

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 846A: IL RTE 53 (CHICAGO ST)
AT LARAWAY RD
SECTION 2-TS (12)
PROJECT: HSIP-0846(025)
TRAFFIC SIGNAL MODERNIZATION
WILL COUNTY

C-91-117-13

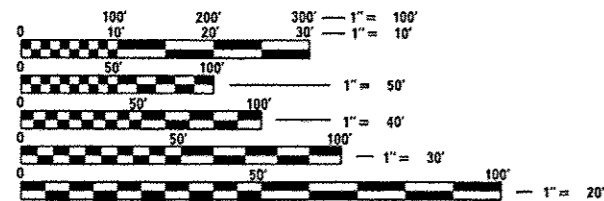
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846 A	2-TS (12)	WILL	15	1
		ILLINOIS	CONTRACT NO. 60V95	
*1542-17				

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATIONS:

IL RTE 38 - OTHER PRINCIPAL ARTERIAL
2011 ADT: 15,400
POSTED SPEED LIMIT: 50 MPH

THE PROJECT IS LOCATED IN
THE CITY OF JOLIET AND
UNINCORPORATED WILL COUNTY.

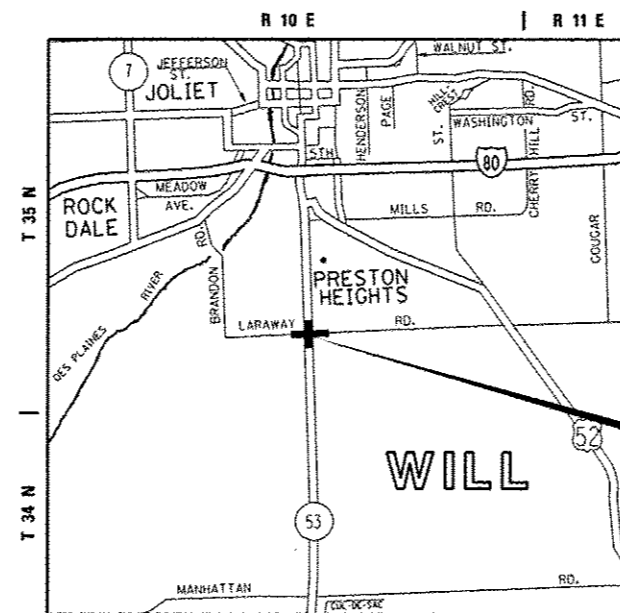


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

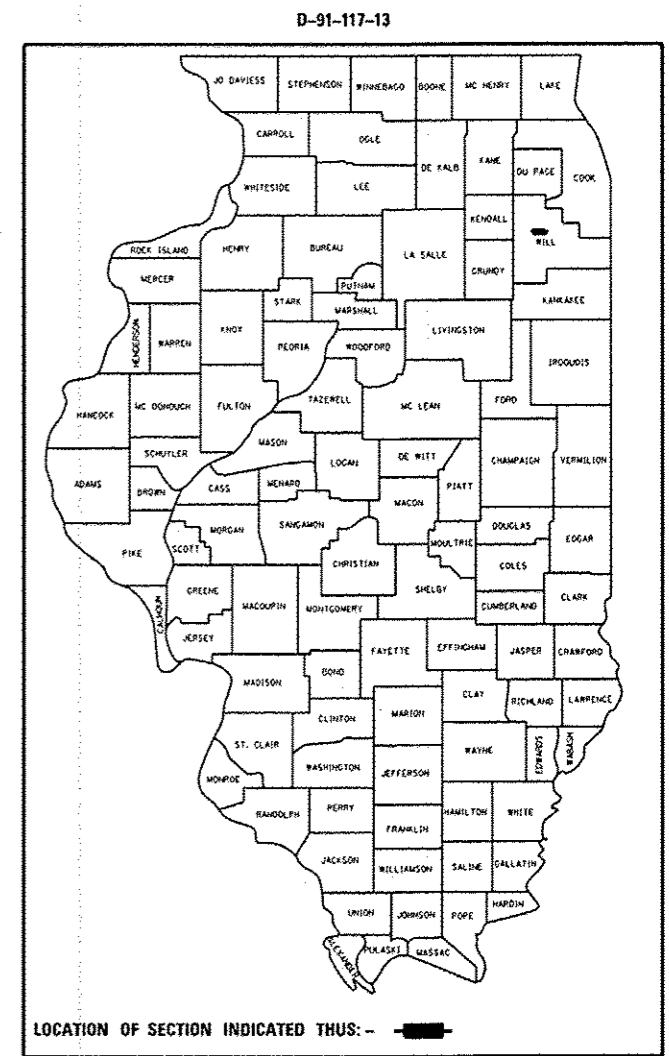
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: PETER BLUMBERG / LUKASZ POCIECHA
PROJECT MANAGER: SUDUD MAHMOUD (847) 708-4420

CONTRACT NO. 60V95



IL RTE 53 AT
LARAWAY RD



LOCATION OF SECTION INDICATED THIS: - [black rectangle] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 14 2012
John Fickman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Feb 1 2013
John D. Baranzelli P.E./bc
acting ENGINEER OF DESIGN AND ENVIRONMENT

Feb 1 2013
Ones Osman P.E./bc
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
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13	TRAFFIC SIGNAL MODERNIZATION PLAN
14	SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
14A, 14B	DISTRICT STANDARDS
15	ARTERIAL ROAD INFORMATION SIGN (TC-22)

HIGHWAY STANDARDS

STD. NO.	TITLE
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-03	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701421-05	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS >= 45 MPH TO 55 MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-08	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-08	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-02	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-03	SIGN PANEL ERECTION DETAILS
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-09	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

GENERAL NOTES

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

THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 72 HOURS IN ADVANCE OF BEGINNING WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARMS LENGTHS.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811. IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).

IF THIS CONTRACT REQUIRES THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK. IF THIS CONTRACT DOES NOT REQUIRE THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR MAY REQUEST ONE FREE LOCATE FOR EXISTING IDOT ELECTRICAL FACILITIES FROM THE DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR PRIOR TO THE START OF ANY WORK. ADDITIONAL REQUESTS MAY BE AT THE EXPENSE OF THE CONTRACTOR. THE LOCATION OF UNDERGROUND TRAFFIC FACILITIES DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO REPAIR ANY FACILITIES DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND IDOT.

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, 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 * blumbergpa	DESIGNED - PB / LP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS & GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pwwork\blumbergpa\00223734\0	11713-SHT-TS.dgn	DRAWN - PB / LP	REVISED -			846 A	2-TS (12)	WILL	15	2	
#MODELNAME*	PLOT SCALE * 100.0000 / in.	CHECKED - SM	REVISED -			CONTRACT NO. 60V95					
	PLOT DATE * 12/4/2012	DATE - 11/19/12	REVISED -			SCALE: NONE	SHEET	OF	SHEETS	STA.	TO STA.

Rev.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				IL 53 AT LARAWAY RD	100% CITY OF JOLIET
				90% FED 10% STATE	EVP
				TRAFFIC SIGNALS 0021 URBAN	0021 URBAN
					OTPOL
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	1	
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	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	
* 72000100	SIGN PANEL - TYPE 1	SO FT	30	30	
* 72400310	REMOVE SIGN PANEL - TYPE 1	SO FT	7.5	7.5	
* 72400710	RELOCATE SIGN PANEL - TYPE 1	SO FT	24	24	
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	17	17	
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	95	95	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	413		413
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	567	567	

*Specialty Items Rev.

FILE NAME * c:\pwork\pwork\blumberga\0323734	USER NAME * blumberga	DESIGNED - PB / LP	REVISIONS - REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES (SHEET 1 OF 3)				F.A.P. RTE. 846 A	SECTION 2-TS (12)	COUNTY WILL	TOTAL SHEETS 15	SHEET NO. 3
PLOT SCALE * 100.0000 1/ in.	CHECKED - SM	DATE - 11/30/12	REVISIONS - REVISIONS -		SCALE: NONE	SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 60V95		
PLOT DATE * 12/4/2012					ILLINOIS FED. AID PROJECT								

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				IL 53 AT LARAWAY RD	100% CITY OF JOLIET
				90% FED 10% STATE	EVP
				TRAFFIC SIGNALS	0021
				0021	0021
				URBAN	URBAN
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	213	213	
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1	1	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1	1	
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1	1	
87700290	STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1	1	
87700310	STEEL MAST ARM ASSEMBLY AND POLE, 54 FT.	EACH	1	1	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	8	8	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	41	41	
87900200	DRILL EXISTING HANDHOLE	EACH	5	5	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8	8	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	2	
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	2	
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2	2	
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10	10	
88200510	TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	10	10	

FILE NAME *	USER NAME * blumbergpo	DESIGNED - PB / LP	REVISED -
ct:\pwork\pwork\blumbergpo\08323734\011713-SHT-TS.dgn		DRAWN - PB / LP	REVISED -
PLOT SCALE * 1/8"=1'-0"		CHECKED - SM	REVISED -
PLOT DATE * 12/4/2012		DATE - 11/30/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
(SHEET 2 OF 3)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
B46 A	2-TS (12)	WILL	15	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60Y95	

Rev.

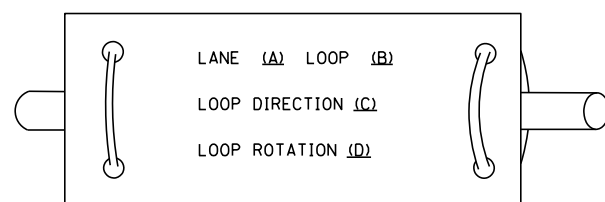
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				IL 53 AT LARAWAY RD	100% CITY OF JOLIET
				90% FED 10% STATE	EVP
				TRAFFIC SIGNALS	0021
				URBAN	URBAN
88700200	LIGHT DETECTOR	EACH	2		2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1
89502200	MODIFY EXISTING CONTROLLER	EACH	1	1	
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1	1	
89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	902	675	227
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	5	5	
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	413		413
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1	1	
Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	103	103	
XX006926	ILLUMINATED STREET NAME SIGN	EACH	4		4

Rev.

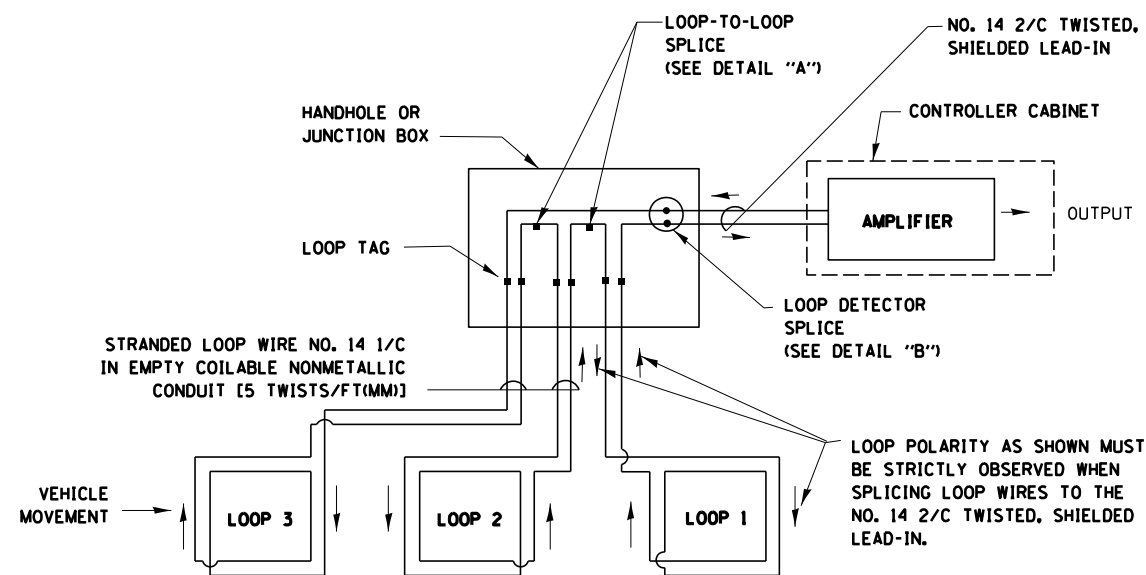
LOOP DETECTOR NOTES

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

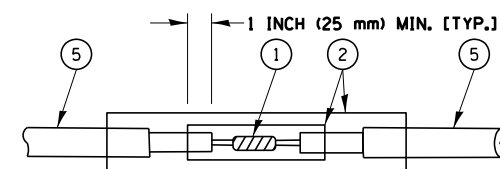


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

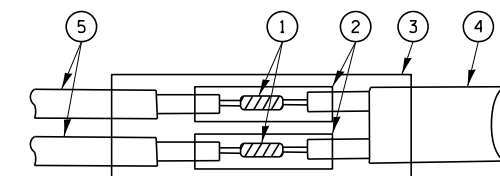


DETECTOR LOOP WIRING SCHEMATIC

- 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.

