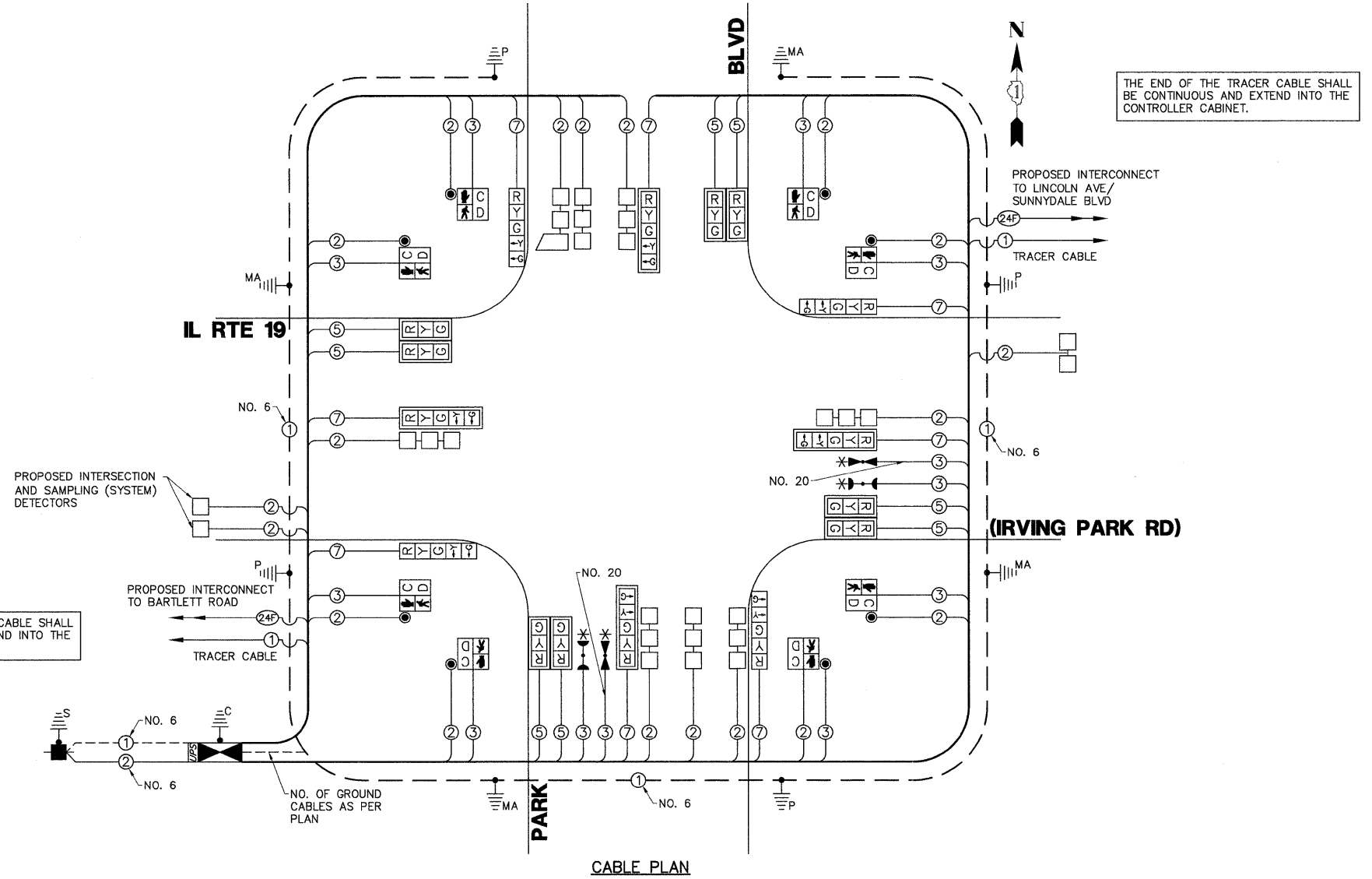
NO.	QUANT.	UNIT	DESCRIPTION
1.	6	CU YD	EARTH EXCAVATION
2.	12	SQ YD	SUB-BASE GRANULAR MATERIAL, TYPE B 4"
3.	255	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
4.	96	SQ FT	DETECTABLE WARNINGS
5.	400	SQ FT	SIDEWALK REMOVAL
6.	120	FOOT	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT
7.	2.00	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
8.	0.30	L SUM	MOBILIZATION
9.	0.30	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
10.	0.30	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
11.	0.30	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
12.	0.30	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
13.	15.00	SQ FT	SIGN PANEL - TYPE 1
14.	30.00	SQ FT	SIGN PANEL - TYPE 2
15.	645	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 6"
16.	575	SQ FT	THERMOPLASTIC PAVEMENT MARKING REMOVAL
17.	280	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
18.	41	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
19.	82	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
20.	25	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
21.	420	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
22.	415	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
23.	5	EACH	HANDHOLE
24.	3	EACH	HEAVY-DUTY HANDHOLE
25.	2	EACH	DOUBLE HANDHOLE
26.	441	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
27.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
28.	1	EACH	TRANSCEIVER - FIBER OPTIC
29.	1,273	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
30.	1,669	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
31.	1,598	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
32.	1,525	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
33.	1,990	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
34.	161	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
35.	4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
36.	2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.
37.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.
38.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.
39.	16	FOOT	CONCRETE FOUNDATION, TYPE A
40.	4	FOOT	CONCRETE FOUNDATION, TYPE C
41.	46	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
42.	8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
43.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
44.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
45.	8	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
46.	12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
47.	11	EACH	INDUCTIVE LOOP DETECTOR
48.	964	FOOT	DETECTOR LOOP, TYPE I
*49.	2	EACH	LIGHT DETECTOR
*50.	1	EACH	LIGHT DETECTOR AMPLIFIER
51.	8	EACH	PEDESTRIAN PUSH-BUTTON
52.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
53.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
54.	11	EACH	REMOVE EXISTING HANDHOLE
55.	9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
*56.	3	EACH	PAINT NEW MAST ARM POLE, UNDER 40 FEET
*57.	4	EACH	PAINT NEW SIGNAL POST
*58.	1	EACH	PAINT NEW MAST ARM POLE, 40 FEET AND OVER
59.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
60.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
61.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY
62.	669	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
*63.	324	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
64.	860	SQ FT	BRICK PAVER REMOVAL AND REPLACEMENT

\* 100% OF COST TO THE VILLAGE OF STREAMWOOD

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO.	LAMPS	INCAND.	L.E.D. % OPERATION	
SIGNAL (RED)	16	135	17	0.50	136.0
SIGNAL (YELLOW)	16	135	25	0.25	40.0
SIGNAL (GREEN)	16	135	15	0.25	96.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					616.2

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

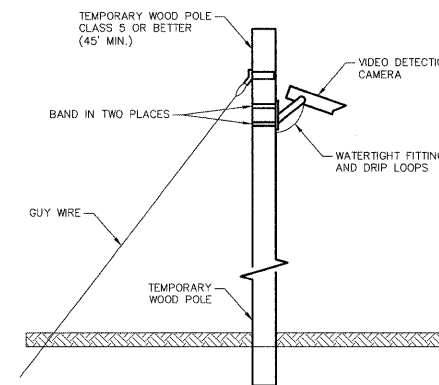
**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.



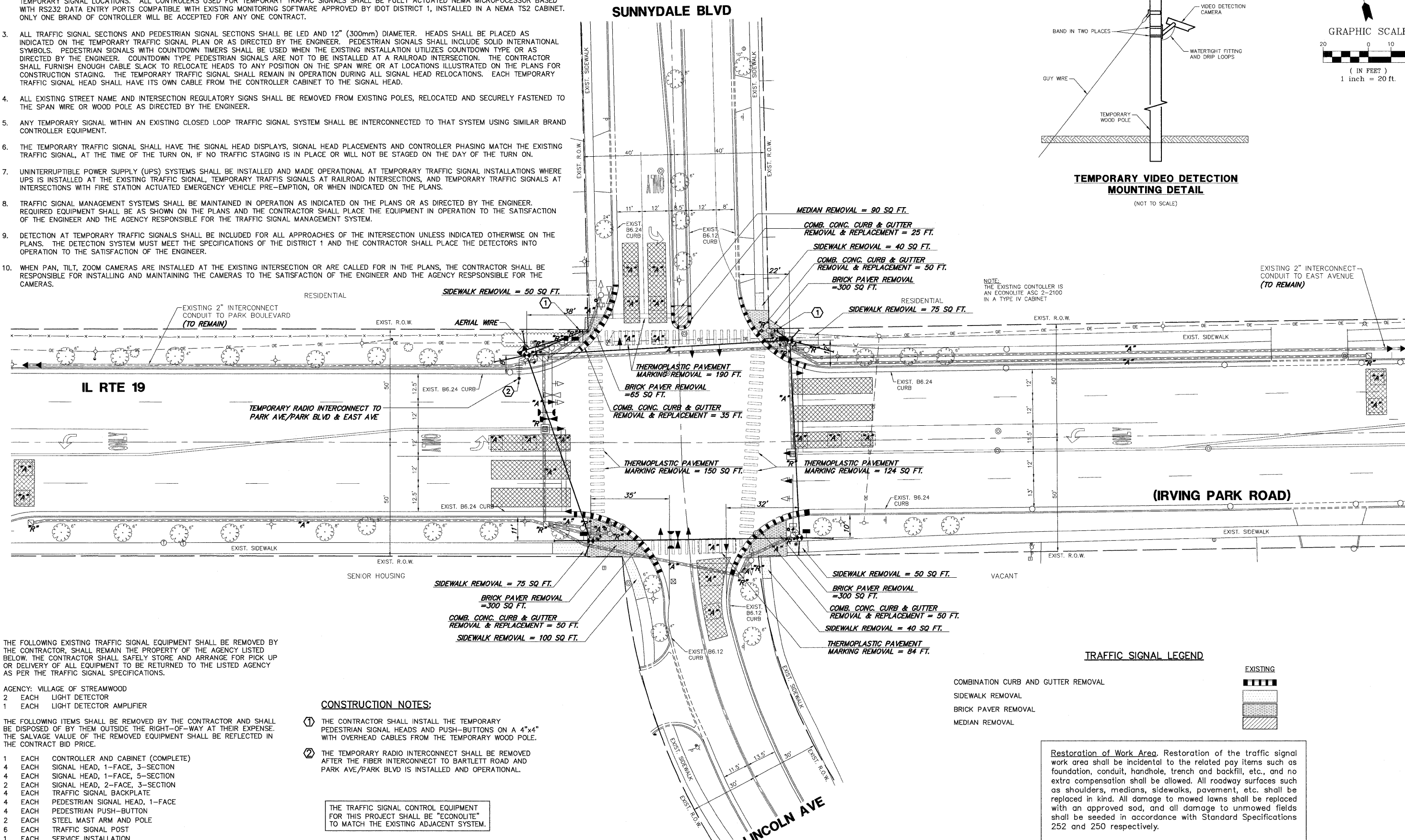
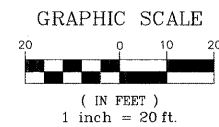


**NOTES FOR TEMPORARY TRAFFIC SIGNALS:**

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- 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 TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. 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 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 CONTROLLER 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.
- UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF THE DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



**TEMPORARY VIDEO DETECTION MOUNTING DETAIL**  
(NOT TO SCALE)



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- AGENCY: VILLAGE OF STREAMWOOD  
 2 EACH LIGHT DETECTOR  
 1 EACH LIGHT DETECTOR AMPLIFIER

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

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 2 EACH SIGNAL HEAD, 2-FACE, 3-SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 2 EACH STEEL MAST ARM AND POLE
- 6 EACH TRAFFIC SIGNAL POST
- 1 EACH SERVICE INSTALLATION

**CONSTRUCTION NOTES:**

- THE CONTRACTOR SHALL INSTALL THE TEMPORARY PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS ON A 4"x4" WITH OVERHEAD CABLES FROM THE TEMPORARY WOOD POLE.
- THE TEMPORARY RADIO INTERCONNECT SHALL BE REMOVED AFTER THE FIBER INTERCONNECT TO BARTLETT ROAD AND PARK AVE/PARK BLVD IS INSTALLED AND OPERATIONAL.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TRAFFIC SIGNAL LEGEND**

