

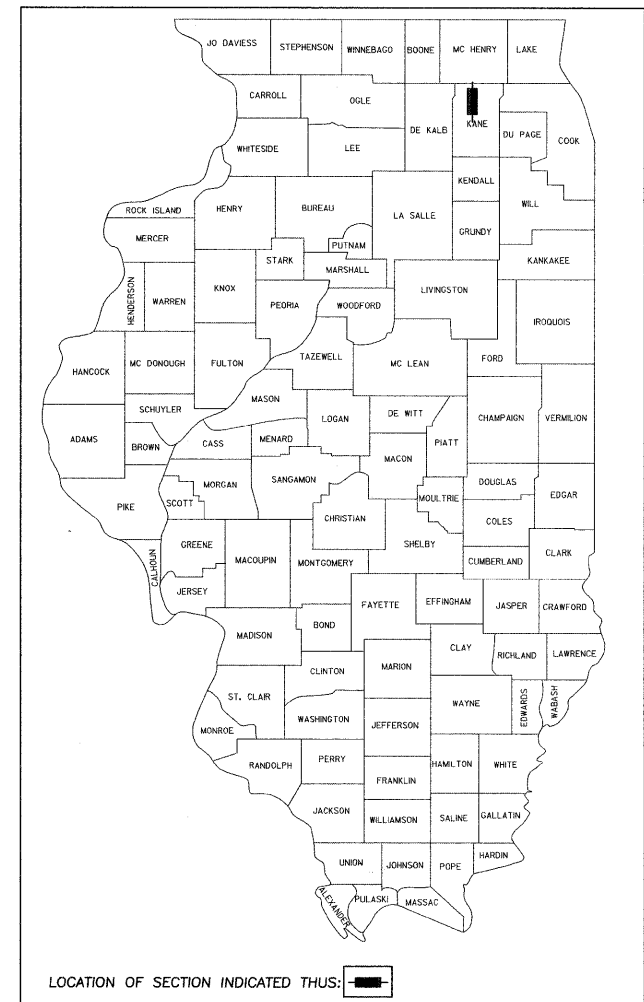
FOR INDEX OF SHEETS SEE SHEET 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED HIGHWAY
PLANS
VARIOUS LOCATIONS IN NORTH KANE COUNTY
LIGHT EMITTING DIODE (LED) INSTALLATION
PROJECT:
SECTION: 2011-218-1
KANE COUNTY
 C-91-193-12

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIABLES	2011-218-1	KANE	48	1
ILLINOIS FED. AID PROJECT			CONTRACT #: 60R60	

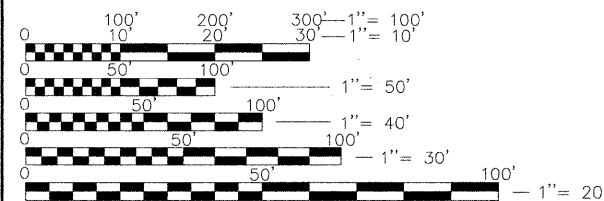
* 48-1 = 47

D-91-193-12



LOCATION OF SECTION INDICATED THUS: [Black Box]

- IDOT STANDARDS**
- 701006 - 03 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
 - 701701 - 08 URBAN LANE CLOSURE, MULTILANE INTERSECTION
 - 701901 - 02 TRAFFIC CONTROL DEVICES
 - 857001 - 01 PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
 - 862001 - 01 UNINTERRUPTABLE POWER SUPPLY (UPS)
 - 880001 - 01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
 - 880006 - 01 TRAFFIC SIGNAL MOUNTING DETAILS



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.

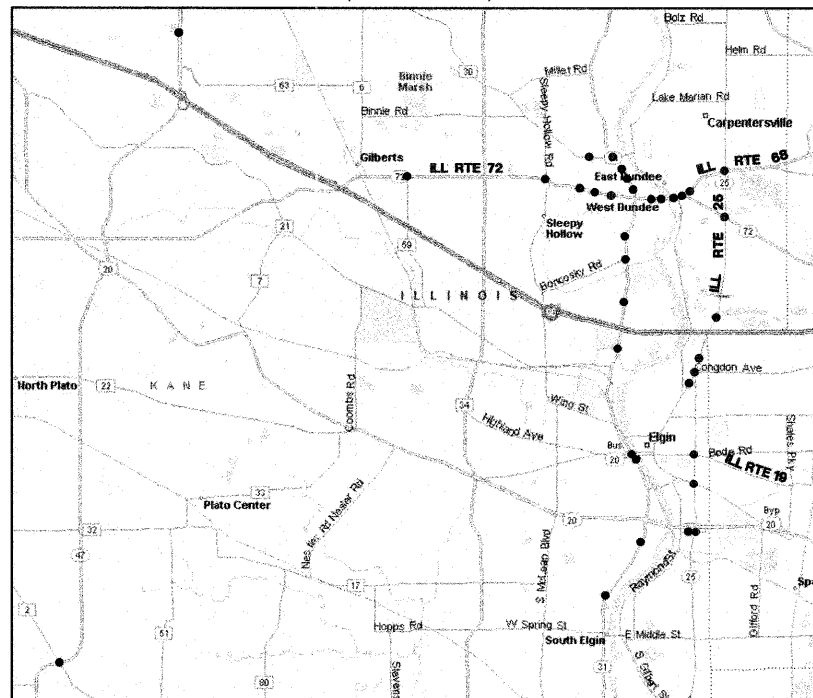
CONTRACT NO. 60R60

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS

Call 48 hours before you dig
(Excluding Sat., Sun., & Holidays)

1-800-892-0123

LOCATION MAP
(NOT TO SCALE)



KANE COUNTY LOCATION MAP
(SEE SHEET NO. 3)



SIGNED: Kevin L. Belgrave
Kevin L. Belgrave
DATE: 12/16/2011

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: Dec. 23 20 11
Debra M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 3 20 12
John D. Baranyski, P.E. Ia
ENGINEER OF DESIGN AND ENVIRONMENT

February 3 20 12
William R. Flanery Ia
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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- 1. TITLE SHEET
- 2. GENERAL NOTES
- 3. LOCATION MAP
- 4-5. SUMMARY OF QUANTITIES
- 6-11. DISTRICT ONE TRAFFIC SIGNAL STANDARD DETAIL SHEETS

TRAFFIC SIGNAL PLANS

- 12. HUNTLEY ROAD AT ELM AVENUE / ENTRANCE F
- 13. ILL RTE 19 (E. CHICAGO AV) AT ILL RTE 25 (LIBERTY ST)
- 14. ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (ST. CHARLES RD)
- 15. ILL RTE 25 AT BRANDT DRIVE
- 16. ILL RTE 25 (DUNDEE AV) / LIBERTY STREET AT CONGDON AVENUE
- 17. ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (LIBERTY ST)
- 18. ILL RTE 25 (DUNDEE AV) AT ILL RTE 25 (PAGE AV)
- 19. ILL RTE 25 (DUNDEE AV) AT LUDA STREET
- 20. ILL RTE 25 (LIBERTY ST) AT VILLA STREET
- 21. ILL RTE 25 AT ILL RTE 68 (BARRINGTON AV)
- 22. ILL RTE 25 AT ILL RTE 72
- 23. ILL RTE 31 AT BONCOSKY ROAD
- 24.-25. ILL RTE 31 (STATE ST) AT CHICAGO STREET
- 26. ILL RTE 31 (STATE ST) AT W. RIVER ROAD / DAVIS ROAD
- 27.-28. ILL RTE 31 (STATE ST) AT HIGHLAND AVENUE
- 29. ILL RTE 31 AT HILLSIDE STREET / ENTRANCE D
- 30. ILL RTE 31 AT KANE STREET / ENTRANCE C
- ~~31. ILL RTE 31 AT W. MAIN STREET (HUNTLEY RD) DELETED~~
- 32. ILL RTE 31 AT MIDDLE ROAD
- 33. ILL RTE 31 AT SPRUCE DRIVE / ALDI ENTRANCE
- 34. ILL RTE 31 (LA FOX ST) AT SUNDOWN ROAD / WYNDHAM LANE
- 35. ILL RTE 31 (STATE ST) AT TOLLGATE ROAD
- 36. ILL RTE 31 AT WILLOW LANE / STROM DRIVE
- 37. ILL RTE 47 AT DEL WEBB BOULEVARD / OAKCREEK PARKWAY
- 38. ILL RTE 47 AT BURLINGTON ROAD - FLASHING BEACONS
- 39. ILL RTE 68 (PENNY AV) AT ILL RTE 72 (MAIN ST)
- 40. ILL RTE 72 (MAIN ST) AT FIRST STREET
- 41. ILL RTE 72 (MAIN ST) AT SECOND STREET
- 42. ILL RTE 72 AT LOCUST DRIVE / ENTRANCE A
- 43. ILL RTE 72 (MAIN ST) AT RIVER STREET
- 44. ILL RTE 72 AT SLEEPY HOLLOW ROAD / CARRINGTON DRIVE
- 45. ILL RTE 72 AT TARTANS DRIVE
- 46. ILL RTE 72 (HIGGINS RD) AT TYRRELL ROAD
- 47. ILL RTE 72 (MAIN ST) AT VAN BUREN STREET
- 48. ILL RTE 72 AT VILLAGE QUARTER ROAD / ENTRANCE B

GENERAL NOTES - MISCELLANEOUS

THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", JANUARY 1, 2012; MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION; PROJECT SPECIFICATIONS; ALL APPLICABLE REQUIREMENTS OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION; THE VILLAGE OF GLEN ELLYN; THE CITY OF WHEATON; THE VILLAGE OF CAROL STREAM; THE VILLAGE OF GLENDALE HEIGHTS; THE VILLAGE OF BLOOMINGDALE; ALL APPLICABLE REQUIREMENTS OF THE ORDINANCES OF AUTHORITIES HAVING JURISDICTION; AND ALL ADDENDA THERETO SHALL GOVERN THIS WORK.

THE STANDARD SPECIFICATIONS, PROJECT SPECIFICATIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED A PART OF THE CONTRACT.

WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OF UNSTABLE MATERIALS CREATED AS A RESULT THEREOF.

THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL AREAS AFFECTED BY EQUIPMENT OR LABORERS TO EXISTING CONDITIONS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING ALL NEW WORK UNTIL COMPLETION OF THIS CONTRACT.

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER IN RESPECT TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. THE CONTRACTOR SHALL ALSO CONTACT J.U.L.I.E. TO OBTAIN LOCATES OF THE RESPECTIVE UTILITY COMPANIES UNDERGROUND FACILITIES.

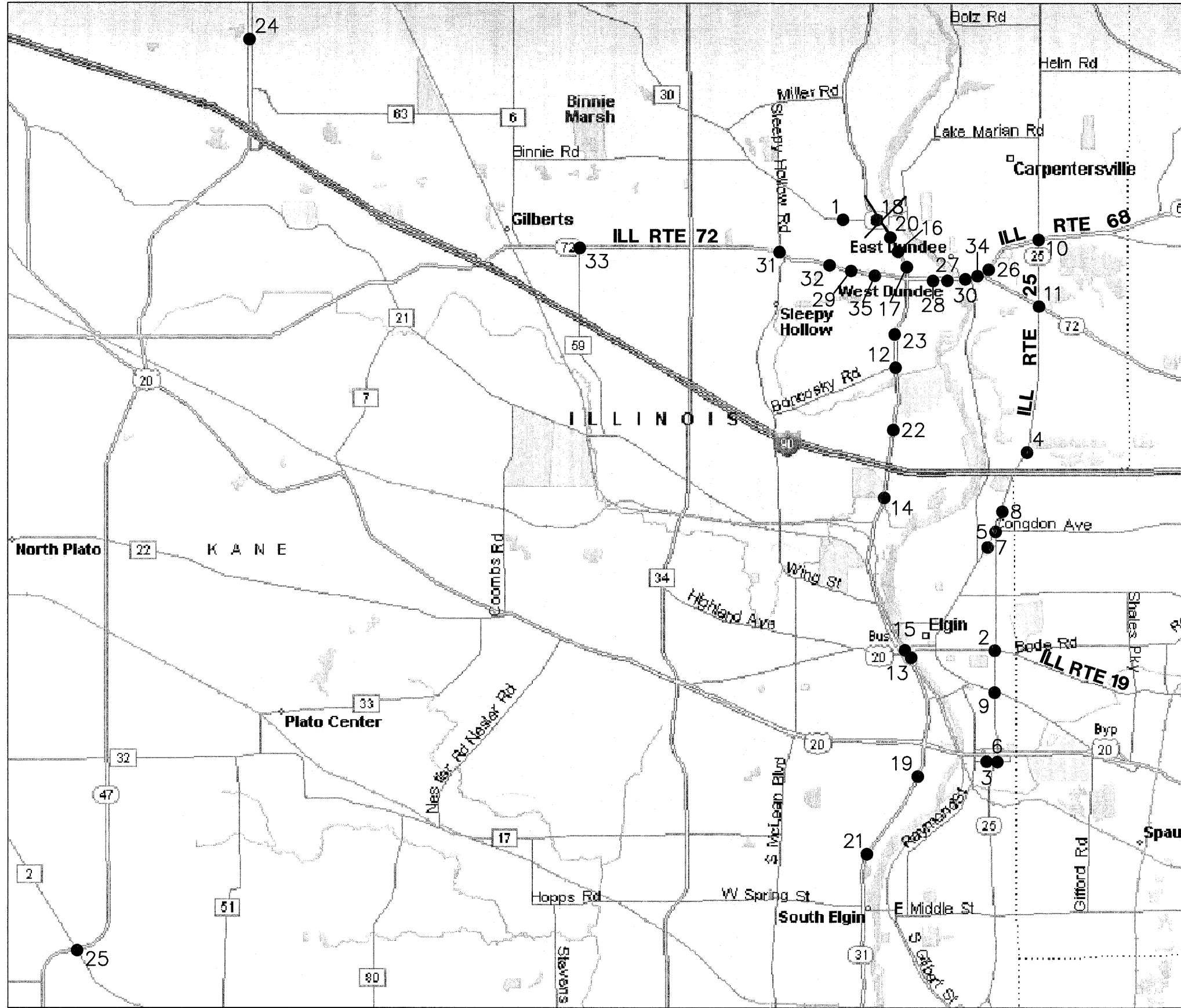
RESTORATION OF WORK AREA: RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC. AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD IN ACCORDANCE TO STANDARD SPECIFICATIONS ARTICLE 252 WHICH SHALL INCLUDE THE REQUIRED WATERING PER ARTICLE 252.08. ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 250 AND 251, SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 250 AND 251, RESPECTIVELY.

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.

FILE NAME = 4085.880-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - ZCW	REVISED -		SCALE: N.A.	SHEET NO.	OF SHEETS	STA.	TO STA.	KANE	48	2
		CHECKED - KLB	REVISED -							CONTRACT #: 60R60		
		DATE - 12/16/2011	REVISED -							ILLINOIS FED. AID PROJECT		

Rev. GHA #4085.880



- INTERSECTIONS**
1. HUNTLEY ROAD AT ELM AVENUE / ENTRANCE F
 2. ILL RTE 19 (E. CHICAGO AV) AT ILL RTE 25 (LIBERTY ST)
 3. ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (ST. CHARLES RD)
 4. ILL RTE 25 AT BRANDT DRIVE
 5. ILL RTE 25 (DUNDEE AV) / LIBERTY STREET AT CONGDON AVENUE
 6. ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (LIBERTY ST)
 7. ILL RTE 25 (DUNDEE AV) AT ILL RTE 25 (PAGE AV)
 8. ILL RTE 25 (DUNDEE AV) AT LUDA STREET
 9. ILL RTE 25 (LIBERTY ST) AT VILLA STREET
 10. ILL RTE 25 AT ILL RTE 68 (BARRINGTON AV)
 11. ILL RTE 25 AT ILL RTE 72
 12. ILL RTE 31 AT BONCOSKY ROAD
 13. ILL RTE 31 (STATE ST) AT CHICAGO STREET
 14. ILL RTE 31 (STATE ST) AT W. RIVER ROAD / DAVIS ROAD
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 16. ILL RTE 31 AT HILLSIDE STREET / ENTRANCE D
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 35. ILL RTE 72 AT VILLAGE QUARTER ROAD / ENTRANCE B

FILE NAME = 4085.880 - TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LOCATION MAP	F.A.P. RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 3
PLOT SCALE = 1" = .0833'		DATE - 12/16/2011	REVISOR -	SCALE: N.A. SHEET NO. OF SHEETS STA. TO STA.		CONTRACT # 60R60		ILLINOIS FED. AID PROJECT		

Rev. GHA #4085.880

SUMMARY OF QUANTITIES			URBAN																
			LOCATION	7, 10, 11, 25, 26	18	30, 34	2	4, 8, 19	3, 6, 9, 13, 14, 15, 22	5	33	24	21	1, 16, 17, 20, 29, 23, 27, 28, 31, 35	12	32	23, 27, 28, 31	3	23
			FUNDING BREAK-DOWNS	100% STATE	95% STATE 2.5% KANE COUNTY 2.5% VILLAGE OF CARPENTERSVILLE	95% STATE 5% VILLAGE OF EAST DUNDEE	97.5% STATE 2.5% CITY OF ELGIN	96.7% STATE 3.3% CITY OF ELGIN	95% STATE 5% CITY OF ELGIN	96% STATE 4% CITY OF ELGIN	95% STATE 5% KANE COUNTY	95% STATE 5% VILLAGE OF HUNTLEY	95% STATE 5% VILLAGE OF SOUTH ELGIN	95% STATE 5% VILLAGE OF WEST DUNDEE	96.7% STATE 3.3% DUNDEE TOWNSHIP	96.7% STATE 3.3% VILLAGE OF WEST DUNDEE	95% STATE 4% VILLAGE OF WEST DUNDEE	EVP *	EVP **
NO.	CODE NO.	ITEM	UNIT	TOTAL	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	
28.	88500100	INDUCTIVE LOOP DETECTOR	EACH	15							8		7						
29.	88800100	PEDESTRIAN PUSH-BUTTON	EACH	20					2		8			8			2	8	
30.	89100400	ILLUMINATED SIGN, LED	EACH	4							4								
31.	89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	1													1		
32.	89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	1														1	
33.	89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, FLASHING UNIT	EACH	1														1	
34.	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	30	4	1	2	1	3	5	1	1	1	10	1	1	4		
35.	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	22	3		2	1	2	6	1		1	6		1	3		
36.	X8670225	FULL ACTUATED CONTROLLER AND TYPE IV CABINET SPECIAL	EACH	1															
37.	X8620050	UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED	EACH	4	1				2										
38.	X8620200	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	29	3		2	1	1	7			1	10	1	1			
39.	X8803040	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT	EACH	3							1						2		
40.	X8803082	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	13			1	1	3	4				4					
41.	X8803084	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	54			12	3	3	20				10			10		
42.	X8803088	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	19			4	1	1	7				2			2		
43.	X8803090	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	12			2	1	1	7									
44.	X8803099	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	2							2								
45.	X8800015	PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	30	3		9	7						11			8		
46.	X8803120	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	2					2										
47.	X8803210	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT	EACH	11			4	1	1	3				2			2		
48.	X8803140	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT	EACH	1															
49.	X8803038	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED, RETROFIT	EACH	1					1										
50.	X8803045	SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION, 1-4 SECTION, 1-5 SECTION BRACKET MOUNTED, RETROFIT	EACH	2						2									
51.	X8608750	COMBINATION SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-4 SECTION, 1-3 SECTION, BRACKET MOUNTED, RETROFIT	EACH	1					1										
52.	88055165	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2													2		

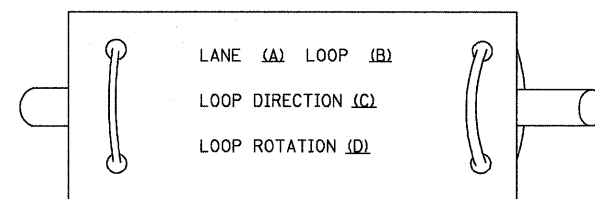
* 100% OF THE COST SHALL BE PAID BY THE CITY OF ELGIN
 ** 100% OF THE COST SHALL BE PAID BY THE VILLAGE OF WEST DUNDEE

- | | | | |
|--|---|---|---|
| 1. HUNTLEY ROAD AT ELM AVENUE / ENTRANCE F | 11. ILL RTE 25 AT ILL RTE 72 | 21. ILL RTE 31 (LA FOX ST) AT SUNDOWN ROAD / WYNDHAM LANE | 31. ILL RTE 72 AT SLEEPY HOLLOW ROAD / CARRINGTON DRIVE |
| 2. ILL RTE 19 (E. CHICAGO AV) AT ILL RTE 25 (LIBERTY ST) | 12. ILL RTE 31 AT BONCOSKY ROAD | 22. ILL RTE 31 (STATE ST) AT TOLLGATE ROAD | 32. ILL RTE 72 AT TARTANS DRIVE |
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| 8. ILL RTE 25 (DUNDEE AV) AT LUDA STREET | 18. ILL RTE 31 AT W. MAIN STREET (HUNTLEY RD) | 28. ILL RTE 72 (MAIN ST) AT SECOND STREET | |
| 9. ILL RTE 25 (LIBERTY ST) AT VILLA STREET | 19. ILL RTE 31 AT MIDDLE ROAD | 29. ILL RTE 72 AT LOCUST DRIVE / ENTRANCE A | |
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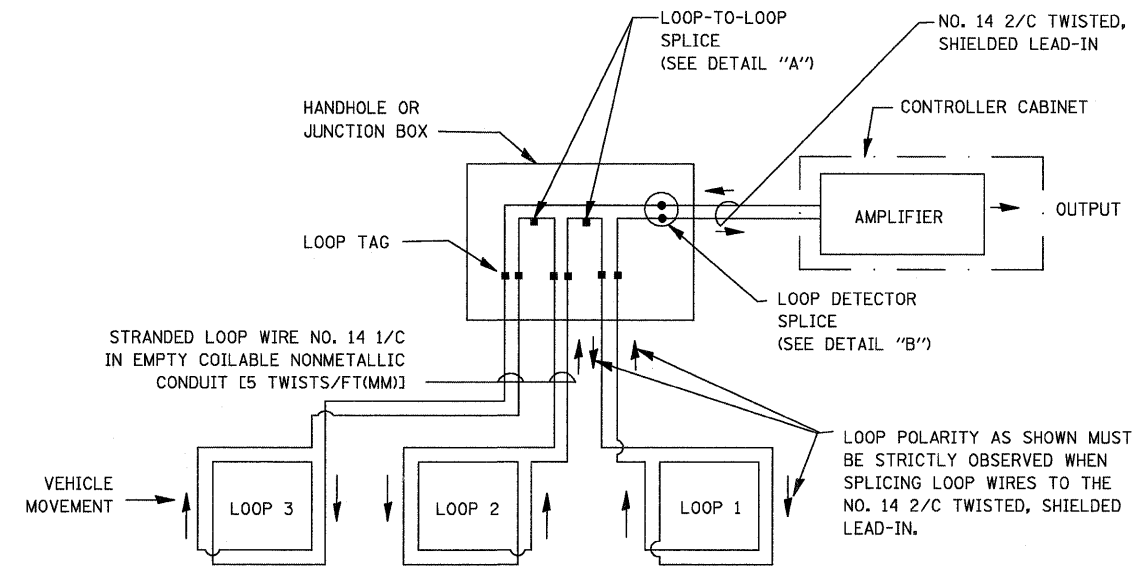
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

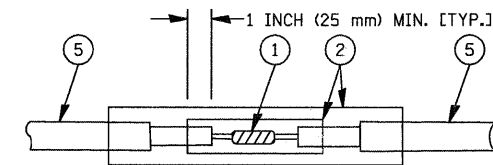


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

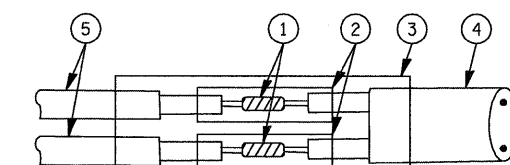


DETECTOR LOOP WIRING SCHEMATIC

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

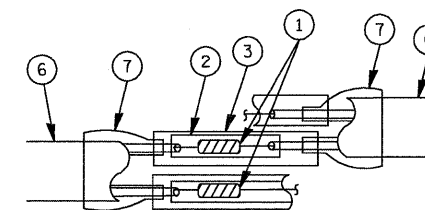


DETAIL "A"
LOOP-TO-LOOP SPLICE

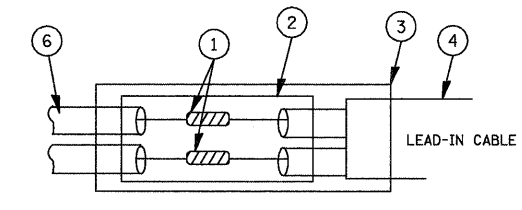


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
PRE-FORMED LOOP
LOOP-TO-LOOP SPLICE



DETAIL "B"
PRE-FORMED LOOP
LOOP-TO-CONTROLLER SPLICE

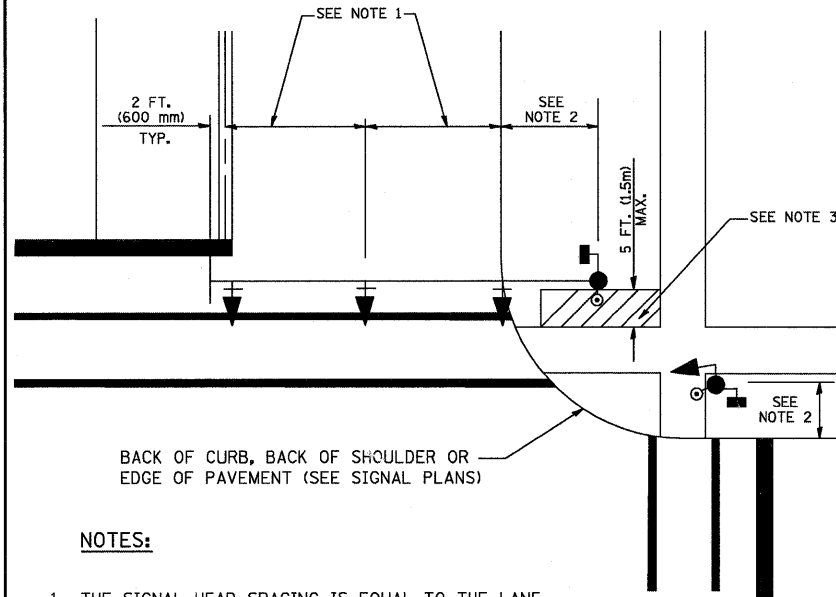
LOOP DETECTOR SPLICE

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

FILE NAME = 4085.880-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			FAP RFE VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 6
PLOT SCALE = 1" = .0833'	CHECKED - DAD	REVISED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 6 SHEETS	STA. TO STA.	TS-05				
PLOT DATE = 12/16/2011	DATE - 10-28-09	REVISED -	REVISED -		GHA #4085.880							
								CONTRACT #: 60R60				

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

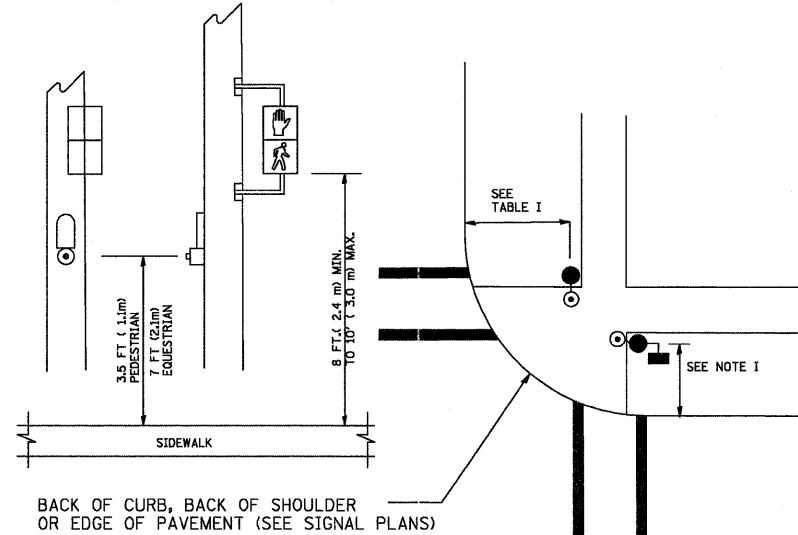
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

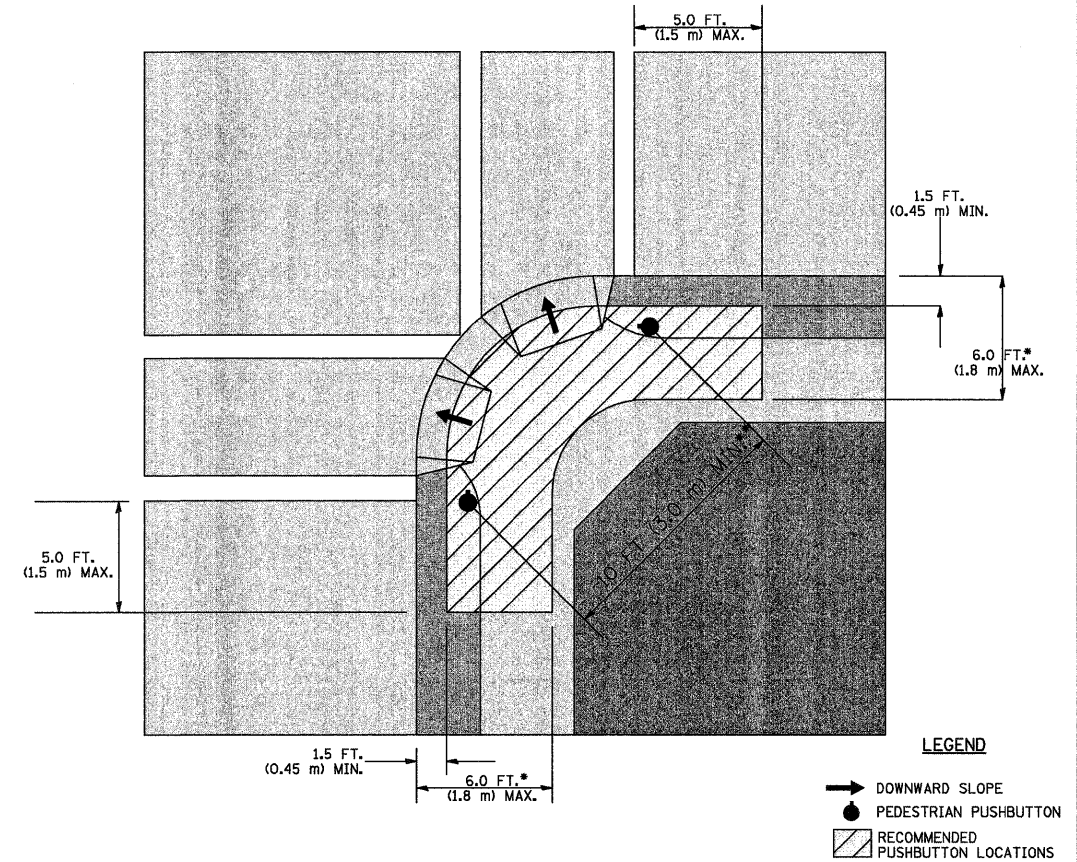
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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) SEPERATION 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.