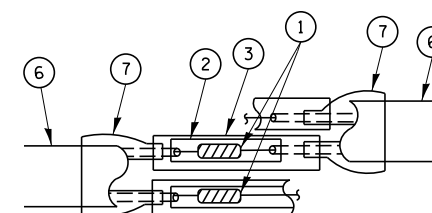


DETAIL "A"
LOOP-TO-LOOP SPLICE

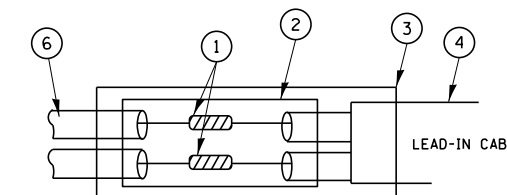


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

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 = blumbergpa	DESIGNED - DAD	REVISED - DAG 11-1-12
e:\pwwork\pwwork\blumbergpa\d0323734\11713-SHT-TS.dgn		DRAWN - BCK	REVISED -
PLOT SCALE = 100.0000' / 1in.		CHECKED - DAD	REVISED -
PLOT DATE = 12/4/2012		DATE - 10-28-09	REVISED -

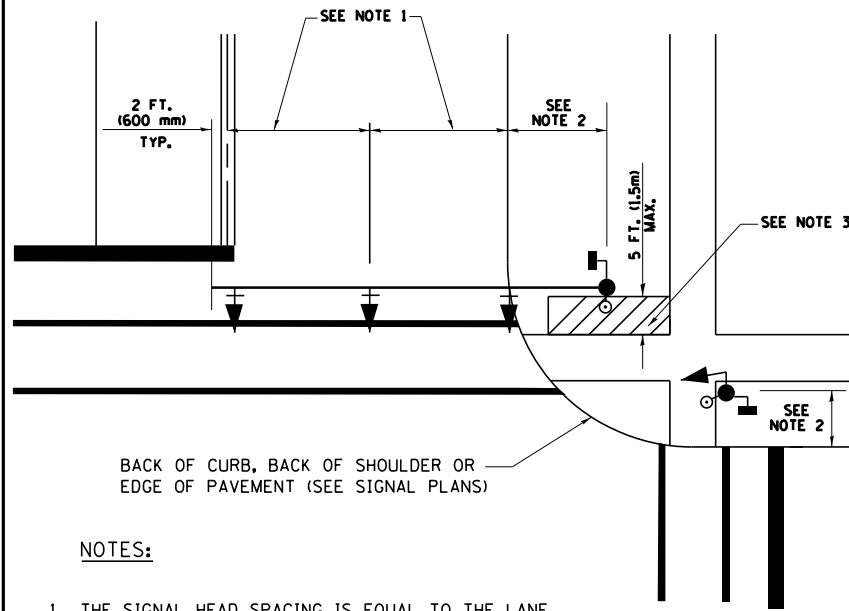
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE	
STANDARD TRAFFIC SIGNAL DESIGN DETAILS	
SCALE: NONE	SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A.P. RTE. 846 A	SECTION 2-TS (12)	COUNTY WILL	TOTAL SHEETS 15	SHEET NO. 6
TS-05			CONTRACT NO. 60V95	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

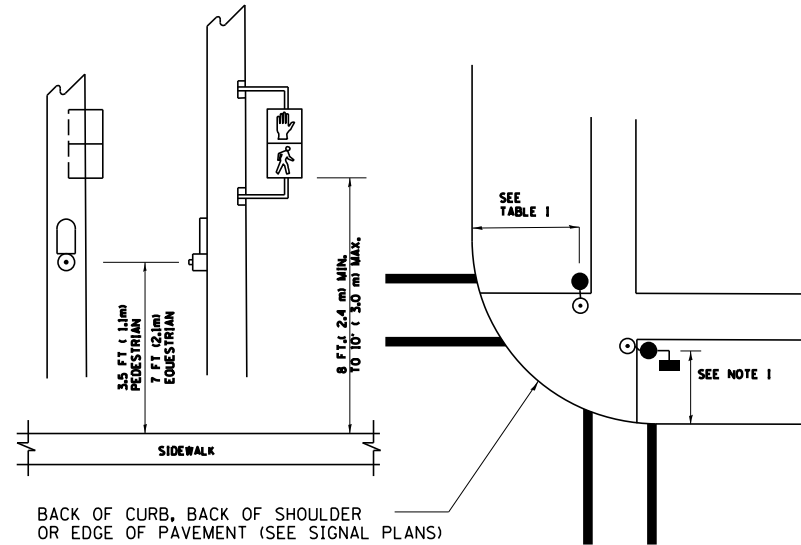
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

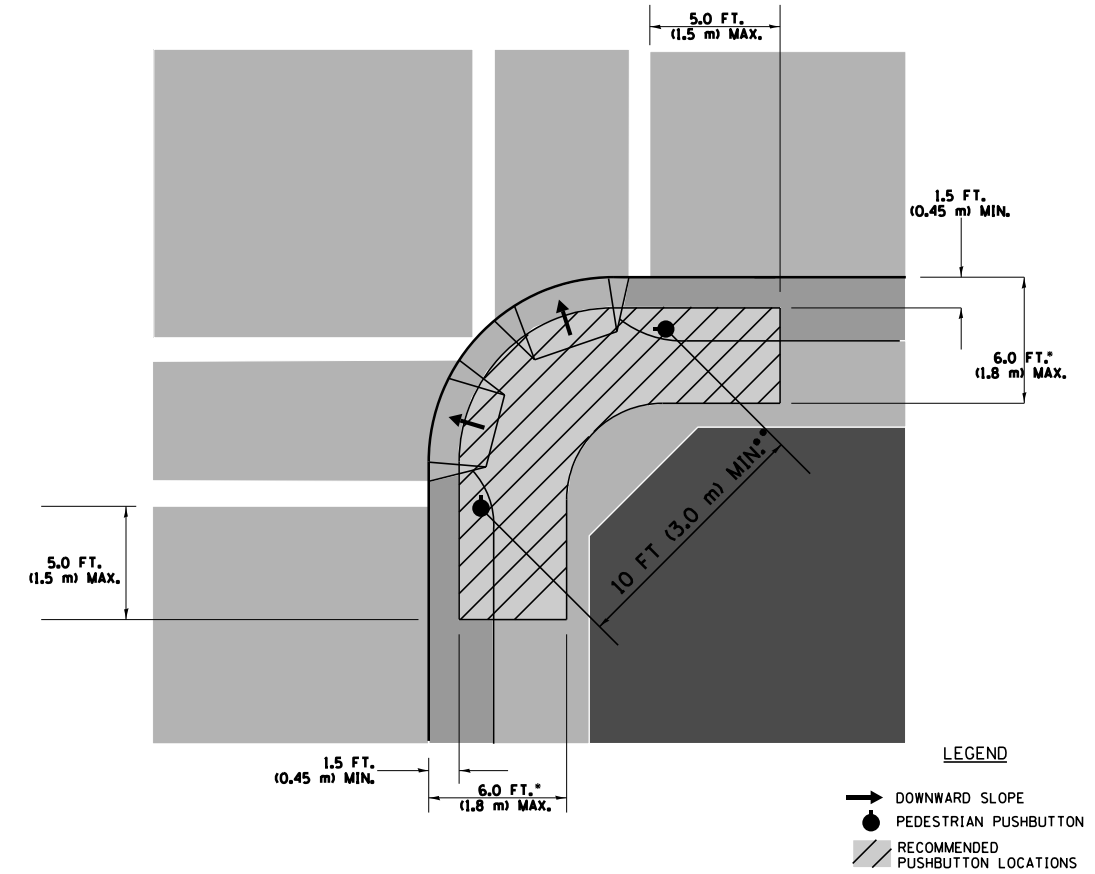
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



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

NOTES:

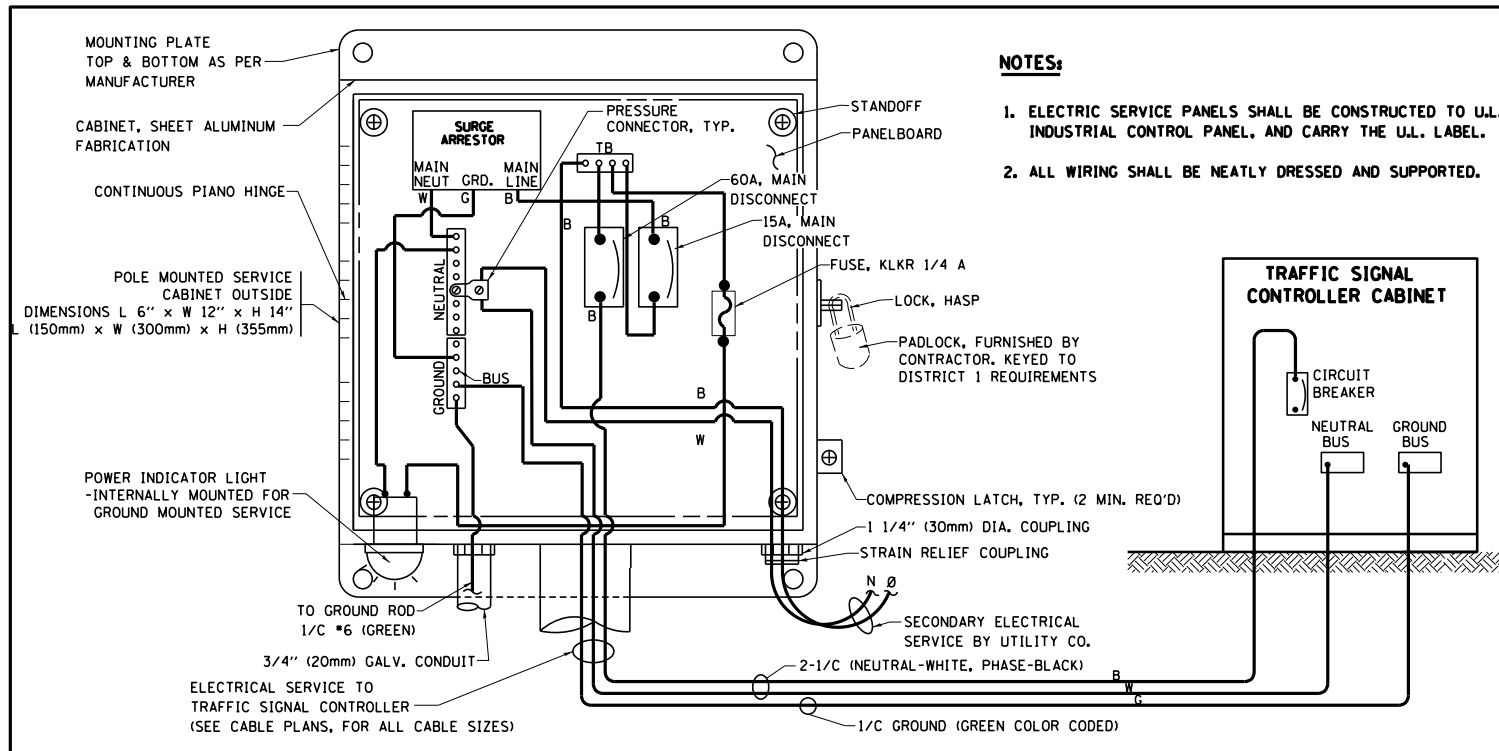
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