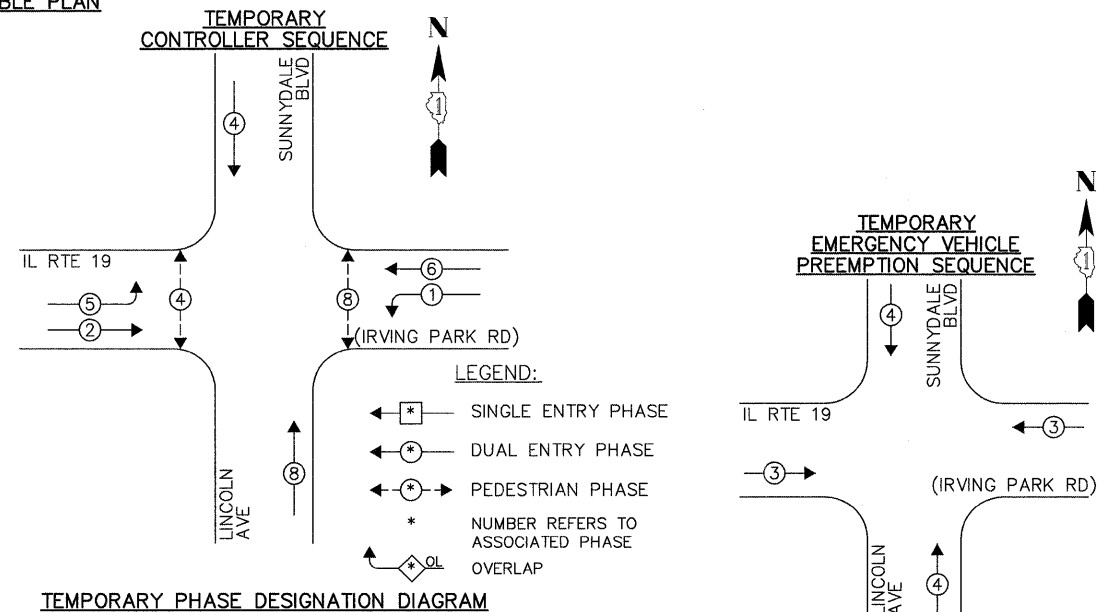
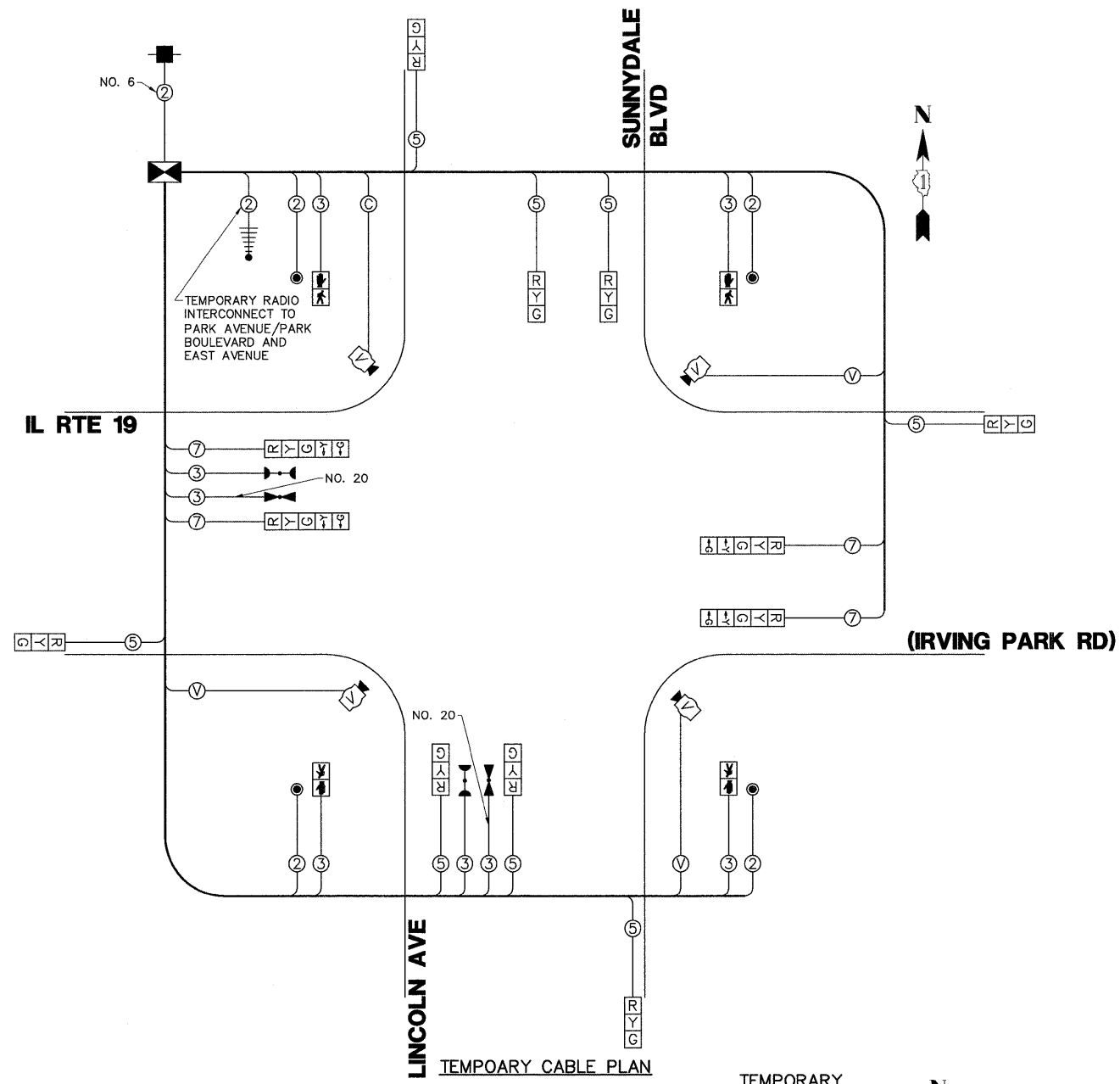
- COMBINATION CURB AND GUTTER REMOVAL
- SIDEWALK REMOVAL
- BRICK PAVER REMOVAL
- MEDIAN REMOVAL



**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

FILE NAME = 4085.864-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TEMPORARY TRAFFIC SIGNAL INSTALLATION & REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT IL RTE 19 (IRVING PARK RD) AT LINCOLN AVE/SUNNYDALE BLVD			FAP RTE VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 17
	PLOT SCALE = 1" = .0833'	DRAWN - MEM	REVISED -						SCALE: 1"=20'	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT # 60K23	ILLINOIS FED. AID PROJECT
	PLOT DATE = 10/12/2010	CHECKED - KLB	REVISED -										
		DATE - 10/12/2010	REVISED -										

GHA #4085.864



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	75.0
SIGNAL (GREEN)	12	135	15	0.25	45.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	-	100	1.00	100.00
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					431.6

ENERGY COSTS - BILLED TO: IDOT - DISTRICT 1  
 (ADDRESS) 201 W. CENTER COURT  
 (ADDRESS) SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT: -  
 PHONE: -  
 COMPANY: COM-ED

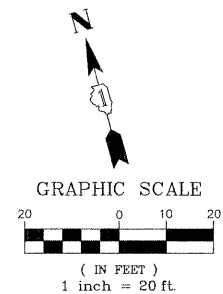
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

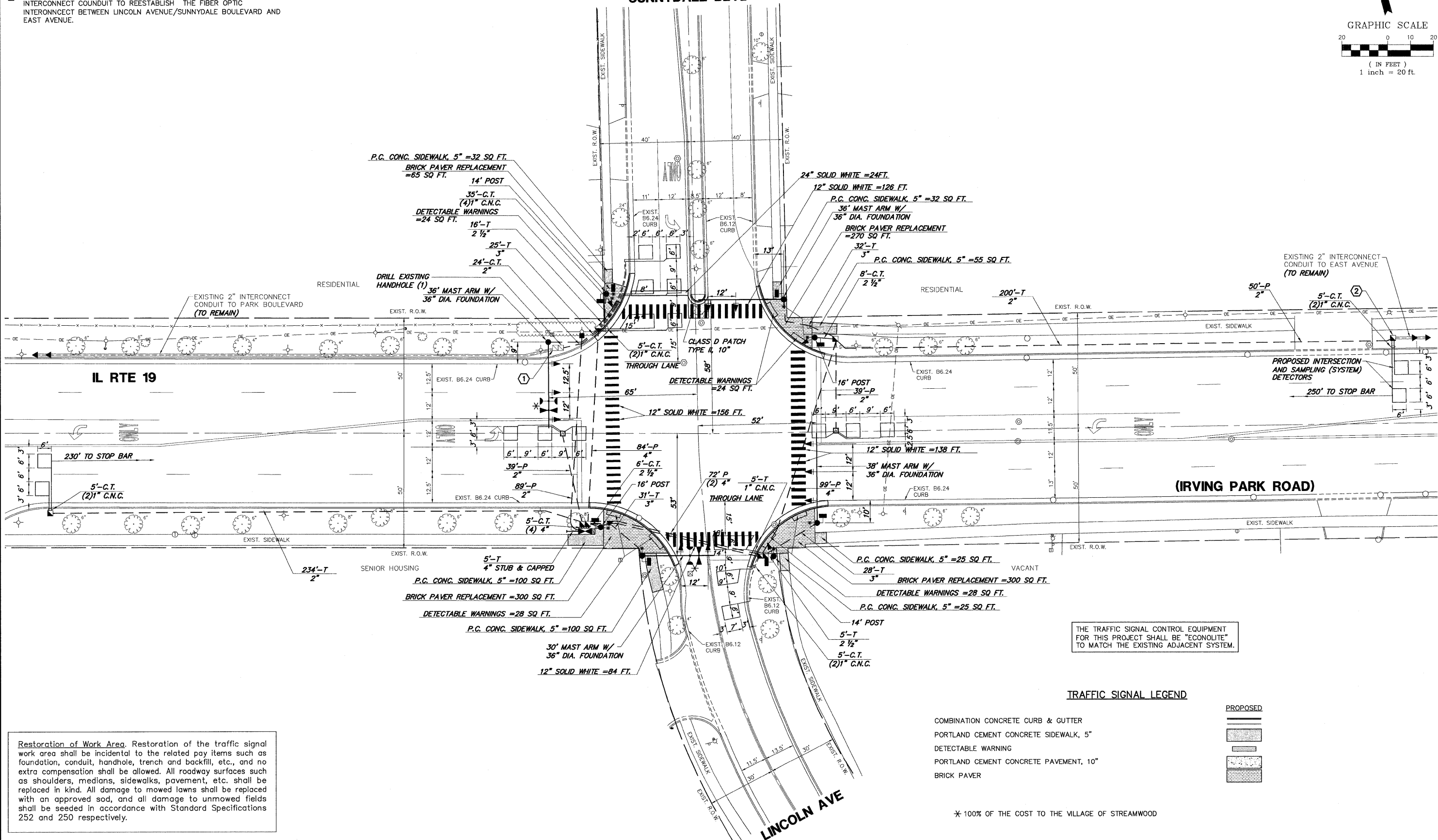
FILE NAME = 4085.862-866-CABLE.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
PLOT SCALE = 1" = .0833'	DATE = 10/12/2010	DRAWN - ZCW	REVISED -
		CHECKED - KLB	REVISED -
		DATE = 10/12/2010	REVISED -

**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL DRILL INTO THE EXISTING DOUBLE HANDHOLE AND INSTALL A 2" INTERCONNECT CONDUIT TO THE NEW INTERSECTION HANDHOLE.
- ② THE CONTRACTOR SHALL BUILD THE NEW HANDHOLE OVER THE EXISTING INTERCONNECT CONDUIT TO REESTABLISH THE FIBER OPTIC INTERCONNECT BETWEEN LINCOLN AVENUE/SUNNYDALE BOULEVARD AND EAST AVENUE.



**SUNNYDALE BLVD**



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TRAFFIC SIGNAL LEGEND**

- COMBINATION CONCRETE CURB & GUTTER
- PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- DETECTABLE WARNING
- PORTLAND CEMENT CONCRETE PAVEMENT, 10"
- BRICK PAVER

\* 100% OF THE COST TO THE VILLAGE OF STREAMWOOD

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

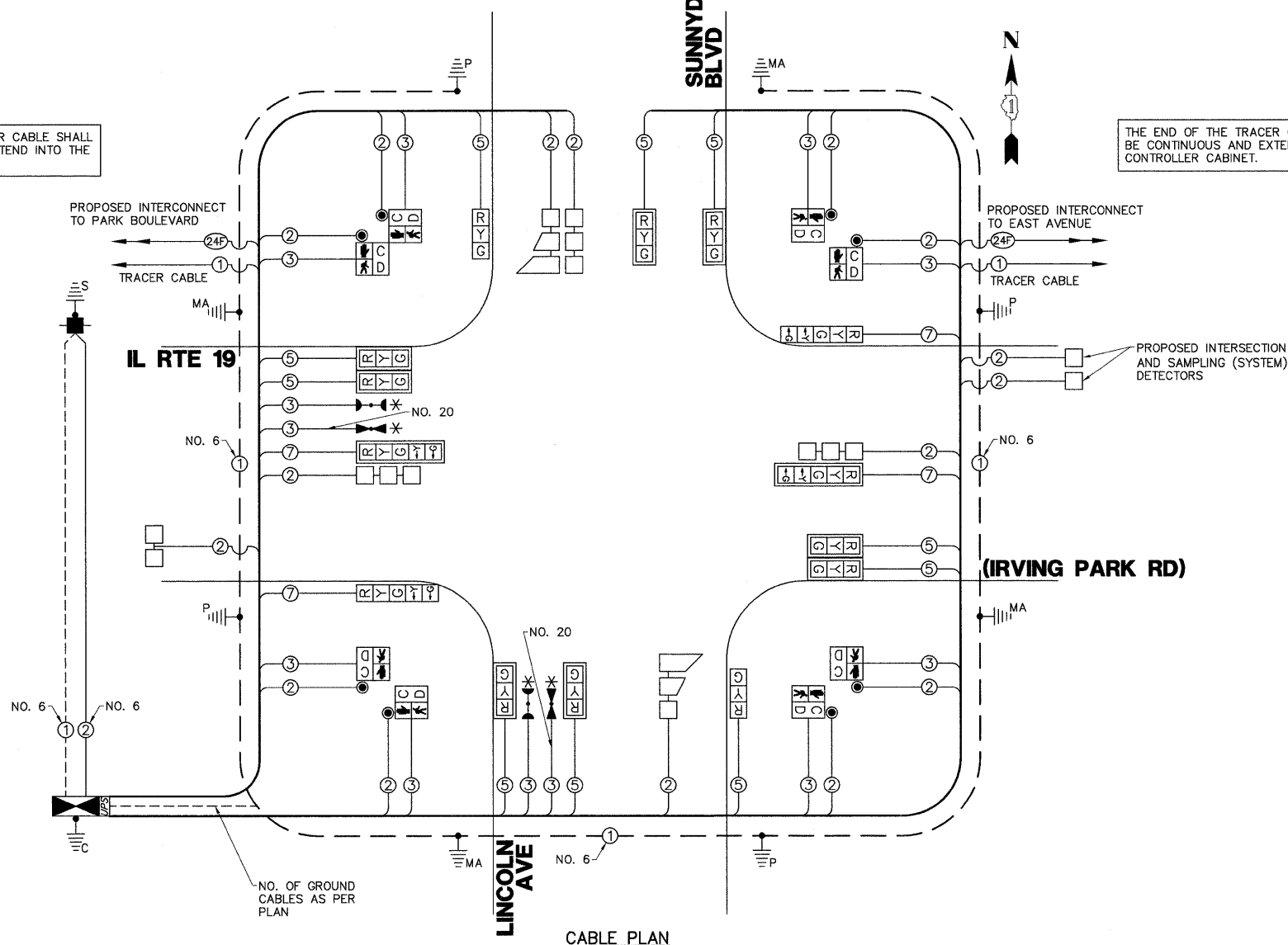
FILE NAME = 4085.864-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL MODERNIZATION PLAN IL RTE 19 (IRVING PARK RD) AT LINCOLN AVE/SUNNYDALE BLVD</b>			FAP RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 19
PLOT SCALE = 1" = .0833'	CHECKED - KLB	DATE - 10/12/2010	REVISED -		SCALE 1"=20'	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT #: 60K23		
										ILLINOIS FED. AID PROJECT		
										GHA #4085.864		

