

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

FAU RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2566	11-00279-03-TL	DUPAGE	19	1
		ILLINOIS	CONTRACT NO. 63826	

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

**FAU 2566 (SCHMALE ROAD)
FULLERTON AVENUE TO BLOOMINGDALE COURT
TRAFFIC SIGNAL INTERCONNECT
SECTION 11-00279-03-TL
PROJECT CMM-4003 (108)
DuPAGE COUNTY**

C-91-085-13

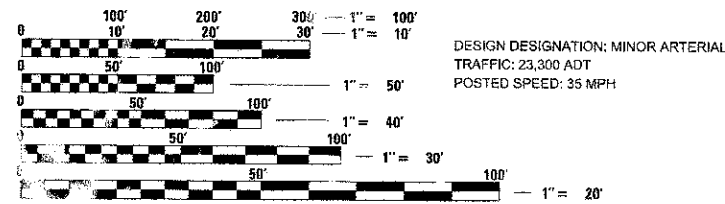
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HIGHWAY STANDARDS

000001-06	001006	424001-07	606001-05
606306-03	701006-04	701011-03	701301-04
701421-05	701501-06	701601-08	701606-08
701701-08	701801-05	701901-02	720001-01
720006-03	814001-02	814006-02	857001-01
862001-01	873001-02	877001-05	878001-09
880001-01	880006-01	886001-01	TS-05

DISTRICT ONE TRAFFIC SIGNAL 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 ABOVE SCALES MAY BE USED.

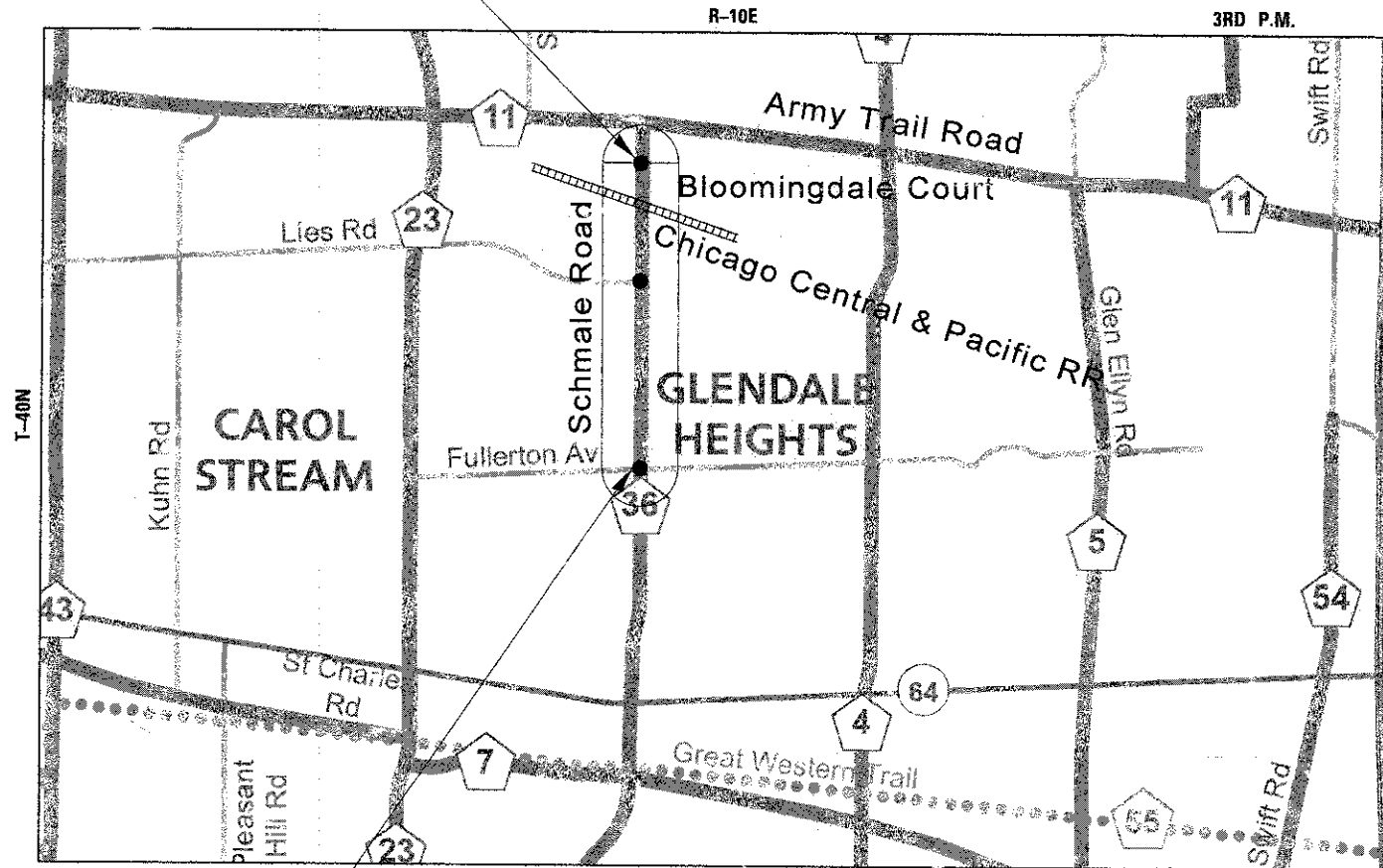
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: THOMAS HARDY
PROJECT MANAGER: DAVE ZIESEMER

CONTRACT NO. 63826

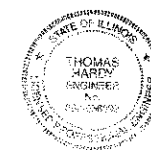
PROJECT LOCATED IN THE VILLAGE OF GLENDALE HEIGHTS

END PROJECT STA 143+00



BEGIN PROJECT STA 67+00

GROSS LENGTH = 7600.00 FT. = 1.44 MILE
NET LENGTH = 7600.00 FT. = 1.44 MILE



Thomas Hardy
3/22/2013



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED *March 22nd 2013*
Christopher Snyder
DUPAGE COUNTY DIVISION OF TRANSPORTATION, COUNTY ENGINEER

PASSED *April 14 2013*
C. Holt C.S. HOLT
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW *April 12 2013*
John Fetzmaier
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROGRAM & OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. (847) 708-4406, SCHAMBERG, IL

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.

IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE WITH THE CHICAGO CENTRAL & PACIFIC RAILROAD (CC&P RR) WHENEVER CONSTRUCTION ACTIVITY IS WITHIN 25 FEET OF THE RAILROAD RIGHT-OF-WAY (ROW). THE CONTRACTOR SHALL RETAIN FLAGMEN EMPLOYED AND DESIGNATED BY THE CC&P RR TO MONITOR ON-COMING TRAIN TRAFFIC, AND ADVISE CONTRACTOR PERSONNEL WHEN ACTIVITY ON OR NEAR THE RAILROAD ROW MAY PROCEED. THIS ITEM WILL BE PAID FOR ACCORDING TO ARTICLE 107.12 AND WILL BE REIMBURSED ACCORDING TO ARTICLE 109.05.

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 INCLUDED IN THE COST OF 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 SOLEY 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.

EXTRA CARE SHALL BE EXERCISED WHEN OPERATING EQUIPMENT AROUND TREES AND SHRUBS. INJURED BRANCHES OR ROOTS SHALL BE PRUNED IN A MANNER SATISFACTORY TO THE ENGINEER AND SHALL BE PAINTED WHERE THE CUT WAS MADE. ROOTS EXPOSED DURING EXCAVATING OPERATIONS SHALL BE NEATLY PRUNED AND COVERED WITH TOPSOIL. THIS WORK SHALL BE DONE AS SOON AS POSSIBLE AND SHALL BE CONSIDERED AS INCLUDED IN THE COST OF THE PAY ITEM "UNDERGROUND CONDUIT" AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

RESTORATION OF WORK AREA: RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF 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.

RESTORATION OF THE WORK AREA DUE TO CURB AND GUTTER AND SIDEWALK REMOVAL AND REPLACEMENT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE RELATED PAY ITEMS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH SALT TOLERANT SOD IN ACCORDANCE WITH SECTION 252 OF THE STANDARD SPECIFICATION.

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING TRAFFIC SIGNAL AND LIGHTING FACILITIES IN THE PROJECT LIMITS. IF THERE ARE ANY QUESTIONS CONCERNING EXISTING EQUIPMENT THE CONTRACTOR SHALL CONTACT THE DUPAGE COUNTY DIVISION OF TRANSPORTATION AT (630) 407-8900 FOR TRAFFIC SIGNAL CABLE LOCATIONS A MINIMUM OF 48 HOURS IN ADVANCE (SATURDAY, SUNDAYS AND HOLIDAYS EXCLUDED) AT ANY LOCATION WITHIN THE RIGHT-OF-WAY.

THE CONTRACTOR SHALL RETURN REMOVED EQUIPMENT UNLESS OTHERWISE MARKED ON THE PLANS, TO THE DUPAGE COUNTY TRAFFIC SIGNAL MAINTENANCE CONTRACTOR FACILITY AT 20W 751 NORTH AURORA ROAD, NAPERVILLE, IL 60563, ALL OTHER EQUIPMENT REMOVED SHALL BE SALVAGED BY THE CONTRACTOR WITH COSTS REFLECTED IN THE UNIT BID PRICES FOR THE RELATED PAY ITEMS.

PLAN SETS IDENTIFY CONSTRUCTION IN BOLD PRINT; EXISTING ROADWAY ELEMENTS INCLUDED FOR REFERENCE ONLY ARE IDENTIFIED IN LIGHTER PRINT.

FOR WORK OUTSIDE THE LIMITS OF BRIDGE APPROACH PAVEMENT, ALL REFERENCES IN THE HIGHWAY STANDARDS AND STANDARD SPECIFICATIONS FOR REINFORCEMENT, DOWEL BARS AND TIE BARS IN PAVEMENT, SHOULDERS, CURB, GUTTER, COMBINATION CURB AND GUTTER AND MEDIAN, AND CHAIR SUPPORTS FOR CRC PAVEMENT, SHALL BE EPOXY COATED, UNLESS NOTED ON THE PLAN.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: NONE SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2566	11-00279-03-TL	DUPAGE	19	2
				CONTRACT NO. 63826
ILLINOIS FED. AID PROJECT				

FILE NAME - Gen Notes.dgn	USER NAME - hwsh	DESIGNED - TH	REVISED -
		DRAWN - TH	REVISED -
		CHECKED - DAZ	REVISED -
		DATE - 10/4/12	REVISED -

PLOT SCALE = 50:1250' / 1" / 16"
PLOT DATE = 03/21/2013

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0021			
				INTERCONNECT	FULLERTON AVENUE	LIES ROAD	BLOOMINGDALE COURT ENTRANCE
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	3	3			
* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	1			
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1			
67100100	MOBILIZATION	L SUM	1	0.4	0.2	0.2	0.2
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	0.4	0.2	0.2	0.2
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	0.4	0.2	0.2	0.2
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	0.4	0.2	0.2	0.2
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.4	0.2	0.2	0.2
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.4	0.2	0.2	0.2
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	3		1	1	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	6142	6142			
81028260	UNDERGROUND CONDUIT, GALVANIZED STEEL, 6" DIA.	FOOT	246	246			
81400100	HANDHOLE	EACH	14	14			
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3		1	1	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	3		1	1	1
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	3		1	1	1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2		1	1	
87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	8038	8038			
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	17		6	5	6
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	8038	8038			
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	441				441
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1550		527	530	493
87900200	DRILL EXISTING HANDHOLE	EACH	4		1	2	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7		4		3
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	7		4		3
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	9		4		5
88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1				1
88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	2				2
88102845	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	2				2
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	16		8		8
88500100	INDUCTIVE LOOP DETECTOR	EACH	19		8	5	6
88700200	LIGHT DETECTOR	EACH	6		2	2	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	3		1	1	1
88800100	PEDESTRIAN PUSH BUTTON	EACH	6				6
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3		1	1	1
Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	3		1	1	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1			

* SPECIALTY ITEMS

FILE NAME = Summary of Quantities.dgn

USER NAME = hsch

DESIGNED - TH

REVISED -

DRAWN - TH

REVISED -

PLOT SCALE = 50.0000 / 1 in.

CHECKED - DAZ

REVISED -

PLOT DATE = 04/01/2013

DATE - 10/4/12

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE

SHEET OF SHEETS STA. TO STA.