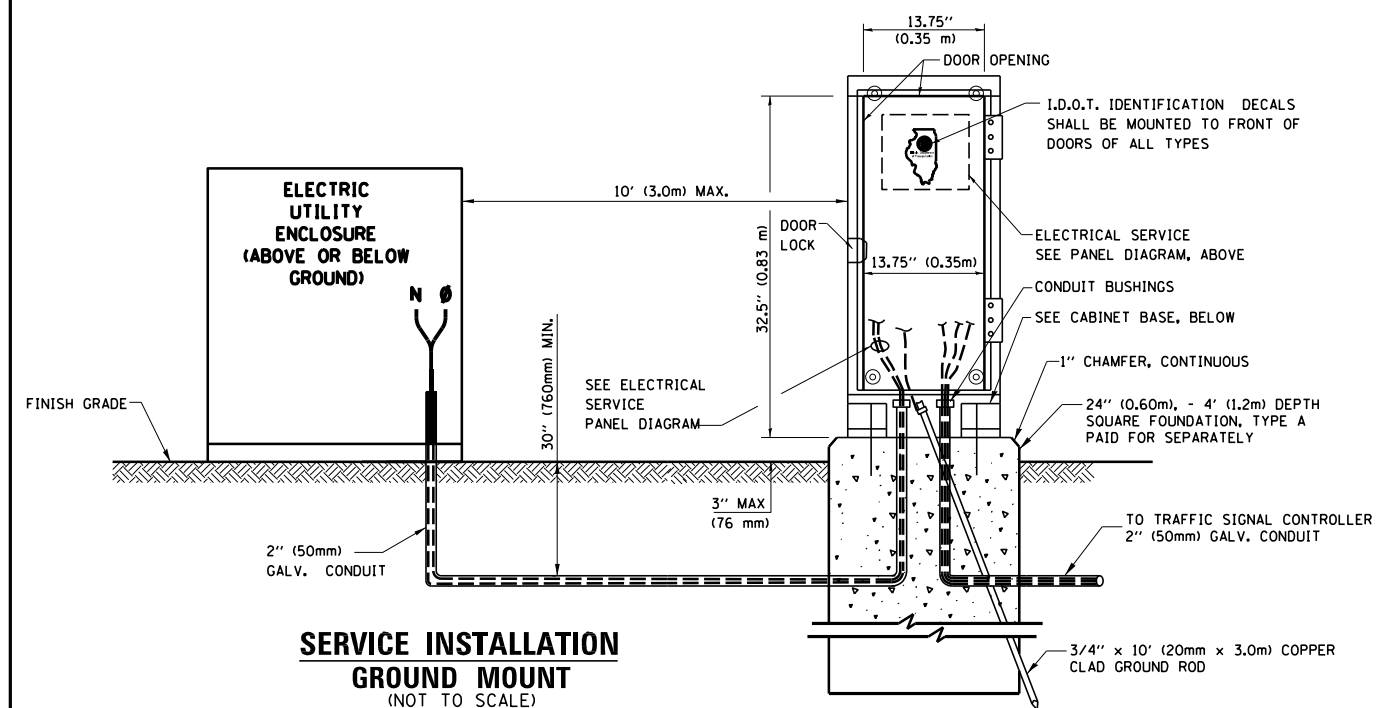
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

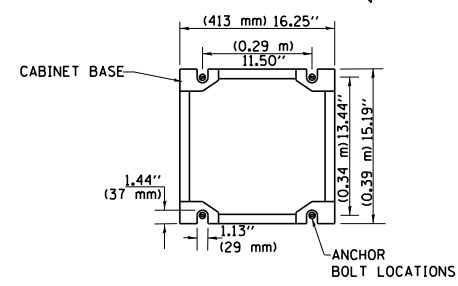


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)

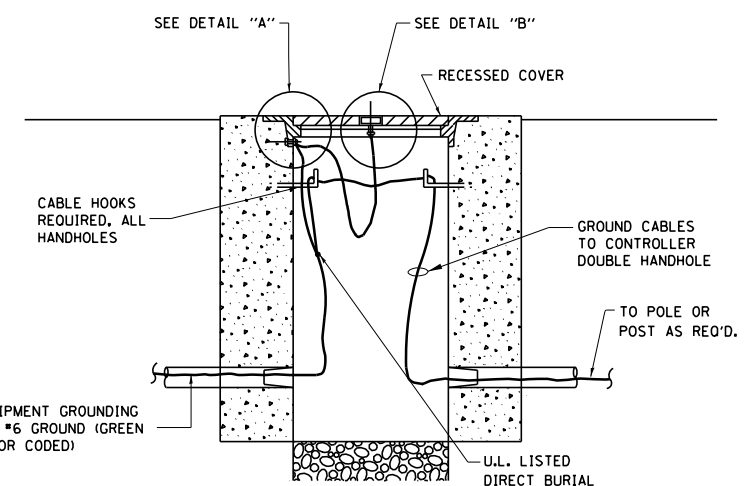
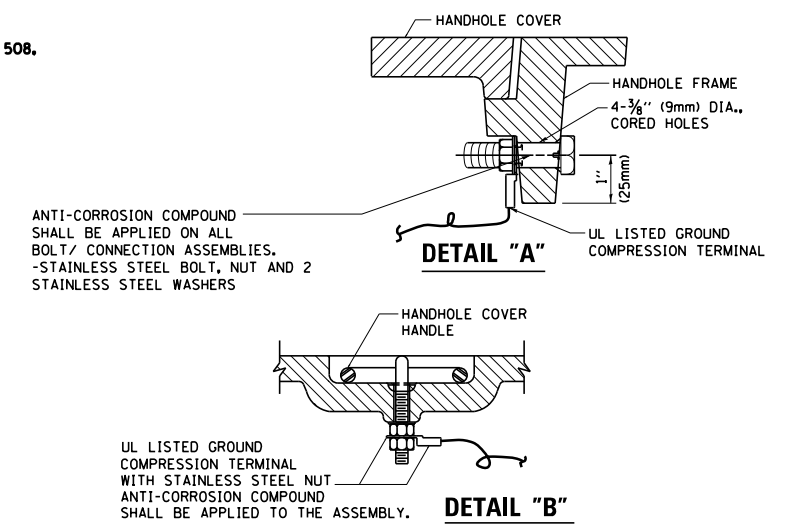
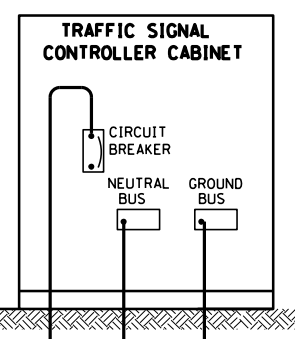


SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

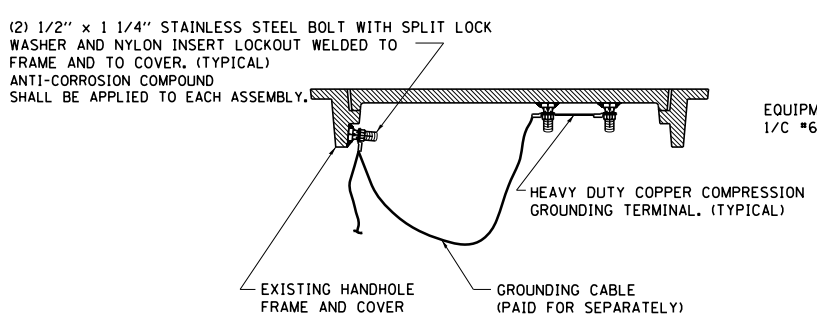
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



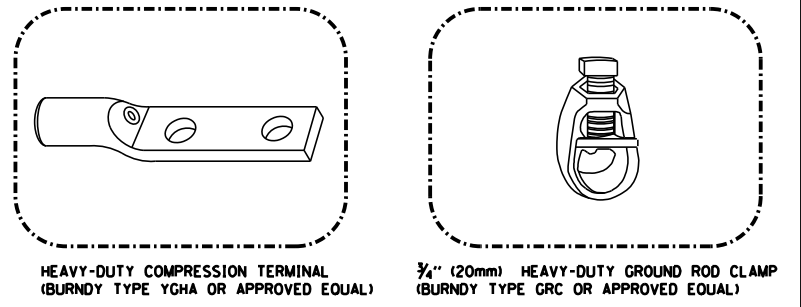
- NOTES:**
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
 2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



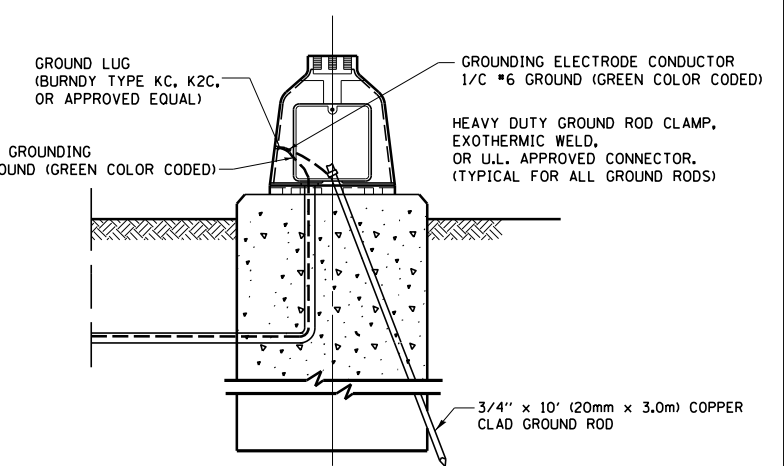
HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)



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



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

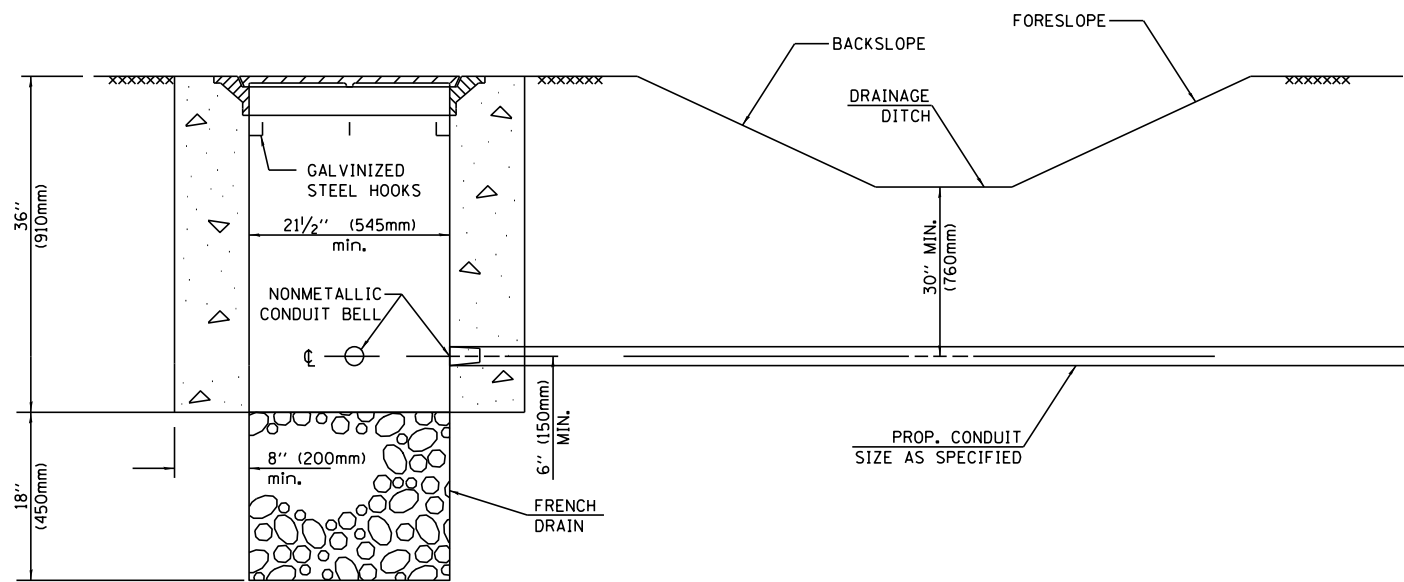


MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)

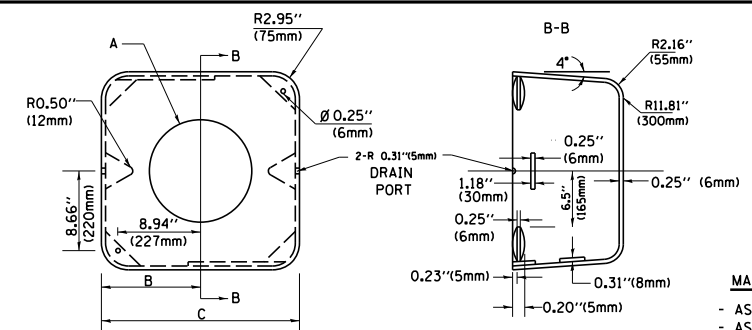
NOTES:
GROUNDING SYSTEM

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.