**SCHEDULE OF QUANTITIES**

IL ROUTE 19 (IRVING PARK ROAD) AT LINCOLN AVENUE/SUNNYDALE BOULEVARD

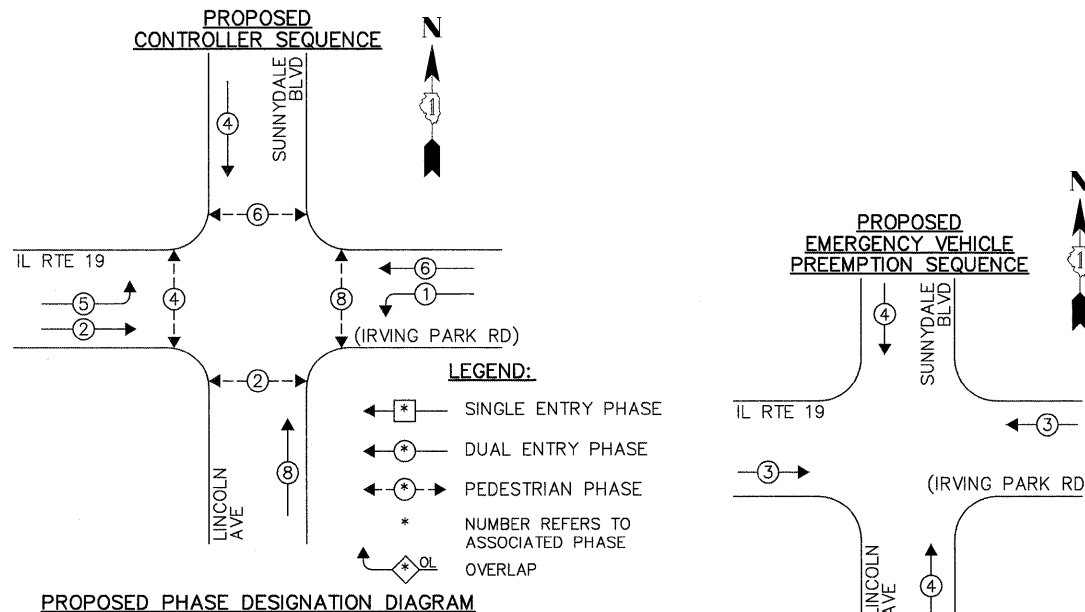
NO.	QUANT.	UNIT
1.	6	CU YD EARTH EXCAVATION
2.	10	SQ YD SUB-BASE GRANULAR MATERIAL, TYPE B 4"
3.	10	TON HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70
4.	5	GAL BITUMINOUS MATERIALS (PRIME COAT)
5.	385	SQ FT PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
6.	104	SQ FT DETECTABLE WARNINGS
7.	440	SQ FT SIDEWALK REMOVAL
8.	210	FOOT COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT
9.	90	SQ FT MEDIAN REMOVAL
10.	10	SQ YD CLASS D PATCHES, TYPE II, 12 INCH
11.	2.00	CAL MO ENGINEER'S FIELD OFFICE, TYPE A
12.	0.30	L SUM MOBILIZATION
13.	0.30	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
14.	0.30	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
15.	0.30	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
16.	0.30	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
17.	15.00	SQ FT SIGN PANEL - TYPE 1
18.	55.00	SQ FT SIGN PANEL - TYPE 2
19.	504	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 12"
20.	24	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 24"
21.	600	SQ FT THERMOPLASTIC PAVEMENT MARKING REMOVAL
22.	458	FOOT CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
23.	35	FOOT CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
24.	116	FOOT CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
25.	25	FOOT CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
26.	214	FOOT CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
27.	327	FOOT CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
28.	4	EACH HANDHOLE
29.	2	EACH HEAVY-DUTY HANDHOLE
30.	2	EACH DOUBLE HANDHOLE
31.	581	FOOT TRENCH AND BACKFILL FOR ELECTRICAL WORK
32.	1	EACH FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
33.	1	EACH TRANSCIVER - FIBER OPTIC
34.	1,110	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
35.	1,475	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
36.	1,793	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
37.	622	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
38.	1,864	FOOT ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
39.	111	FOOT ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
40.	2	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
41.	2	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
42.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.
43.	2	EACH STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.
44.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.
45.	16	FOOT CONCRETE FOUNDATION, TYPE A
46.	4	FOOT CONCRETE FOUNDATION, TYPE C
47.	44	FOOT CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
48.	1	EACH DRILL EXISTING HANDHOLE
49.	8	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
50.	2	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
51.	2	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
52.	2	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
53.	6	EACH PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
54.	1	EACH PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
55.	10	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
57.	7	EACH INDUCTIVE LOOP DETECTOR
58.	681	FOOT DETECTOR LOOP, TYPE I
*59.	2	EACH LIGHT DETECTOR
*60.	1	EACH LIGHT DETECTOR AMPLIFIER
61.	8	EACH PEDESTRIAN PUSH-BUTTON
62.	1	EACH TEMPORARY TRAFFIC SIGNAL INSTALLATION
63.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
64.	7	EACH REMOVE EXISTING HANDHOLE
65.	9	EACH REMOVE EXISTING CONCRETE FOUNDATION
*66.	4	EACH PAINT NEW MAST ARM POLE, UNDER 40 FEET
*67.	4	EACH PAINT NEW SIGNAL POST
68.	1	EACH TEMPORARY TRAFFIC SIGNAL TIMING
69.	1	EACH SERVICE INSTALLATION - POLE MOUNTED
70.	1	EACH UNINTERRUPTIBLE POWER SUPPLY
71.	600	FOOT ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
*72.	485	FOOT ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
73.	435	SQ FT BRICK PAVER REMOVAL AND REPLACEMENT

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



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

**PROPOSED CONTROLLER SEQUENCE**



**PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE**

PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	—

\* 100% OF COST TO THE VILLAGE OF STREAMWOOD

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO.	LAMPS	INCAND.	WATTAGE	
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	35.0
SIGNAL (GREEN)	14	135	15	0.25	84.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	—	100	1.00	100.0
LUMINAIRE	—	—	250	0.50	—
L.E.D. ST. NAME SIGN	—	—	64	0.50	—
VIDEO SYSTEM	—	—	150	1.00	—
BATTERY BACKUP	1	—	25	1.00	25.0
ILLUMINATED SIGN	—	—	25	0.05	—
TOTAL =					472.6

FILE NAME = 4085.862-866-CABLE.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
		DRAWN - ZCW	REVISED -
		CHECKED - KLB	REVISED -
		DATE - 10/12/2010	REVISED -

<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, &amp; EMERGENCY VEHICLE PREEMPTION SEQUENCE</b>				FAP RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 20
IL RTE 19 (IRVING PARK RD) AT LINCOLN AVE/SUNNYDALE BLVD				SCALE N.A. SHEET NO. OF SHEETS STA TO STA				CONTRACT #: 60K23				

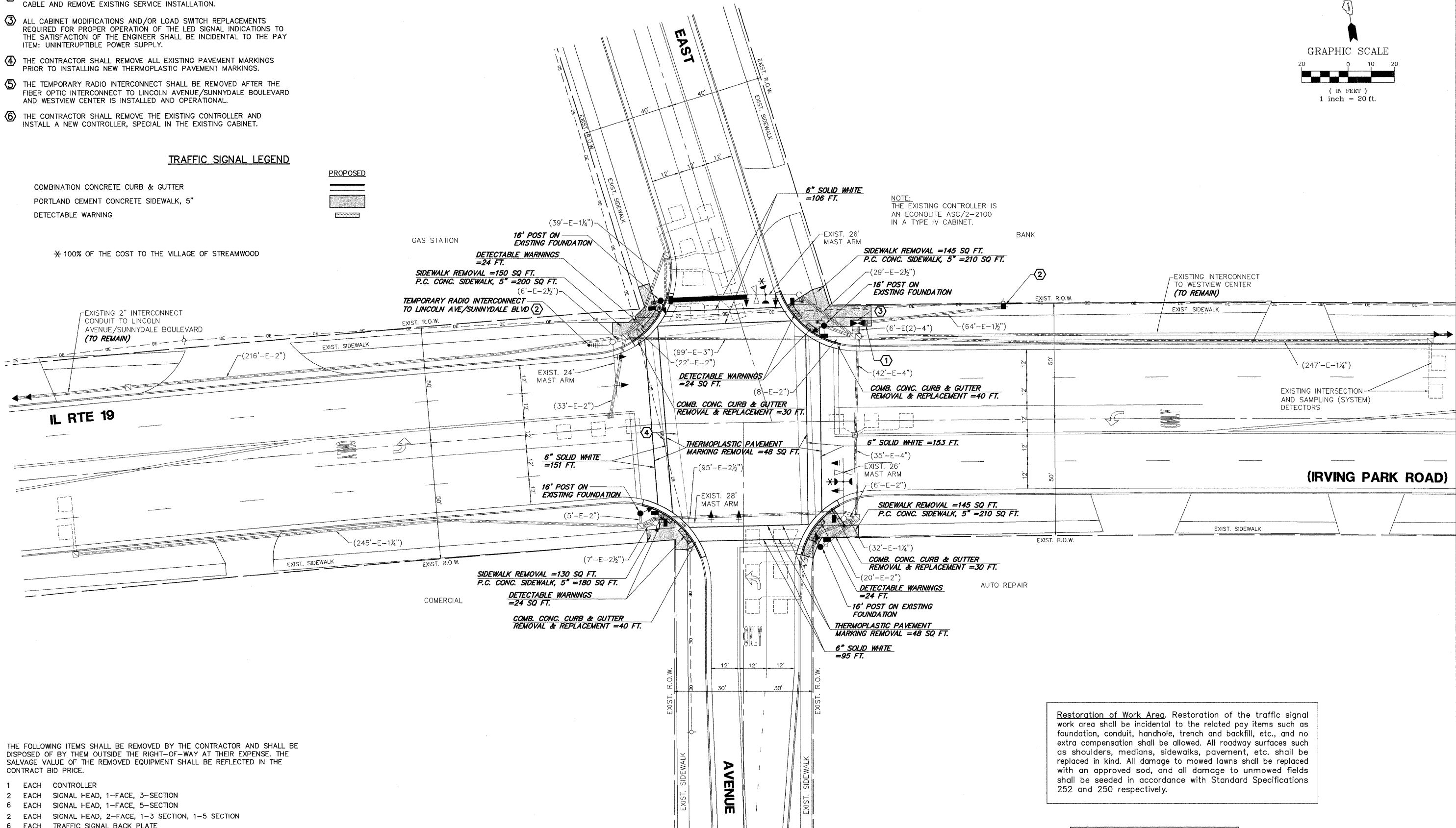
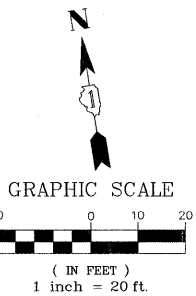
GHA #4085.864

**CONSTRUCTION NOTES:**

- ① INSTALL UNINTERRUPTIBLE POWER SUPPLY UNIT.
- ② INSTALL NEW SERVICE INSTALLATION, SERVICE CABLE, AND GROUND CABLE AND REMOVE EXISTING SERVICE INSTALLATION.
- ③ ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF THE LED SIGNAL INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM: UNINTERRUPTIBLE POWER SUPPLY.
- ④ THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS PRIOR TO INSTALLING NEW THERMOPLASTIC PAVEMENT MARKINGS.
- ⑤ THE TEMPORARY RADIO INTERCONNECT SHALL BE REMOVED AFTER THE FIBER OPTIC INTERCONNECT TO LINCOLN AVENUE/SUNNYDALE BOULEVARD AND WESTVIEW CENTER IS INSTALLED AND OPERATIONAL.
- ⑥ THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND INSTALL A NEW CONTROLLER, SPECIAL IN THE EXISTING CABINET.

**TRAFFIC SIGNAL LEGEND**

- COMBINATION CONCRETE CURB & GUTTER
- PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- DETECTABLE WARNING



\* 100% OF THE COST TO THE VILLAGE OF STREAMWOOD

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

- 1 EACH CONTROLLER
- 2 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 6 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 2 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
- 6 EACH TRAFFIC SIGNAL BACK PLATE
- 4 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 7 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

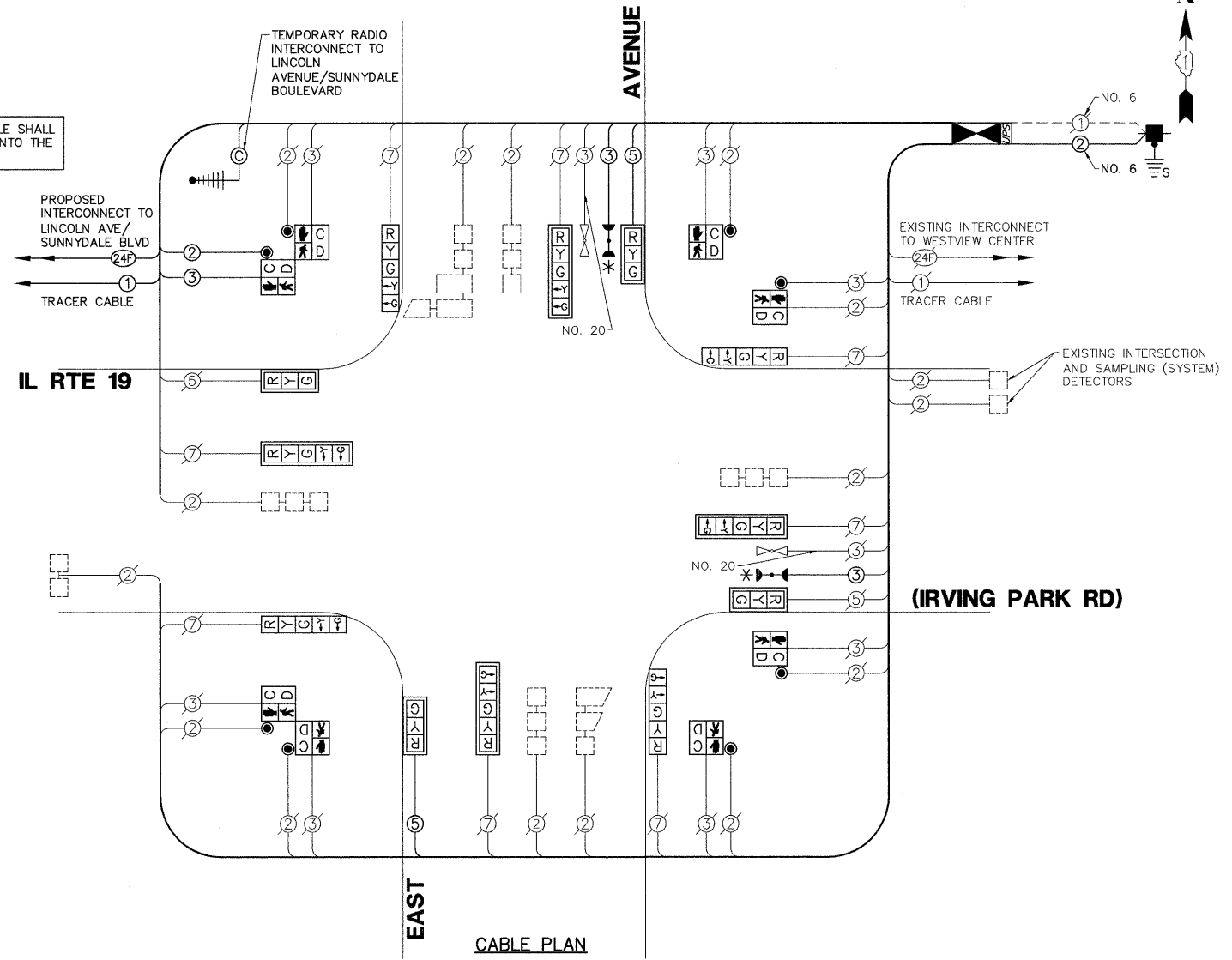
FILE NAME = 4085.865-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL MODERNIZATION PLAN IL ROUTE 19 (IRVING PARK ROAD) AT EAST AVENUE</b>			FAP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1" = .08'	DRAWN - ZCW	REVISED -		SCALE 1"=20'	SHEET NO.	OF SHEETS	STA.	TO STA.	COOK	32	21
	PLOT DATE = 10/12/2010	CHECKED - KLB	REVISED -							CONTRACT #:	60K23	
		DATE - 10/12/2010	REVISED -							ILLINOIS FED. AID PROJECT		