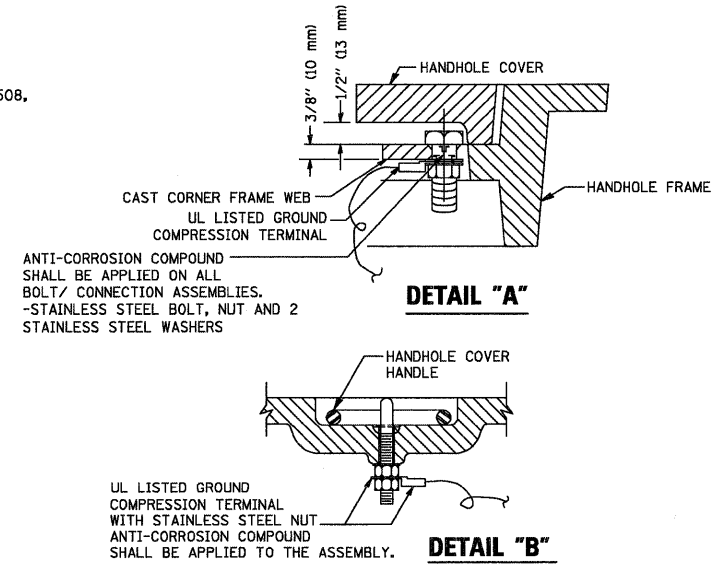
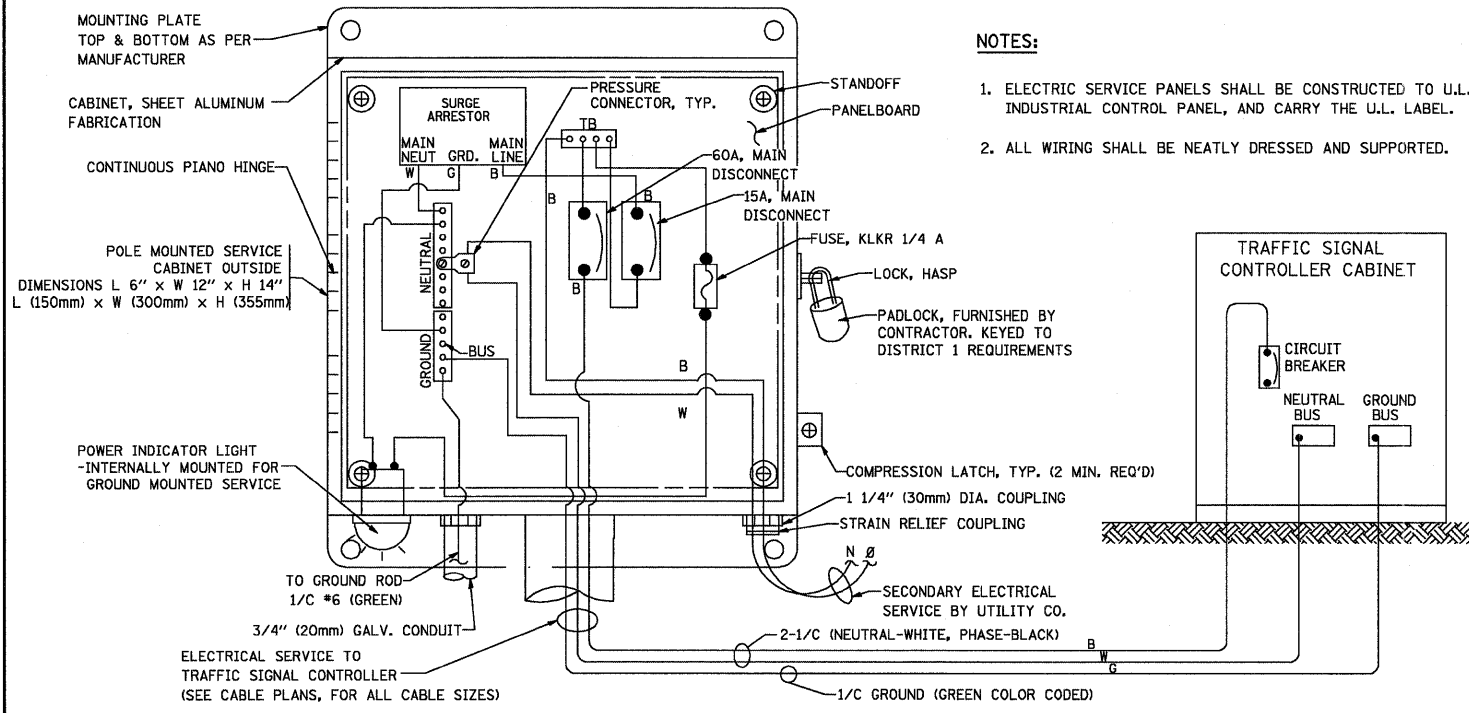
THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

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.

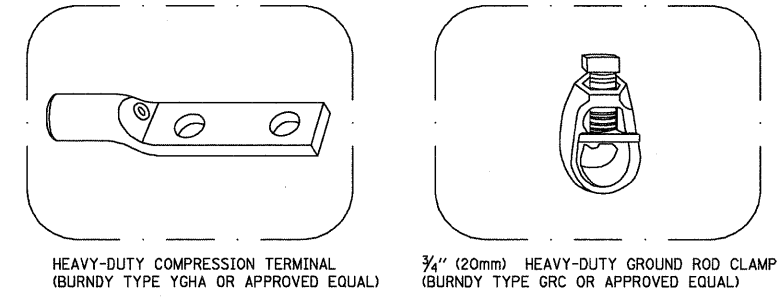
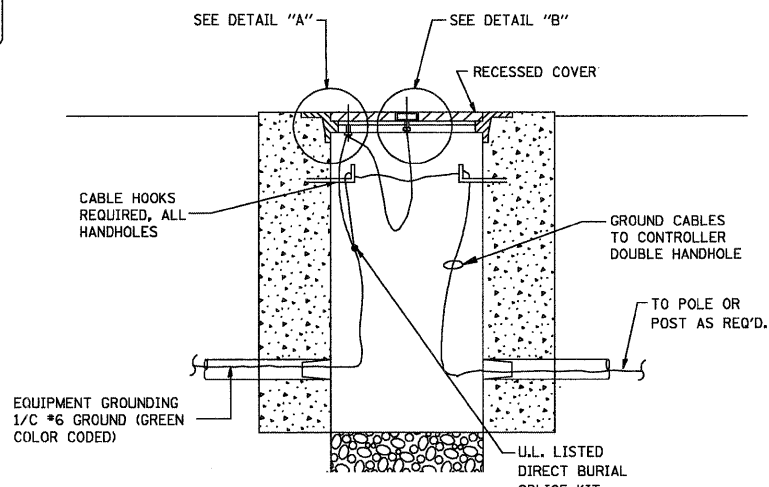


NOTES:

GROUNDING SYSTEM

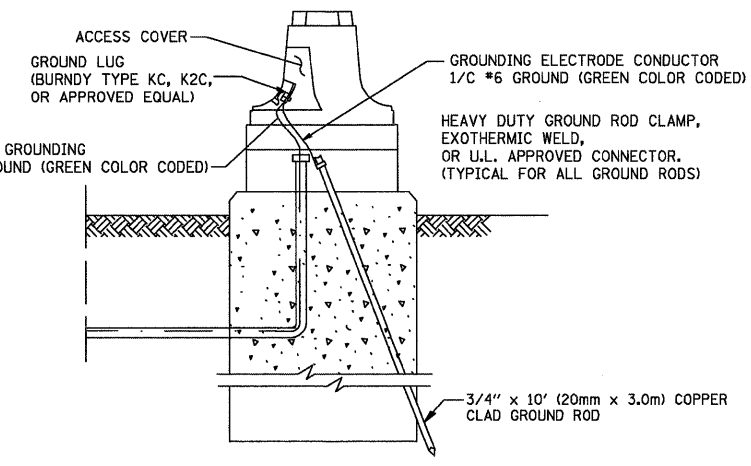
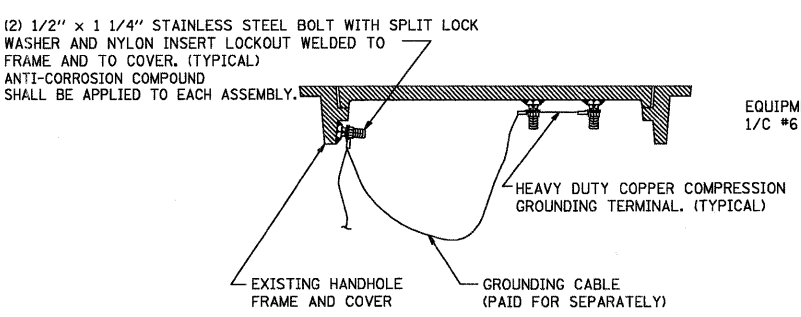
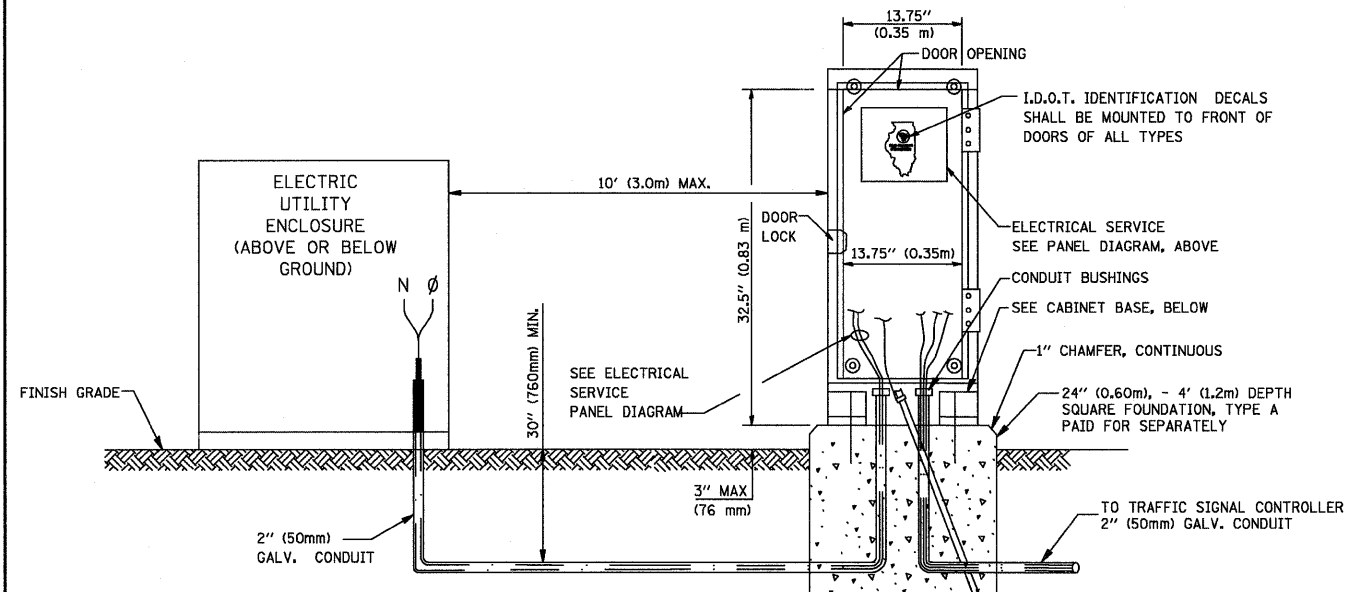
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE,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

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



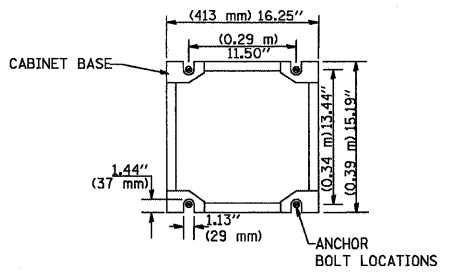
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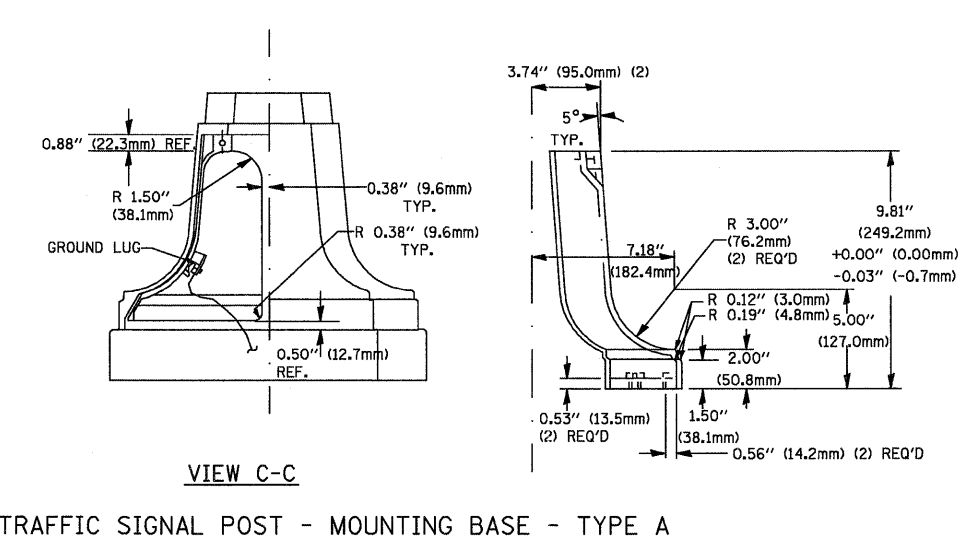
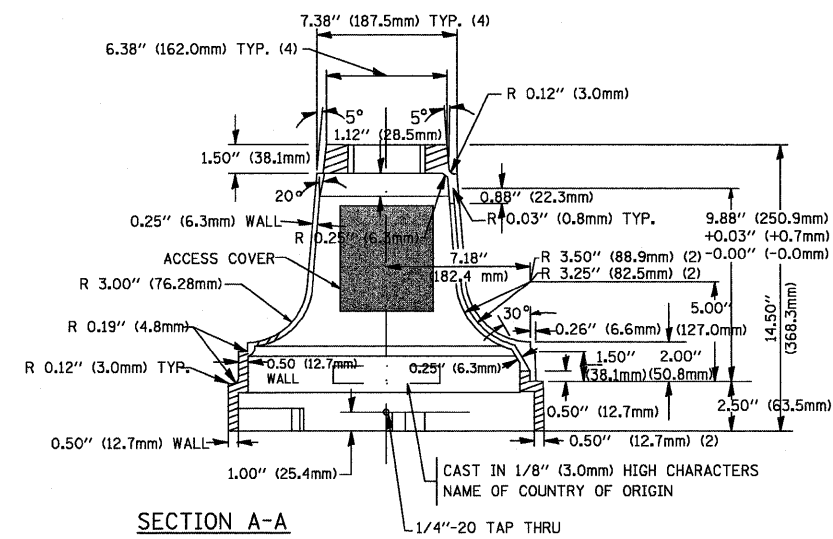
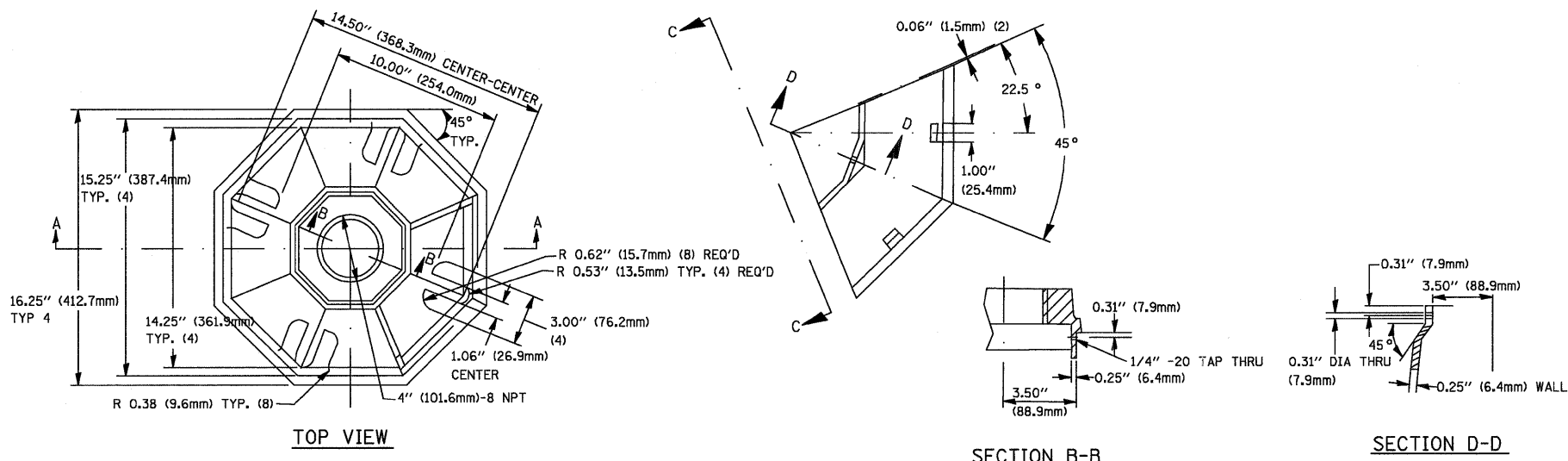
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
- 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
- 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
- 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



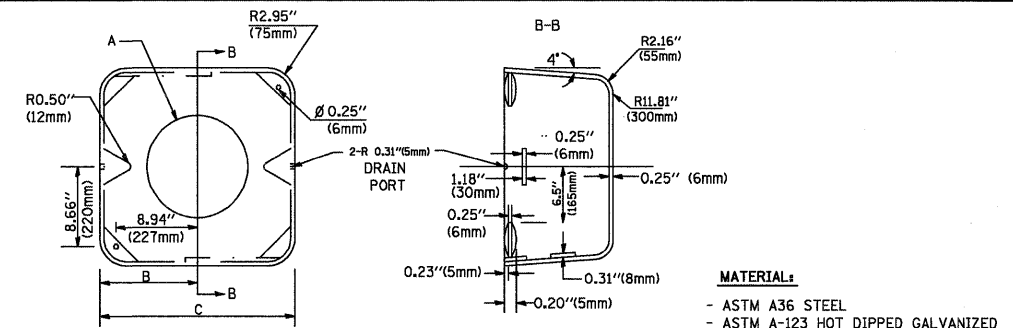
SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)





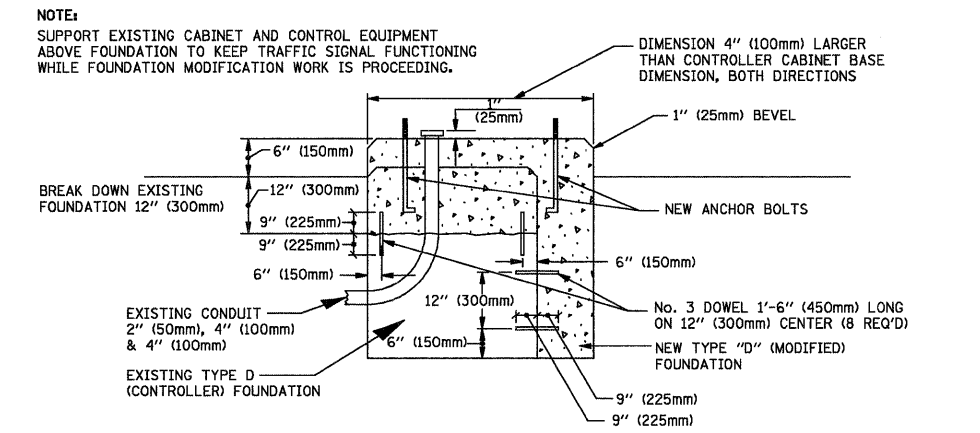
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



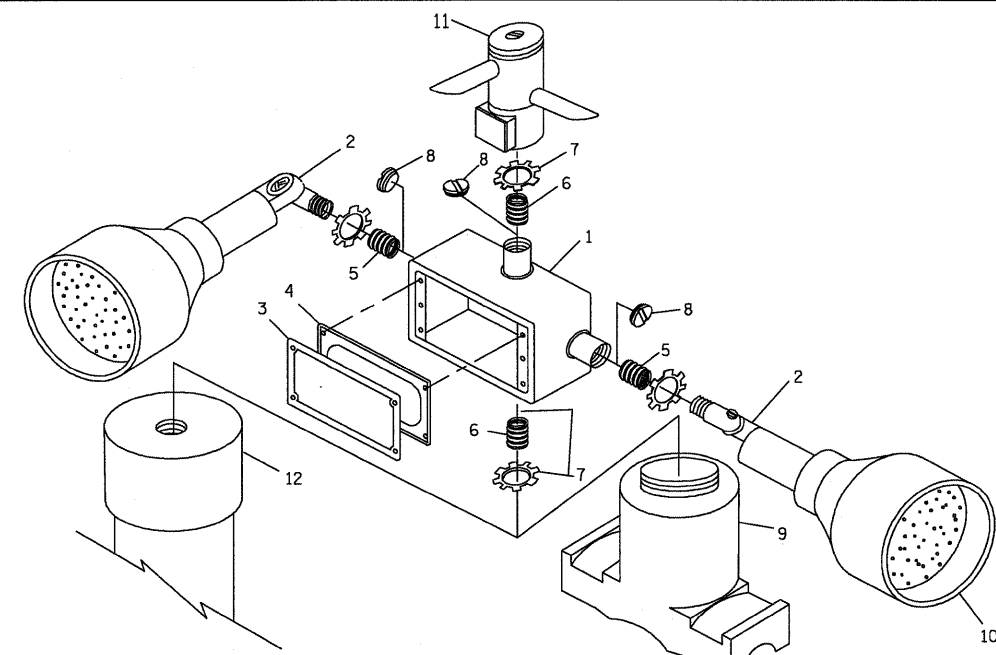
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIABLES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIABLES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIABLES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)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

SHROUD

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



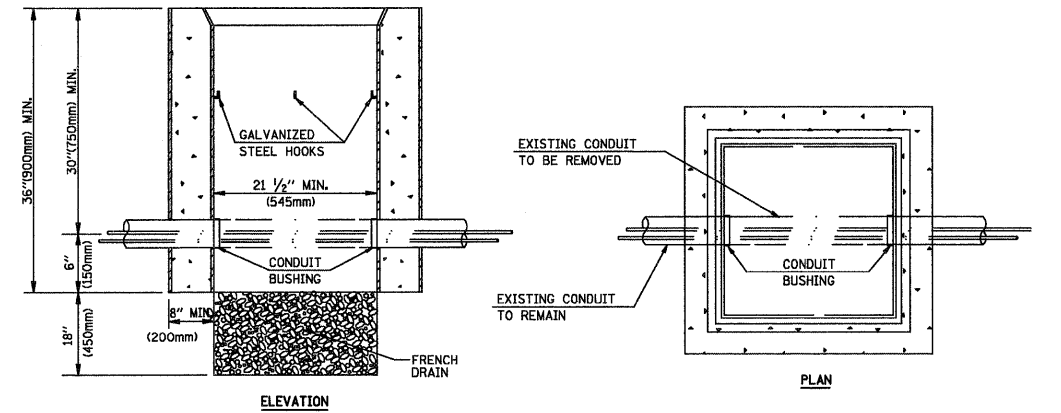
MODIFY EXISTING TYPE "D" FOUNDATION



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

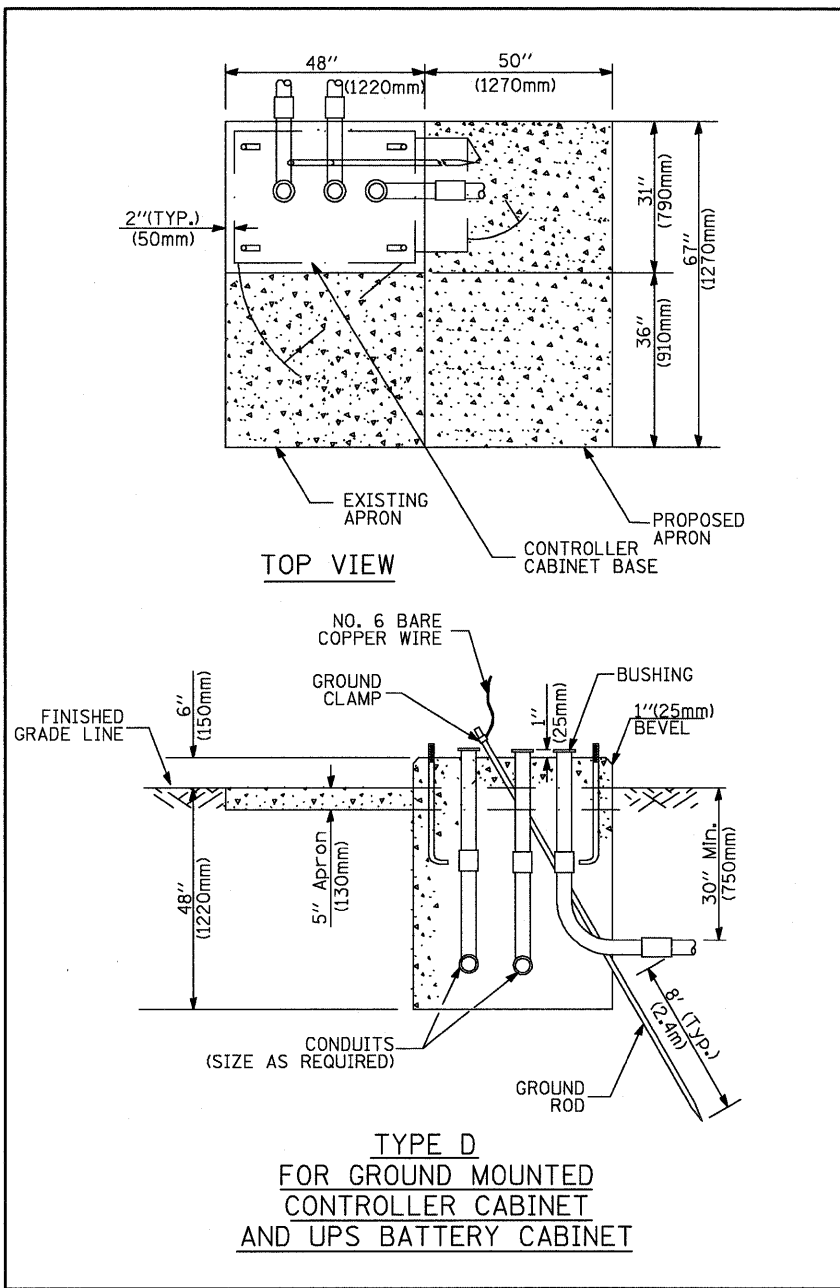
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT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

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

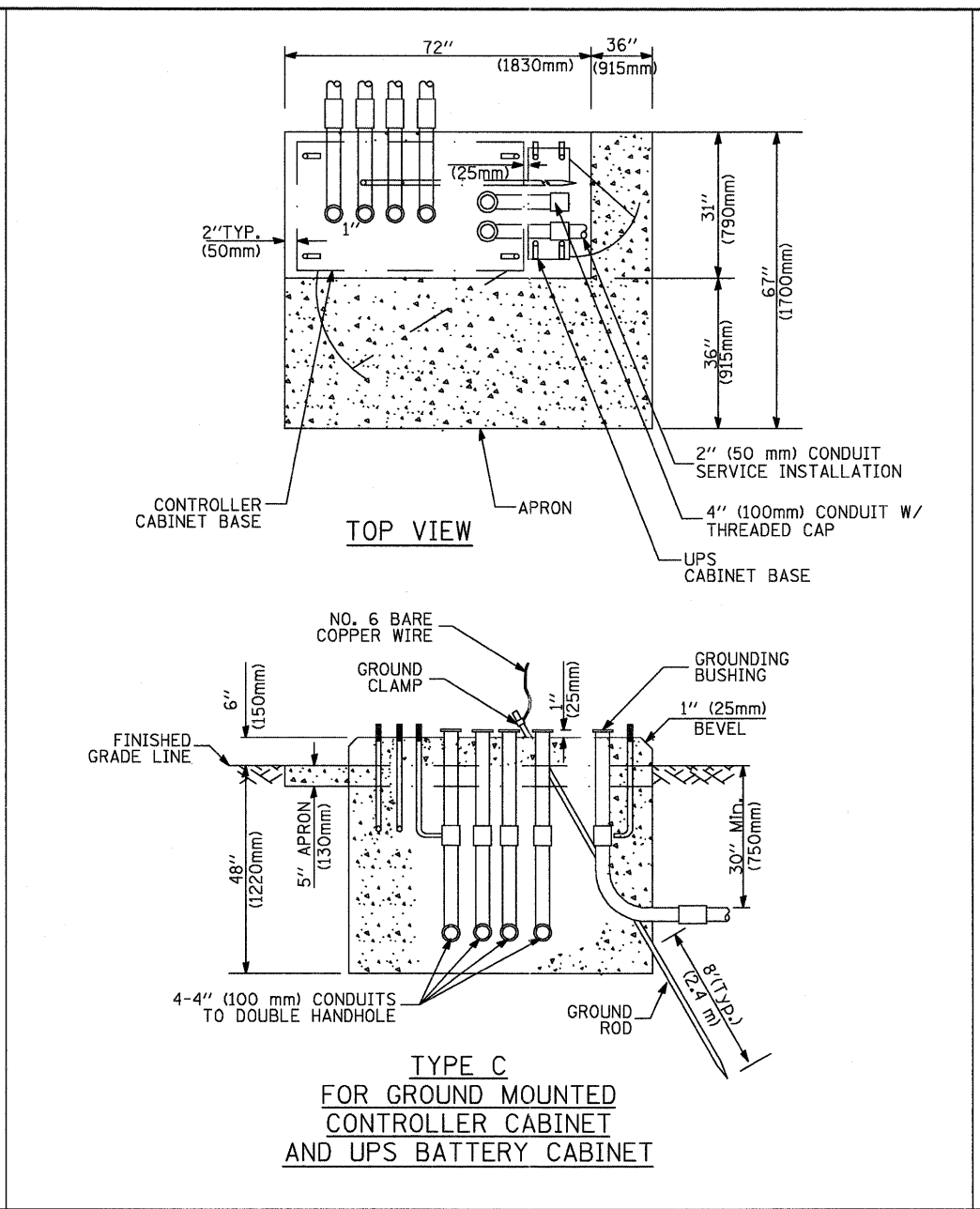


- NOTES:**
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
 - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

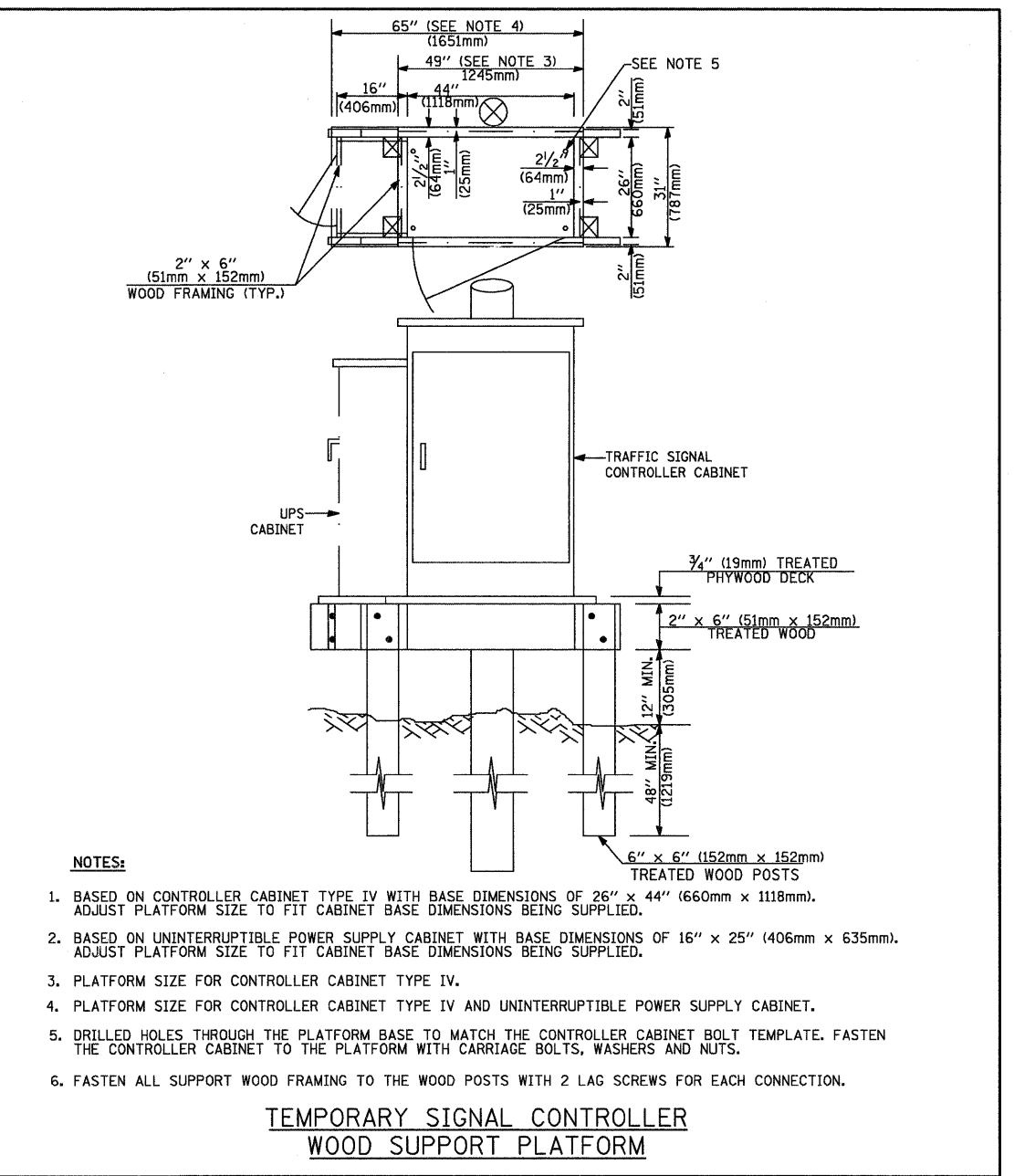
HANDHOLE TO INTERCEPT EXISTING CONDUIT



**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



**TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



- 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**

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-H	6.0-H
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