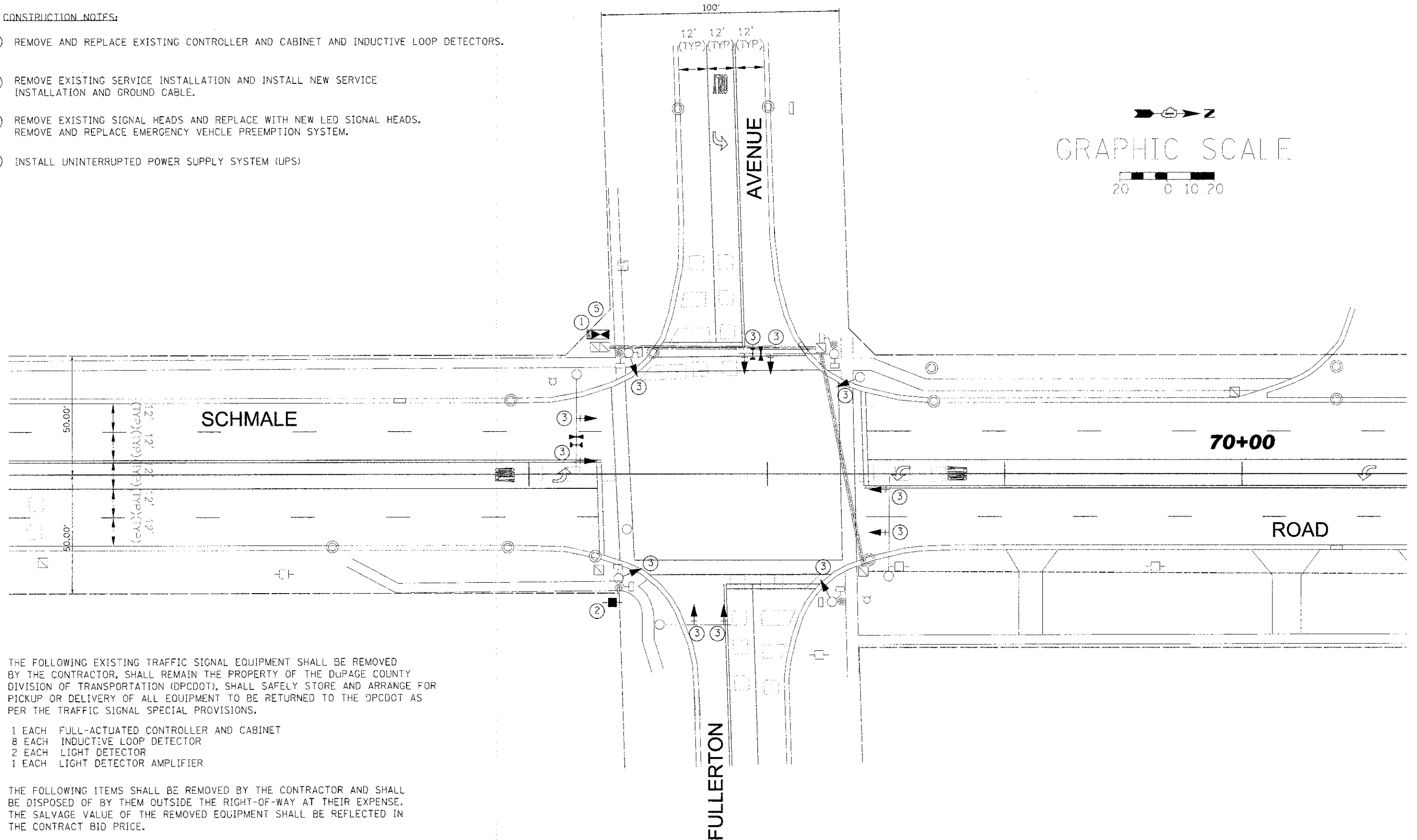
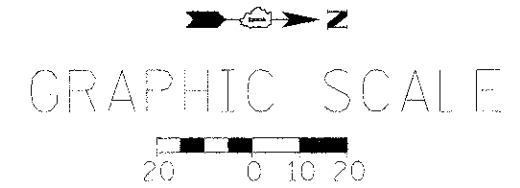
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2566	11-00279-03-TL	DuPAGE	19	3
CONTRACT NO. 63826				
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL LEGEND

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

CONSTRUCTION NOTES:

- ① REMOVE AND REPLACE EXISTING CONTROLLER AND CABINET AND INDUCTIVE LOOP DETECTORS.
- ② REMOVE EXISTING SERVICE INSTALLATION AND INSTALL NEW SERVICE INSTALLATION AND GROUND CABLE.
- ③ REMOVE EXISTING SIGNAL HEADS AND REPLACE WITH NEW LED SIGNAL HEADS. REMOVE AND REPLACE EMERGENCY VEHICLE PREEMPTION SYSTEM.
- ⑤ INSTALL UNINTERRUPTED POWER SUPPLY SYSTEM (UPS)



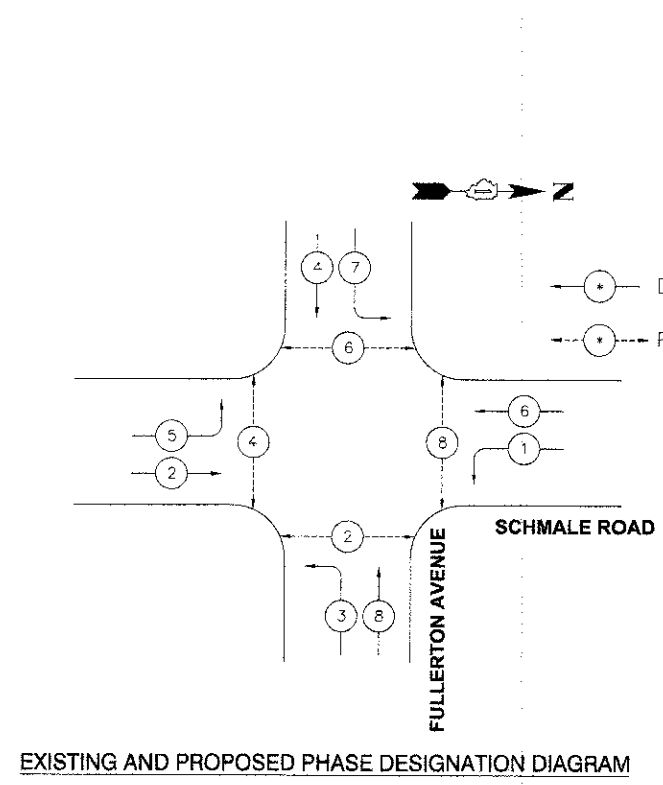
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE DuPAGE COUNTY DIVISION OF TRANSPORTATION (DPCDOT), SHALL SAFELY STORE AND ARRANGE FOR PICKUP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE DPCDOT AS PER THE TRAFFIC SIGNAL SPECIAL PROVISIONS.

- 1 EACH FULL-ACTUATED CONTROLLER AND CABINET
- 8 EACH INDUCTIVE LOOP DETECTOR
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

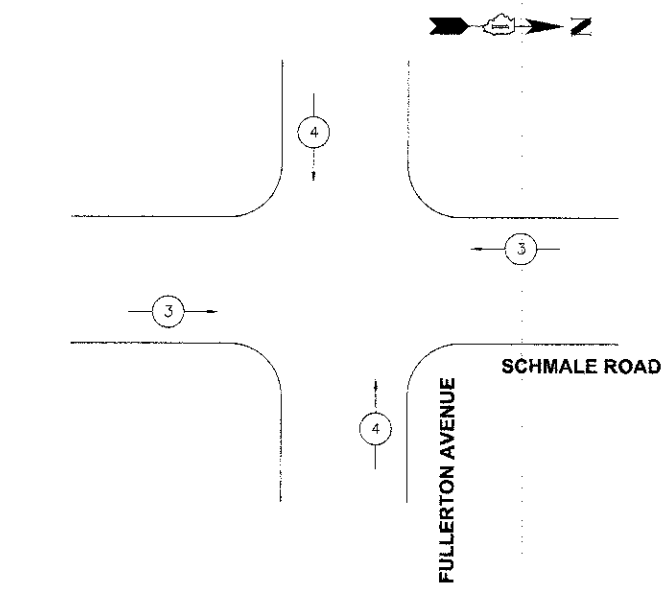
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

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

FILE NAME = SIGNAL PLAN SHEETS.dwg	USER NAME = hsch	DESIGNED - TH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN- SCHMALE ROAD AT FULLERTON AVENUE	F.A.J. RTE. 2566	SECTION 11-00279-03-TL	COUNTY DUPAGE	TOTAL SHEETS 19	SHEETS NO. 5
	PLOT SCALE = 28.4400 / in.	CHECKED - DAZ	REVISED -			SCALE: 1"=20'	SHEET ___ OF ___ SHEETS	STA. _____ TO STA. _____	ILLINOIS FED. AID PROJECT CONTRACT NO. 63826	
PLOT DATE = 03/20/2013	DATE = 10/2/2012	REVISED -	REVISED -							

