

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1362	2009-102 N	COOK	17	1

D-91-115-10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

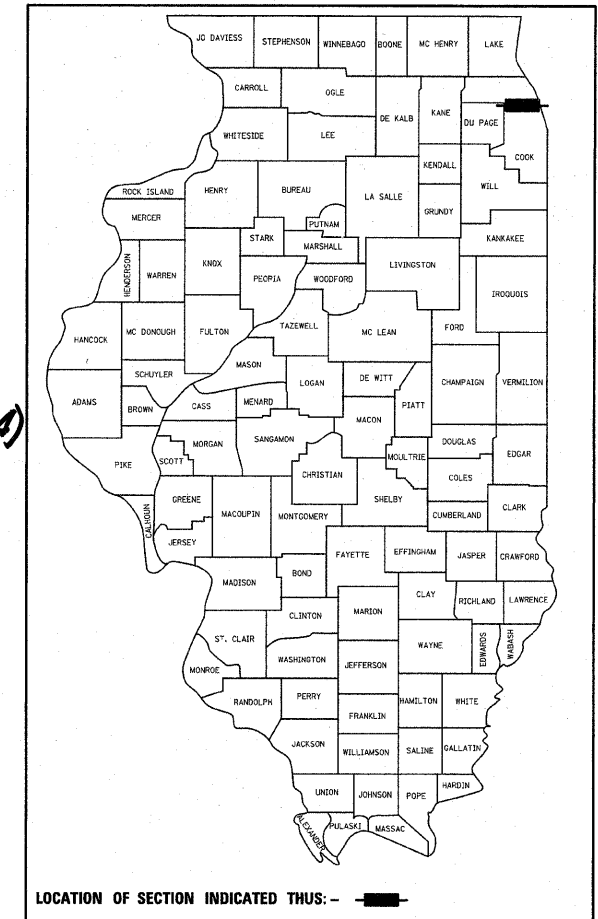
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

DISTRICT 1
CONGESTION MITIGATION AIR QUALITY (C.M.A.Q.)
TRAFFIC SIGNAL INTERCONNECT

PROJECT: CMM-1362(004)

F.A.P. ROUTE 1362 / LAWRENCE AVE
25TH AVE. TO DES PLAINES RIVER ROAD

SECTION 2009-102N
COOK COUNTY
PROJECT NO. C-91-115-10



LOCATION OF SECTION INDICATED THUS: -

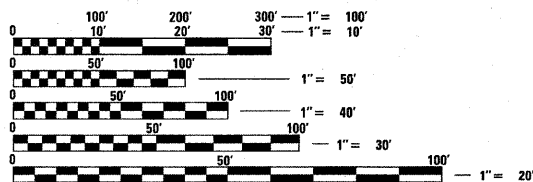
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LAWRENCE AVENUE FROM 25TH AVENUE TO DES PLAINES RIVER ROAD

STANDARDS

- 701006-03
- 701001-02
- 701101-02
- 701301-03
- 701501-05
- 701502-03
- 701801-04
- 701901-01

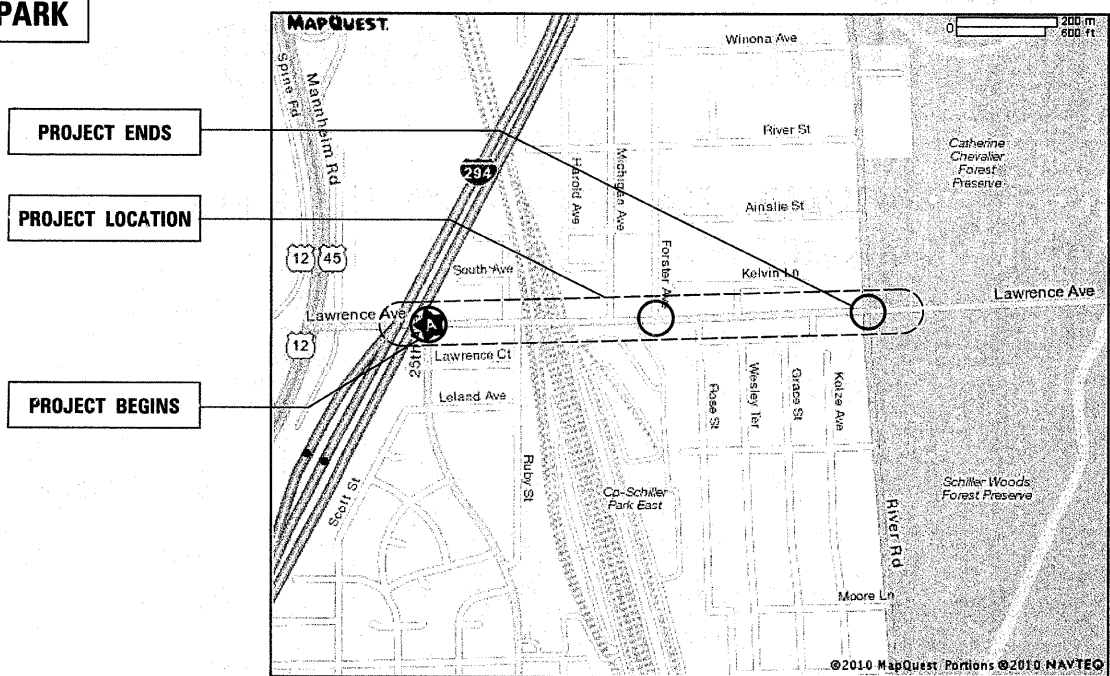
PROJECT LOCATED IN THE
VILLAGE OF SCHILLER PARK



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.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

SCALES { PLAN 1"=20'
INTERCONNECT 1"=50'



PROJECT ENDS

PROJECT LOCATION

PROJECT BEGINS

LOCATION MAP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 25 2010
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 13 2010
Scott E. Stitt P.E.
Acting ENGINEER OF DESIGN AND ENVIRONMENT

August 13 2010
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

DISTRICT 1 BUREAU OF TRAFFIC: STEVE TRAVIA/DARYLE DREW (847) 705-4420

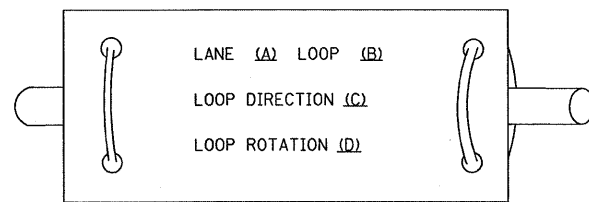
SUMMARY OF QUANTITIES

PERCENTAGES							
LOCATION OF WORK			80% FED. / 20% STATE URBAN				
SUMMARY OF QUANTITIES			CONSTRUCTION CODE	Y031 1F	Y031 1F	Y031 1F	Y031 1F
CODE NO.	ITEM	UNIT	GRAND TOTAL	LAWRENCE AVE. @ 25TH STREET	LAWRENCE AVE. @ FOSTER AVE.	LAWRENCE AVE. @ DES-PLAINES RIVER RD.	INTERCONNECT
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.25	0.25	0.25	0.25
70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	1	0.25	0.25	0.25	0.25
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.25	0.25	0.25	0.25
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1038			226	812
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	1182			57	1125
81400100	HANDHOLE	EACH	5				5
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1038			226	812
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3	1	1	1	
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2	1	1		
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1			1	
86000100	MASTER CONTROLLER	EACH	2			1	1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	3	1	1	1	
20030850	TEMPORARY INFORMATION SIGNING	SQ FT	102.8				102.8
87900200	DRILL EXISTING HANDHOLE	EACH	5			1	4
20033090	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	3530				3530
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	3530				3530
X0325096	OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM	1				1
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1710	300		1410	
88500100	INDUCTIVE LOOP DETECTOR	EACH	21	6	7	8	
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	2		1	1	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3	1	1	1	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2/C	FOOT	440		140	300	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1/C	FOOT	440		140	300	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	375		125	250	

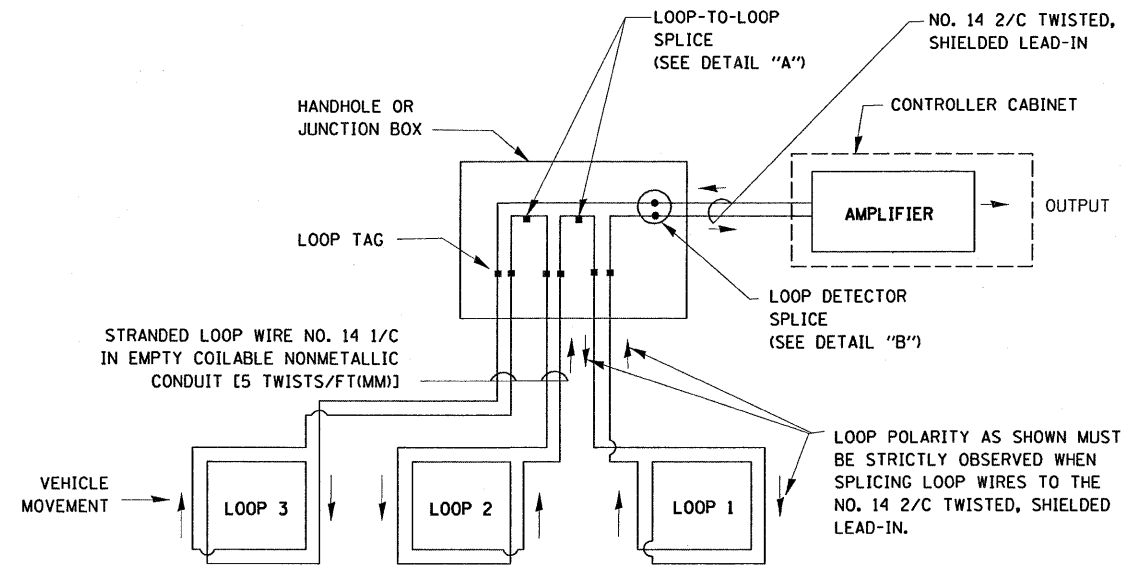
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

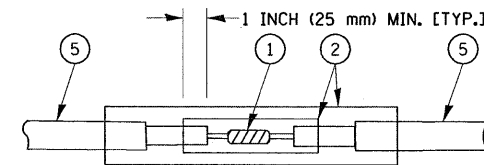


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

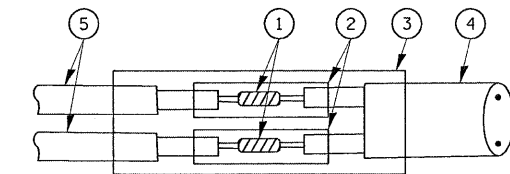


DETECTOR LOOP WIRING SCHEMATIC

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

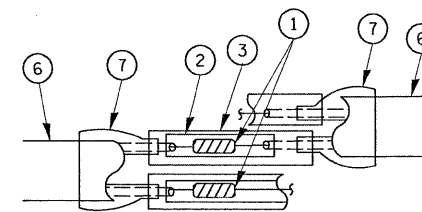


**DETAIL "A"
LOOP-TO-LOOP SPLICE**

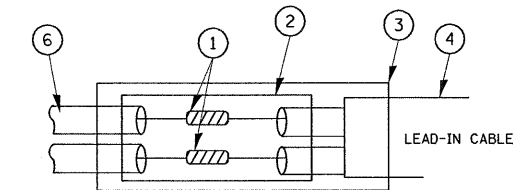


**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

TYPE I LOOP



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



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

LOOP DETECTOR SPLICE

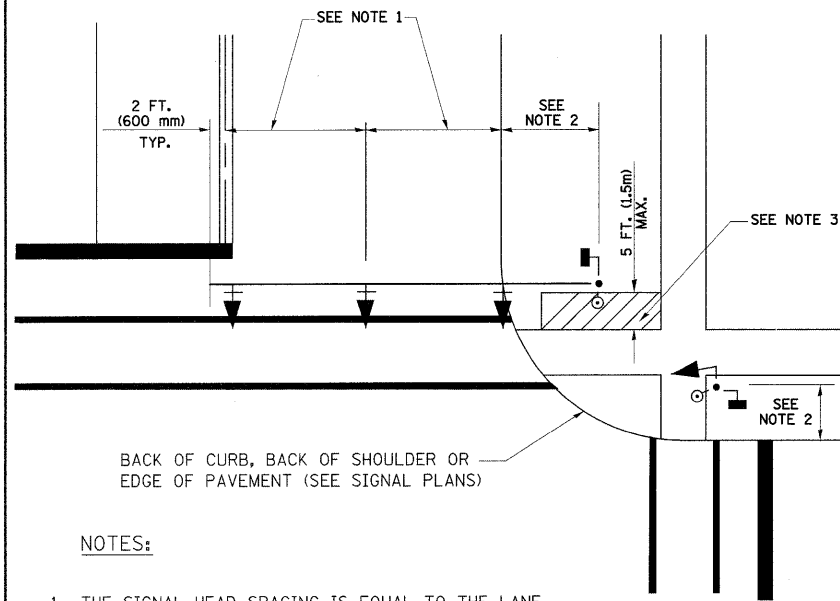
- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED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