GHA #4085.865

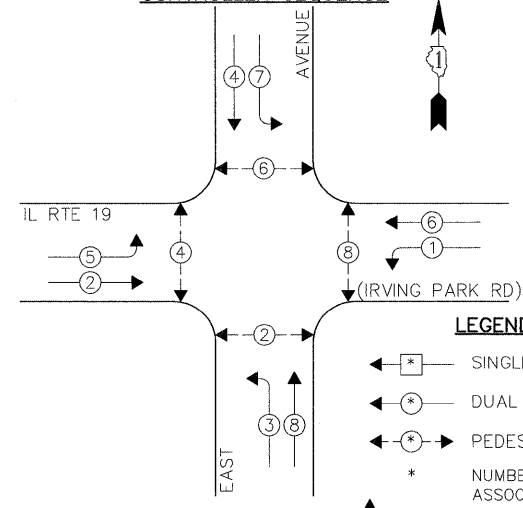
**SCHEDULE OF QUANTITIES**  
IL ROUTE 19 (IRVING PARK ROAD) AT EAST AVENUE

NO.	QUANT.	UNIT	DESCRIPTION
1.	4	CU YD	EARTH EXCAVATION
2.	10	SQ YD	SUB-BASE GRANULAR MATERIAL, TYPE B 4"
3.	990	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
4.	96	SQ FT	DETECTABLE WARNINGS
5.	630	SQ FT	SIDEWALK REMOVAL
6.	140	FOOT	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT
7.	0.25	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
8.	0.10	L SUM	MOBILIZATION
9.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
10.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
11.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
12.	0.10	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
13.	510	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 6"
14.	265	SQ FT	THERMOPLASTIC PAVEMENT MARKING REMOVAL
15.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
16.	1	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL
17.	1	EACH	TRANSCEIVER - FIBER OPTIC
18.	157	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
19.	437	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
20.	86	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
21.	4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
22.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
23.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
24.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
25.	4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
26.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
27.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
28.	9	EACH	INDUCTIVE LOOP DETECTOR
29.	8	EACH	PEDESTRIAN PUSH-BUTTON
30.	222	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
31.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
*32.	2	EACH	CONFIRMATION BEACON
33.	1	EACH	REMOVE EXISTING SERVICE INSTALLATION
34.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
35.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY
36.	73	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C

\* 100% OF COST TO THE VILLAGE OF STREAMWOOD

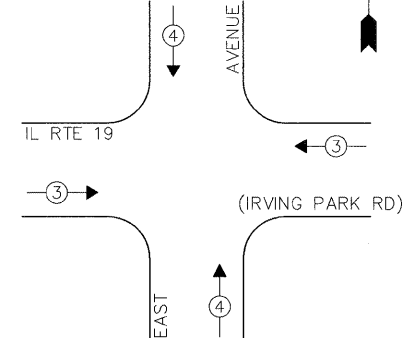


**EXISTING AND PROPOSED CONTROLLER SEQUENCE**



- LEGEND:**
- ◀ \* → SINGLE ENTRY PHASE
  - ◀ \* → DUAL ENTRY PHASE
  - ◀ \* → PEDESTRIAN PHASE
  - \* NUMBER REFERS TO ASSOCIATED PHASE
  - ◀ \* → OVERLAP

**EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM**

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO.	LAMPS	INCAND. L.E.D.	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	30.0
SIGNAL (GREEN)	12	135	15	0.25	72.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	100.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					613.6

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

ENERGY COSTS - BILLED TO: IDOT - DISTRICT 1  
(ADDRESS) 201 W. CENTER COURT  
(ADDRESS) SCHAUMBURG, IL 60196-1096  
ENERGY SUPPLY - CONTACT: -  
PHONE: -  
COMPANY: COM-ED

FILE NAME =	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
4085.862-866-CABLE.dwg		DRAWN - ZCW	REVISED -
	PLOT SCALE = 1" = .0833'	CHECKED - KLB	REVISED -
	PLOT DATE = 10/12/2010	DATE - 10/12/2010	REVISED -

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

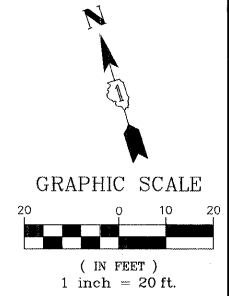
**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE**  
**IL ROUTE 19 (IRVING PARK ROAD) AT EAST AVENUE**

FAP. RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 22
CONTRACT # 60K23			GHA #4085.865	

EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	←	↑	

**CONSTRUCTION NOTES:**

- ① INSTALL UNINTERRUPTIBLE POWER SUPPLY UNIT.
- ② ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF THE LED SIGNAL INDICATORS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM: UNINTERRUPTIBLE POWER SUPPLY.
- ③ ALL EXISTING CONFIRMATION BEACONS SHALL BE RETROFITTED WITH LED INDICATORS. THIS WORK SHALL BE INCIDENTAL TO THE PAY ITEM: UNINTERRUPTIBLE POWER SUPPLY.



**TRAFFIC SIGNAL LEGEND**

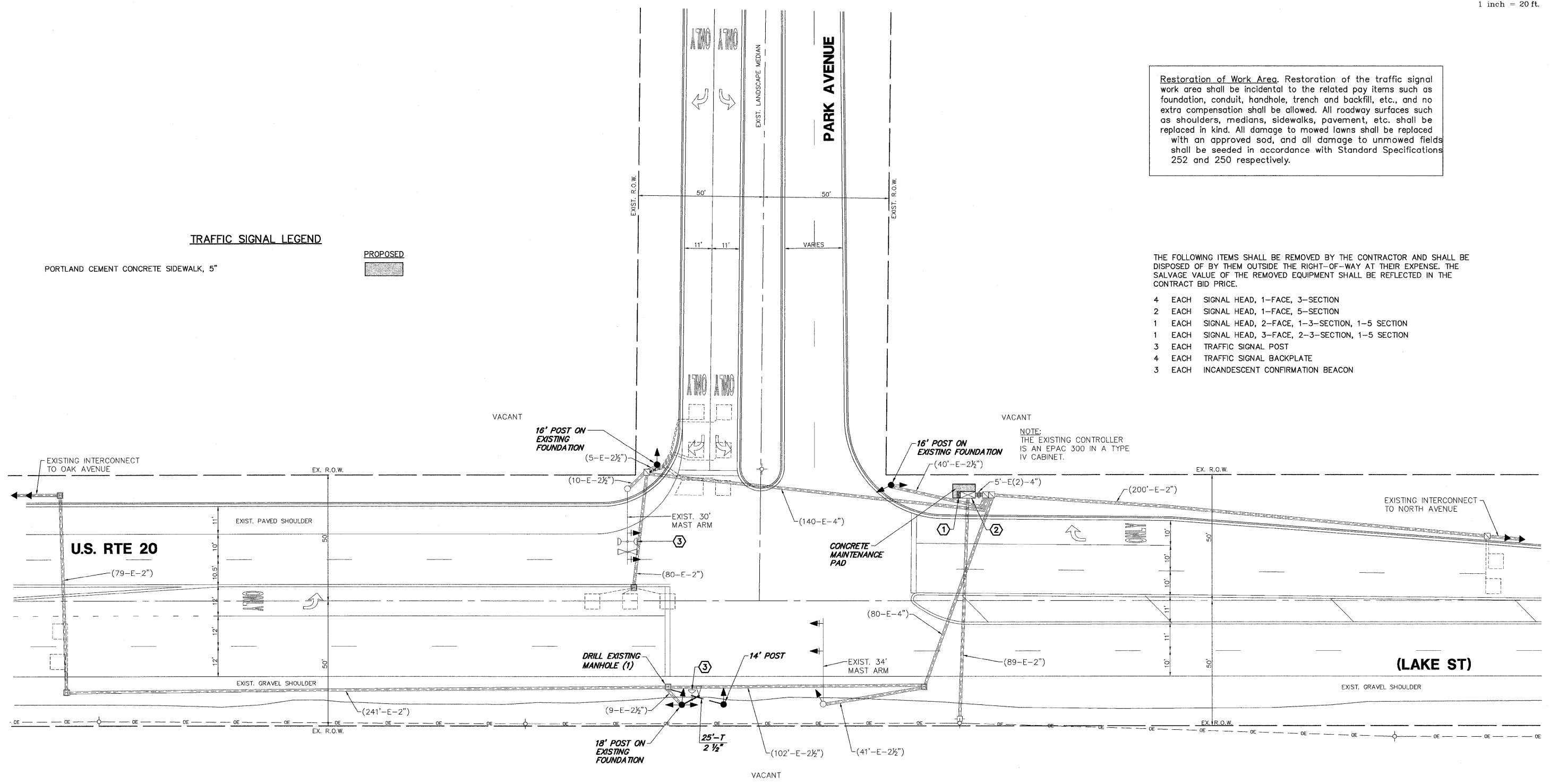
PORTLAND CEMENT CONCRETE SIDEWALK, 5"

PROPOSED



**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

FILE NAME =	4085.866-TR1.dwg
USER NAME =	ZACH WALLSTEN
DESIGNED -	JRD
DRAWN -	ZCW
CHECKED -	KLB
DATE -	10/12/2010

REVISD -	
REVISD -	
REVISD -	
REVISD -	

STATE OF ILLINOIS	TRAFFIC SIGNAL MODERNIZATION PLAN
DEPARTMENT OF TRANSPORTATION	U.S. RTE 20 (LAKE ST) AT PARK AVENUE

SCALE: 1"=20'	SHEET NO. OF SHEETS	STA. TO STA.
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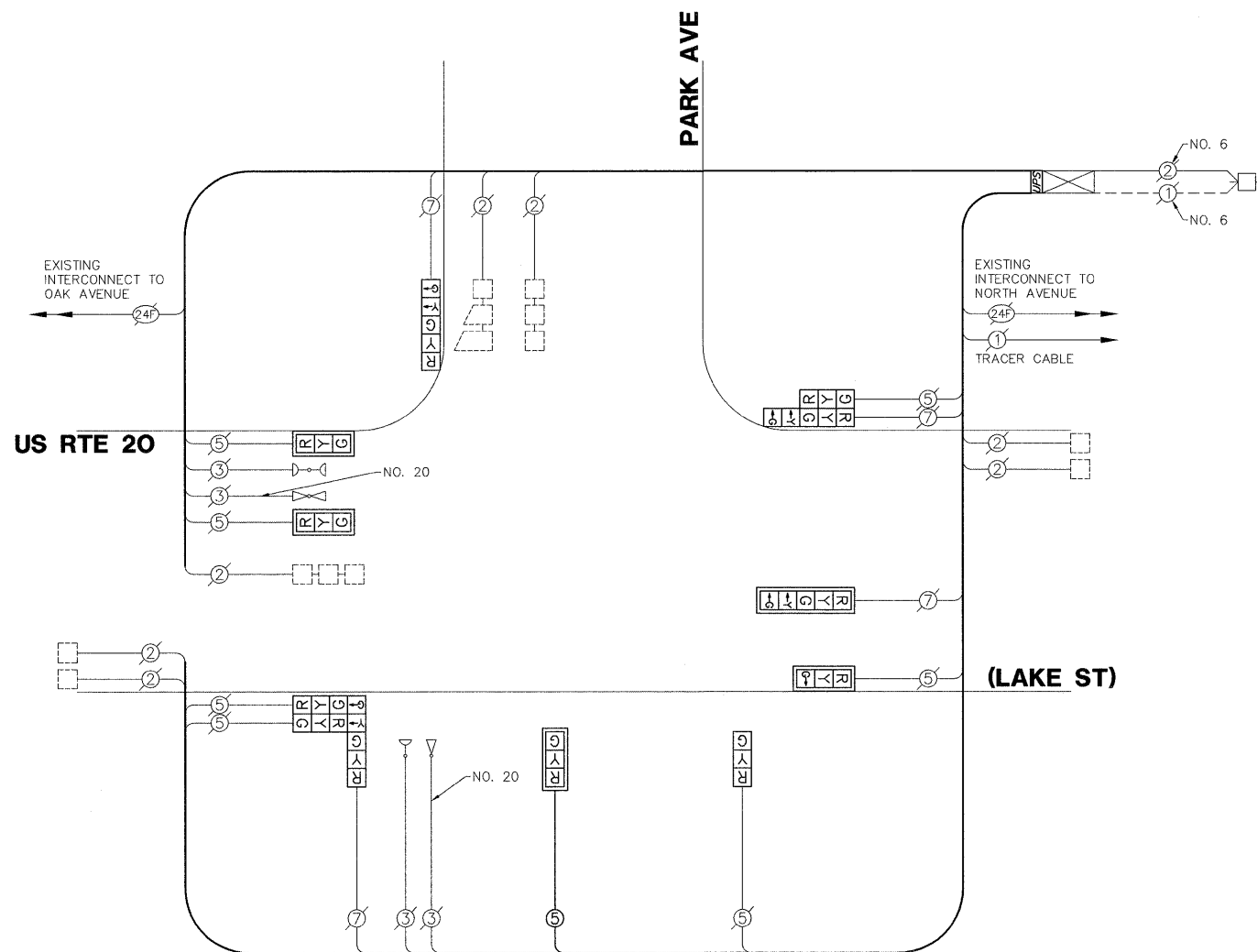
F&P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2010-005TS	COOK	32	23
CONTRACT #:			60K23	

GHA #4085.866				
ILLINOIS FED. AID PROJECT				

**SCHEDULE OF QUANTITIES**  
U.S. ROUTE 20 AT PARK AVENUE

NO.	QUANT.	UNIT
1.	0.25	CAL MO ENGINEER'S FIELD OFFICE, TYPE A
2.	0.10	L SUM MOBILIZATION
3.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
4.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
5.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
6.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
7.	25	FOOT CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
8.	25	FOOT TRENCH AND BACKFILL FOR ELECTRICAL WORK
9.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
10.	259	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
11.	1	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
12.	2	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
13.	1	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
14.	4	FOOT CONCRETE FOUNDATION, TYPE A
15.	1	EACH DRILL EXISTING HANDHOLE
16.	3	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
17.	2	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
18.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
19.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
20.	1	EACH SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
21.	1	EACH SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
22.	4	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
*23.	1	EACH RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
24.	1	EACH UNINTERRUPTIBLE POWER SUPPLY

\* 100% OF COST TO THE VILLAGE OF STREAMWOOD



**CABLE PLAN**

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	11	135	17	0.50	93.5
SIGNAL (YELLOW)	11	135	25	0.25	27.5
SIGNAL (GREEN)	11	135	15	0.25	66.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
<b>TOTAL =</b>					<b>321.6</b>