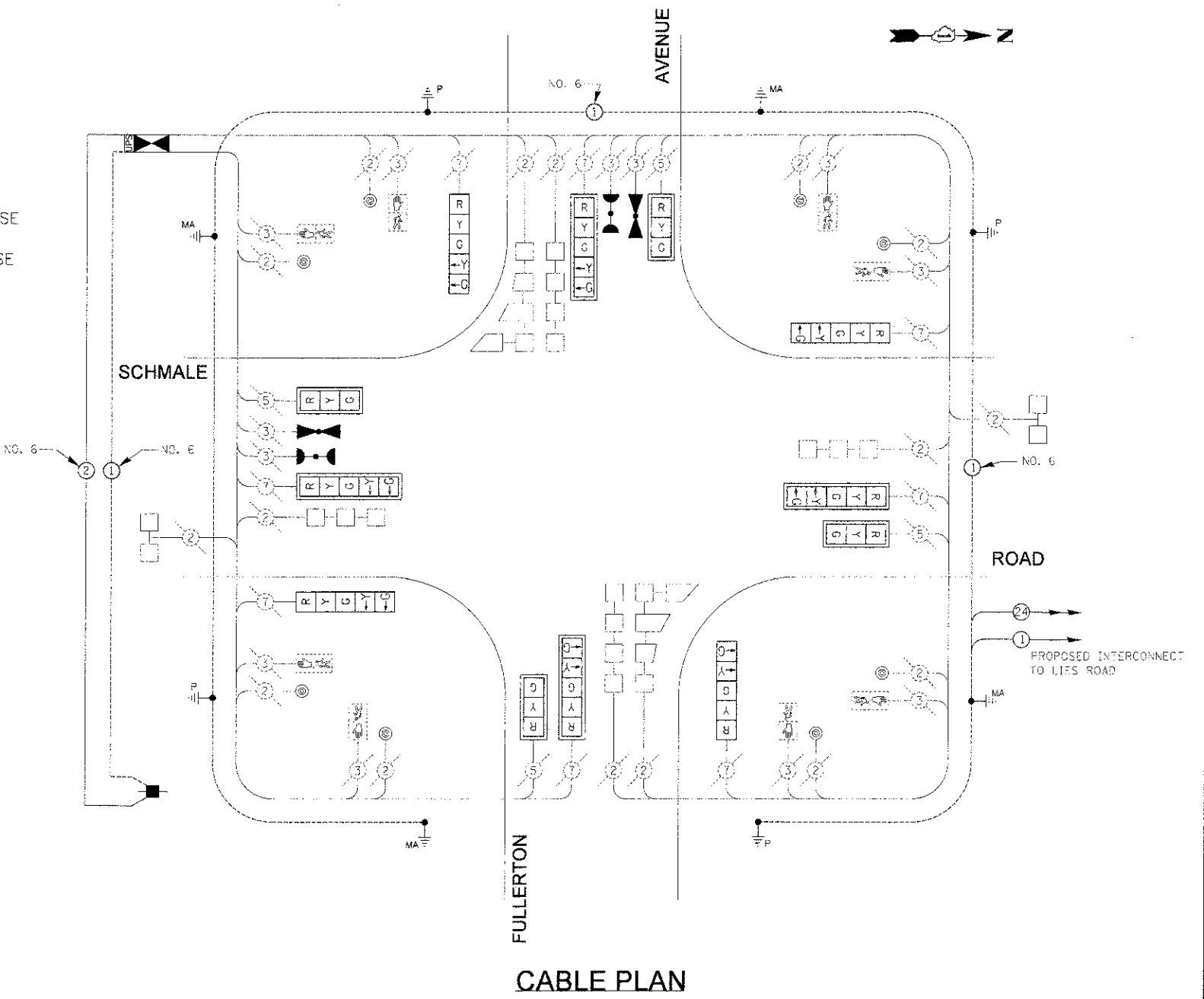


EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



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

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE PLAN

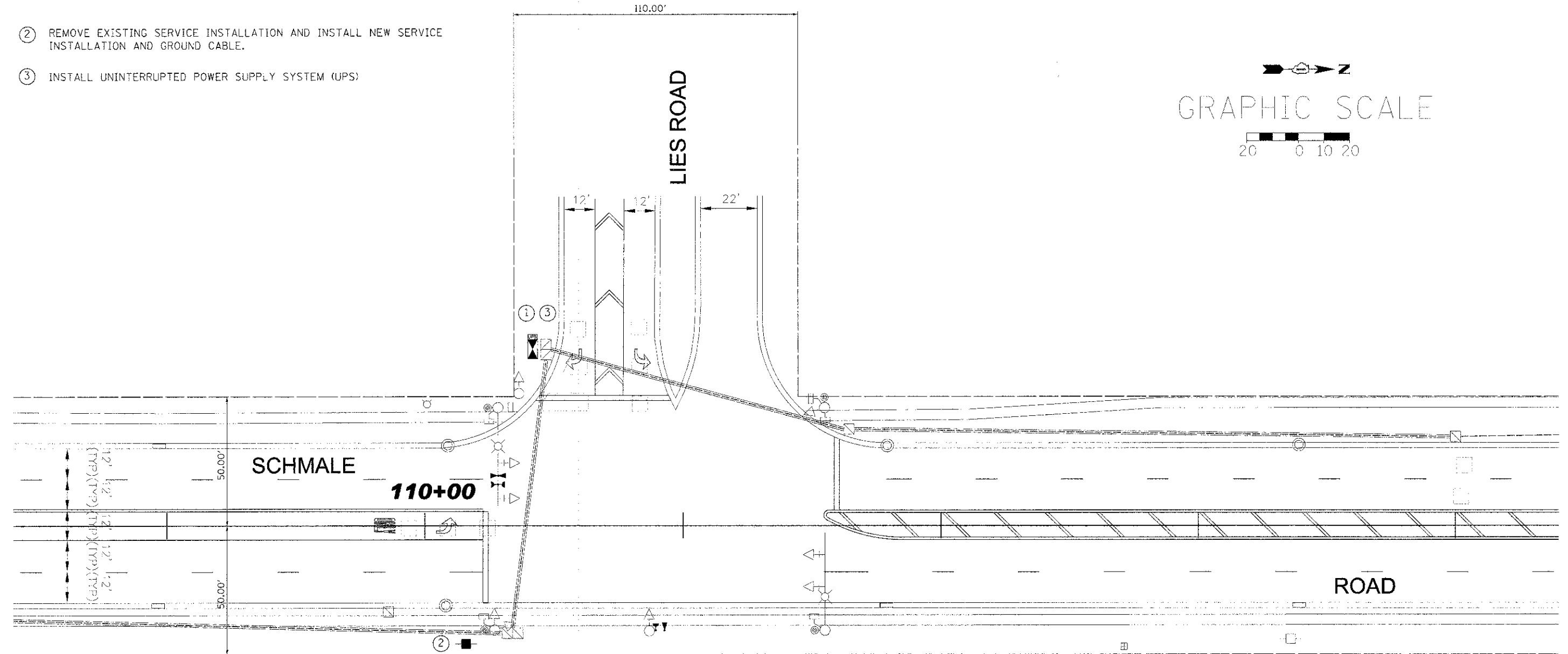
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION (%)	
SIGNAL (RED)	12	17	0.50	102	
(YELLOW)	12	25	0.25	75	
(GREEN)	12	15	0.25	45	
ARROW	12	12	0.10	14.4	
PED SIGNAL CONTROLLER	8	25	1.00	200	
LUMINAIRE	1	100	1.00	100	
TOTAL=					536.4

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL
67100100	MOBILIZATION	L SUM	0.2
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	0.2
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.2
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.2
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.2
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.2
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86200200	UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	6
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C	FOOT	527
87900200	DRILL EXISTING HANDHOLE	EACH	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
88500100	INDUCTIVE LOOP DETECTOR	EACH	8
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1

CONSTRUCTION NOTES:

- ① REMOVE AND REPLACE EXISTING CONTROLLER AND CABINET AND INDUCTIVE LOOP DETECTORS.
- ② REMOVE EXISTING SERVICE INSTALLATION AND INSTALL NEW SERVICE INSTALLATION AND GROUND CABLE.
- ③ INSTALL UNINTERRUPTED POWER SUPPLY SYSTEM (UPS)



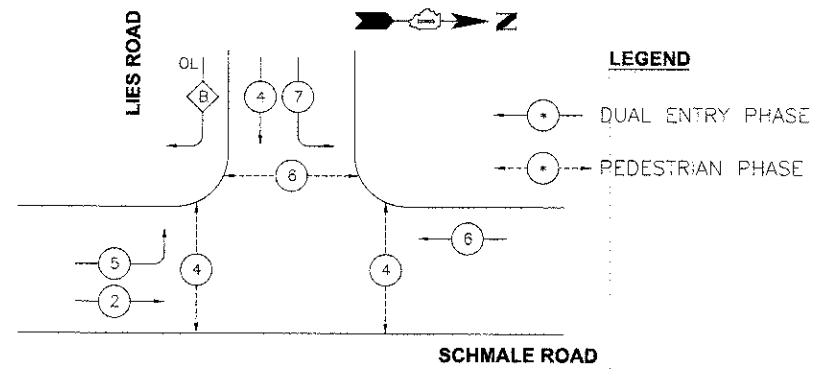
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DPCDOT), SHALL SAFELY STORE AND ARRANGE FOR PICKUP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE DPCDOT AS PER THE TRAFFIC SIGNAL SPECIAL PROVISIONS.

- 1 EACH FULL-ACTUATED CONTROLLER AND CABINET
- 5 EACH INDUCTIVE LOOP DETECTOR
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

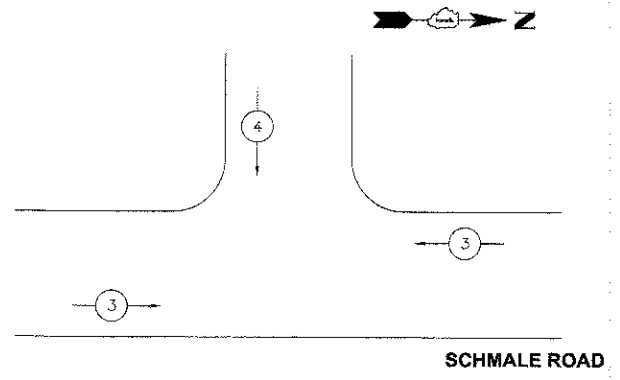
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH SERVICE INSTALLATION

FILE NAME PLAN/DC15.dgn	DESIGNED - TH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN- SCHMALE ROAD AT LIES ROAD		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - TH	REVISED -		SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	2566	11-00279-03-TL	DuPAGE	19
PLOT SCALE - 20.0000 / 1" = 20'	CHECKED - OAZ	REVISED -							CONTRACT NO. 63826	
PLOT DATE - 03/21/2013	DATE - 10/2/12	REVISED -				ILLINOIS FED. AID PROJECT				

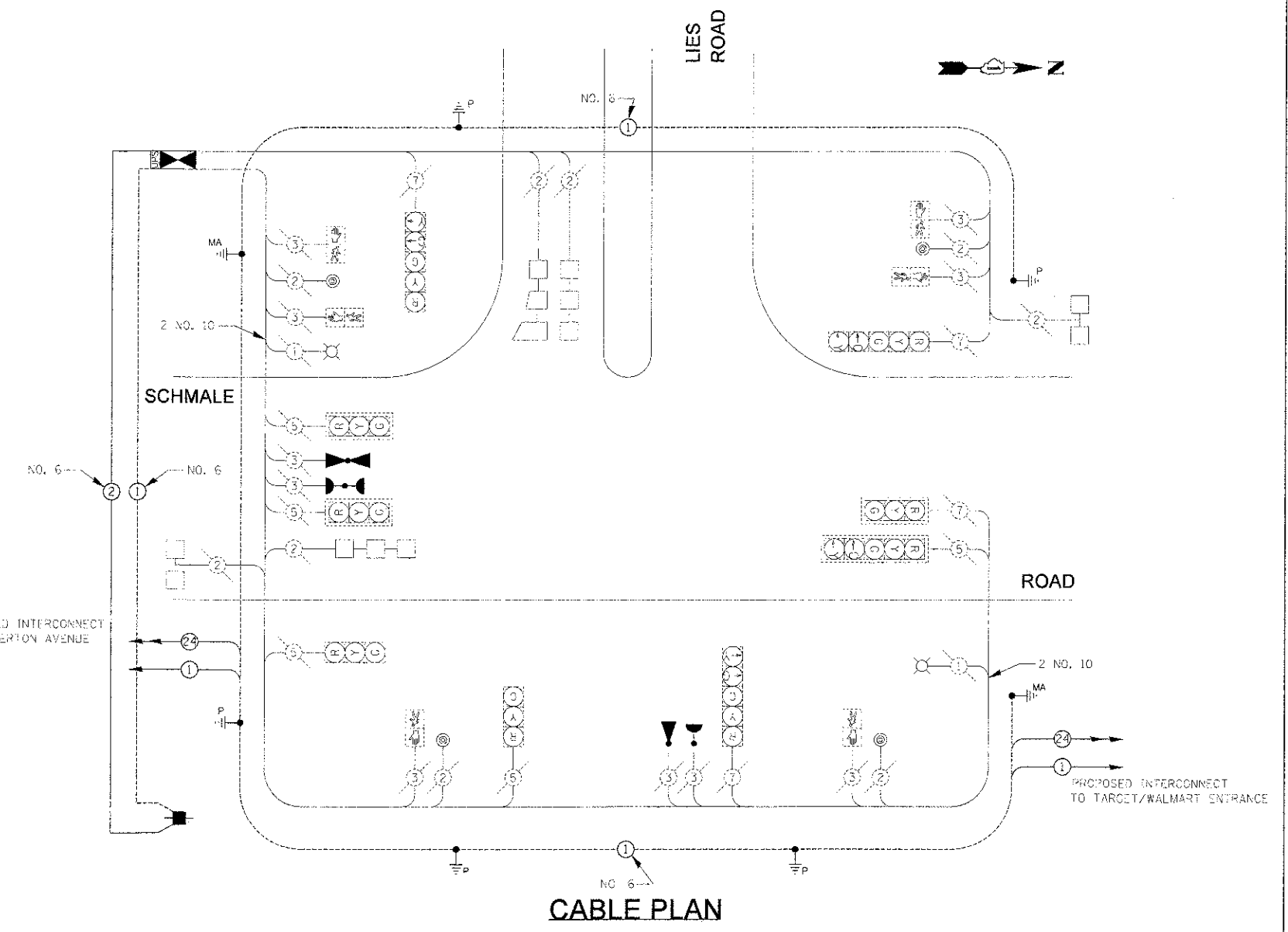


EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



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

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE PLAN

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL
67100100	MOBILIZATION	L SUM	0.2
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	0.2
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.2
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.2
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.2
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.2
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	5
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	530
87900200	DRILL EXISTING HANDHOLE	EACH	2
88500100	INDUCTIVE LOOP DETECTOR	EACH	5
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1

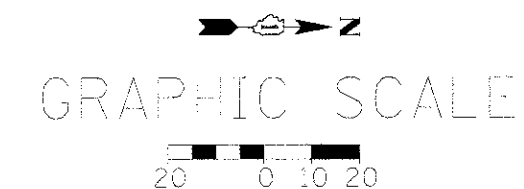
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION (%)	
		INCAND.	LED		
SIGNAL (RED)	9	17	0.50		76.5
(YELLOW)	9	25	0.25		56.3
(GREEN)	9	15	0.25		33.8
ARROW	4	12	0.10		4.8
PED. SIGNAL	6	25	1.00		150
CONTROLLER	1	100	1.00		100
LUMINAIRE	2	310	0.50		310
TOTAL=					731.4

CONSTRUCTION NOTES:

- ① REMOVE AND REPLACE EXISTING CONTROLLER AND CABINET AND INDUCTIVE LOOP DETECTORS.
- ② REMOVE EXISTING SERVICE INSTALLATION AND INSTALL NEW SERVICE INSTALLATION AND GROUND CABLE.
- ③ REMOVE EXISTING SIGNAL HEADS AND REPLACE WITH NEW LED SIGNAL HEADS.
- ④ REMOVE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS, REPLACE WITH NEW LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS, AND INSTALL NEW NUMBER 14 2C CABLE FOR ADDED PUSH BUTTONS AT SOUTHWEST AND SOUTHEAST CORNERS.
- ⑤ INSTALL UNINTERRUPTED POWER SUPPLY SYSTEM (UPS)

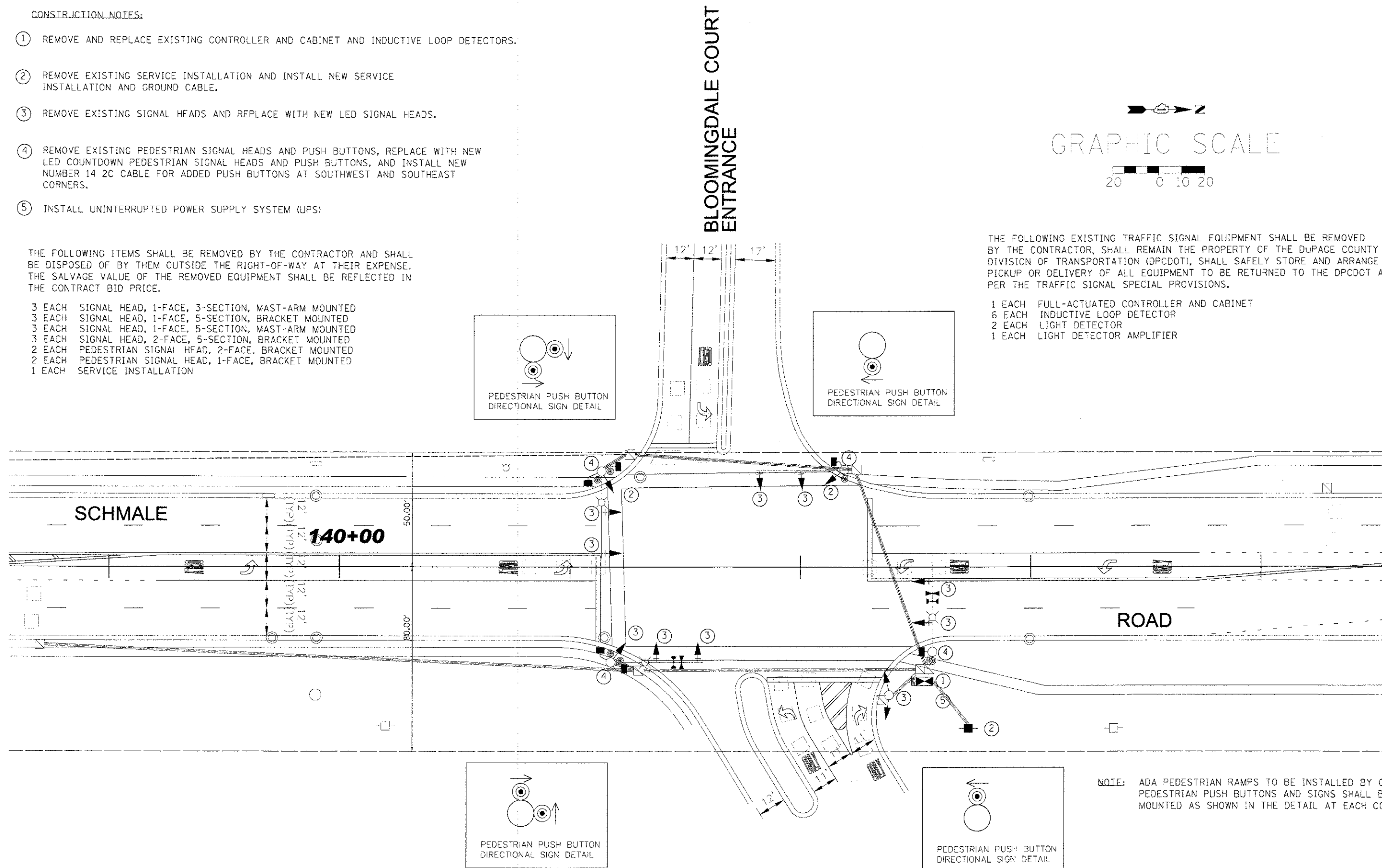
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
- 3 EACH SIGNAL HEAD, 2-FACE, 5-SECTION, BRACKET MOUNTED
- 2 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
- 1 EACH SERVICE INSTALLATION



