

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
337	20-N-4	LAKE	18	1
		ILLINOIS	CONTRACT NO. 60L19	

D-91-652-10 *18+1=19

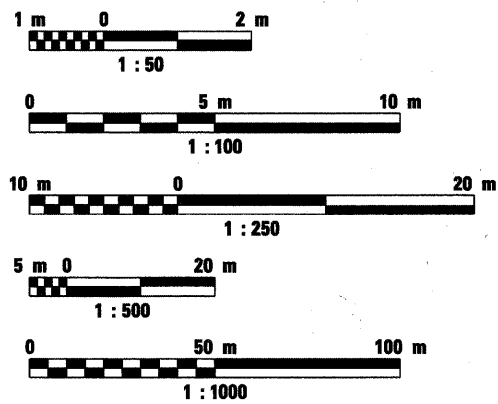
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STANDARDS

- 03 - 701006 : OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 02 - 701011 : OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 02 - 701101 : OFF-ROAD OPERATIONS MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 04 - 701301 : LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 02 - 701106 : OFF-ROAD OPERATIONS MULTILANE, MORE THAN 15 (4.5 m) AWAY
- 01 - 701427 : LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40 MPH
- 01 - 701601 : URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
- 08 - 701606 : URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 08 - 701701 : URBAN LANE CLOSURE MULTILANE INTERSECTION
- 05 - 701801 : LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 02 - 701901 : TRAFFIC CONTROL DEVICES
- 01 - 720001 : SIGN PANEL MOUNTING DETAIL
- 01 - 805001 : ELECTRICAL SERVICE INSTALLATION DETAILS
- 01 - 857001 : STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 01 - 862001 : UNINTERRUPTABLE POWER SUPPLY (UPS)
- 02 - 873001 : TRAFFIC SIGNAL GROUNDING & BONDING
- 05 - 877001 : STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 04 - 877006 : STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS
- 05 - 877011 : STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 02 - 877012 : STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
- 09 - 878001 : CONCRETE FOUNDATION DETAILS
- 01 - 880006 : TRAFFIC SIGNAL MOUNTING DETAILS

METRIC RATIOS



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
PROJECT MANAGER

CONTRACT NO. 60L19

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

FAP ROUTE 337: IL ROUTE 22 (HALF DAY ROAD) & WESTMINSTER WAY /HEWITT DR.
SECTION: 20-N-4

TRAFFIC SIGNAL MODERNIZATION
LAKE COUNTY

C-91-652-10



LOCATION OF SECTION INDICATED THUS: - [shaded box] -



Signed Daniel Wiktorszak
DANIEL WIKTORZAK, P.E. IL Lic. No. 062-060960
Expires 11-30-2018
Date 10/25/11 DW

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10/26 2011

Deane O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 9, 2011
Scott E. Stett, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

December 9, 2011
William R. Fieker
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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CIVIL ENGINEERING CONSULTANTS
RWA
 Regina Webster & Associates, Inc.
 8619 W. Bryn Mawr Ave., Suite 602
 Chicago, IL 60631-3551
 773-283-2600 Fax: 773-283-2602
 www.RWEng.com

SUMMARY OF QUANTITIES

LOCATION OF WORK				URBAN	IL RT 22 (HALF DAY RD.) @ WESTMINSTER WAY / HEWITT DR	100% STATE	INTERCONNECT <i>100% Village of Lombardshire</i>
SUMMARY OF QUANTITIES				CONSTRUCTION CODE	0021	0021	
CODE NO.	ITEM	UNIT	GRAND TOTAL				
67100100	MOBILIZATION	L SUM	1		1		
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1		1		
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1		1		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1		1		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1		1		
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1		1		
X8570225	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL	EACH	1		1		
86400100	TRANSCIVER - FIBER OPTIC	EACH	1		1		
87900200	DRILL EXISTING HANDHOLE	EACH	6		6		
88030020	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4		4		
88030110	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	10		10		
88030240	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2		2		
88102717	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4		4		
88102747	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2		2		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	14		14		
88500100	INDUCTIVE LOOP DETECTOR	EACH	14		14		
88700200	LIGHT DETECTOR	EACH	3		3		
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1		
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8		8		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1		1		
* M7200100	SIGN PANEL - TYPE I	SQ M	4.45		4.45		
* M7200200	SIGN PANEL - TYPE II	SQ M	2.78		2.78		
M8101166	UNDERGROUND CONDUIT, GALVANIZED STEEL, 65 MM DIA.	METER	9.00		9		
M8101170	UNDERGROUND CONDUIT, GALVANIZED STEEL, 75 MM DIA.	METER	13.00		13		
M8731210	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	METER	495		495		
M8731220	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	METER	747		747		
M8731240	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	METER	447		447		
M8731250	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	METER	819		819		
M8731300	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	METER	1,124		1124		
M8731800	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	METER	26		26		
** MX875020	TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER (SPECIAL)	EACH	2		2		
** M8770260	STEEL MAST ARM ASSEMBLY AND POLE, 10.97 METER (SPECIAL)	EACH	1		1		
** M8770295	STEEL MAST ARM ASSEMBLY AND POLE, 15.24 METER (SPECIAL)	EACH	1		1		
** MX877028	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 12.19 METER & 15.85 METER (SPECIAL)	EACH	1		1		
** MX877022	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 11.58 METER & 16.76 METER (SPECIAL)	EACH	1		1		
M8780100	CONCRETE FOUNDATION, TYPE A	METER	2.4		2.4		
MX878030	CONCRETE FOUNDATION, TYPE E 900 MM DIAMETER	METER	17.80		17.8		
MX032178	TEMPORARY INFORMATION SIGNING	SQ M	9.2		9.2		
Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL M	2		2		
X8440102	RELOCATE EXISTING LUMINAIRE	EACH	2		2		
MX816074	UNIT DUCT 3-1/C #4 & 1/C #6 GROUND, 600V (XLP-TYPE RHW) 30MM DIA. POLETHYLENE	METER	45		45		
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1		1		
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	7		7		
X862.0200	UNINTERRUPTABLE POWER SUPPLY SPECIAL	EACH	1		1		
Z0033020	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	2		2		
Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, LEVEL 1	EACH	1				1
M8731850	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	METER	200		200		
MX873030	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	METER	236		236		
M8780150	CONCRETE FOUNDATION, TYPE C	METER	1.2		1.2		

**** UPGRADED MATERIAL AS PER SPECIFICATION BY STEINBERG LIGHTING** **Specialty Items*

CIVIL ENGINEERING CONSULTANTS
RWIA
 Regina Webster & Associates, Inc.
 8619 W. Bryn Mawr Ave., Suite 402
 Chicago, IL 60631-3551
 773-283-2600 Fax: 773-283-2602
 www.RWIAengineers.com

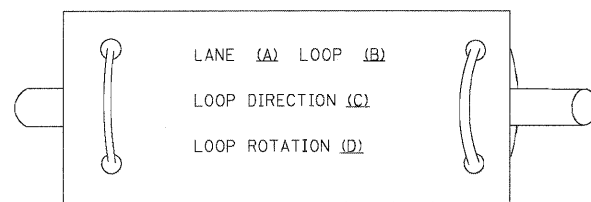
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#FILE#		DRAWN - JDH	REVISED -										
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	PLOT DATE = #DATE#	DATE -	REVISED -										

ILLINOIS FED. AID PROJECT

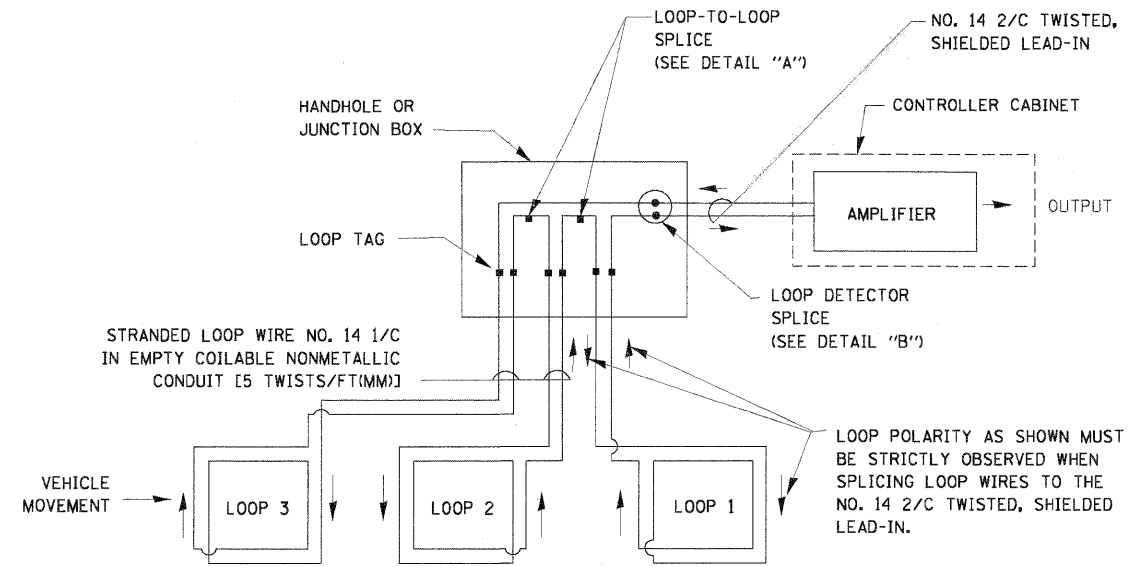
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

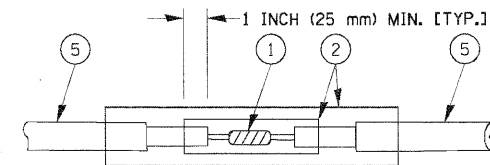


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

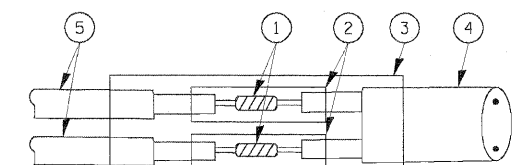


DETECTOR LOOP WIRING SCHEMATIC

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

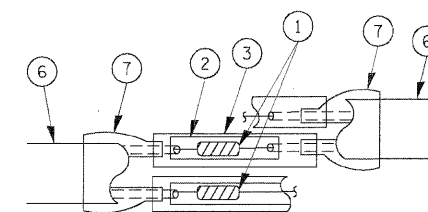


DETAIL "A"
LOOP-TO-LOOP SPLICE

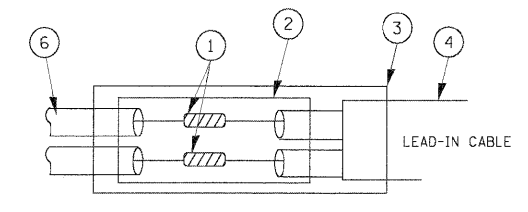


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



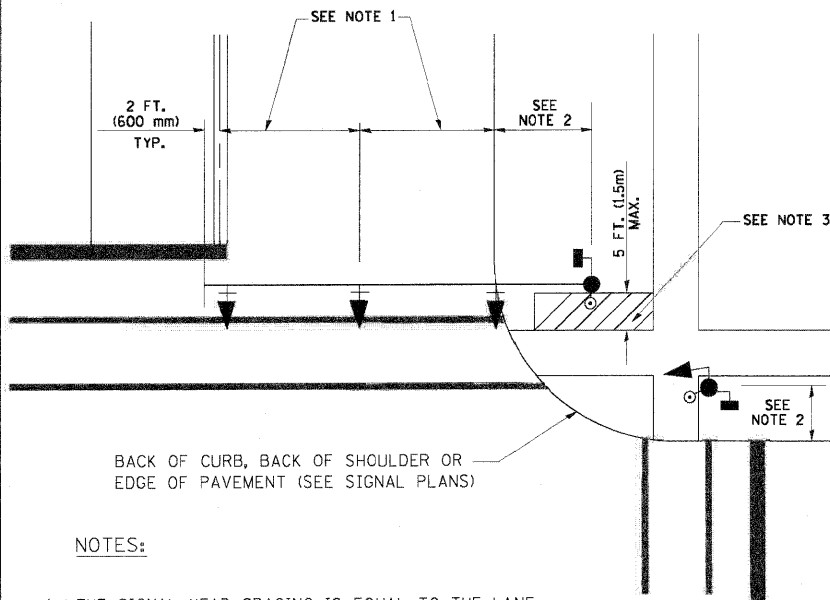
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

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

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

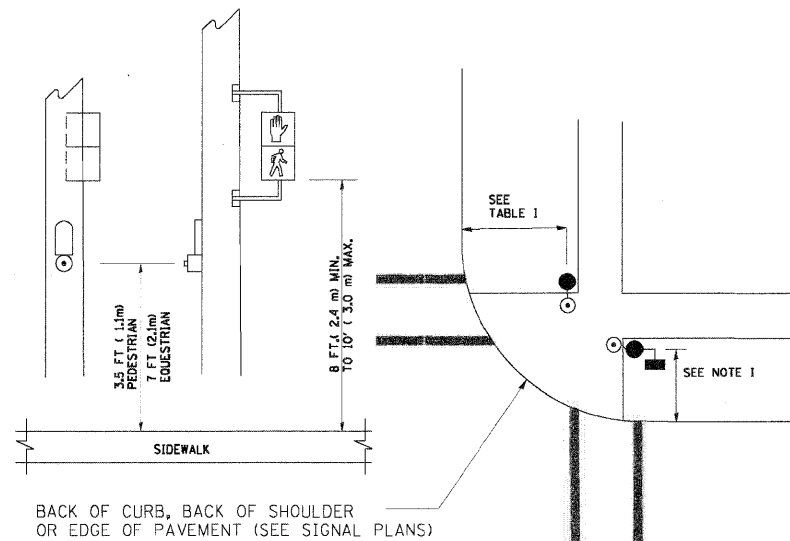
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