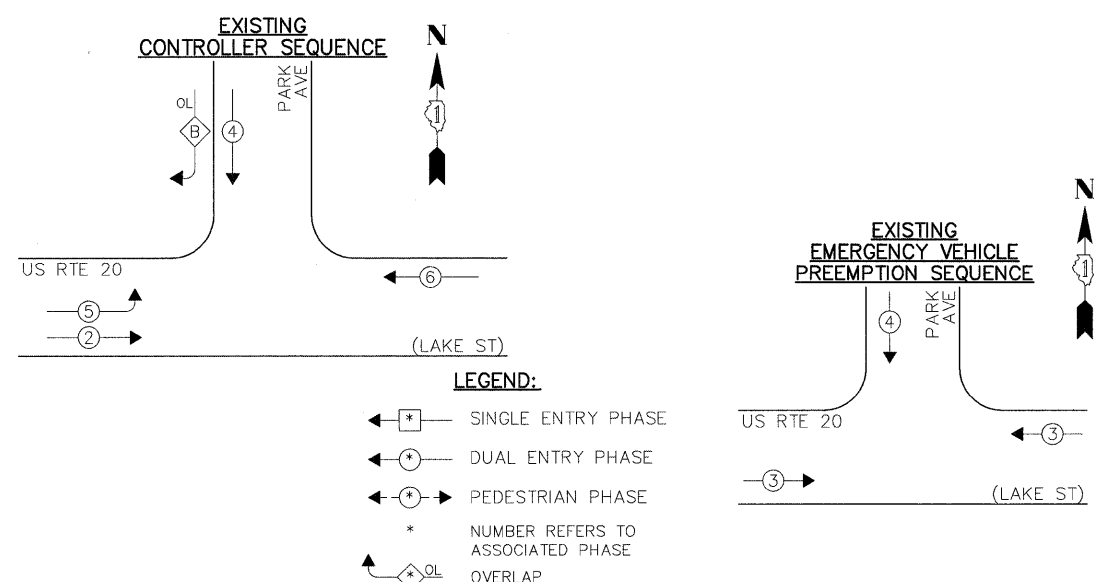
ENERGY COSTS - BILLED TO: IDOT - DISTRICT 1  
(ADDRESS) 201 W. CENTER COURT  
(ADDRESS) SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT: -  
PHONE: -  
COMPANY: COM-ED

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

**Restoration of Work Area.** Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

$$\text{OVERLAP LETTER B} = \frac{\text{PERMISSIVE PHASE}}{4} + \frac{\text{PROTECTED PHASE}}{5}$$

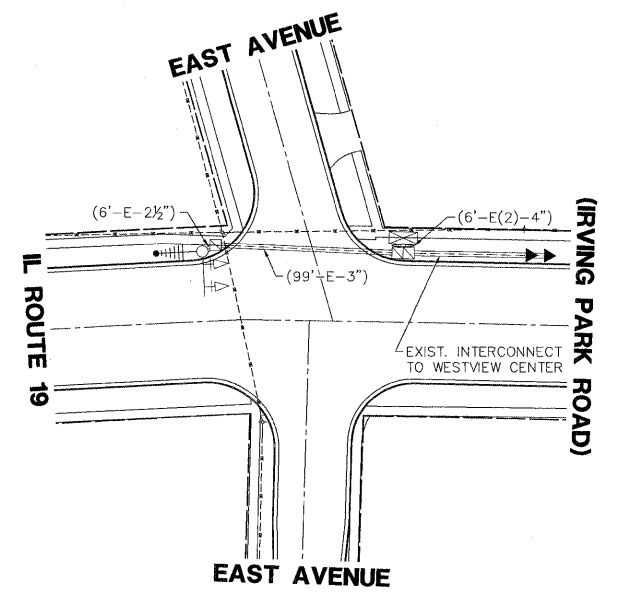
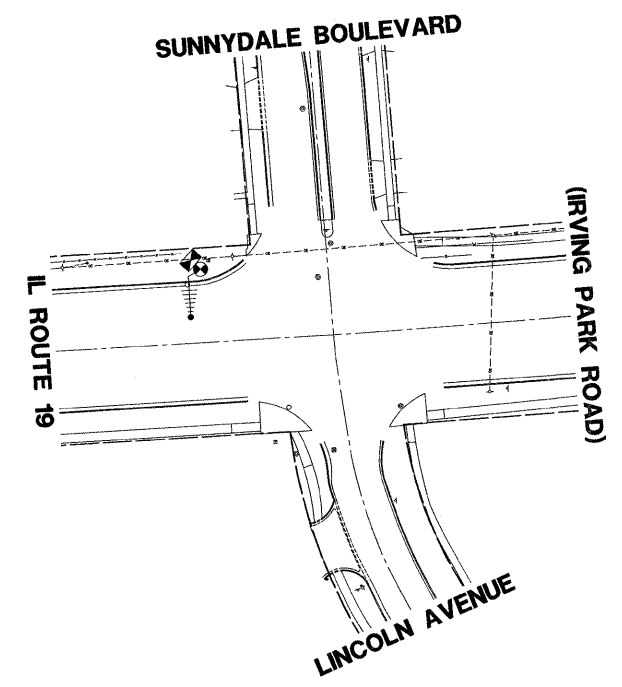
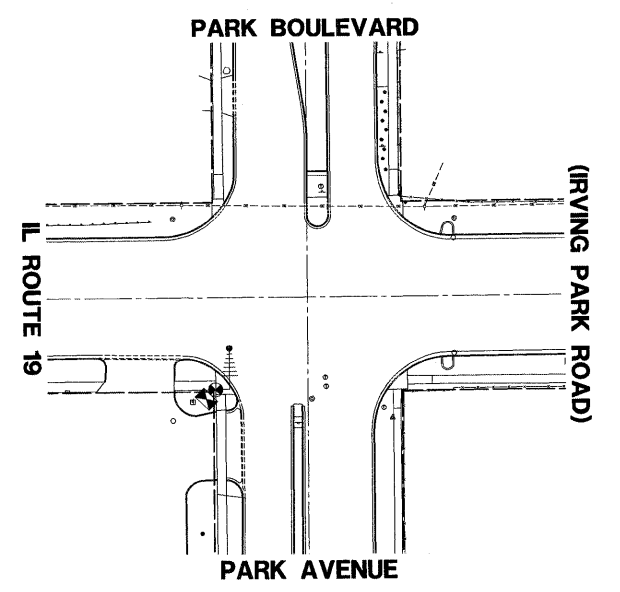
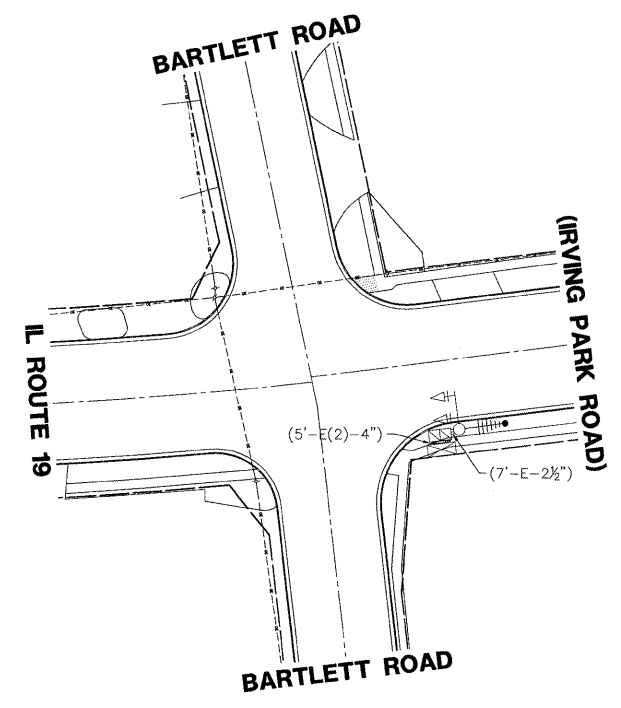
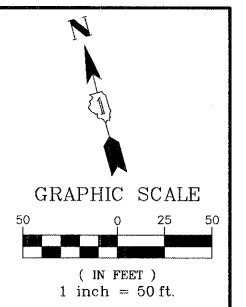


**EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM**

EXISTING EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	← →



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

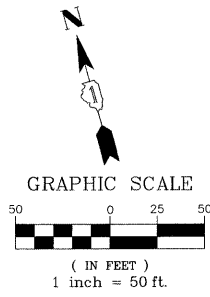
**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL INSTALL A TEMPORARY RADIO INTERCONNECT SYSTEM TO MAINTAIN THE EXISTING INTERCONNECT BETWEEN BARTLETT ROAD AND EAST AVENUE ALONG IL ROUTE 19 (IRVING PARK ROAD) DURING CONSTRUCTION. THE COST OF THE TEMPORARY RADIO INTERCONNECT SHALL BE INCIDENTAL TO THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

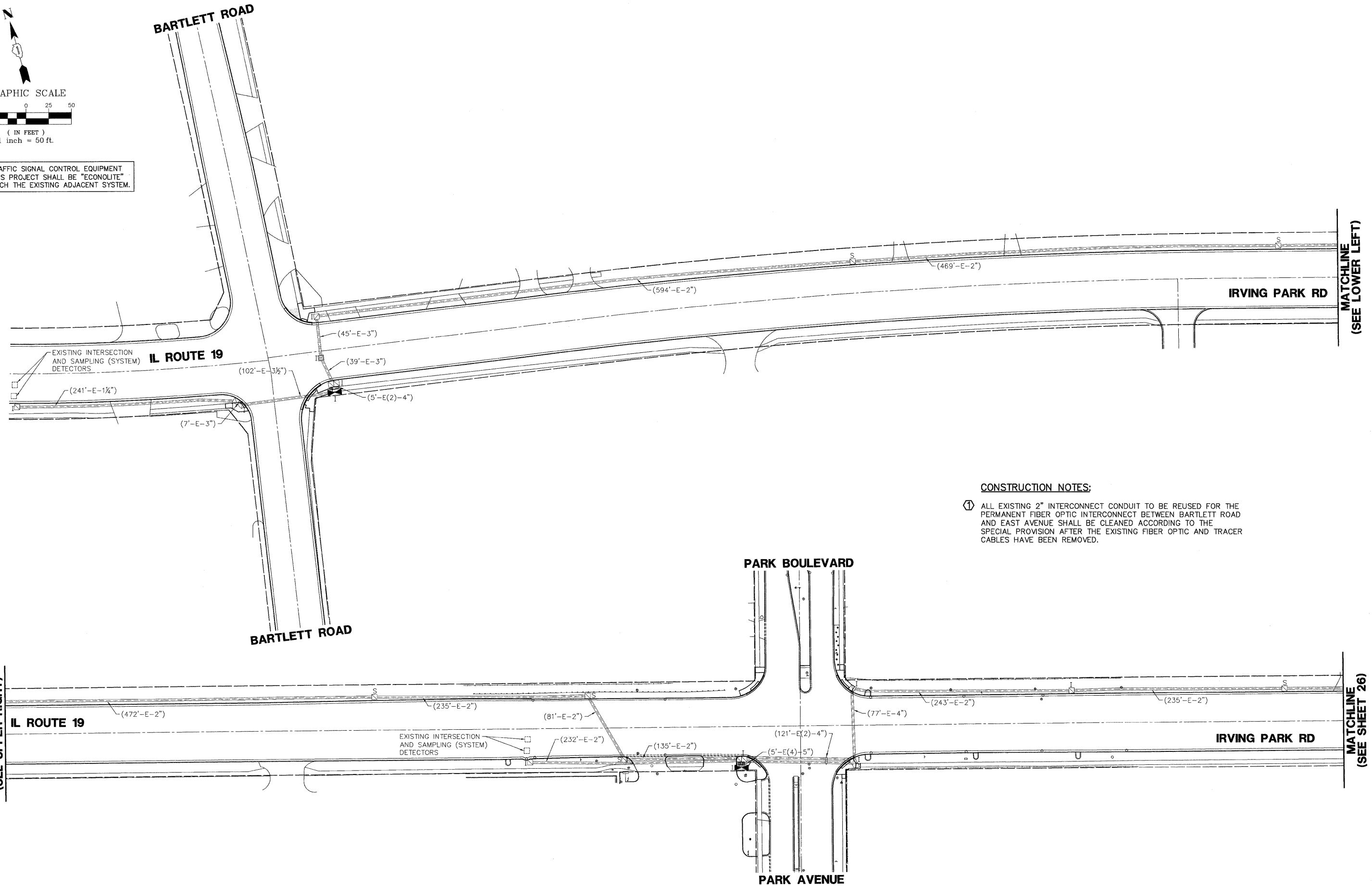
FILE NAME = 4085.862-866-INTERCONNECT.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY RADIO INTERCONNECT PLAN AND SCHEMATIC IL RTE 19 (IRVING PARK RD) - FROM BARTLETT RD TO EAST AV</b>	FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 1" = .0833'	DRAWN - ZCW	REVISED -			VARIES	2010-005TS	COOK	32	25	
	PLOT DATE = 10/12/2010	CHECKED - KLB	REVISED -			SCALE N.A.		SHEET NO. OF SHEETS		STA. TO STA.	CONTRACT #:
		DATE - 10/12/2010	REVISED -								60K23

GHA #4085.862-866

ILLINOIS FED. AID PROJECT



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



**CONSTRUCTION NOTES:**

- ① ALL EXISTING 2" INTERCONNECT CONDUIT TO BE REUSED FOR THE PERMANENT FIBER OPTIC INTERCONNECT BETWEEN BARTLETT ROAD AND EAST AVENUE SHALL BE CLEANED ACCORDING TO THE SPECIAL PROVISION AFTER THE EXISTING FIBER OPTIC AND TRACER CABLES HAVE BEEN REMOVED.

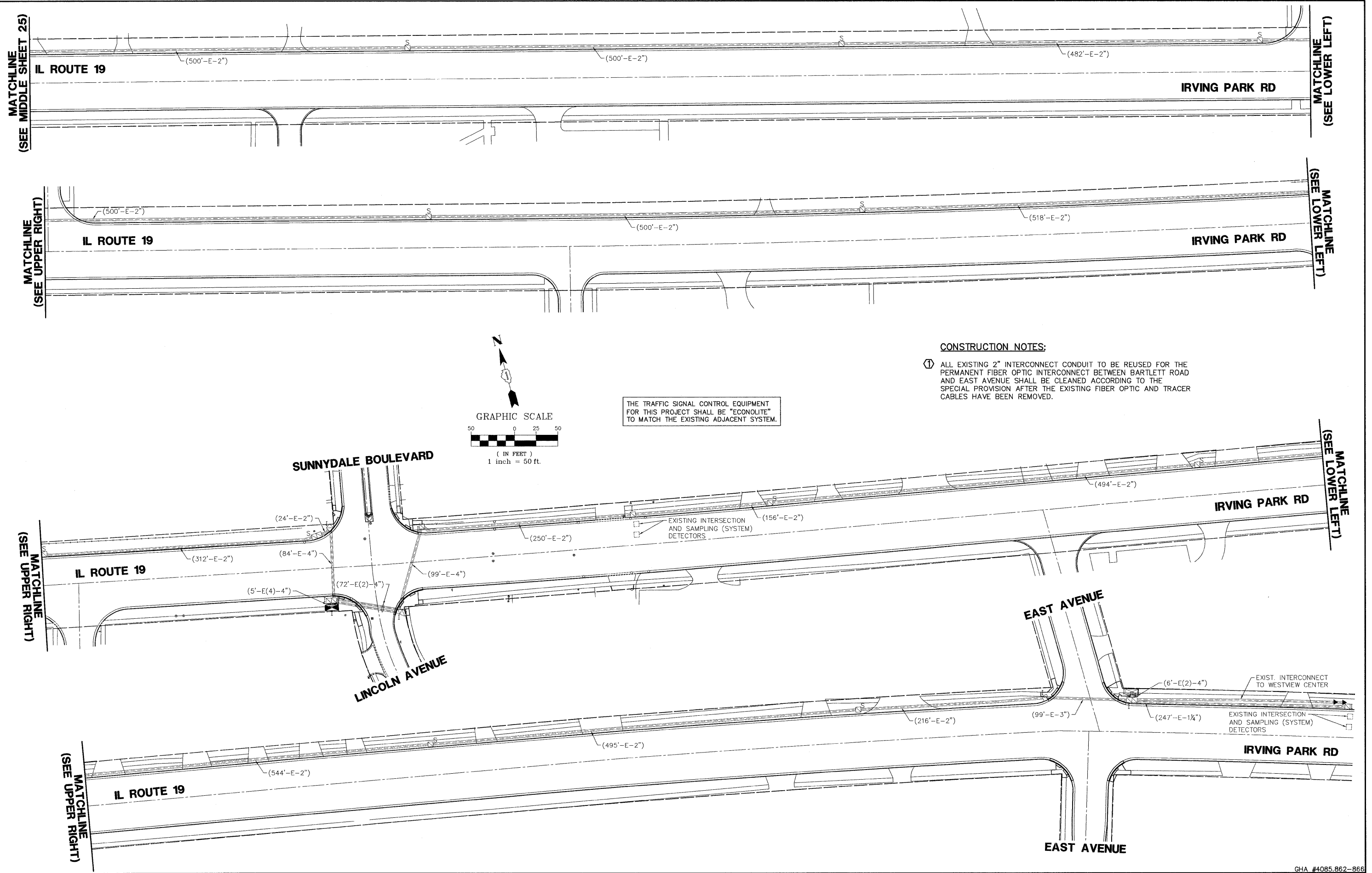
MATCHLINE (SEE UPPER RIGHT)