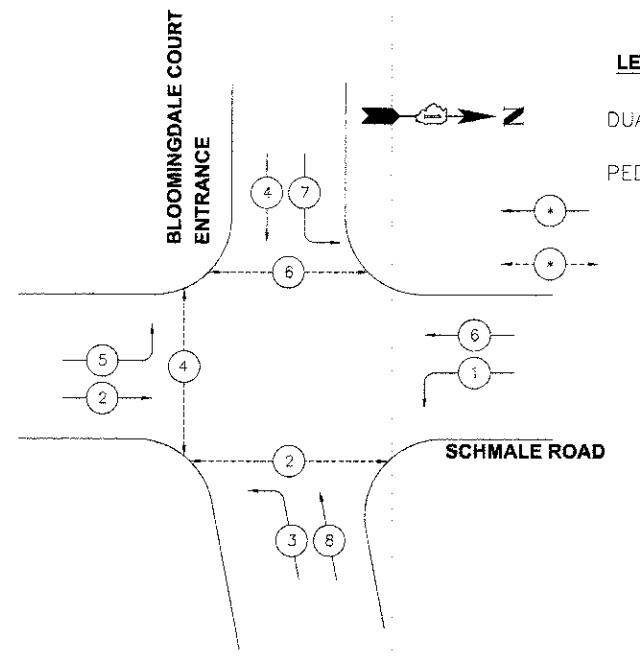
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DPCDOT), SHALL SAFELY STORE AND ARRANGE FOR PICKUP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE DPCDOT AS PER THE TRAFFIC SIGNAL SPECIAL PROVISIONS.

- 1 EACH FULL-ACTUATED CONTROLLER AND CABINET
- 6 EACH INDUCTIVE LOOP DETECTOR
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

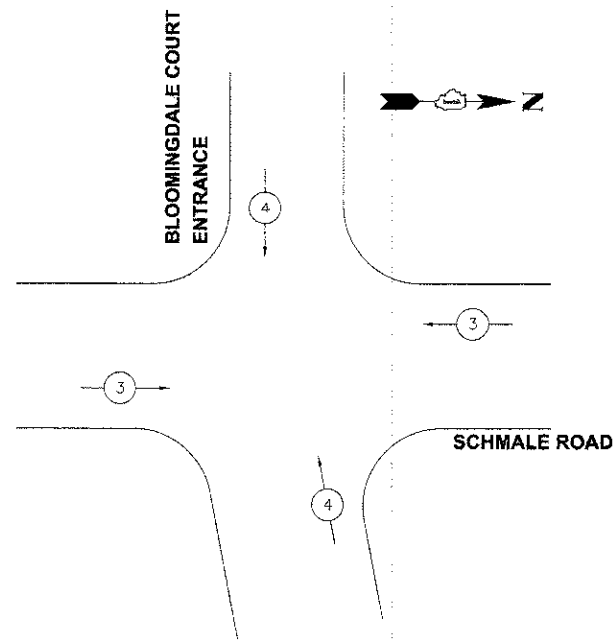


NOTE: ADA PEDESTRIAN RAMPS TO BE INSTALLED BY OTHERS. PEDESTRIAN PUSH BUTTONS AND SIGNS SHALL BE MOUNTED AS SHOWN IN THE DETAIL AT EACH CORNER.

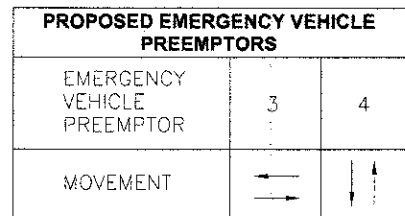
FILE NAME: PLANSHEET.dwg	USER NAME: fuzkm	DESIGNED: TH	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN SCHMALE ROAD AT BLOOMINGDALE COURT ENTRANCE		F.A.U. RTE: 256E	SECTION: 11-00279-03-TL	COUNTY: DUPAGE	TOTAL SHEETS: 19	SHEET NO.: 9
	PLST SCALE: 20.000 1/4" = 1'	CHECKED: DAZ	DATE: 10/2/12		REVISED: -	SCALE: 1"=20'	SHEET OF SHEETS: STA. TO STA.	ILLINOIS FED. AID PROJECT CONTRACT NO. 63826			



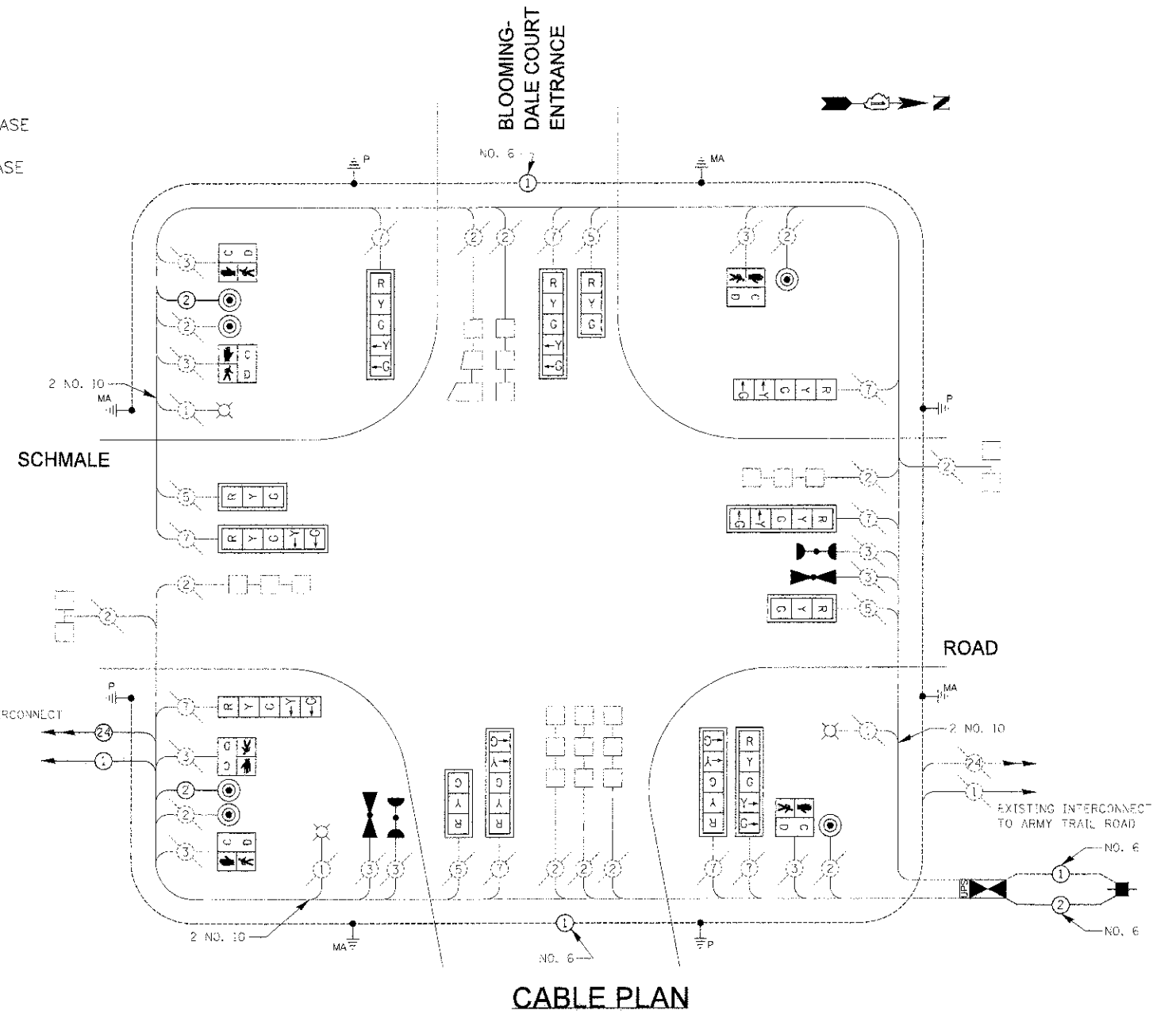
EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND
 DUAL ENTRY PHASE
 PEDESTRIAN PHASE



CABLE PLAN

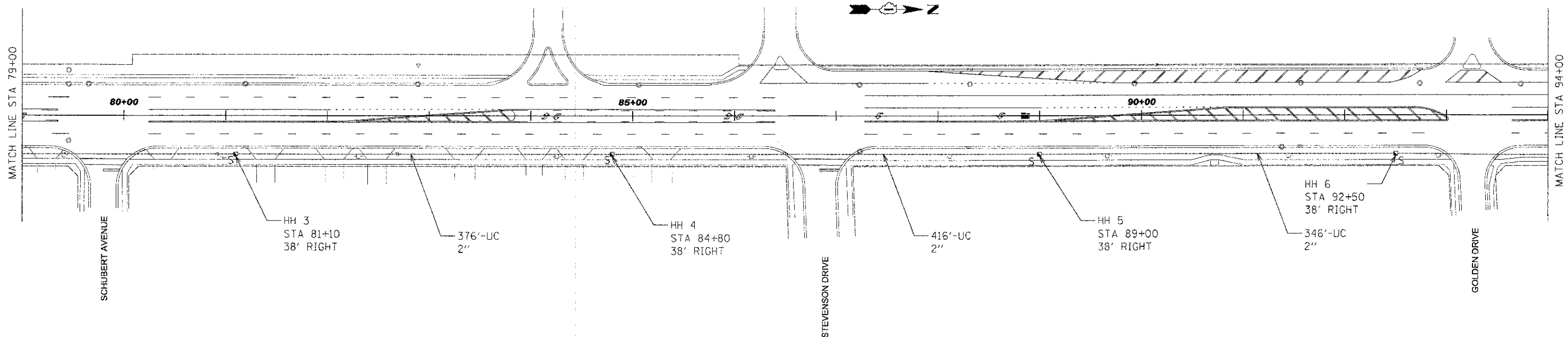
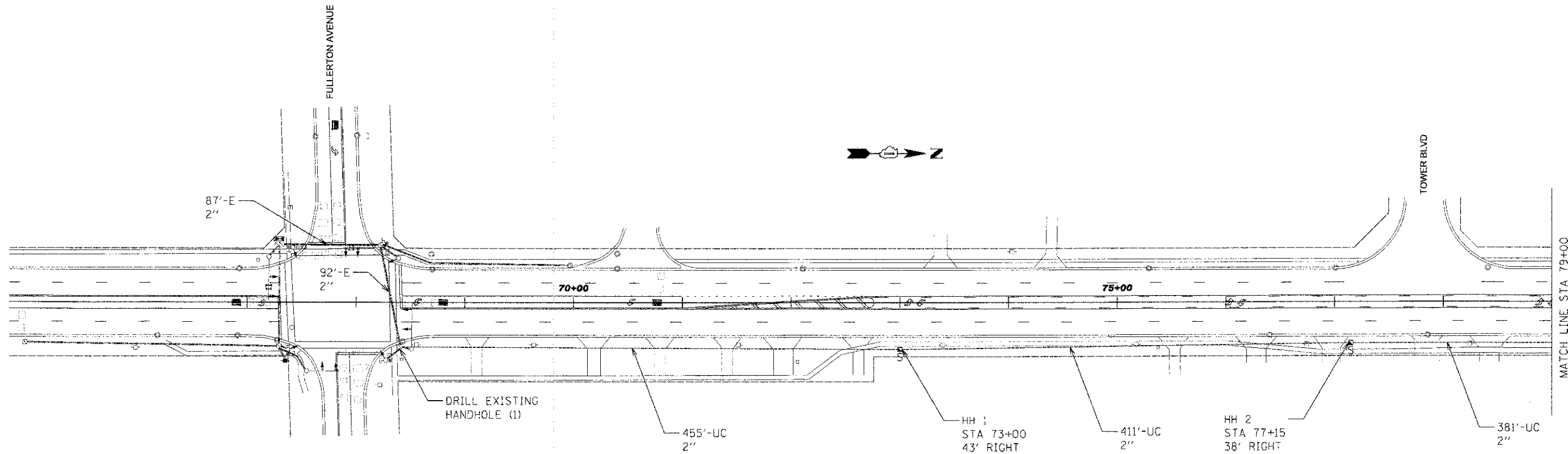
SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL
67100100	MOBILIZATION	L SUM	0.2
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	0.2
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.2
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.2
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.2
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.2
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	6
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	441
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	463
87900200	DRILL EXISTING HANDHOLE	EACH	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	5
88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
88102825	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	2
88102845	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	2
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
88500100	INDUCTIVE LOOP DETECTOR	EACH	6
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH BUTTON	EACH	6
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL 2	EACH	1