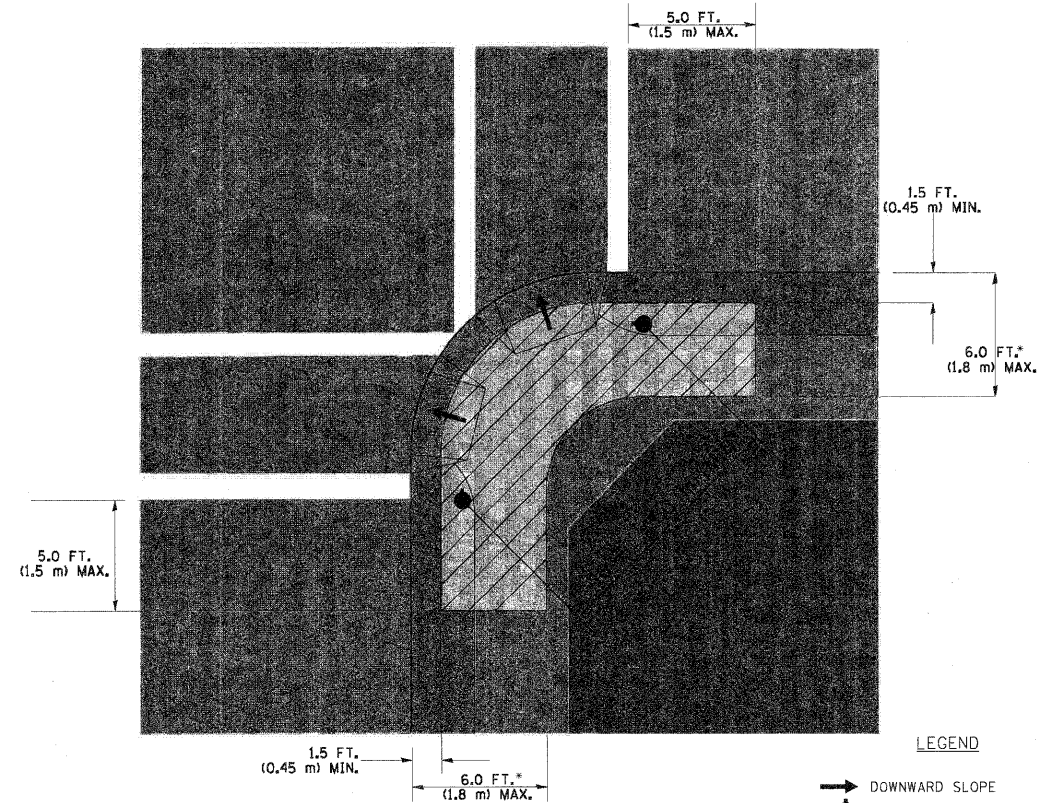
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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:

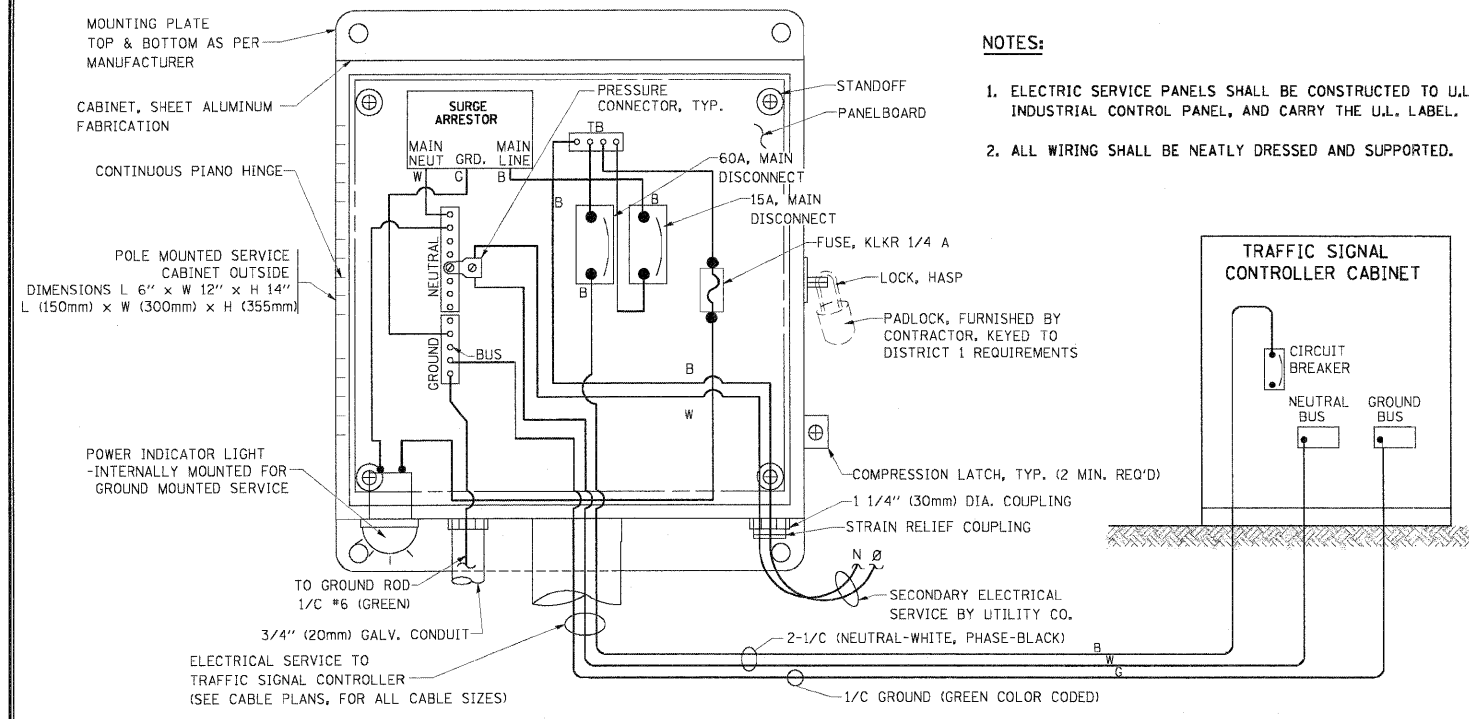
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

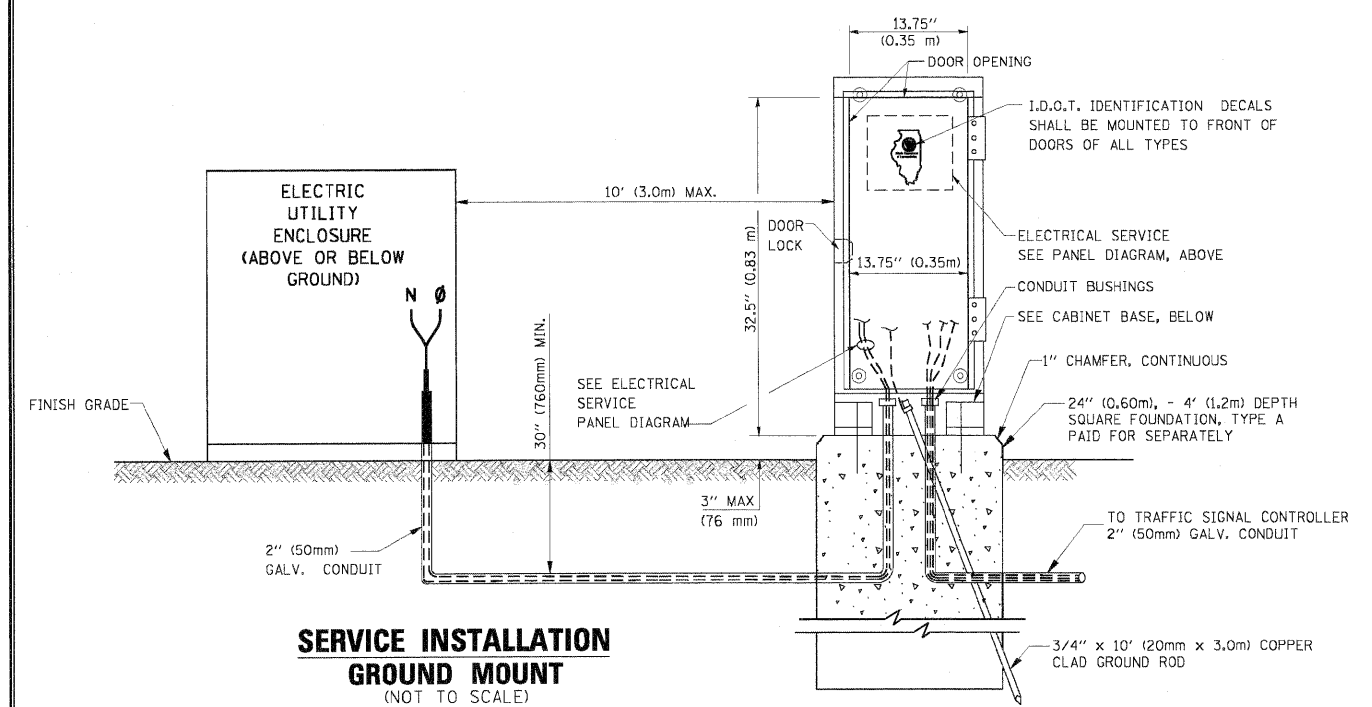
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

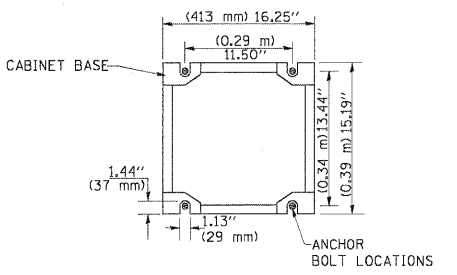


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)

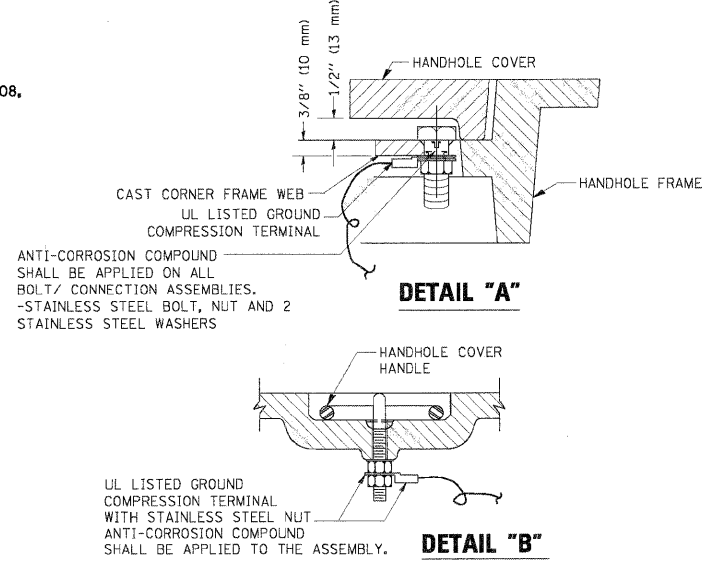


SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

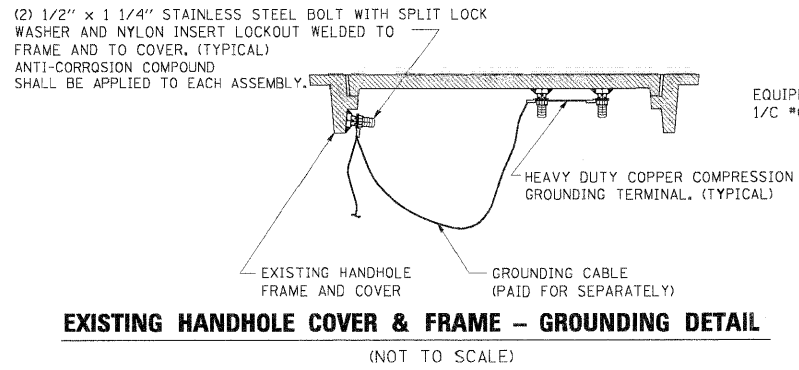
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



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

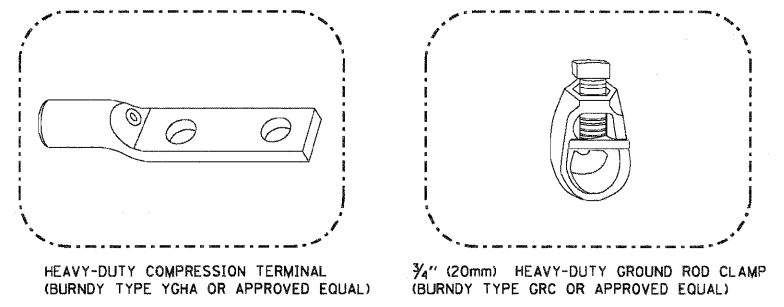


HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

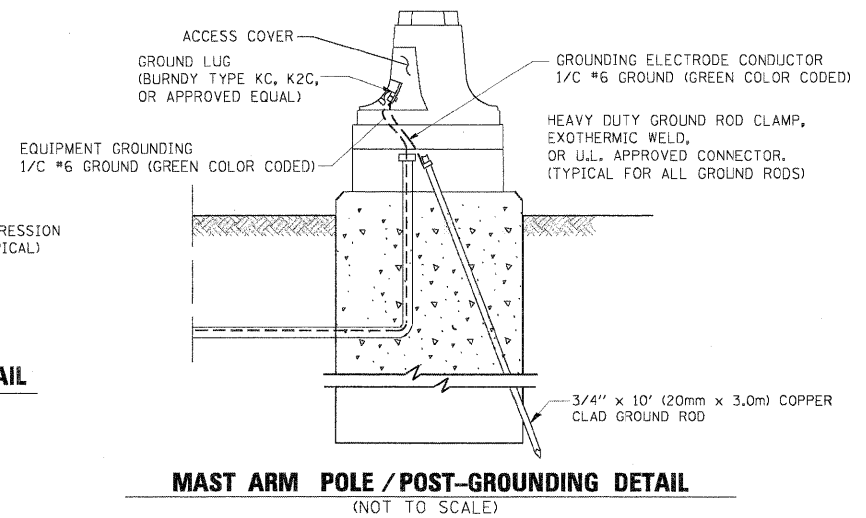


EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

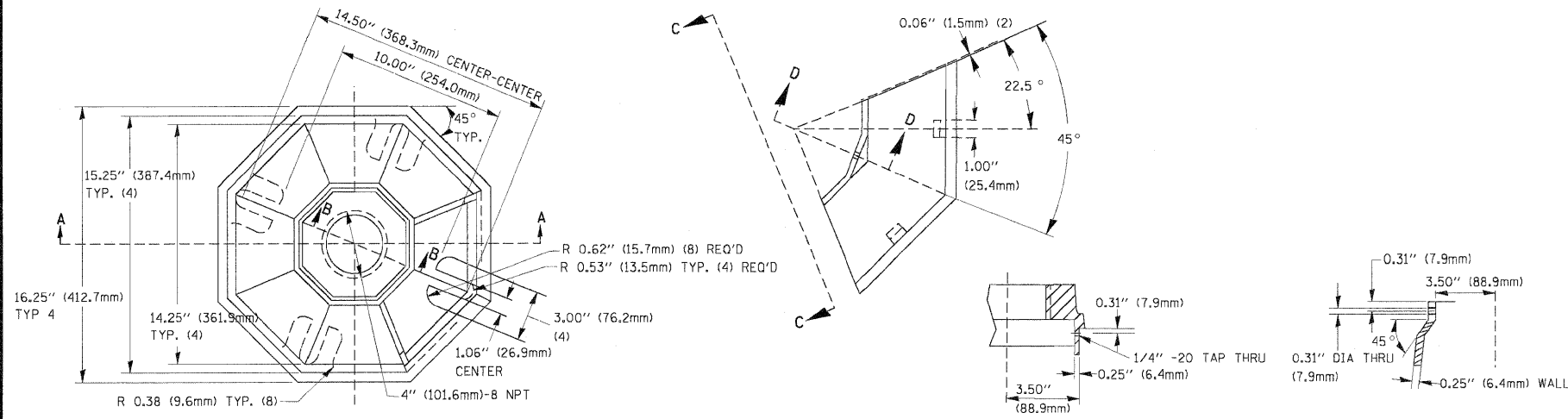
- NOTES:**
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4\"/>
 - 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.