FILE NAME =	USER NAME = kenthphuxaybc	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS		F.A.U. RTE. 1362	SECTION 2009-102N	COUNTY COOK	TOTAL SHEETS 17	SHEET NO. 3
c:\pw_work\pwsdot\kenthphuxaybc\d011261	traffic_legend_v8.dgn	DRAWN - BCK	REVISED -		SCALE:	SHEET NO. 1 OF 6 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 60165	
		CHECKED - DAD	REVISED -								
		DATE - 10/28/09	REVISED -								

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TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

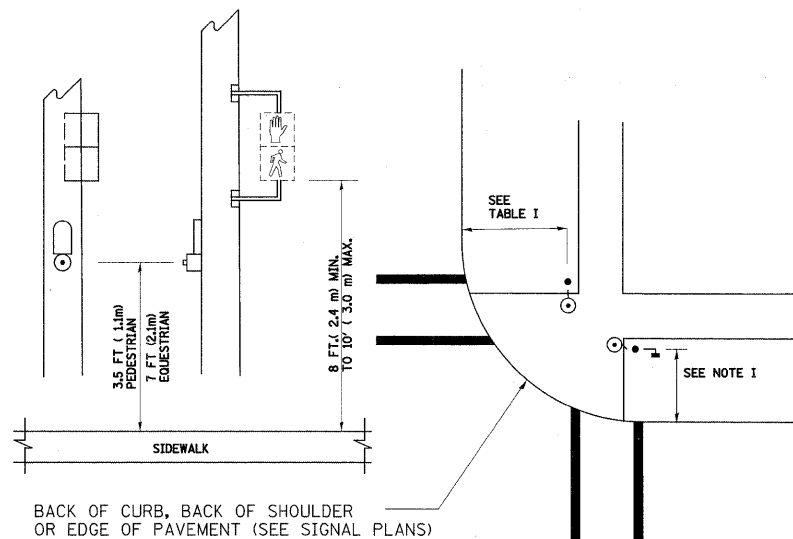
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

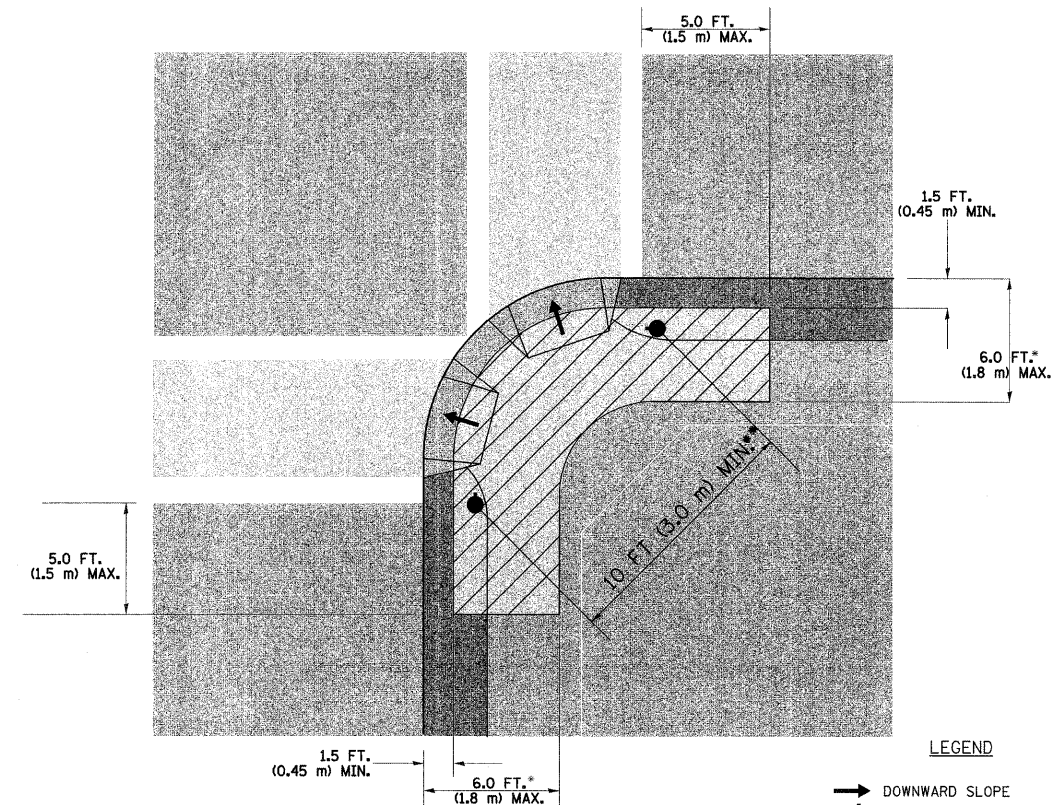
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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:

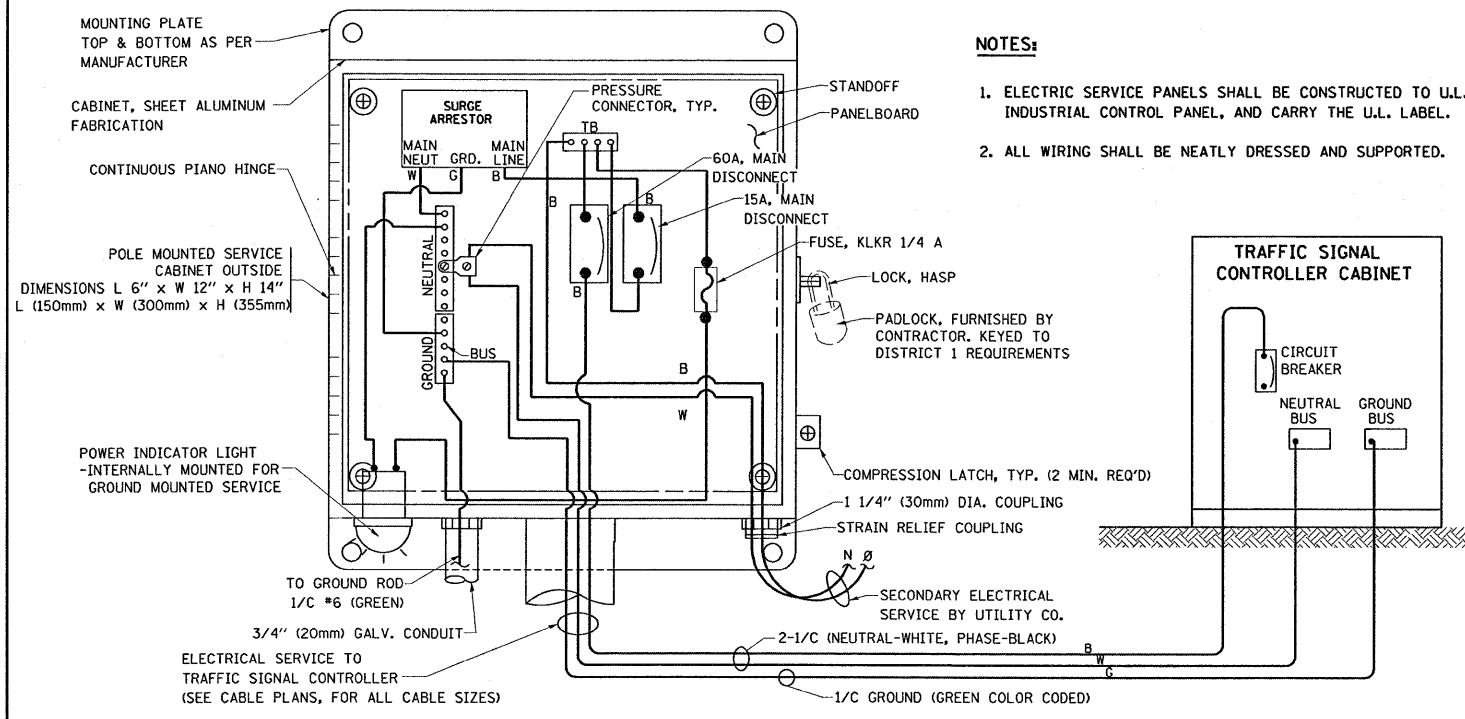
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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.
3. 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.
4. 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.
5. 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

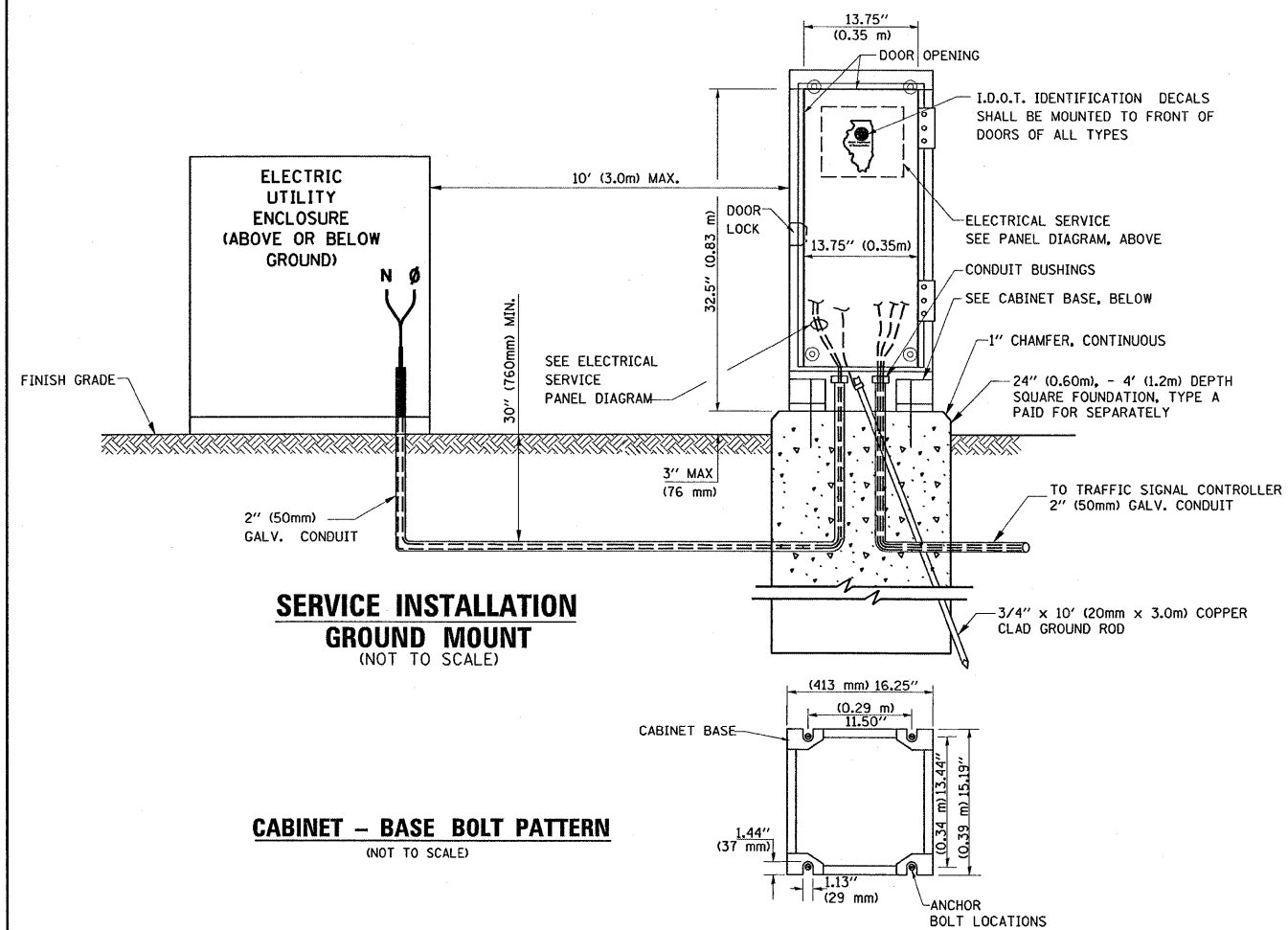
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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:

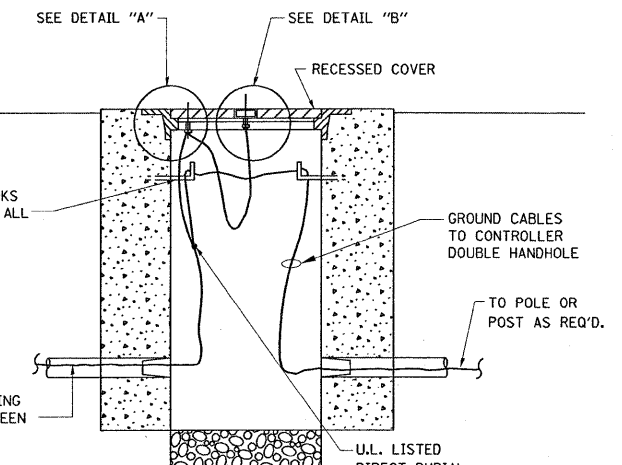
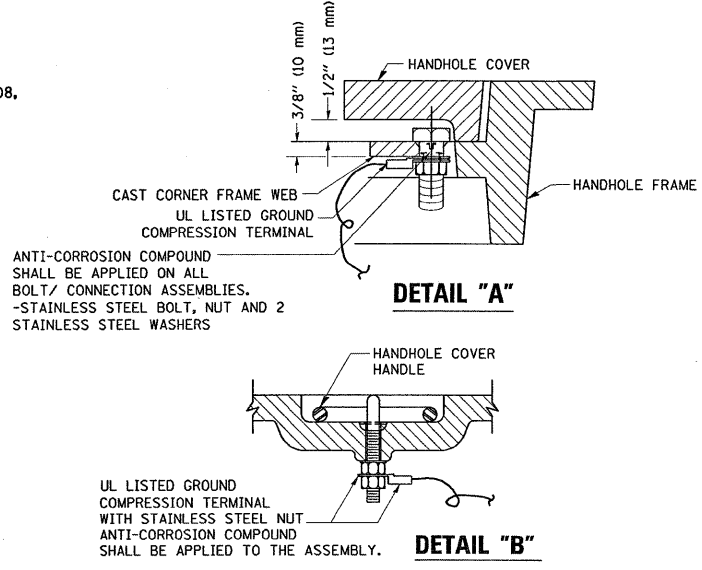
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM 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.