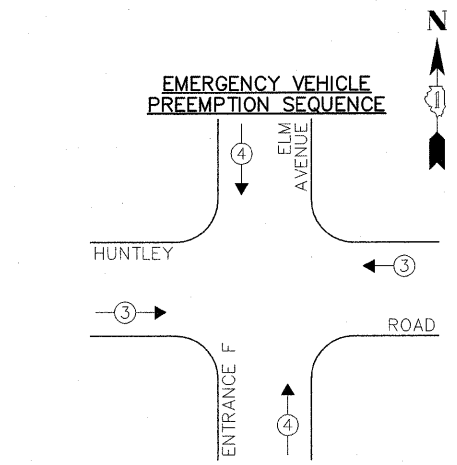
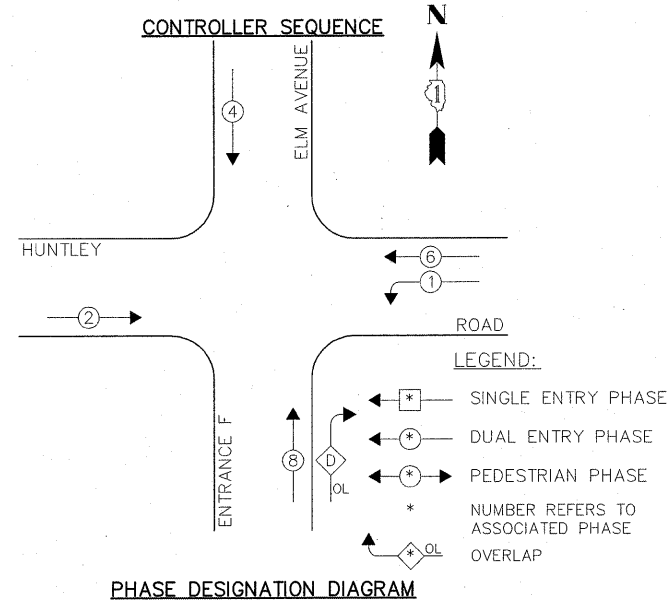
- NOTES:**
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by 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

GHA #4085.880

TRAFFIC SIGNAL LEGEND

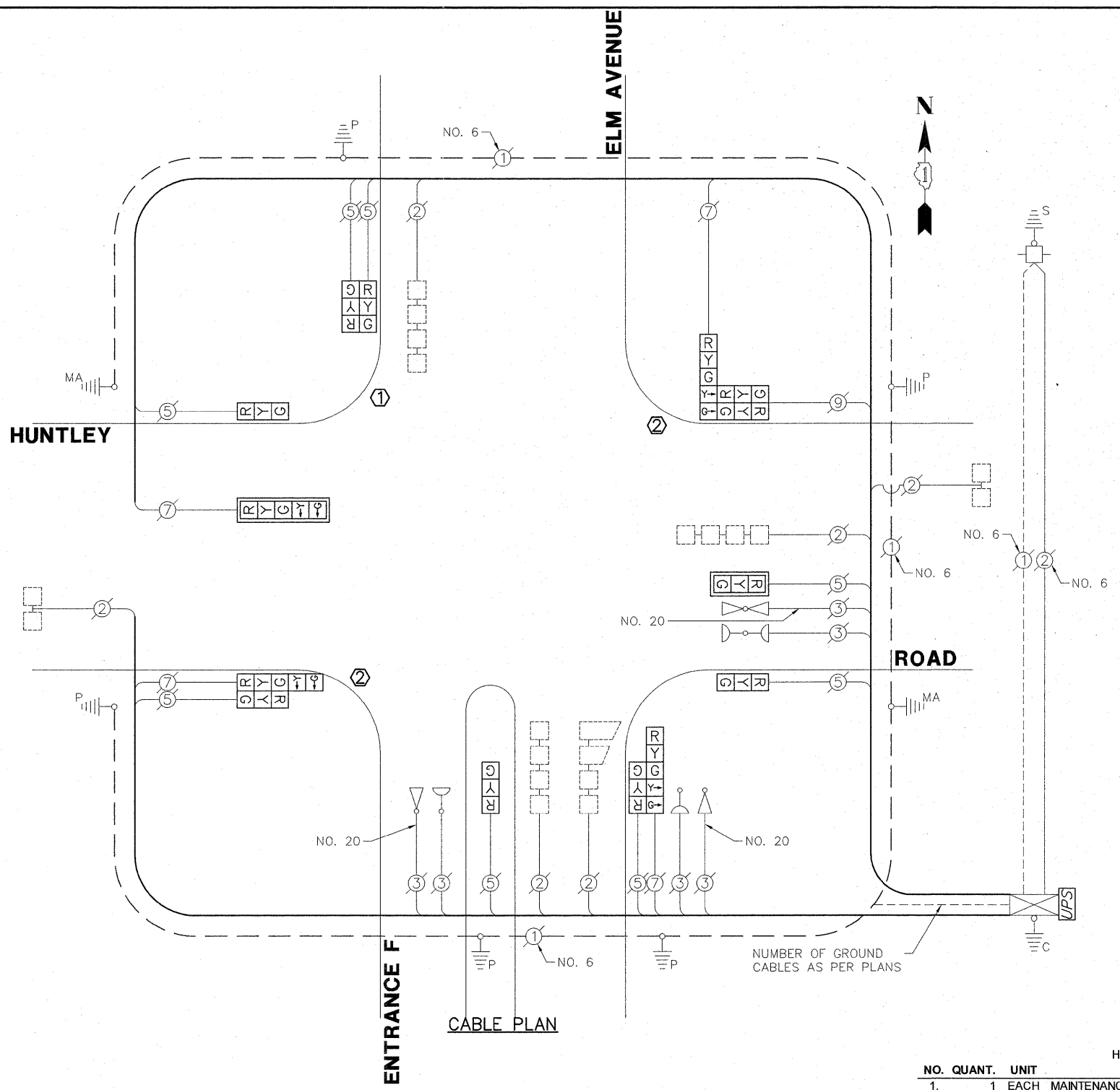
ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS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



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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
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	-
TOTAL =					393.6

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

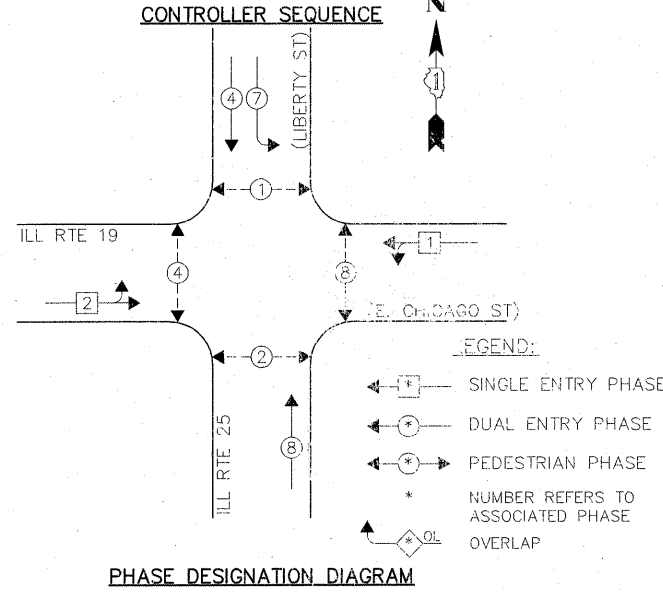
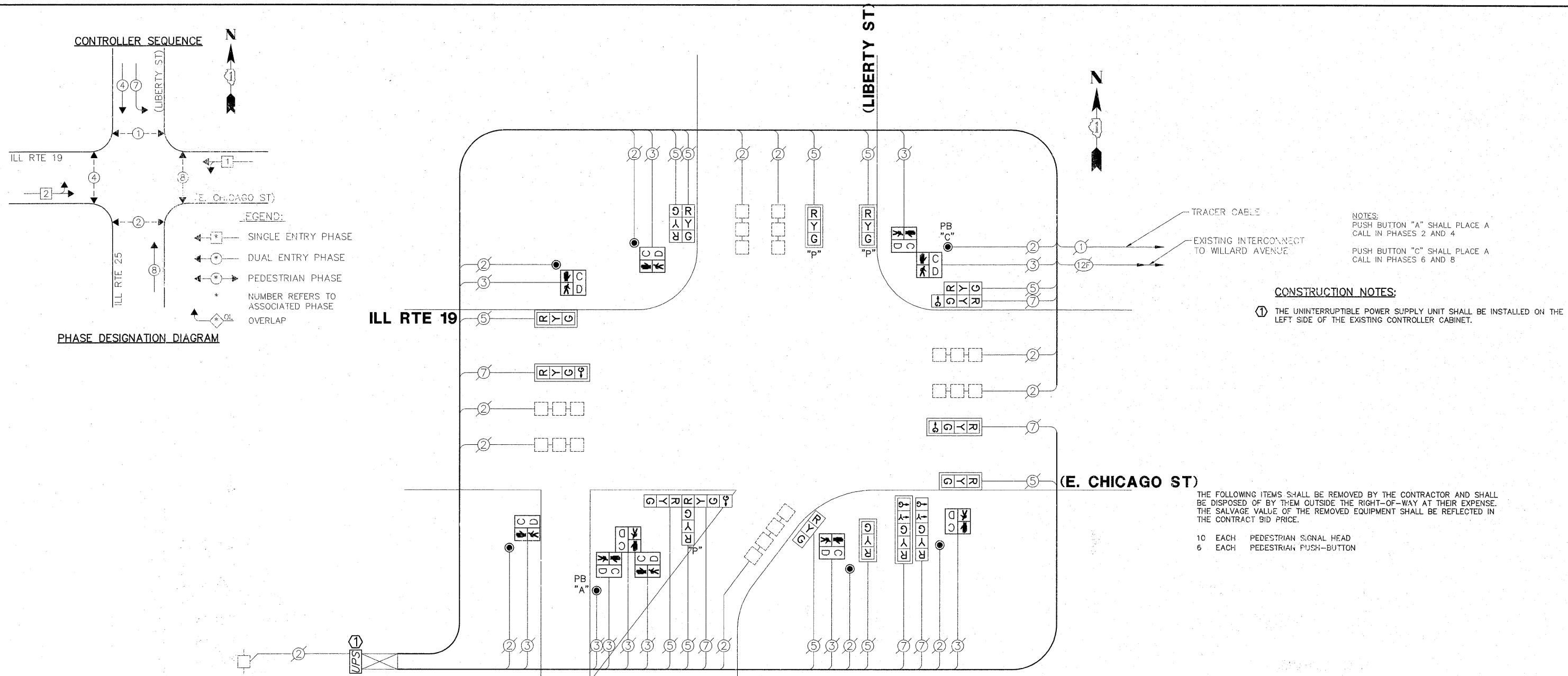


- CONSTRUCTION NOTES:**
- REPLACE EXISTING 14 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.
 - REPLACE EXISTING 16 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.

- 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.
- | | | |
|----|------|--------------------------|
| 10 | EACH | SIGNAL HEAD, 3-SECTION |
| 4 | EACH | SIGNAL HEAD, 5-SECTION |
| 2 | EACH | TRAFFIC SIGNAL BACKPLATE |
| 3 | EACH | TRAFFIC SIGNAL POST |

SCHEDULE OF QUANTITIES
HUNTLEY ROAD AT ELM AVENUE / ENTRANCE F

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
3.	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
4.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
5.	3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
6.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
7.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
8.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
9.	1	EACH	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
10.	2	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
11.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
12.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
13.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL



LEGEND:
 [Symbol] SINGLE ENTRY PHASE
 [Symbol] DUAL ENTRY PHASE
 [Symbol] PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE OVERLAP

NOTES:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8

CONSTRUCTION NOTES:
 ① THE UNINTERRUPTIBLE POWER SUPPLY UNIT SHALL BE INSTALLED ON THE LEFT SIDE OF THE EXISTING CONTROLLER CABINET.

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.

10 EACH PEDESTRIAN SIGNAL HEAD
 6 EACH PEDESTRIAN PUSH-BUTTON

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

SCHEDULE OF QUANTITIES
 ILL RTE 19 (E. CHICAGO AV) AT ILL RTE 25 (LIBERTY ST)

NO.	QUANT.	UNIT
1.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	5	EACH PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	1	EACH PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4.	1	EACH PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
5.	1	EACH MODIFY EXISTING CONTROLLER CABINET
6.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
7.	1	EACH UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
8.	1	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
9.	3	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
10.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
11.	1	EACH SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
12.	2	EACH OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
13.	7	EACH PEDESTRIAN PUSH-BUTTON, NON-LATCHING
14.	2	EACH SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED, RETROFIT
15.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT
16.	1	EACH SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED, RETROFIT
17.	1	EACH COMBINATION SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-4 SECTION, 1-3 SECTION, BRACKET MOUNTED, RETROFIT

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	17	135	17	0.50	144.5
SIGNAL (YELLOW)	17	135	25	0.25	106.25
SIGNAL (GREEN)	21	135	15	0.25	78.75
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	10	90	25	1.00	250.0
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 =					709.3

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

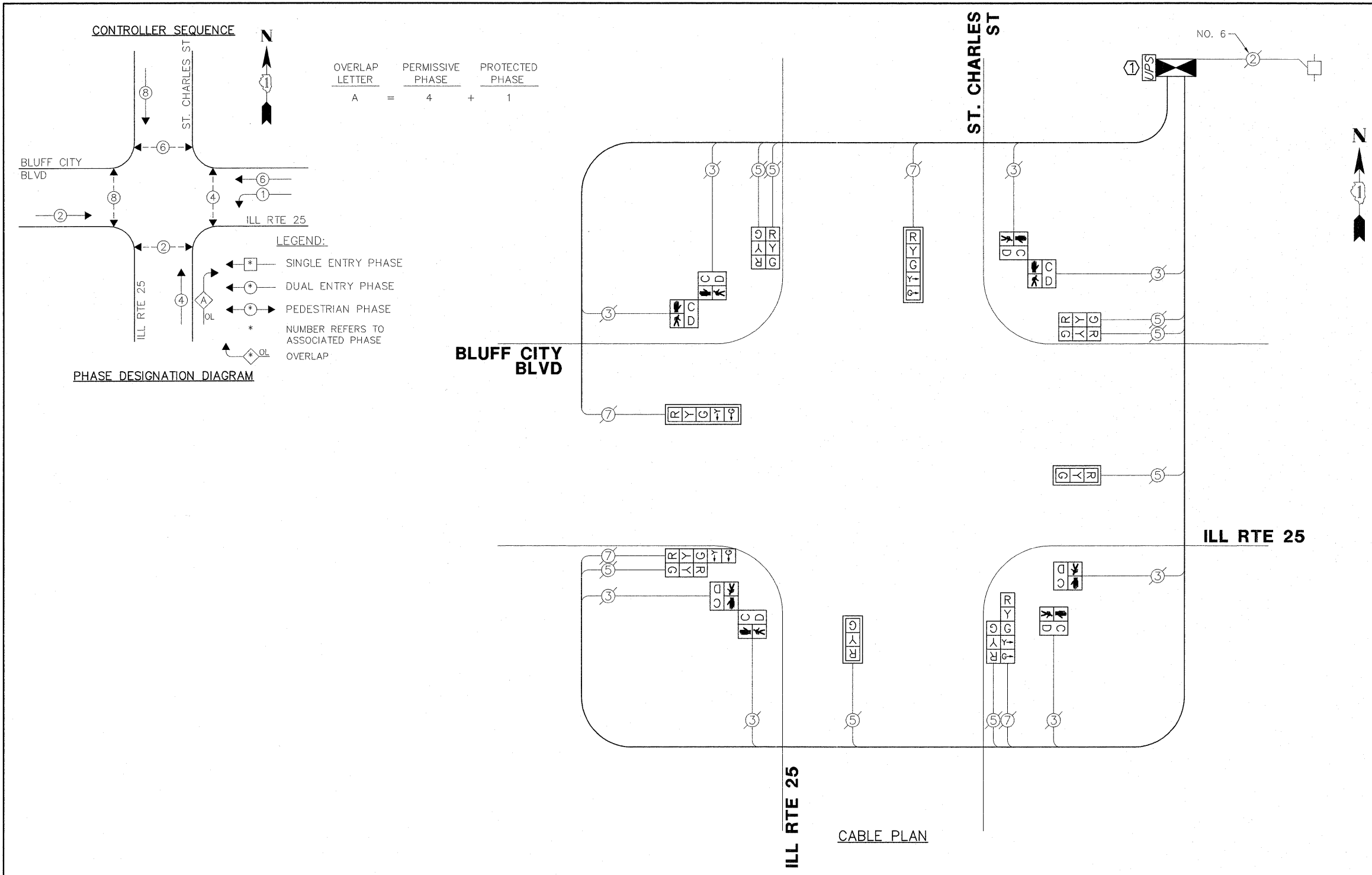
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		DRAWN - ZCW	REVISED -
		CHECKED - KLB	REVISED -
		DATE - 12/16/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM
ILL ROUTE 19 (E. CHICAGO AV) AT ILL ROUTE 25 (LIBERTY ST)

F.A.P. RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 13
SCALE N.A.			CONTRACT # 60R60	
ILLINOIS FED. AID PROJECT				

GHA #4085.880



CONSTRUCTION NOTES:

① THE EXISTING EMERGENCY VEHICLE PREEMPTION CABLES ARE NOT CONNECTED IN THE EXISTING CONTROLLER CABINET. THE ENGINEER SHALL COORDINATE WITH THE CITY OF ELGIN FOR DELIVERY OF THE EXISTING LIGHT DETECTOR AMPLIFIER.

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: CITY OF ELGIN
- 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.
- 8 EACH SIGNAL HEAD, 3-SECTION
 - 4 EACH SIGNAL HEAD, 5-SECTION
 - 8 EACH PEDESTRIAN SIGNAL HEAD
 - 1 EACH CABINET AND CONTROLLER (COMPLETE)
 - 4 EACH TRAFFIC SIGNAL BACKPLATE

SCHEDULE OF QUANTITIES
ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (ST. CHARLES RD)

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
3.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
4.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
5.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
6.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
7.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
8.	3	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
9.	4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
10.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
11.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		
		INCAND.	L.E.D.	% OPERATION
SIGNAL (RED)	12	135	17	0.50
SIGNAL (YELLOW)	12	135	25	0.25
SIGNAL (GREEN)	12	135	15	0.25
ARROW	8	135	12	0.10
PED. SIGNAL	8	90	25	1.00
CONTROLLER	1	-	100	1.00
LUMINAIRE	-	-	250	0.50
L.E.D. ST. NAME SIGN	-	-	64	0.50
VIDEO SYSTEM	-	-	150	1.00
BATTERY BACKUP	1	-	25	1.00
ILLUMINATED SIGN	-	-	25	0.05
TOTAL =				556.6

ENERGY COSTS - BILLED TO: CITY OF ELGIN
(ADDRESS) 150 DEXTER COURT
(ADDRESS) ELGIN, IL 60120
ENERGY SUPPLY - CONTACT: -
PHONE: -
COMPANY: -

FILE NAME = 4085.880-TR1.dwg	USER NAME = GEORGE WHITTEN	DESIGNED - JRD	REVISED -
	PLOT SCALE = 1" = .0833'	DRAWN - ZCW	REVISED -
	PLOT DATE = 12/16/2011	CHECKED - KLB	REVISED -
		DATE - 12/16/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

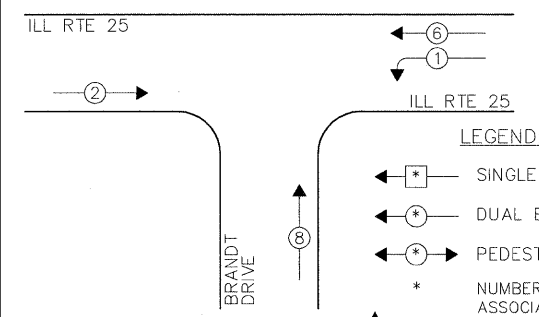
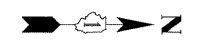
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (ST. CHARLES ST)

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

FAP RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 14
CONTRACT # 60R60			ILLINOIS FED. AID PROJECT	

GHA #4085.880

CONTROLLER SEQUENCE



LEGEND:

- ◀ * → SINGLE ENTRY PHASE
- ◀ * → DUAL ENTRY PHASE
- ◀ * → PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- ◀ * OL → OVERLAP

PHASE DESIGNATION DIAGRAM

ILL RTE 25

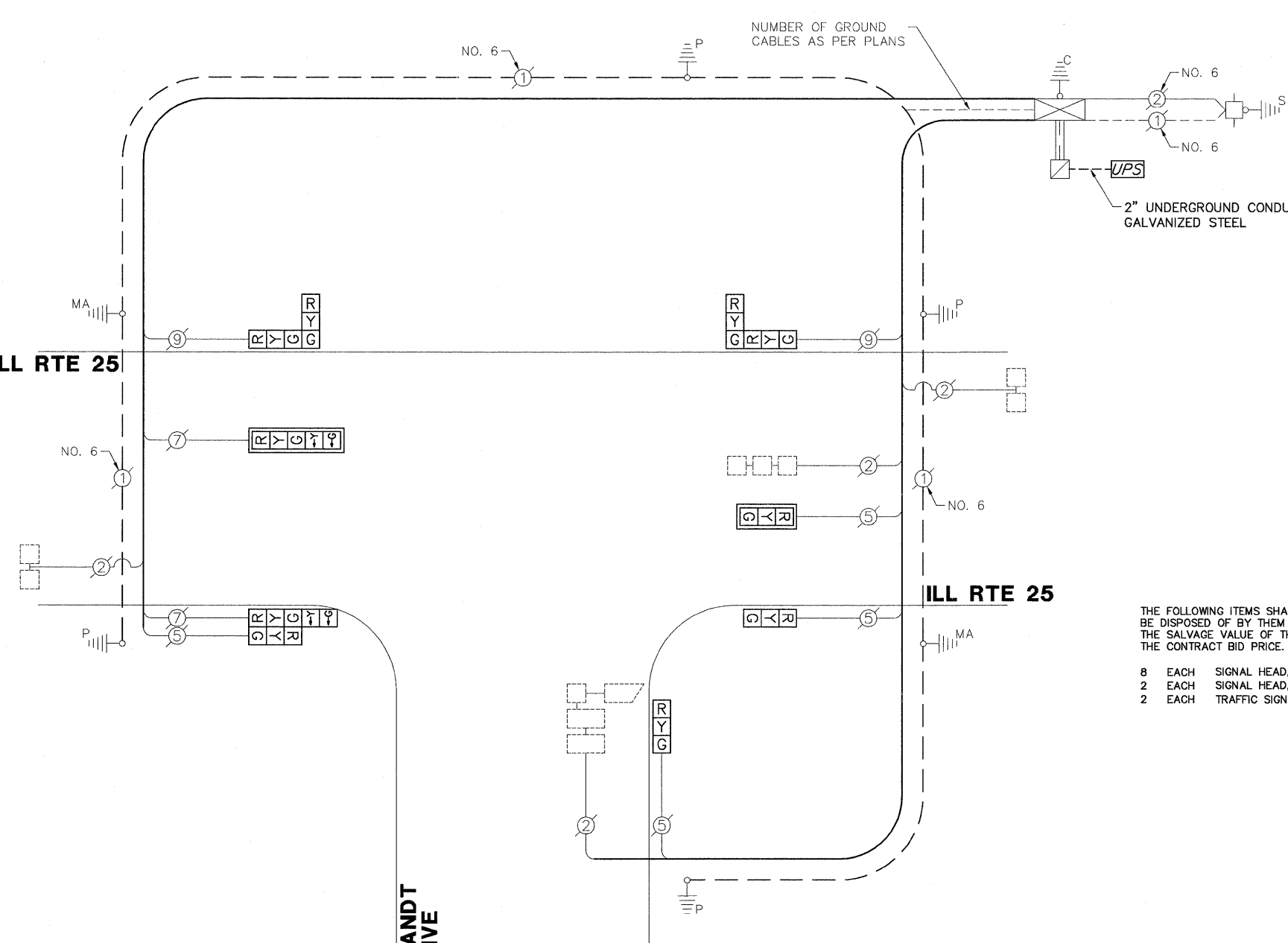
NO. 6

NO. 6

NO. 6

BRANDT DRIVE

CABLE PLAN



THE UPS SHALL BE INSTALLED ON A SEPARATE FOUNDATION NEXT TO THE EXISTING CONTROLLER CABINET (TYPE III) OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED."

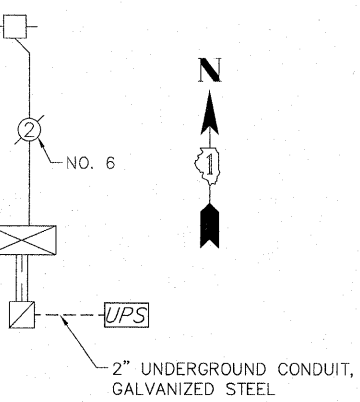
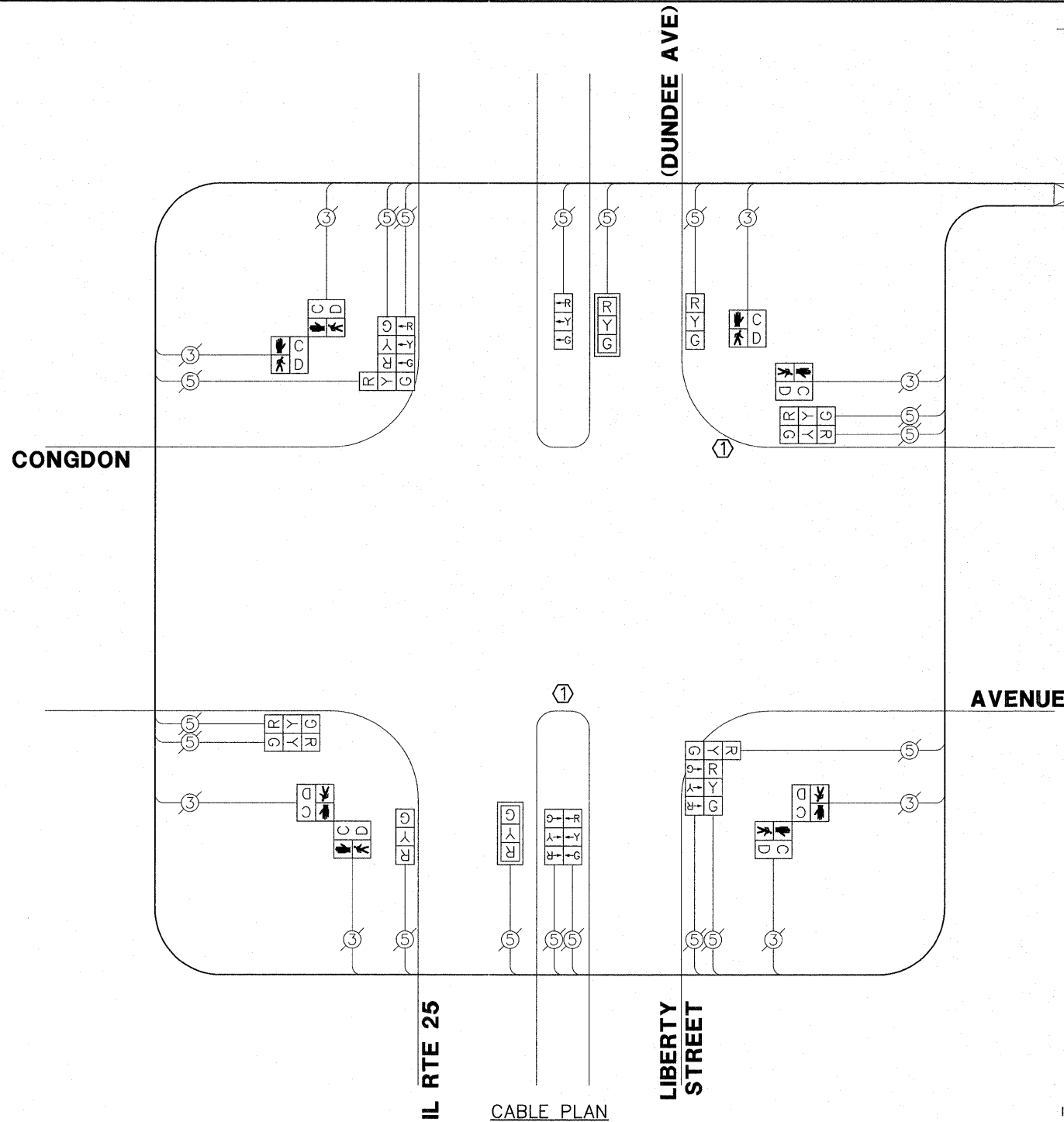
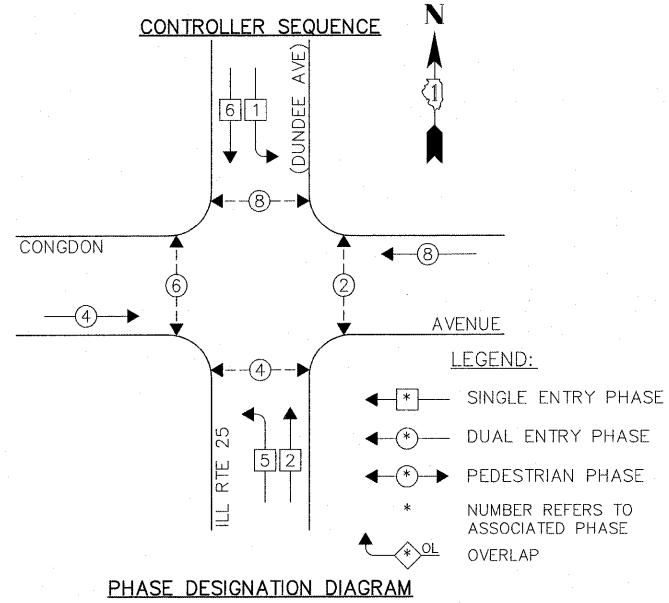
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 8 EACH SIGNAL HEAD, 3-SECTION
 - 2 EACH SIGNAL HEAD, 5-SECTION
 - 2 EACH TRAFFIC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

SCHEDULE OF QUANTITIES
ILL RTE 25 AT BRANDT DRIVE

NO.	QUANT.	UNIT
1.	15	FOOT UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3.	1	EACH DRILL EXISTING HANDHOLE
4.	1	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
5.	2	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
6.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
7.	2	EACH SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
8.	1	EACH SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
9.	2	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
10.	1	EACH MODIFY EXISTING CONTROLLER CABINET
11.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
12.	1	EACH UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	10	135	17	0.50	85.0
SIGNAL (YELLOW)	10	135	25	0.25	62.5
SIGNAL (GREEN)	10	135	15	0.25	37.5
ARROW	4	135	12	0.10	4.8
FED. 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	-
TOTAL =					314.8

ENERGY COSTS - BILLED TO: CITY OF ELGIN
(ADDRESS) 150 DEXTER COURT
(ADDRESS) ELGIN, IL 60120
ENERGY SUPPLY - CONTACT: -
PHONE: -
COMPANY: -



THE UPS SHALL BE INSTALLED ON A SEPARATE FOUNDATION NEXT TO THE EXISTING CONTROLLER CABINET (TYPE III) OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED."

CONSTRUCTION NOTES:

- ① REPLACE EXISTING 14 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES

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.