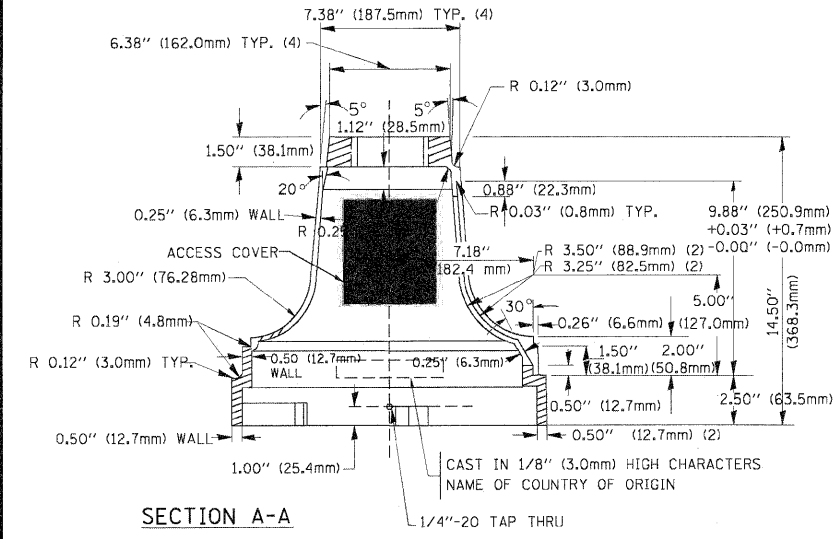
MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)



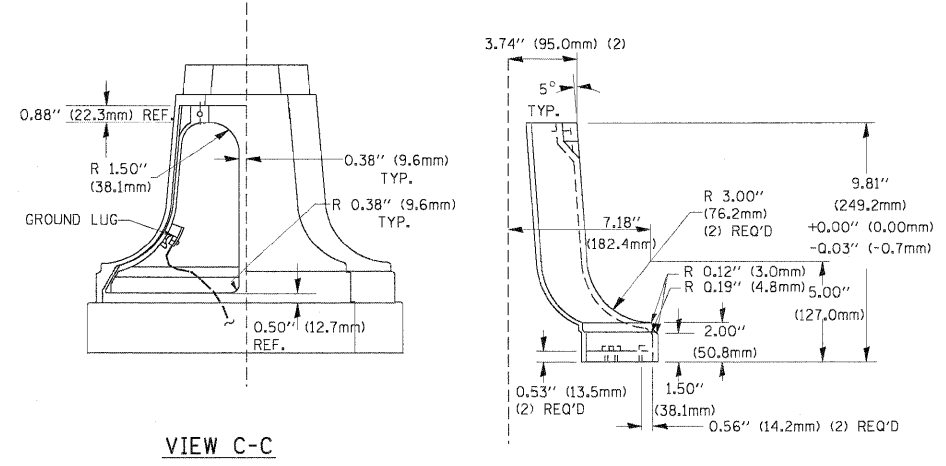
TOP VIEW

SECTION B-B

SECTION D-D

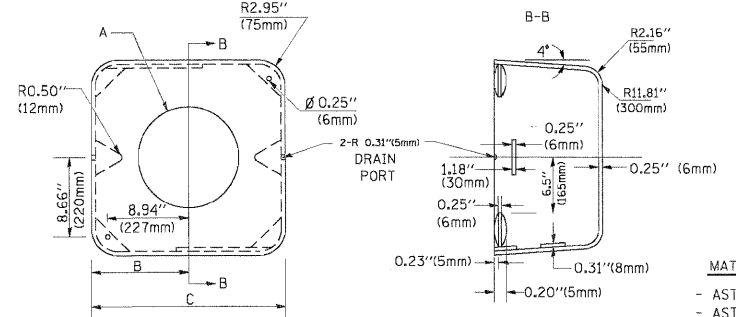


SECTION A-A



VIEW C-C

TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

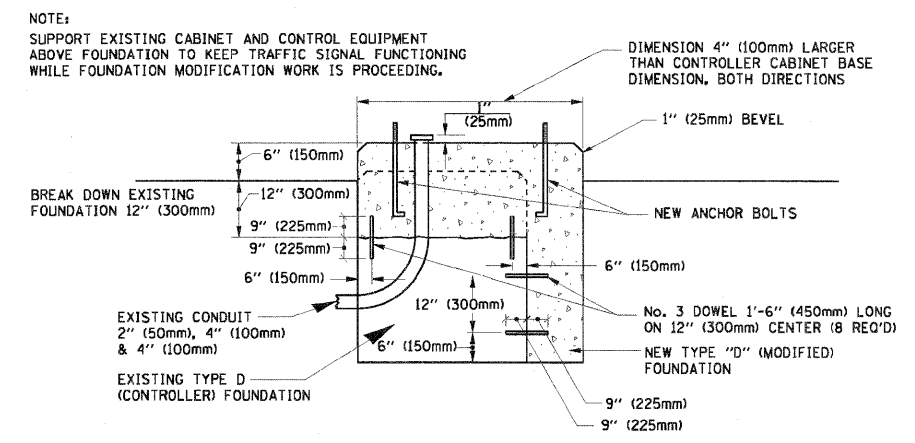


MATERIAL:
 - ASTM A36 STEEL
 - ASTM A-123 HOT DIPPED GALVANIZED

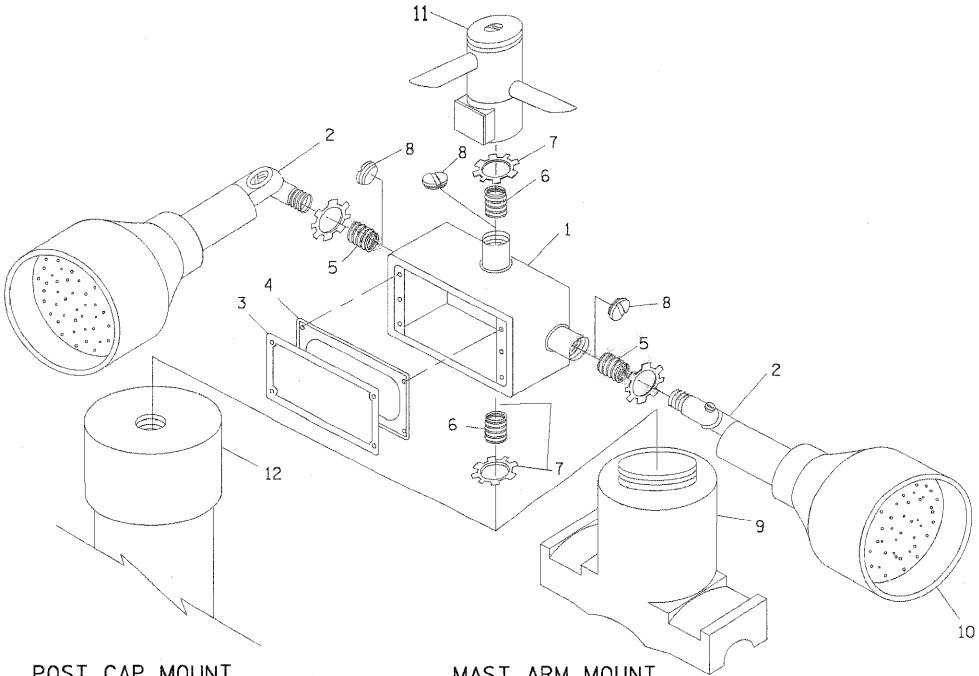
A	B	C	HEIGHT	WEIGHT
VARIES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126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

SHROUD

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



MODIFY EXISTING TYPE "D" FOUNDATION



POST CAP MOUNT

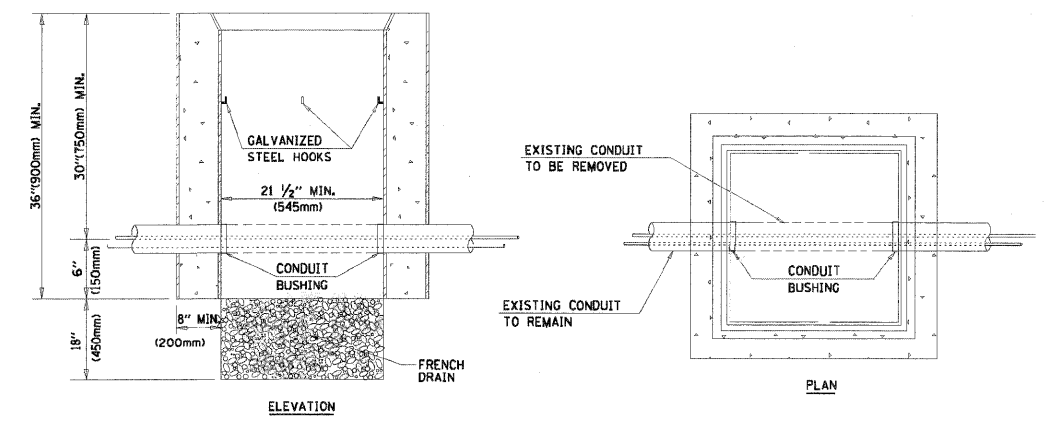
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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

NOTES:

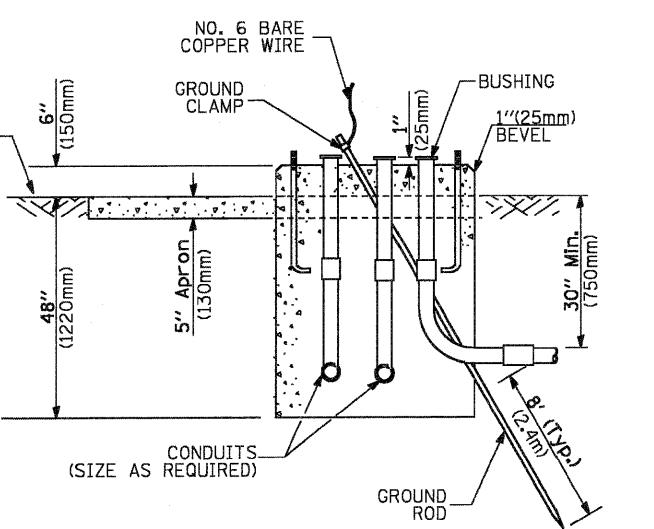
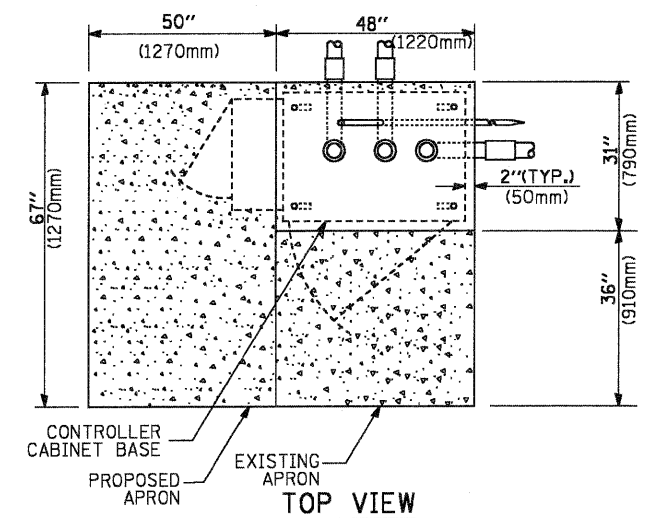
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
 ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION 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.