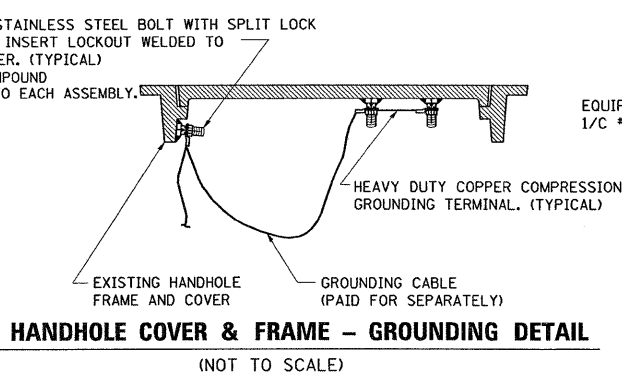
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



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

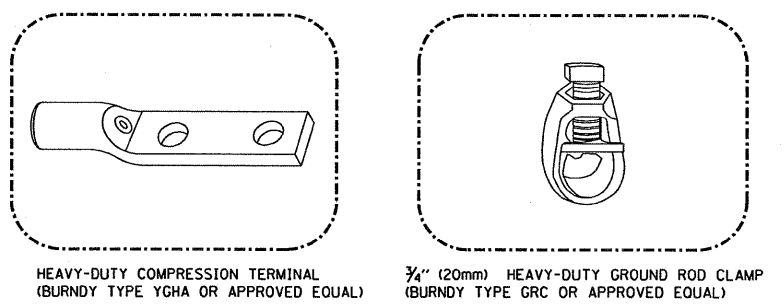


HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

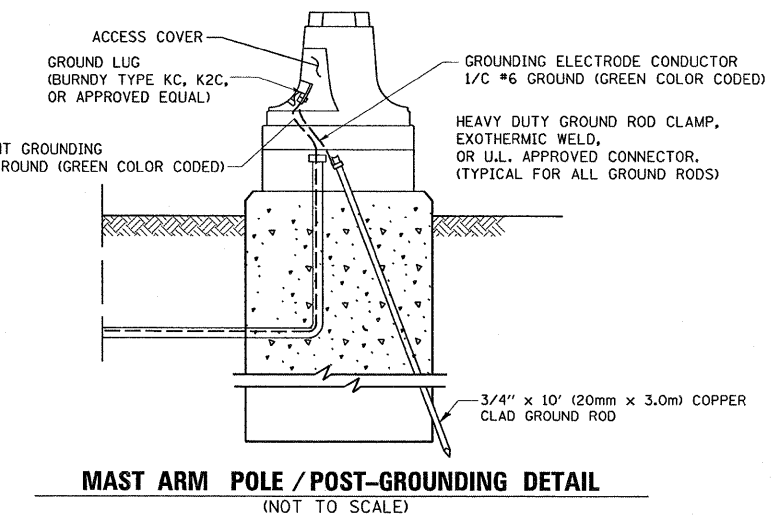


EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

- 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.



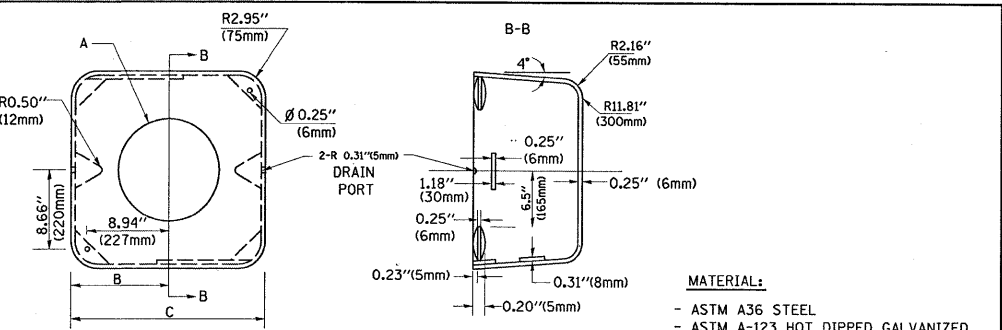
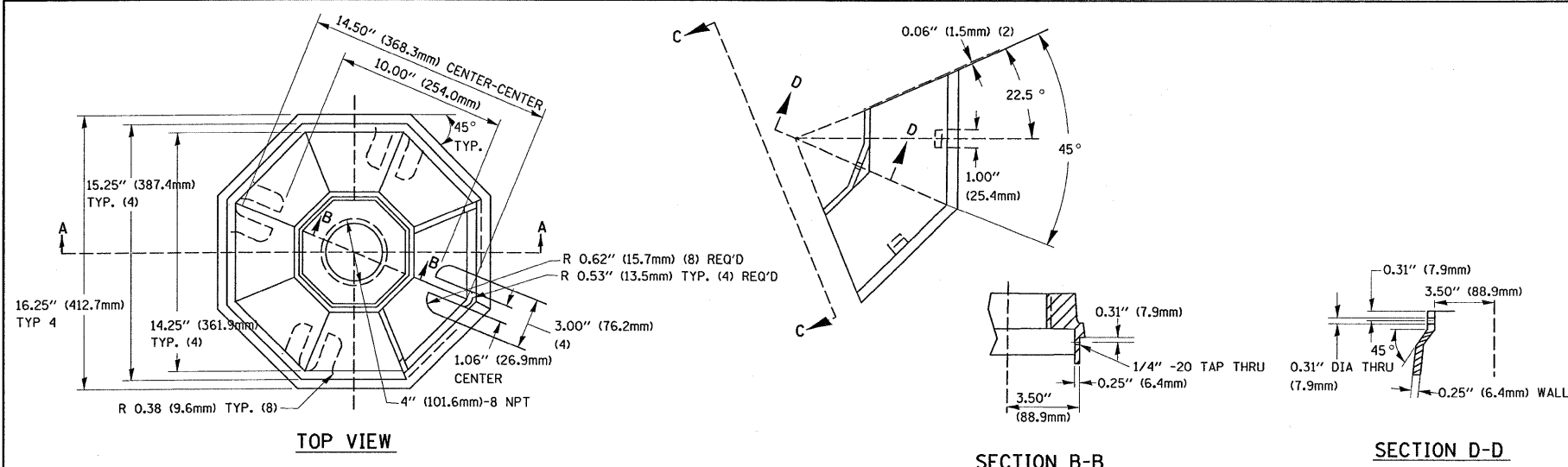
- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



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

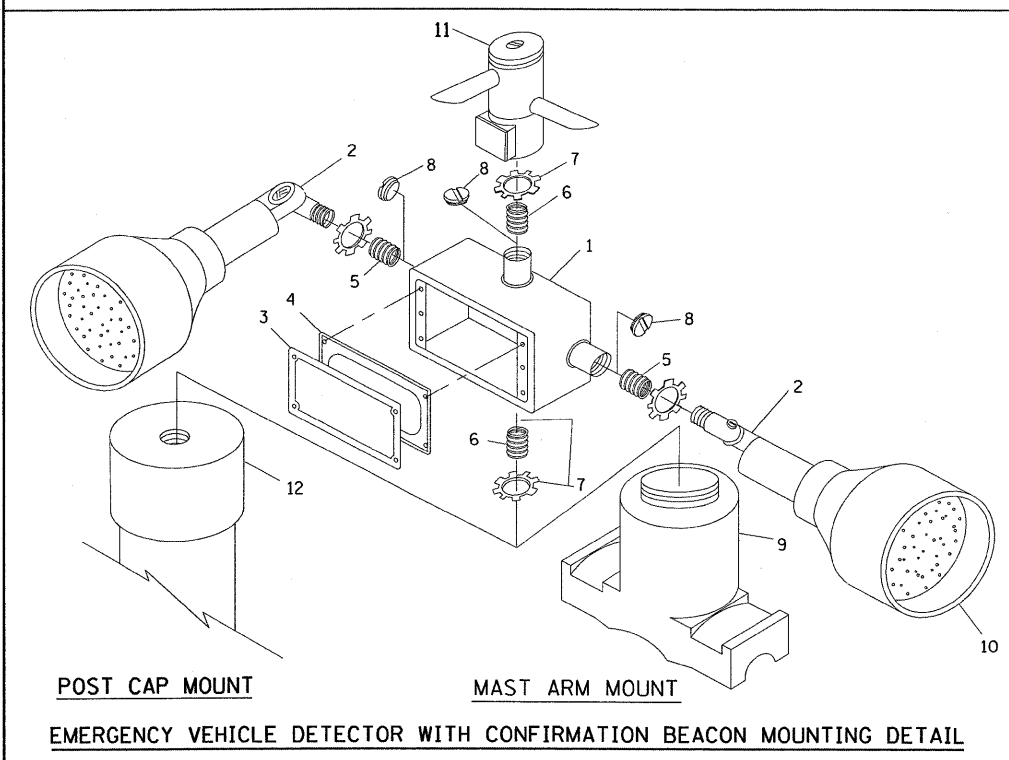
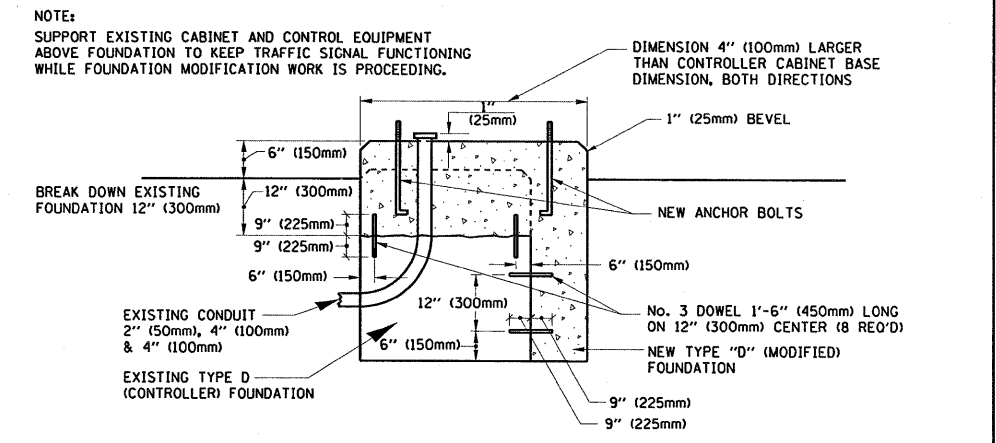
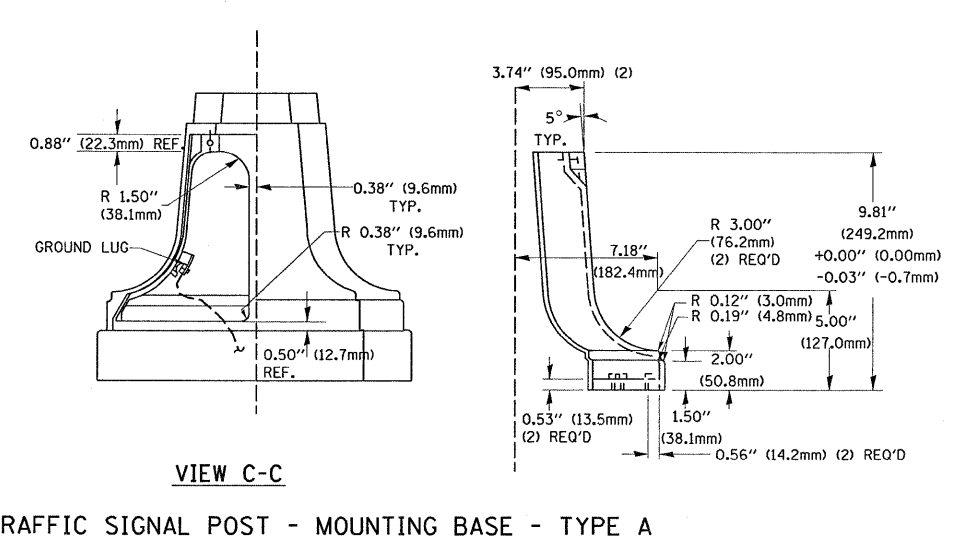
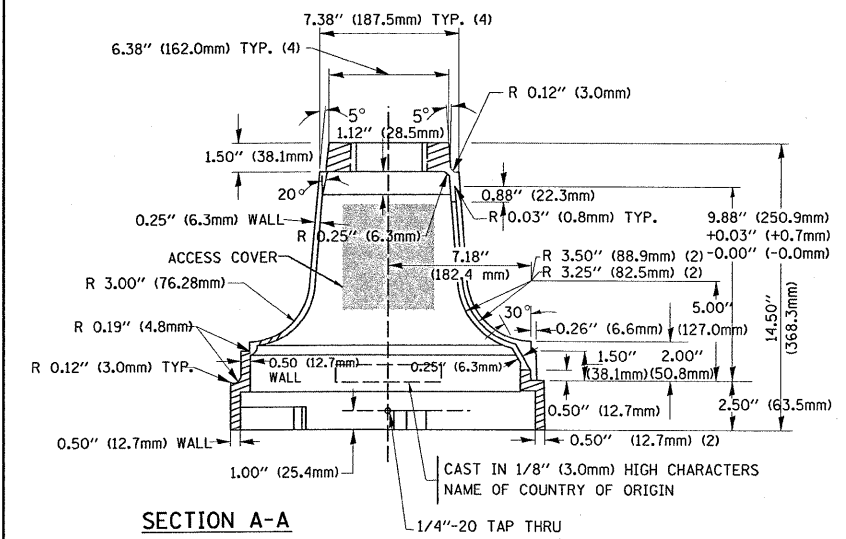
FILE NAME =	USER NAME = kanthapxaybo	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A. RTE. 1362	SECTION 2009-102N	COUNTY COOK	TOTAL SHEETS 17	SHEET NO. 5	
at:\pw_work\pwwork\kanthapxaybo\d011261	ctraffic.legend.v8.dgn	DRAWN - BCK	REVISED -			SCALE:	SHEET NO. 3 OF 6 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60165
	PLOT SCALE = 20,0000 / IN.	CHECKED - DAD	REVISED -								
	PLOT DATE = 6/25/2010	DATE - 10/28/09	REVISED -								