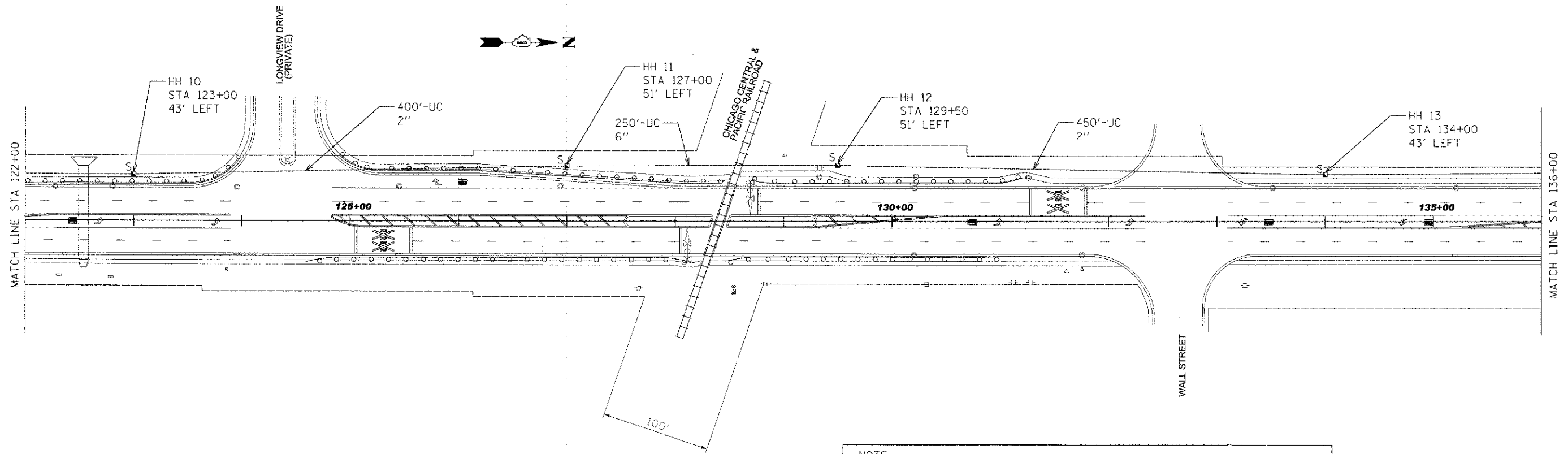
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION (%)	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	13		17	0.50	102
SIGNAL (YELLOW)	13		25	0.25	73
SIGNAL (GREEN)	13		15	0.25	45
ARROW	4		12	0.10	14.4
PED. SIGNAL	6		25	1.00	200
CONTROLLER	1	100			100
LUMINAIRE	2	310		0.50	310
TOTAL=					906.4

ENERGY COSTS - BILLED TO: _____

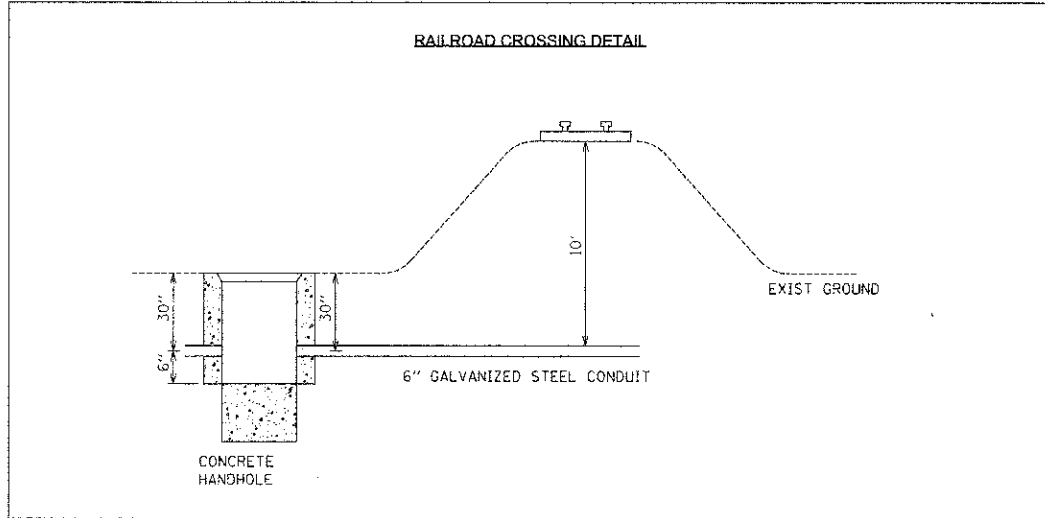
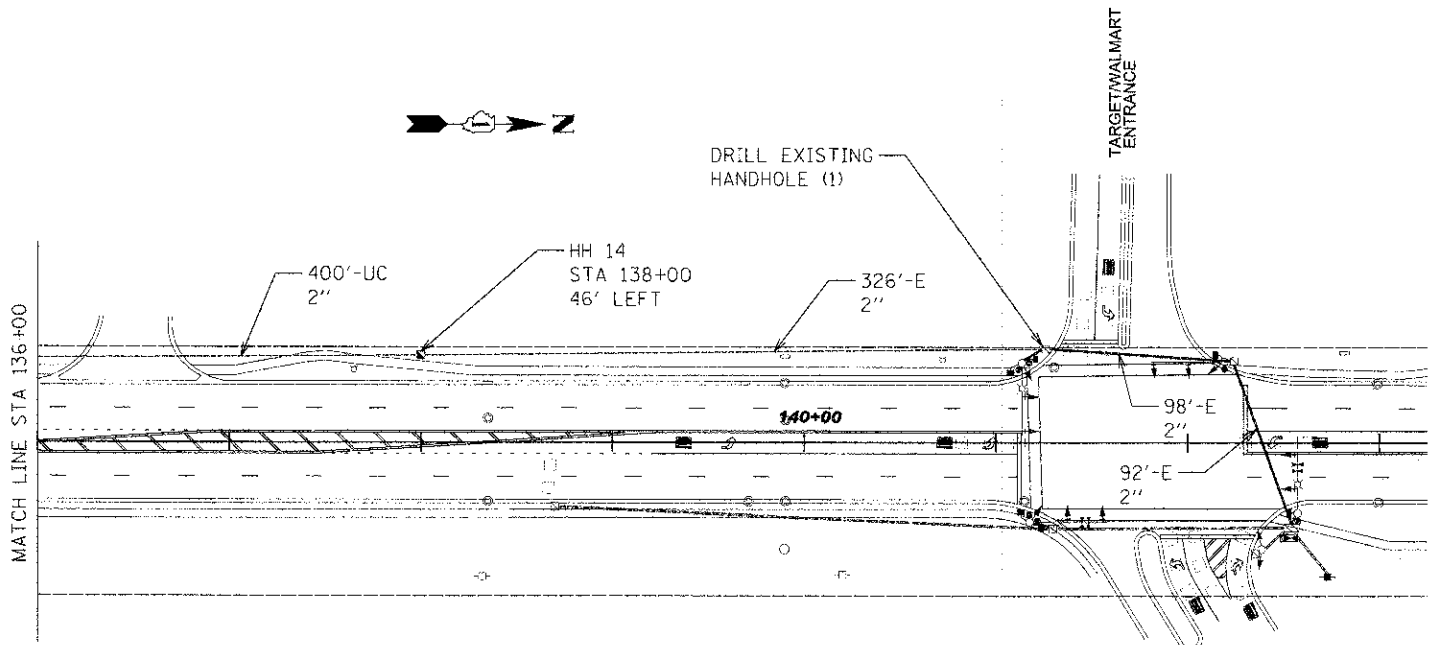
ENERGY SUPPLY - CONTACT: _____



FILE NAME - INTERCONNECT.dgn	USER NAME - daz	DESIGNED - TH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERCONNECT PLAN SHEET			F.A.U. RTE. 2566	SECTION 11-00279-03-TL	COUNTY DuPAGE	TOTAL SHEETS 19	SHEET NO. 11
	PLOT SCALE = 50.0000 ft / in.	CHECKED - DAZ	REVISED -					CONTRACT NO. 63826				
	PLOT DATE = 04/27/2013	DATE - 10/3/12	REVISED -		ILLINOIS FED. AID PROJECT							
					SCALE: 1"=50'	SHEET 1	OF 3 SHEETS	STA. 67+00	TO STA. 94+00			



NOTE:
 PROVIDE A 6" GALVANIZED STEEL CONDUIT AT 60" WITH A 2" UNIT DUCT FOR FIBER OPTIC CABLE. THE COST OF UNIT DUCT INSTALLATION SHALL BE INCLUDED IN THE PRICE OF THE GALVANIZED STEEL CONDUIT. ALL WORK IS TO BE PERFORMED OUTSIDE THE RAILROAD RIGHT-OF-WAY. NOTIFY THE CHICAGO CENTRAL & PACIFIC RAILROAD AT 1-800-465-9239 FOR REQUIRED PERMIT AND INSPECTION COSTS AT LEAST 30 DAYS IN ADVANCE OF WORK. ADDITIONAL RAILROAD COSTS NOT COVERED UNDER ARTICLE 107 OF THE STANDARD SPECIFICATIONS WILL BE PAID FOR UNDER ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.



FILE NAME =
 INTERCONNECT.dgn

USER NAME = hwbkn
 PLOT SCALE = 50,000.00 Ft / in.
 PLOT DATE = 05/22/2013

DESIGNED - TH
 DRAWN - TH
 CHECKED - DAZ
 DATE - 10/3/12

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

INTERCONNECT PLAN SHEET

SCALE: 1"=50' SHEET 3 OF 3 SHEETS STA. 122+00 TO STA. 145+00

F.A.U. RATE: 2566	SECTION: 11-00279-03-TL	COUNTY: DuPAGE	TOTAL SHEETS: 19	SHEET NO.: 13
CONTRACT NO. 63826			ILLINOIS FED. AID PROJECT	

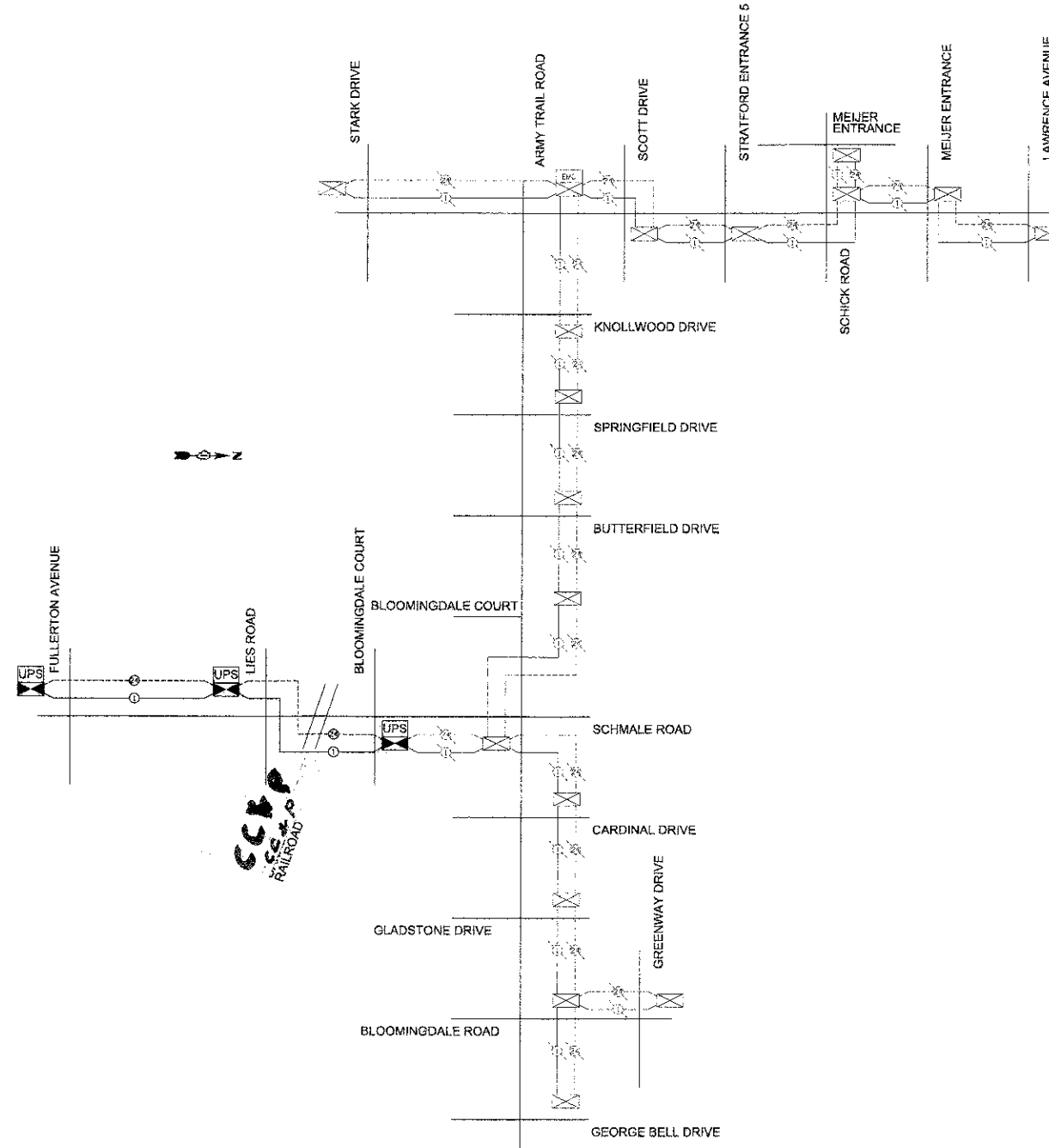
SUMMARY OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	3
66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1
66900530	SOIL DISPOSAL ANALYSIS	EACH	1
67100100	MOBILIZATION	L SUM	0.4
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	0.4
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.4
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.4
70102835	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.4
70102840	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.4
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	6142
81028260	UNDERGROUND CONDUIT, GALVANIZED STEEL, 6" DIA.	FOOT	246
81400100	HANDHOLE	EACH	14
87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	8038
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	8038
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