MATCHLINE (SEE SHEET 26)

FILE NAME = 4085.862-866-INTERCONNECT.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INTERCONNECT PLAN (SHEET 1 OF 2) IL RTE 19 (IRVING PARK RD) - FROM BARTLETT RD TO EAST AV</b>			FAP. RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 26
PLOT SCALE = 1" = .0833'	PLOT DATE = 10/12/2010	DRAWN - ZCW	REVISED -		SCALE 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT #:	60K23	
		CHECKED - KLB	REVISED -									
		DATE - 10/12/2010	REVISED -									

GHA #4085.862-866

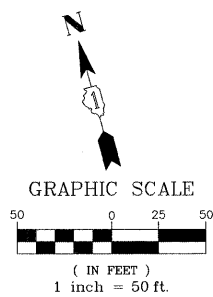
ILLINOIS FED. AID PROJECT



**CONSTRUCTION NOTES:**

1 ALL EXISTING 2" INTERCONNECT CONDUIT TO BE REUSED FOR THE PERMANENT FIBER OPTIC INTERCONNECT BETWEEN BARTLETT ROAD AND EAST AVENUE SHALL BE CLEANED ACCORDING TO THE SPECIAL PROVISION AFTER THE EXISTING FIBER OPTIC AND TRACER CABLES HAVE BEEN REMOVED.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



FILE NAME =	4085.862-866-INTERCONNECT.dwg
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USER NAME =	ZACH WALLSTEN
PLOT SCALE =	1" = .0833'
PLOT DATE =	10/12/2010

DESIGNED -	JRD
DRAWN -	ZCW
CHECKED -	KLB
DATE -	10/12/2010

REVISED -	
REVISED -	
REVISED -	
REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN (SHEET 2 OF 2)  
IL RTE 19 (IRVING PARK RD) - FROM BARTLETT RD TO EAST AV**

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

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2010-005TS	COOK	32	27
CONTRACT #:			60K23	
ILLINOIS FED. AID PROJECT				

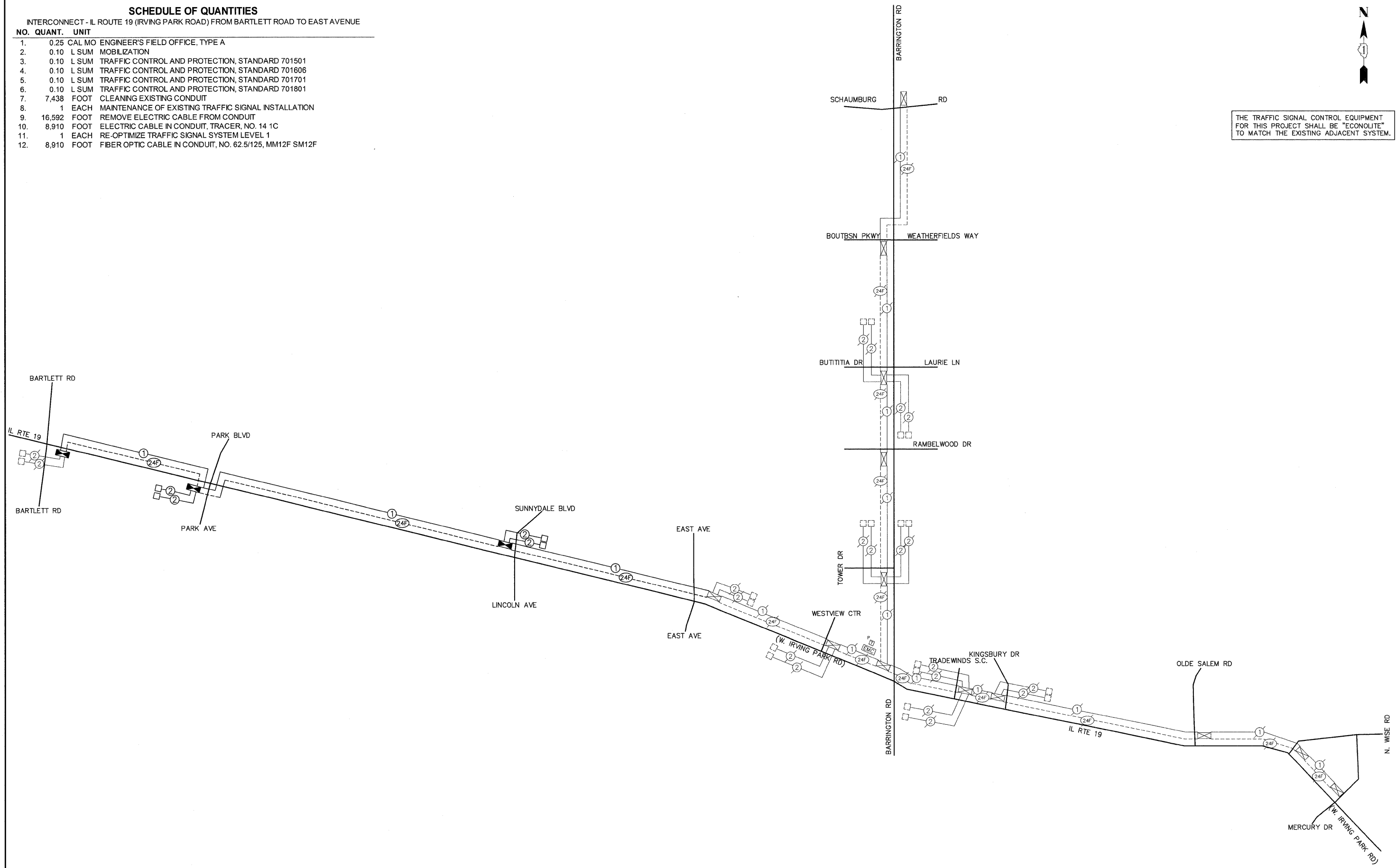
GHA #4085.862-866

**SCHEDULE OF QUANTITIES**

INTERCONNECT - IL ROUTE 19 (IRVING PARK ROAD) FROM BARTLETT ROAD TO EAST AVENUE

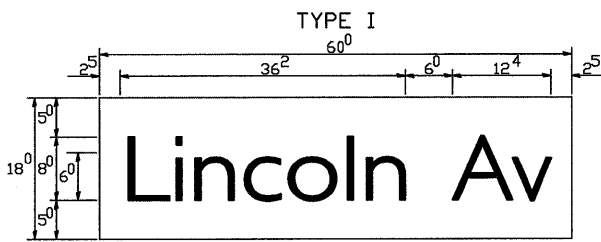
NO.	QUANT.	UNIT
1.	0.25	CAL MO ENGINEER'S FIELD OFFICE, TYPE A
2.	0.10	L SUM MOBILIZATION
3.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
4.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
5.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
6.	0.10	L SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
7.	7,438	FOOT CLEANING EXISTING CONDUIT
8.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
9.	16,592	FOOT REMOVE ELECTRIC CABLE FROM CONDUIT
10.	8,910	FOOT ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
11.	1	EACH RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1
12.	8,910	FOOT FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

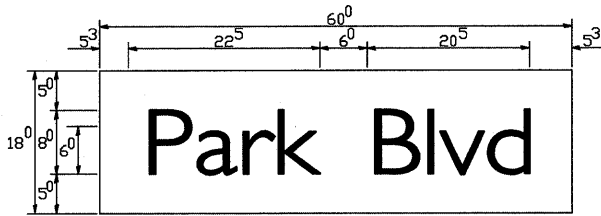


FILE NAME = 4085.862-866-INTERCONNECT.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SCHEDULE OF QUANTITIES &amp; INTERCONNECT SCHEMATIC IL ROUTE 19 (IRVING PARK ROAD) &amp; BARRINGTON ROAD</b>	FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 1" = .0833'	CHECKED - KLB	REVISED -	VARIES			2010-005TS	COOK	32	28		
PLOT DATE = 10/12/2010	DATE - 10/12/2010	REVISED -	SCALE N.A.			SHEET NO. OF SHEETS		STA. TO STA.		CONTRACT #:	
								ILLINOIS FED. AID PROJECT		60K23	

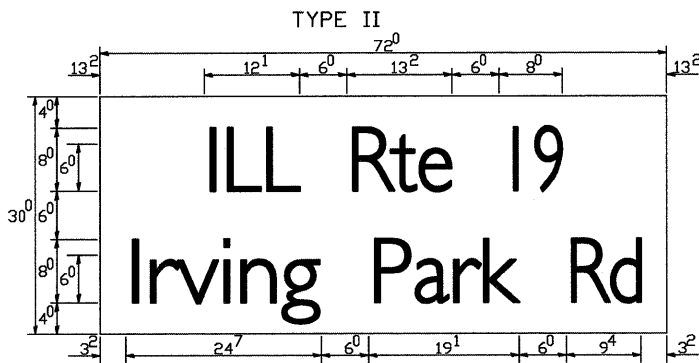
GHA #4085.862-866



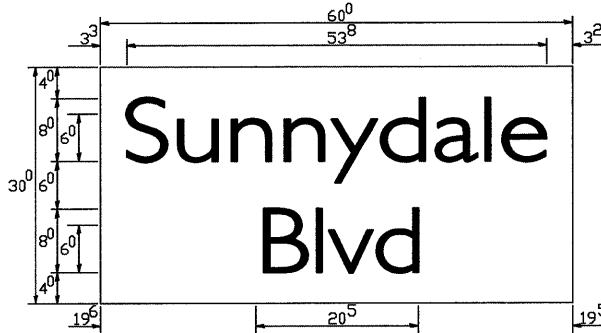
Sq. M. each  
7.5 Sq. Ft. each  
2 Required  
Design Series D



Sq. M. each  
7.5 Sq. Ft. each  
2 Required  
Design Series D

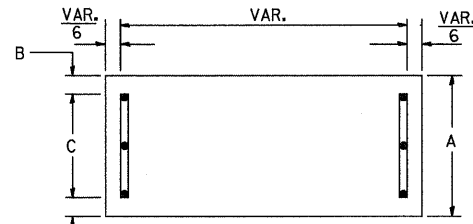


Sq. M. each  
15.0 Sq. Ft. each  
4 Required  
Design Series C

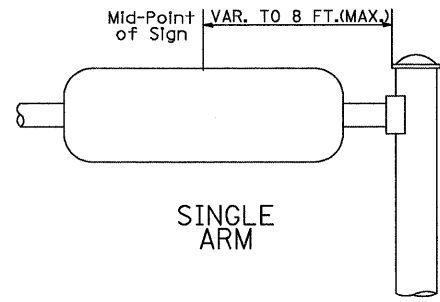


Sq. M. each  
12.5 Sq. Ft. each  
2 Required  
Design Series D

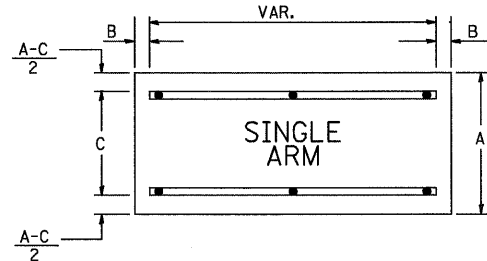
SUPPORTING CHANNELS



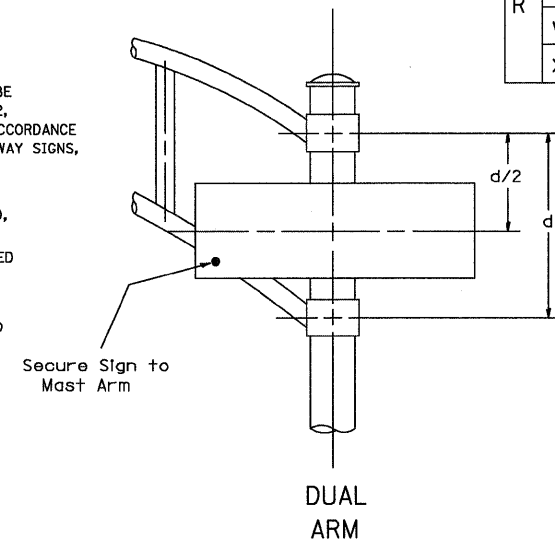
A	B	C
18"	2"	14"



SUPPORTING CHANNELS



A	B	C
18"	2"	12"
30"	2"	22"



SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM shall be used. See Note #5.