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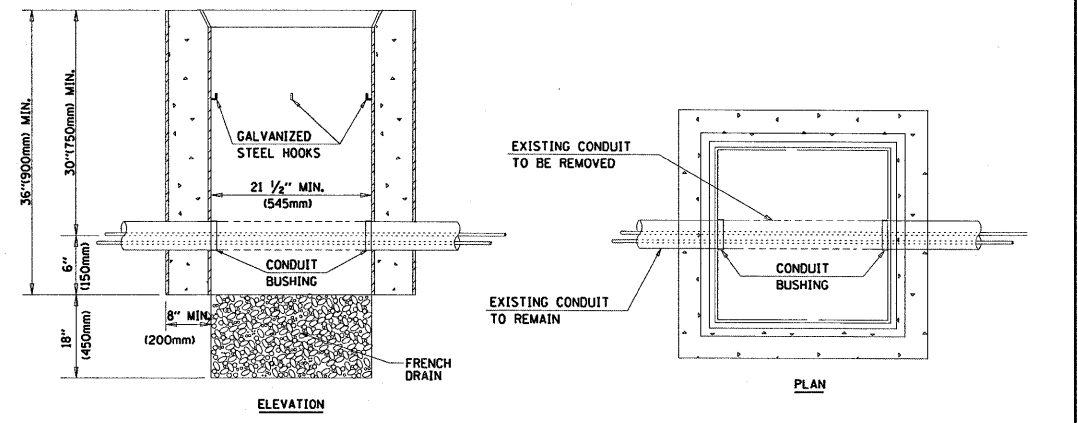
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIABLES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIABLES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIABLES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)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

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



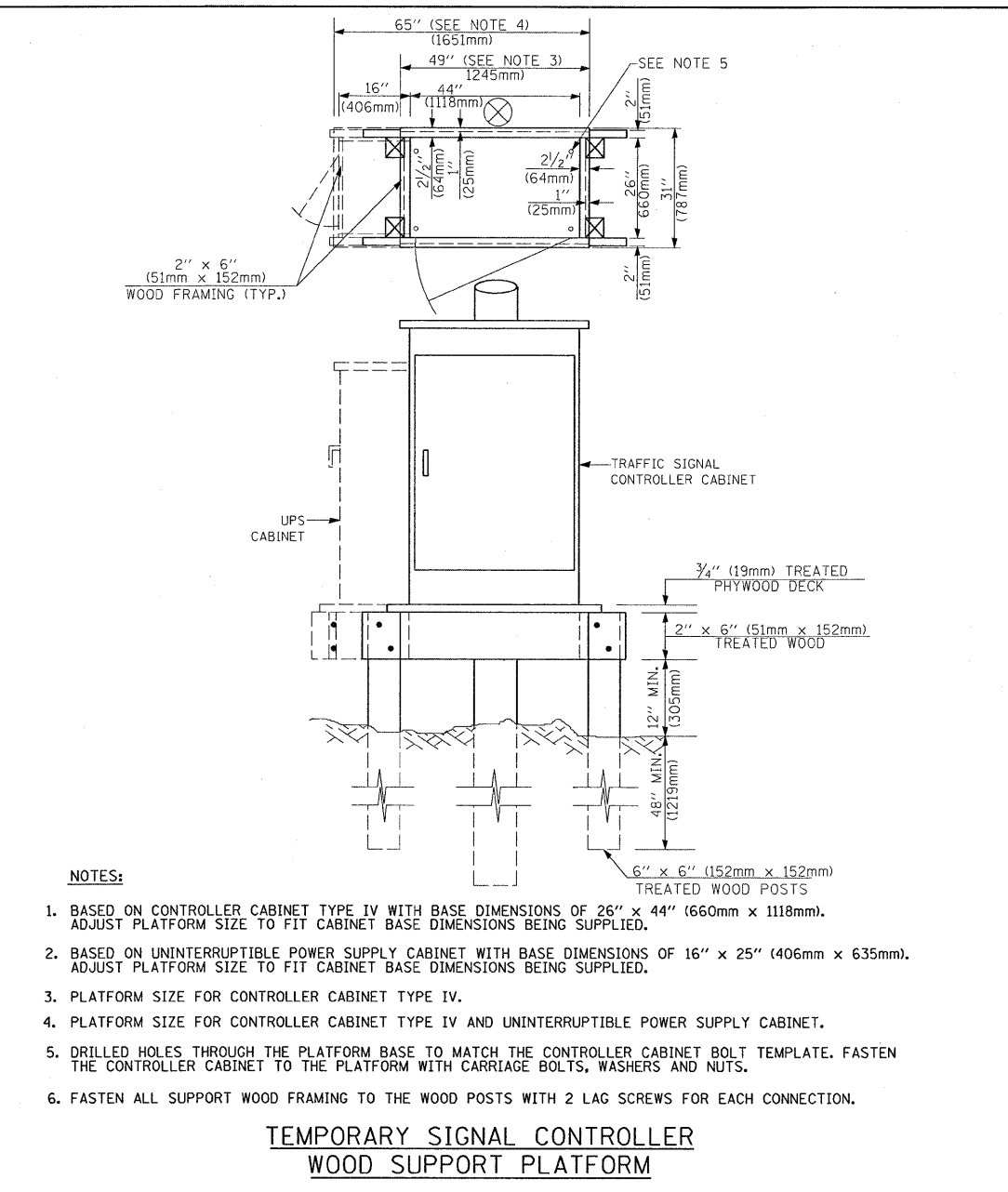
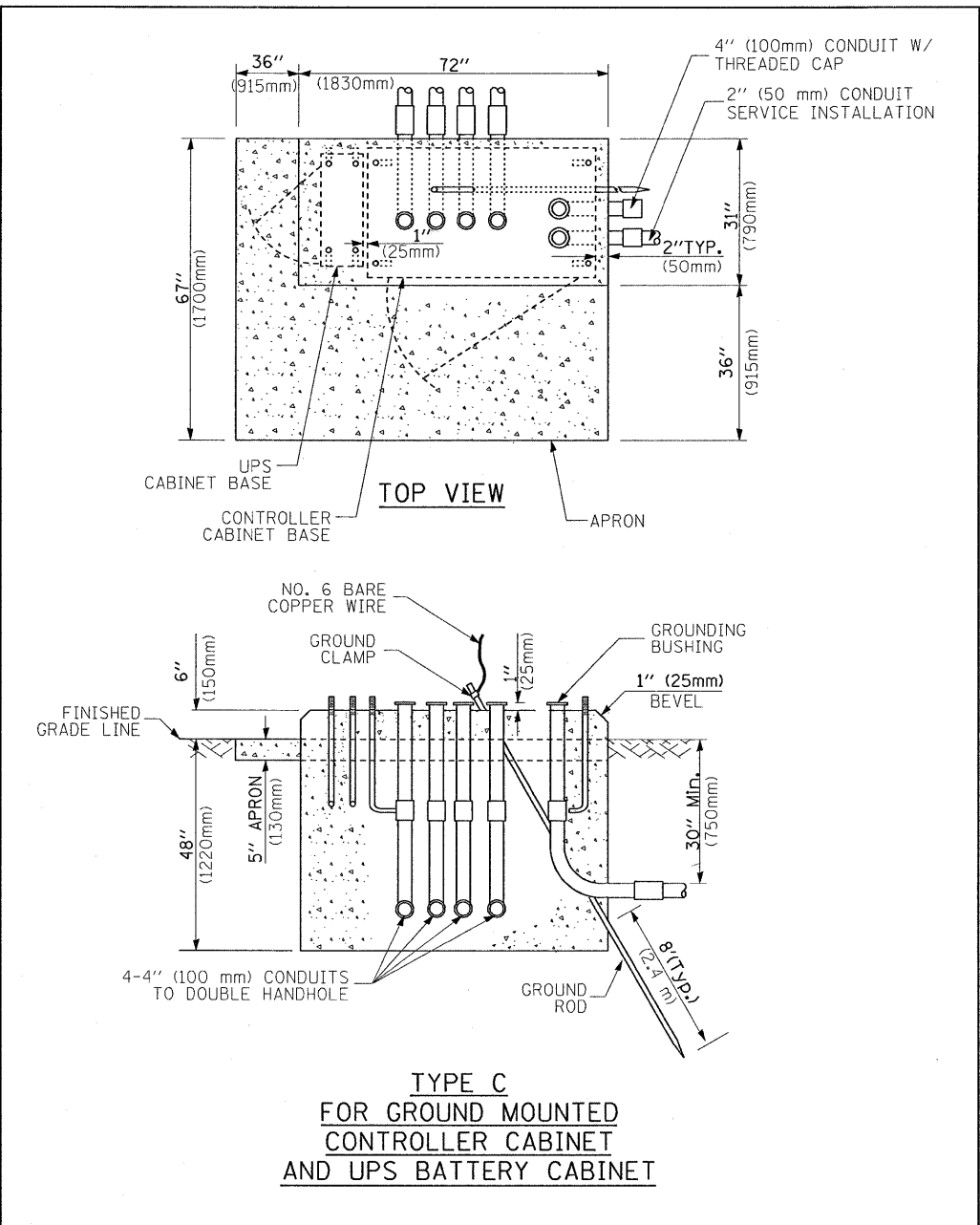
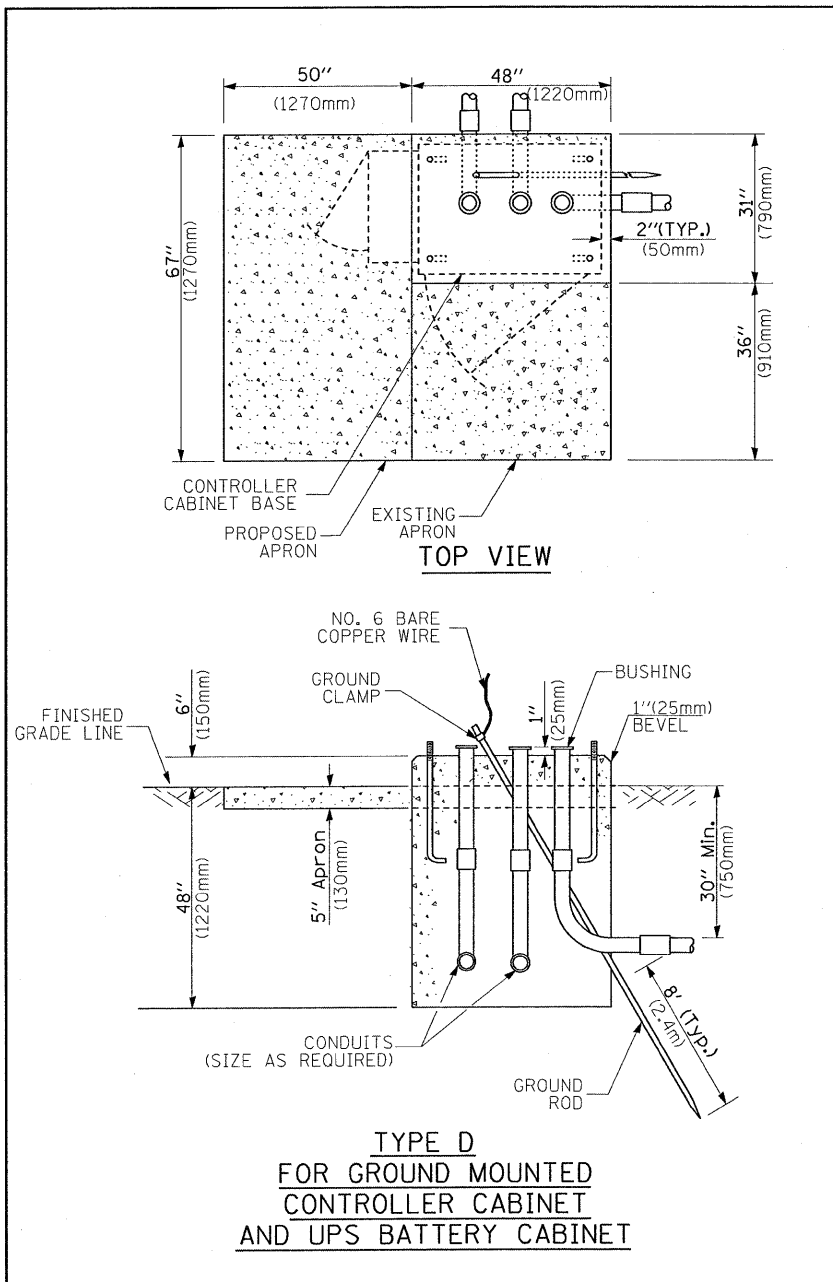
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT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