FILE NAME =	USER NAME = blumbergpa	DESIGNED - DAD	REVISED - DAG 11-1-12	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE		F.A.P. RTE. 846 A	SECTION 2-TS (12)	COUNTY WILL	TOTAL SHEETS 15	SHEET NO. 8
DESIGNED - DAD	DRAWN - BCK	CHECKED - DAD	REVISED -		STANDARD TRAFFIC SIGNAL DESIGN DETAILS		TS-05		CONTRACT NO. 60V95		
PLOT SCALE = 100.0000' / 1"	CHECKED - DAD	DATE - 10-28-09	REVISED -		SCALE: NONE	SHEET NO. 3 OF 6 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
PLOT DATE = 12/4/2012	DATE - 10-28-09	REVISED -	REVISED -								



HANDHOLE WITH MINIMUM CONDUIT DEPTH



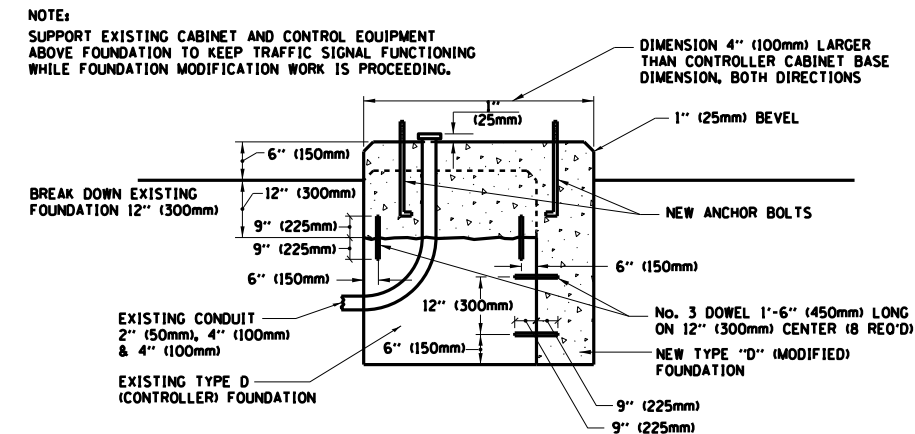
MATERIAL:
 - ASTM A36 STEEL
 - ASTM A-123 HOT DIPPED GALVANIZED

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

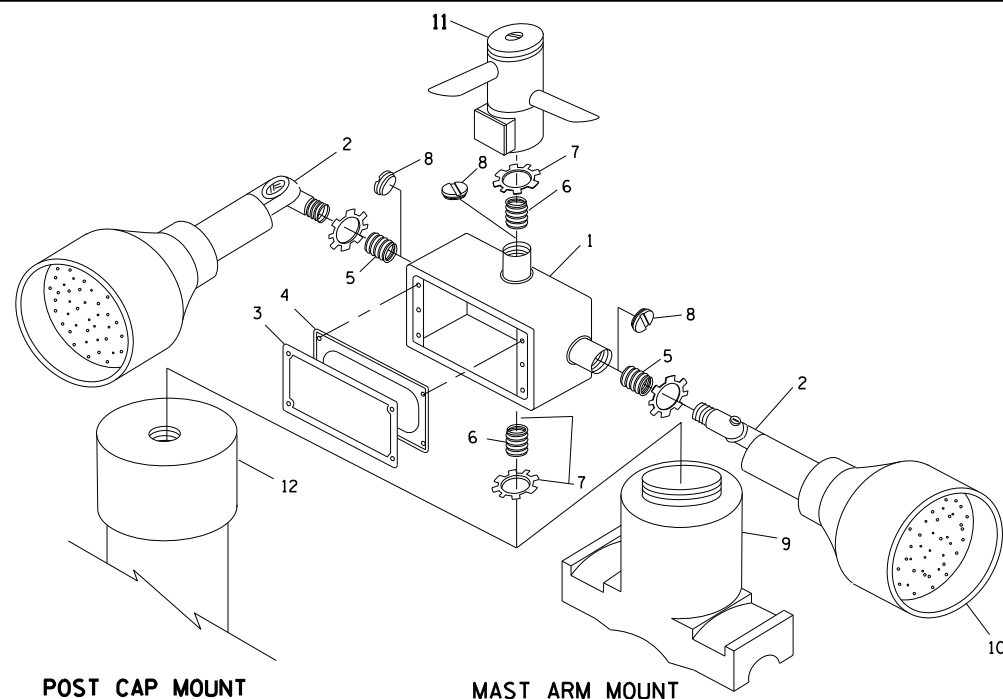
SHROUD

NOTES:

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



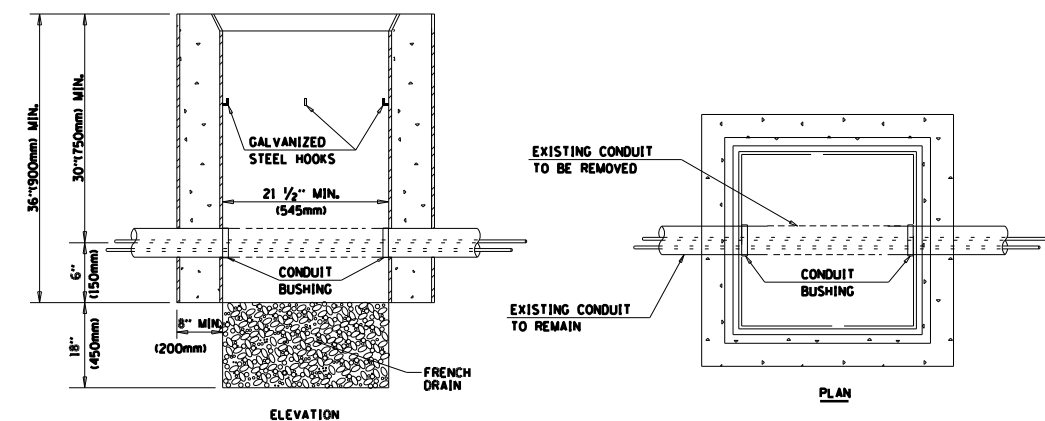
MODIFY EXISTING TYPE "D" FOUNDATION



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

NOTES:

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



NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

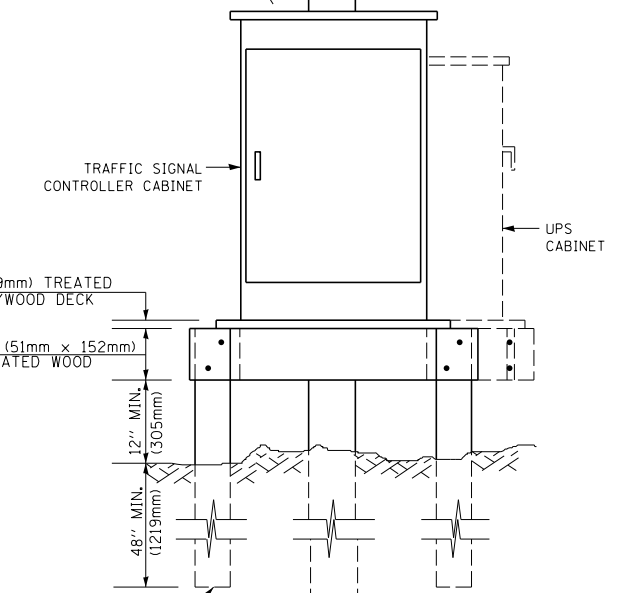
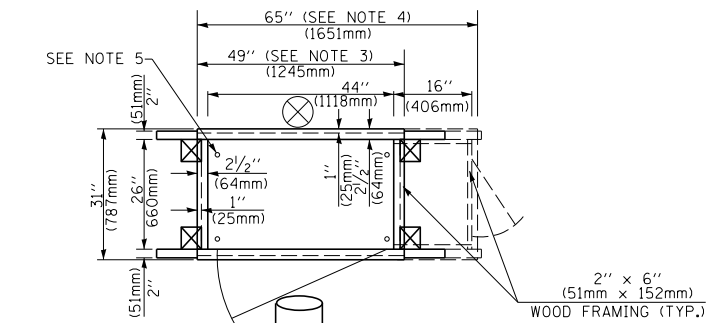
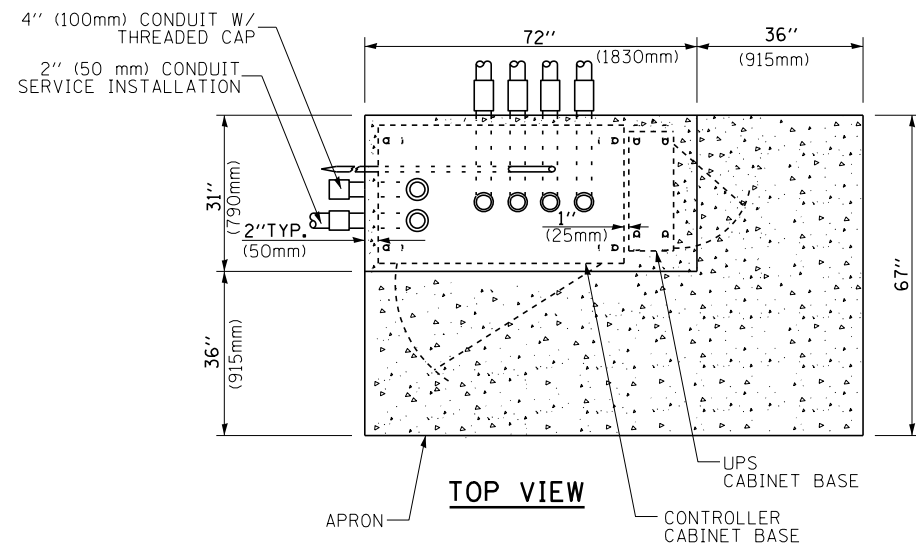
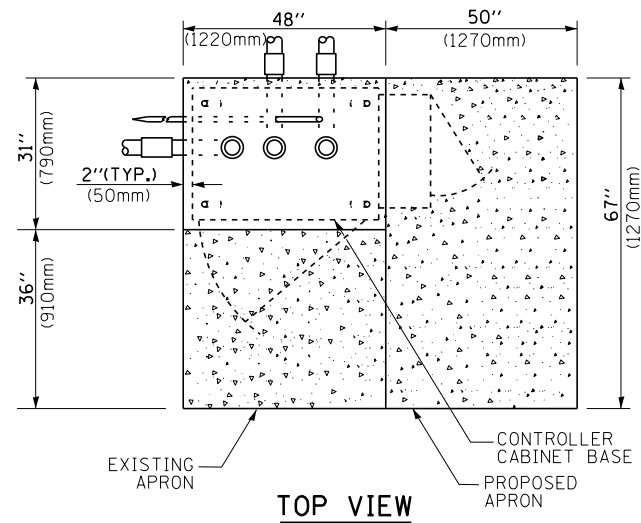
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	PLOT SCALE = 100.0000' / 1"	CHECKED - DAD	REVISED -
	PLOT DATE = 12/4/2012	DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