Upper Case To Lower Case Spacing Chart 8-6 Inch Series "C & D"

SERIES	SECOND LETTER															
	acde		bhikl		f w		J		s t		v y		x		z	
	g	o	q	m	n	p	r	u	C	D	C	D	C	D	C	D
A W X	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>4</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>
B	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>
C E G	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>0</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
D O Q R	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>0</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
F	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>4</sup>	1 <sup>5</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>
H I M N	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>2</sup>	2 <sup>4</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>
J U	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>0</sup>	2 <sup>1</sup>
K L	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>
P	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
S	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
T	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>6</sup>	1 <sup>7</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>
V	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
Y	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>4</sup>	1 <sup>5</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>5</sup>	0 <sup>7</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>
Z	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>2</sup>	2 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>0</sup>	2 <sup>1</sup>

Lower Case To Lower Case Spacing Chart 6 Inch Series "C & D"

SERIES	SECOND LETTER															
	acde		bhikl		f w		J		s t		v y		x		z	
	g	o	q	m	n	p	r	u	C	D	C	D	C	D	C	D
ad h g l j	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>2</sup>	2 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>
l m n q u																
b f k o p s	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
c e	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
r	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>
t z	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
v y	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
w	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>
x	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>

Number To Number Spacing Chart 8 Inch Series "C & D"

SERIES	SECOND NUMBER																			
	0		1		2		3		4		5		6		7		8		9	
0 9	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>
1	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>
2 3 4	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>
5	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
6	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
7	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>
8	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>

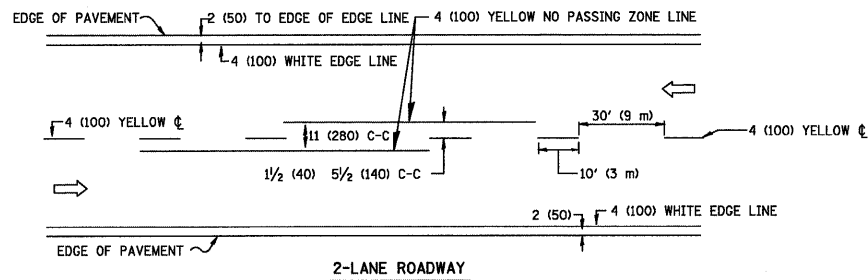
EXAMPLE, 2<sup>3</sup> DENOTES 3/8

UPPER AND LOWER CASE LETTER WIDTHS

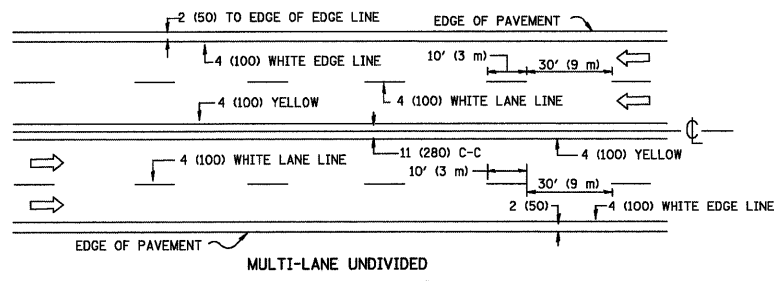
LETTERS	6 INCH UPPER CASE LETTERS				8 INCH UPPER CASE LETTERS				6 INCH LOWER CASE LETTERS			
	SERIES		SERIES		SERIES		SERIES		SERIES		SERIES	
	C	D	C	D	C	D	C	D	C	D	C	D
A	3 <sup>6</sup>	5 <sup>0</sup>	5 <sup>0</sup>	6 <sup>5</sup>	a	3 <sup>5</sup>	4 <sup>2</sup>					
B	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	b	3 <sup>5</sup>	4 <sup>2</sup>					
C	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	c	3 <sup>5</sup>	4 <sup>1</sup>					
D	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	d	3 <sup>5</sup>	4 <sup>2</sup>					
E	3 <sup>0</sup>	3 <sup>5</sup>	4 <sup>0</sup>	4 <sup>7</sup>	e	3 <sup>5</sup>	4 <sup>2</sup>					
F	3 <sup>0</sup>	3 <sup>5</sup>	4 <sup>0</sup>	4 <sup>7</sup>	f	2 <sup>3</sup>	2 <sup>6</sup>					
G	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	g	3 <sup>5</sup>	4 <sup>2</sup>					
H	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	h	3 <sup>5</sup>	4 <sup>2</sup>					
I	0 <sup>7</sup>	0 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	i	1 <sup>1</sup>	1 <sup>1</sup>					
J	3 <sup>0</sup>	3 <sup>6</sup>	4 <sup>0</sup>	5 <sup>0</sup>	j	2 <sup>0</sup>	2 <sup>2</sup>					
K	3 <sup>2</sup>	4 <sup>1</sup>	4 <sup>3</sup>	5 <sup>4</sup>	k	3 <sup>5</sup>	4 <sup>2</sup>					
L	3 <sup>0</sup>	3 <sup>5</sup>	4 <sup>0</sup>	4 <sup>7</sup>	l	1 <sup>1</sup>	1 <sup>1</sup>					
M	3 <sup>7</sup>	4 <sup>5</sup>	5 <sup>1</sup>	6 <sup>1</sup>	m	6 <sup>0</sup>	7 <sup>0</sup>					
N	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	n	3 <sup>5</sup>	4 <sup>2</sup>					
O	3 <sup>4</sup>	4 <sup>2</sup>	4 <sup>5</sup>	5 <sup>5</sup>	o	3 <sup>6</sup>	4 <sup>3</sup>					
P	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	p	3 <sup>5</sup>	4 <sup>2</sup>					
Q	3 <sup>4</sup>	4 <sup>2</sup>	4 <sup>5</sup>	5 <sup>5</sup>	q	3 <sup>5</sup>	4 <sup>2</sup>					
R	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	r	2 <sup>6</sup>	3 <sup>2</sup>					
S	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	s	3 <sup>6</sup>	4 <sup>2</sup>					
T	3 <sup>0</sup>	3 <sup>5</sup>	4 <sup>0</sup>	4 <sup>7</sup>	t	2 <sup>7</sup>	3 <sup>2</sup>					
U	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	u	3 <sup>5</sup>	4 <sup>2</sup>					
V	3 <sup>5</sup>	4 <sup>4</sup>	4 <sup>7</sup>	6 <sup>0</sup>	v	4 <sup>2</sup>	4 <sup>7</sup>					
W	4 <sup>4</sup>	5 <sup>2</sup>	6 <sup>0</sup>	7 <sup>0</sup>	w	5 <sup>5</sup>	6 <sup>4</sup>					
X	3 <sup>4</sup>	4 <sup>0</sup>	4 <sup>5</sup>	5 <sup>3</sup>	x	4 <sup>4</sup>	5 <sup>1</sup>					
Y	3 <sup>6</sup>	5 <sup>0</sup>	5 <sup>0</sup>	6 <sup>6</sup>	y	4 <sup>6</sup>	5 <sup>3</sup>					
Z	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	z	3 <sup>6</sup>	4 <sup>3</sup>					

NUMBER	6 INCH SERIES		8 INCH SERIES	
	C	D	C	D
1	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>
2	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
3	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
4	3 <sup>5</sup>	4 <sup>3</sup>	4 <sup>7</sup>	5 <sup>7</sup>
5	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
6	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
7	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
8	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
9	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>
0	3 <sup>4</sup>	4 <sup>2</sup>	4 <sup>5</sup>	5 <sup>5</sup>

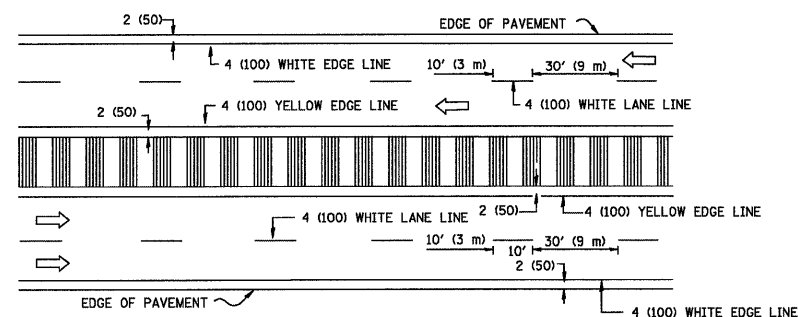
NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS



2-LANE ROADWAY



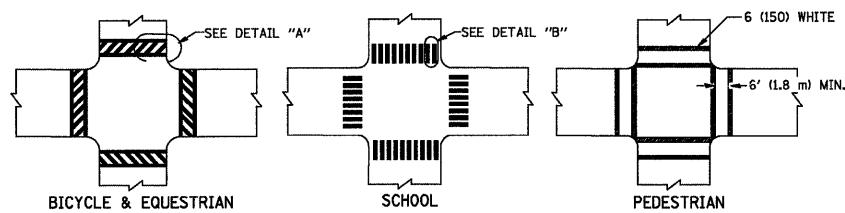
MULTI-LANE UNDIVIDED



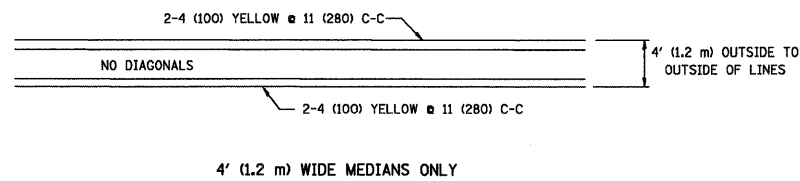
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

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

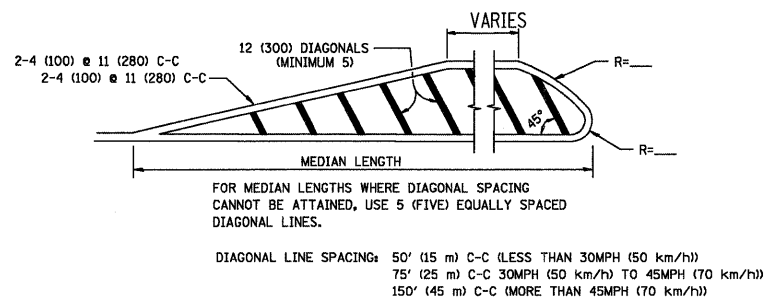
TYPICAL LANE AND EDGE LINE MARKING



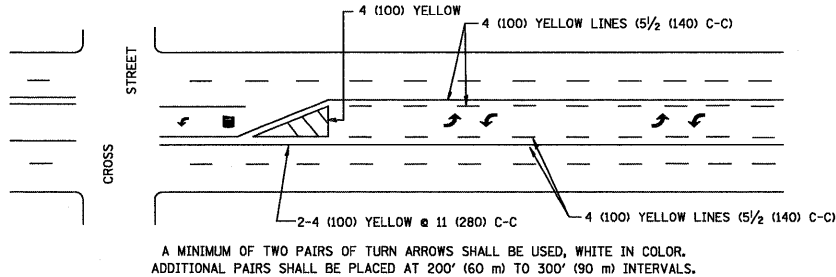
TYPICAL CROSSWALK MARKING



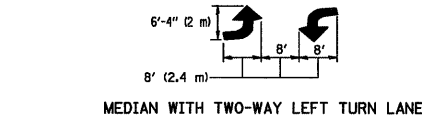
4' (1.2 m) WIDE MEDIANS ONLY



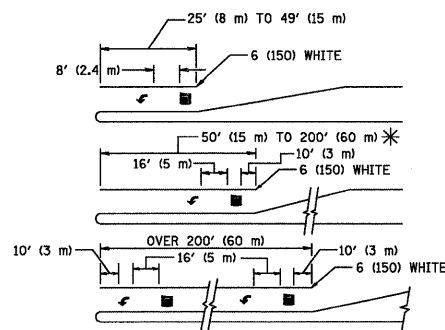
MEDIANS OVER 4' (1.2 m) WIDE



TYPICAL PAINTED MEDIAN MARKING



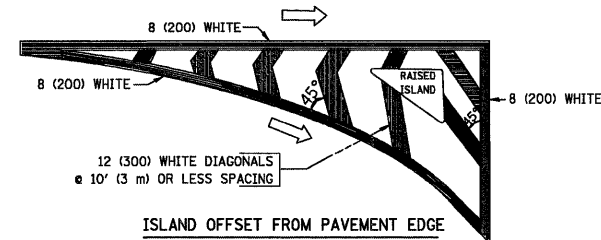
MEDIAN WITH TWO-WAY LEFT TURN LANE



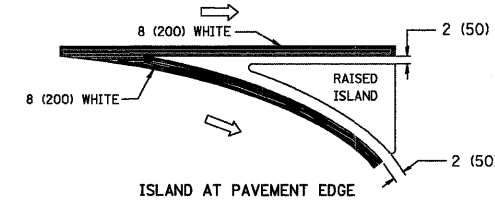
TYPICAL LEFT (OR RIGHT) TURN LANE

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

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

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

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

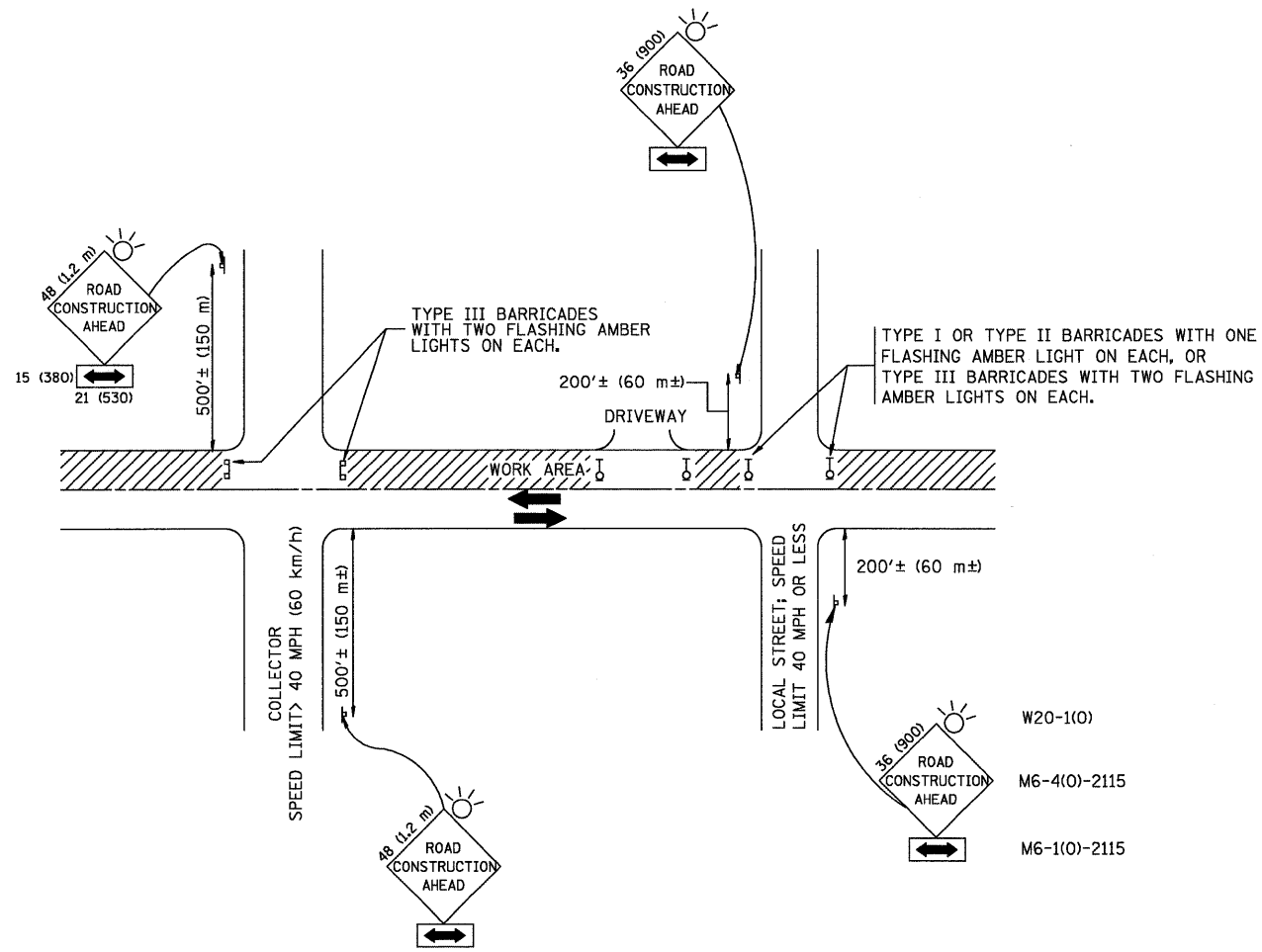
All dimensions are in inches (millimeters) unless otherwise shown.

TYPICAL PAVEMENT MARKINGS

TC-13, LATEST REVISION DATE: 09-09-09

FILE NAME = 4085.862-866-DT1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT 1 STANDARD DETAILS</b>	FAP. RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 30
PLOT SCALE = 1" = .0833'	PLOT DATE = 10/12/2010	DRAWN - ZCW	REVISED -			SCALE: N.A.	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT # 60K23	ILLINOIS FED. AID PROJECT
CHECKED - KLB	DATE - 10/12/2010	REVISED -	REVISED -							

GHA #4085.862-866



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

**NOTES:**

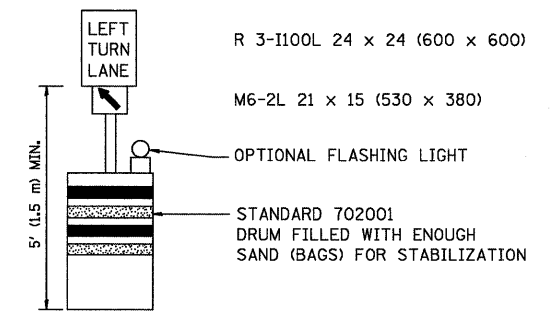
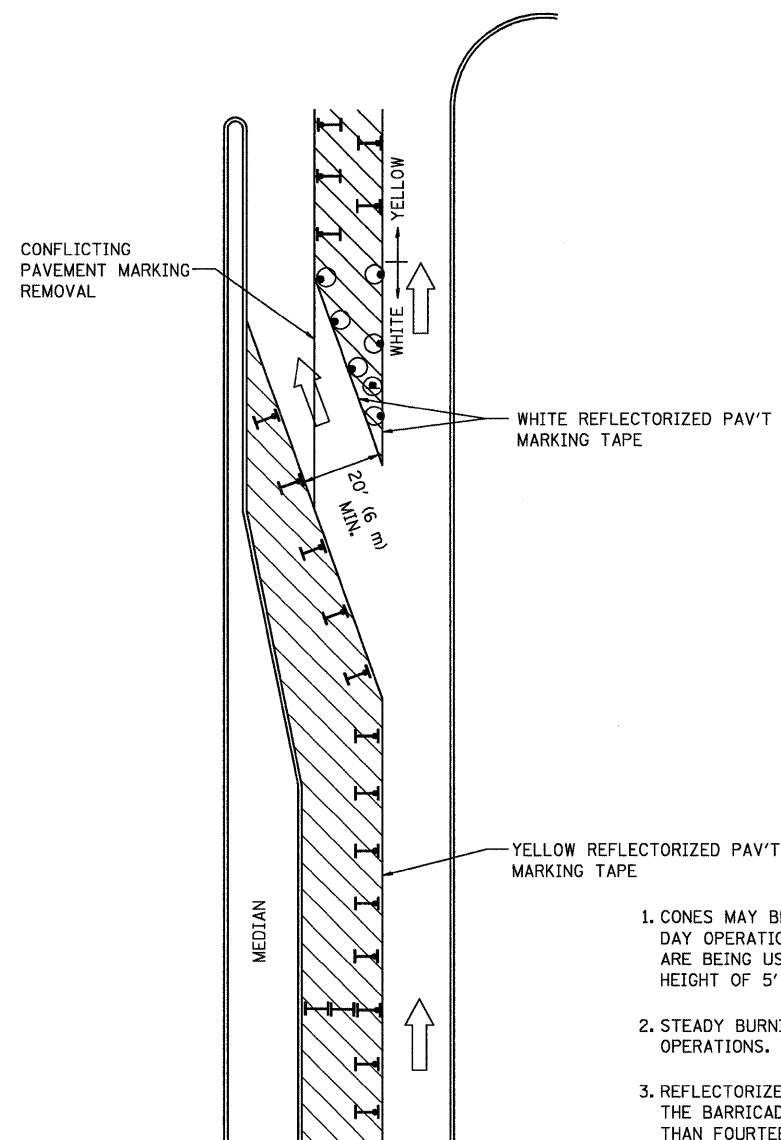
**A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**

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

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

- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
  - D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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



**GENERAL NOTES**

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

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

**LEGEND**

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

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS**

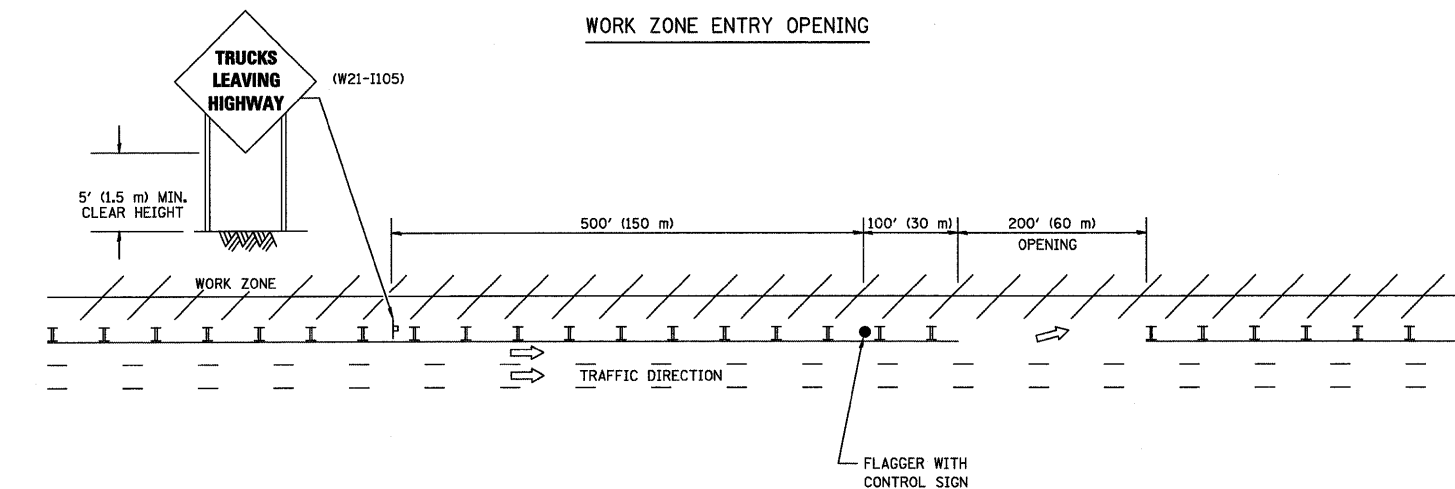
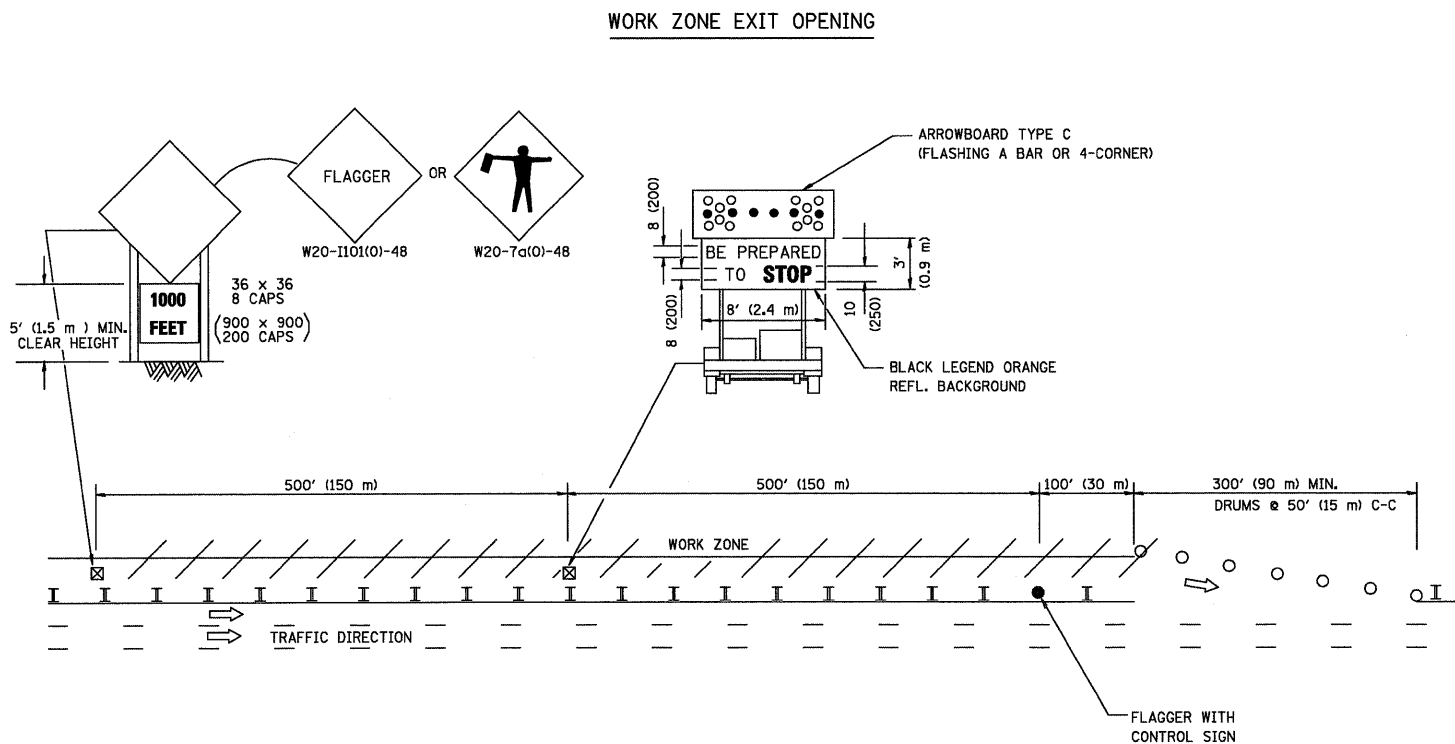
TC-14, LATEST REVISION DATE: 9-14-09

TC-10, LATEST REVISION DATE: 01-06-00

FILE NAME = 4085.862-866-DT1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT 1 STANDARD DETAILS</b>			FAP. RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 31
	PLOT SCALE = 1" = .0833'	DRAWN - ZCW	REVISED -		SCALE N.A.	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT # 60K23	ILLINOIS FED. AID PROJECT	
	PLOT DATE = 10/12/2010	CHECKED - KLB	REVISED -									
		DATE - 10/12/2010	REVISED -									

GHA #4085.862-866

**SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENING**

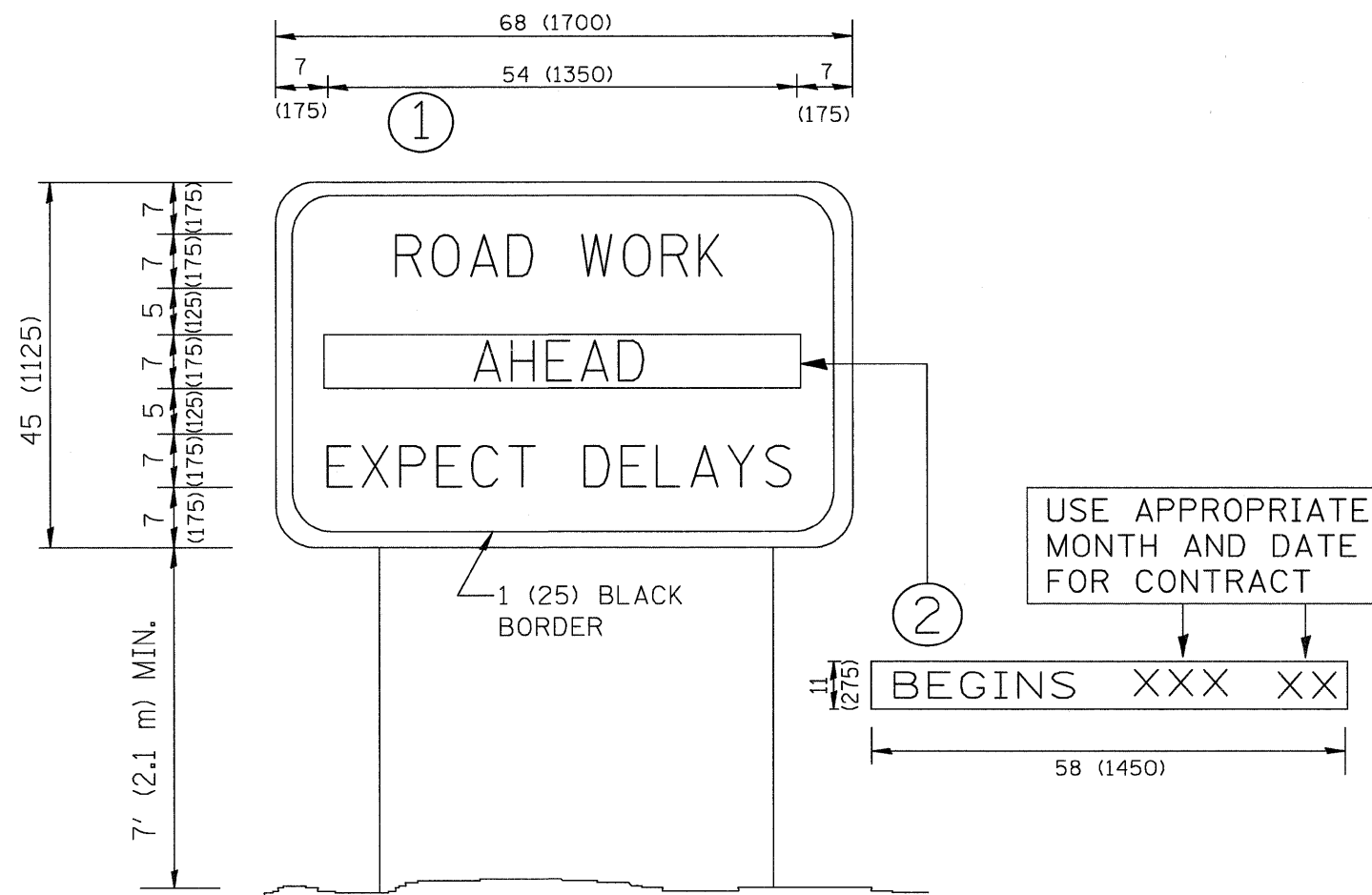


**NOTES:**

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

**ARTERIAL ROAD INFORMATIONAL SIGN**



**NOTES:**

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

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

TC-18, LATEST REVISION DATE: 12-09

TC-22, LATEST REVISION DATE: 01-31-07

FILE NAME = 4085.862-866-DT1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISIONS -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT 1 STANDARD DETAILS</b>	FAP. RTE. VARIES	SECTION 2010-005TS	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 32		
PLOT SCALE = 1" = .0833'	DRAWN - ZCW	CHECKED - KLB	REVISIONS -			<b>TC-18 &amp; TC-22</b>		CONTRACT # 60K23		ILLINOIS FED. AID PROJECT		
PLOT DATE = 10/12/2010	DATE - 10/12/2010	REVISIONS -	REVISIONS -			SCALE N.A.	SHEET NO. OF SHEETS	STA. TO STA.				
GHA #4085.862-866												