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



- 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.

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- 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.

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

MAST ARM LENGTH	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) 11'-0" (3.4 m)	30" (750mm) 36" (900mm)	24" (600mm) 30" (750mm)	8 12	6(19) 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 (q_u) > 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

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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 5M12F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
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											

RAILROAD SYMBOLS

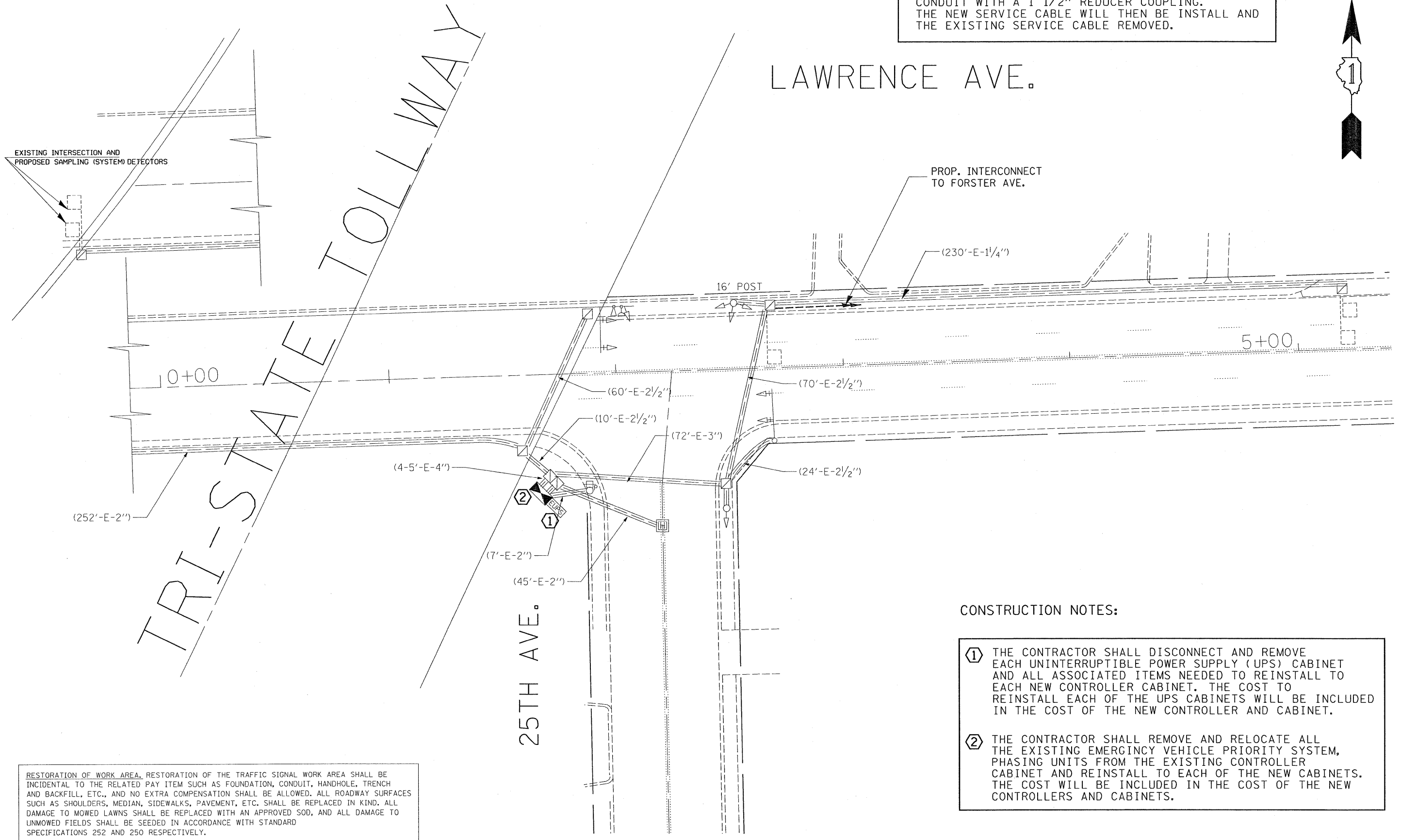
	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

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THE CONTRACTOR SHALL INSTALL THE NEW SERVICE CABINET AND CONNECT TO THE EXISTING CONDUIT WITH A 1 1/2" REDUCER COUPLING. THE NEW SERVICE CABLE WILL THEN BE INSTALL AND THE EXISTING SERVICE CABLE REMOVED.



LAWRENCE AVE.



CONSTRUCTION NOTES:

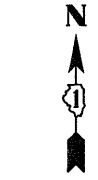
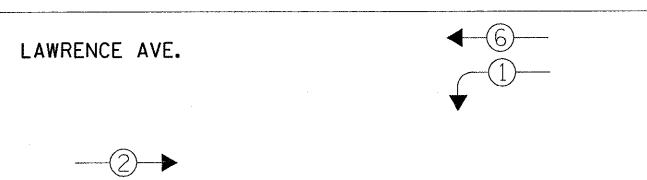
- ① THE CONTRACTOR SHALL DISCONNECT AND REMOVE EACH UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET AND ALL ASSOCIATED ITEMS NEEDED TO REINSTALL TO EACH NEW CONTROLLER CABINET. THE COST TO REINSTALL EACH OF THE UPS CABINETS WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLER AND CABINET.
- ② THE CONTRACTOR SHALL REMOVE AND RELOCATE ALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNITS FROM THE EXISTING CONTROLLER CABINET AND REINSTALL TO EACH OF THE NEW CABINETS. THE COST WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLERS AND CABINETS.

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, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME =	USER NAME = kanthophixaybc	DESIGNED - SN/BK/JE	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION PLAN LAWRENCE AVE AT 25TH AVE.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pw_work\pwidot\kanthophixaybc\d011261	\traffic_legend_v8.dgn	DRAWN - SN/BK	REVISED -			1362	2009-102N	COOK	17	9	
PLOT SCALE = 20.00000' / IN.	CHECKED - JE	REVISED -	REVISED -			CONTRACT NO. 60165					
PLOT DATE = 6/25/2010	DATE - 06/25/2010	REVISED -	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					
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CONTROLLER SEQUENCE



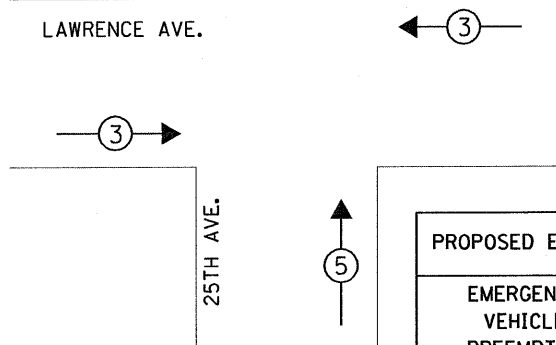
PHASE DESIGNATION DIAGRAM

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

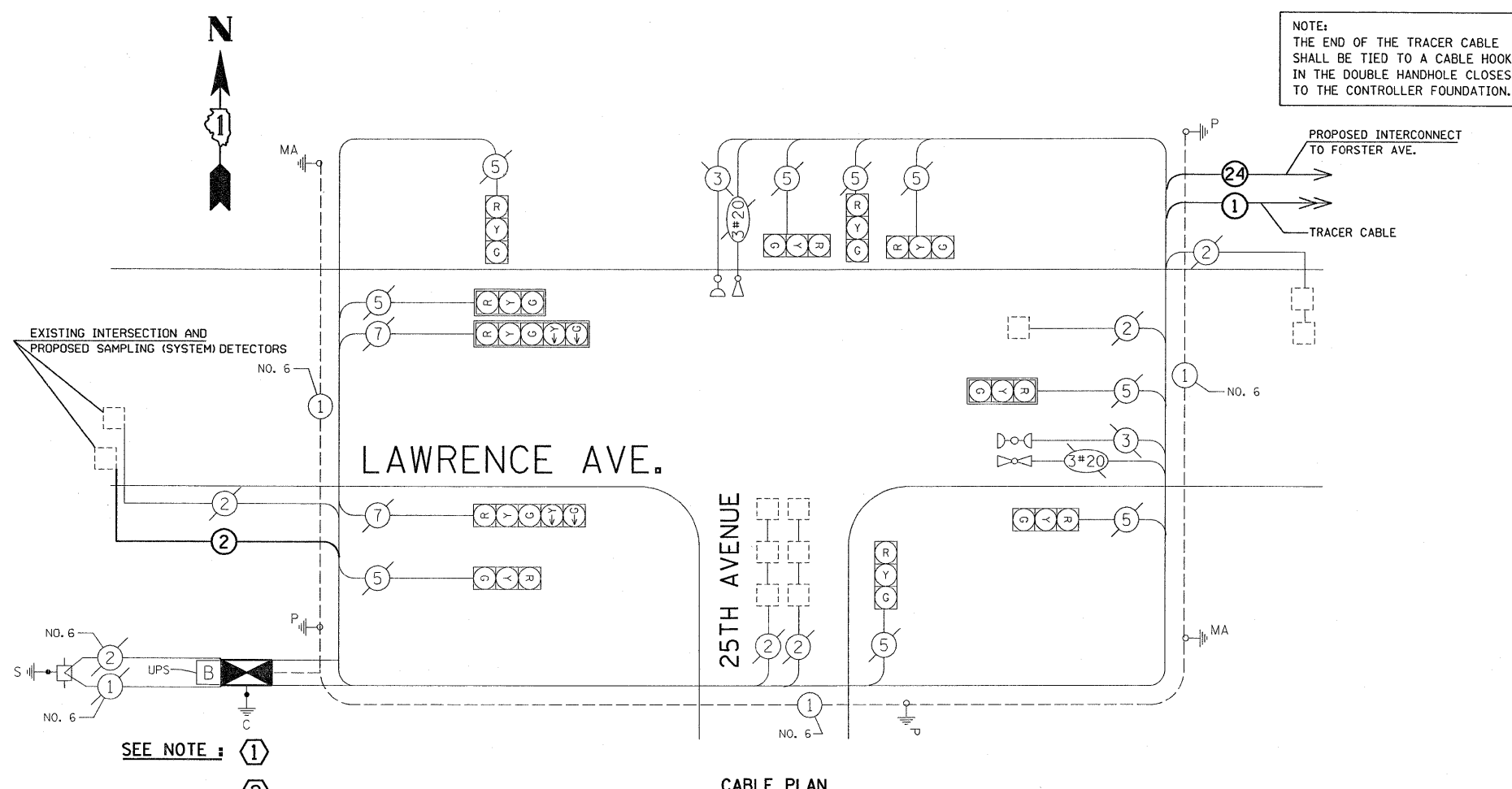
OVERLAP LETTER = PERMISSIVE PHASE + PROTECTED PHASE

D = 6 + 1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	5
MOVEMENT	← →	↑



NOTE:
THE END OF THE TRACER CABLE SHALL BE TIED TO A CABLE HOOK IN THE DOUBLE HANDHOLE CLOSEST TO THE CONTROLLER FOUNDATION.