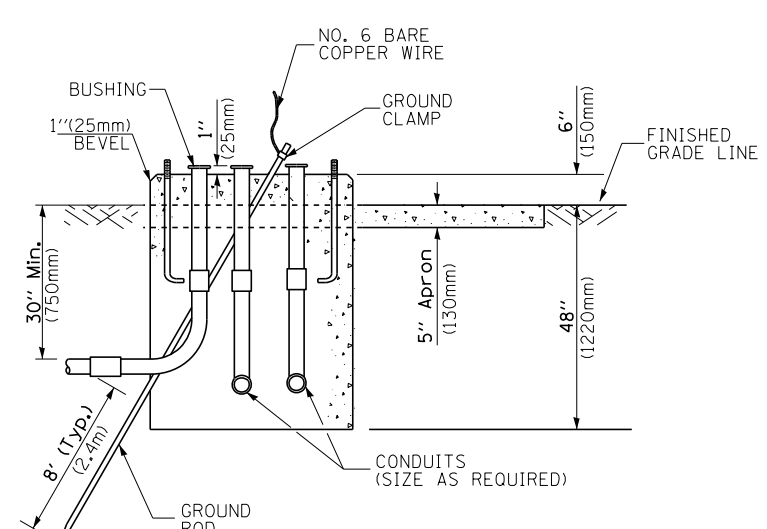
SCALE: NONE SHEET NO. 4 OF 6 SHEETS STA. TO STA.

F.A.P. RTE. 846 A	SECTION 2-TS (12)	COUNTY WILL	TOTAL SHEETS 15	SHEET NO. 9
TS-05		CONTRACT NO. 60V95		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

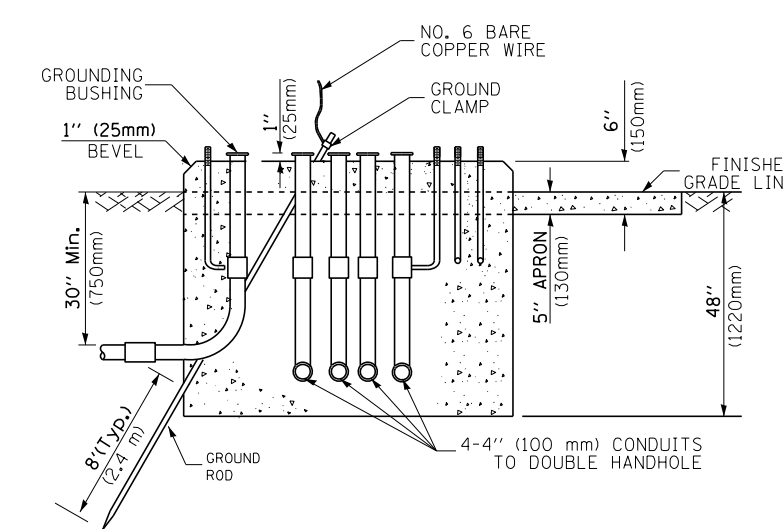


- NOTES:**
1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET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

TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM



TYPE D FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET



TYPE C FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

Mast Arm Length	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)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m) and up to 85' (25.9 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

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			
UNINTERRUPTABLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
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)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT							
DETECTOR LOOP, TYPE I				RADIO REPEATER							
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
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		

CONSTRUCTION NOTES

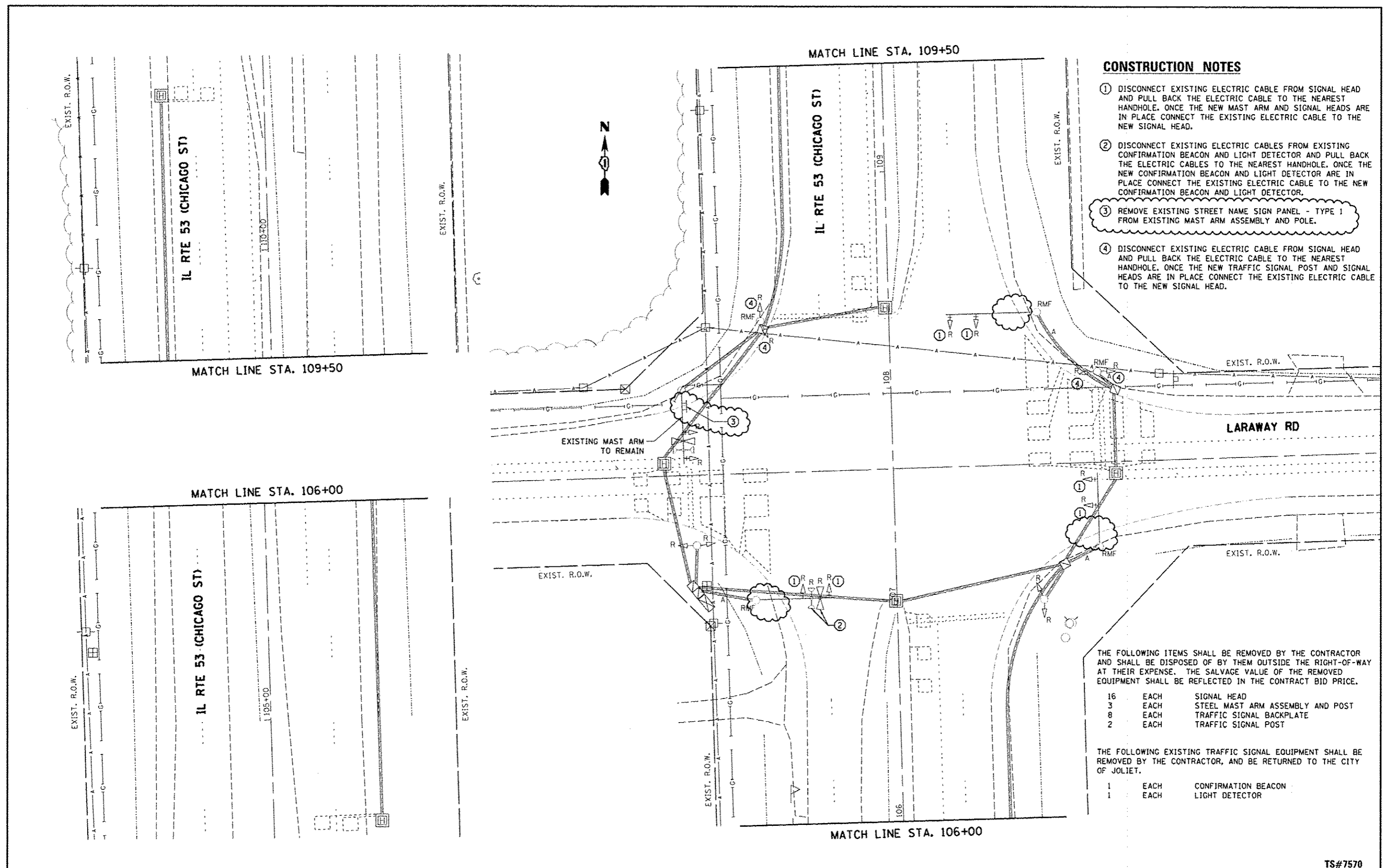
- ① DISCONNECT EXISTING ELECTRIC CABLE FROM SIGNAL HEAD AND PULL BACK THE ELECTRIC CABLE TO THE NEAREST HANDHOLE. ONCE THE NEW MAST ARM AND SIGNAL HEADS ARE IN PLACE CONNECT THE EXISTING ELECTRIC CABLE TO THE NEW SIGNAL HEAD.
- ② DISCONNECT EXISTING ELECTRIC CABLES FROM EXISTING CONFIRMATION BEACON AND LIGHT DETECTOR AND PULL BACK THE ELECTRIC CABLES TO THE NEAREST HANDHOLE. ONCE THE NEW CONFIRMATION BEACON AND LIGHT DETECTOR ARE IN PLACE CONNECT THE EXISTING ELECTRIC CABLE TO THE NEW CONFIRMATION BEACON AND LIGHT DETECTOR.
- ③ REMOVE EXISTING STREET NAME SIGN PANEL - TYPE 1 FROM EXISTING MAST ARM ASSEMBLY AND POLE.
- ④ DISCONNECT EXISTING ELECTRIC CABLE FROM SIGNAL HEAD AND PULL BACK THE ELECTRIC CABLE TO THE NEAREST HANDHOLE. ONCE THE NEW TRAFFIC SIGNAL POST AND SIGNAL HEADS ARE IN PLACE CONNECT THE EXISTING ELECTRIC CABLE TO THE NEW SIGNAL HEAD.

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

16	EACH	SIGNAL HEAD
3	EACH	STEEL MAST ARM ASSEMBLY AND POST
8	EACH	TRAFFIC SIGNAL BACKPLATE
2	EACH	TRAFFIC SIGNAL POST

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, AND BE RETURNED TO THE CITY OF JOLIET.

1	EACH	CONFIRMATION BEACON
1	EACH	LIGHT DETECTOR



TS#7570

FILE NAME *	USER NAME *	DESIGNED -	REVISED -
g:\pwork\p1dot\poc\tscha\108323734\101	poc\tscha	PB / LP	IRV 02/01/2013
		DRAWN -	REVISED -
		PB / LP	
		CHECKED -	REVISED -
		SM	
		DATE -	REVISED -
		11/30/12	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN
IL RTE 53 (CHICAGO ST) AT LARAWAY RD**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846 A	2-TS (12)	WILL	15	12
				CONTRACT NO. 60V95
ILLINOIS FED. AID PROJECT				

EXIST. R.O.W.