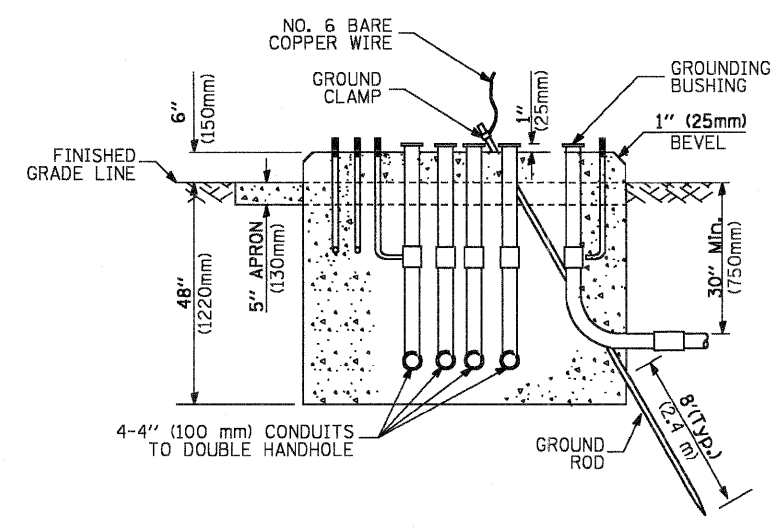
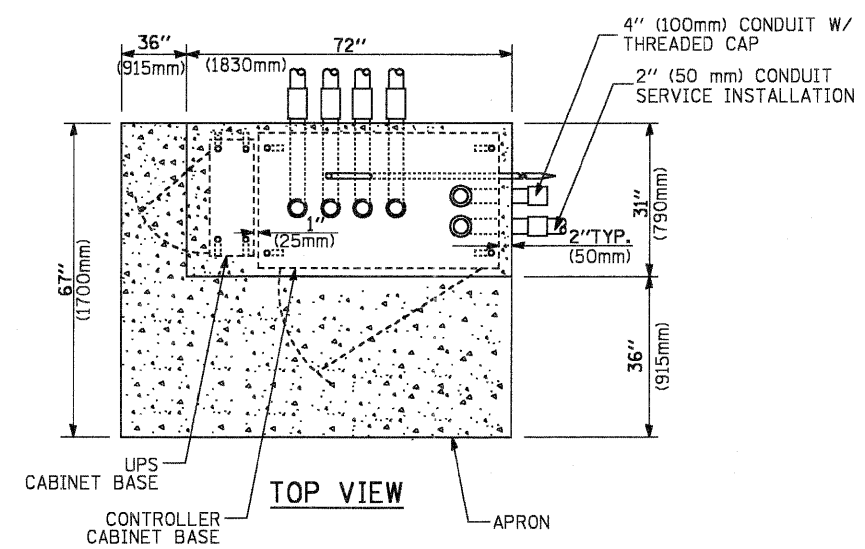
NOTES:

- 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.

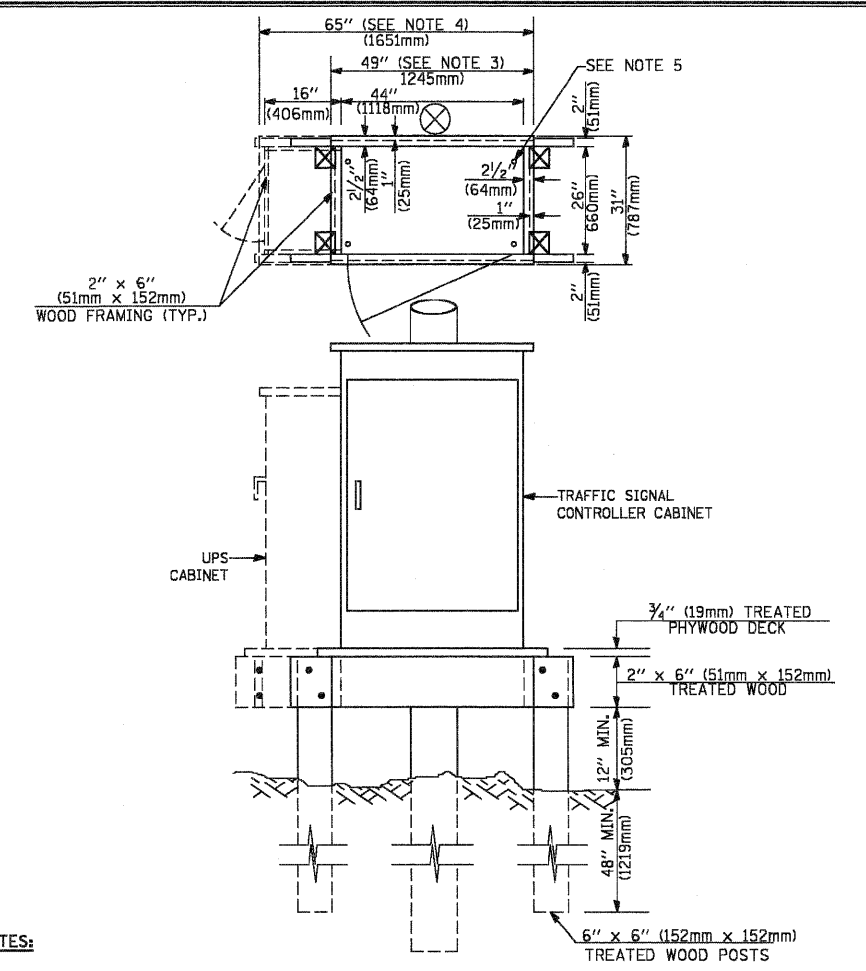
HANDHOLE TO INTERCEPT EXISTING CONDUIT



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



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



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

**TEMPORARY SIGNAL CONTROLLER
 WOOD SUPPORT PLATFORM**

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

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+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)	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 (QU) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
 4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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 5M12F																				
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				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED																				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED																				
SIGNAL POST				REMOVE ITEM				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				SIGNAL POST AND FOUNDATION TO BE REMOVED																				
GUY WIRE				ABANDON ITEM				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				<h2>RAILROAD SYMBOLS</h2> <table border="1"> <thead> <tr> <th></th> <th>EXISTING</th> <th>PROPOSED</th> </tr> </thead> <tbody> <tr> <td>RAILROAD CONTROL CABINET</td> <td></td> <td></td> </tr> <tr> <td>RAILROAD CANTILEVER MAST ARM</td> <td></td> <td></td> </tr> <tr> <td>FLASHING SIGNAL</td> <td></td> <td></td> </tr> <tr> <td>CROSSING GATE</td> <td></td> <td></td> </tr> <tr> <td>CROSSBUCK</td> <td></td> <td></td> </tr> </tbody> </table>				EXISTING	PROPOSED	RAILROAD CONTROL CABINET			RAILROAD CANTILEVER MAST ARM			FLASHING SIGNAL			CROSSING GATE			CROSSBUCK		
	EXISTING	PROPOSED																										
RAILROAD CONTROL CABINET																												
RAILROAD CANTILEVER MAST ARM																												
FLASHING SIGNAL																												
CROSSING GATE																												
CROSSBUCK																												
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																												

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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

- 4 EACH PED. SIGNAL HEAD, L.E.D., 2 - FACE
- 4 EACH PED. PUSH BUTTON
- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 1 EACH UNINTERRUPTABLE POWER SUPPLY (COMPLETE)
- 4 EACH VIDEO DETECTION CAMERA

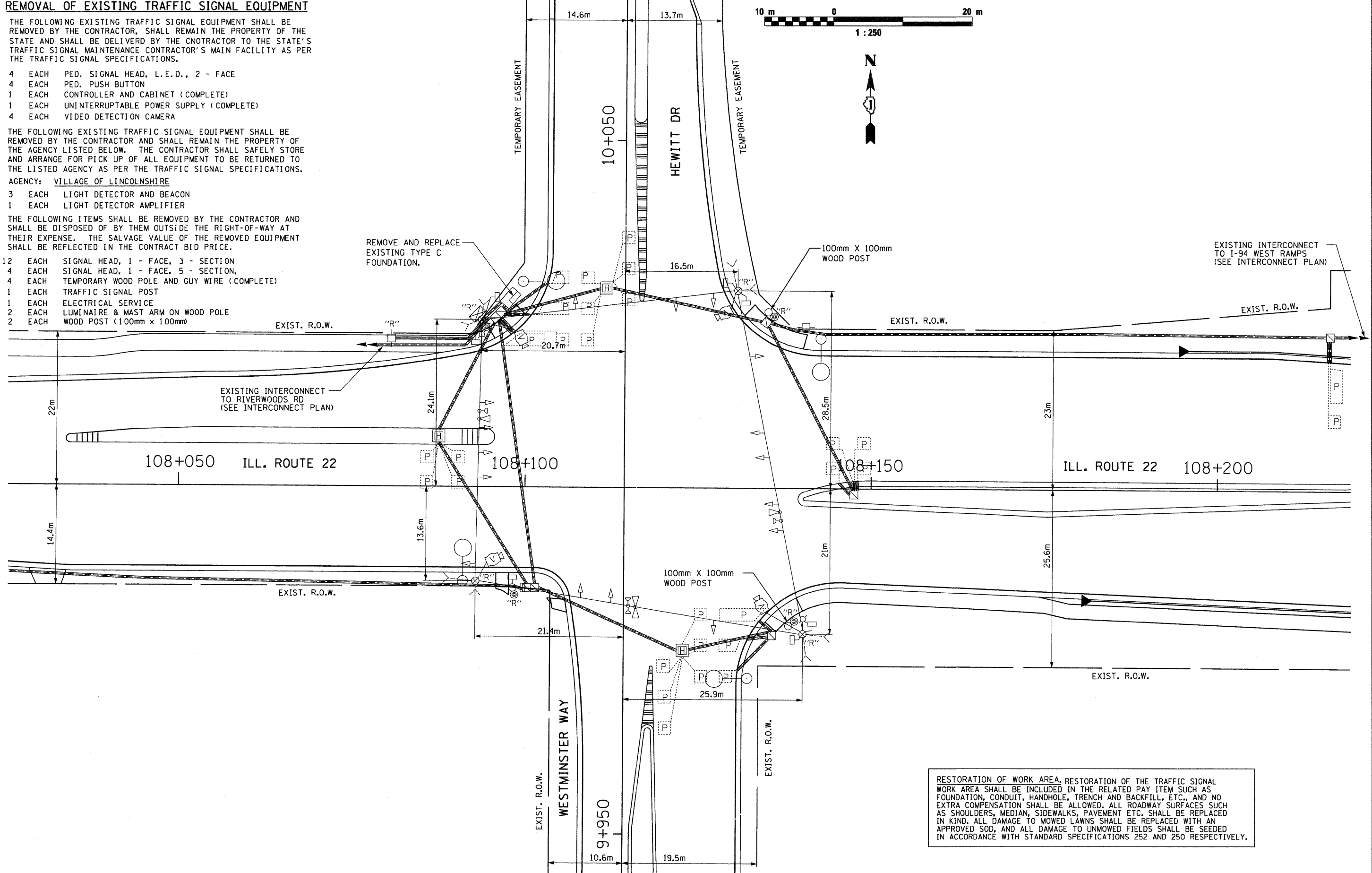
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: VILLAGE OF LINCOLNSHIRE

- 3 EACH LIGHT DETECTOR AND BEACON
- 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.

- 12 EACH SIGNAL HEAD, 1 - FACE, 3 - SECTION
- 4 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
- 4 EACH TEMPORARY WOOD POLE AND GUY WIRE (COMPLETE)
- 1 EACH TRAFFIC SIGNAL POST
- 1 EACH ELECTRICAL SERVICE
- 2 EACH LUMINAIRE & MAST ARM ON WOOD POLE
- 2 EACH WOOD POST (100mm x 100mm)



RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

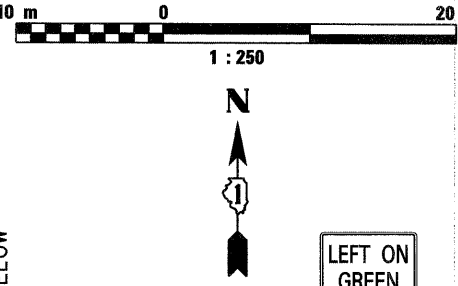
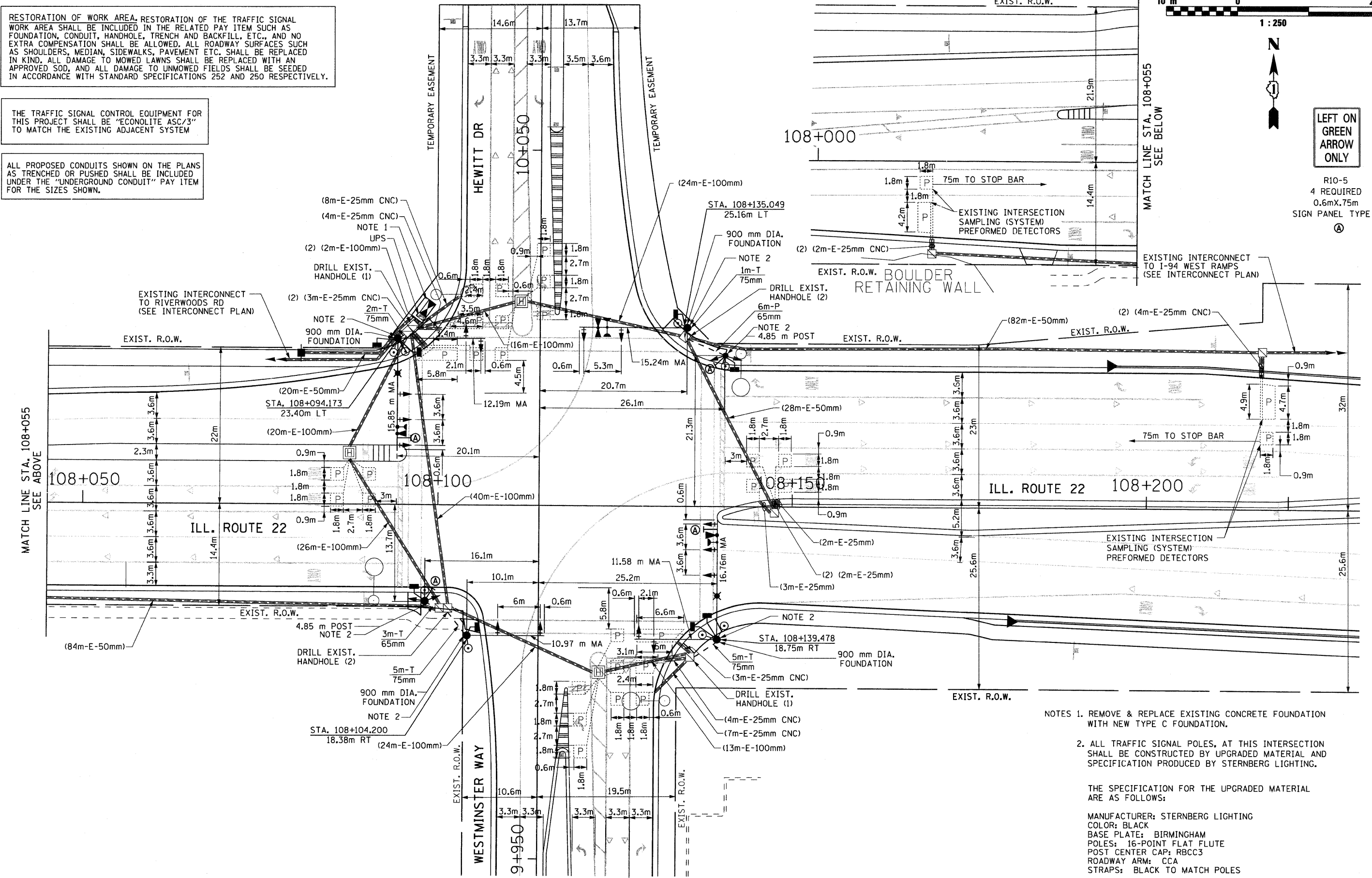
FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - JDH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 22 (HALF DAY RD) AT WESTMINSTER WAY / HEWITT RD REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN	F.A. RTE. 337	SECTION 20-N-4	COUNTY LAKE	TOTAL SHEETS 18	SHEET NO. 9		
PLOT SCALE = #SCALE#	CHECKED - DW	REVISED -	SCALE: 1:250			SHEET NO. 1 OF 3 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				
PLOT DATE = #DATE#	DATE -	REVISED -										
CONTRACT NO. 60L19												



RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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 SEEDD IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE ASC/3" TO MATCH THE EXISTING ADJACENT SYSTEM

ALL PROPOSED CONDUITS SHOWN ON THE PLANS AS TRENCHED OR PUSHED SHALL BE INCLUDED UNDER THE "UNDERGROUND CONDUIT" PAY ITEM FOR THE SIZES SHOWN.