SEE NOTE : ① ②

CABLE PLAN

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	11	17	0.50		93.50
(YELLOW)	11	25	0.25		68.75
(GREEN)	11	15	0.25		41.25
ARROW	4	12	0.10		4.80
PED. SIGNAL		25	1.00		
CONTROLLER	1	100	1.00		100.00
ILLUM. SIGN			0.05		
FLASHER				0.05	
ENERGY COSTS TO:				TOTAL=	308.30

ENERGY SUPPLY CONTACT: _____
PHONE: _____
COMPANY: COMMONWEALTH EDISON

SCHEDULE OF INTERSECTION QUANTITIES

1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
6	EACH	INDUCTIVE LOOP DETECTOR
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
300	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
0.25	EACH	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
0.25	EACH	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502
0.25	EACH	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	TRANSCEIVER - FIBER OPTIC

- ① THE CONTRACTOR SHALL DISCONNECT AND REMOVE EACH UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET AND ALL ASSOCIATED ITEMS NEEDED TO REINSTALL TO EACH NEW CONTROLLER CABINET. THE COST TO REINSTALL EACH OF THE UPS CABINETS WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLER AND CABINET.
- ② THE CONTRACTOR SHALL REMOVE AND RELOCATE ALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNITS FROM EACH OF THE EXISTING CONTROLLER CABINETS AND REINSTALL TO EACH OF THE NEW CABINETS. THE COST WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLERS AND CABINETS.

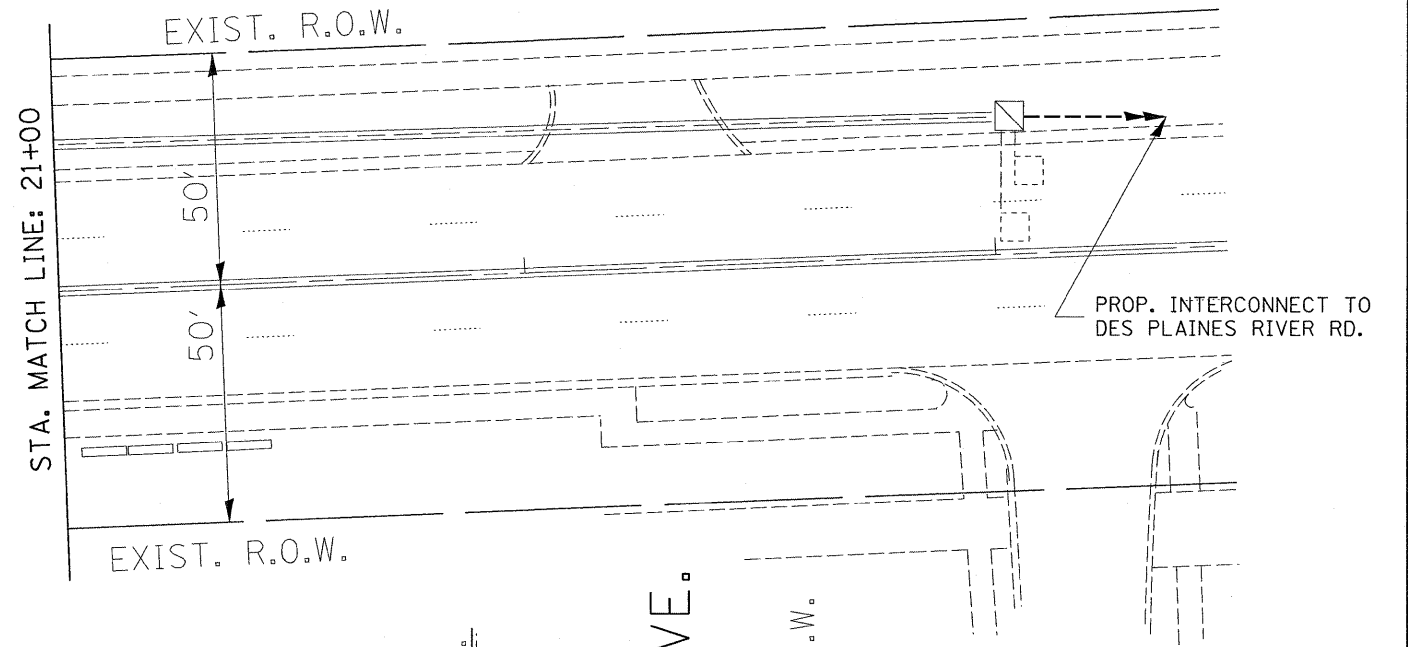
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CONSTRUCTION NOTES:

① THE CONTRACTOR SHALL DISCONNECT AND REMOVE EACH UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET AND ALL ASSOCIATED ITEMS NEEDED TO REINSTALL TO EACH NEW CONTROLLER CABINET. THE COST TO REINSTALL EACH OF THE UPS CABINETS WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLER AND CABINET.

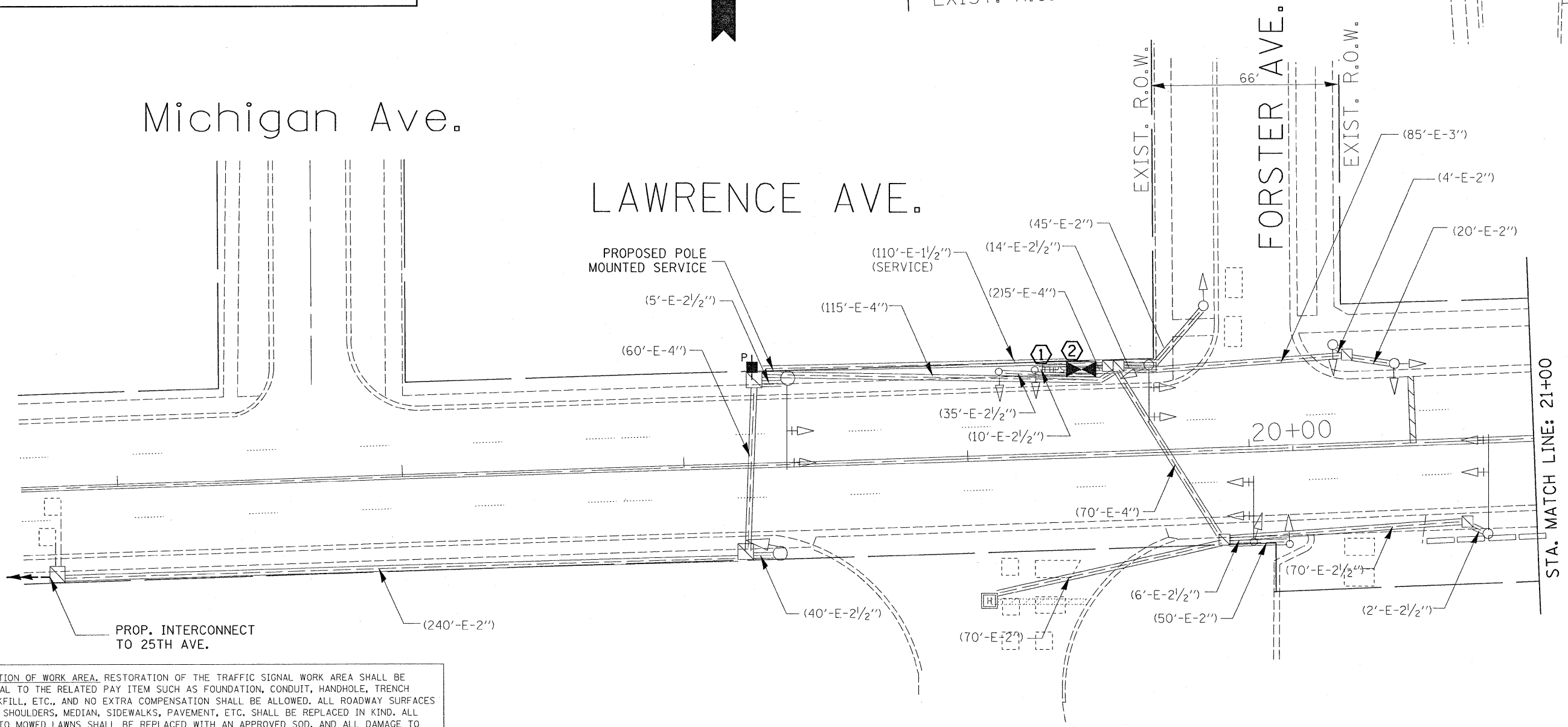
② THE CONTRACTOR SHALL REMOVE AND RELOCATE ALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNITS FROM EACH OF THE EXISTING CONTROLLER CABINETS AND REINSTALL TO EACH OF THE NEW CABINETS. THE COST WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLERS AND CABINETS.

THE CONTRACTOR SHALL INSTALL THE NEW SERVICE CABINET AND CONNECT TO THE EXISTING CONDUIT WITH A 1 1/2" REDUCER COUPLING. THE NEW SERVICE CABLE WILL THEN BE INSTALL AND THE EXISTING SERVICE CABLE REMOVED.



Michigan Ave.

LAWRENCE AVE.



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, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME =	USER NAME = kentaphixajbc	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION PLAN LAWRENCE AVE AT FORSTER AVE.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pwwork\kentaphixajbc\d011261\tr of fic . legend . v8 . dgn	PLOT SCALE = 20.0000 ' / IN.	DRAWN -	REVISED -			1362	2009 102 N	COOK	17	11	
PLOT DATE = 6/25/2010	DATE -	CHECKED -	REVISED -			CONTRACT NO. 60165					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.	

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PHASE	2+6				3				4				A S H													
	1	2	3a	3b	3c	3d	4a	4b	4c	4d	5	6a		6b	7a	7b	7c	7d	8	9a	9b	10a	10b	10c	10d	
INTERVAL																										
CHANGE TO PHASE																										
LAWRENCE AVE EB (1) NEAR RIGHT, (2) MIDDLE MAST ARM AND (3) FAR LEFT SIGNALS	G	G	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
LAWRENCE AVE EB (2) FAR MAST ARM PROGRAMMED SIGNALS	G	G	G	G	G	G	G	Y	R	G	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	
LAWRENCE AVE WB (1) NEAR RIGHT, (2) MIDDLE MAST ARM AND (3) FAR LEFT SIGNALS	G	G	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
LAWRENCE AVE WB (2) FAR MAST ARM PROGRAMMED SIGNALS	G	G	G	G	Y	R	G	G	G	G	R	R	R	R	R	R	G	G	G	G	G	Y	R	R	R	
SCHILLER PARK YARD NB (2) FAR SIGNALS	R	R	R	R	R	R	R	R	R	R	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	
WHITE HEN PARKING LOT NB (2) FAR SIGNALS AND FORSTER AVE SB (1) NEAR RIGHT AND (2) FAR SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	Y	R	R	R	R	R	
PEDESTRIAN SIGNALS CROSSING FORSTER AVE, AND SCHILLER PARK YARD	P	FH	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	DARK	

PHASE 2+6 SHALL BE PLACED ON RECALL

- * TO APPEAR ONLY UPON PUSHBUTTON ACTUATION
- ** FLASHING "P" IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.
- θ THIS "A" OR FLASHING "P" INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE "A" OR FLASHING "P" INTERVALS.
- P = ILLUMINATED PERSON = WALK
- FH = ILLUMINATED FLASHING HAND = FLASHING DONT WALK
- H = ILLUMINATED SOLID HAND = DONT WALK