- 14 EACH SIGNAL HEAD, 3-SECTION
- 3 EACH OPTICALLY PROGRAMMED SIGNAL HEAD, 3-SECTION
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH TRAFFIC SIGNAL POST
- 8 EACH PEDESTRIAN SIGNAL HEAD

SCHEDULE OF QUANTITIES

ILL RTE 25 (DUNDEE AV) / LIBERTY STREET AT CONGDON AVENUE

NO.	QUANT.	UNIT
1.	15	FOOT UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3.	2	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
4.	1	EACH DRILL EXISTING HANDHOLE
5.	2	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
6.	3	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
7.	3	EACH SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
8.	2	EACH SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED
9.	2	EACH PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10.	3	EACH PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
11.	2	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
12.	1	EACH MODIFY EXISTING CONTROLLER CABINET
13.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
14.	1	EACH UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	
SIGNAL (RED)	17	135	17	0.50	144.5
SIGNAL (YELLOW)	17	135	25	0.25	106.25
SIGNAL (GREEN)	17	135	15	0.25	63.75
ARROW	-	135	12	0.10	-
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 =					639.5

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

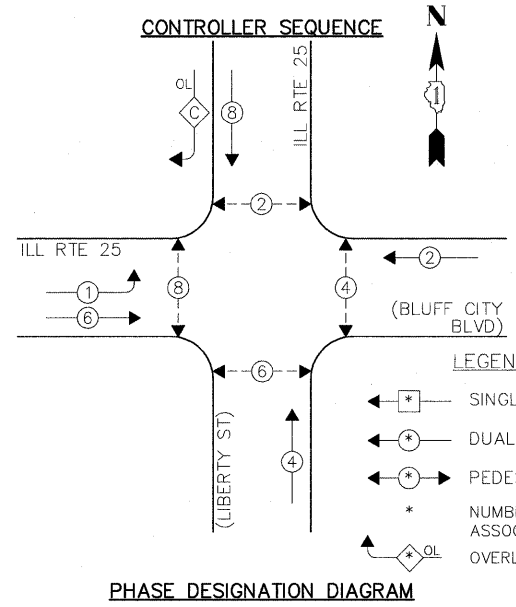
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		DRAWN - ZCW	REVISED -
		CHECKED - KLB	REVISED -
		DATE - 12/16/2011	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM
ILL ROUTE 25 (DUNDEE AV) / LIBERTY ST AT CONGDON AVENUE

F.A.P. RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 16
CONTRACT # 60R60			ILLINOIS FED. AID PROJECT	

GHA #4085.880



OVERLAP LETTER = C
 PERMISSIVE PHASE = 8
 PROTECTED PHASE = 1

LEGEND:
 * SINGLE ENTRY PHASE
 * DUAL ENTRY PHASE
 * PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE
 OL OVERLAP

ILL RTE 25

ILL RTE 25

(BLUFF CITY BLVD)

(LIBERTY ST)

CABLE PLAN

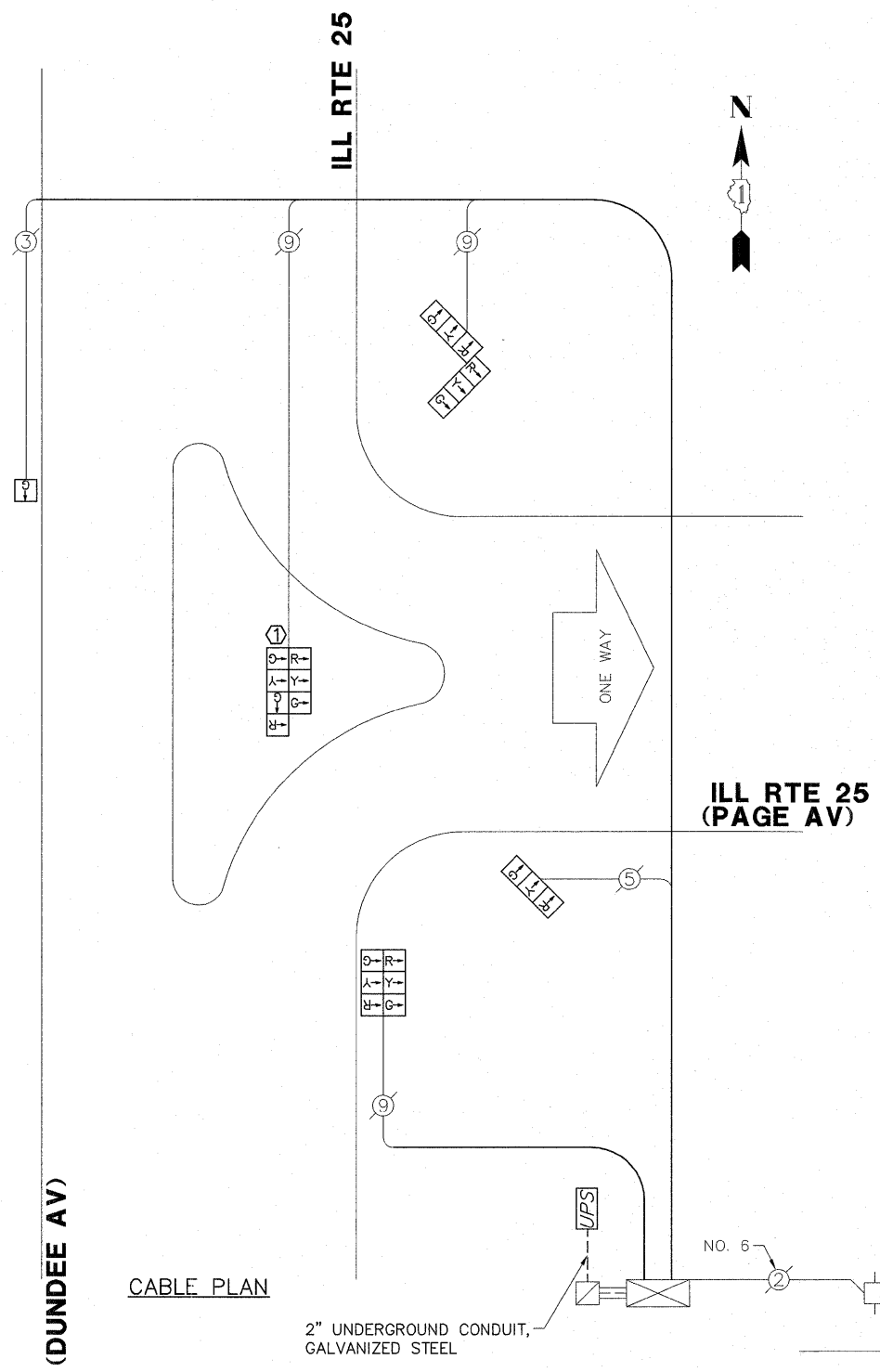
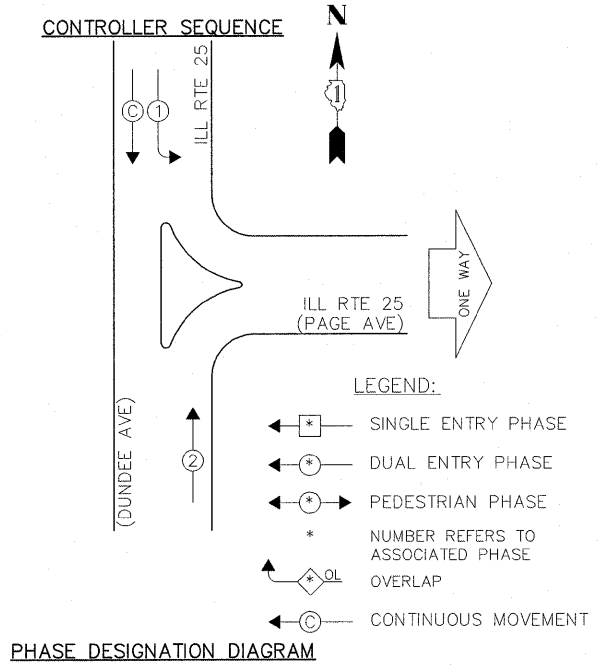
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 10 EACH SIGNAL HEAD, 3-SECTION
 - 4 EACH SIGNAL HEAD, 5-SECTION
 - 5 EACH TRAFFIC SIGNAL BACKPLATE
 - 8 EACH PEDESTRIAN SIGNAL HEAD

SCHEDULE OF QUANTITIES
 ILL RTE 25 (BLUFF CITY BLVD) AT ILL RTE 25 (LIBERTY ST)

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
3.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
4.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
5.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
6.	1	EACH	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
7.	4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
8.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
9.	5	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
10.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
11.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
12.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
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	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					588.6

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



CONSTRUCTION NOTES:

① USE SPARE WIRE IN THE EXISTING 9 CONDUCTOR CABLE FOR ADDITIONAL CONTINUOUS FLOW SECTION ON THE 4-SECTION HEAD.

② INCIDENTAL HMA MIX WILL BE A MINIMUM SURFACE, MIX "D", N50.

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 SIGNAL HEAD, 1-SECTION
7 EACH SIGNAL HEAD, 3-SECTION

THE UPS SHALL BE INSTALLED ON A SEPARATE FOUNDATION NEXT TO THE EXISTING CONTROLLER CABINET (TYPE III) OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED."

SCHEDULE OF QUANTITIES
ILL RTE 25 (DUNDEE AV) AT ILL RTE 25 (PAGE AV)

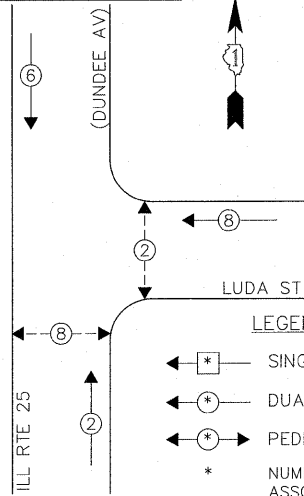
NO.	QUANT.	UNIT	DESCRIPTION
1.	15	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3.	1	EACH	DRILL EXISTING HANDHOLE
4.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED
5.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
6.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
7.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED
8.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
9.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
10.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED

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

TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	7	135	17	0.50	59.5
SIGNAL (YELLOW)	7	135	25	0.25	43.75
SIGNAL (GREEN)	9	135	15	0.25	33.75
ARROW	--	135	12	0.10	--
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	--
TOTAL =					262.0

ENERGY COSTS - BILLED TO: CITY OF ELGIN
(ADDRESS) 150 DEXTER COURT
(ADDRESS) ELGIN, IL 60120
ENERGY SUPPLY - CONTACT: ---
PHONE: ---
COMPANY: ---

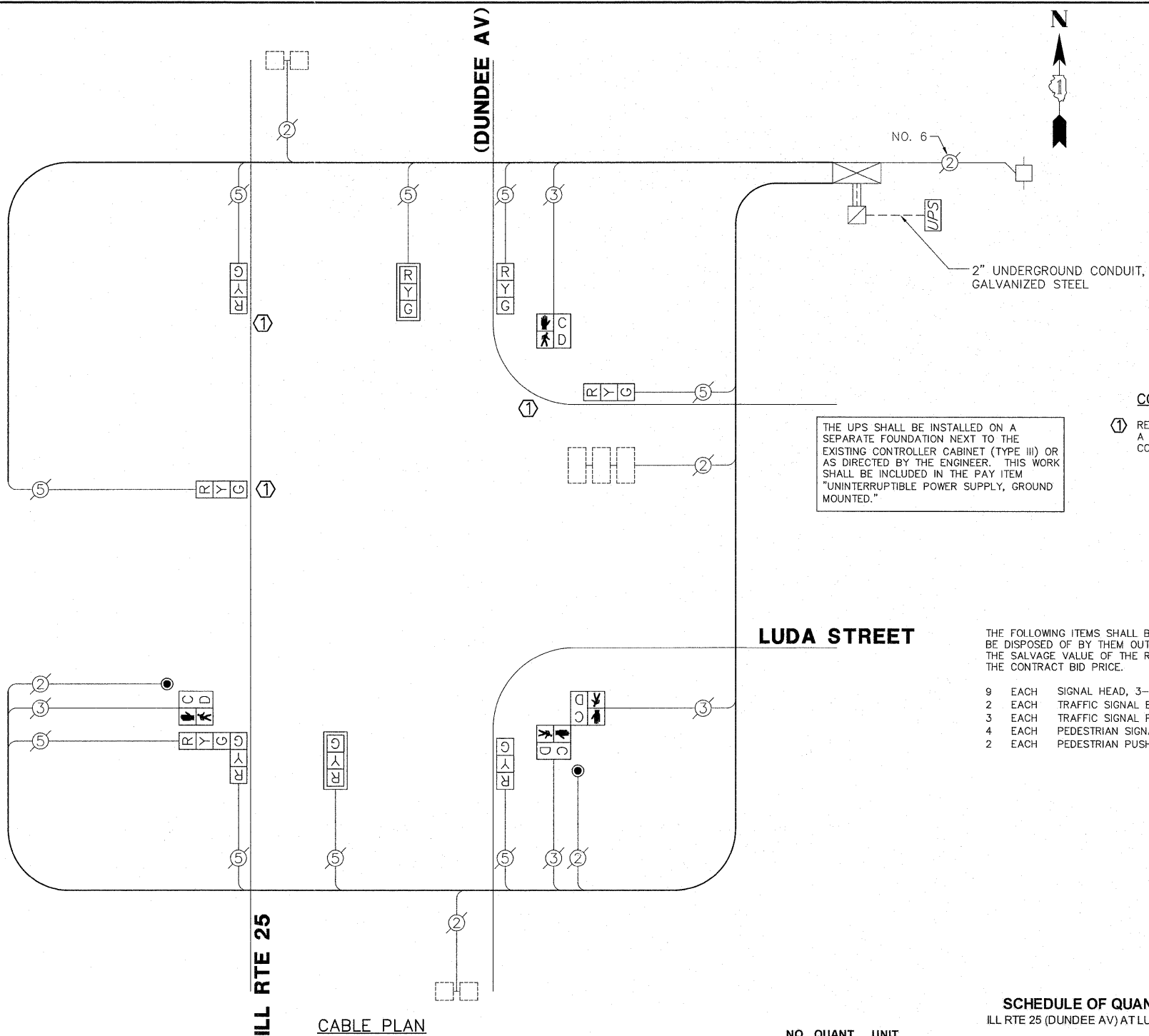
CONTROLLER SEQUENCE



LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◻ DUAL ENTRY PHASE
- ◻ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- ◻ OL OVERLAP

PHASE DESIGNATION DIAGRAM



THE UPS SHALL BE INSTALLED ON A SEPARATE FOUNDATION NEXT TO THE EXISTING CONTROLLER CABINET (TYPE III) OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED."

CONSTRUCTION NOTES:

- ① REPLACE EXISTING 10 FOOT PAINTED POST WITH A 14 FOOT POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES

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.

- 9 EACH SIGNAL HEAD, 3-SECTION
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 3 EACH TRAFFIC SIGNAL POST
- 4 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

CABLE PLAN

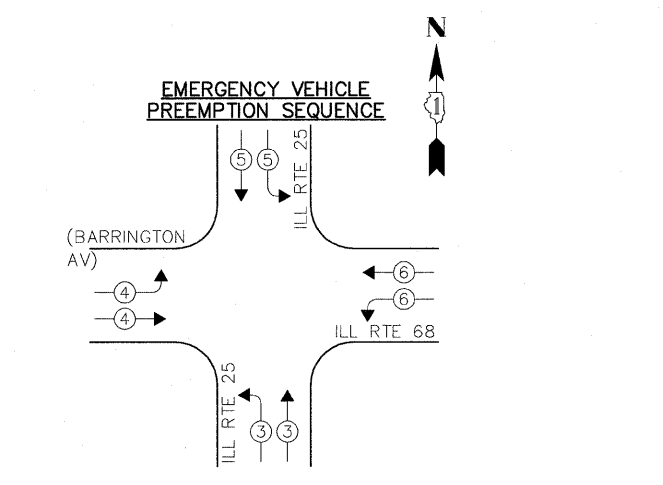
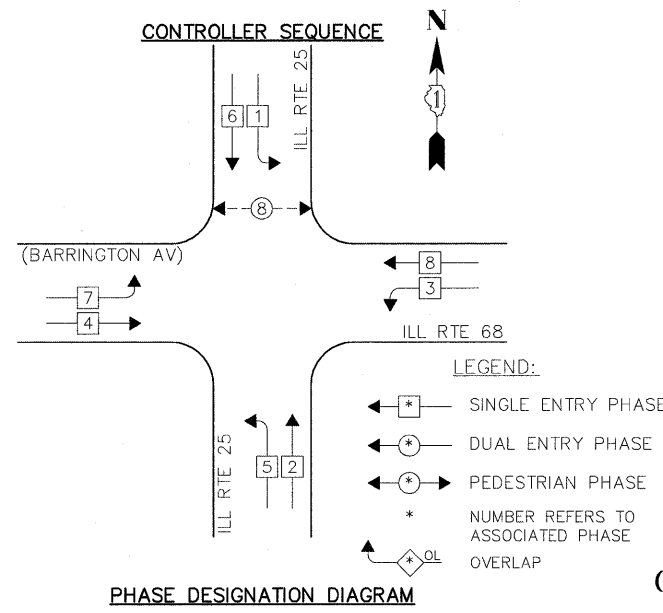
SCHEDULE OF QUANTITIES

ILL RTE 25 (DUNDEE AV) AT LUDA STREET

NO.	QUANT.	UNIT	DESCRIPTION
1.	15	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3.	3	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
4.	1	EACH	DRILL EXISTING HANDHOLE
5.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
6.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
7.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
8.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
9.	1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10.	2	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
11.	2	EACH	PEDESTRIAN PUSH-BUTTON
12.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
13.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
14.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	9	135	17	0.50	76.5
SIGNAL (YELLOW)	9	135	25	0.25	56.25
SIGNAL (GREEN)	9	135	15	0.25	33.75
ARROW	-	135	12	0.10	100.0
PED. SIGNAL	4	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	-
TOTAL =					391.5

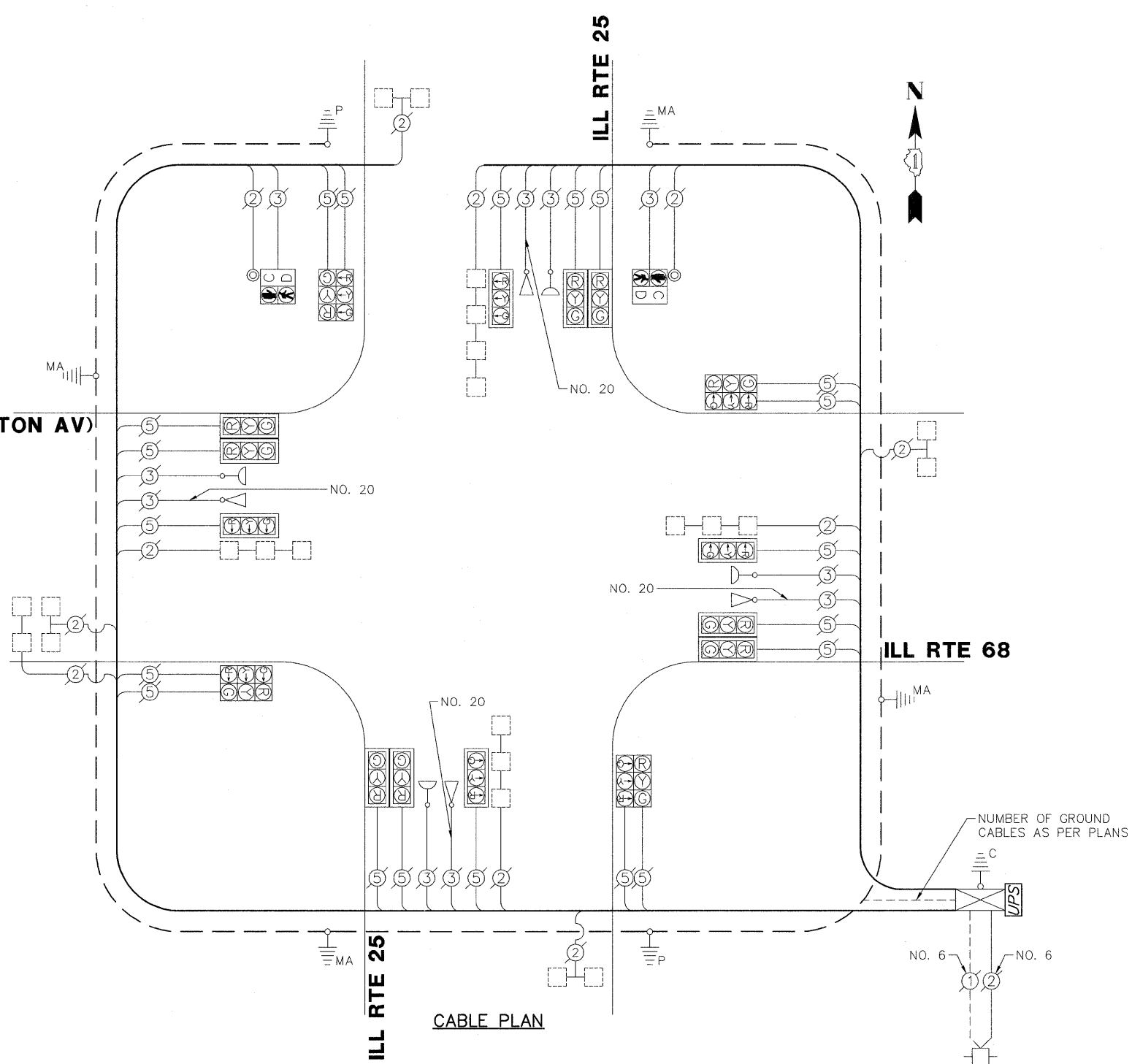
ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -



EXISTING EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	↗	↘	↖	↙

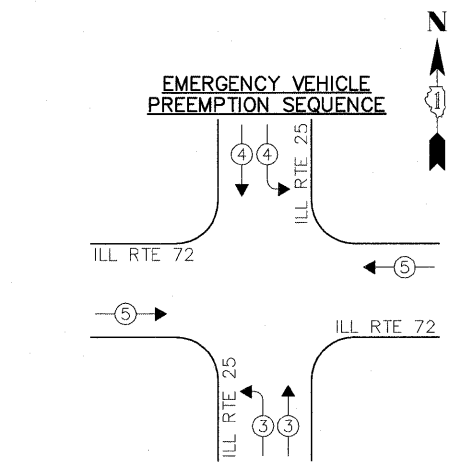
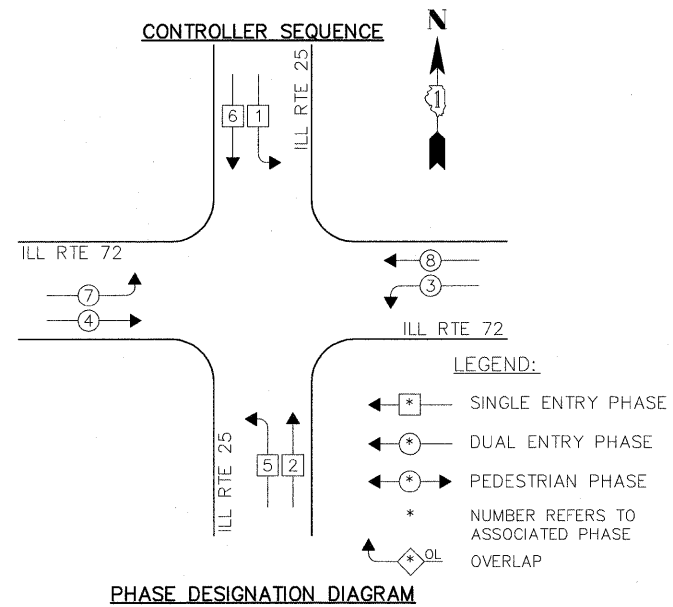
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO.	LAMPS	INCAND.	WATTAGE	
SIGNAL (RED)	20	135	17	0.50	170.0
SIGNAL (YELLOW)	20	135	25	0.25	125.0
SIGNAL (GREEN)	20	135	15	0.25	75.0
ARROW	-	135	12	0.10	-
PED. SIGNAL	2	90	25	1.00	50.0
CONTROLLER	1	-	100	1.00	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 =					545.0

ENERGY COSTS - BILLED TO: VILLAGE OF EAST DUNDEE
 (ADDRESS) 120 BARRINGTON AVENUE
 (ADDRESS) EAST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT:
 PHONE:
 COMPANY:

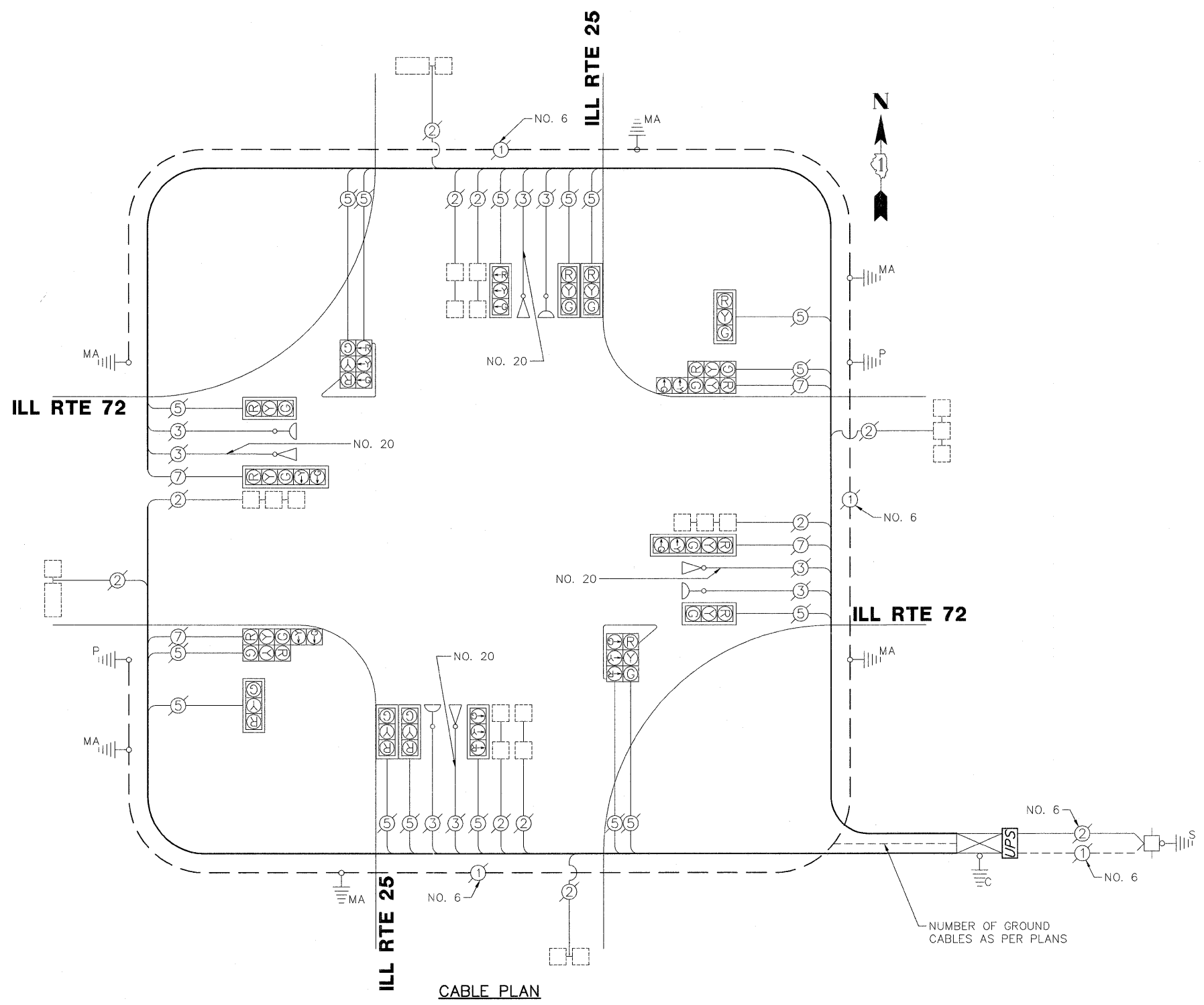


SCHEDULE OF QUANTITIES
ILL RTE 25 AT ILL RTE 68 (BARRINGTON AV)

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	71	14	==



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		INCAND.	L.E.D.		
SIGNAL (RED)	20	135	17	0.50	170.0
SIGNAL (YELLOW)	20	135	25	0.25	125.0
SIGNAL (GREEN)	20	135	15	0.25	75.0
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	-
TOTAL =					504.6

ENERGY COSTS - BILLED TO: VILLAGE OF EAST DUNDEE
 (ADDRESS) 120 BARRINGTON AVENUE
 (ADDRESS) EAST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -

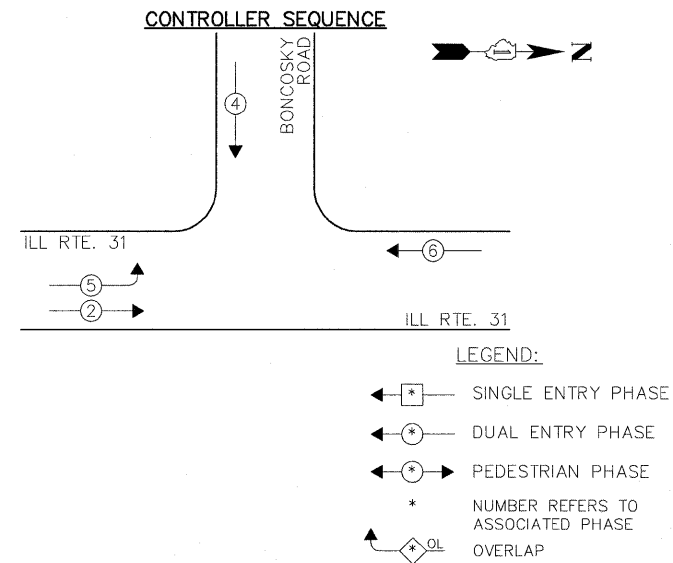
SCHEDULE OF QUANTITIES			
ILL RTE 25 AT ILL RTE 72			
NO.	QUANT.	UNIT	
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

FILE NAME = 4085.880-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
		DRAWN - ZCW	REVISED -
		CHECKED - KLB	REVISED -
		DATE - 12/16/2011	REVISED -

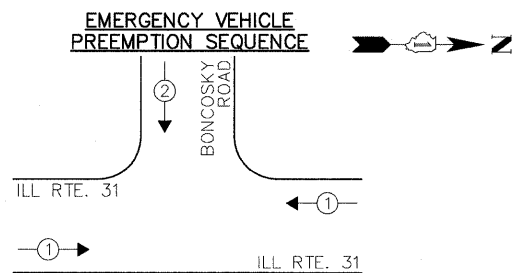
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILL ROUTE 25 AT ILL ROUTE 72

FAP RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 22
CONTRACT #: 60R60			GHA #4085.880	
ILLINOIS FED. AID PROJECT				



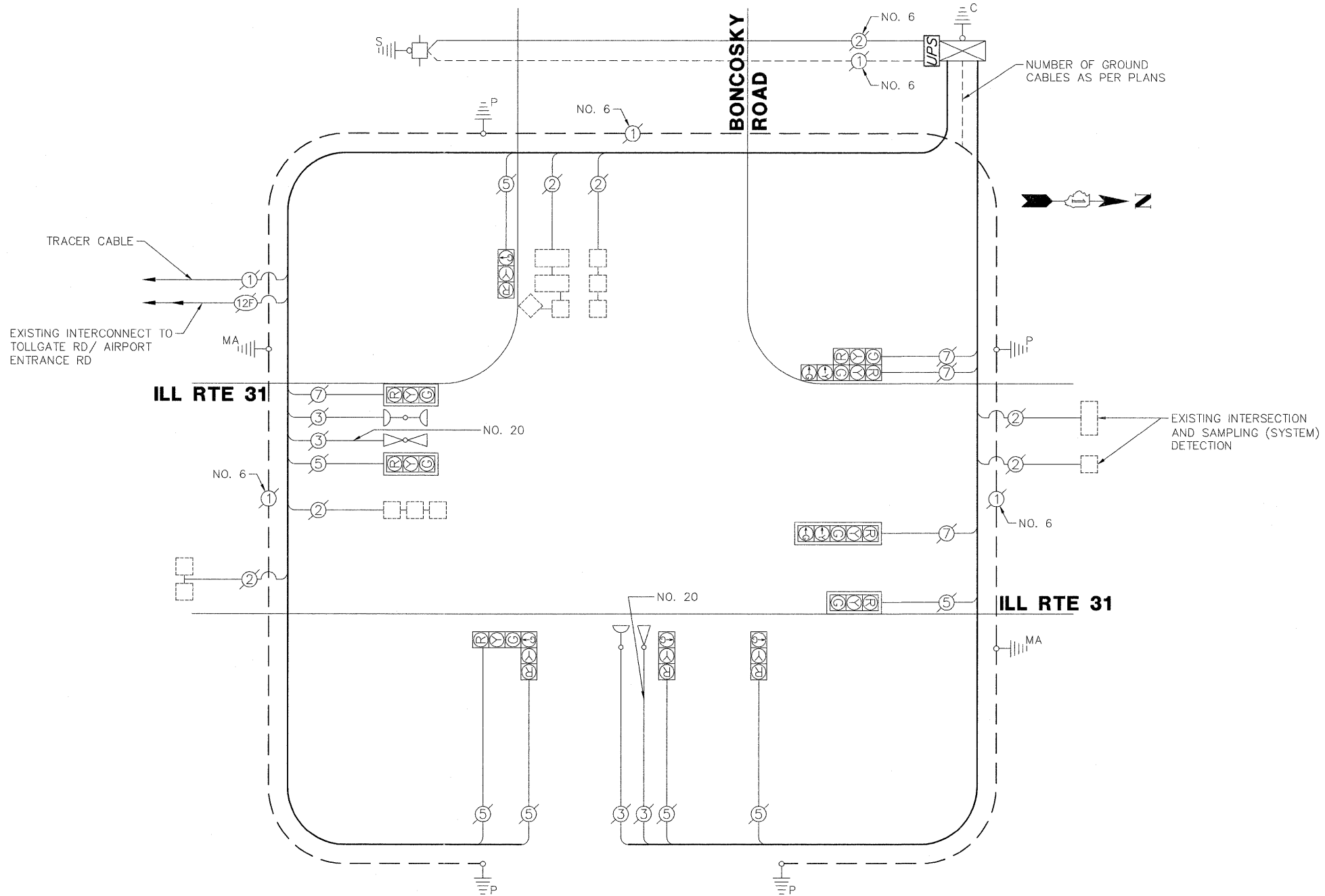
PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	←	↓