LEFT ON GREEN ARROW ONLY

R10-5
 4 REQUIRED
 0.6m X 0.75m
 SIGN PANEL TYPE 1
 (A)

NOTES 1. REMOVE & REPLACE EXISTING CONCRETE FOUNDATION WITH NEW TYPE C FOUNDATION.
 2. ALL TRAFFIC SIGNAL POLES, AT THIS INTERSECTION SHALL BE CONSTRUCTED BY UPGRADED MATERIAL AND SPECIFICATION PRODUCED BY STERNBERG LIGHTING.

THE SPECIFICATION FOR THE UPGRADED MATERIAL ARE AS FOLLOWS:

MANUFACTURER: STERNBERG LIGHTING
 COLOR: BLACK
 BASE PLATE: BIRMINGHAM
 POLES: 16-POINT FLAT FLUTE
 POST CENTER CAP: RBCC3
 ROADWAY ARM: CCA
 STRAPS: BLACK TO MATCH POLES

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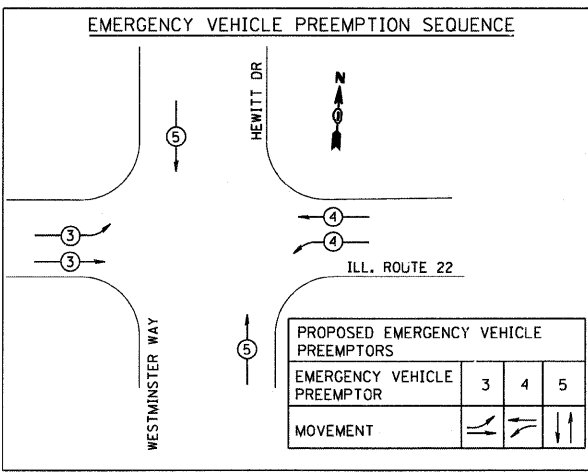
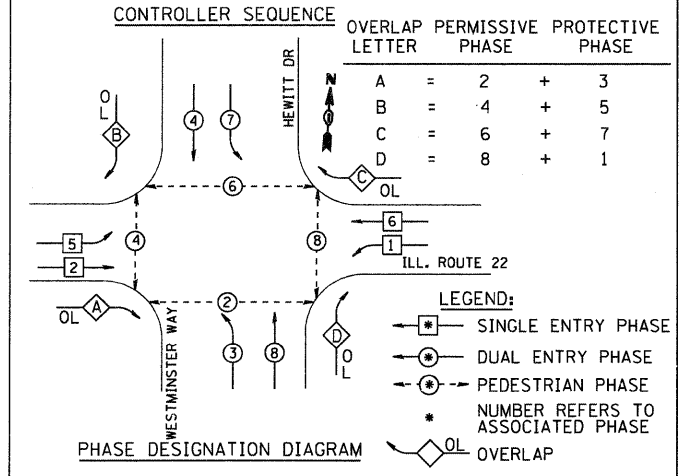
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 22 (HALF DAY RD) AT WESTMINSTER WAY / HEWITT RD
 TRAFFIC SIGNAL MODERNIZATION PLAN**

SCALE: 1:250 SHEET NO. 2 OF 3 SHEETS STA. TO STA.

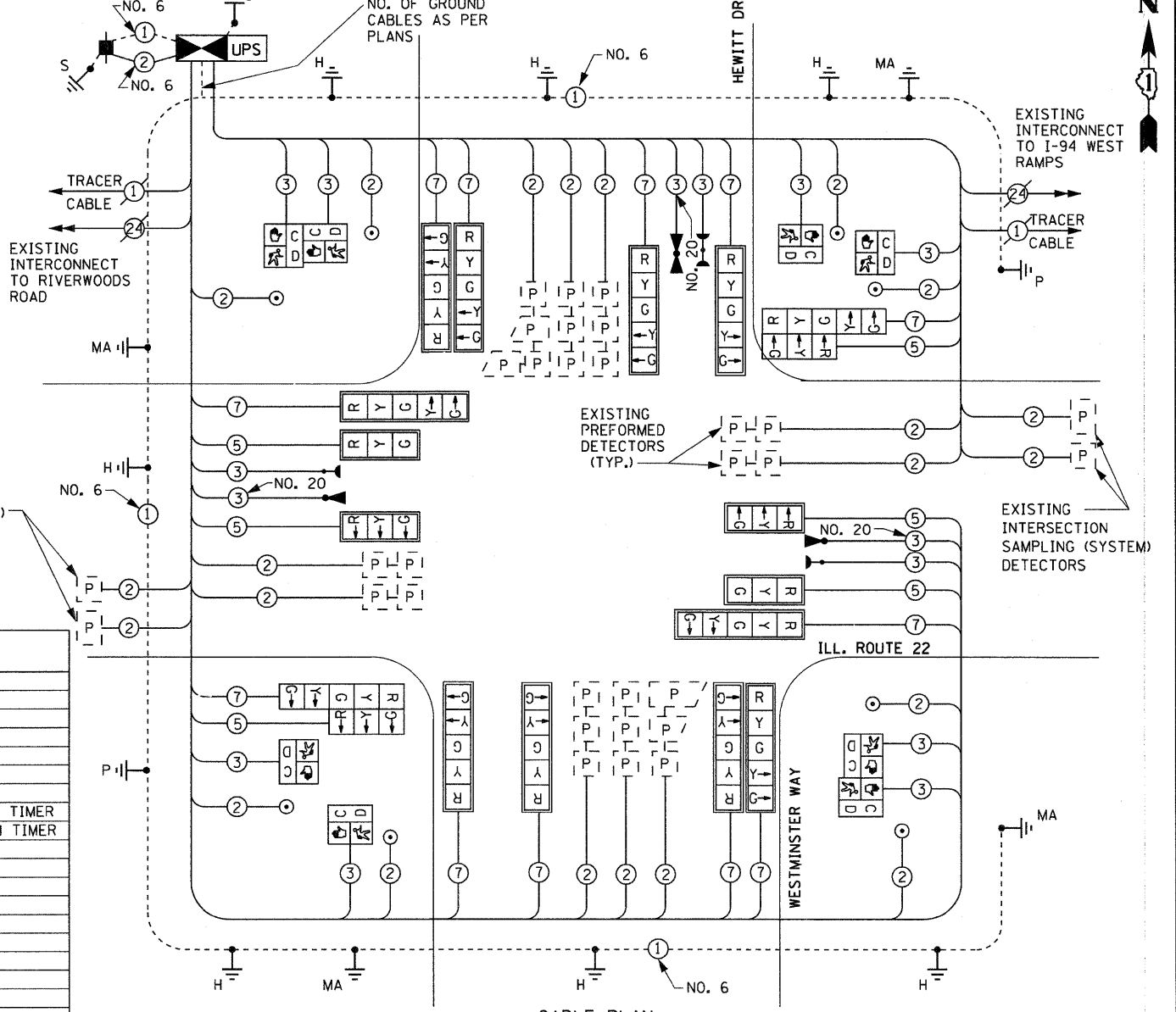
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
337	20-N-4	LAKE	18	10
CONTRACT NO. 60L19			ILLINOIS FED. AID PROJECT	



SCHEDULE OF QUANTITIES

UNIT	QTY.	ITEM
EACH	1	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
EACH	1	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL
EACH	1	TRANSCEIVER - FIBER OPTIC
EACH	6	DRILL EXISTING HANDHOLE
EACH	4	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
EACH	10	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
EACH	2	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
EACH	4	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
EACH	2	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
EACH	14	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
EACH	14	INDUCTIVE LOOP DETECTOR
EACH	3	LIGHT DETECTOR
EACH	1	LIGHT DETECTOR AMPLIFIER
EACH	8	PEDESTRIAN PUSH-BUTTON
EACH	1	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
EACH	1	REMOVE EXISTING CONCRETE FOUNDATION
SQ M	4.45	SIGN PANEL - TYPE I
SQ M	2.78	SIGN PANEL - TYPE II
METER	9	UNDERGROUND CONDUIT, GALVANIZED STEEL, 65 MM DIA.
METER	13	UNDERGROUND CONDUIT, GALVANIZED STEEL, 75 MM DIA.
METER	495	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
METER	747	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
METER	447	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
METER	819	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
METER	1124	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
METER	26	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
** EACH	2	TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER (SPECIAL)
** EACH	1	STEEL MAST ARM ASSEMBLY AND POLE, 10.97 METER (SPECIAL)
** EACH	1	STEEL MAST ARM ASSEMBLY AND POLE, 15.24 METER (SPECIAL)
** EACH	1	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 12.19 METER & 15.85 METER (SPECIAL)
** EACH	1	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 11.58 METER & 16.76 METER (SPECIAL)
METER	2.4	CONCRETE FOUNDATION, TYPE A
METER	1.2	CONCRETE FOUNDATION, TYPE C
METER	17.8	CONCRETE FOUNDATION, TYPE E 900 MM DIAMETER
SQ M	9.2	TEMPORARY INFORMATION SIGNING
EACH	1	SERVICE INSTALLATION - POLE MOUNTED
EACH	7	GROUNDING EXISTING HANDHOLE FRAME AND COVER
EACH	1	UNINTERRUPTABLE POWER SUPPLY SPECIAL
METER	200	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
METER	236	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED

** UPGRADED MATERIAL AS PER SPECIFICATION BY STEINBERG LIGHTING



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

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE ASC/3" TO MATCH THE EXISTING ADJACENT SYSTEM

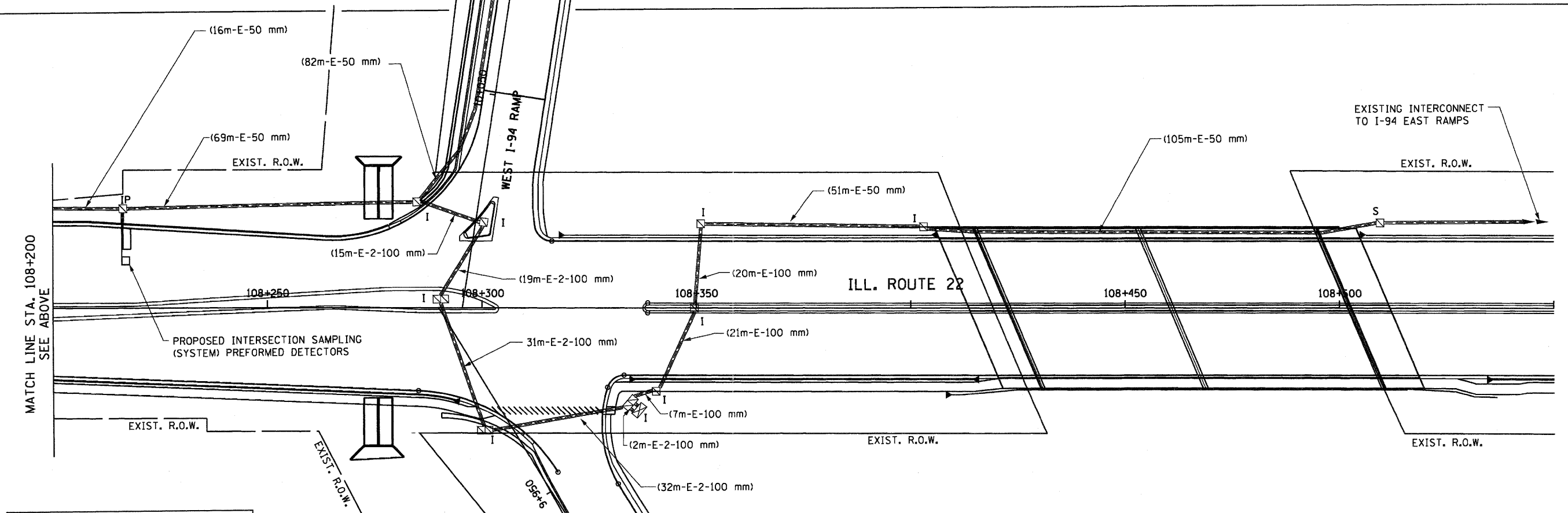
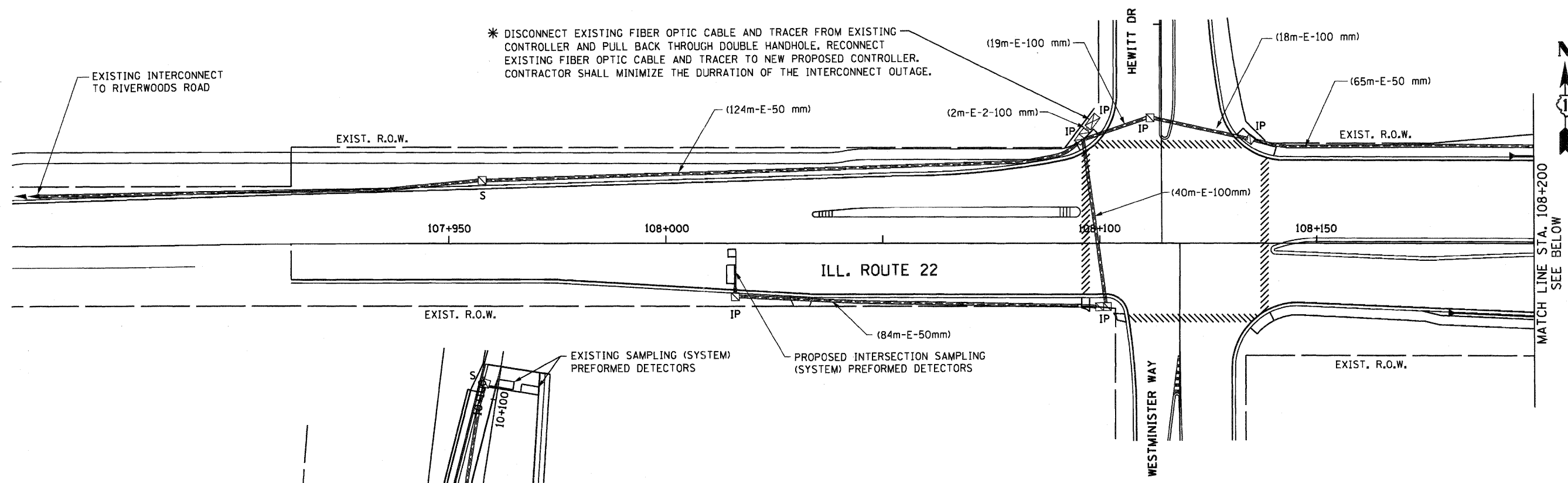
CONTRACTOR TO VERIFY GROUNDING OF EXISTING TRAFFIC SIGNAL. IF SIGNAL IS NOT GROUNDED, CONTRACTOR SHALL GROUND TRAFFIC SIGNAL SYSTEM AS WELL AS EXISTING HANDHOLE FRAME AND COVER.