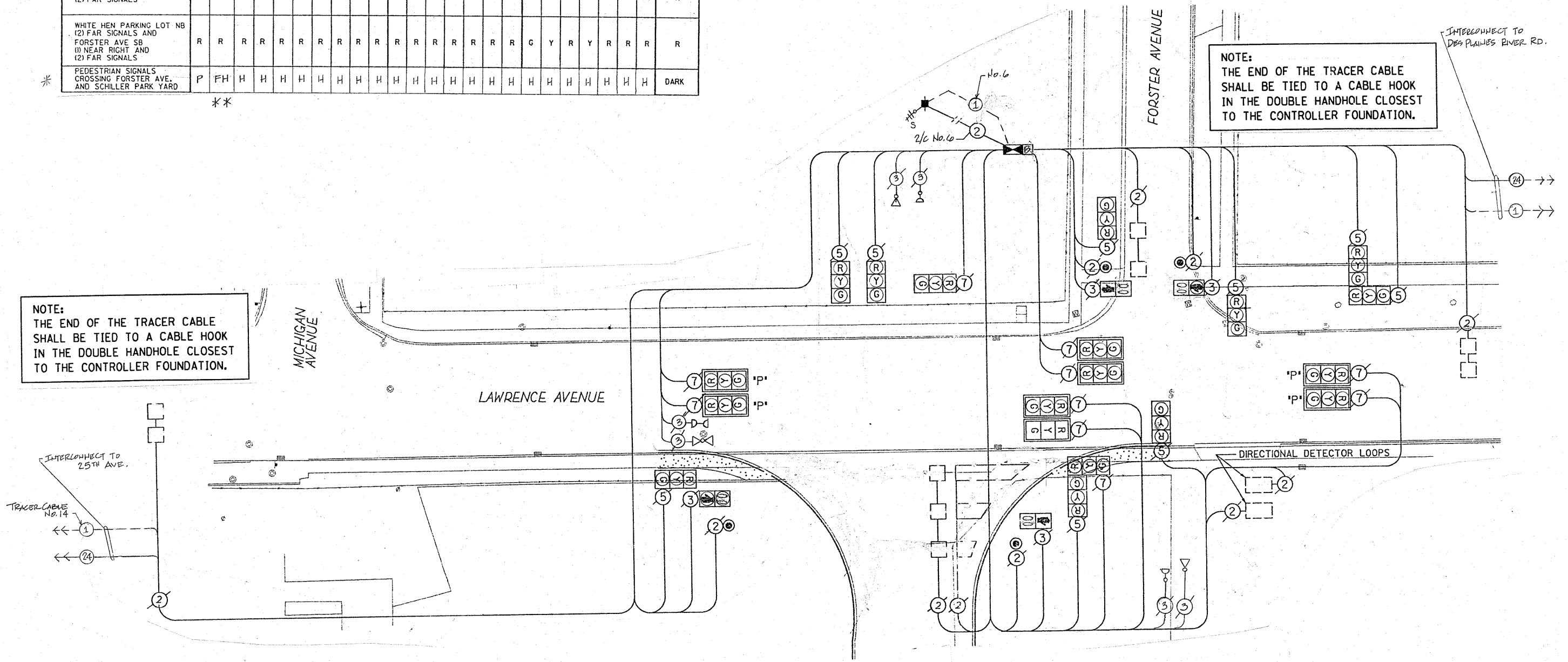
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. OF LAMPS	WATTAGE			
		XINCAND.	LED x % OPERATION		
SIGNAL (RED)	19		17	0.50	161.5
(YELLOW)	10		25	0.25	118.8
(GREEN)	19		15	0.25	71.2
ARROW			12	0.10	
PED. SIGNAL	4		25	1.00	100.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	551.5

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY: CONTACT: LINDA KLOK
PHONE: 708-410-5313
COMPANY: COMED



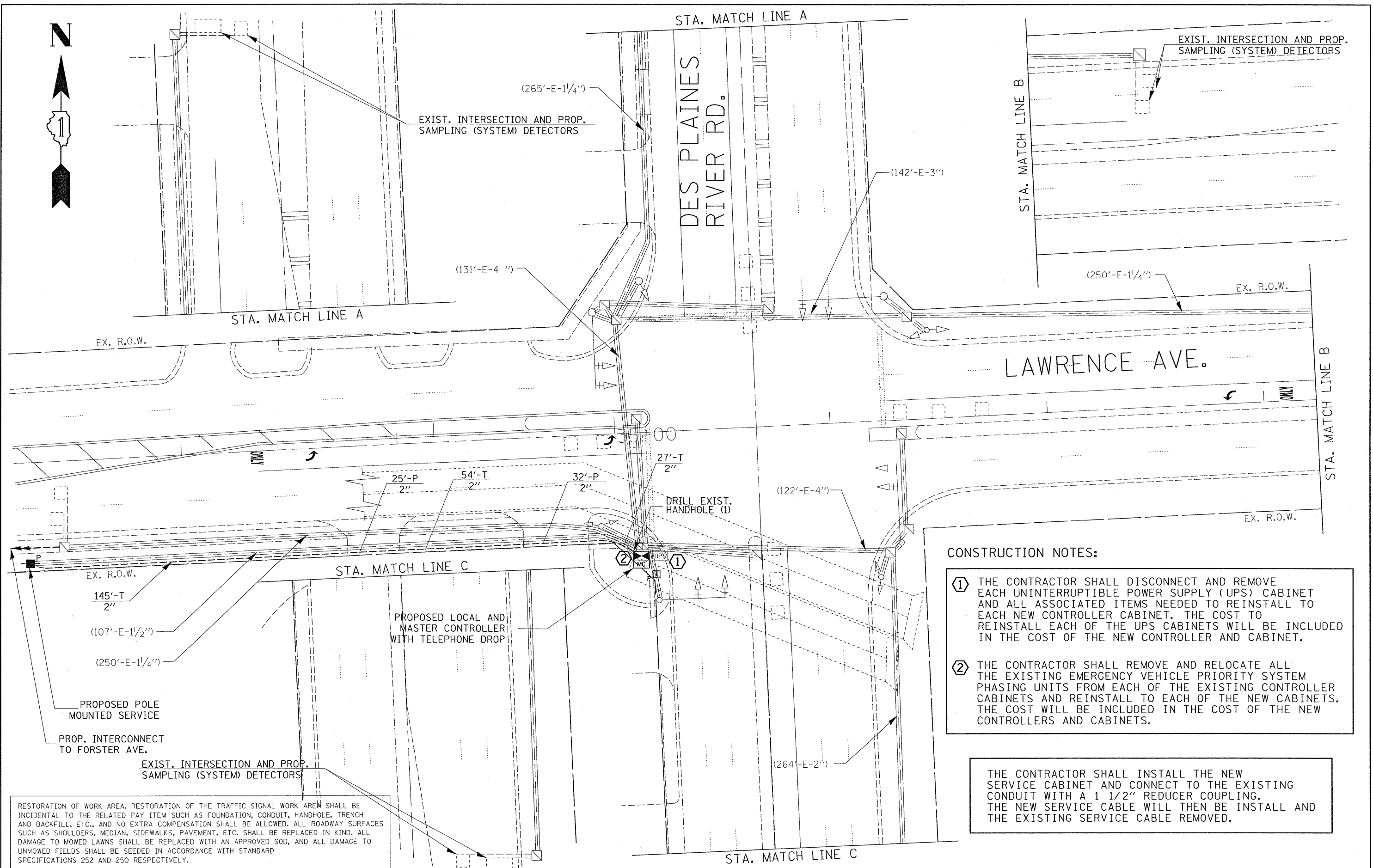
NOTE:
THE END OF THE TRACER CABLE SHALL BE TIED TO A CABLE HOOK IN THE DOUBLE HANDHOLE CLOSEST TO THE CONTROLLER FOUNDATION.

NOTE:
THE END OF THE TRACER CABLE SHALL BE TIED TO A CABLE HOOK IN THE DOUBLE HANDHOLE CLOSEST TO THE CONTROLLER FOUNDATION.



CABLE PLAN

FILE NAME =	USER NAME = kenthaphixaybo	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES, PHASE DESIGNATION DIAGRAM, AND CABLE PLAN LAWRENCE AVE. AT FORSTER AVE.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw\work\PWIDOT\KANTHAPHIXAYBO\d01126	4\trffico_legend.v8.dgn	DRAWN -	REVISED -			1362	2009 102N	COOK	17	12	
	PLOT SCALE = 5/8"=1'-0"	CHECKED -	REVISED -			CONTRACT NO. 60565					
	PLOT DATE = 6/24/2010	DATE -	REVISED -			FFD. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



CONSTRUCTION NOTES:

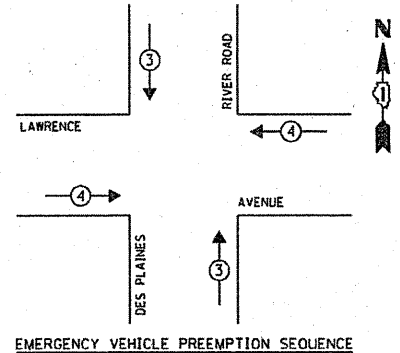
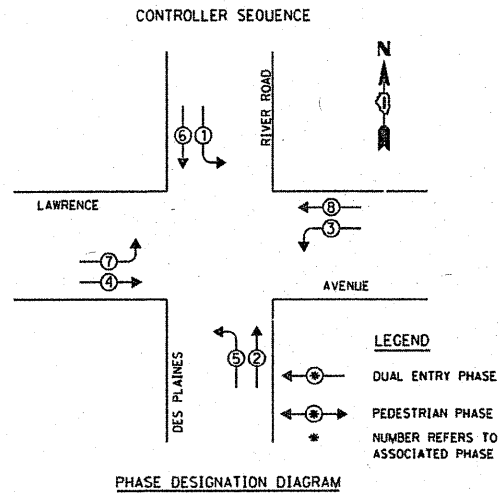
- ① THE CONTRACTOR SHALL DISCONNECT AND REMOVE EACH UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET AND ALL ASSOCIATED ITEMS NEEDED TO REINSTALL TO EACH NEW CONTROLLER CABINET. THE COST TO REINSTALL EACH OF THE UPS CABINETS WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLER AND CABINET.
- ② THE CONTRACTOR SHALL REMOVE AND RELOCATE ALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNITS FROM EACH OF THE EXISTING CONTROLLER CABINETS AND REINSTALL TO EACH OF THE NEW CABINETS. THE COST WILL BE INCLUDED IN THE COST OF THE NEW CONTROLLERS AND CABINETS.

THE CONTRACTOR SHALL INSTALL THE NEW SERVICE CABINET AND CONNECT TO THE EXISTING CONDUIT WITH A 1 1/2" REDUCER COUPLING. THE NEW SERVICE CABLE WILL THEN BE INSTALL AND THE EXISTING SERVICE CABLE REMOVED.

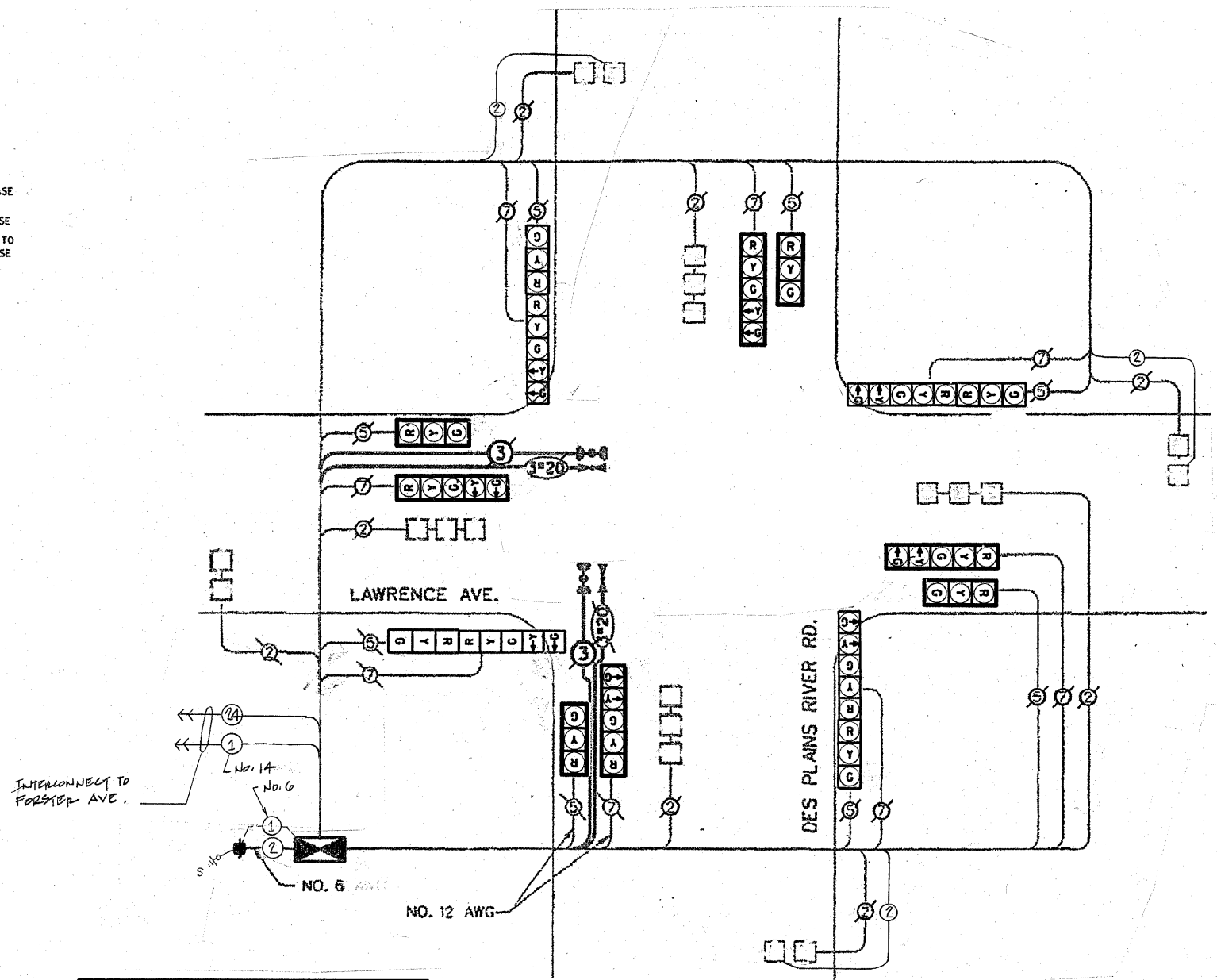
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL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

FILE NAME =	USER NAME = konthapxaybo	DESIGNED - SN/BK/JE	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION PLAN LAWRENCE AVE AT DES PLAINES RIVER RD.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pw_work\pwide\konthapxaybo\d011261	traffic_legend.v8.dgn	DRAWN - SN/BK	REVISED -			1362	2009 102 N	COOK	17	13	
PLOT SCALE = 20,0000' / IN.	CHECKED - JE	REVISED -	REVISED -			CONTRACT NO. 60165					
PLOT DATE = 6/25/2010	DATE - 06/25/2010	REVISED -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

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



INTERCONNECT TO FORSTER AVE.