CONSTRUCTION NOTES

THE FOLLOWING SIGNALS SHALL BE OPTIMIZED UNDER THE PAY ITEM, "RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, LEVEL 2":

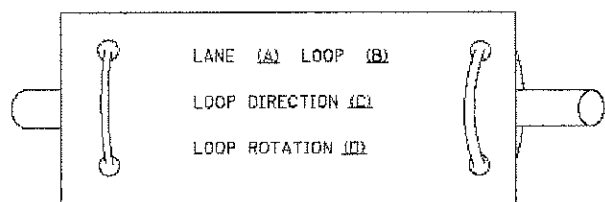
- SCHMALE ROAD AT FULLERTON AVENUE
- SCHMALE ROAD AT LIES ROAD
- SCHMALE ROAD AT BLOOMINGDALE COURT ENTRANCE



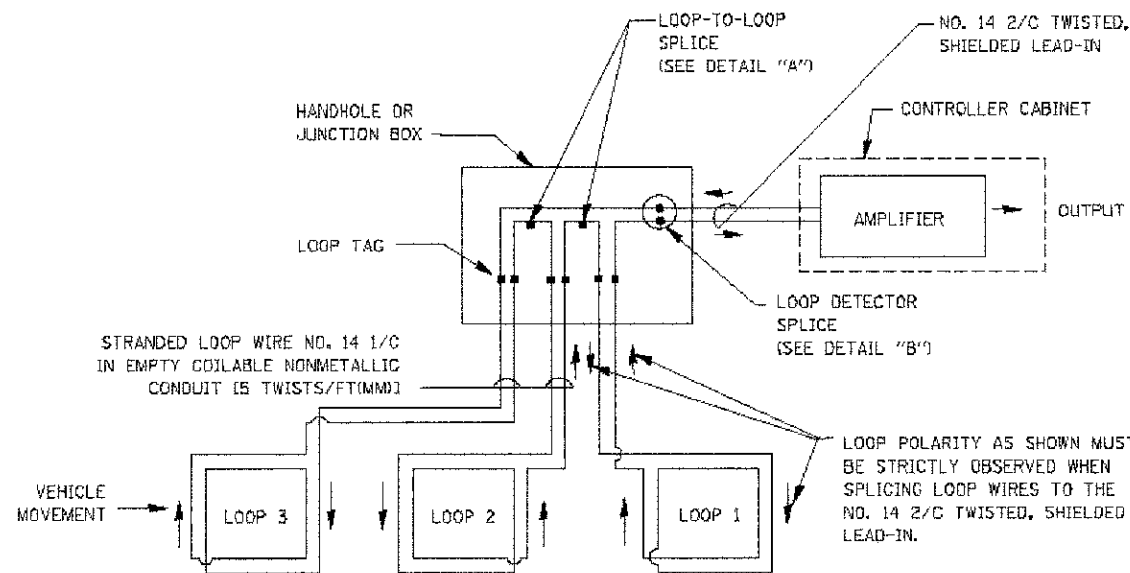
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND 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.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

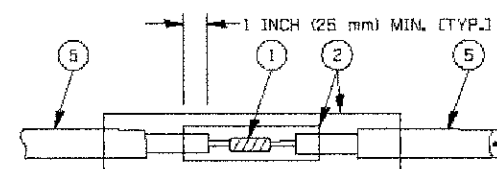


- A. LANE #1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

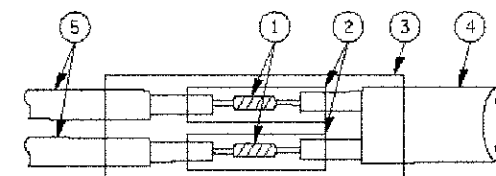


DETECTOR LOOP WIRING SCHEMATIC

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

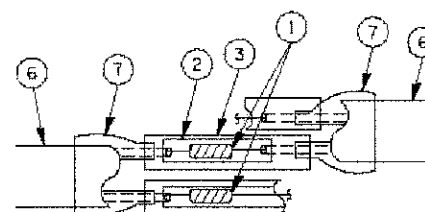


**DETAIL "A"
LOOP-TO-LOOP SPLICE**

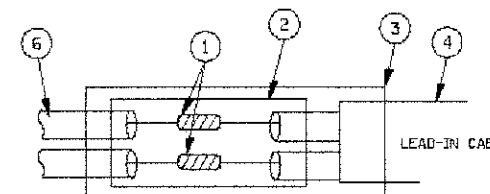


**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

TYPE I LOOP



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



PRE-FORMED LOOP

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

LOOP DETECTOR SPLICE

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

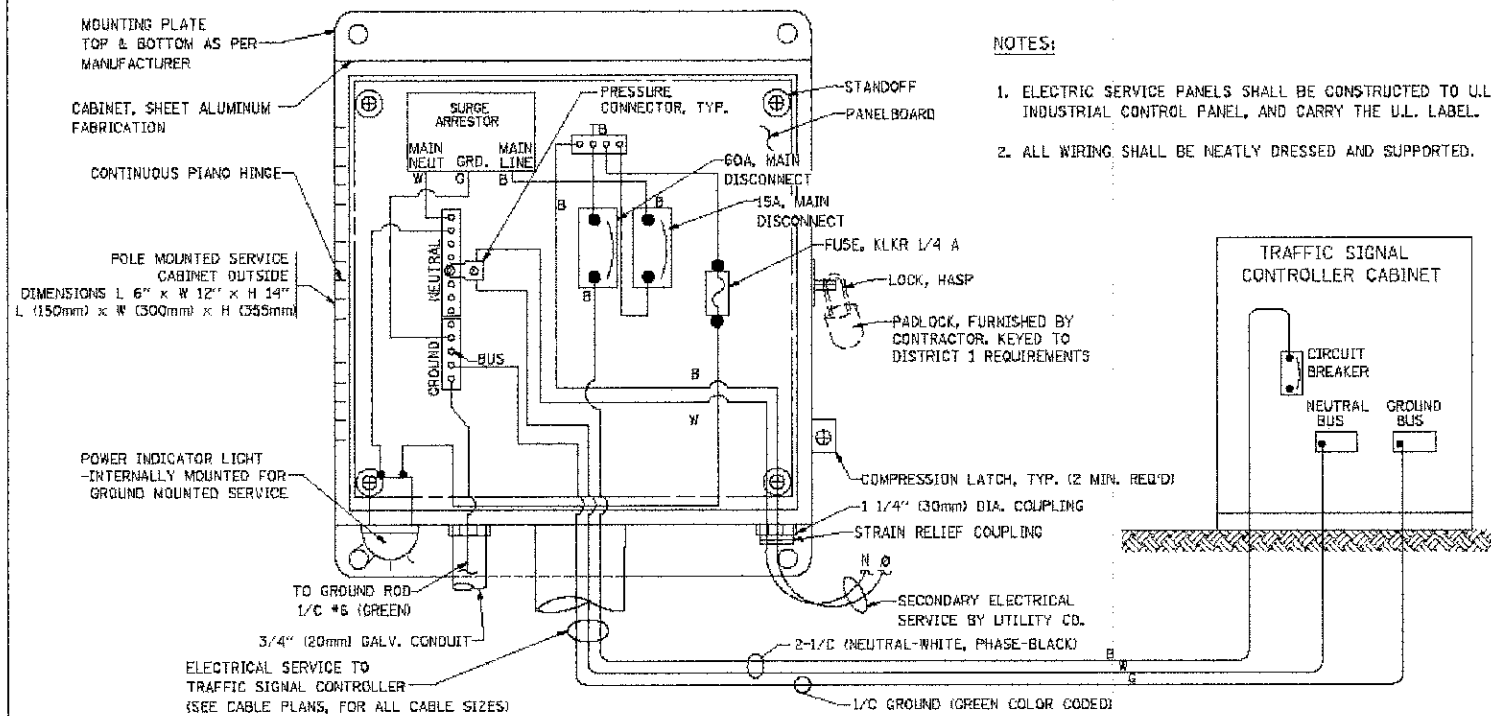
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		DATE - 10/28/09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

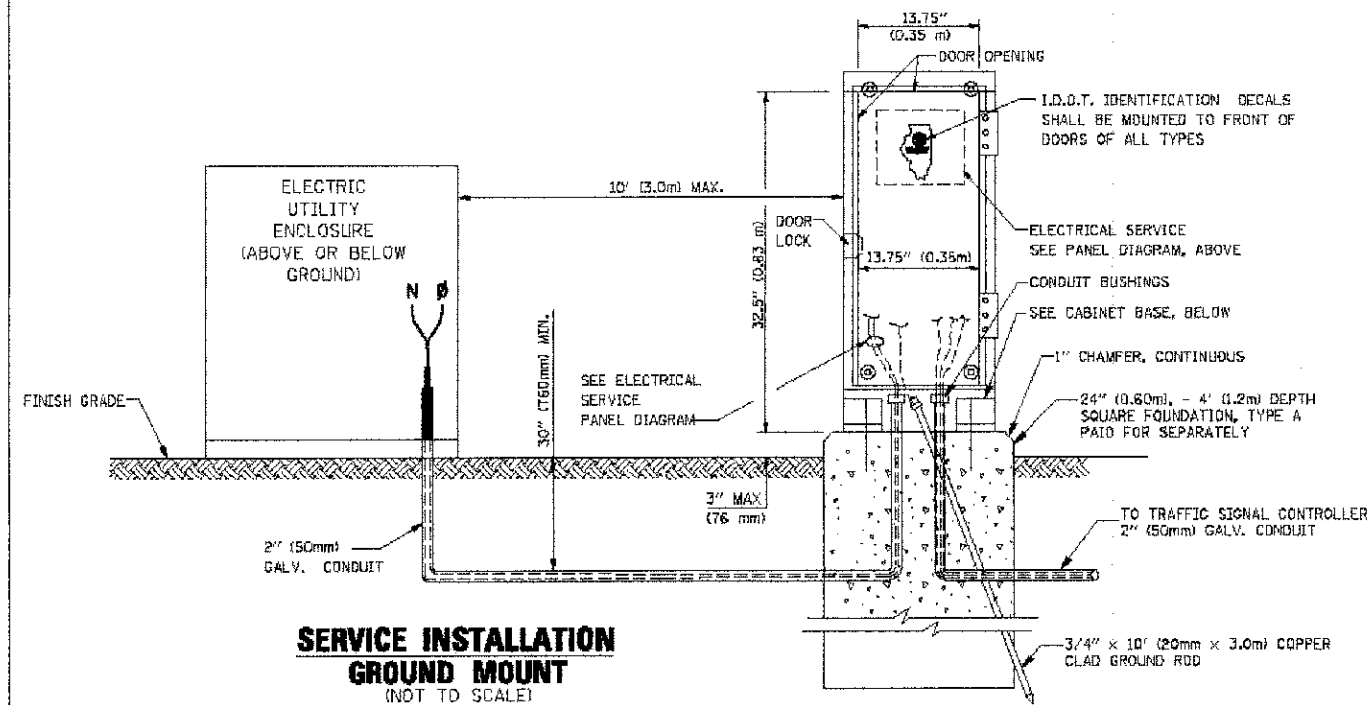
SCALE: SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	TS-05			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			CONTRACT NO. 63826