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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND	LED	% OPERATION	
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	24	135	12	0.10	28.8
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84	35	0.05	
VIDEO SYSTEM		150		1.00	
FLASHER		135	25	0.50	
TOTAL =					661.8

ENERGY COST TO: VILLAGE OF LINCOLNSHIRE
 ONE OLDE HALF DAY ROAD
 LINCOLNSHIRE, ILLINOIS 60069
 ENERGY SUPPLY: CONTACT: Ms. Dorothy Prosen
 PHONE: 847-816-5323
 COMPANY: ComEd-Libertyville

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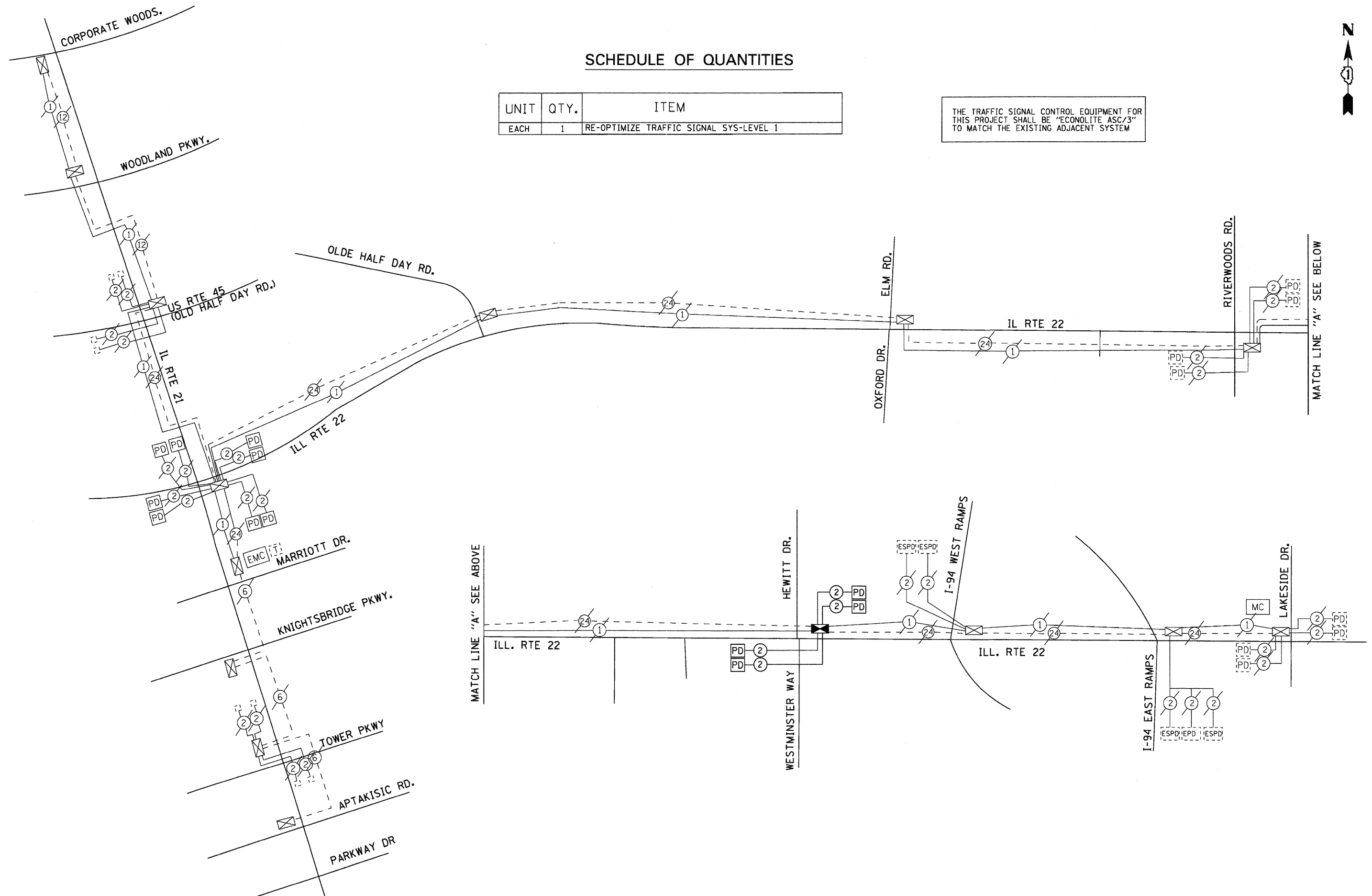
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE ASC/3" TO MATCH THE EXISTING ADJACENT SYSTEM

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	PLOT DATE = 4/13/2011	DATE -	REVISED -		(ILLINOIS) FED. AID PROJECT							

SCHEDULE OF QUANTITIES

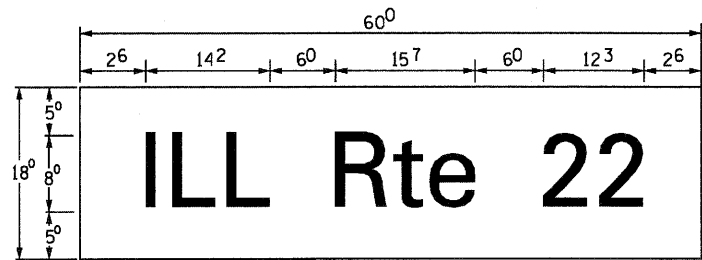
UNIT	QTY.	ITEM
EACH	1	RE-OPTIMIZE TRAFFIC SIGNAL SYS-LEVEL 1

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE ASC/3" TO MATCH THE EXISTING ADJACENT SYSTEM

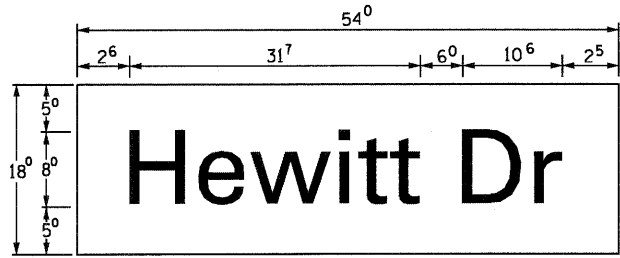


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	PLOT DATE = 4/13/2011	CHECKED - DW	REVISED -			CONTRACT NO. 60L19					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

PANEL SIGN DESIGN TYPE 1

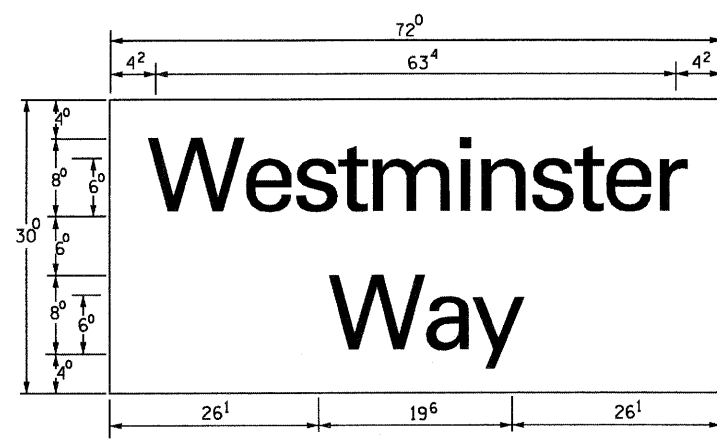


0.70 Sq. M. each
 7.50 Sq. Ft. each
 2 Required
 Design Series D



0.63 Sq. M. each
 6.75 Sq. Ft. each
 2 Required
 Design Series D

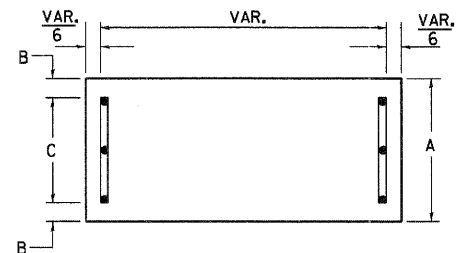
PANEL SIGN DESIGN TYPE 2



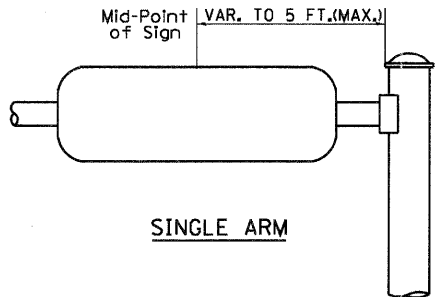
1.39 Sq. M. each
 15.0 Sq. Ft. each
 2 Required
 Design Series C

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

SUPPORTING CHANNELS

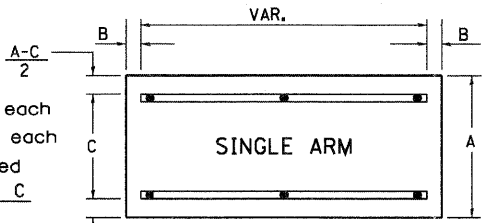


A	B	C
18"	2"	14"

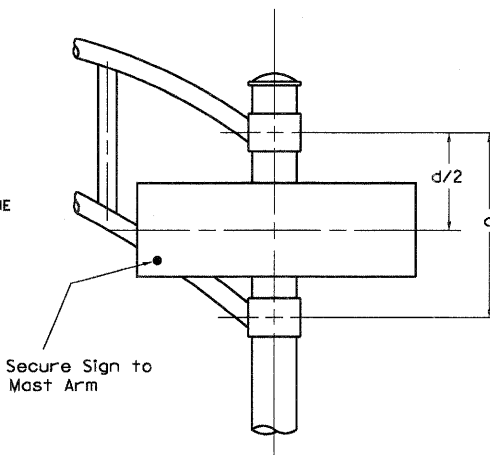


SINGLE ARM

SUPPORTING CHANNELS



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



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

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

EXAMPLE, 2
 ③ DENOTES 3/8"

FIRST LETTER	SECOND LETTER															
	a c c d e		b h i k l		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	12	14	14	15	12	14	06	10	11	14	06	10	11	12	12	14
B	14	15	20	21	14	15	11	12	14	15	12	14	12	14	16	17
C E G	14	15	20	21	12	14	06	10	12	14	12	14	14	15	14	15
D O O R	14	15	20	21	14	15	06	10	12	14	12	14	14	15	14	15
F	05	06	14	15	06	10	05	06	06	10	06	10	06	10	11	12
H I M N	20	21	22	24	20	21	14	15	16	17	16	17	20	21	20	21
J U	20	21	20	21	16	17	14	15	16	17	16	17	16	17	20	21
K L	11	12	16	17	11	12	05	06	11	12	11	12	11	12	12	14
P	12	14	14	15	12	14	05	06	11	12	11	12	12	14	12	14
S	12	14	16	17	12	14	06	10	12	14	12	14	12	14	12	14
T	11	12	16	17	06	10	06	10	11	12	11	12	11	12	12	14
V	06	10	14	15	11	12	06	10	12	14	12	14	12	14	12	14
Y	05	06	14	15	06	10	05	06	05	07	05	06	06	10	11	12
Z	16	17	22	24	16	17	12	14	16	17	16	17	16	17	20	21

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

FIRST LETTER	SECOND LETTER															
	a c c d e		b h i k l		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j	16	17	22	24	16	17	12	14	14	15	14	15	16	17	16	17
l m n q u																
b f k o p s	12	14	16	17	11	12	05	06	11	12	11	12	12	14	12	14
c e	12	14	16	17	12	14	06	10	12	14	12	14	12	14	12	14
r	06	10	12	14	06	10	03	03	05	06	05	06	06	10	06	10
t z	12	14	16	17	12	14	06	10	11	12	11	12	12	14	12	14
v y	11	12	14	15	11	12	05	06	06	10	06	10	11	12	11	12
w	11	12	14	15	11	12	05	06	11	12	11	12	11	12	12	14
	12	14	16	17	11	12	05	06	11	12	11	12	11	12	12	14