NOTE:
THE END OF THE TRACER CABLE SHALL BE TIED TO A CABLE HOOK IN THE DOUBLE HANDHOLE CLOSEST TO THE CONTROLLER FOUNDATION.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE X INCAND.	LED	% OPERATION	
SIGNAL (RED)	16		17	0.50	136.00
(YELLOW)	16		25	0.25	100.00
(GREEN)	16		15	0.25	60.00
ARROW	16		12	0.10	19.20
PED. SIGNAL			25	1.00	
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 415.20

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY: CONTACT: LINDA KLOK
PHONE: 708-410-5313
COMPANY: COMED

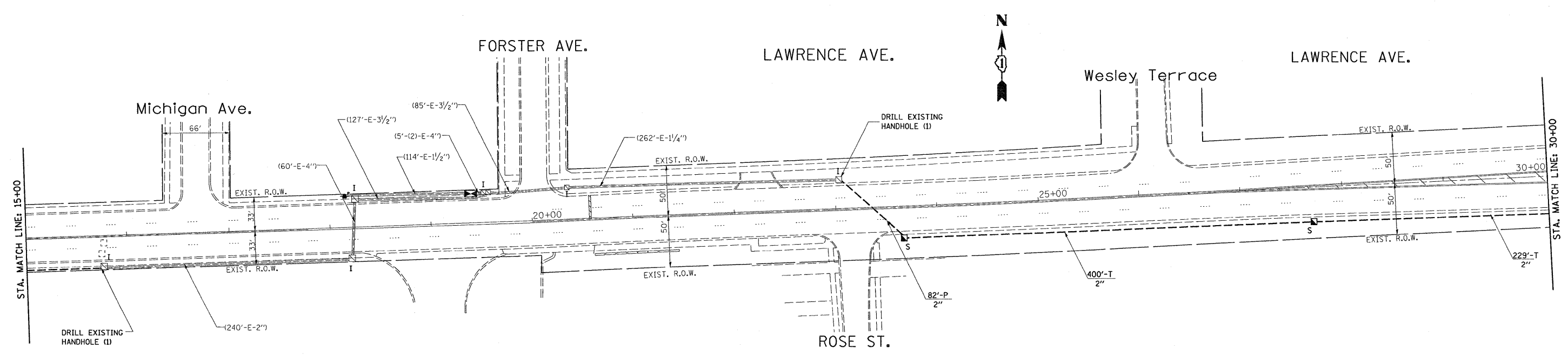
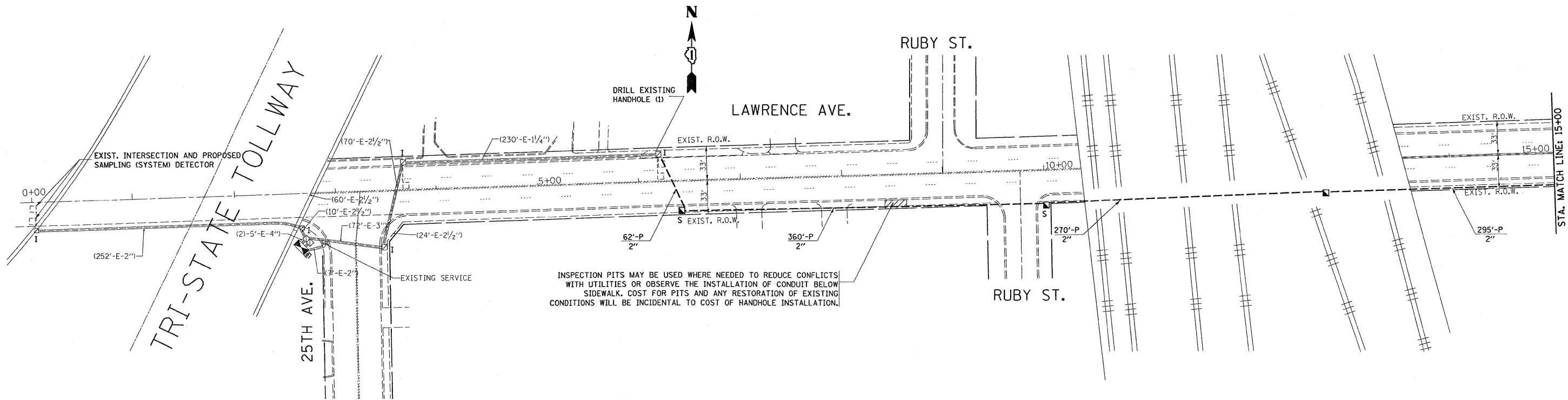
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	PLOT DATE = 6/24/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE AND CABLE PLAN
LAWRENCE AVE. AT DES PLAINES RIVER RD.

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1362	2009 102 N	COOK	17	14
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 00565	



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PLOT DATE = 6/25/2010	DATE - 06/25/2010	REVISED -	REVISED -

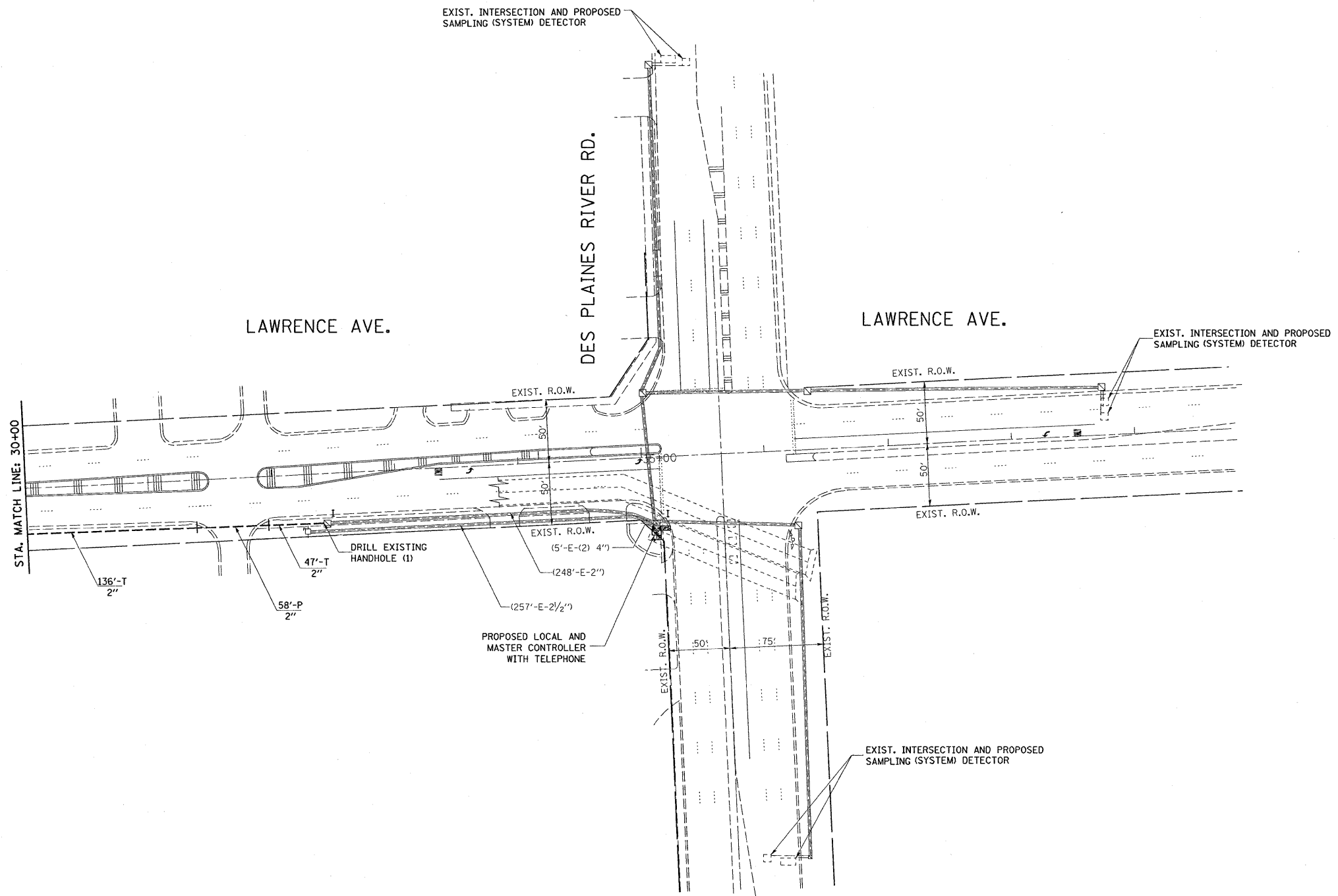
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
LAWRENCE AVENUE
FROM 25TH AVE. TO FORSTER AVE.**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1362	2009-102N	COOK	17	15
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60165	

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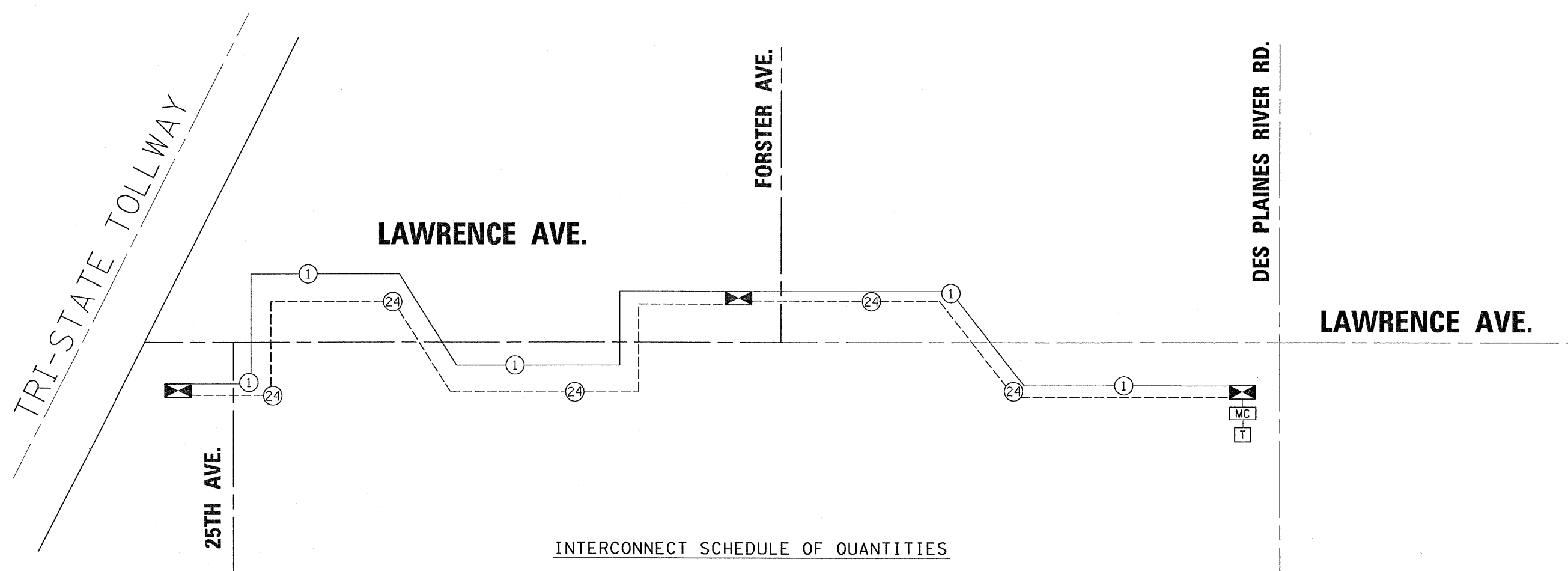
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PLOT SCALE = 50.0000' / IN.	CHECKED - JE	REVISED -	REVISED -
PLOT DATE = 6/25/2010	DATE - 06/25/2010	REVISED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
LAWRENCE AVENUE
DES PLAINES RIVER ROAD**

SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						1362	2009-102N	COOK	17	16
						CONTRACT NO. 60165				
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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INTERCONNECT SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
812	FOOT	CONDUIT IN TRENCH 2" DIA., GALVANIZED STEEL
1127	FOOT	CONDUIT PUSHED 2" DIA., GALVANIZED STEEL
5	EACH	HANDHOLE
812	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	MASTER CONTROLLER
4	EACH	DRILL EXISTING HANDHOLE
3,530	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
1	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM
3,530	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F

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