IL RTE 53 (CHICAGO ST)

MATCH LINE STA. 109+50

MATCH LINE STA. 106+00

IL RTE 53 (CHICAGO ST)

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

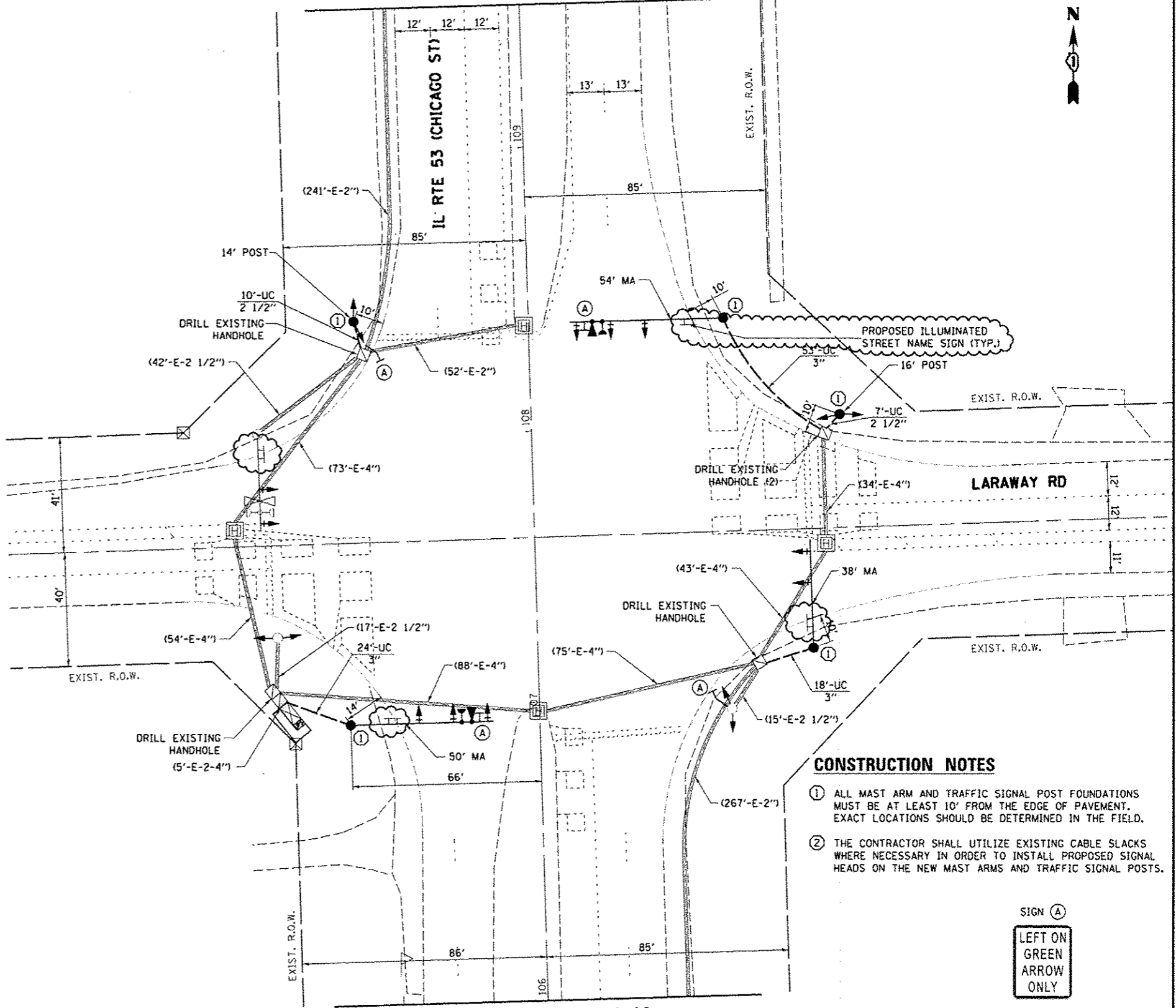
MATCH LINE STA. 109+50

IL RTE 53 (CHICAGO ST)

LARAWAY RD

EXIST. R.O.W.

MATCH LINE STA. 106+00



CONSTRUCTION NOTES

- ① ALL MAST ARM AND TRAFFIC SIGNAL POST FOUNDATIONS MUST BE AT LEAST 10' FROM THE EDGE OF PAVEMENT. EXACT LOCATIONS SHOULD BE DETERMINED IN THE FIELD.
- ② THE CONTRACTOR SHALL UTILIZE EXISTING CABLE SLACKS WHERE NECESSARY IN ORDER TO INSTALL PROPOSED SIGNAL HEADS ON THE NEW MAST ARMS AND TRAFFIC SIGNAL POSTS.

SIGN (A)
 LEFT ON
 GREEN
 ARROW
 ONLY

R10-5
 30"x36"
 (4 EACH)

TS#7570

FILE NAME *	USER NAME * pccrecha	DESIGNED - PB / LP	REVISED - IRV 02/01/2013
c:\pwwork\pccrecha\10832734\01	713-SHT-TS.dgn	DRAWN - PB / LP	REVISED -
MODEL NAME #	PLOT SCALE = 40.0000' / 1"	CHECKED - SM	REVISED -
	PLOT DATE = 2/5/2013	DATE - 11/30/12	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

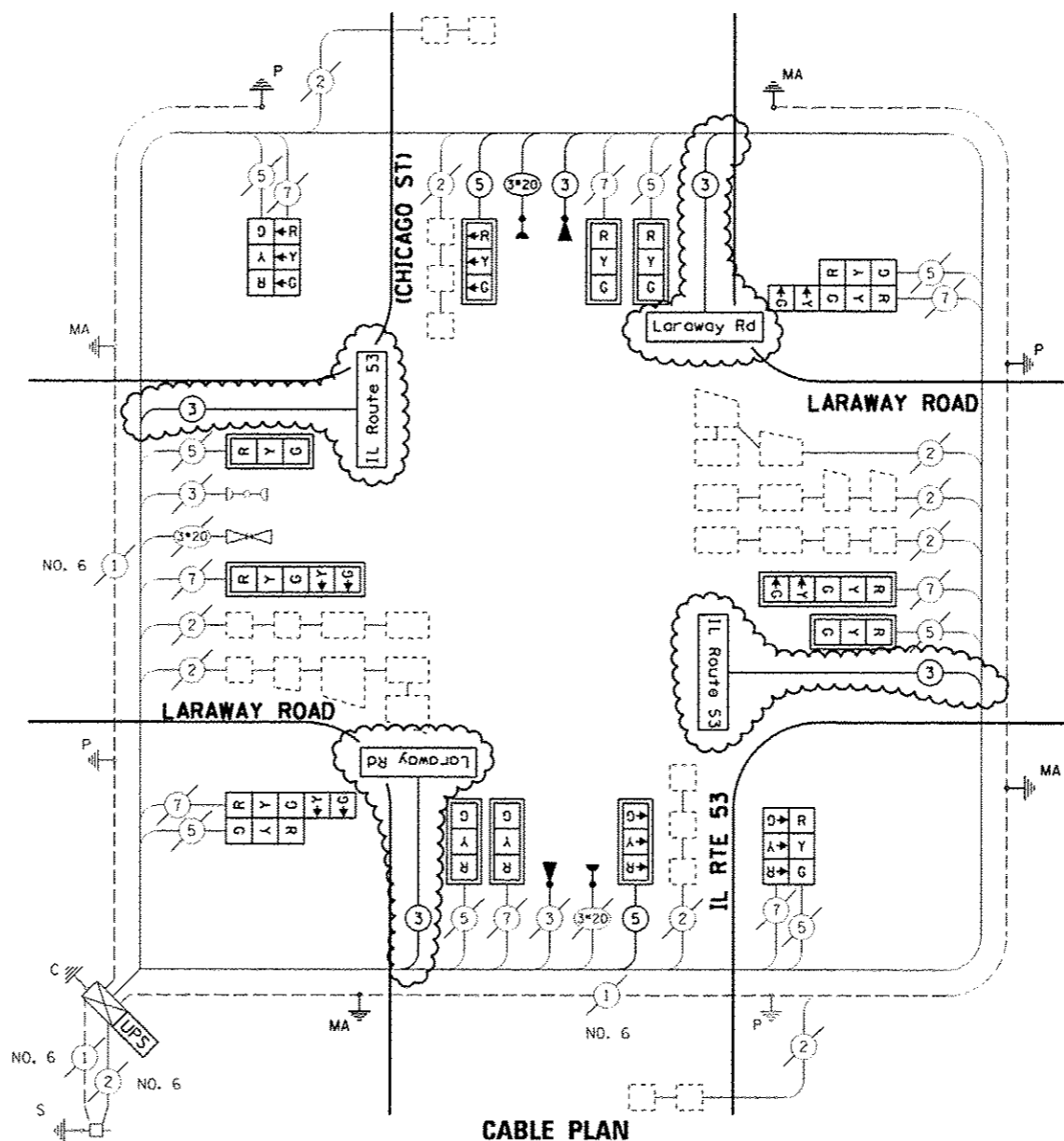
TRAFFIC SIGNAL MODERNIZATION PLAN			
IL RTE 53 (CHICAGO ST) AT LARAWAY RD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846 A	2-TS (12)	WILL	15	13
				CONTRACT NO. 60V95
ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES

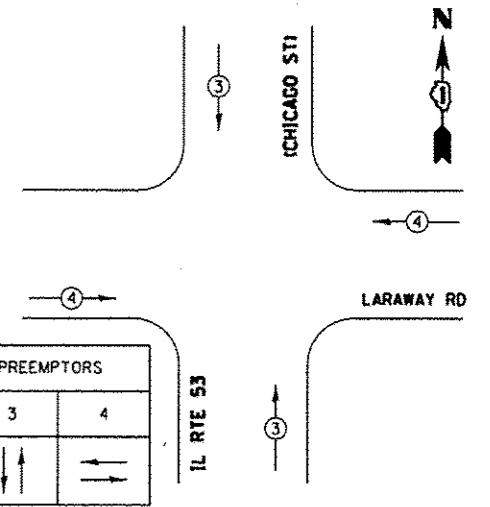
ITEM DESCRIPTION	UNITS	TOTAL QTY.
SIGN PANEL - TYPE 1	50 FT	30
REMOVE SIGN PANEL - TYPE 1	50 FT	7.5
RELOCATE SIGN PANEL - TYPE 1	50 FT	24
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2-1/2" DIA.	FOOT	17
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	95
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
* ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	413
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	567
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	213
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 54 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	41
DRILL EXISTING HANDHOLE	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE	EACH	10
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
MODIFY EXISTING CONTROLLER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	902
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
* EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	413
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1
TEMPORARY INFORMATION SIGNING	50 FT	103
* ILLUMINATED STREET NAME SIGN	EACH	4

* 100% COST TO THE CITY OF JOLIET



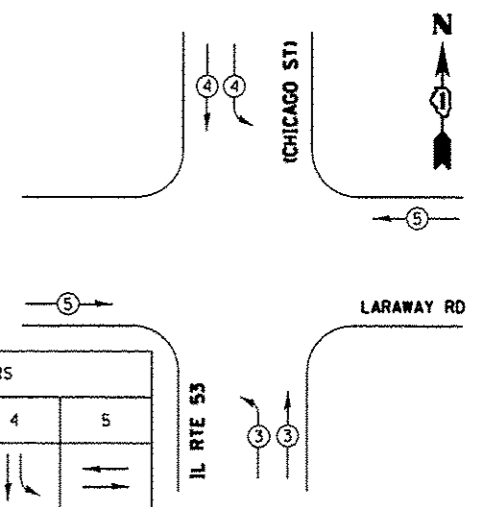
THE PROPOSED EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE "GTT OPTICOM" TO MATCH THE EXISTING SYSTEM AND MUNICIPAL REQUIREMENTS.

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

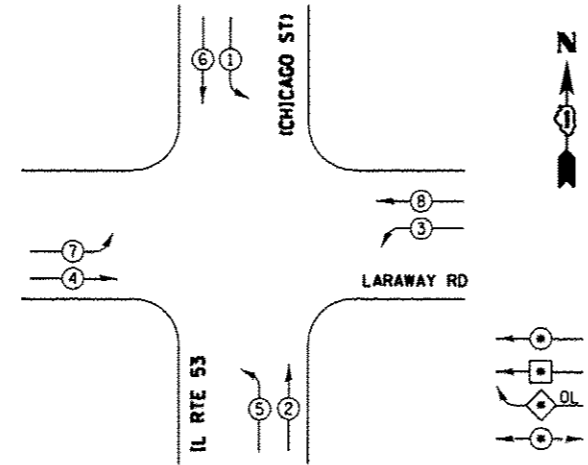


PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	↑ ↓

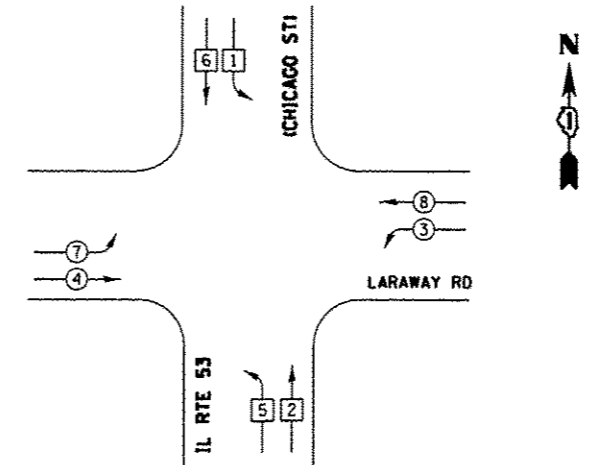


EXISTING CONTROLLER SEQUENCE



EXIST. PHASE DESIGNATION DIAGRAM

PROPOSED CONTROLLER SEQUENCE



PROP. PHASE DESIGNATION DIAGRAM

- LEGEND**
- DUAL ENTRY PHASE
 - SINGLE ENTRY PHASE
 - OVERLAP
 - PEDESTRAIN PHASE
 - NUMBER REFERS TO ASSOCIATED PHASE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	18		17	0.50	153.00
(YELLOW)	18		25	0.25	112.50
(GREEN)	18		15	0.25	67.50
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		150	1.00	-
BATTERY BACKUP	1		25	1.00	25.00
LED SIGN	4		90	1.00	360.00
FLASHER	-		0.50	-	-
ENERGY COSTS TO:					TOTAL = 827.60