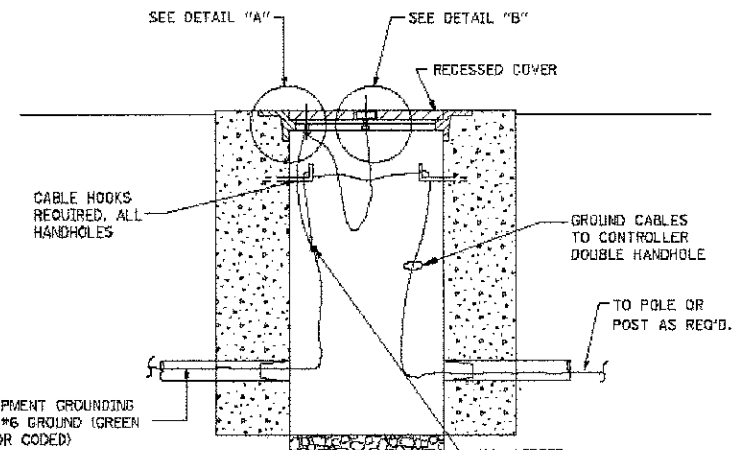
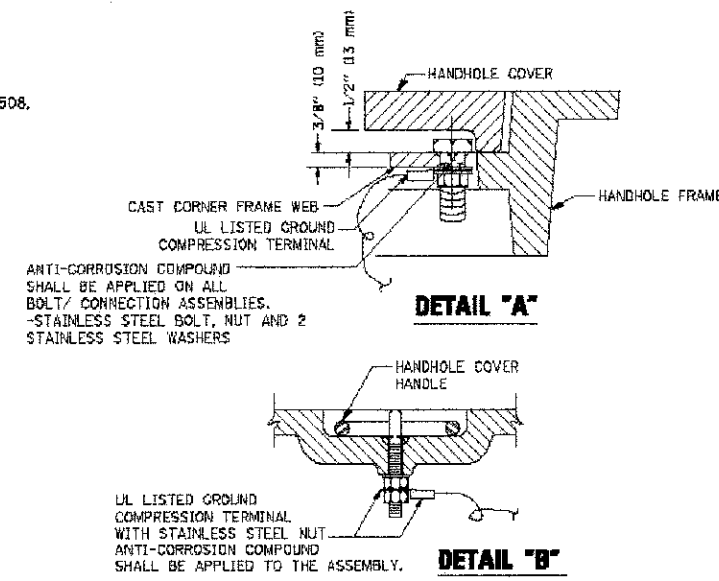
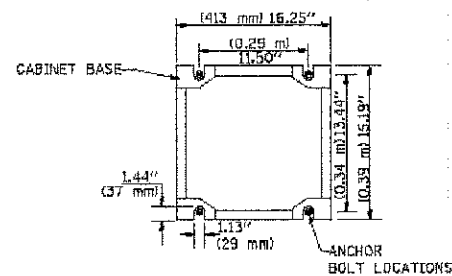
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)

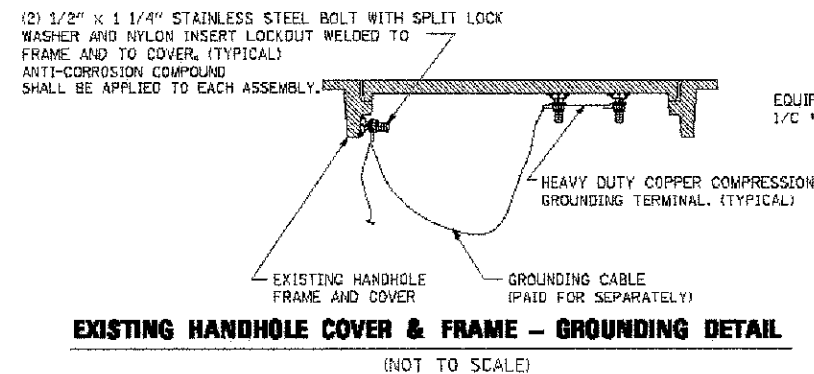


SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)

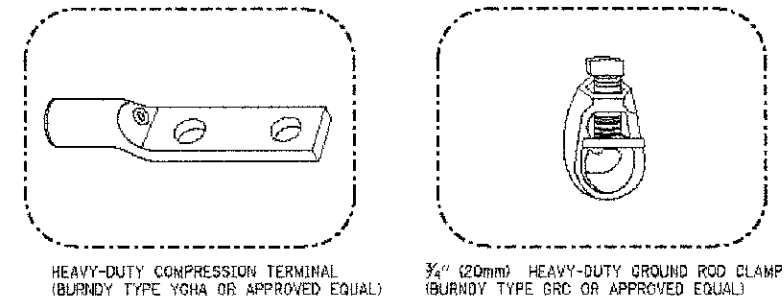
CABINET - BASE BOLT PATTERN
(NOT TO SCALE)



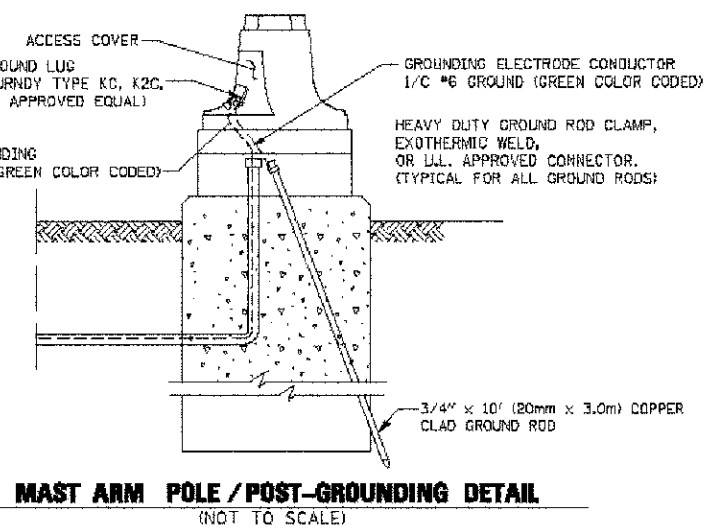
HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)



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



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



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

NOTES:

GROUNDING SYSTEM

- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4135.
- THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

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		DATE - 10/28/09	REVISED -

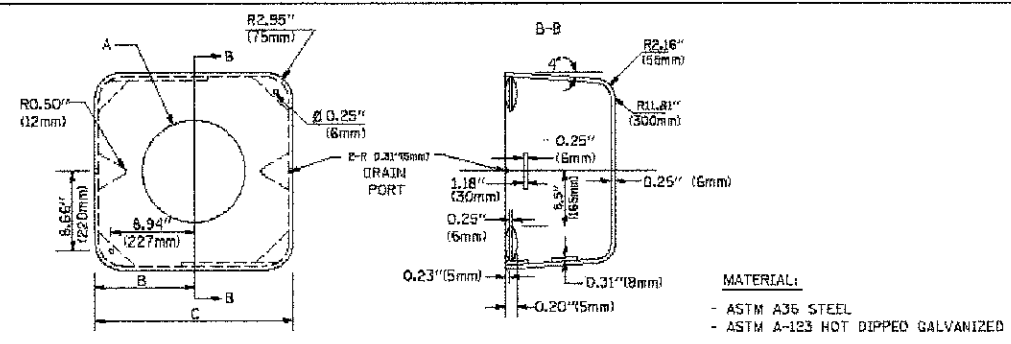
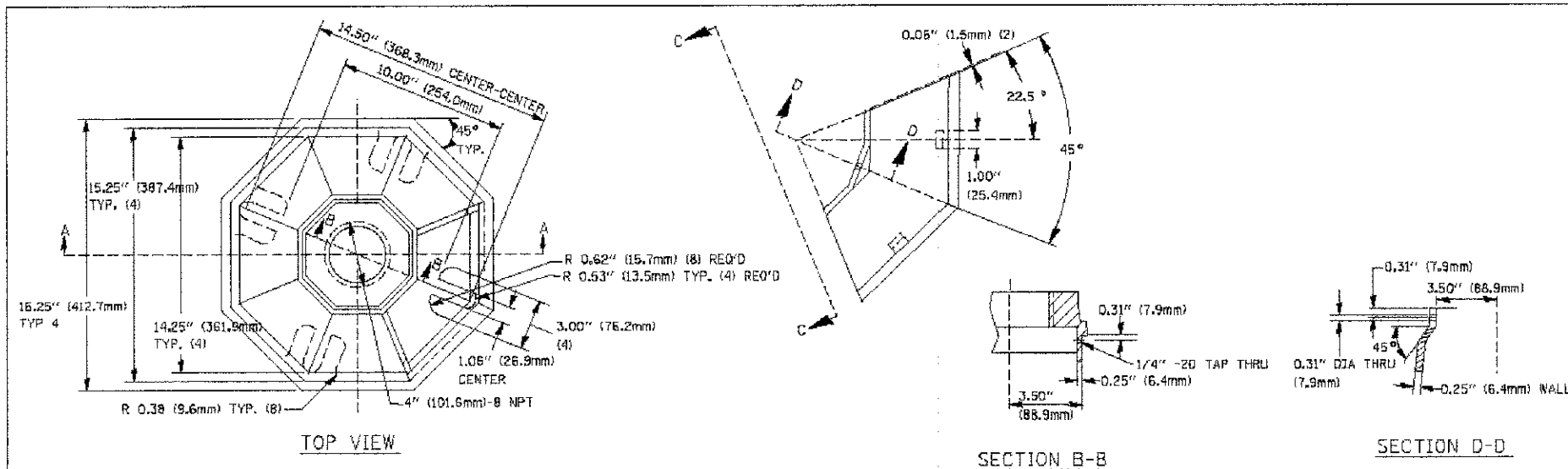
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

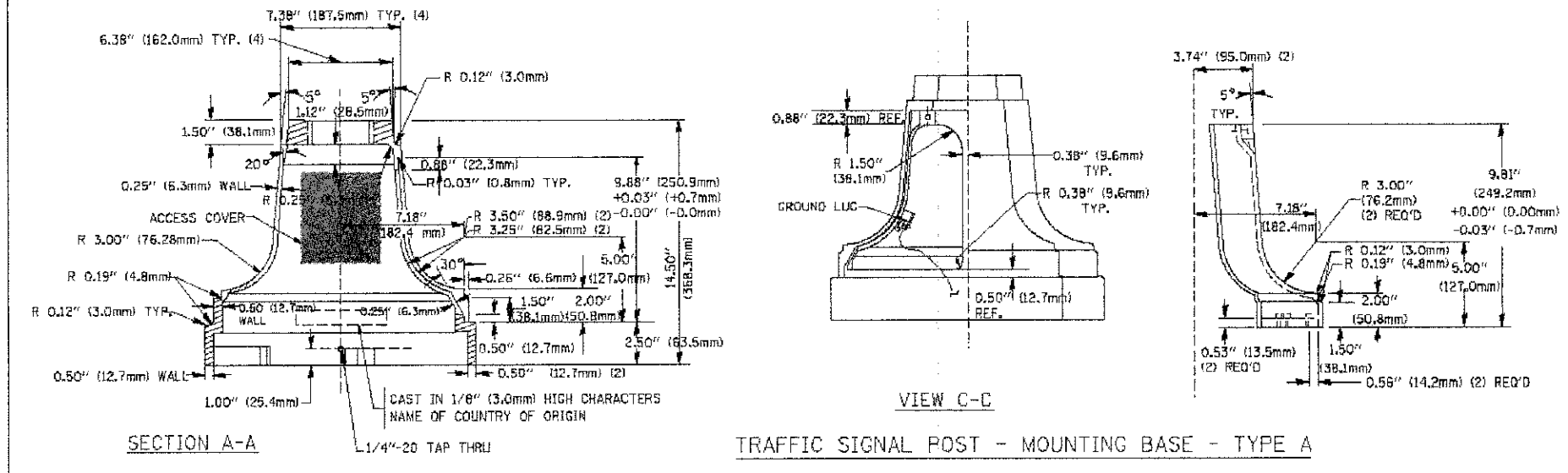
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	TS-05			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