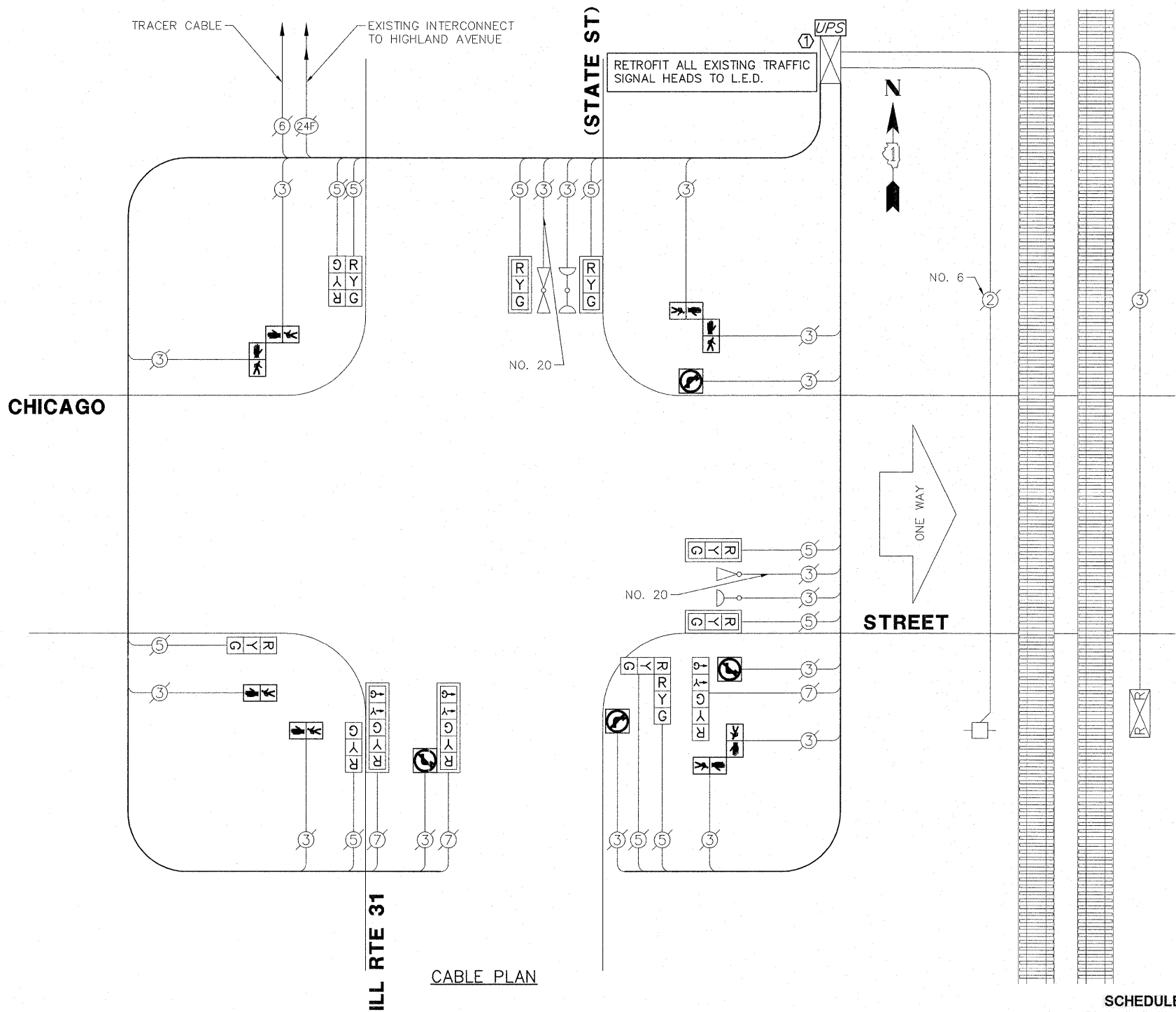
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	WATTAGE L.E.D.	% OPERATION	
SIGNAL (RED)	11	135	17	0.50	93.5
SIGNAL (YELLOW)	11	135	25	0.25	68.75
SIGNAL (GREEN)	11	135	15	0.25	41.25
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	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	-	-
TOTAL =					333.3

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -



SCHEDULE OF QUANTITIES
ILL RTE 31 AT BONCOSKY ROAD

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL



CABLE PLAN

CONSTRUCTION NOTES:
 ① ADDITIONAL BRACING SUPPORT FOR THE BOTTOM OF THE NEW UPS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEER.

SCHEDULE OF QUANTITIES
 ILL RTE 31 (STATE ST) AT CHICAGO STREET

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED
3.	3	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED
4.	4	EACH	ILLUMINATED SIGN, LED
5.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
6.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
7.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
8.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
9.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
10.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
11.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
12.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT

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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH ILLUMINATED SIGN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	13	135	17	0.50	110.5
SIGNAL (YELLOW)	13	135	25	0.25	81.25
SIGNAL (GREEN)	13	135	15	0.25	48.75
ARROW	6	135	12	0.10	7.2
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	4	-	25	0.05	5.0
TOTAL =					577.7

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -


SEQUENCE OF OPERATION

MOVEMENT	P 6 ↑ ↓ 1		P 6 ↑ ↓ 2				P 6 ↑ ↓ 1				← P 4 → P ←				FLASH
PHASE	1+6		2+6				1+6				4				
INTERVAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
IL RTE 31 SB MAST ARM AND FAR LEFT SIGNALS	G ← G	G ← Y	G	G	G	G	G ← G	G ← G	Y	R	R	R	R	R	R
IL RTE 31 SB NEAR RIGHT AND FAR RIGHT SIGNALS	G	G	G	G	G	G	G	G	Y	R	R	R	R	R	R
IL RTE 31 NB SIGNALS	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R
CHICAGO STREET EB SIGNALS	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
PED SIGNALS CROSSING IL RTE 31	H	H	H	H	H	H	H	H	H	H	P	FH	H	H	
PED SIGNALS CROSSING CHICAGO STREET ON WEST SIDE OF IL RTE 31	P	P	P	P	P	P	FH	H	H	H	H	H	H	H	
PED SIGNALS CROSSING CHICAGO STREET ON EAST SIDE OF IL RTE 31	H	H	H	FH	H	H	H	H	H	H	H	H	H	H	
															DARK

RAILROAD PREEMPTION SEQUENCE OF OPERATION

								PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 2	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1 OR 7	3	11								CLEAR TO NORMAL SEQUENCE
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER								2	3		
RAILROAD PREEMPTION SEQUENCE OF OPERATION NUMBER	1A	1B	1C	1D	1E	1F	1G		2		△
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	2	1D	2	2	1G	2				△
IL RTE 31 SB MAST ARM AND FAR LEFT SIGNALS	G ← Y	G	R	R	G	R	R		G		△
IL RTE 31 NEAR RIGHT AND FAR RIGHT SIGNALS	G	G	R	R	G	R	R		G		△
IL RTE 31 NB SIGNALS	R	G	R	R	G	R	R		G		△
CHICAGO STREET EB SIGNALS	R	R	Y	R	R	Y	R		R		△
PWD SIGNAL CROSSING IL RTE 31	H	H	FH	H	H	H	H		H		△
PED SIGNAL CROSSING CHICAGO STREET ON WEST SIDE OF IL RTE 31	FH	FH	H	H	H	H	H		H		△
PED SIGNAL CROSSING CHICAGO STREET ON EAST SIDE IL RTE 31	FH	FH	H	H	H	H	H		H		△
ILLUMINATED SIGN NB IL RTE 31 NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT		NRT		△
ILLUMINATED SIGN SB IL RTE 31 NLT	NLT	NLT	NLT	NLT	NLT	NRT	NLT		NLT		△

NRT = "NO RIGHT TURN" OR 

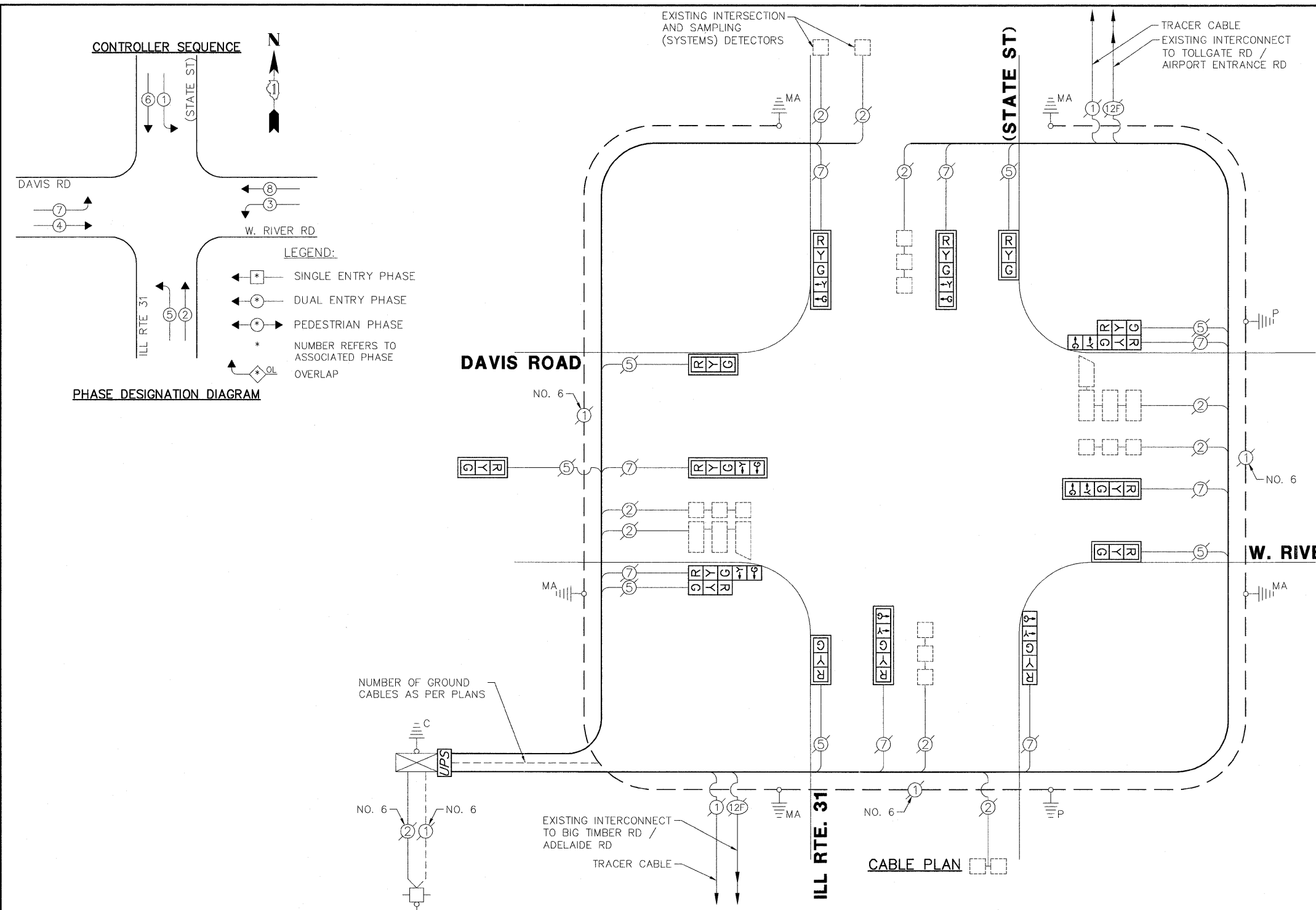
NLT = "NO LEFT TURN" OR 

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 2 IS TERMINATED.

EMERGENCY VEHICLE SEQUENCE OF OPERATION

																			PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	1	3	3	7	7	11	11													CLEAR TO NORMAL SEQUENCE
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	2	3	◇
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	1E	3	2	1H	1J	3	1L	2	1N	1P	3	1R	1S	2	3			◇
IL RTE 31 SB MAST ARM AND FAR LEFT SIGNALS	G ← G	G ← Y	G ← G	Y	R	G	G	Y	R	G ← G	G ← Y	G ← G	Y	R	R	R	R	R	G	R	◇
IL RTE 31 SB NEAR RIGHT AND FAR RIGHT SIGNALS	G	G	G	Y	R	G	G	Y	R	G	G	G	Y	R	R	R	R	R	G	R	◇
IL RTE 31 NB SIGNALS	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	G	R	◇
CHICAGO STREET EB SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	G	R	G	◇
PED SIGNAL CROSSING IL RTE 31	H	H	H	H	H	H	H	H	H	H	H	H	H	H	FH	H	H	FH	H	H	◇
PED SIGNAL CROSSING CHICAGO STREET ON WEST SIDE OF IL RTE 31	FH	H	FH	H	H	FH	FH	H	H	FH	H	FH	H	H	H	H	H	H	H	H	◇
PED SIGNALS CROSSING CHICAGO STREET ON EAST SIDE OF IL RTE 31	H	H	H	H	H	FH	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	◇

◇ EMERGENCY VEHICLE PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY INTERVAL AFTER EMERGENCY INTERVAL 2 OR 3 IS TERMINATED



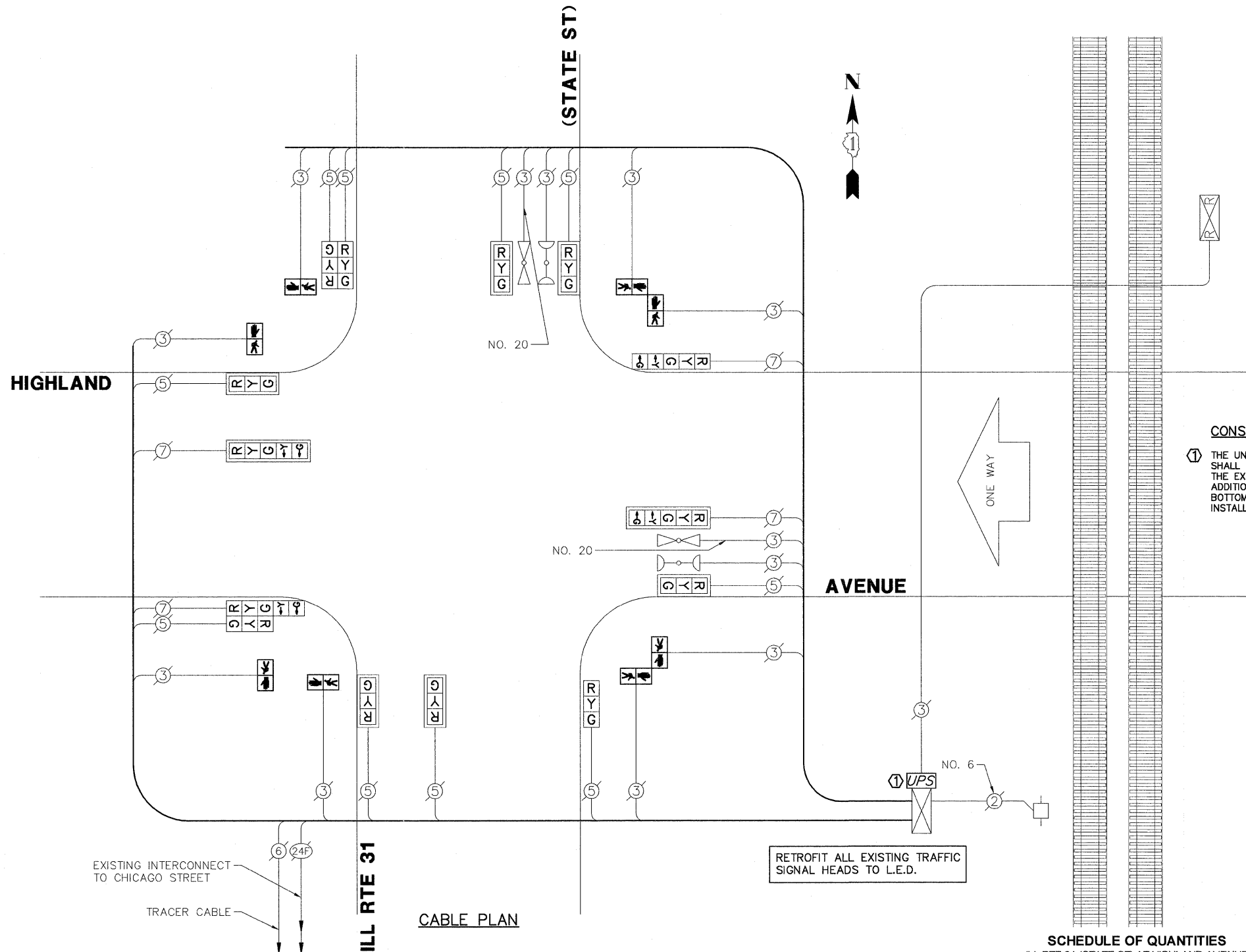
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 7 EACH SIGNAL HEAD, 3-SECTION
 - 8 EACH SIGNAL HEAD, 5-SECTION
 - 10 EACH TRAFFIC SIGNAL BACKPLATE

SCHEDULE OF QUANTITIES
ILL RTE 31 (STATE ST) AT W. RIVER ROAD / DAVIS ROAD

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
3.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
5.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
6.	10	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
7.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
8.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
9.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	LE.D.	% OPERATION	
SIGNAL (RED)	15	135	17	0.50	127.5
SIGNAL (YELLOW)	15	135	25	0.25	93.75
SIGNAL (GREEN)	15	135	15	0.25	56.25
ARROW	16	135	12	0.10	19.2
PE.D. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
LE.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 =					421.7

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -



CONSTRUCTION NOTES:
 ① THE UNINTERRUPTIBLE POWER SUPPLY UNIT SHALL BE INSTALLED ON THE LEFT SIDE OF THE EXISTING CONTROLLER CABINET. ADDITIONAL BRACING SUPPORT FOR THE BOTTOM OF THE NEW UPS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEER.

CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

SCHEDULE OF QUANTITIES
 ILL RTE 31 (STATE ST) AT HIGHLAND AVENUE

NO.	QUANT.	UNIT
1.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	4	EACH PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED
3.	2	EACH PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED
4.	1	EACH MODIFY EXISTING CONTROLLER CABINET
5.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6.	1	EACH UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
7.	1	EACH SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT
8.	1	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
9.	6	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
10.	2	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
11.	1	EACH SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
12.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT

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.
 8 EACH PEDESTRIAN SIGNAL HEAD

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	INCAND.	L.E.D.	% OPERATION
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
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	25.0
ILLUMINATED SIGN	—	—	25	0.05	—
TOTAL =					593.6

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

FILE NAME = 4085.880-TRI.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
PLOT SCALE = 1" = .0833'	DATE = 12/16/2011	DRAWN - ZCW	REVISED -
		CHECKED - KLB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES AND CABLE PLAN
ILL ROUTE 31 (STATE STREET) AT HIGHLAND AVENUE

FAP RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 27
CONTRACT #: 60R60			GHA #4085.880	
ILLINOIS FED. AID PROJECT				

SEQUENCE OF OPERATIONS

MOVEMENT	↑				↑		↑		↑		↑		↑		↑		↑		↑		FLASH
	N				P		6		2		P		7		3		P		4		
PHASE	2+6				3+7				4+8												
INTERVAL	1	2	3	4	5	6	7	8	9	10											
IL RTE 31 NB SIGNALS	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IL RTE 31 SB SIGNALS	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HIGHLAND AVE EB END MAST ARM AND FAR LEFT SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HIGHLAND AVE EB NEAR AND FAR RIGHT SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HIGHLAND AVE WB NEAR AND FAR RIGHT SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HIGHLAND AVE WB END MAST ARM AND FAR LEFT SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PEDESTRIAN SIGNALS CROSSING HIGHLAND AVE	P	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	DARK
PEDESTRIAN SIGNALS CROSSING IL RTE 31	H	H	H	H	H	H	H	H	H	H	P	FH	H	H	H	H	H	H	H	H	ARK

P = ILLUMINATED PERSON = WALK
 FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
 H = ILLUMINATED SOLID HAND = DON'T WALK

RAILROAD PREEMPTION SEQUENCE OF OPERATION

					PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4		PREEMPTOR NUMBER 2													
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1				5		7		2		3											
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER																						
RAILROAD PREEMPTION SEQUENCE OF OPERATION NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	2	3	4	5	6	7	8	9	10	CLEAR TO NORMAL SEQUENCE			
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	2	1E	2	1G	2	1J	2	3	4	5	6	7	8 OR NORMAL	9	10	5 OR NORMAL				
IL RTE 31 NB SIGNALS	Y	R	R	R	R	Y	R	R	R	R	R	R	G	Y	R	R	R	R	△			
IL RTE 31 SB SIGNALS	Y	R	R	R	R	Y	R	R	R	R	R	R	G	Y	R	R	R	R	△			
HIGHLAND AVE EB END MAST AND FAR LEFT SIGNALS	R	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	G	Y	R	△			
HIGHLAND AVE EB NEAR AND FAR RIGHT SIGNALS	R	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	G	Y	R	△			
HIGHLAND AVE WB NEAR AND FAR RIGHT SIGNALS	R	R	R	G	G	R	R	G	G	G	Y	R	R	R	R	R	R	R	△			
HIGHLAND AVE WB END MAST ARM AND FAR LEFT SIGNALS	R	R	R	G	G	R	R	G	G	G	Y	R	R	R	R	R	R	R	△			
PEDESTRIAN SIGNALS CROSSING HIGHLAND AVE	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	△			
PEDESTRIAN SIGNAL CROSSING IL RTE 31	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	△			

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 7 OR 10 IS TERMINATED.

△ RAILROAD PREEMPTION SEQUENCE SHALL BE CAPABLE OF CYCLING BETWEEN PHASES 2+6 AND PHASE 7 UNTIL RAILROAD PREEMPTION IS TERMINATED.

P = ILLUMINATED PERSON = WALK
 FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
 H = ILLUMINATED SOLID HAND = DON'T WALK

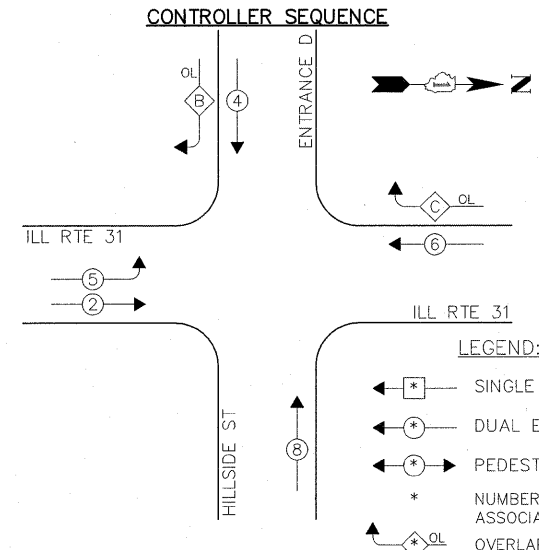
⊖ HOLD

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

									PREEMPTOR NUMBER 3		PREEMPTOR NUMBER 4				
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		1		5		7		7						
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	2	3	CLEAR TO NORMAL SEQUENCE			
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	1D	3	2 OR 3	1G	1H	2	3						
IL RTE 31 NB SIGNALS	G	G	Y	R	R	R	R	R	R	G	R				
IL RTE 31 SB SIGNALS	G	G	Y	R	R	R	R	R	R	G	R				
HIGHLAND AVE EB END MAST ARM AND FAR LEFT SIGNALS	R	R	R	R	R	R	R	R	R	R	G				
HIGHLAND AVE EB NEAR AND FAR RIGHT SIGNALS	R	R	R	R	R	R	R	R	R	R	G				
HIGHLAND AVE WB NEAR AND FAR RIGHT SIGNALS	R	R	R	R	R	R	R	R	R	R	G				
HIGHLAND AVE WB MAST ARM AND FAR LEFT SIGNALS	R	R	R	R	R	R	R	R	R	R	G				
PEDESTRIAN SIGNALS CROSSING HIGHLAND AVE	FH	FH	H	H	H	H	H	H	H	H	H				
PEDESTRIAN SIGNALS CROSSING IL RTE 31	H	H	H	H	H	FH	H	H	FH	H	H				

◇ EMERGENCY VEHICLE PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY INTERVAL AFTER EMERGENCY INTERVAL 2 OR 3 IS TERMINATED.

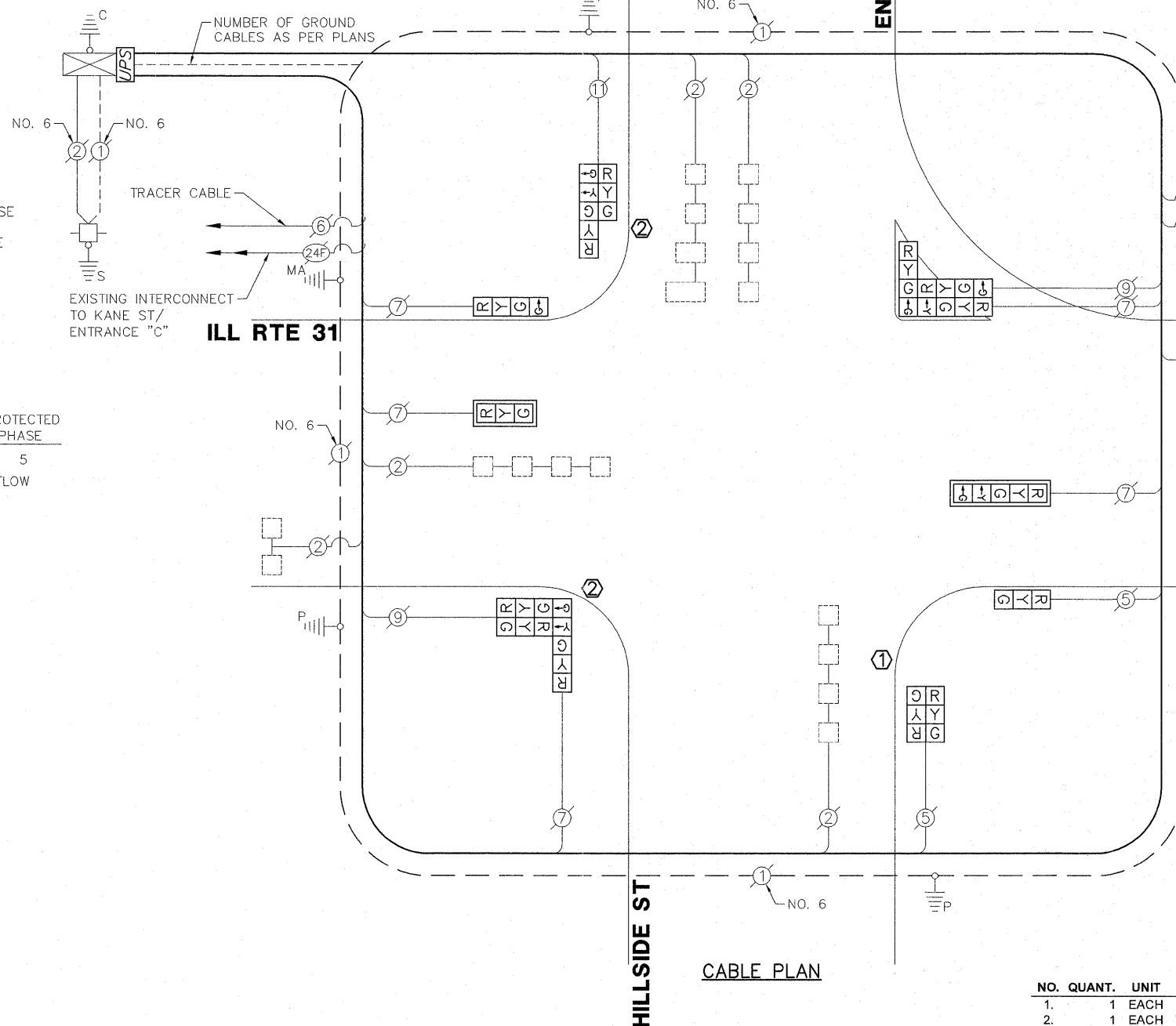
P = ILLUMINATED PERSON = WALK
 FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
 H = ILLUMINATED SOLID HAND = DON'T WALK



LEGEND:
 * SINGLE ENTRY PHASE
 * DUAL ENTRY PHASE
 * PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE OVERLAP

PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
C	=	CONTINUOUS FLOW



- CONSTRUCTION NOTES:**
- ① REPLACE EXISTING 14 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.
 - ② REPLACE EXISTING 16 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.