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: TIM COSLET
 PHONE: (815) 724-5010
 COMPANY: COMED

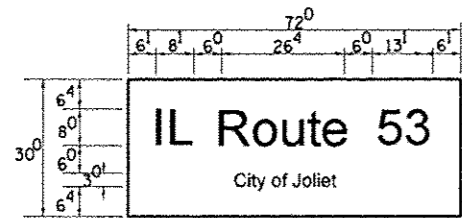
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PL01 SCALE: 48,0000 1/16"	PL01 DATE: 2/5/2013	DRAWN: PB / LP	REVISIONS:
Default		CHECKED: SM	DATE: 11/30/12

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

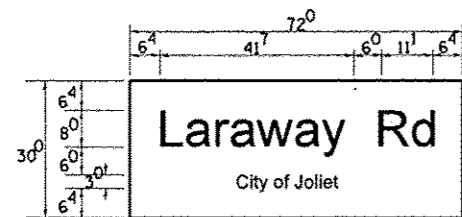
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 53 (CHICAGO ST) AT LARAWAY RD

F.A.P. RTE. 846 A	SECTION 2-TS (12)	COUNTY WILL	TOTAL SHEETS 15	SHEET NO. 14
				CONTRACT NO. 60V95
ILLINOIS FED. AID PROJECT				

TS#7570



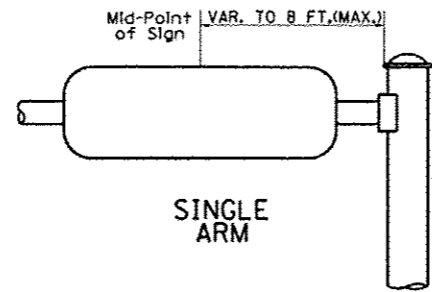
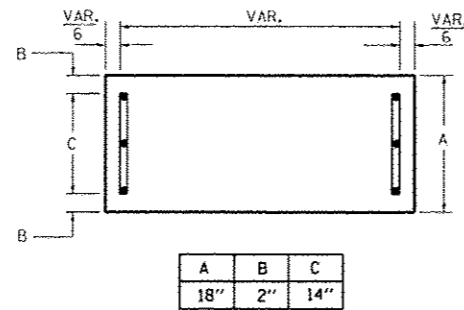
— Sq. M. each
 — Sq. Ft. each
 2 Required
 Design Series D



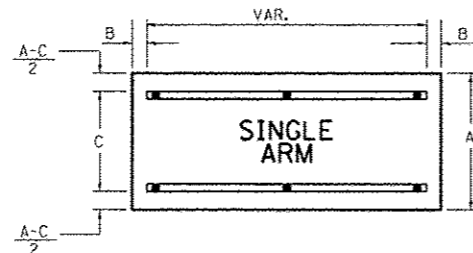
— Sq. M. each
 — Sq. Ft. each
 2 Required
 Design Series D

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

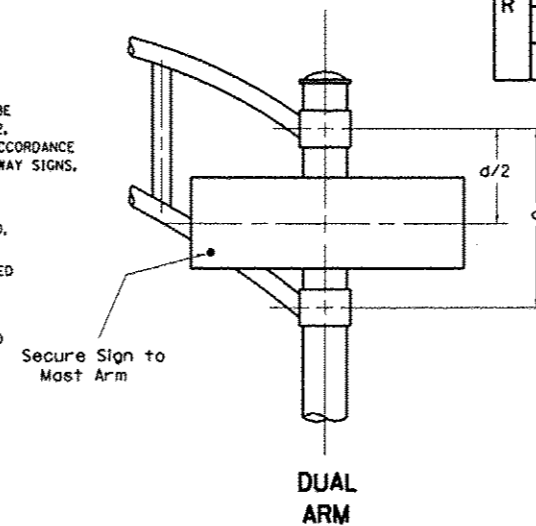
SUPPORTING CHANNELS



SUPPORTING CHANNELS



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



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

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

SERIES	SECOND LETTER															
	acde		bhikl		fw		j		st		vy		x		z	
	g	o	q	m	n	p	r	u								
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"

SERIES	SECOND LETTER															
	acde		bhikl		fw		j		st		vy		x		z	
	g	o	q	m	n	p	r	u								
adhglj	16	17	22	24	16	17	12	14	14	15	14	15	16	17	16	17
lmnqu																
bfkops	12	14	16	17	11	12	05	06	11	12	11	12	12	14	12	14
ce	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
x	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"

SERIES	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	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	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	14	15
7	12	14	12	14	14	15	12	14	14	15	14	15	11	12	14	15	12	14	15	14
8	16	17	16	17	14	15	12	14	14	15	16	17	12	14	16	17	14	15	14	15

EXAMPLE, 2³ DENOTES $\frac{3}{8}$

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

NUMBER	6 INCH SERIES		8 INCH SERIES	
	C	D	C	D
1	1 ²	1 ⁴	1 ⁵	2 ⁰
2	3 ²	4 ⁰	4 ³	5 ³
3	3 ²	4 ⁰	4 ³	5 ³
4	3 ⁵	4 ³	4 ⁷	5 ⁷
5	3 ²	4 ⁰	4 ³	5 ³
6	3 ²	4 ⁰	4 ³	5 ³
7	3 ²	4 ⁰	4 ³	5 ³
8	3 ²	4 ⁰	4 ³	5 ³
9	3 ²	4 ⁰	4 ³	5 ³
0	3 ⁴	4 ²	4 ⁵	5 ⁵

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 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-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 8'-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:

- * J.O. HERBERT CO. MIDLOTHIAN, VA.
- * WESTERN REMAC INC. WOODRIDGE, IL.

PARTS LISTING:
 SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
 SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
 SELF TAPPING WITH NEOPRENE WASHER
 BRACKETS PART #HPN034 (UNIVERSAL)
 CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

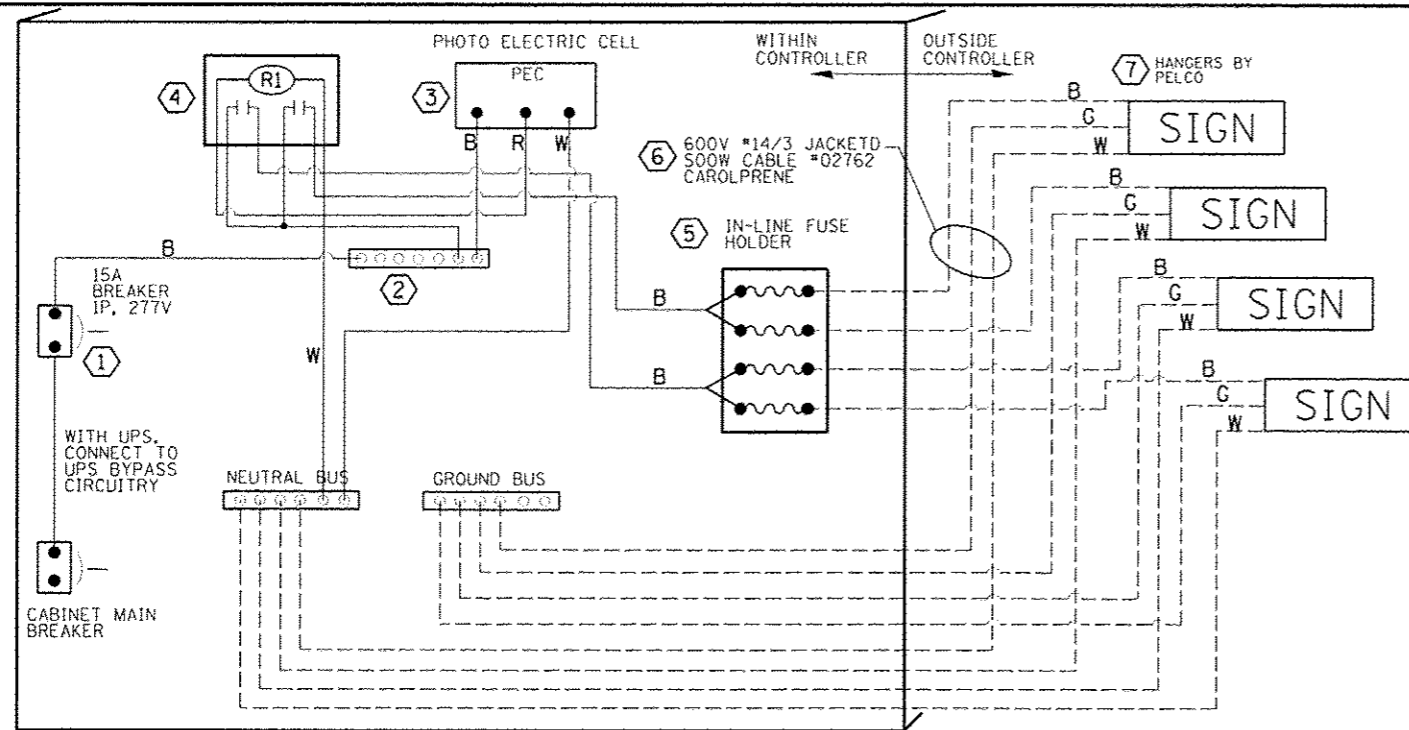
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

FILE NAME	USER NAME	DESIGNED	REVISED
c:\pwork\p\midot\pocirecho\id8323731\011	pocirecho	DAG/BCK	DAG 10/28/09
		DRAWN	REVISED
		BCK	
		CHECKED	REVISED
		DAG/DAD	
		DATE	REVISED
		03-15-09	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
 MAST ARM MOUNTED STREET NAME SIGNS
 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

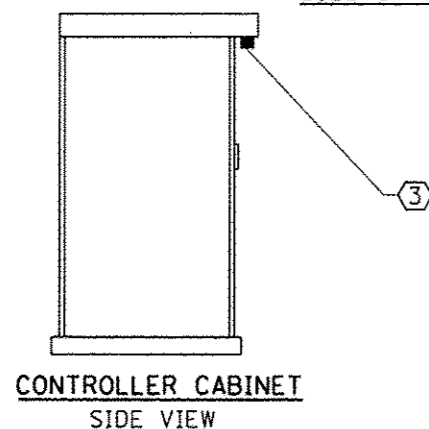
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846 A	2-TS (12)	WILL	15	14A
TS-02		CONTRACT NO. 60V95		
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