CONTRACT NO. 63826



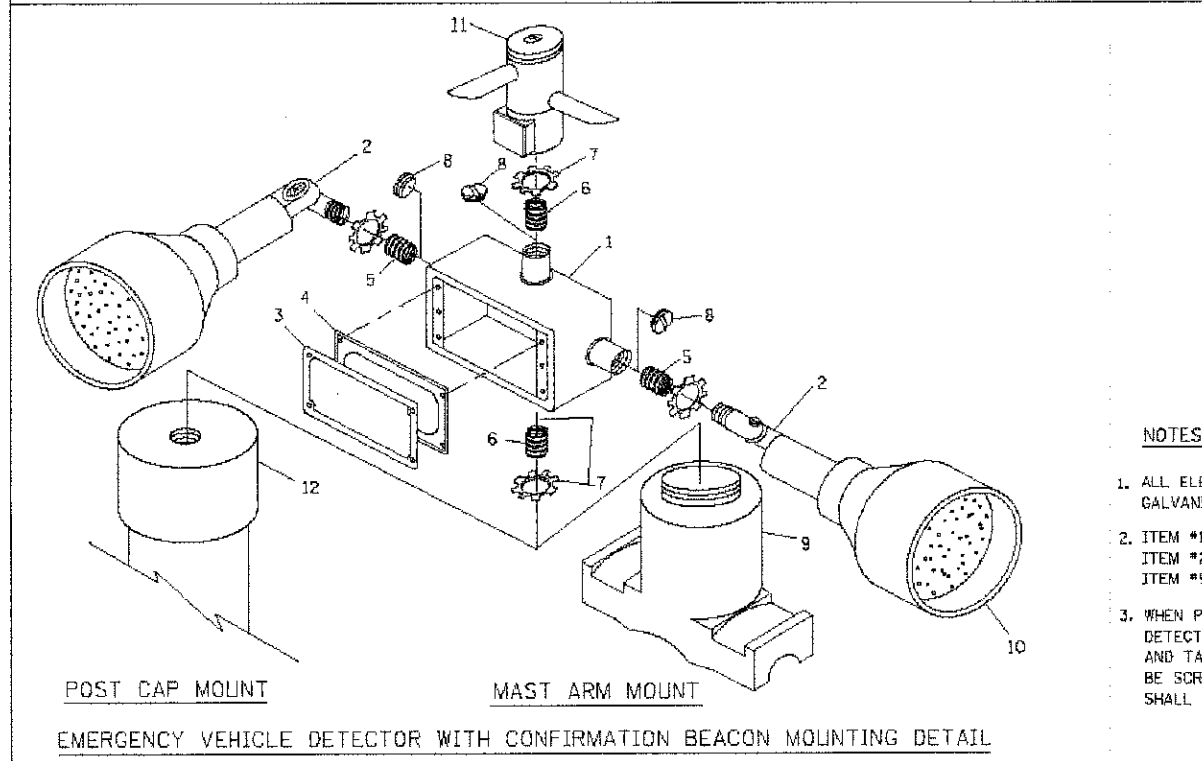
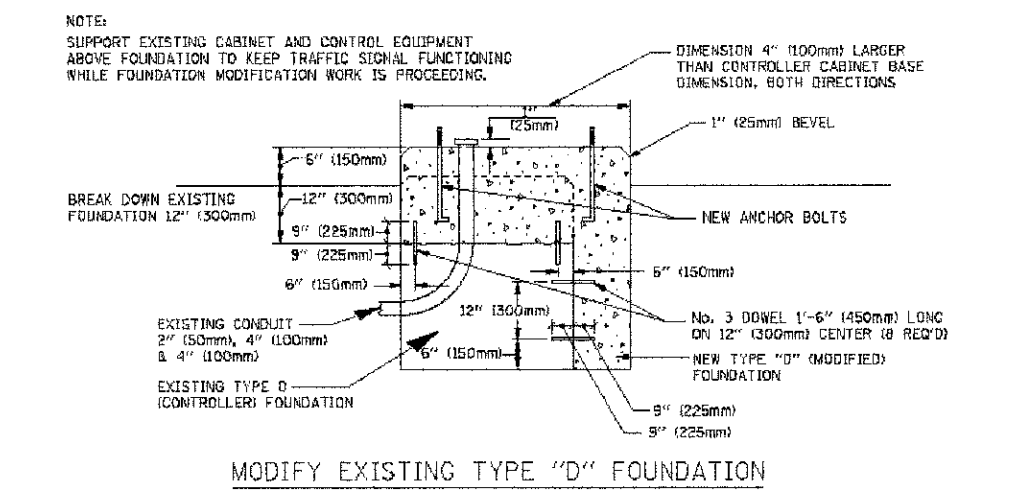
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	18\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	16.5\" (417mm)	37\" (940mm)	7\" (178mm) - 12\" (300mm)	126 lbs (57 kg)



SHROUD

NOTES:

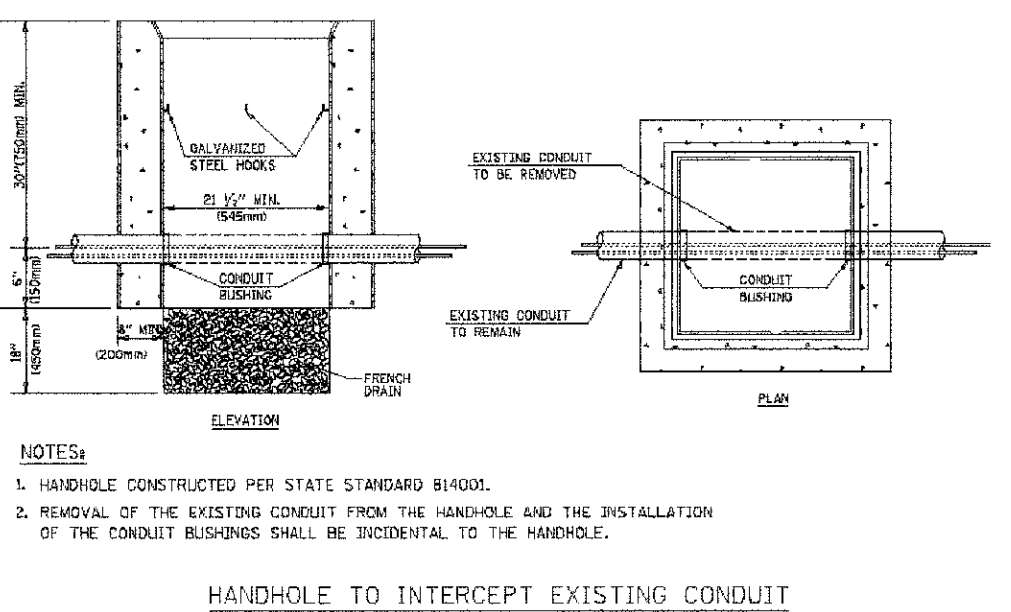
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 GWIN. (0-000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

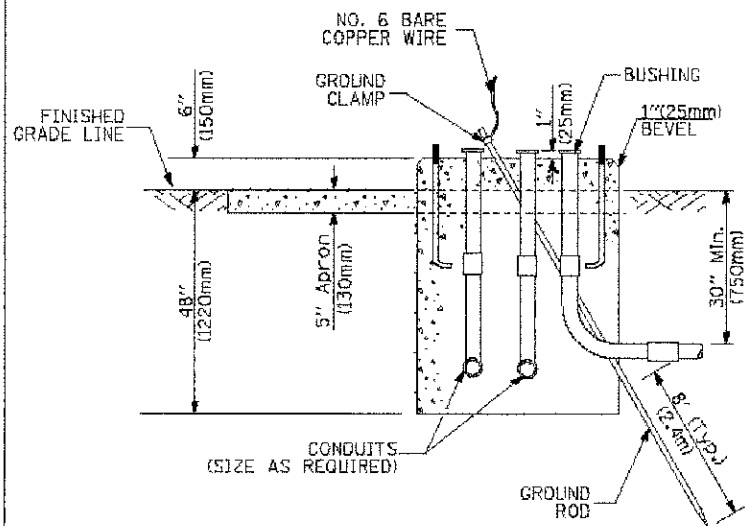
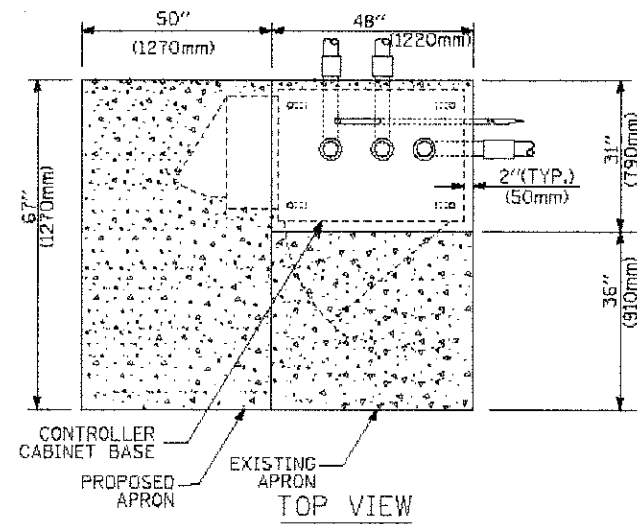
NOTES:

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

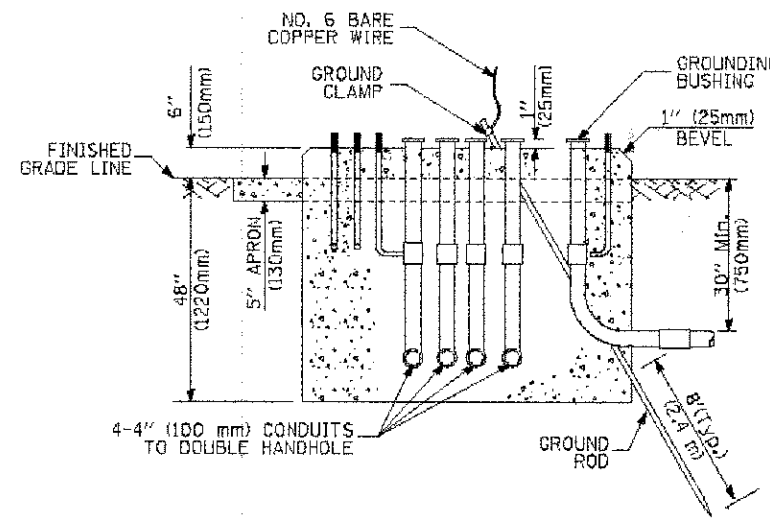
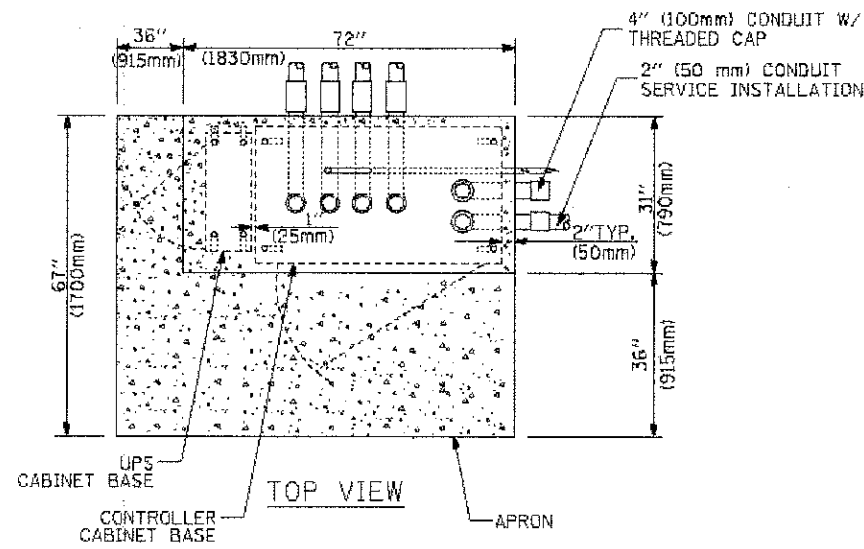


NOTES:

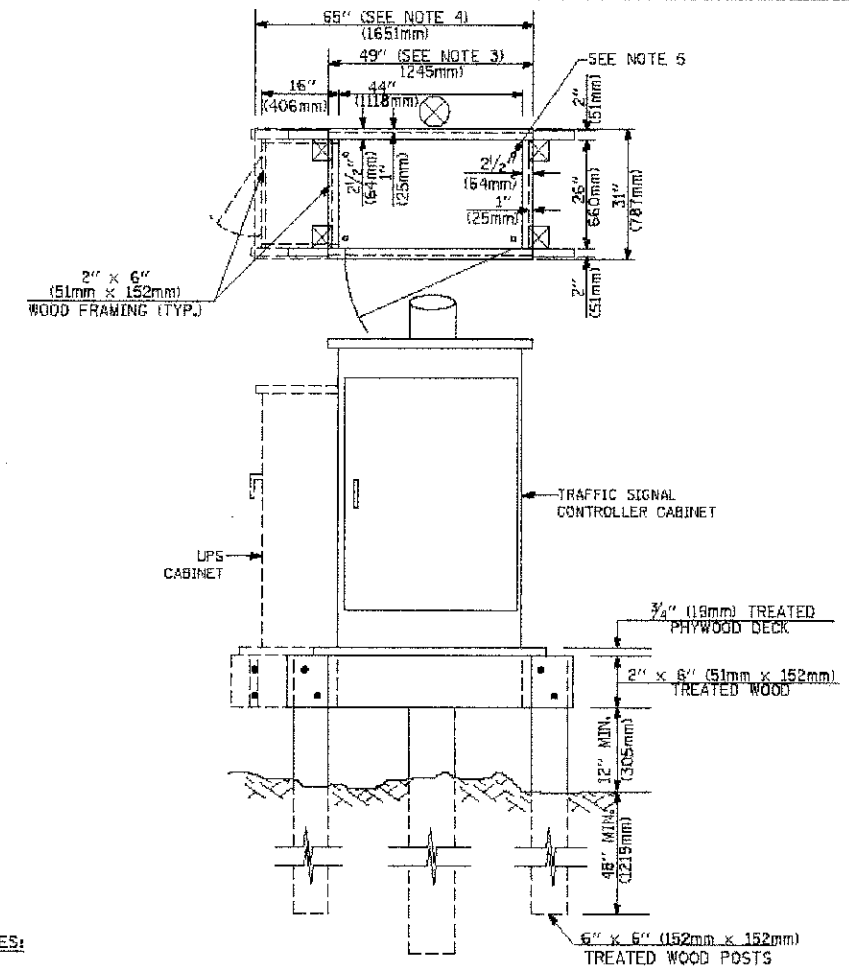
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.



**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" (405mm 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	1.5

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	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)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 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 (OU) > 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 B78001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E