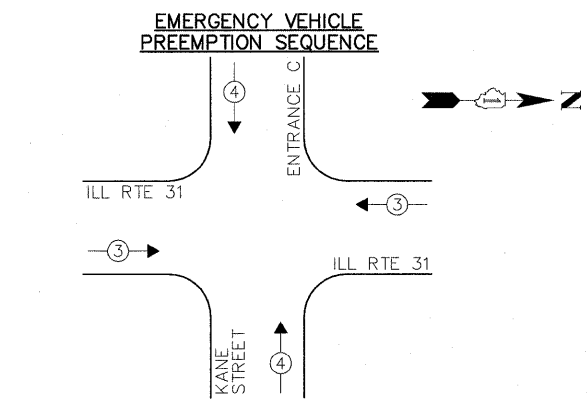
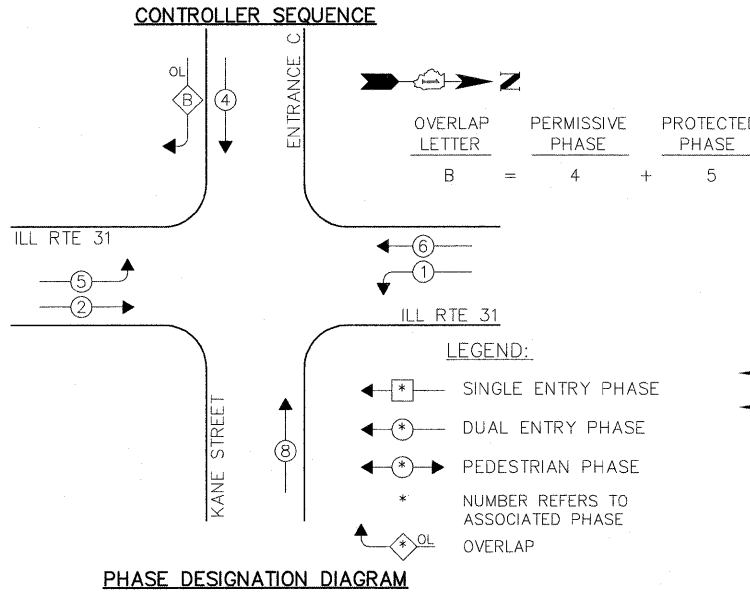
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 3 EACH TRAFFIC SIGNAL POST
 - 8 EACH SIGNAL HEAD, 3-SECTION
 - 2 EACH SIGNAL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

SCHEDULE OF QUANTITIES
ILL RTE 31 AT HILLSIDE STREET / ENTRANCE D

NO.	QUANT.	UNIT
1.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
3.	2	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
4.	1	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
5.	1	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
6.	1	EACH SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
7.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
8.	1	EACH SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
9.	1	EACH SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
10.	1	EACH SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION, 1-4 SECTION, 1-5 SECTION BRACKET MOUNTED
11.	1	EACH SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
12.	2	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
13.	1	EACH MODIFY EXISTING CONTROLLER CABINET
14.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
15.	1	EACH UNINTERRUPTABLE POWER SUPPLY, SPECIAL

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	16	135	15	0.25	60.0
ARROW	8	135	12	0.10	9.5
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	-
TOTAL =					401.1

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



EXISTING EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

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

TYPE	NO. LAMPS	WATTAGE			TOTAL WATTAGE
		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	12	135	12	0.10	14.4
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.F.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 =					361.4

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

FILE NAME = 4085.880-TR1.dwg
 USER NAME = ZACH WALLSTEN
 PLOT SCALE = 1" = .0833'
 PLOT DATE = 12/16/2011

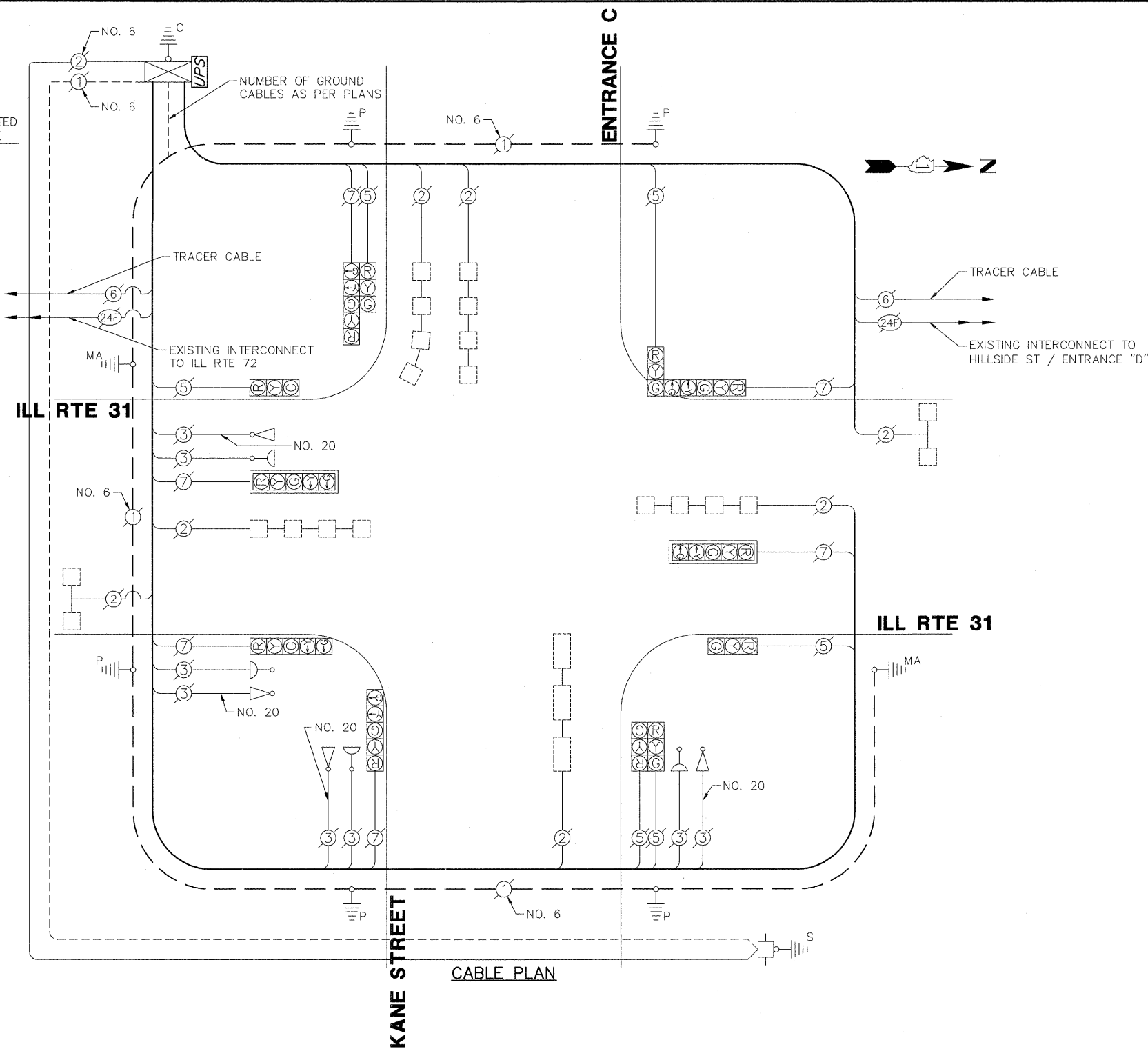
DESIGNED - JRD
 DRAWN - ZCW
 CHECKED - KLB
 DATE - 12/16/2011

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE ILL RTE 31 AT KANE STREET / ENTRANCE C

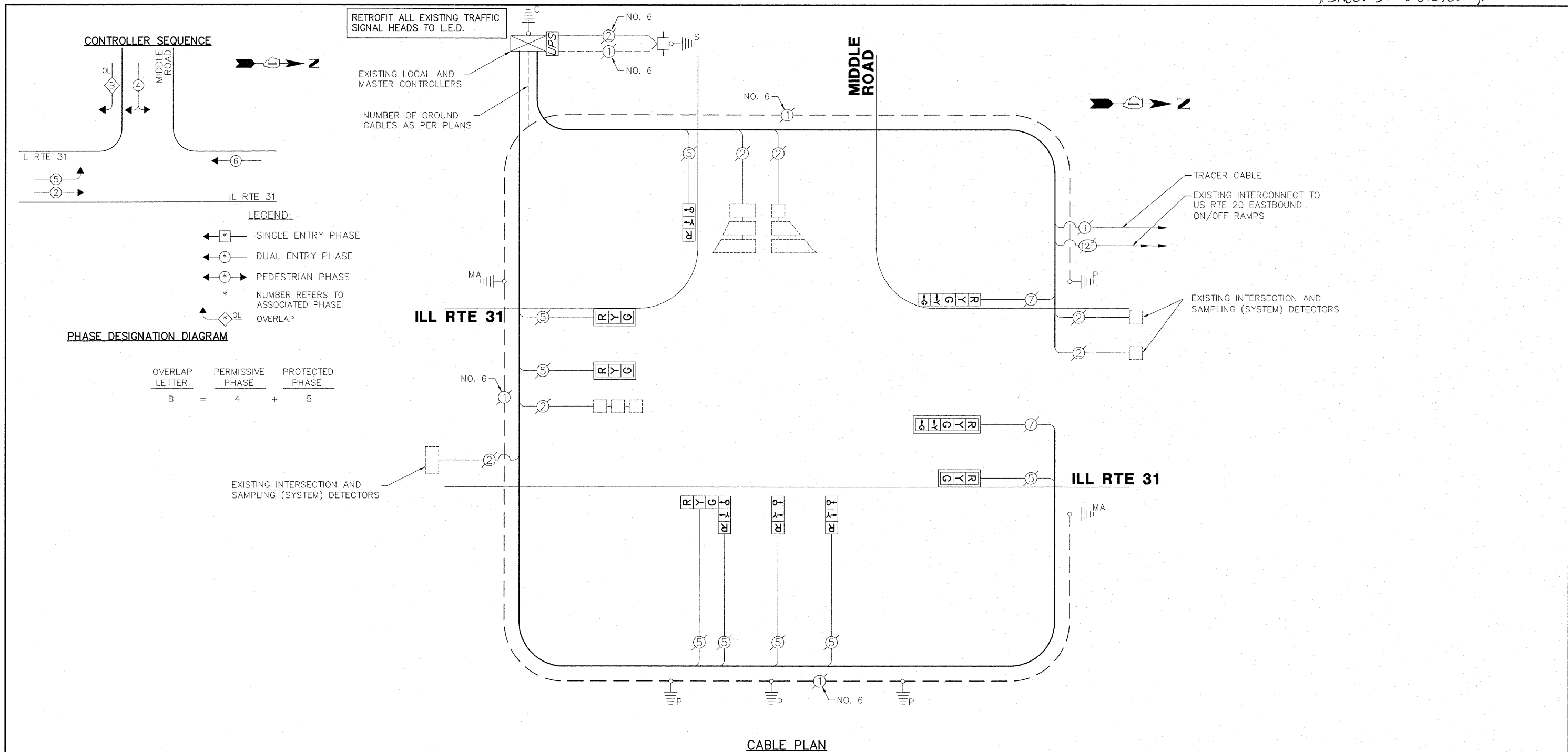
F.A.P. RTE. VARIES	SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 30
CONTRACT #:			60R60	
ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES
ILL RTE 31 AT KANE STREET / ENTRANCE C

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

GHA #4085.880



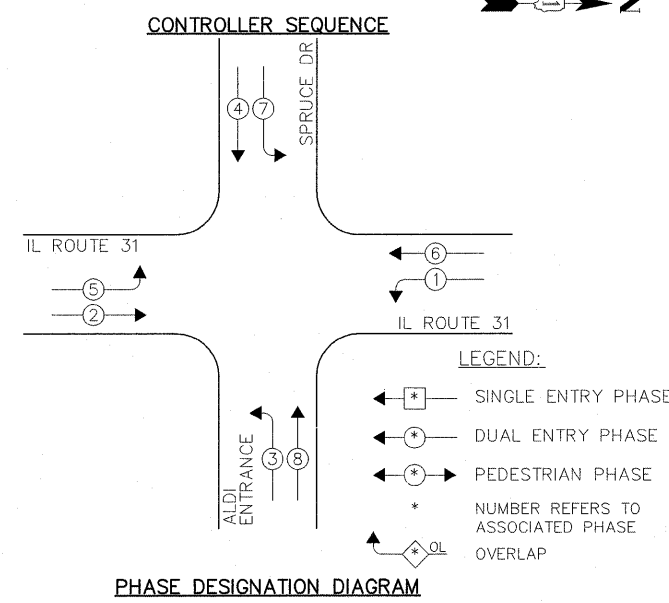
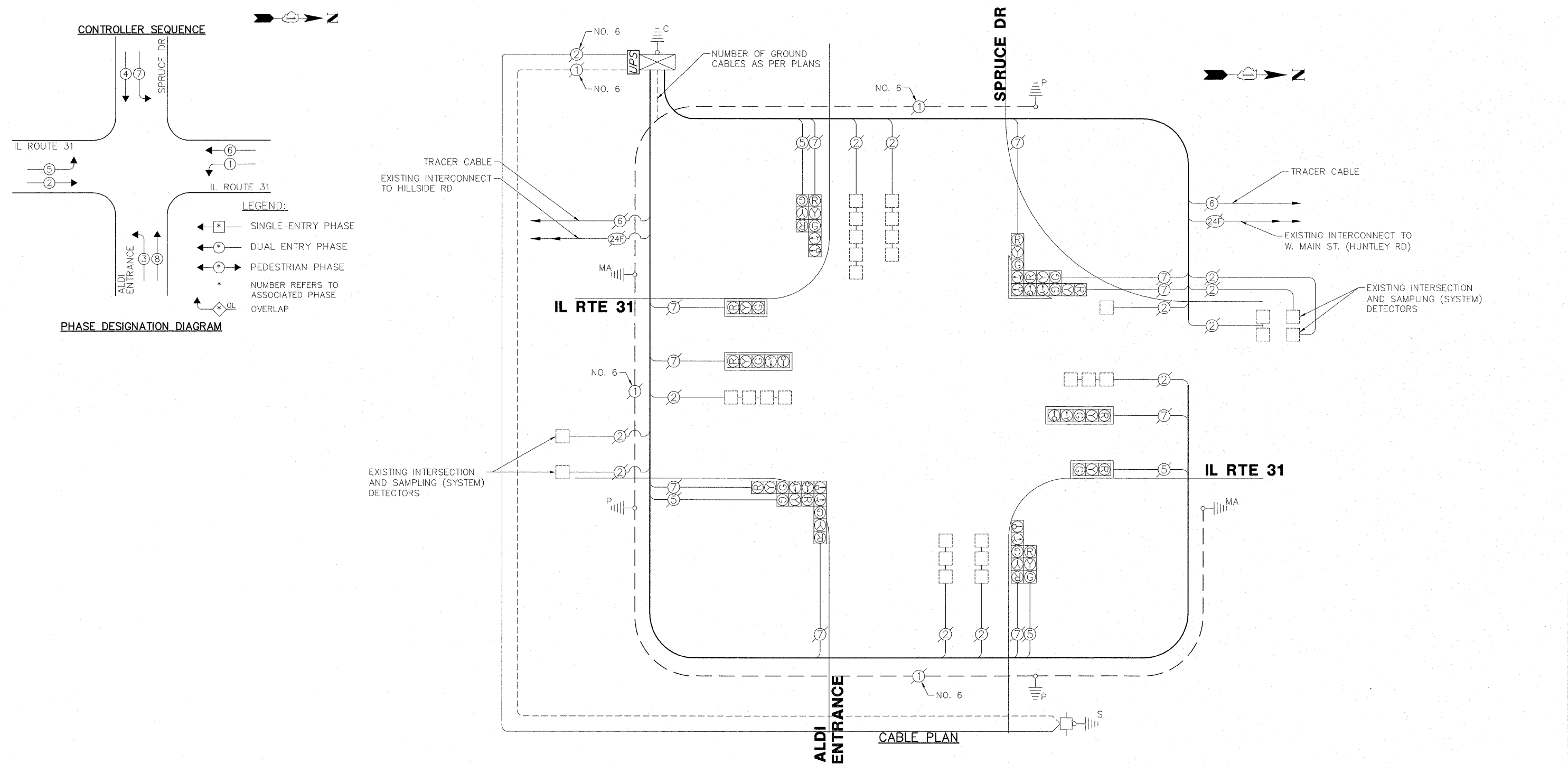
CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	10	135	1.7	0.50	85.0
SIGNAL (YELLOW)	10	135	25	0.25	62.5
SIGNAL (GREEN)	10	135	15	0.25	37.5
ARROW	4	135	12	0.10	4.8
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	-
TOTAL =					314.8

ENERGY COSTS -- BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY -- CONTACT: --
 PHONE: --
 COMPANY: --

SCHEDULE OF QUANTITIES
ILL RTE 31 AT MIDDLE ROAD

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
4.	3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
5.	3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
6.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
7.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
8.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT

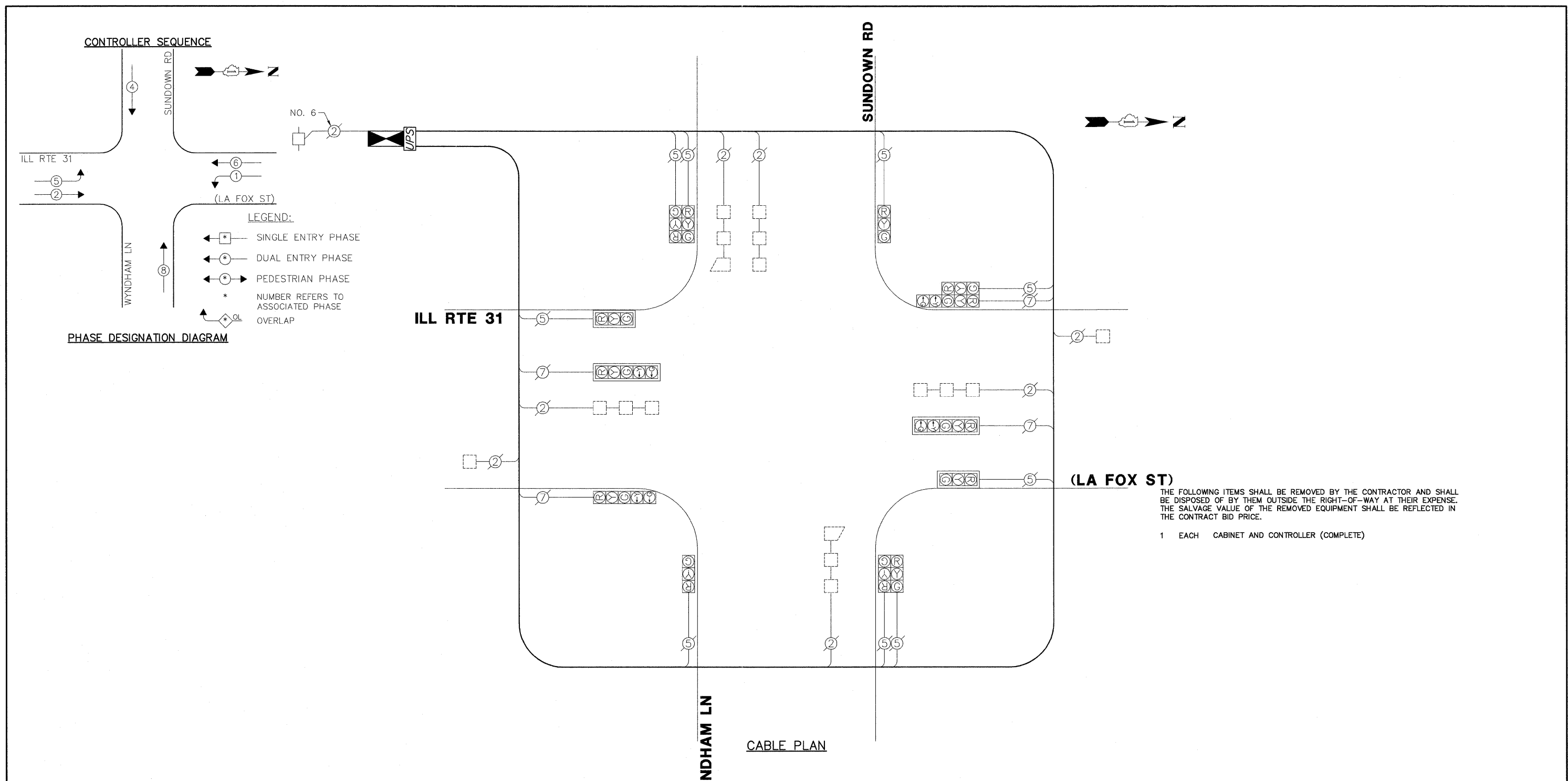


I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	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	-
TOTAL =					403.2

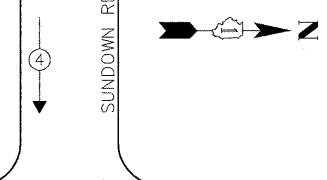
ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -

SCHEDULE OF QUANTITIES
 ILL RTE 31 AT SPRUCE DRIVE / ALDI ENTRANCE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

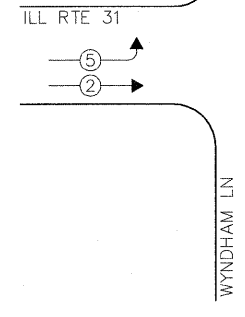


CONTROLLER SEQUENCE



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

PHASE DESIGNATION DIAGRAM



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 CABINET AND CONTROLLER (COMPLETE)

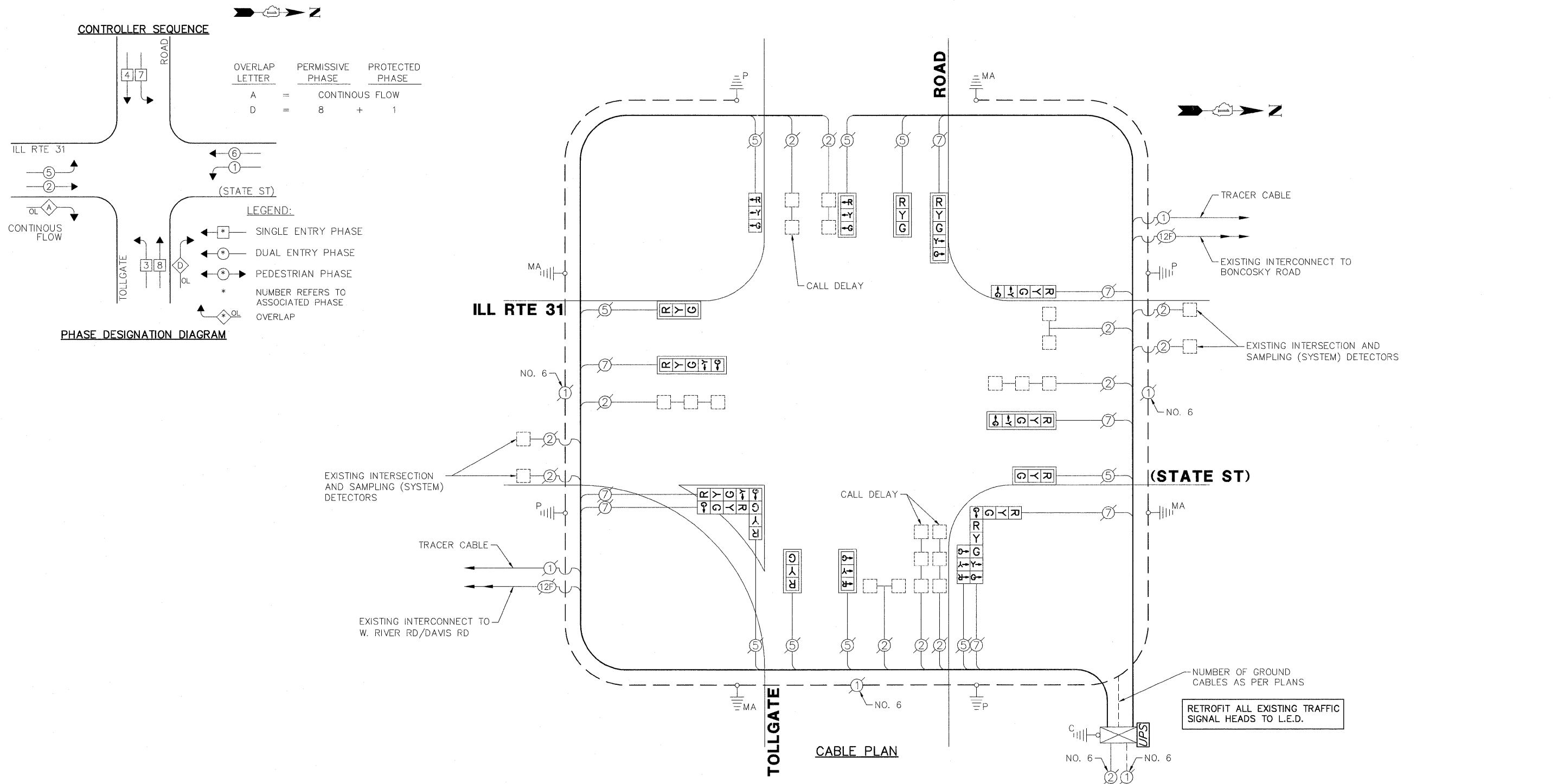
CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		INCAND.	L.E.D.		
SIGNAL (RED)	13	135	17	0.50	110.5
SIGNAL (YELLOW)	13	135	25	0.25	81.25
SIGNAL (GREEN)	13	135	15	0.25	48.75
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	-
TOTAL =					375.1

ENERGY COSTS - BILLED TO: VILLAGE OF SOUTH ELGIN
 (ADDRESS) 10 NORTH WATER STREET
 (ADDRESS) SOUTH ELGIN, IL 60177
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

SCHEDULE OF QUANTITIES
 ILL RTE 31 (LA FOX ST) AT SUNDOWN ROAD / WYNDHAM LANE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
3.	7	EACH	INDUCTIVE LOOP DETECTOR
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL



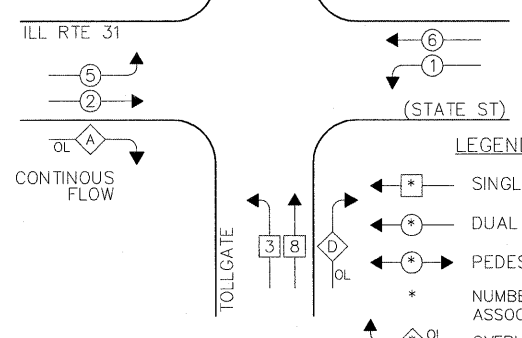
CONTROLLER SEQUENCE

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	=	CONTINUOUS FLOW
D	=	8 + 1

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◻ DUAL ENTRY PHASE
- ◻ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE OVERLAP

PHASE DESIGNATION DIAGRAM



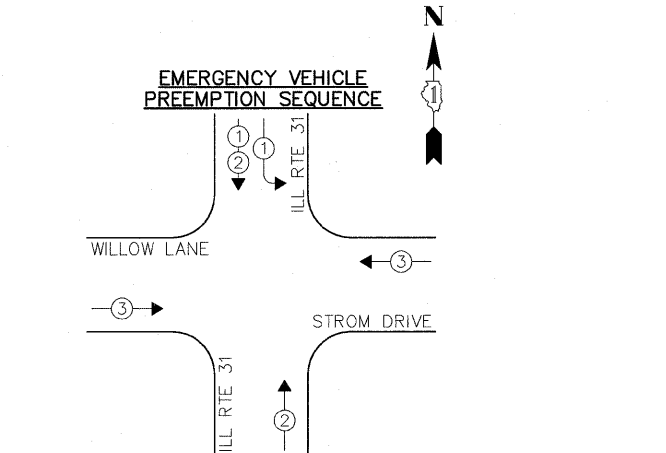
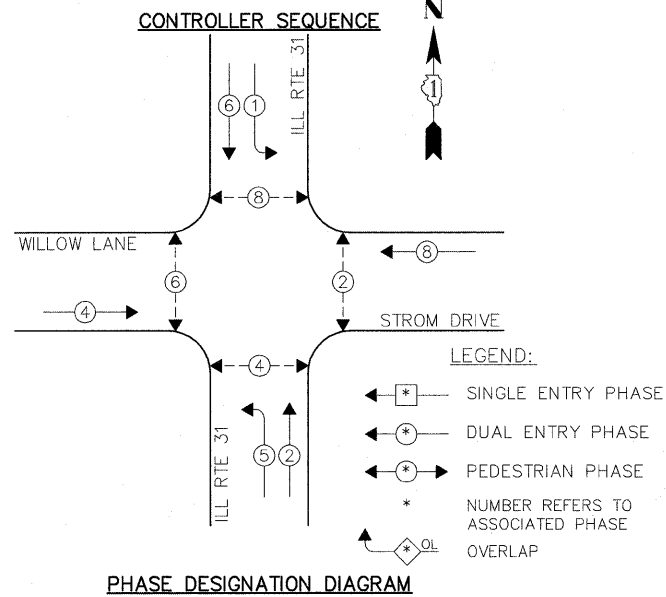
CABLE PLAN

SCHEDULE OF QUANTITIES
ILL RTE 31 (STATE ST) AT TOLLGATE ROAD

NO.	QUANT.	UNIT
1.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH UNINTERRUPTABLE POWER SUPPLY, SPECIAL
4.	1	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
5.	6	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
6.	3	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
7.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT
8.	2	EACH SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION, 1-4 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	17	135	17	0.50	144.5
SIGNAL (YELLOW)	17	135	25	0.25	106.25
SIGNAL (GREEN)	19	135	15	0.25	71.25
ARROW	12	135	12	0.10	14.4
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	-
TOTAL =					461.4

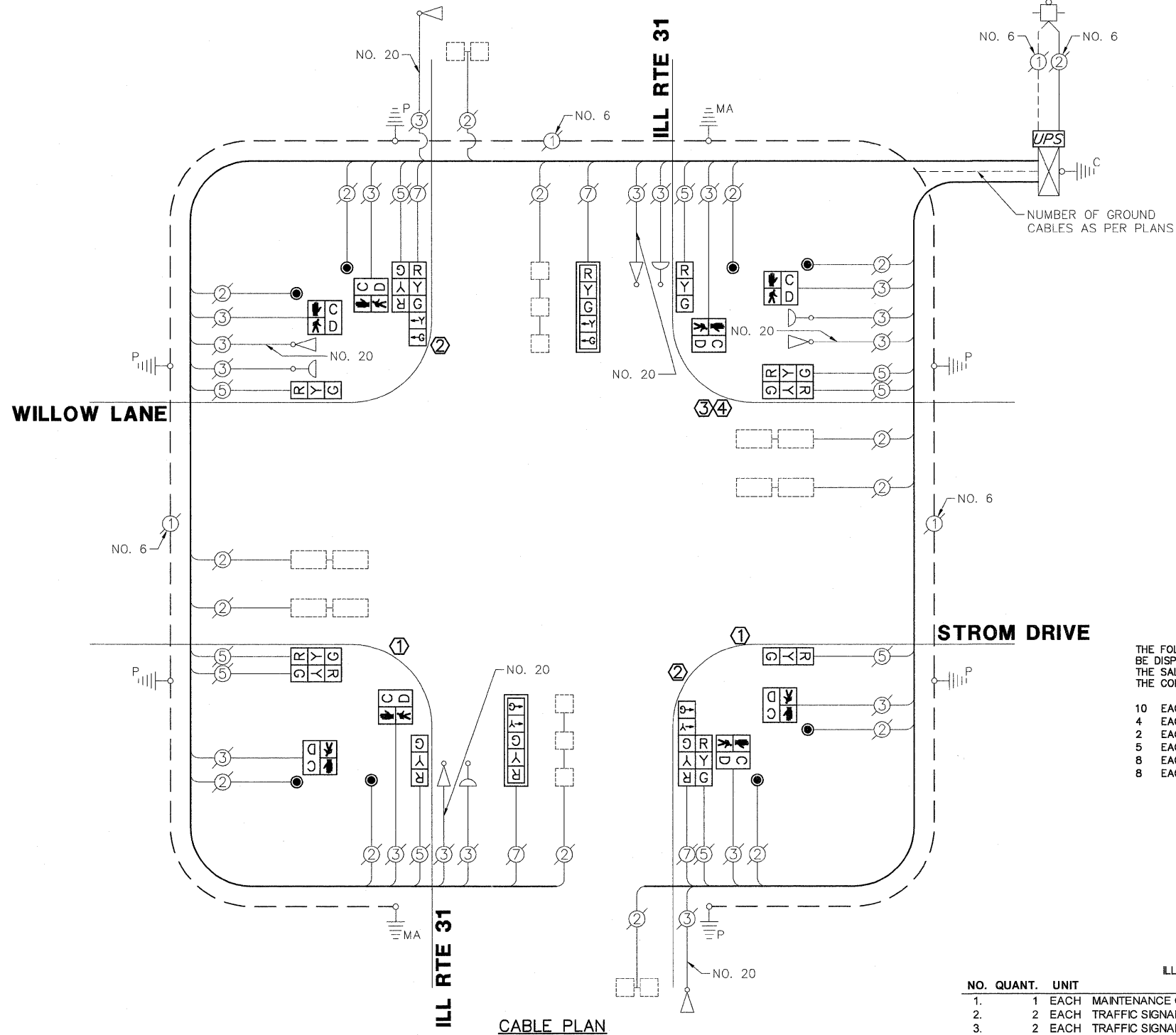
ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	1	2	3
MOVEMENT	IL	II	III

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND. L.E.D.	% OPERATION		
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
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	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					593.6

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



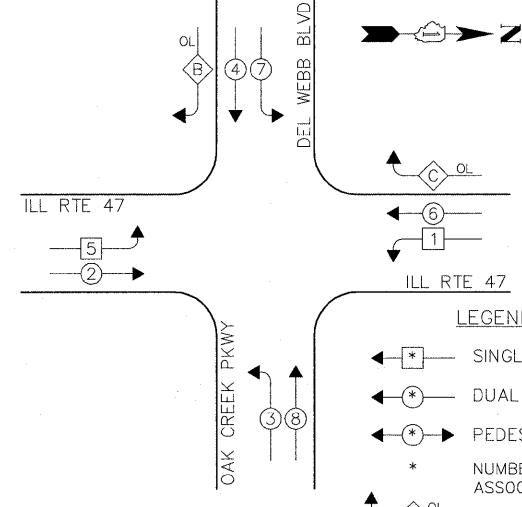
- CONSTRUCTION NOTES:**
- REPLACE EXISTING 14 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.
 - REPLACE EXISTING 16 FOOT PAINTED POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.
 - REPLACE EXISTING 14 FOOT PAINTED POST WITH A NEW 18 FOOT GALVANIZED STEEL POST. REUSE EXISTING TYPE A CONCRETE FOUNDATION AND EXISTING CABLES.
 - RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNIT ON NEW 18 FOOT POST

- 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.
- | | | |
|----|------|--------------------------|
| 10 | EACH | SIGNAL HEAD, 3-SECTION |
| 4 | EACH | SIGNAL HEAD, 5-SECTION |
| 2 | EACH | TRAFFIC SIGNAL BACKPLATE |
| 5 | EACH | TRAFFIC SIGNAL POST |
| 8 | EACH | PEDESTRIAN SIGNAL HEAD |
| 8 | EACH | PEDESTRIAN PUSH-BUTTON |