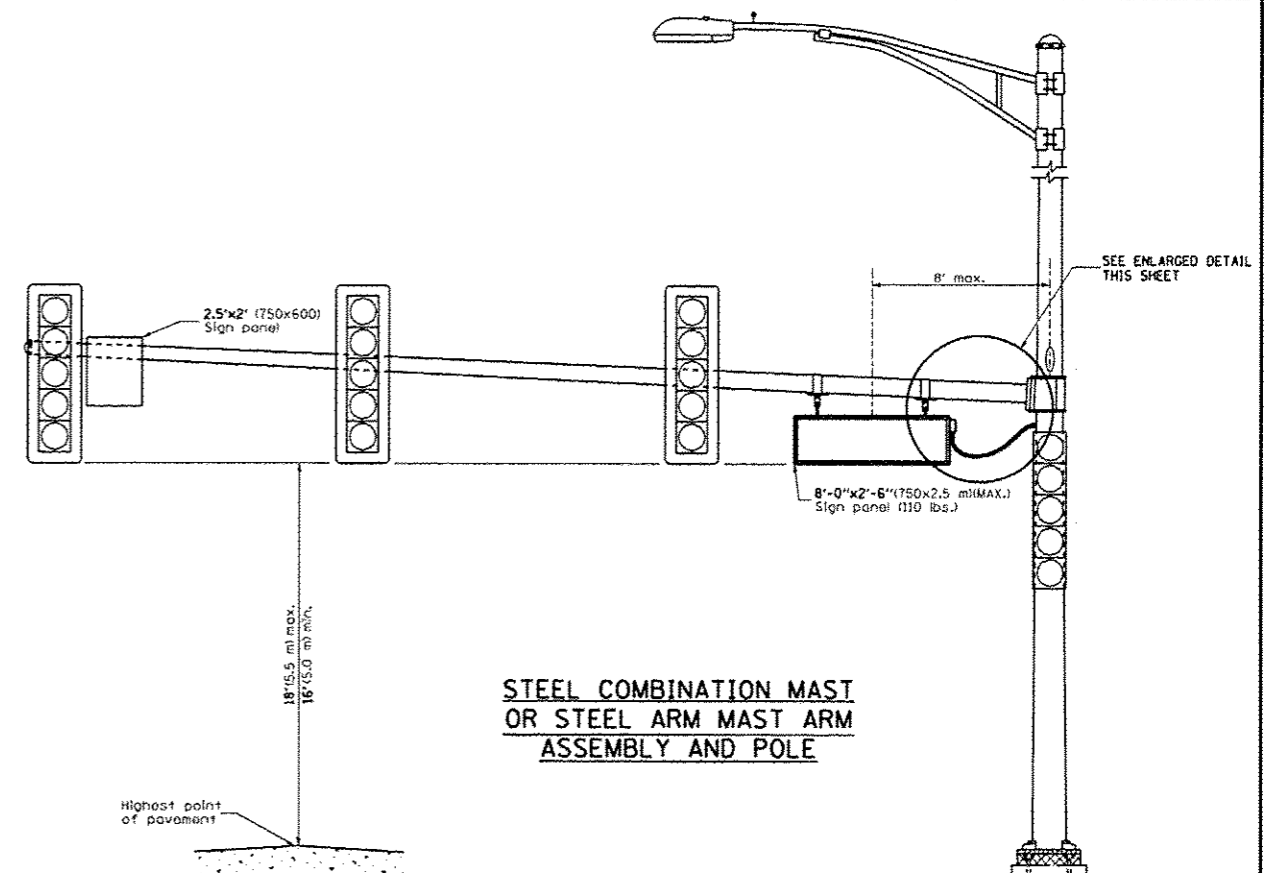
LED SIGN WIRING DETAIL

DESCRIPTION	MANUFACTURER	MODEL	NOTES
① CIRCUIT BREAKER		15 AMPERE	Molded case, Thermal Mag. min. R.I. of 14K R.M.S. symmetrical ampere at 277V.
② TERMINAL BLOCK	MARATHON	1502 DJSV	
③ PHOTO ELECTRIC CONTROL	FISHER PIERCE	B124-1.5-07762	
④ CONTROL RELAY	SQUARE D	8501X020V02	BOLT ON W/SCREW TERMINAL
⑤ IN-LINE FUSE HOLDER WITH 5 AMP FUSE	BUSSMAN	S-8000 BK/S-8-3-4-R	
⑥ ELECTRIC CABLE, NO. 14, 3/C (BLACK, WHITE, GREEN)	CAROLPRENE/SOOW	02762	
⑦ SIGN MOUNTING HARDWARE	PELCO	SE-5015	S.S. HARDWARE

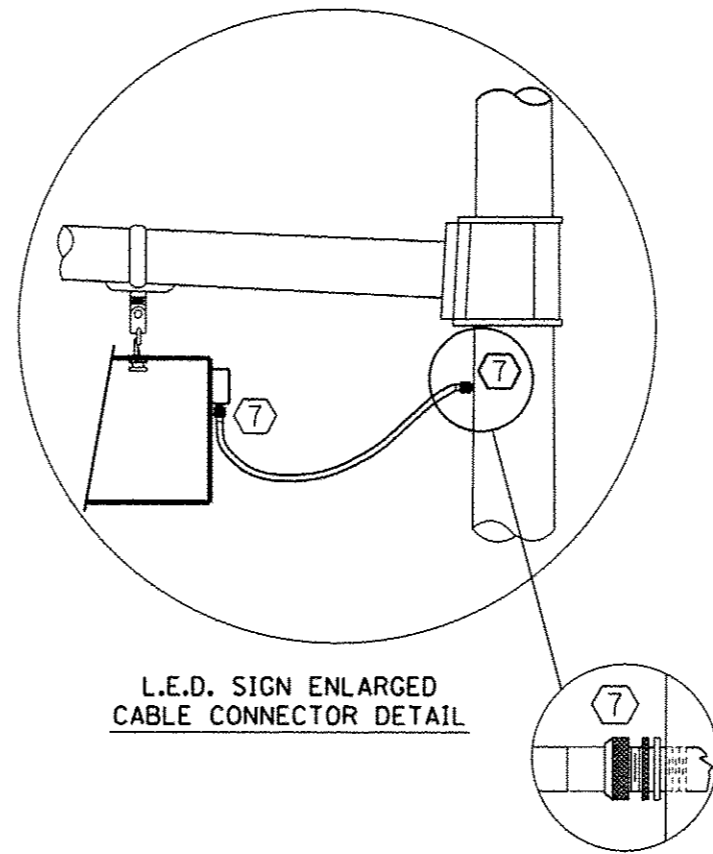
BILL OF MATERIALS



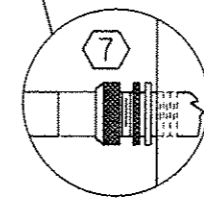
CONTROLLER CABINET SIDE VIEW



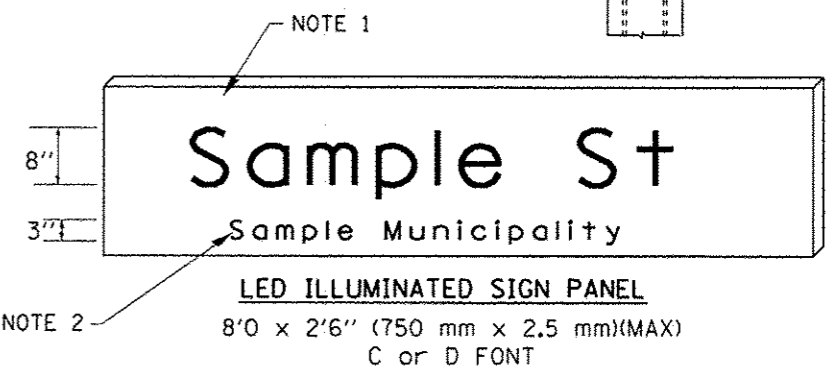
STEEL COMBINATION MAST OR STEEL ARM MAST ARM ASSEMBLY AND POLE



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL

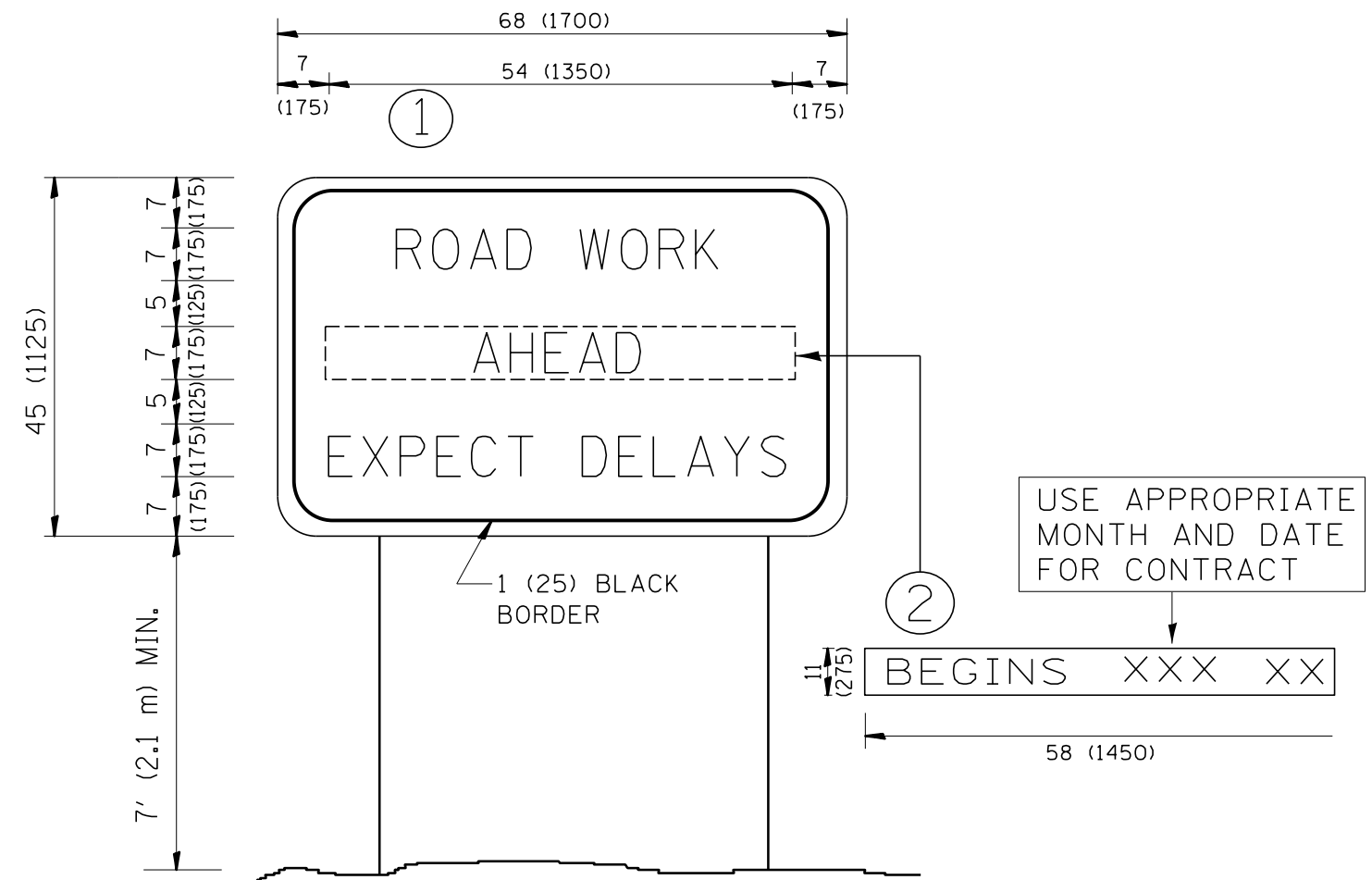


L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL



NOTES:

- SIGNS SHALL BE DUAL SIDED. FRONT AND BACK OF SIGN WILL BE THE SAME.
- CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN. VERIFY WITH ENGINEER.
- SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS. THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
R = RED BL = BLUE W = WHITE
B = BLACK Y = YELLOW G = GREEN
- ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



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.

USER NAME = poc1echol	DESIGNED -	REVISED - R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN		F.A.P. RTE. 846 A	SECTION 2-TS (12)	COUNTY WILL	TOTAL SHEETS 15	SHEET NO. 15
PLOT SCALE = 100.0000' / 1in.	DRAWN -	REVISED - R. MIRS 12-11-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	TC-22		CONTRACT NO. 60V95
PLOT DATE = 12/11/2012	CHECKED -	REVISED - T. RAMMACHER 02-02-99		<small>FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT</small>						
	DATE -	REVISED - C. JUCIUS 01-31-07								