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

FIRST NUMBER	SECOND NUMBER																			
	0		1		2		3		4		5		6		7		8		9	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	16	17	16	17	14	15	12	14	14	15	14	15	16	17	12	14	16	17	16	17
1	20	21	20	21	20	21	16	17	14	15	20	21	20	21	14	15	20	21	20	21
2 3 4	14	15	14	15	14	15	12	14	14	15	14	15	11	12	16	17	14	15		
5	14	15	14	15	14	15	11	12	11	12	14	15	11	12	14	15	14	15		
6	16	17	14	15	14	15	12	14	14	15	14	15	11	12	14	15	14	15		
7	12	14	12	14	14	15	12	15	05	06	12	14	14	15	11	12	14	15	12	14
8	16	17	16	17	14	15	12	15	12	14	14	15	16	17	12	14	16	17	14	15

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS		8 INCH UPPER CASE LETTERS		LETTERS	6 INCH LOWER CASE LETTERS	
	SERIES		SERIES			SERIES	
	C	D	C	D		C	D
A	36	50	50	65	a	35	42
B	32	40	43	53	b	35	42
C	32	40	43	53	c	35	41
D	32	40	43	53	d	35	42
E	30	35	40	47	e	35	42
F	30	35	40	47	f	23	26
G	32	40	43	53	g	35	42
H	32	40	43	53	h	35	42
I	07	07	11	12	i	11	11
J	30	36	40	50	j	20	22
K	32	41	43	54	k	35	42
L	30	35	40	47	l	11	11
M	37	45	51	61	m	60	70
N	32	40	43	53	n	35	42
O	34	42	45	55	o	36	43
P	32	40	43	53	p	35	42
Q	34	42	45	55	q	35	42
R	32	40	43	53	r	26	32
S	32	40	43	53	s	36	42
T	30	35	40	47	t	27	32
U	32	40	43	53	u	35	42
V	35	44	47	60	v	42	47
W	44	52	60	70	w	55	64
X	34	40	45	53	x	44	51
Y	36	50	50	66	y	46	53
Z	32	40	43	53	z	36	43

NUMBER	6 INCH SERIES		8 INCH SERIES	
	C	D	C	D
1	12	14	15	20
2	32	40	43	53
3	32	40	43	53
4	35	43	47	57
5	32	40	43	53
6	32	40	43	53
7	32	40	43	53
8	32	40	43	53
9	32	40	43	53
0	34	42	45	55

GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
 - ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
 - THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
 - ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
 - SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
 - * A.K.T. CORPORATION SCHAUMBURG, IL
 - * TUCKER COMPANY, INC. WAUWATOSA, WI
 - * AMERICAN FABRICATION CO. CHICAGO HEIGHTS, IL
 - * WESTERN TRAFFIC CONTROL INC. CICERO, IL
- PARTS LISTING:**
 SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
 SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
 BRACKETS PART #HPN034 (UNIVERSAL)
 CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING
- OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.







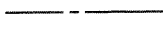


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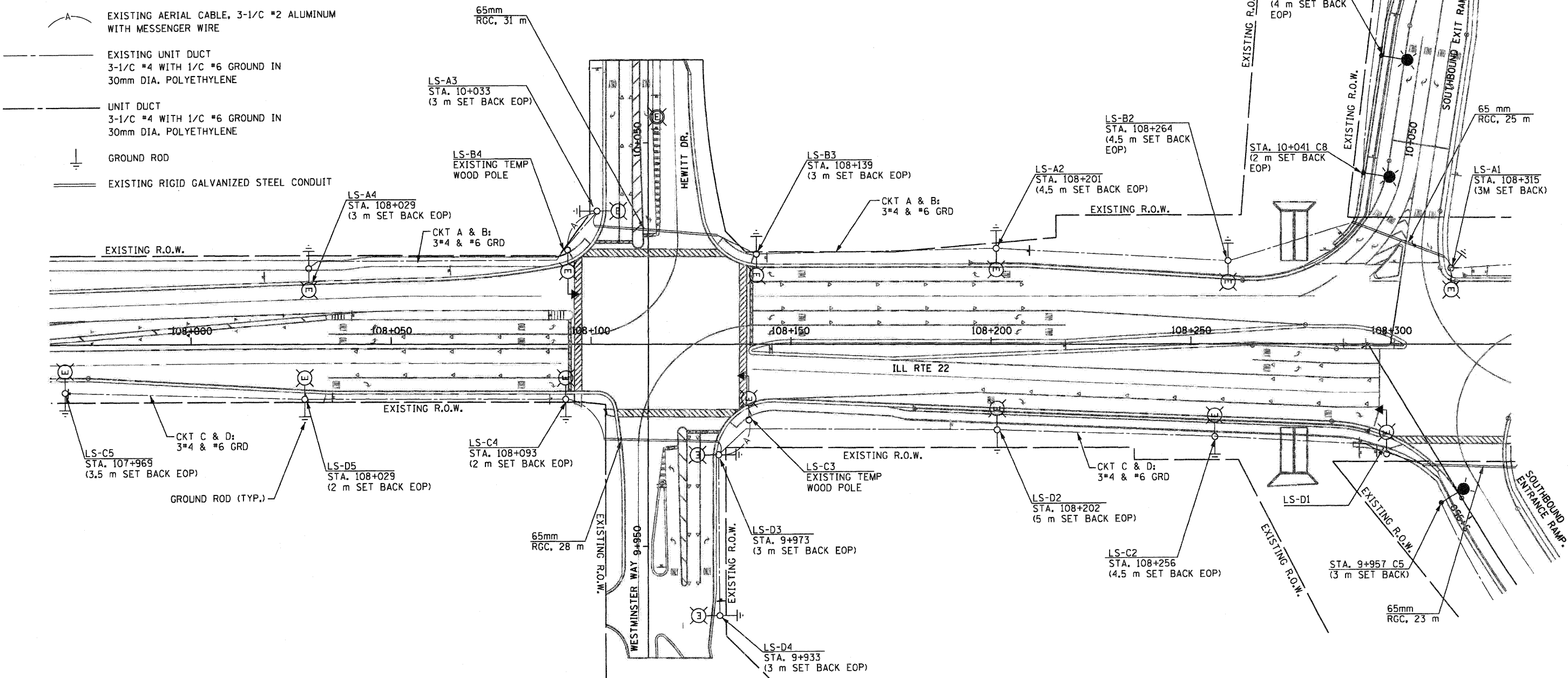
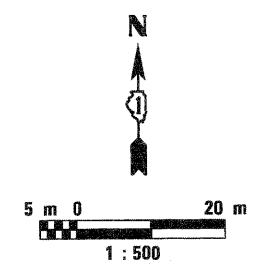
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 22 (HALF DAY RD) AT WESTMINSTER WAY / HEWITT RD
MAST ARM MOUNTED STREET NAME SIGNS

F.A. RTE. 337	SECTION	COUNTY LAKE	TOTAL SHEETS 18	SHEET NO. 14
SCALE: NTS			SHEET NO. 1 OF 1 SHEETS STA. TO STA.	
ILLINOIS FED. AID PROJECT CONTRACT NO. 60L19				

ELECTRICAL SYMBOLS LEGEND

-  EXISTING LIGHTING UNIT:
EXISTING 14.5 m M.H., 4.5 m M.A.
400W HPS M-C-III LUMINAIRE BREAKAWAY
TRANSFORMER BASE
-  EXISTING COMBINATION SIGNAL/LIGHTING UNIT
14.5m M.H., 4.5m MAST ARM, 400W HPS M-C-III
LUMINAIRE
-  COMBINATION SIGNAL/LIGHTING UNIT
14.5m M.H., 4.5m MAST ARM, 400W HPS M-C-III
LUMINAIRE
-  EXISTING ISTHA 400W HPS LUMINAIRE AND FOUNDATION,
SINGLE ARM GROUND MOUNT
-  EXISTING AERIAL CABLE, 3-1/2 #2 ALUMINUM
WITH MESSENGER WIRE
-  EXISTING UNIT DUCT
3-1/2 #4 WITH 1/2 #6 GROUND IN
30mm DIA. POLYETHYLENE
-  UNIT DUCT
3-1/2 #4 WITH 1/2 #6 GROUND IN
30mm DIA. POLYETHYLENE
-  GROUND ROD
-  EXISTING RIGID GALVANIZED STEEL CONDUIT



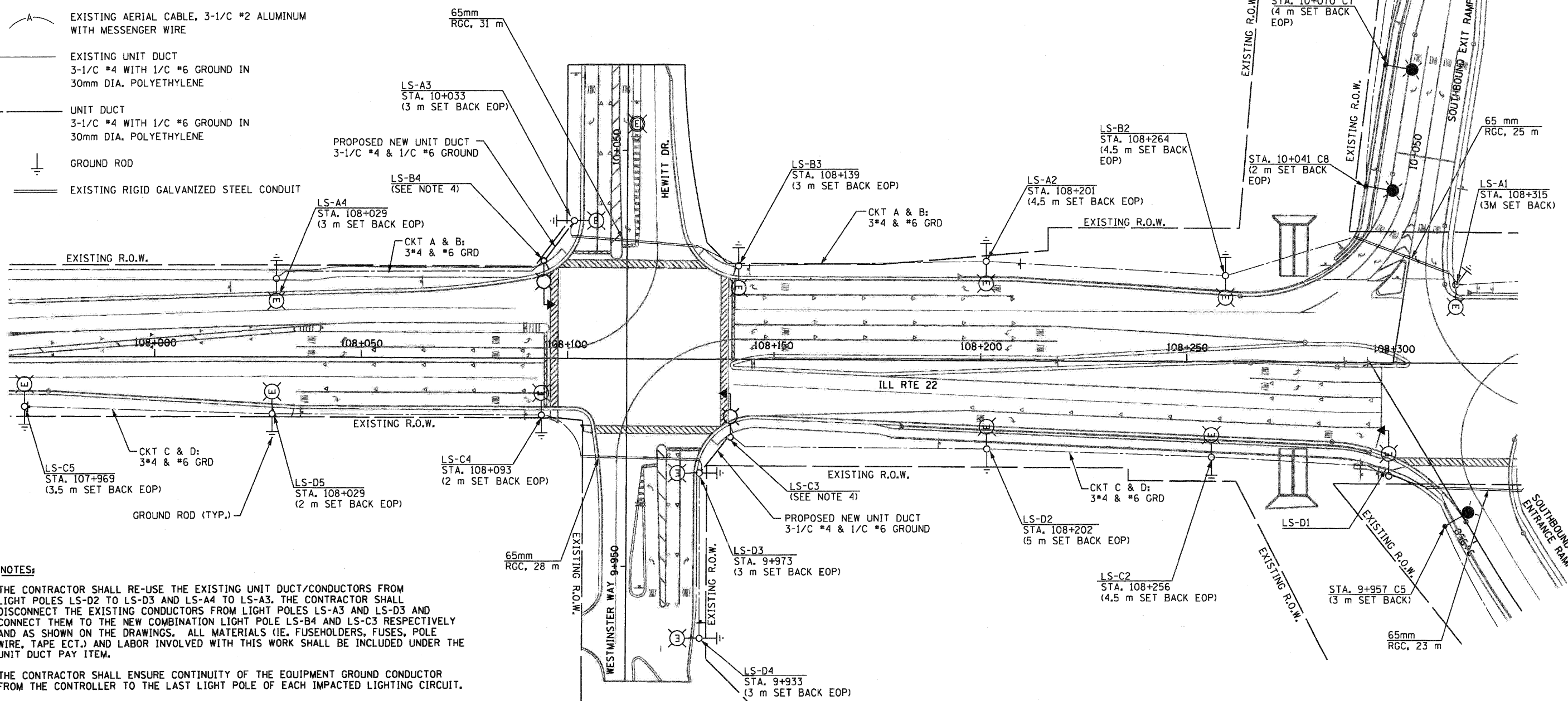
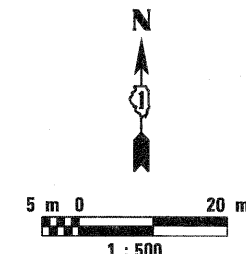
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PLOT SCALE = #SCALE#		DRAWN - JDH		SCALE: 1:500		SHEET NO. 1 OF 2 SHEETS		CONTRACT NO. 60L19		TO STA.
PLOT DATE = 4/13/2011		CHECKED - DW		ILLINOIS FED. AID PROJECT						
		DATE -								
		REVISED -								

ELECTRICAL SYMBOLS LEGEND

- EXISTING LIGHTING UNIT:
EXISTING 14.5 m M.H., 4.5 m M.A.
400W HPS M-C-III LUMINAIRE BREAKAWAY
TRANSFORMER BASE
- EXISTING COMBINATION SIGNAL/LIGHTING UNIT
14.5m M.H. 4.5m MAST ARM, 400W HPS M-C-III
LUMINAIRE
- COMBINATION SIGNAL/LIGHTING UNIT
14.5m M.H. 4.5m MAST ARM, 400W HPS M-C-III
LUMINAIRE
- EXISTING ISTHA 400W HPS LUMINAIRE AND FOUNDATION,
SINGLE ARM GROUND MOUNT
- EXISTING AERIAL CABLE, 3-1/2 #2 ALUMINUM
WITH MESSENGER WIRE
- EXISTING UNIT DUCT
3-1/2 #4 WITH 1/2 #6 GROUND IN
30mm DIA. POLYETHYLENE
- UNIT DUCT
3-1/2 #4 WITH 1/2 #6 GROUND IN
30mm DIA. POLYETHYLENE
- GROUND ROD
- EXISTING RIGID GALVANIZED STEEL CONDUIT