SCHEDULE OF QUANTITIES
ILL RTE 31 AT WILLOW LANE / STROM DRIVE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
3.	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
4.	1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
5.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
6.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
7.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
8.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
9.	8	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10.	2	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
11.	8	EACH	PEDESTRIAN PUSH-BUTTON
12.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
13.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
14.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
15.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

CONTROLLER SEQUENCE

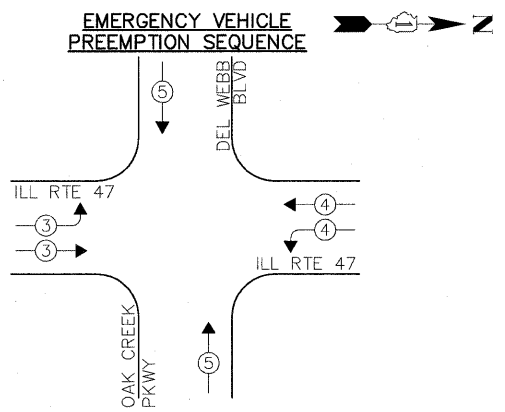


OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
C	= 6	+ 7

LEGEND:

- ◀ * → SINGLE ENTRY PHASE
- ◀ * → DUAL ENTRY PHASE
- ◀ * → PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- ◀ * OL → OVERLAP

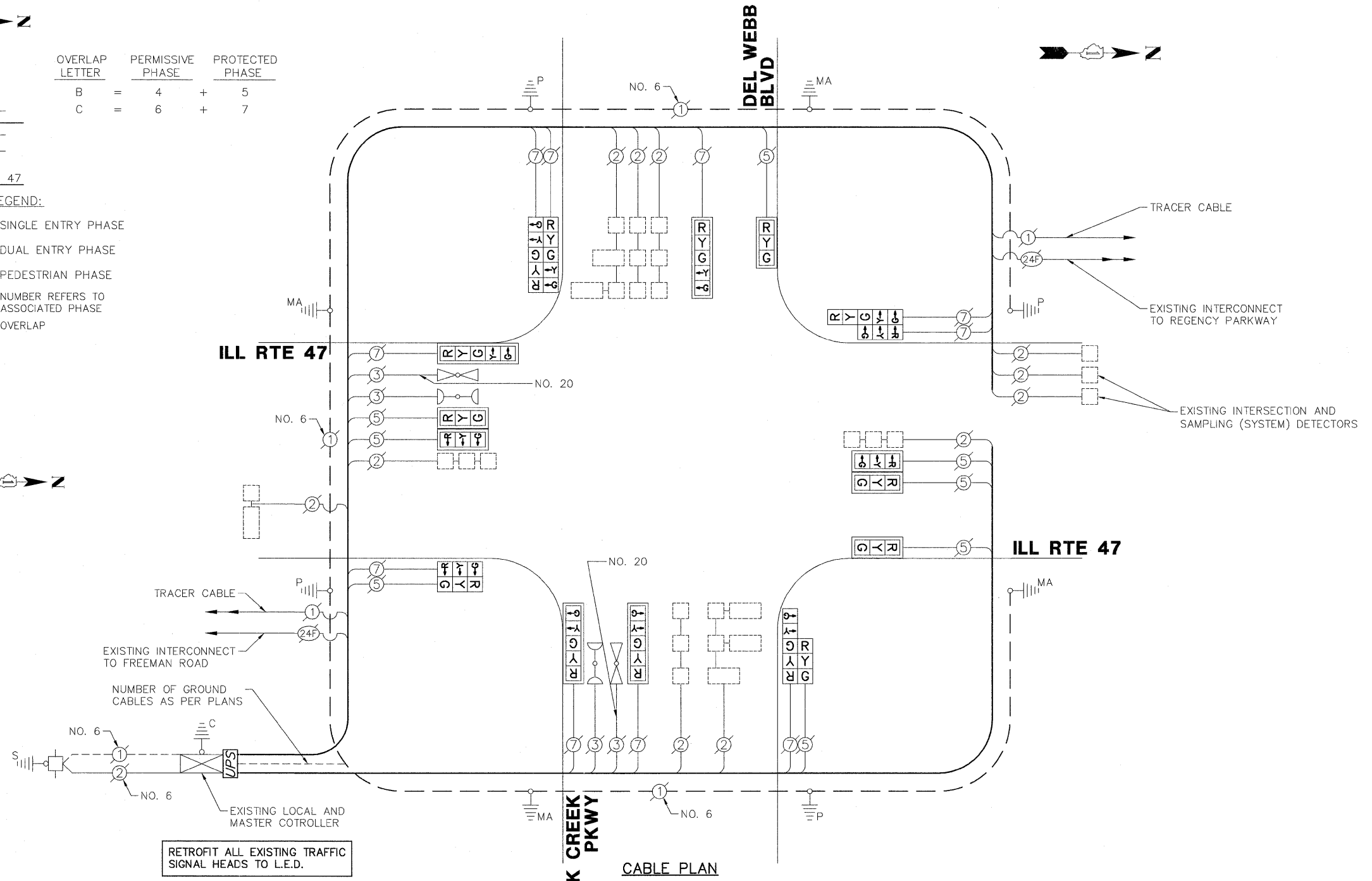
PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↔	↔	↔

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	18	135	17	0.50	153.0
SIGNAL (YELLOW)	18	135	25	0.25	112.5
SIGNAL (GREEN)	18	135	15	0.25	67.5
ARROW	16	135	12	0.10	19.2
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	-
TOTAL =					477.2

ENERGY COSTS - BILLED TO: VILLAGE OF HUNTLEY
 (ADDRESS) 10987 MAIN STREET
 (ADDRESS) HUNTLEY, IL 60142
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



CABLE PLAN

SCHEDULE OF QUANTITIES

ILL RTE 47 AT DEL WEBB BOULEVARD / OAKCREEK PARKWAY

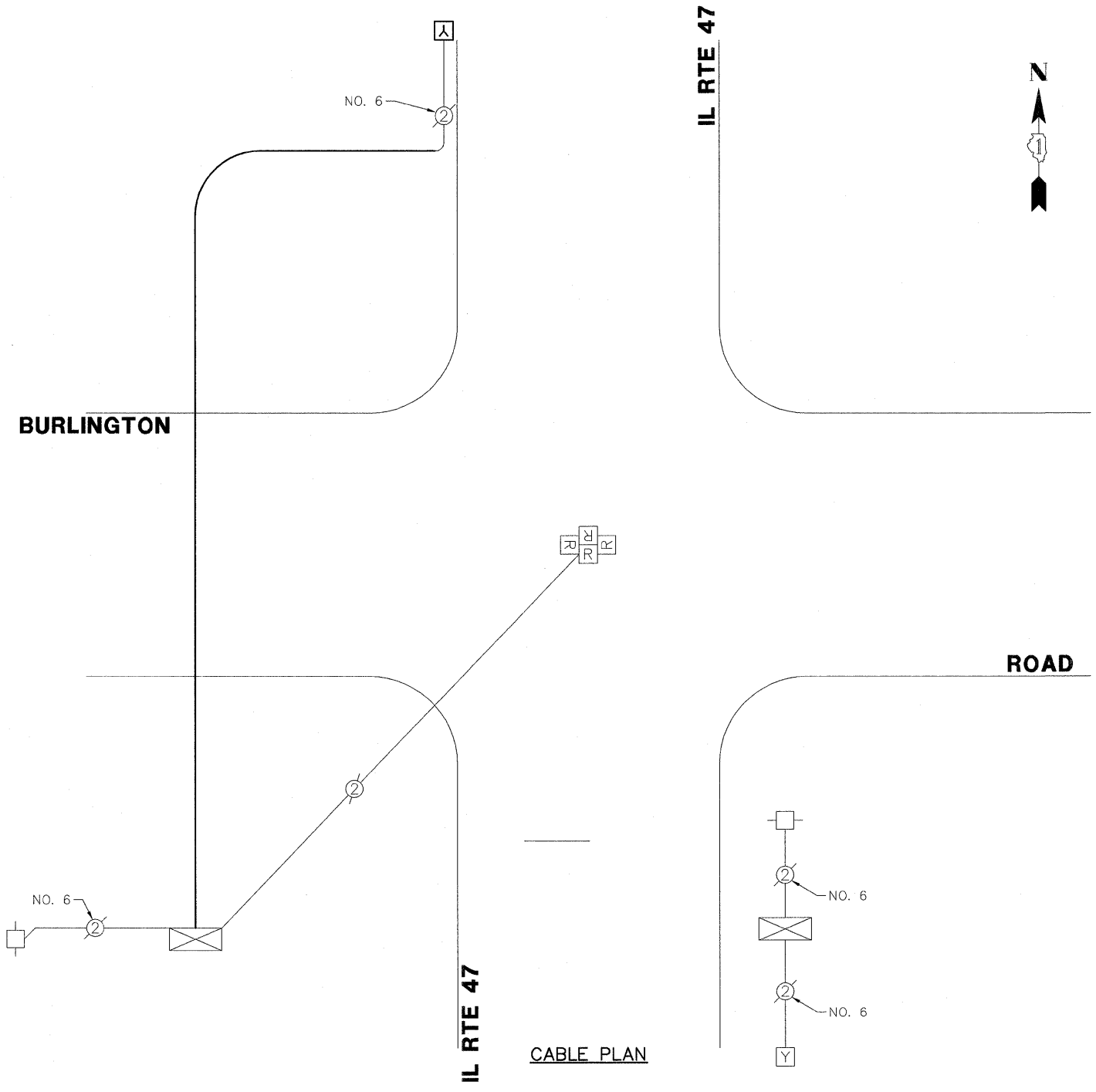
NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
4.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT
5.	6	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
6.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
7.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
8.	1	EACH	SIGNAL HEAD, LED, 2 FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT

FILE NAME = 4085.880-TR1.dwg	USER NAME = ZACH WALLSTEN	DESIGNED - JRD	REVISED -
		DRAWN - ZCW	REVISED -
	PLOT SCALE = 1" = .0833'	CHECKED - KLB	REVISED -
	PLOT DATE = 12/16/2011	DATE - 12/16/2011	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE			
ILL ROUTE 47 AT DEL WEBB BOULEVARD / OAK CREEK PARKWAY			
SCALE: N.A.	SHEET NO. OF SHEETS	STA. TO STA.	F.A.P. RITE. VARIES

SECTION 2011-218-1	COUNTY KANE	TOTAL SHEETS 48	SHEET NO. 37
CONTRACT # 60R60		GHA #4085.880	
ILLINOIS FED. AID PROJECT			



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 SIGNAL HEAD, 1-SECTION

NOTE: TWO SEPARATE SERVICE INSTALLATIONS

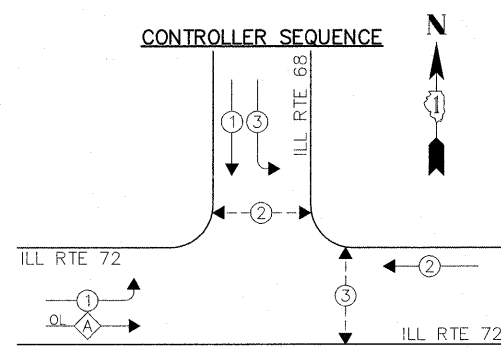
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		INCAND.	L.E.D.		
SIGNAL (RED)	4	135	17	0.50	34.0
SIGNAL (YELLOW)	2	135	25	0.25	12.5
SIGNAL (GREEN)	-	135	15	0.25	-
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	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	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					146.5

ENERGY COSTS - BILLED TO: ILLINOIS DEPT. OF TRANS.
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHAUMBURG, IL 60196
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

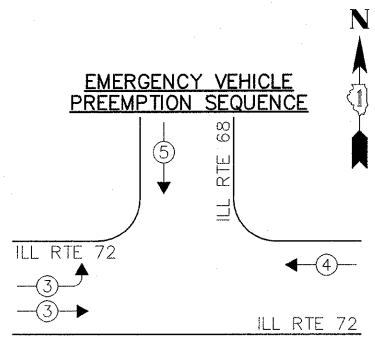
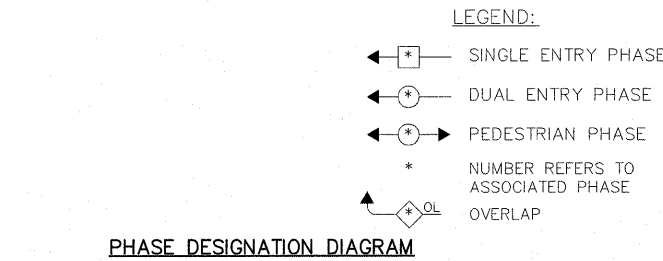
CABLE PLAN

SCHEDULE OF QUANTITIES
 ILL RTE 47 AT BURLINGTON ROAD - FLASHING BEACONS

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED
3.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

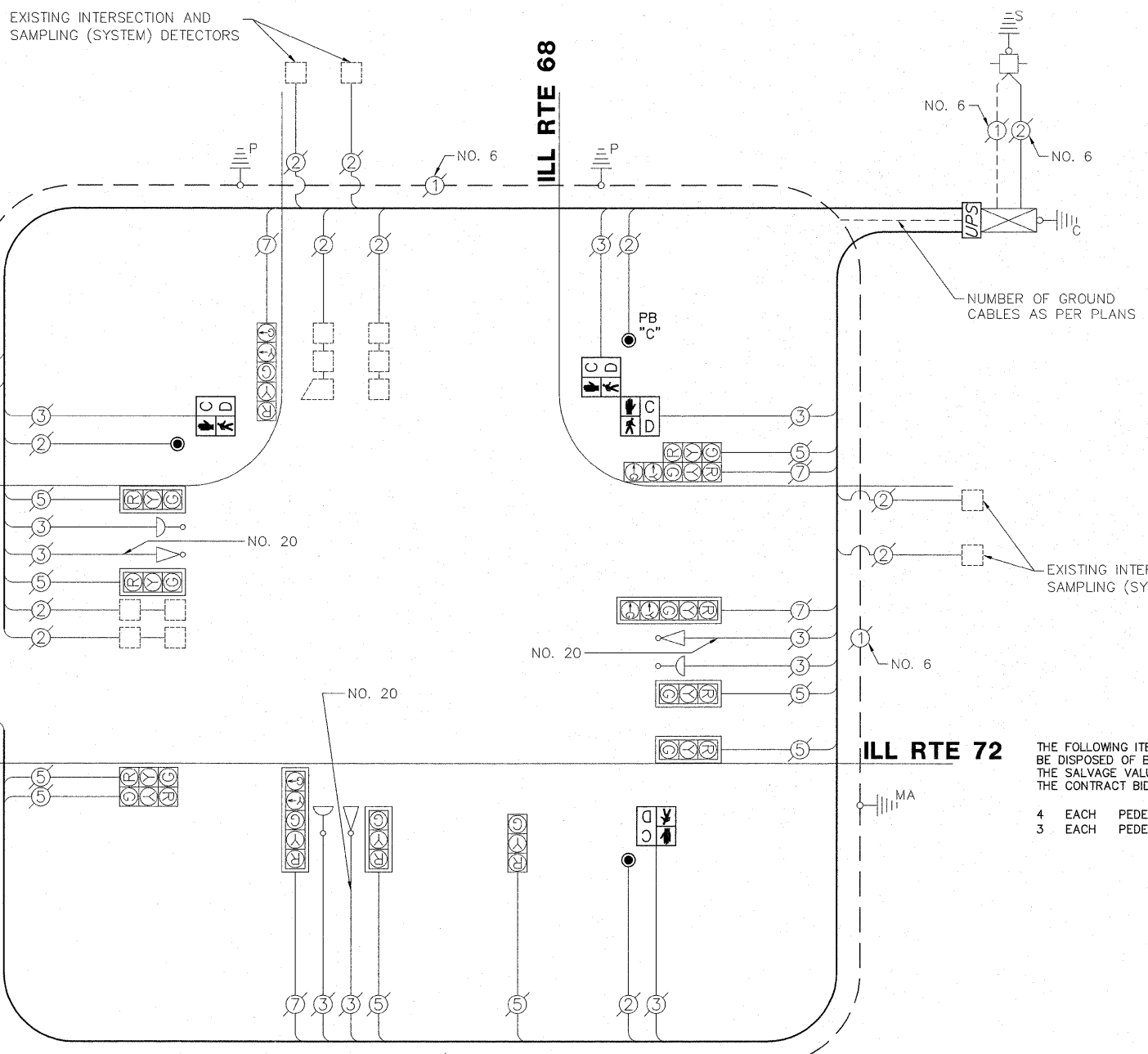


OVERLAP LETTER A = PERMISSIVE PHASE 1 + PROTECTED PHASE 2



EXISTING EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↓



NOTE: PUSH BUTTON "C" SHALL PLACE A CALL TO PHASES 2 AND 3

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 PEDESTRIAN SIGNAL HEAD
- 3 EACH PEDESTRIAN PUSH-BUTTON

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

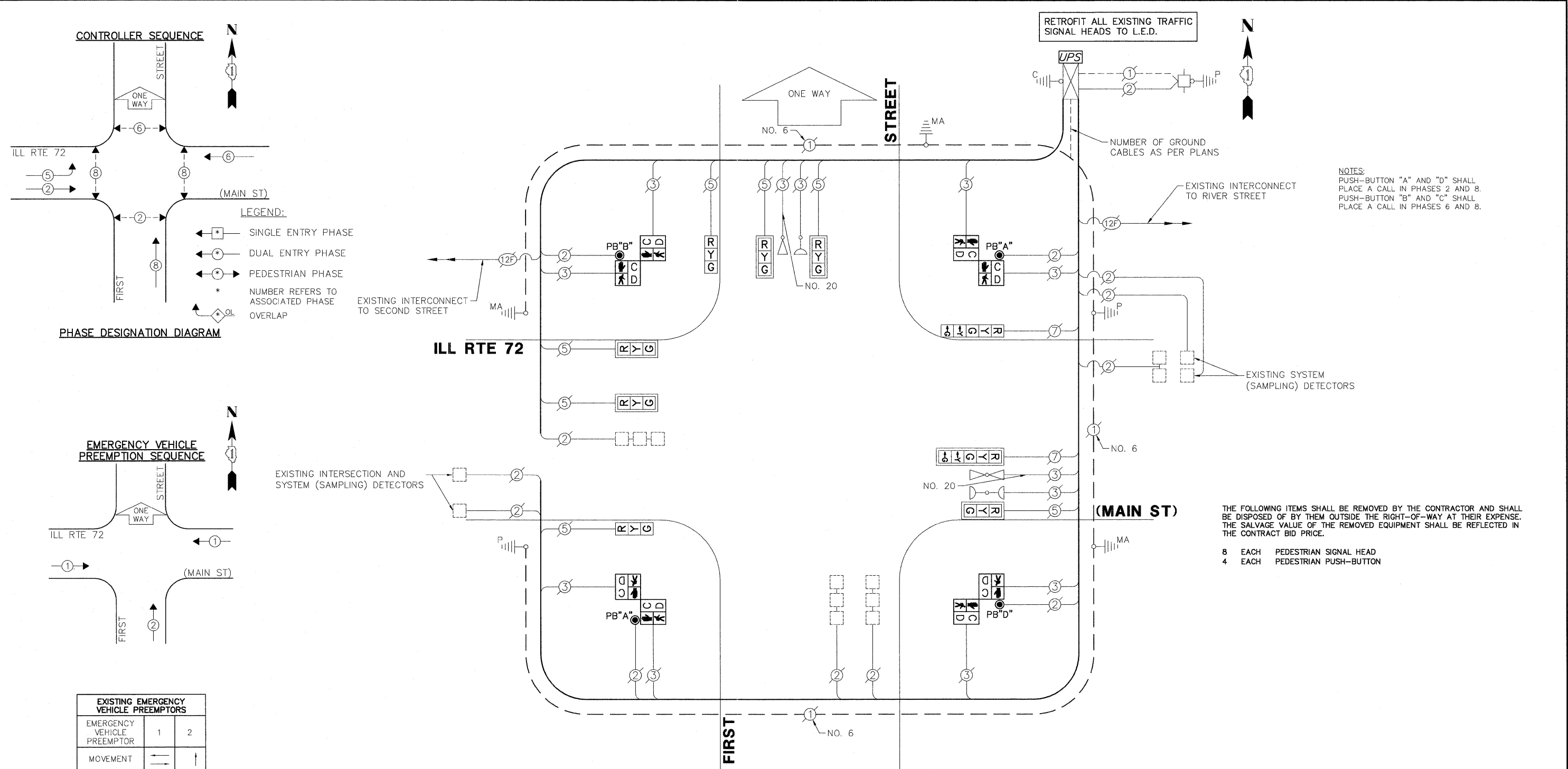
TYPE	NO. LAMPS	WATTAGE		% OPERATION	TOTAL WATTAGE
		INCAND.	L.E.D.		
SIGNAL (RED)	13	135	17	0.50	110.5
SIGNAL (YELLOW)	13	135	25	0.25	81.25
SIGNAL (GREEN)	13	135	15	0.25	48.75
ARROW	8	135	12	0.10	9.5
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					475.1

ENERGY COSTS - BILLED TO: VILLAGE OF EAST DUNDEE
 (ADDRESS) 120 BARRINGTON AVENUE
 (ADDRESS) EAST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

SCHEDULE OF QUANTITIES

ILL RTE 68 (PENNY AV) AT ILL RTE 72 (MAIN ST)

NO.	QUANT.	UNIT
1.	1 EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	2 EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	1 EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4.	1 EACH	MODIFY EXISTING CONTROLLER CABINET
5.	1 EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6.	1 EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
7.	3 EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



EXISTING EMERGENCY VEHICLE PREAMPTORS

EMERGENCY VEHICLE PREAMPTOR	1	2
MOVEMENT	←	↑

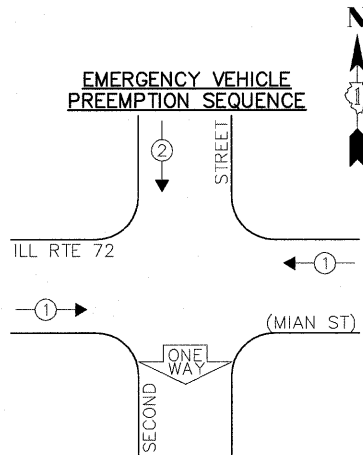
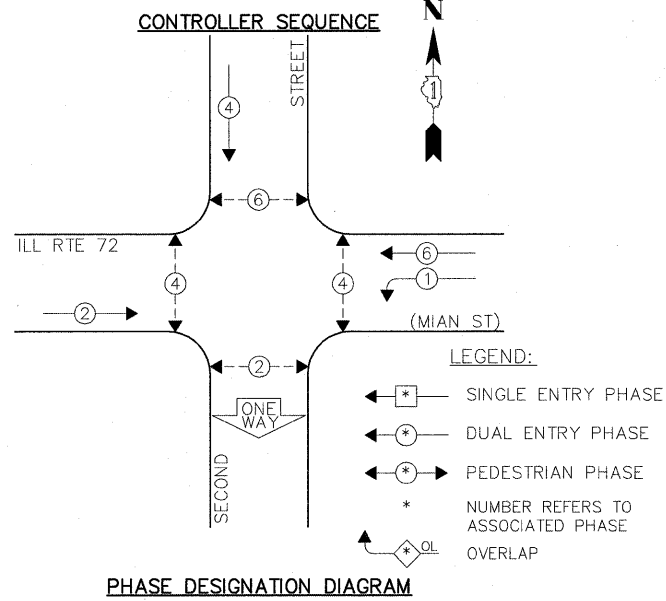
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	9	135	17	0.50	76.5
SIGNAL (YELLOW)	9	135	25	0.25	56.25
SIGNAL (GREEN)	9	135	15	0.25	37.75
ARROW	4	135	12	0.10	4.8
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 =					496.3

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 S. SECOND STREET
 (ADDRESS) WEST DUNDEE, ILLINOIS 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

SCHEDULE OF QUANTITIES
ILL RTE 72 (MAIN ST) AT FIRST STREET

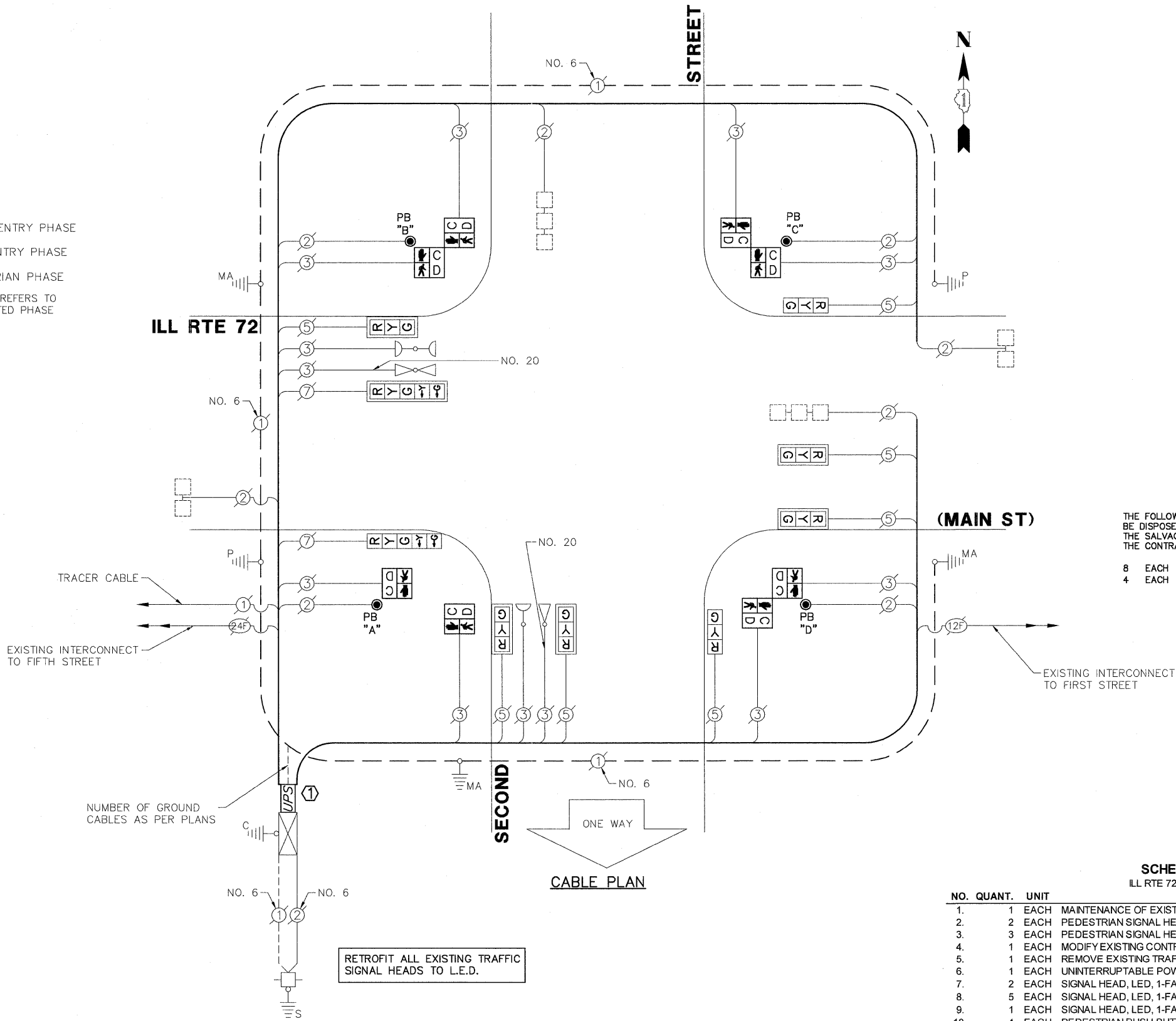
NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
6.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
7.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
8.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
9.	4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING
10.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	→	↓

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND. L.E.D.	% OPERATION		
SIGNAL (RED)	9	135	17	0.50	76.5
SIGNAL (YELLOW)	9	135	25	0.25	56.25
SIGNAL (GREEN)	9	135	15	0.25	33.75
ARROW	4	135	12	0.10	4.8
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 =					496.3

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



CONSTRUCTION NOTES:

① CONTRACTOR SHALL INSTALL NEW UNINTERRUPTIBLE POWER SUPPLY TO EXISTING CONTROLLER CABINET WITH DOORS MOUNTED SIDE TO SIDE. UPS CABINET WIDTH SHALL HAVE A MAXIMUM 16" WIDTH.