SCHEDULE OF QUANTITIES

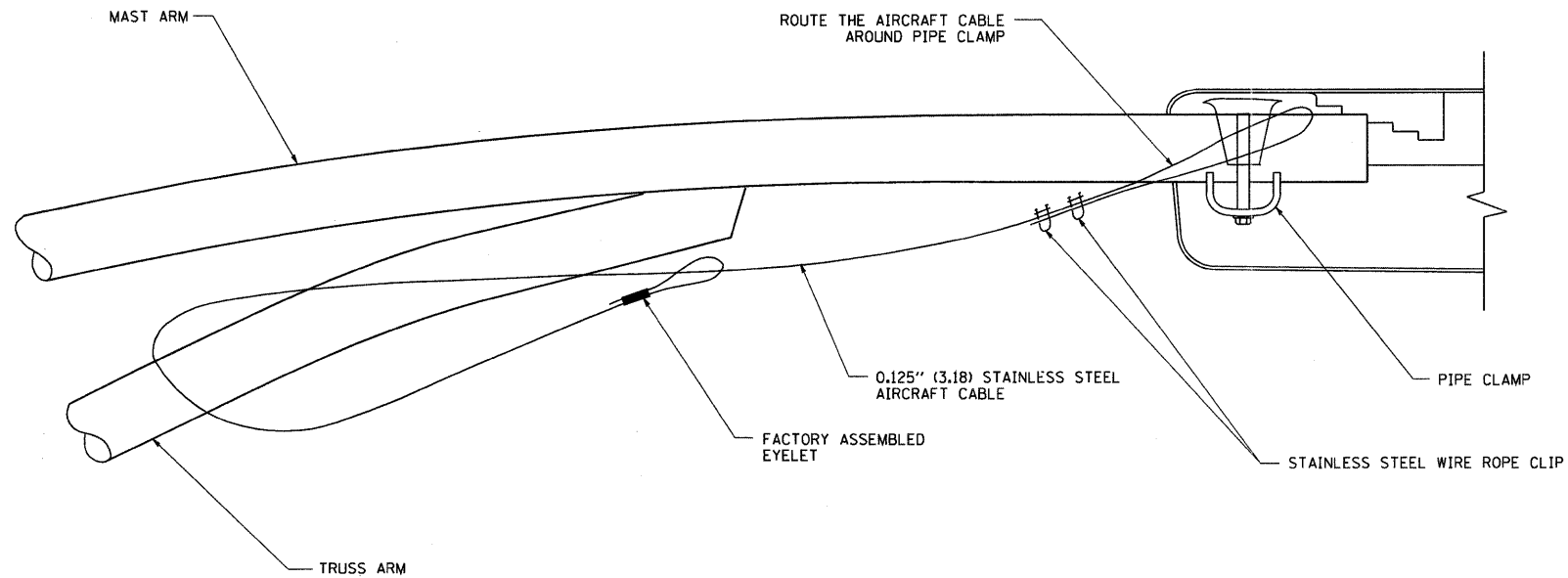
UNIT	QTY.	ITEM
CAL M	2	MAINTENANCE OF LIGHTING SYSTEM
EACH	2	REMOVE AND RELOCATE EXISTING LUMINAIRE
METER	45	UNIT DUCT 3-1/2 #4 & 1/2 #6 GROUND, 600V (XLP-TYPE RHW) 30MM DIA. POLYETHYLENE
EACH	2	LUMINAIRE SAFETY CABLE ASSEMBLY



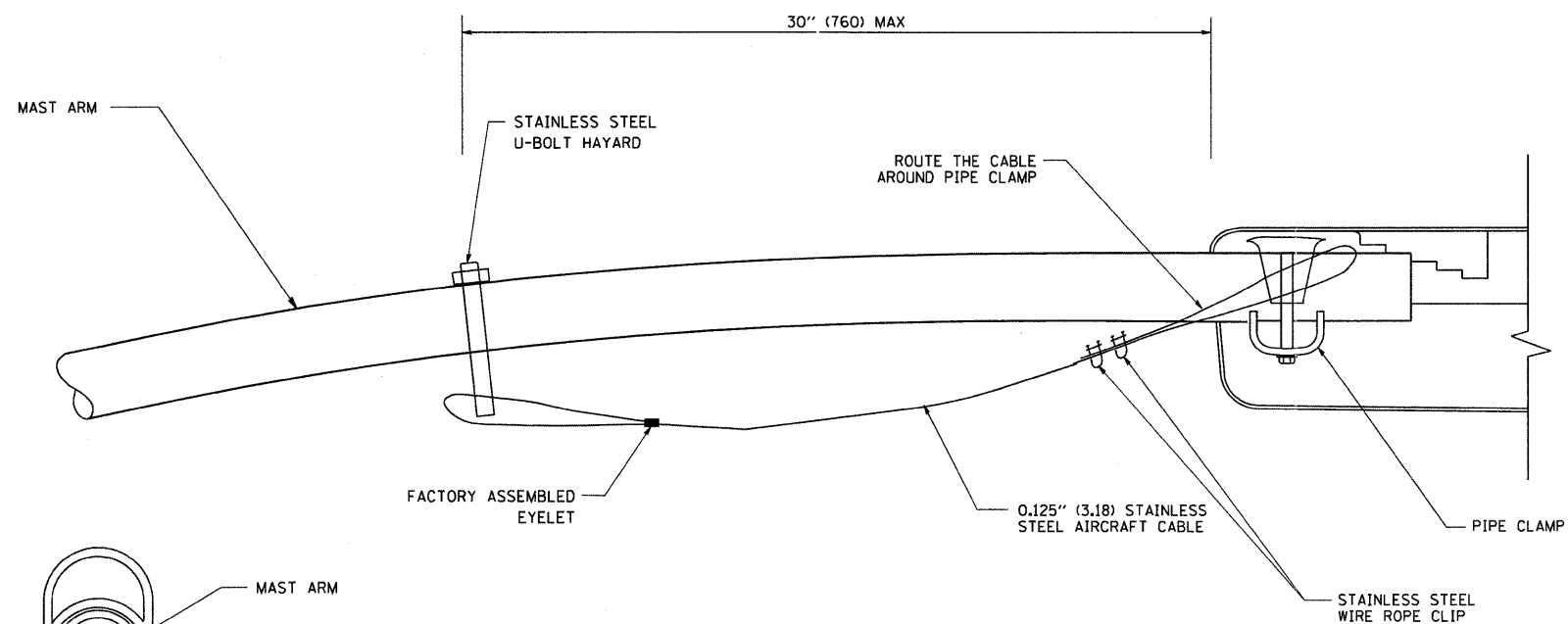
NOTES:

1. THE CONTRACTOR SHALL RE-USE THE EXISTING UNIT DUCT/CONDUCTORS FROM LIGHT POLES LS-D2 TO LS-D3 AND LS-A4 TO LS-A3. THE CONTRACTOR SHALL DISCONNECT THE EXISTING CONDUCTORS FROM LIGHT POLES LS-A3 AND LS-D3 AND CONNECT THEM TO THE NEW COMBINATION LIGHT POLE LS-B4 AND LS-C3 RESPECTIVELY AND AS SHOWN ON THE DRAWINGS. ALL MATERIALS (IE. FUSEHOLDERS, FUSES, POLE WIRE, TAPE ECT.) AND LABOR INVOLVED WITH THIS WORK SHALL BE INCLUDED UNDER THE UNIT DUCT PAY ITEM.
2. THE CONTRACTOR SHALL ENSURE CONTINUITY OF THE EQUIPMENT GROUND CONDUCTOR FROM THE CONTROLLER TO THE LAST LIGHT POLE OF EACH IMPACTED LIGHTING CIRCUIT.
3. THE PROPOSED WORK SHALL BE PROPERLY STAGED SO THAT AT NO TIME SHALL THE ROADWAY BE LEFT UNLIT.
4. REFER TO TRAFFIC SIGNAL PLANS FOR EXACT LOCATIONS OF COMBINATION TRAFFIC SIGNAL/LIGHT POLES AT THE INTERSECTION.

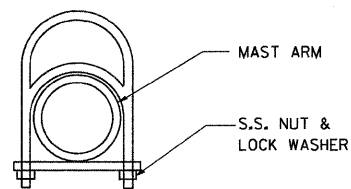
ALL PROPOSED CONDUITS SHOWN ON THE PLANS AS TRENCHED OR PUSHED SHALL BE INCLUDED UNDER THE "UNDERGROUND CONDUIT" PAY ITEM FOR THE SIZES SHOWN.



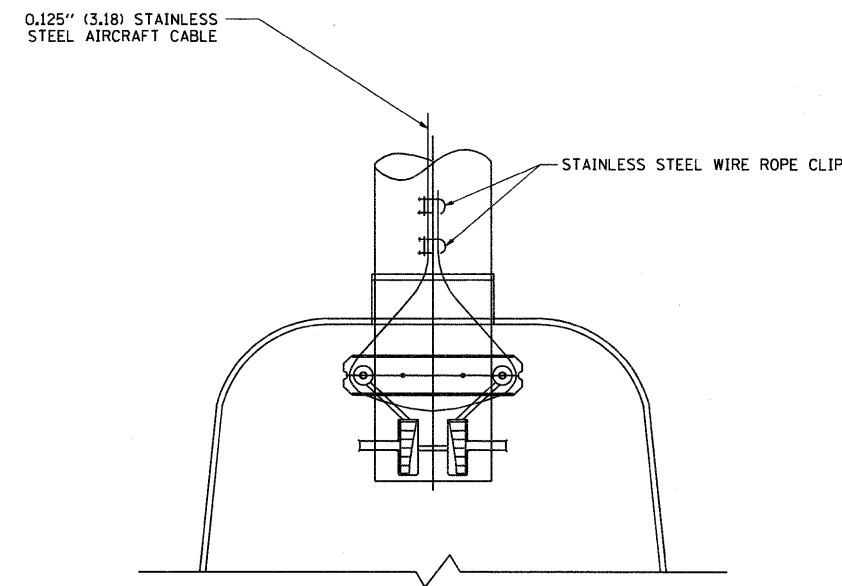
SIDE VIEW (TRUSS ARM)
N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.



STAINLESS STEEL
U-BOLT HAYARD

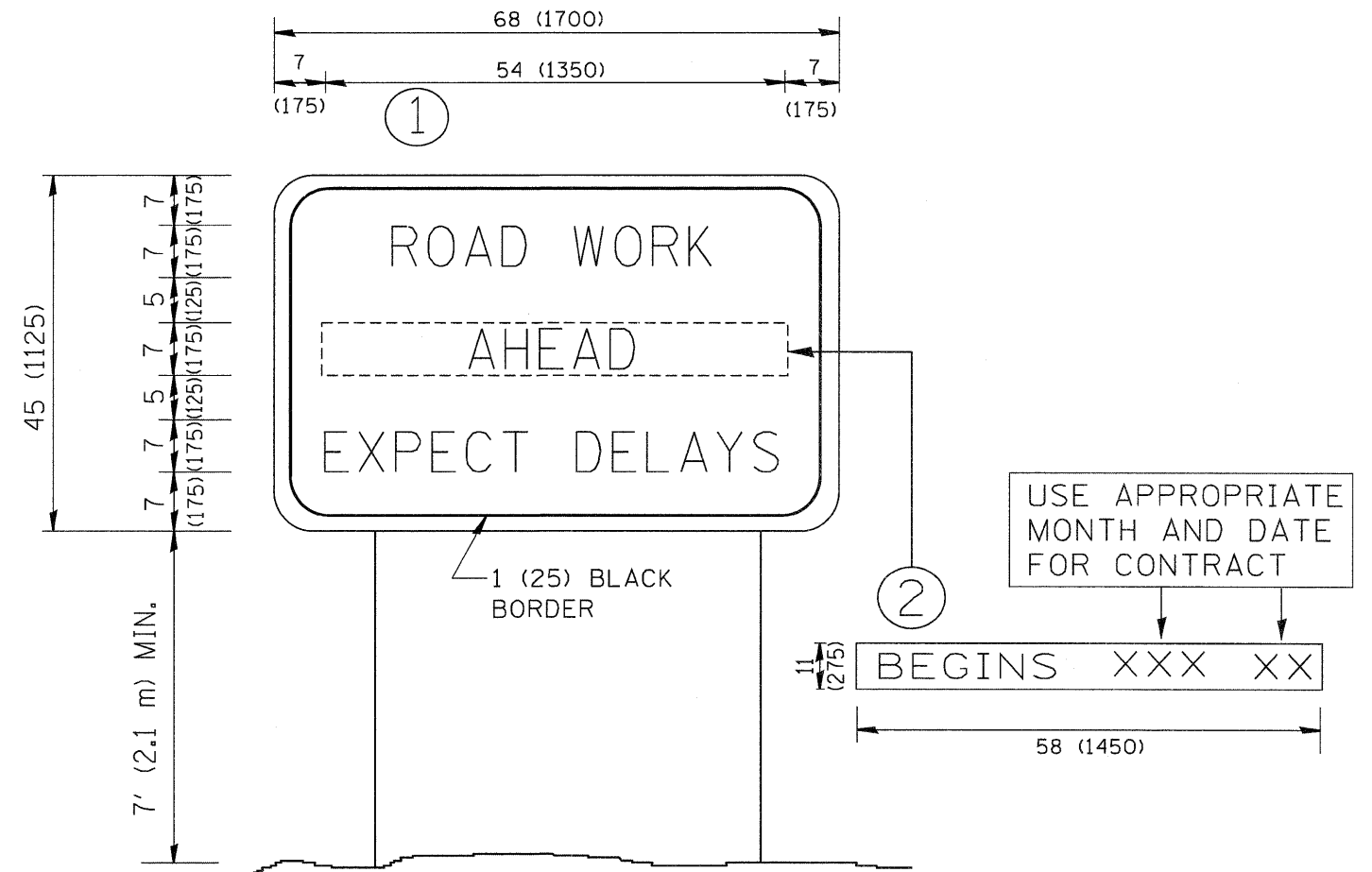


BOTTOM VIEW
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

FILE NAME = W:\diststd\22x34\be701.dgn	USER NAME = gegltonobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE SAFETY CABLE ASSEMBLY			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50,000' / IN.	DRAWN -	REVISED -					337	20-N-4	LAKE	18	17
PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				
								BE-701 CONTRACT NO.				



NOTES:

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

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

FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = geglienobt	DESIGNED - DRAWN -	REVISED - R. MIRS 09-15-97
		CHECKED -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	DATE -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008		REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD
INFORMATION SIGN

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 337	SECTION 20-N-4	COUNTY LAKE	TOTAL SHEETS 18	SHEET NO. 18A
TC-22		CONTRACT NO.		
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				