NOTE:
 PUSH BUTTON "A" AND "D" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "B" AND "C" SHALL PLACE A CALL IN PHASES 4 AND 6

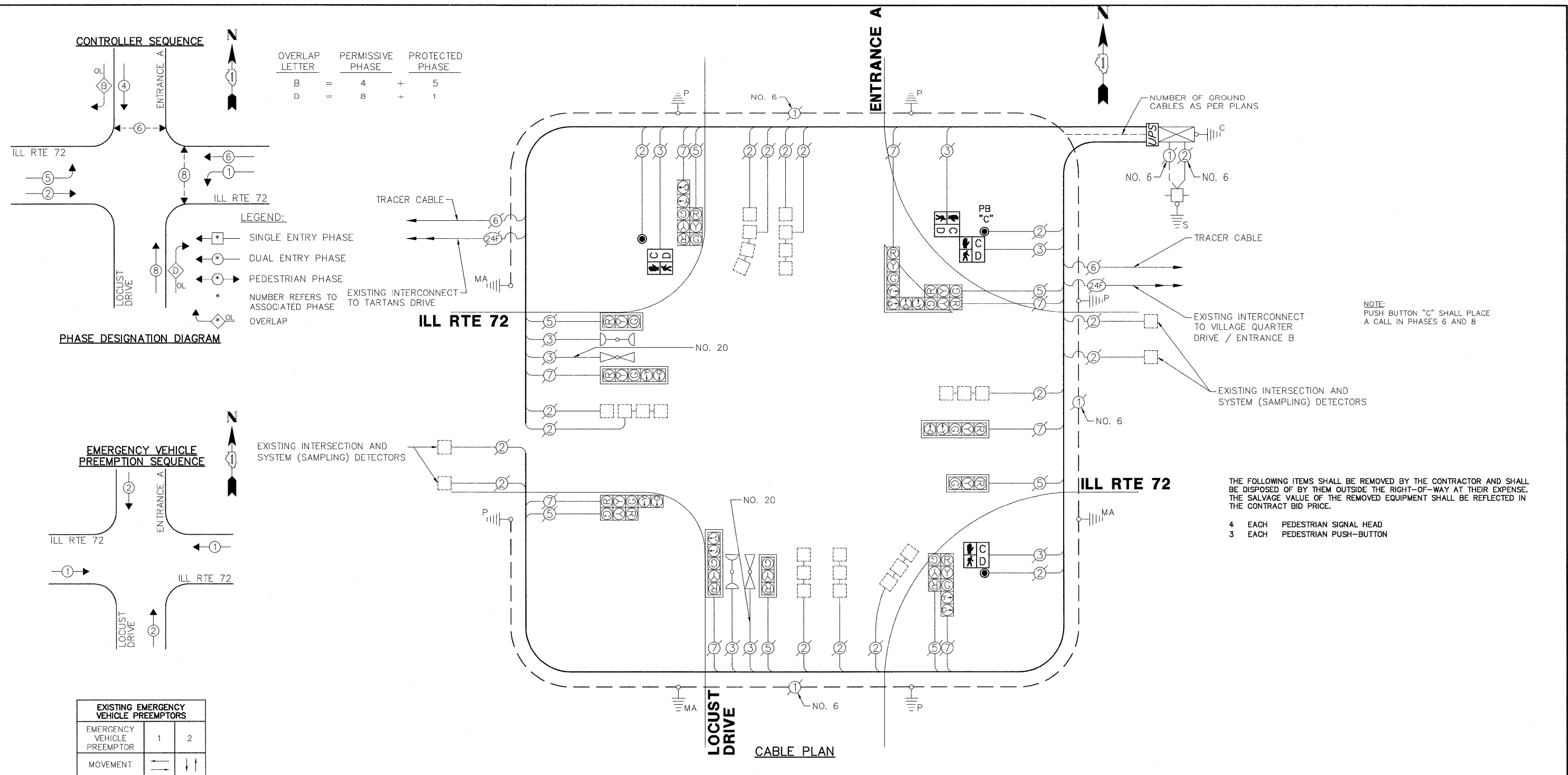
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ILL RTE 72 (MAIN ST) AT SECOND STREET

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	3	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
5.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
7.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
8.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
9.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
10.	4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING
11.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT



OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
D	= 8	+ 1

LEGEND:

- ◀ * ▶ SINGLE ENTRY PHASE
- ◀ * ▶ DUAL ENTRY PHASE
- ◀ * ▶ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- ◀ * ▶ OVERLAP

EXISTING INTERCONNECT TO TARTANS DRIVE

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	←	→

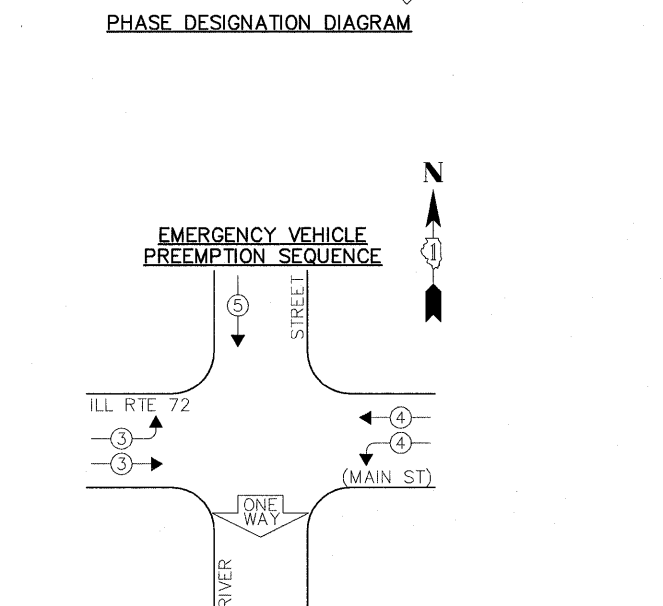
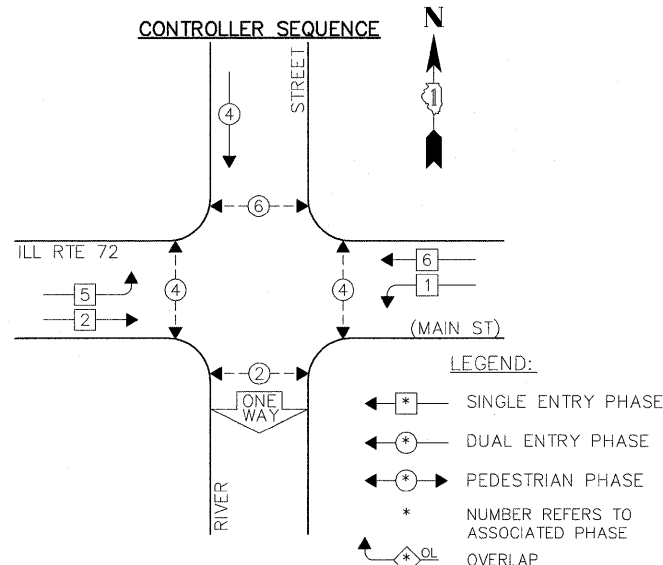
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 4 EACH PEDESTRIAN SIGNAL HEAD
- 3 EACH PEDESTRIAN PUSH-BUTTON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	15	135	17	0.50	127.5
SIGNAL (YELLOW)	15	135	25	0.25	93.75
SIGNAL (GREEN)	15	135	15	0.25	56.25
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 =					521.7

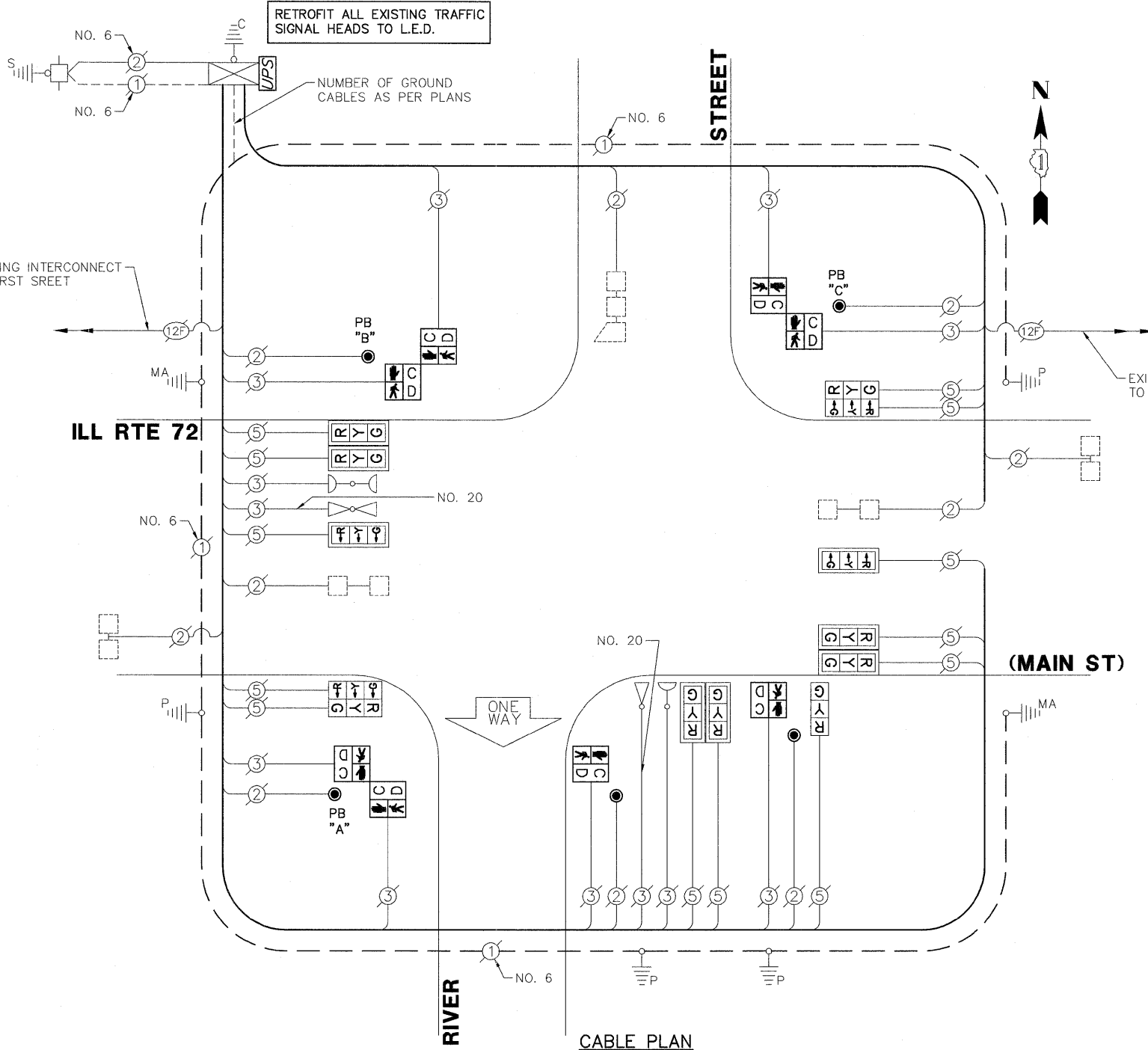
ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

SCHEDULE OF QUANTITIES			ILL RTE 72 AT LOCUST DRIVE / ENTRANCE A	
NO.	QUANT.	UNIT		
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	
2.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	
3.	1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	
4.	1	EACH	MODIFY EXISTING CONTROLLER CABINET	
5.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	
6.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	
7.	3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING	



EXISTING EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↑



NOTES:

PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4

PUSH BUTTON "B" AND "C" SHALL PLACE A CALL IN PHASES 4 AND 6

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.

8 EACH PEDESTRIAN SIGNAL HEAD
5 EACH PEDESTRIAN PUSH-BUTTON

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

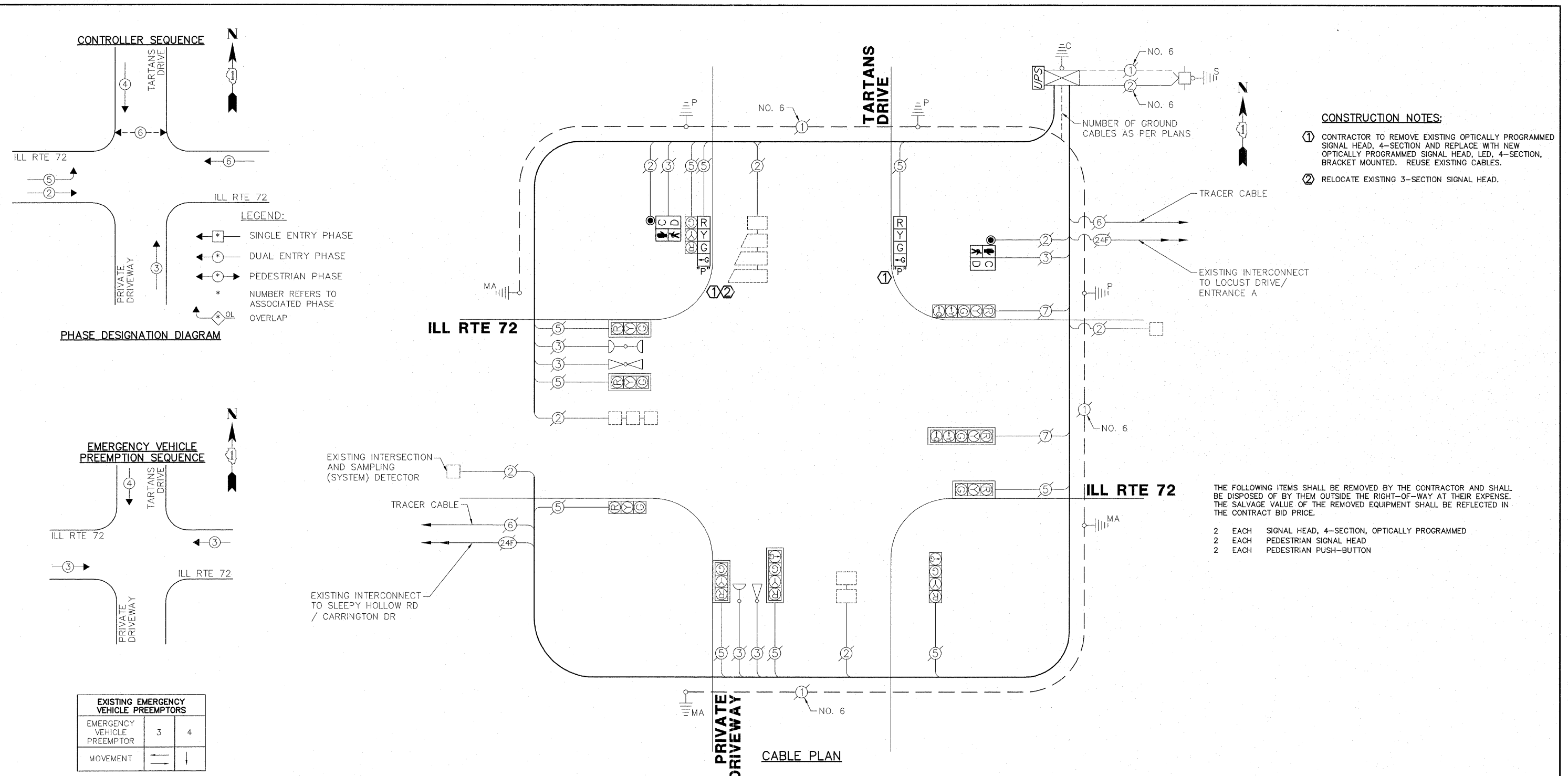
TYPE	NO.	LAMPS	INCAND.	L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	135	17	0.50	110.5	
SIGNAL (YELLOW)	13	135	25	0.25	81.25	
SIGNAL (GREEN)	13	135	15	0.25	48.75	
ARROW	-	135	12	0.10	-	
PED. SIGNAL	8	90	25	1.00	200.0	
CONTROLLER	1	-	100	1.00	100.0	
LUMINAIRE	-	-	250	0.50	-	
L.E.D. ST. NAME SIGN	-	-	64	0.50	-	
VIDEO SYSTEM	-	-	150	1.00	-	
BATTERY BACKUP	1	-	25	1.00	25.0	
ILLUMINATED SIGN	-	-	25	0.05	-	
TOTAL =						551.1

ENERGY COSTS - BILLED TO: VILLAGE OF EAST DUNDEE
(ADDRESS) 120 BARRINGTON AVENUE
(ADDRESS) EAST DUNDEE, IL 60118

ENERGY SUPPLY - CONTACT: _____
PHONE: _____
COMPANY: _____

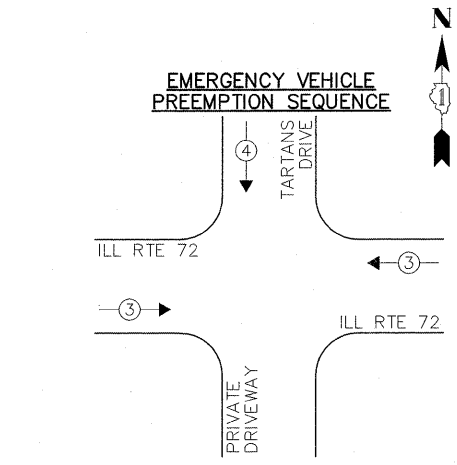
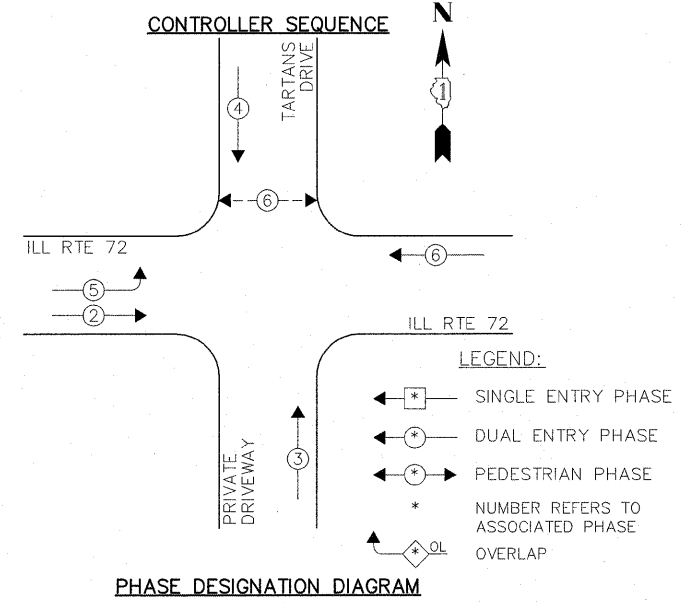
SCHEDULE OF QUANTITIES
ILL RTE 72 (MAIN ST) AT RIVER STREET

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	3	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
5.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
7.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
8.	8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
9.	2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT
10.	5	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



- CONSTRUCTION NOTES:**
- ① CONTRACTOR TO REMOVE EXISTING OPTICALLY PROGRAMMED SIGNAL HEAD, 4-SECTION AND REPLACE WITH NEW OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 4-SECTION, BRACKET MOUNTED. REUSE EXISTING CABLES.
 - ② RELOCATE EXISTING 3-SECTION SIGNAL HEAD.

- 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.
- 2 EACH SIGNAL HEAD, 4-SECTION, OPTICALLY PROGRAMMED
 - 2 EACH PEDESTRIAN SIGNAL HEAD
 - 2 EACH PEDESTRIAN PUSH-BUTTON



EXISTING EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↓

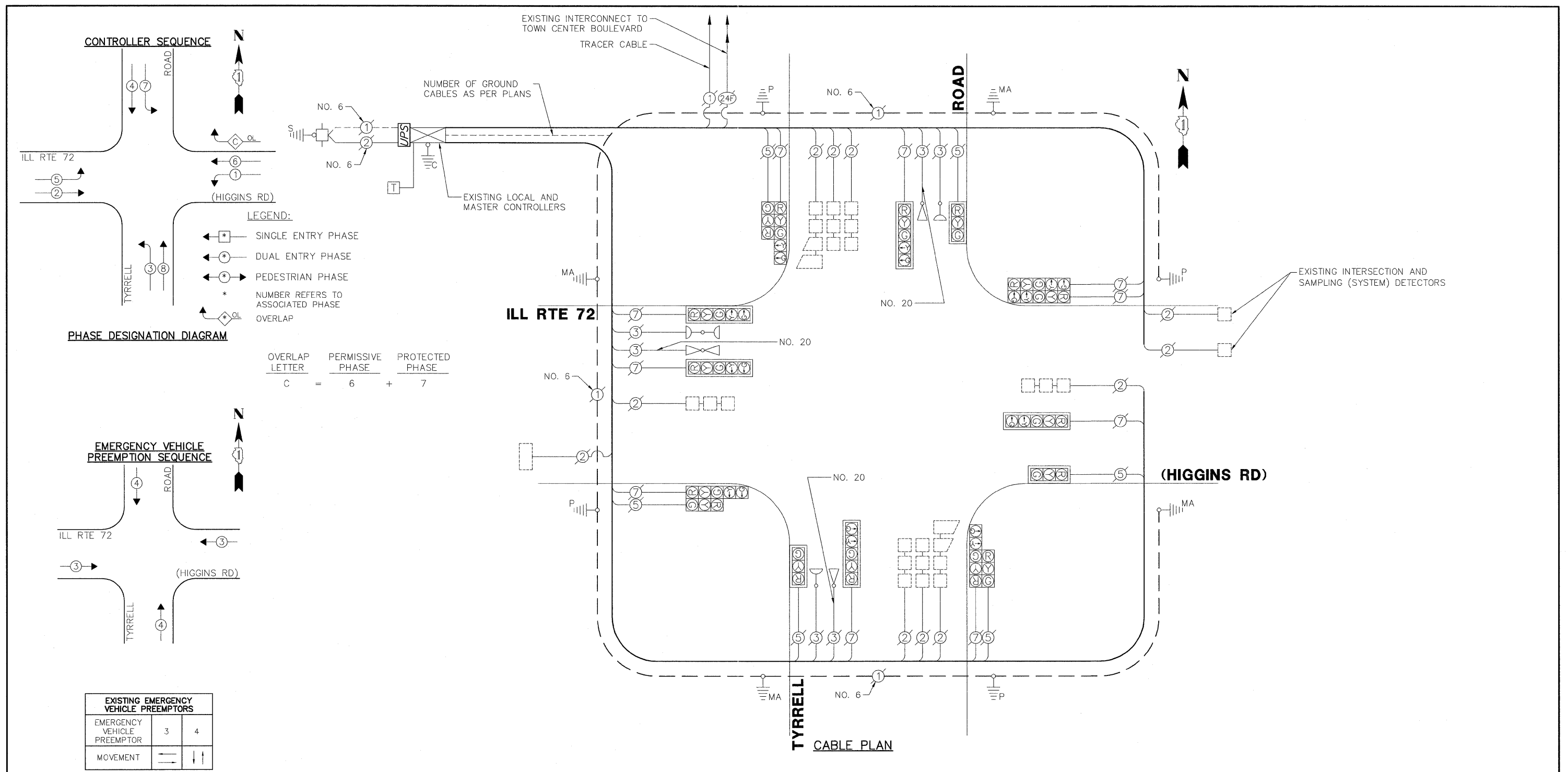
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO.	LAMPS	INCAND.	L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50		102.0
SIGNAL (YELLOW)	12	135	25	0.25		75.0
SIGNAL (GREEN)	16	135	15	0.25		60.0
ARROW	4	135	12	0.10		4.8
PED. SIGNAL	2	90	25	1.00		50.0
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 =						416.8

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: -
 PHONE: -
 COMPANY: -

SCHEDULE OF QUANTITIES
ILL RTE 72 AT TARTANS DRIVE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	2	EACH	PEDESTRIAN PUSH-BUTTON
4.	1	EACH	RELOCATE EXISTING SIGNAL HEAD
5.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
6.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
7.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
8.	2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED



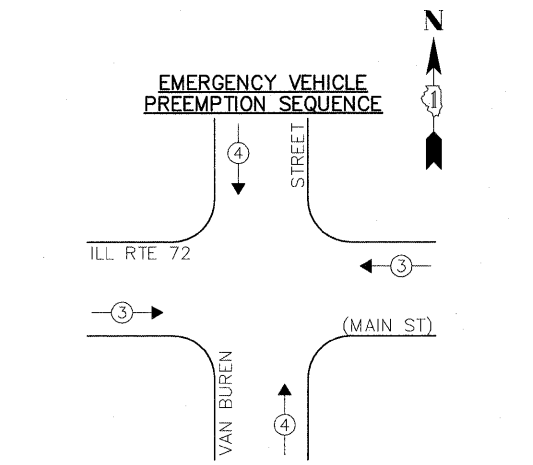
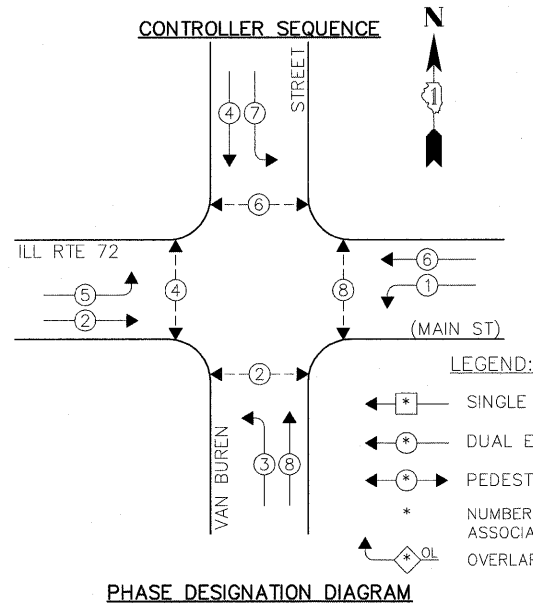
OVERLAP LETTER = PERMISSIVE PHASE + PROTECTED PHASE
 C = 6 + 7

SCHEDULE OF QUANTITIES
 ILL RTE 72 (HIGGINS RD) AT TYRRELL ROAD

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		INCAND.	L.E.D.		
SIGNAL (RED)	16	135	17	0.50	136.0
SIGNAL (YELLOW)	16	135	25	0.25	100.0
SIGNAL (GREEN)	16	135	15	0.25	60.0
ARROW	20	135	12	0.10	24.0
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	-
TOTAL =					445.0

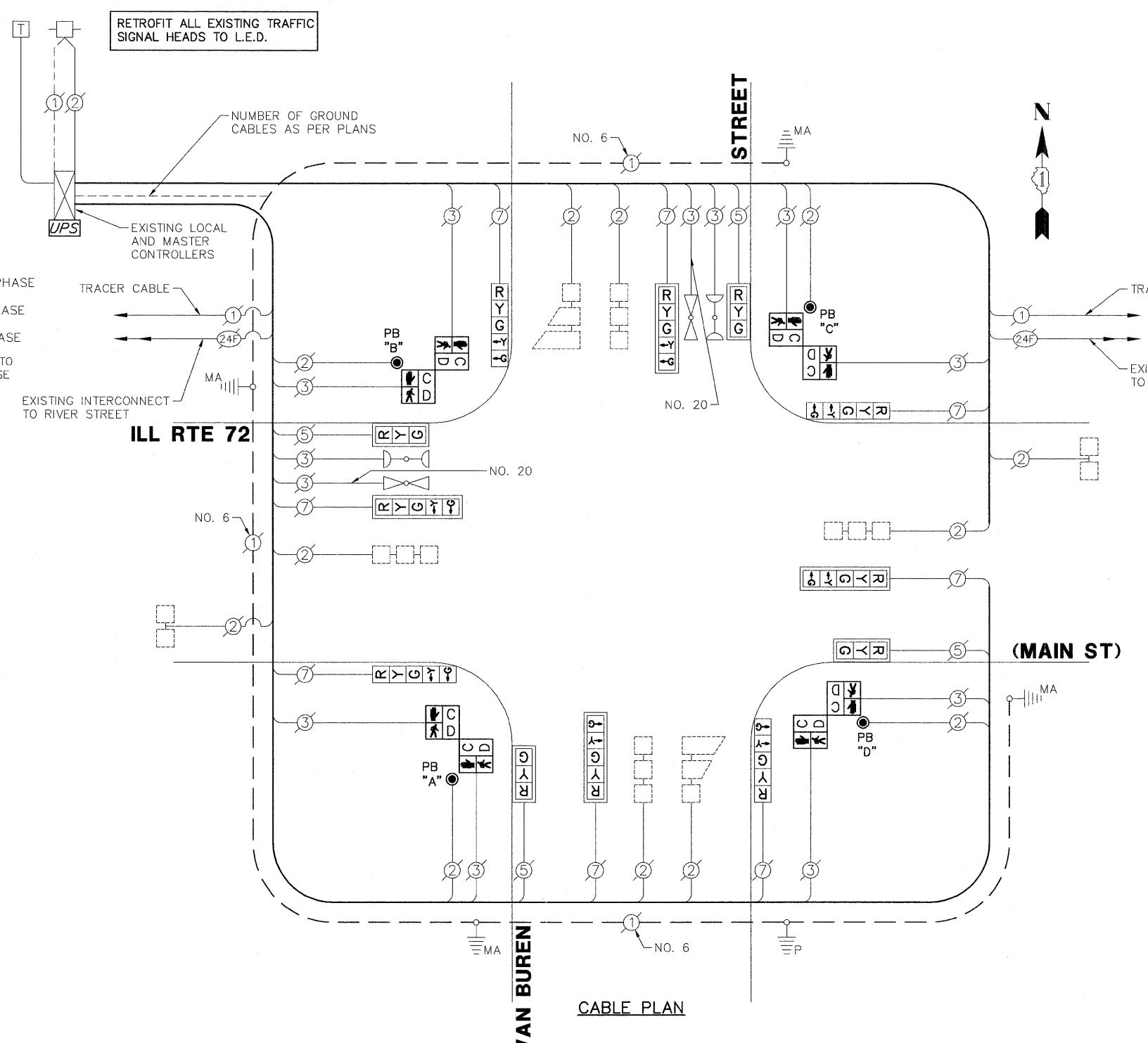
ENERGY COSTS - BILLED TO: VILLAGE OF GILBERTS
 (ADDRESS) 87 GALLIGAN ROAD
 (ADDRESS) GILBERTS, IL 60136
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	25.0
SIGNAL (GREEN)	12	135	15	0.25	45.0
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 =					566.2

ENERGY COSTS - BILLED TO: VILLAGE OF EAST DUNDEE
 (ADDRESS) 120 BARRINGTON AVENUE
 (ADDRESS) EAST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____



NOTE:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
 PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

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.

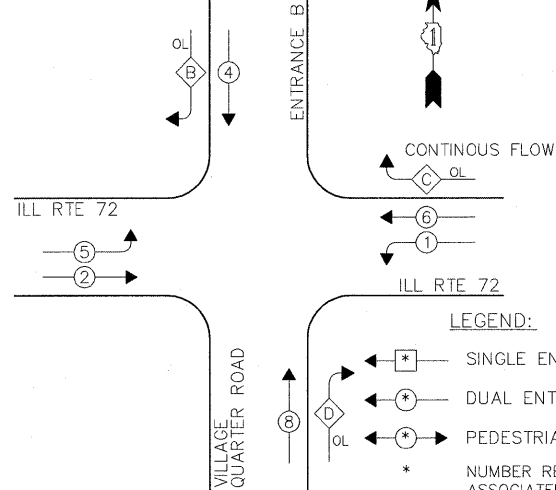
8 EACH PEDESTRIAN SIGNAL HEAD
 4 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ILL RTE 72 (MAIN ST) AT VAN BUREN STREET

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
6.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
7.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
8.	4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING
9.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT

CONTROLLER SEQUENCE

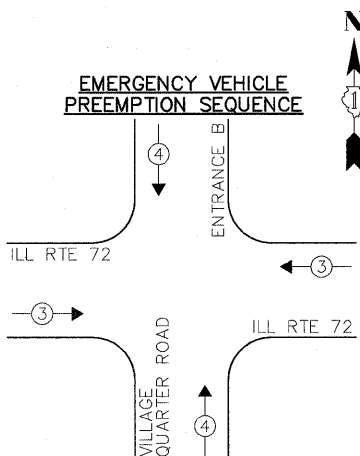


OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
C	=	CONTINUOUS FLOW
D	= 1	+ 8

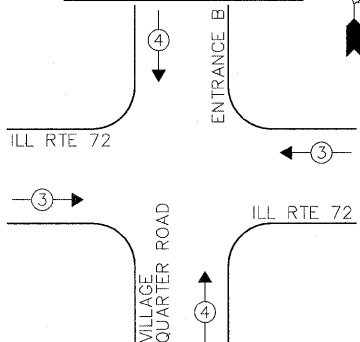
LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◻ DUAL ENTRY PHASE
- ◻ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE OVERLAP

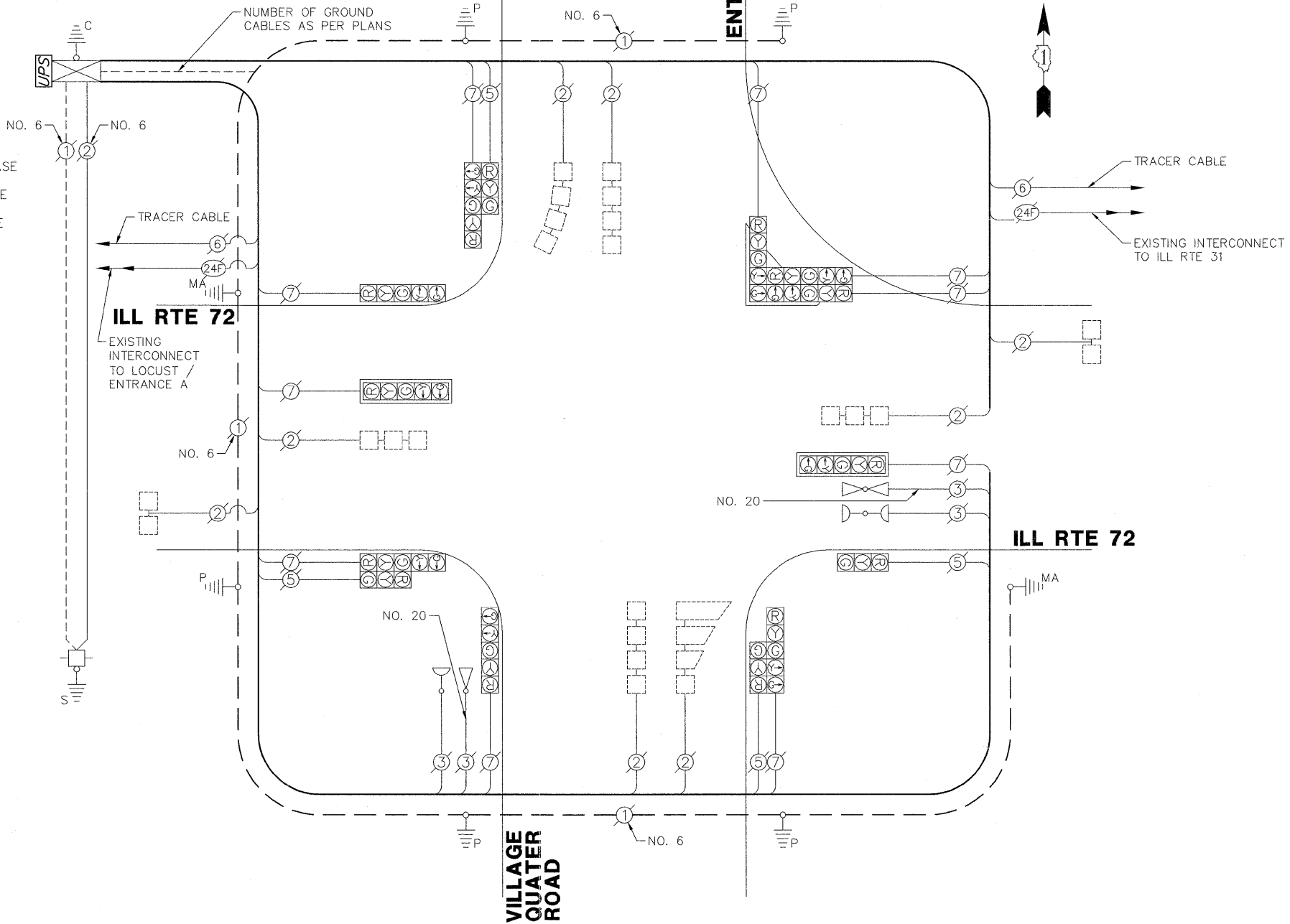
PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE



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



CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	20	135	12	0.10	24.0
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	-
TOTAL =					408.0.

ENERGY COSTS - BILLED TO: VILLAGE OF WEST DUNDEE
 (ADDRESS) 102 SOUTH SECOND STREET
 (ADDRESS) WEST DUNDEE, IL 60118
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

SCHEDULE OF QUANTITIES
ILL RTE 72 AT VILLAGE QUARTER ROAD / ENTRANCE B

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL