

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2820	2009-011 TS	COOK	13	1

D-91-324-09

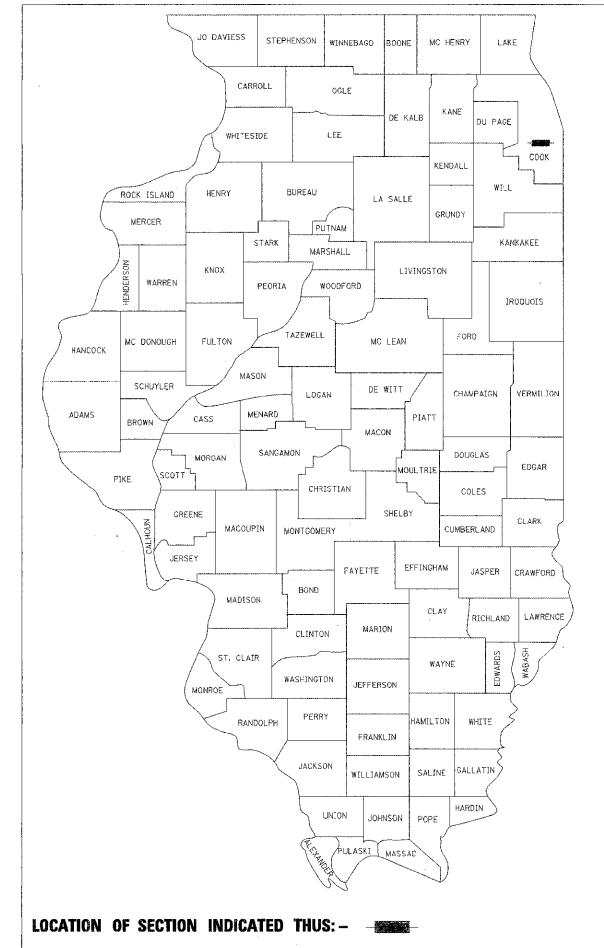
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

**DISTRICT 1
HIGHWAY SAFETY IMPROVEMENT PROJECT
TRAFFIC SIGNAL MODERNIZATION**

GOVERNOR'S HIGHWAY AT KEDZIE AVENUE

**F.A.U. ROUTE 2820
SECTION 2009-011 TS
COOK COUNTY
C-91-324-09
PROJECT: HSIP-2820(003)**



INDEX OF SHEETS

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- GOVERNOR'S HIGHWAY AT KEDZIE AVENUE - TEMPORARY TRAFFIC SIGNAL AND REMOVAL PLAN - SHEET 2 OF 2
- GOVERNOR'S HIGHWAY AT KEDZIE AVENUE - TEMPORARY CABLE PLAN
- GOVERNOR'S HIGHWAY AT KEDZIE AVENUE - PROPOSED TRAFFIC SIGNAL PLAN - SHEET 1 OF 2
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- GOVERNOR'S HIGHWAY AT KEDZIE AVENUE - PROPOSED CABLE PLAN
- MAST ARM MOUNTED STREET NAME SIGNS

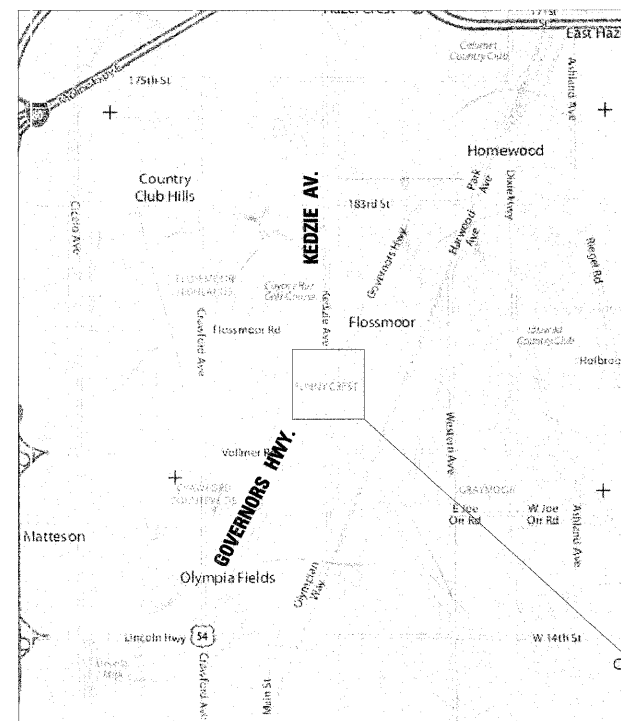
STANDARD DRAWINGS

424001-05	606001-03	(805001-01)	814001-01	814006-01
(857001-01)	857006	(862001-01)	(873001-02)	876001
(877001-04)	(878001-07)	880001	(880006-01)	886001

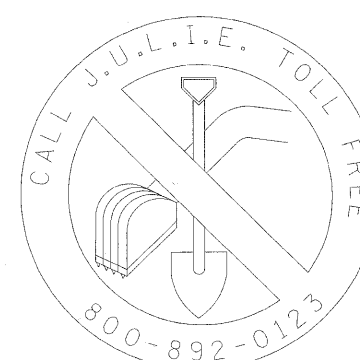
(701501-05)	(701601-06)	701606-05	(701701-06)	(701801-04)
(720001-01)	(720016-02)	780001-01		

NOTE: STANDARD DRAWINGS REQUIRED (CIRCLED)

RICH TOWNSHIP



TOBY C. MICKEY
062-053237
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
Toby C. Mickey
1/28/09



48 - HOURS BEFORE DIGGING

PROJECT LOCATION

LOCATION MAP

PREPARED BY Steve Tamm TRAFFIC ENGINEER
DATE 1/30/09

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

CONTRACT NO. 60609

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 30 2009
Don M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 27, 2009
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

March 27, 2009
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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

PERCENTAGES

LOCATION OF WORK

90% FED.
10% STATE

SJMMARY OF QUANTITIES

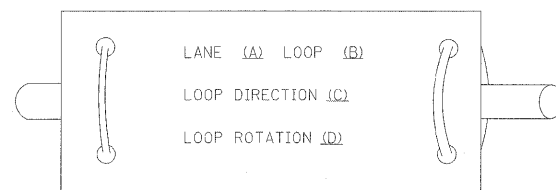
CONSTRUCTION
CODE
Y031-1F

CODE NO.	ITEM	UNIT	TOTAL
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	40
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
** 72000100	SIGN PANEL - TYPE 1	SQ FT	18
** 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	343
** 78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	686
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	12
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	1
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	632
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2356
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	650
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	97
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	794
* X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED	FOOT	323
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
87800415	CONCRETE FOUNDATION, TYPE E 36" DIAMETER	FOOT	22
87900200	DRILL EXISTING HANDBOLE	EACH	2
X8808120	SIGNAL HEAD, L E D, 1-FACE, 3-SECTION, OPTICALLY PROGRAMMED MAST ARM MOUNTED	EACH	10
X8808180	SIGNAL HEAD, L E D, 1-FACE, 5-SECTION, OPTICALLY PROGRAMMED MAST ARM MOUNTED	EACH	2
X8808122	SIGNAL HEAD, L E D, 2-FACE, 3 SECTION, OPTICALLY PROGRAMMED BRACKET MOUNTED	EACH	2
X8808185	SIGNAL HEAD, L E D, 2-FACE, 1-3 SECTION, 1-5 SECTION, OPTICALLY PROGRAMMED BRACKET MOUNTED	EACH	2
88200210	TRAFFIC SIGNAL EACKPLATE, LOUVERED, ALUMINUM	EACH	12
88500100	INDUCTIVE LOOP DETECTOR	EACH	8
* 88700200	LIGHT DETECTOR	EACH	3
* 88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4058
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	102.8
X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	1
67100100	MOBILIZATION	L SUM	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3
* 100%	COST TO VILLAGE OF FLOSSMOOR		
**	SPECIALTY ITEMS		

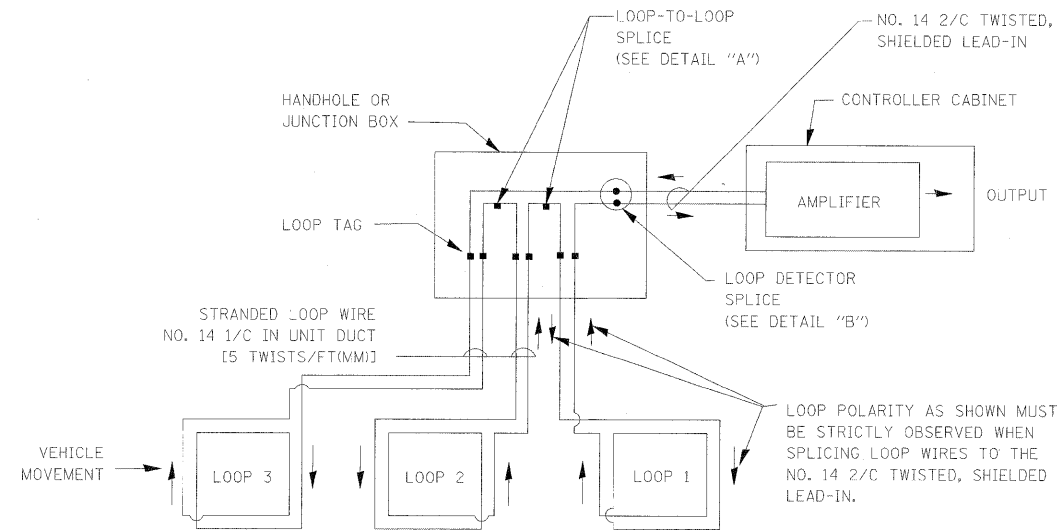
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

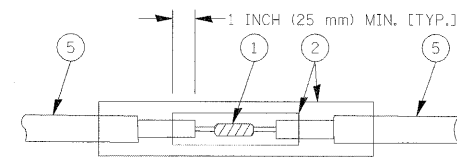


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

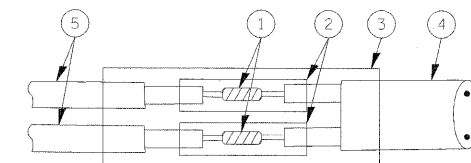


DETECTOR LOOP WIRING SCHEMATIC

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



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



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

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.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. DATE 091-11-2007
DRAWN BY: BL
CHECKED BY: ER/TC

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		DRAWN - NB/TCM	REVISED -
		CHECKED - NB/TCM	REVISED -
		DATE - 01/23/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

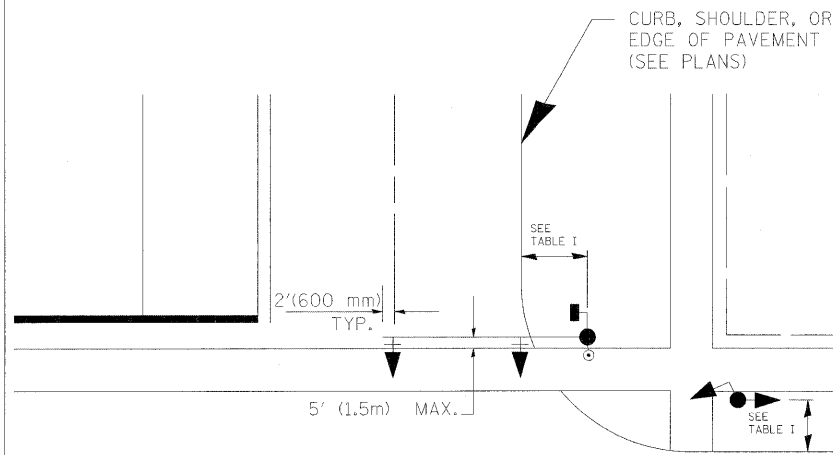
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F.A.U. RTE. 2820	SECTION 2009-011 TS	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 3
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		

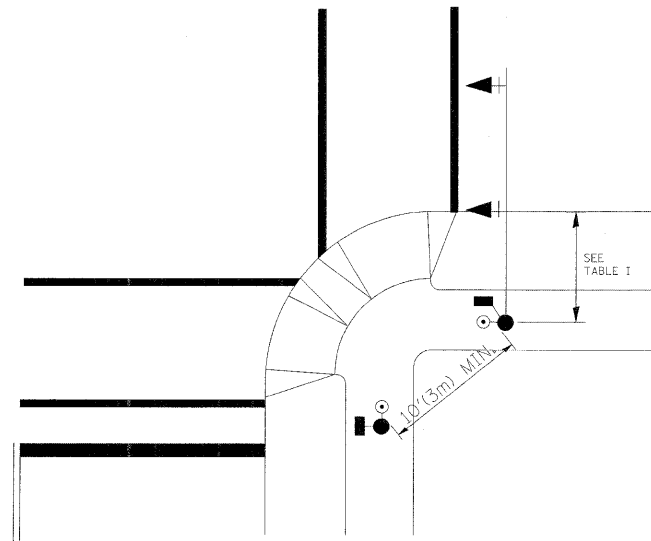
CONTRACT NO. 60G09

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSH-BUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK.
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

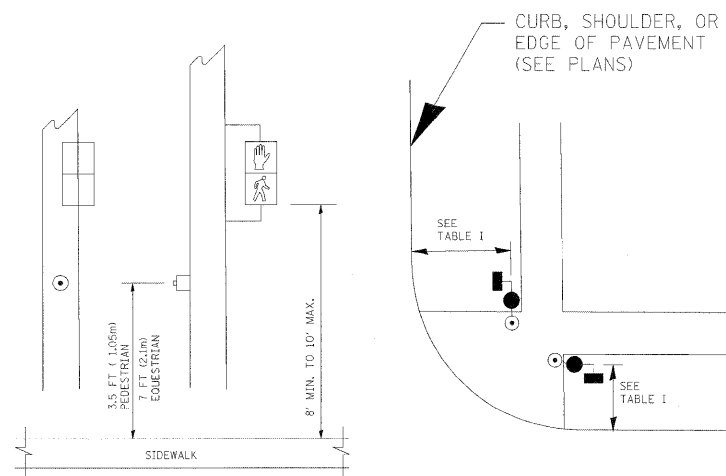


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE HORIZ. DATE 09-11-2007 DRAWN BY: BL CHECKED BY: ER/TC

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PLOT SCALE = 60,0001 / IN.		DRAWN - NB/TCM	REVISED -
PLOT DATE = 1/27/2009		CHECKED - NB/TCM	REVISED -
		DATE - 01/23/2009	REVISED -

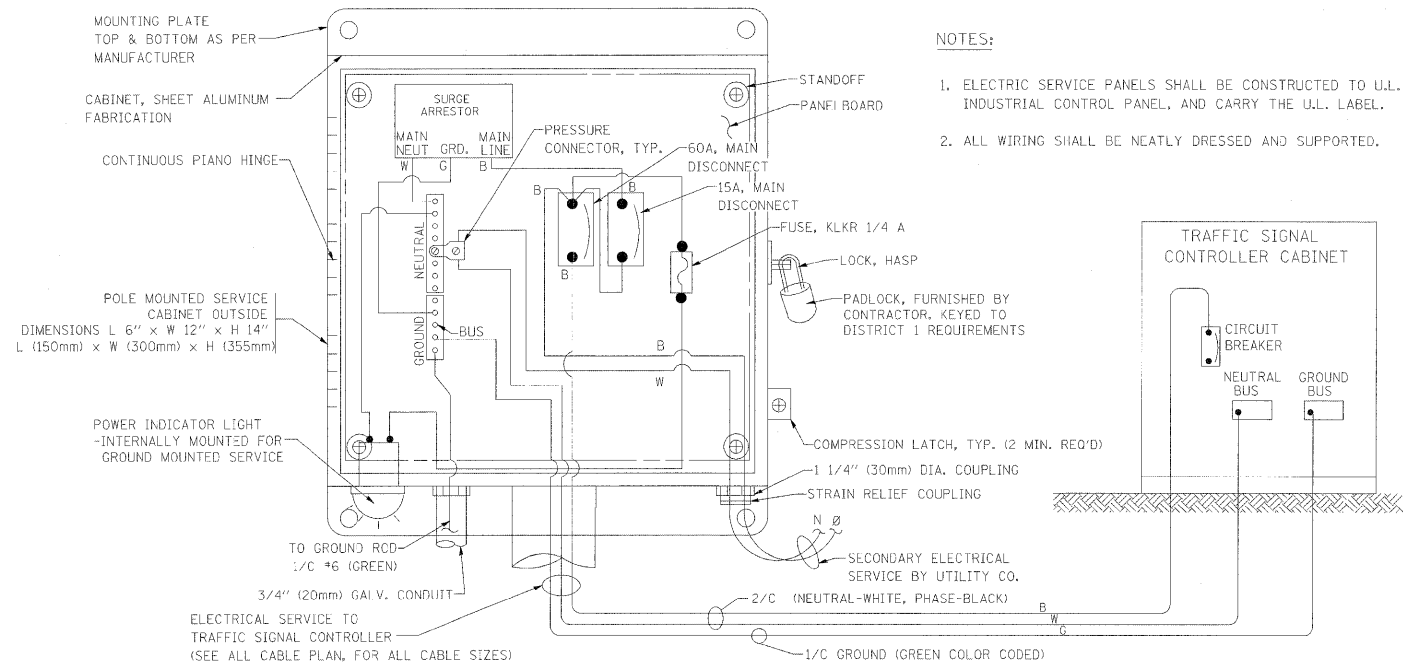
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

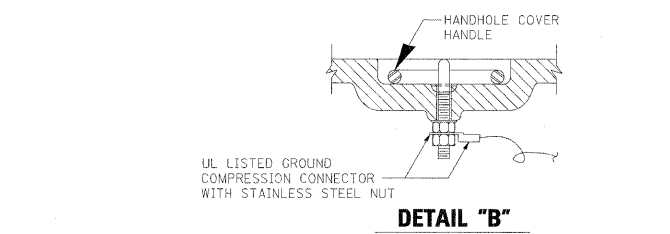
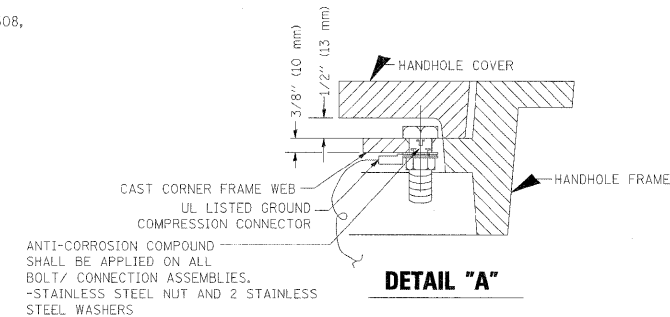
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F.A.U. RTE. 2820	SECTION 2009-011 TS	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 4
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		

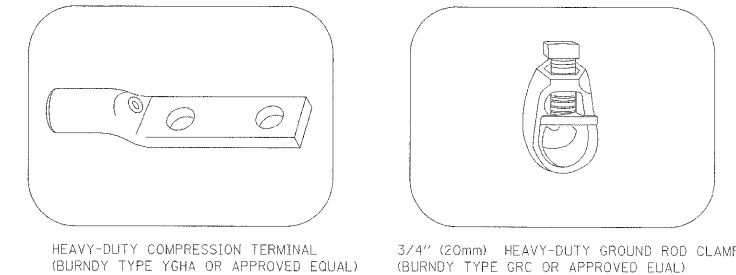
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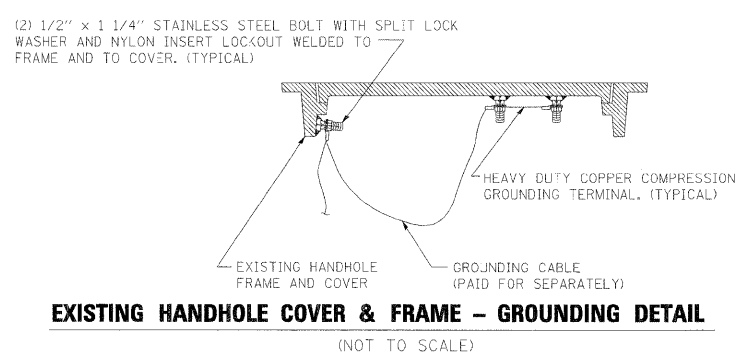
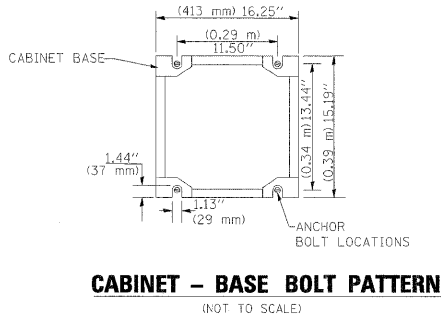
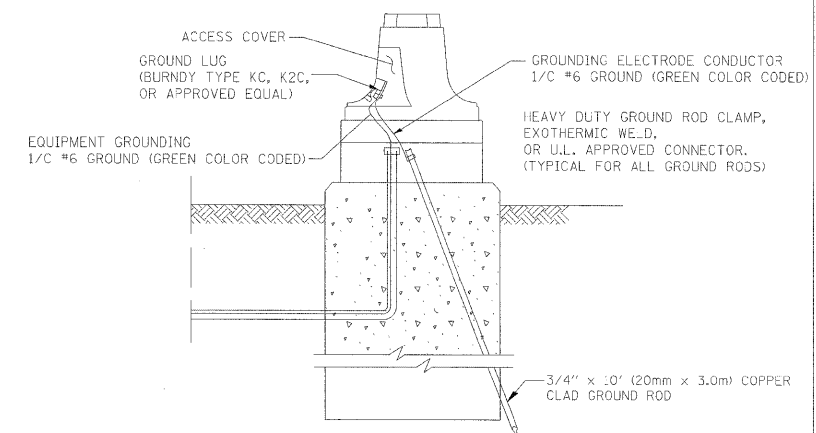
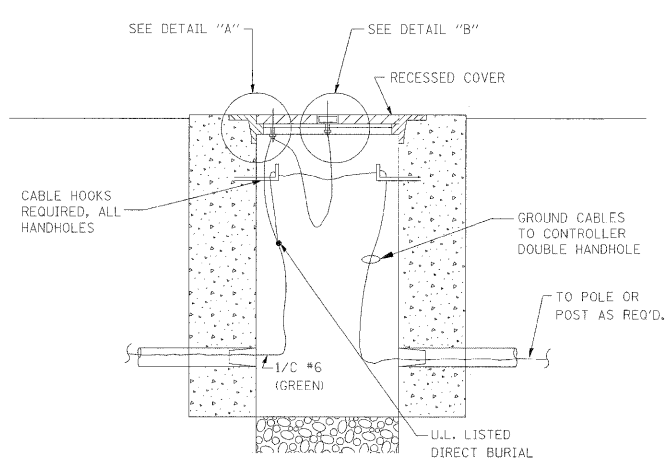
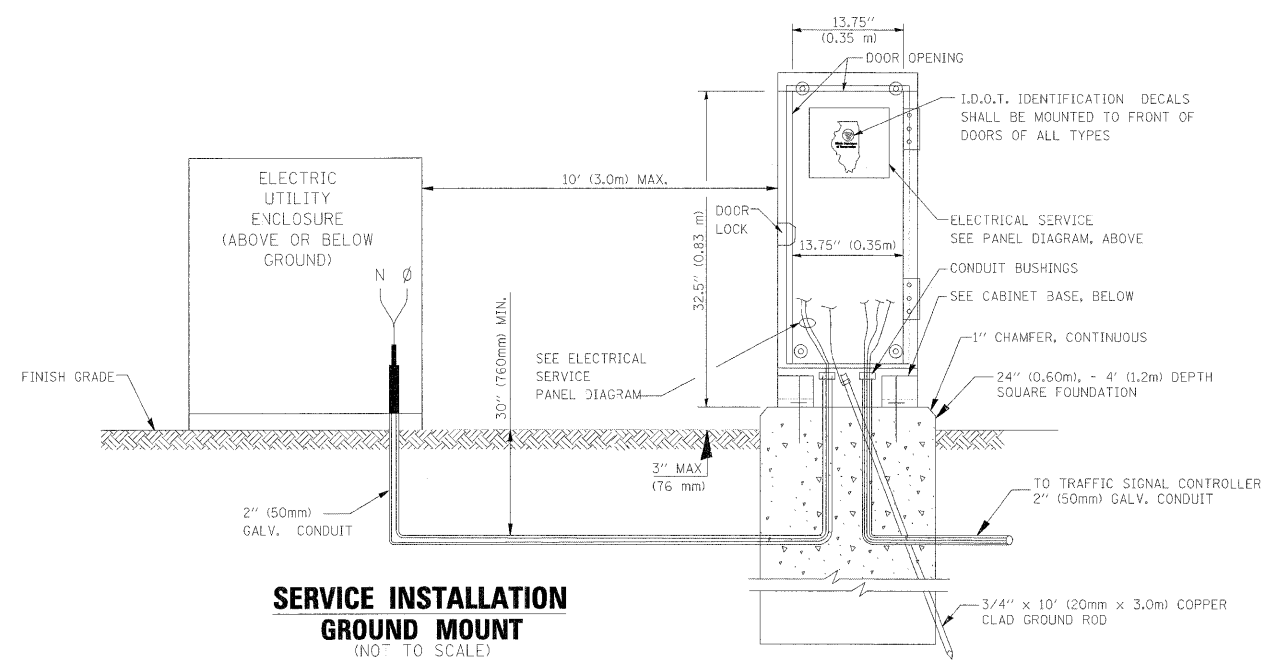
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



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



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



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: VERT. NONE
 HORIZ. 1" = 10'
 DATE 09-11-2007

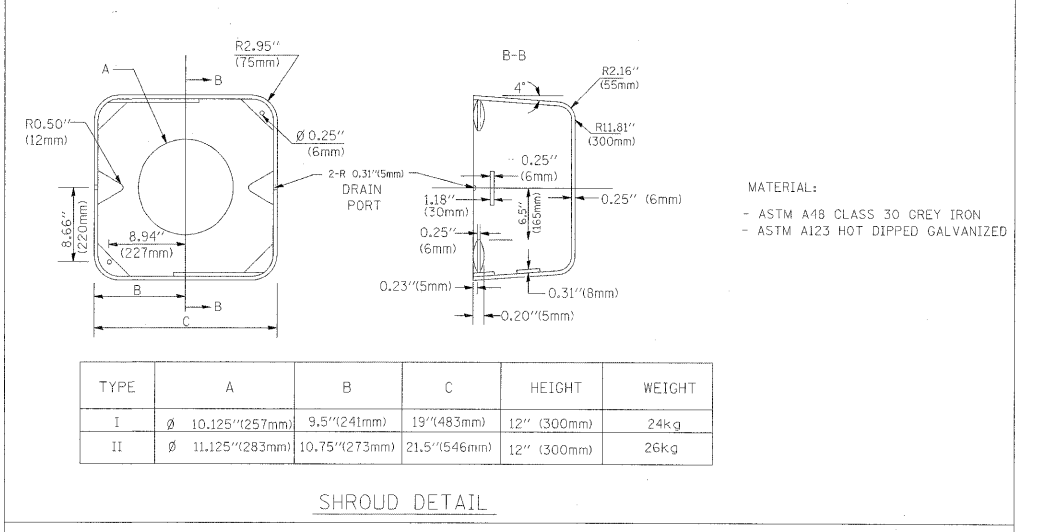
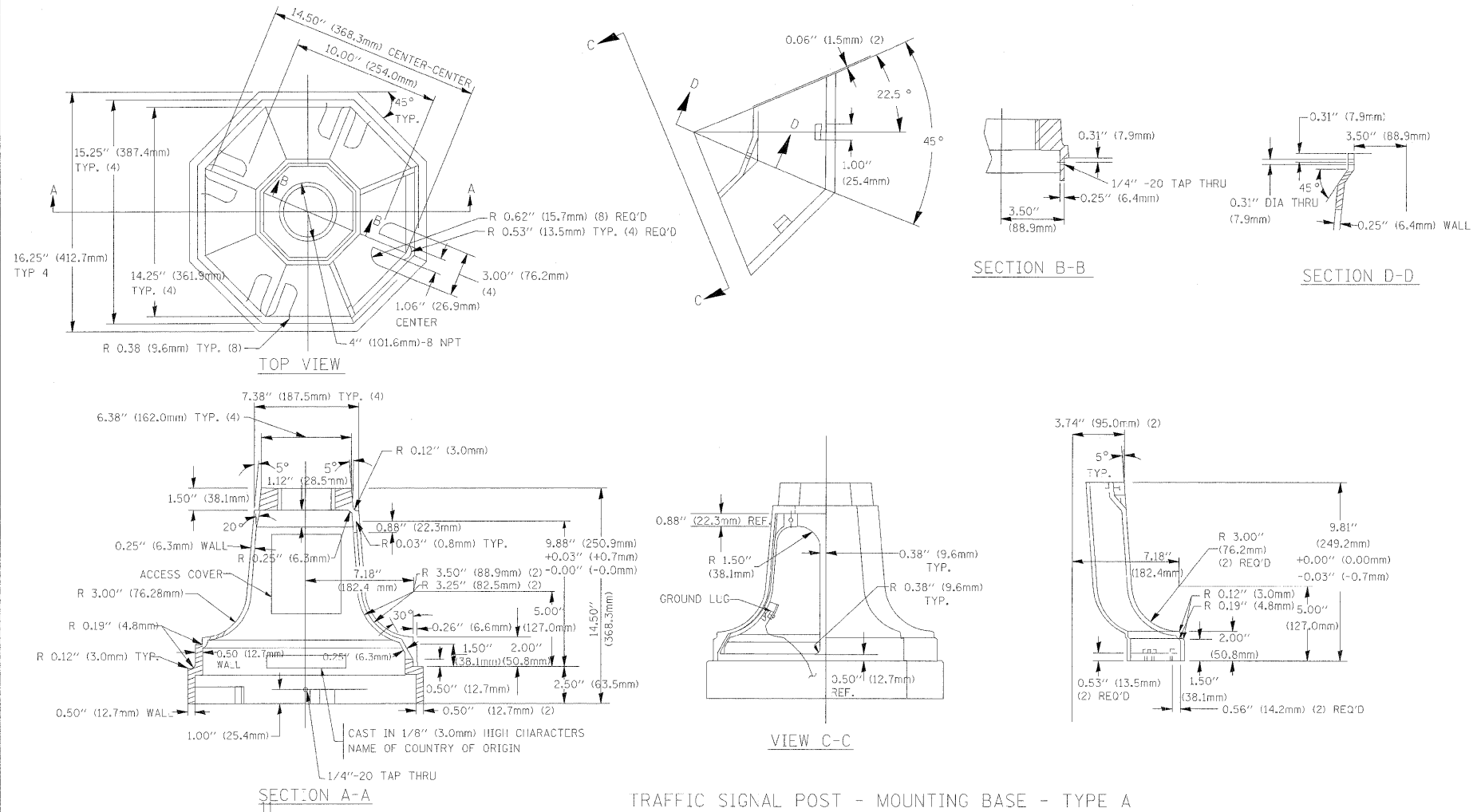
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F.A.J. RTE. 2820	SECTION 2009-011 TS	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 5
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FED. ROAD DIST. NO. [ILLINOIS]		FED. AID PROJECT		

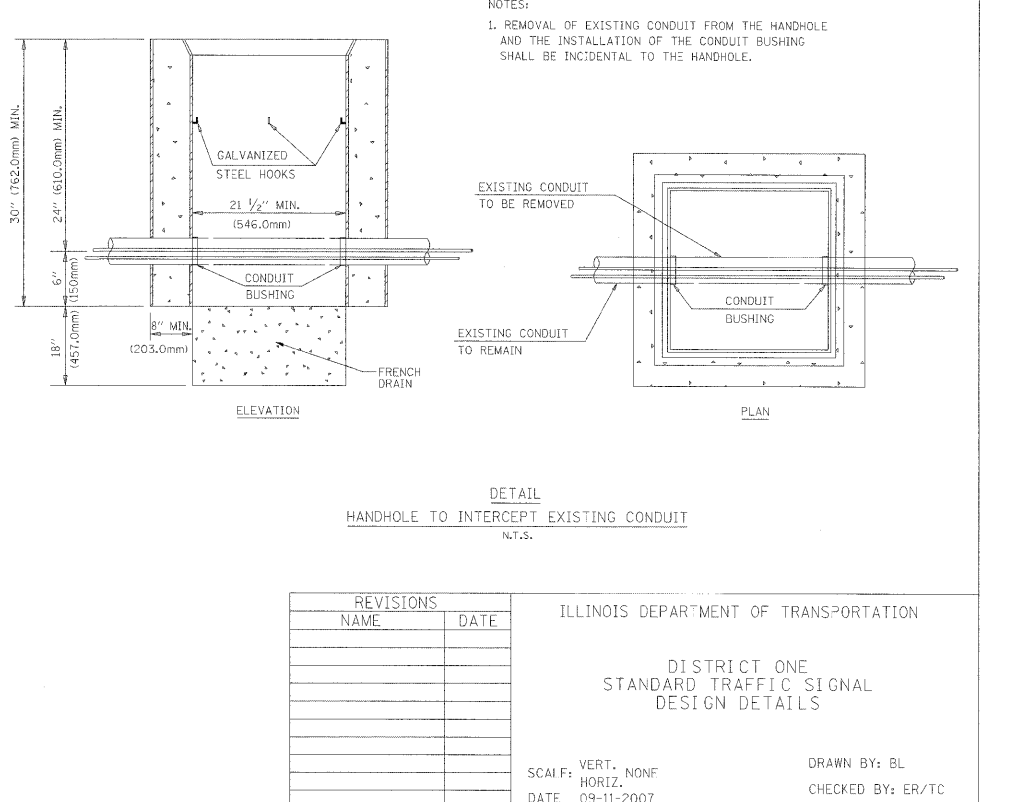
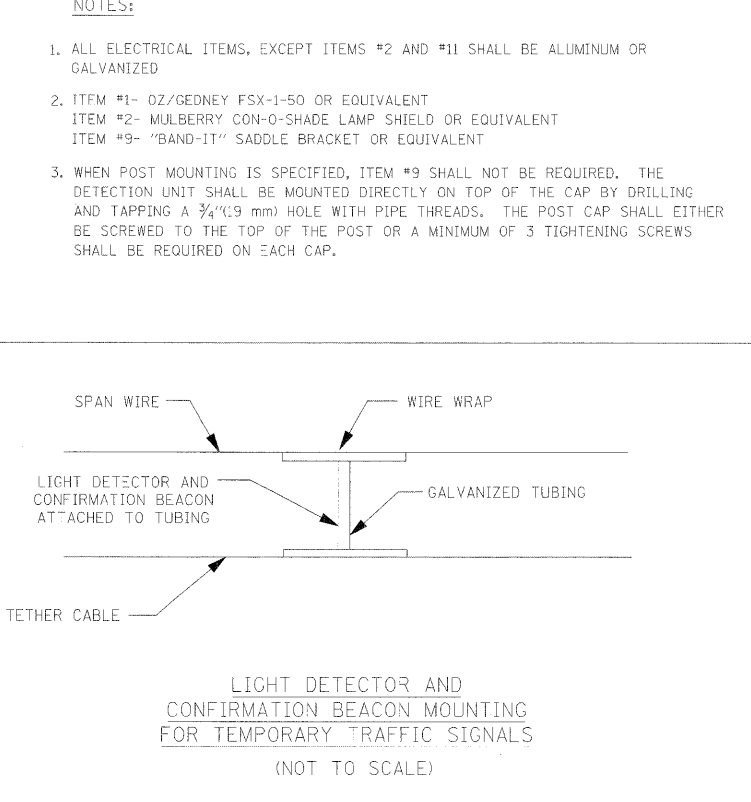
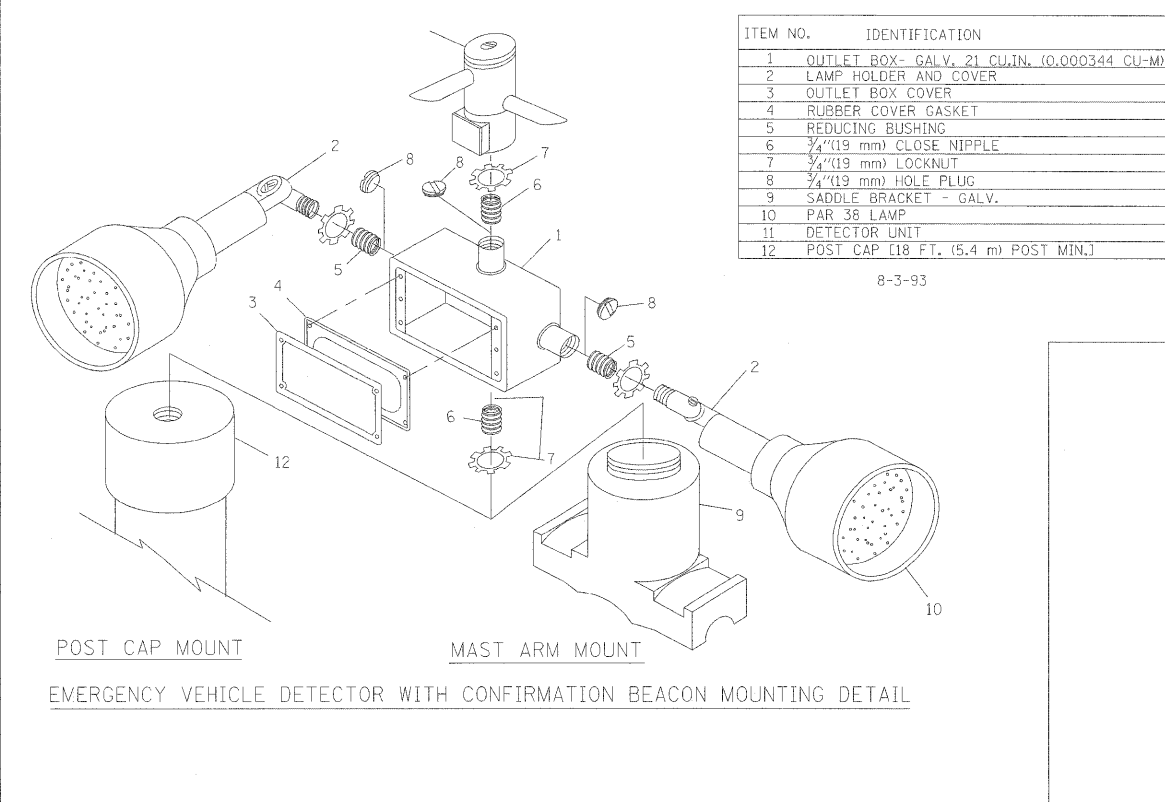
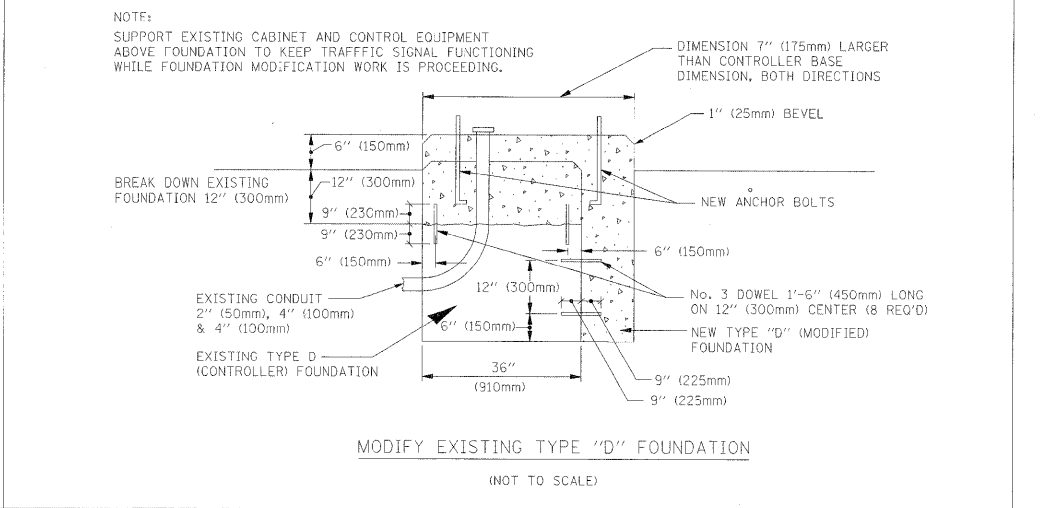
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PLOT SCALE = 60.0001" / IN.	DRAWN - NB/TCM	CHECKED - NB/TCM	REVISED -
PLOT DATE = 1/27/2009	DATE - 01/23/2009		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**














DISTRICT ONE
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

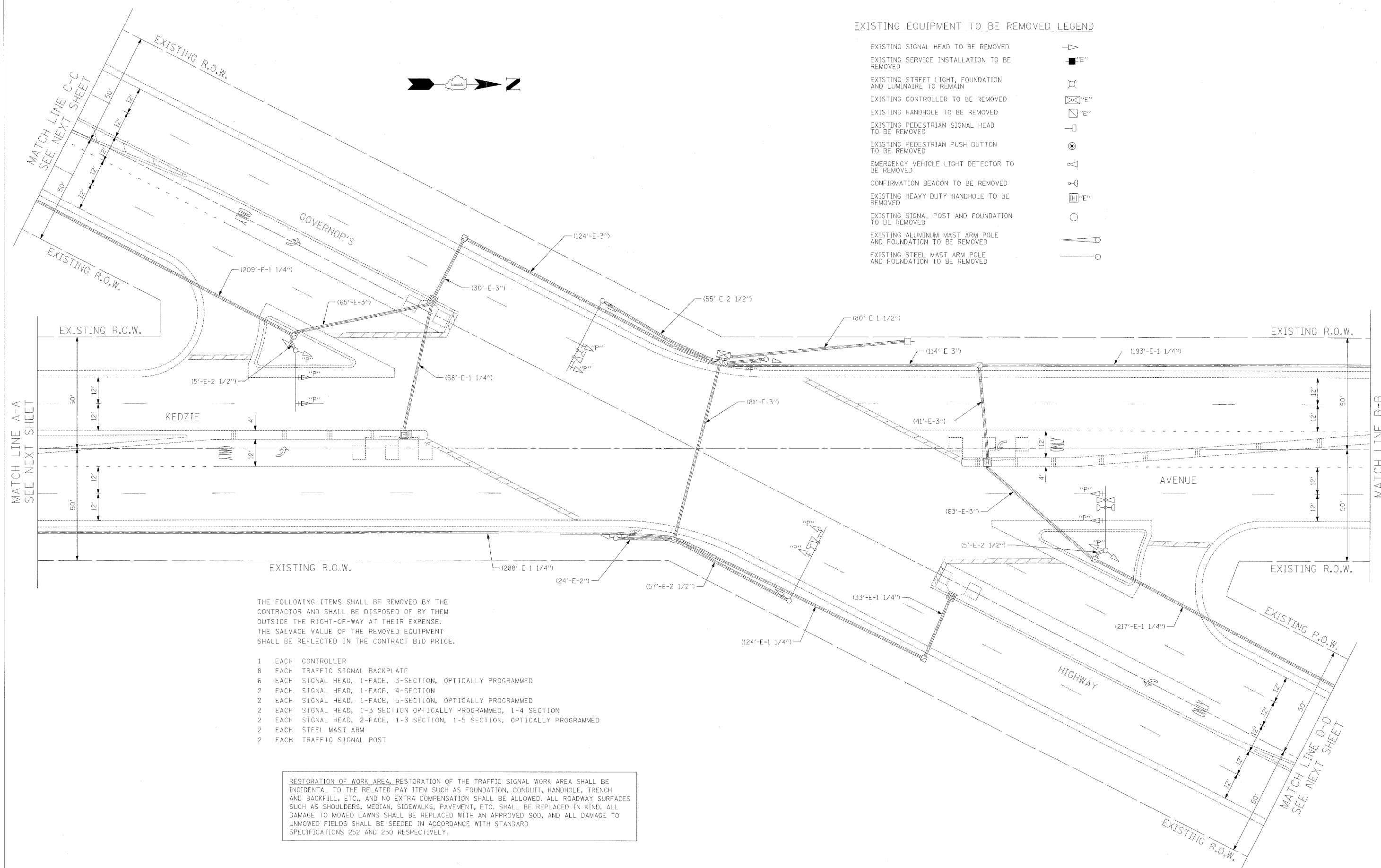


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\"(300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\"(300mm)	26kg



EXISTING EQUIPMENT TO BE REMOVED LEGEND

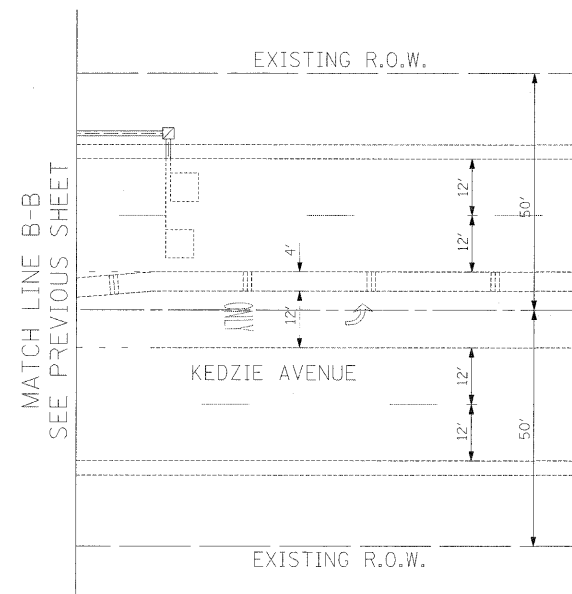
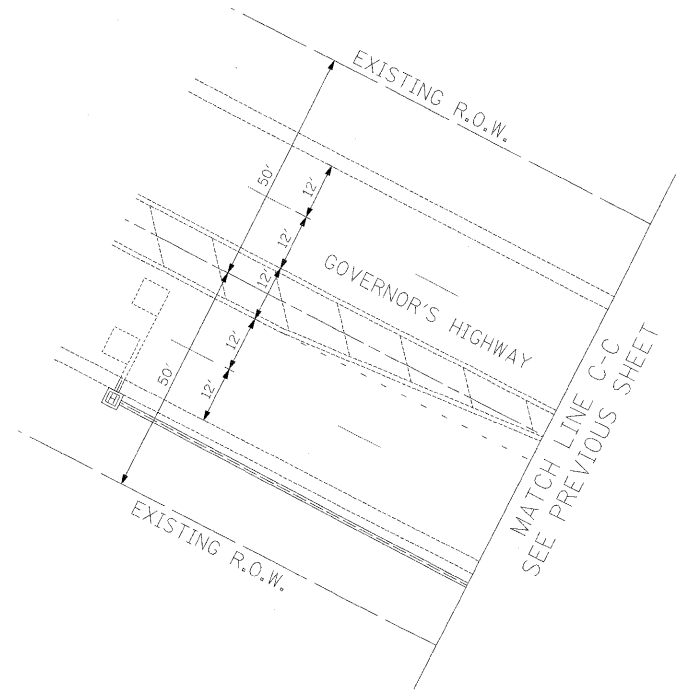
- EXISTING SIGNAL HEAD TO BE REMOVED 
- EXISTING SERVICE INSTALLATION TO BE REMOVED 
- EXISTING STREET LIGHT, FOUNDATION AND LUMINAIRE TO REMAIN 
- EXISTING CONTROLLER TO BE REMOVED 
- EXISTING HANDHOLE TO BE REMOVED 
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED 
- EXISTING PEDESTRIAN PUSH BUTTON TO BE REMOVED 
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED 
- CONFIRMATION BEACON TO BE REMOVED 
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED 
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED 
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED 
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED 



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

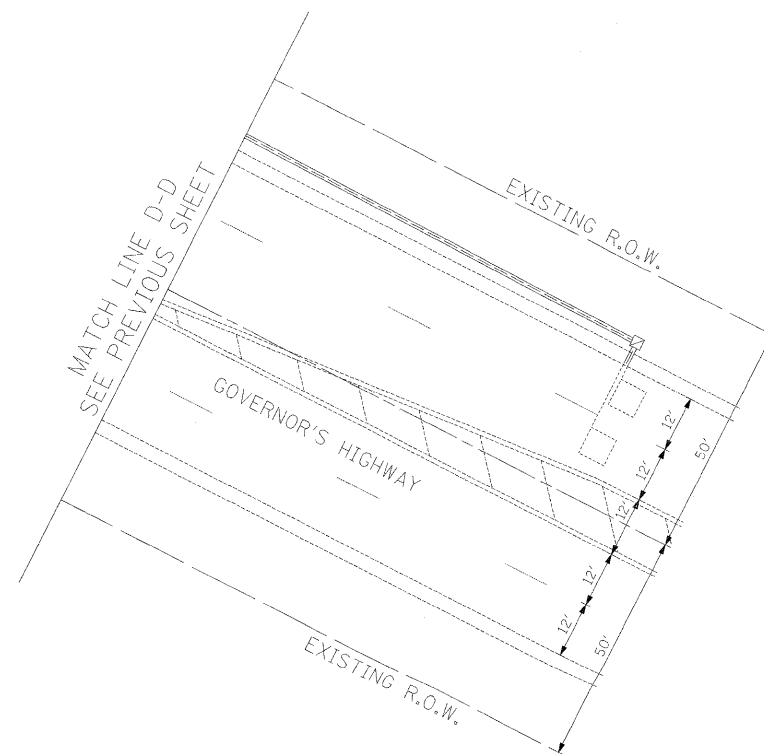
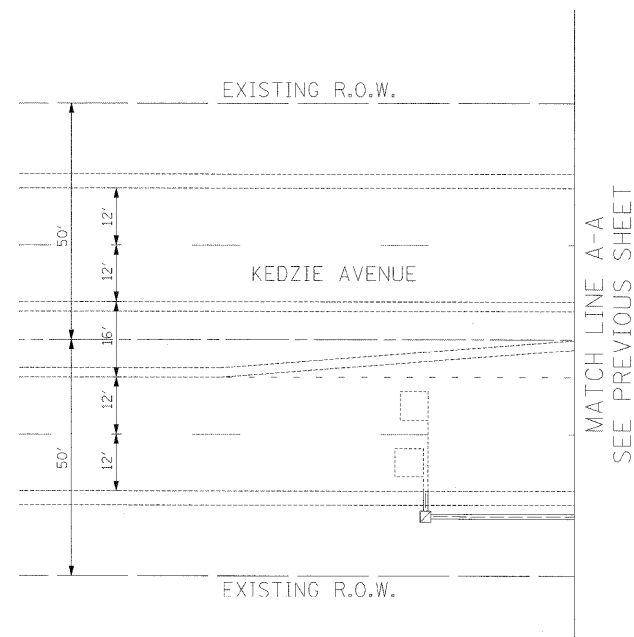
- 1 EACH CONTROLLER
- 8 EACH TRAFFIC SIGNAL BACKPLATE
- 6 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, OPTICALLY PROGRAMMED
- 2 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, OPTICALLY PROGRAMMED
- 2 EACH SIGNAL HEAD, 1-3 SECTION OPTICALLY PROGRAMMED, 1-4 SECTION
- 2 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, OPTICALLY PROGRAMMED
- 2 EACH STEEL MAST ARM
- 2 EACH TRAFFIC SIGNAL POST

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



EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING STREET LIGHT, FOUNDATION AND LUMINAIRE TO REMAIN
- EXISTING CONTROLLER TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH BUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED



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

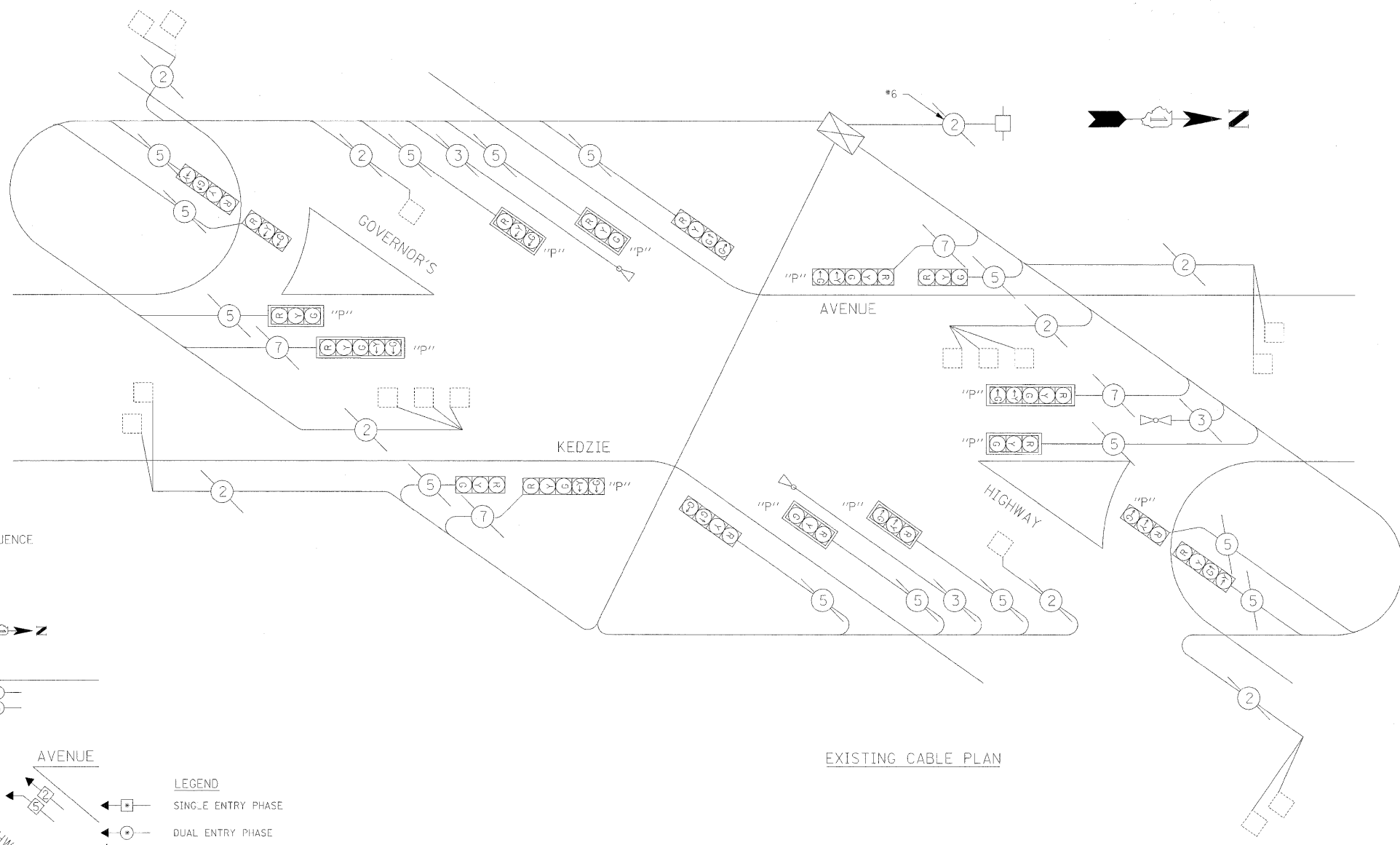
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		DRAWN - NB/TCM	REVISED -
		CHECKED - NB/TCM	REVISED -
		DATE - 01/23/2009	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING TRAFFIC SIGNAL AND REMOVAL PLAN
GOVERNOR'S HIGHWAY AT KEDZIE AVENUE (SHEET 2 OF 2)**

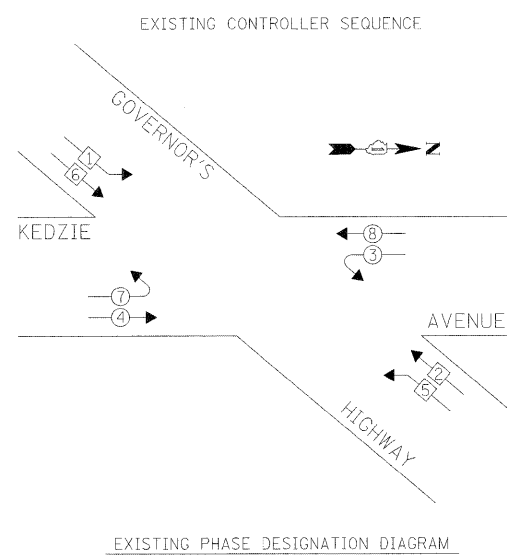
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F.A.U. RTE. 2820	SECTION 2009-011 TS	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 8
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60G09	

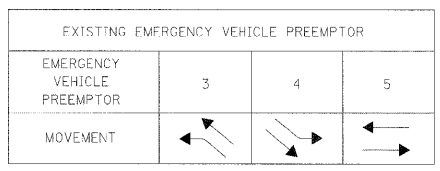
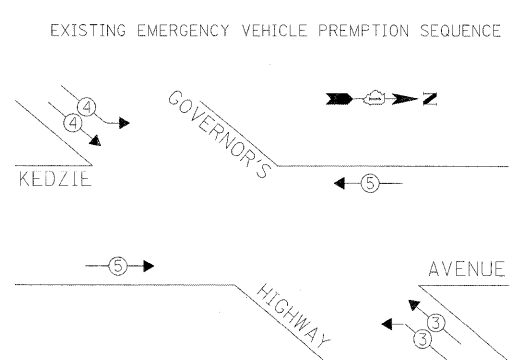


CABLE PLAN LEGEND

- | | | |
|-----------------|-----------------|---|
| PROPOSED | EXISTING | |
| | | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | CONTROLLER CABINET |
| | | SERVICE INSTALLATION |
| | | TELEPHONE CONNECTION |
| | | MAGNETIC DETECTOR |
| | | PUSHBUTTON DETECTOR |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD |
| | | RAILROAD CONTROL CABINET |
| | | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" |
| | | ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN" |
| | | GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| | | GROUND ROD AT POST OR MAST ARM POLE |
| | | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & 5M12F |
| | | MICROWAVE VEHICLE SENSOR |
| | | VIDEO DETECTOR |
| | | CLOSED CIRCUIT TV |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | UNINTERRUPTIBLE POWER SUPPLY |
| | | WIRELESS INTERCONNECT (ANTENNA) |



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



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	18	135		0.50	1215.0
(YELLOW)	18	135		0.25	607.5
(GREEN)	18	135		0.25	607.5
ARROW	12	135		0.10	162.0
PED. SIGNAL				1.00	
CONTROLLER	1	100		1.00	100.0
ILLUM. SIGN				0.05	
FLASHER				0.05	
ENERGY COSTS TO: VILLAGE OF FLOSSMOOR, 2800 FLOSSMOOR ROAD, FLOSSMOOR, IL 60422					TOTAL= 2692.0
ENERGY SUPPLY	CONTACT: GREG TRIEMSTRA				
	PHONE: (708) 235-2331				
	COMPANY: COMMONWEALTH EDISON				

FILE NAME = P:\VP-08-1600-4\Design\2_Governors Hwy at Kedzie\Shht\SHHT009.dgn	USER NAME = #USER#	DESIGNED - NB/TCM	REVISED -
		DRAWN - NB/TCM	REVISED -
	PLOT SCALE = 1.0000 "/ IN.	CHECKED - NB/TCM	REVISED -
	PLOT DATE = 1/27/2009	DATE - 01/23/2009	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING CABLE PLAN GOVERNOR HIGHWAY AT KEDZIE AVENUE

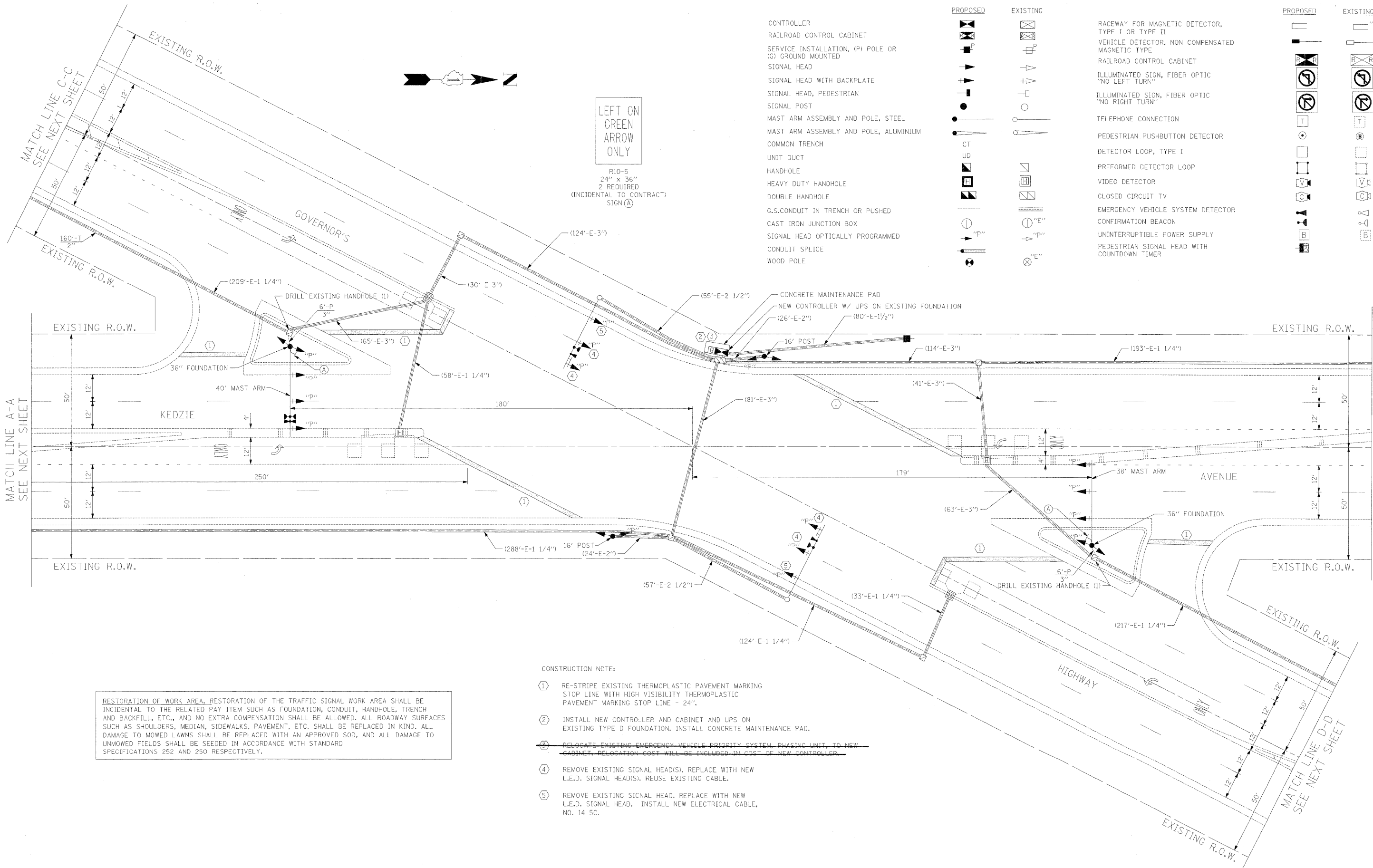
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			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60609		

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING		PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]	RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]	VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]	[Symbol]
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNTED	[Symbol]	[Symbol]	RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]	TELEPHONE CONNECTION	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]	PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]	DETECTOR LOOP, TYPE I	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINIUM	[Symbol]	[Symbol]	PREFORMED DETECTOR LOOP	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]	VIDEO DETECTOR	[Symbol]	[Symbol]
UNIT DUCT	[Symbol]	[Symbol]	CLOSED CIRCUIT TV	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]	EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]	CONFIRMATION BEACON	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]	UNINTERRUPTIBLE POWER SUPPLY	[Symbol]	[Symbol]
G.S.CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]	PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	[Symbol]	[Symbol]
CAST IRON JUNCTION BOX	[Symbol]	[Symbol]			
SIGNAL HEAD OPTICALLY PROGRAMMED	[Symbol]	[Symbol]			
CONDUIT SPLICE	[Symbol]	[Symbol]			
WOOD POLE	[Symbol]	[Symbol]			

LEFT ON GREEN ARROW ONLY

R10-5
24" x 36"
2 REQUIRED
(INCIDENTAL TO CONTRACT)
SIGN (A)



CONSTRUCTION NOTE:

- ① RE-STRIPE EXISTING THERMOPLASTIC PAVEMENT MARKING STOP LINE WITH HIGH VISIBILITY THERMOPLASTIC PAVEMENT MARKING STOP LINE - 24".
- ② INSTALL NEW CONTROLLER AND CABINET AND UPS ON EXISTING TYPE D FOUNDATION. INSTALL CONCRETE MAINTENANCE PAD.
- ③ ~~RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CABINET. RELOCATION COST WILL BE INCLUDED IN COST OF NEW CONTROLLER.~~
- ④ REMOVE EXISTING SIGNAL HEAD(S), REPLACE WITH NEW L.E.D. SIGNAL HEAD(S). REUSE EXISTING CABLE.
- ⑤ REMOVE EXISTING SIGNAL HEAD, REPLACE WITH NEW L.E.D. SIGNAL HEAD. INSTALL NEW ELECTRICAL CABLE, NO. 14 SC.

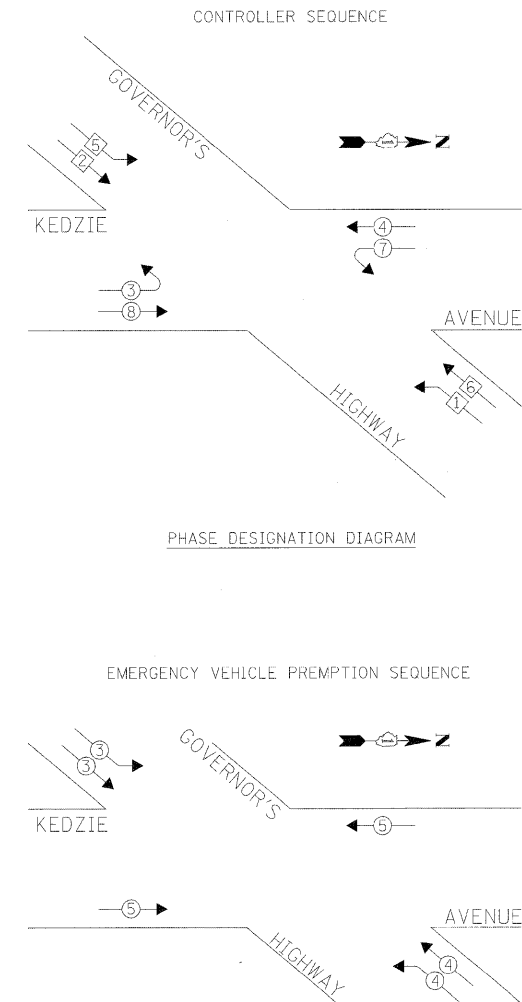
RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL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

FILE NAME = P:\P-08-1620-4\Design\2.Governors Hwy at Kedzie\Sht\SH1010.DGN	USER NAME = #USER# Kedzie\Sht\SH1010.DGN	DESIGNED - NB/TCM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TRAFFIC SIGNAL PLAN GOVERNOR'S HIGHWAY AT KEDZIE AVENUE (SHEET 1 OF 2)		F.A.U. RTE. 2820	SECTION 2009-011 TS	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 10
PLOT SCALE = 20.0000' / 1" IN.	PLOT DATE = 1/27/2009	CHECKED - NB/TCM	REVISED -		SCALE: 1"=20'	SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60G09		
		DATE - 01/23/2009	REVISED -								

Rev.

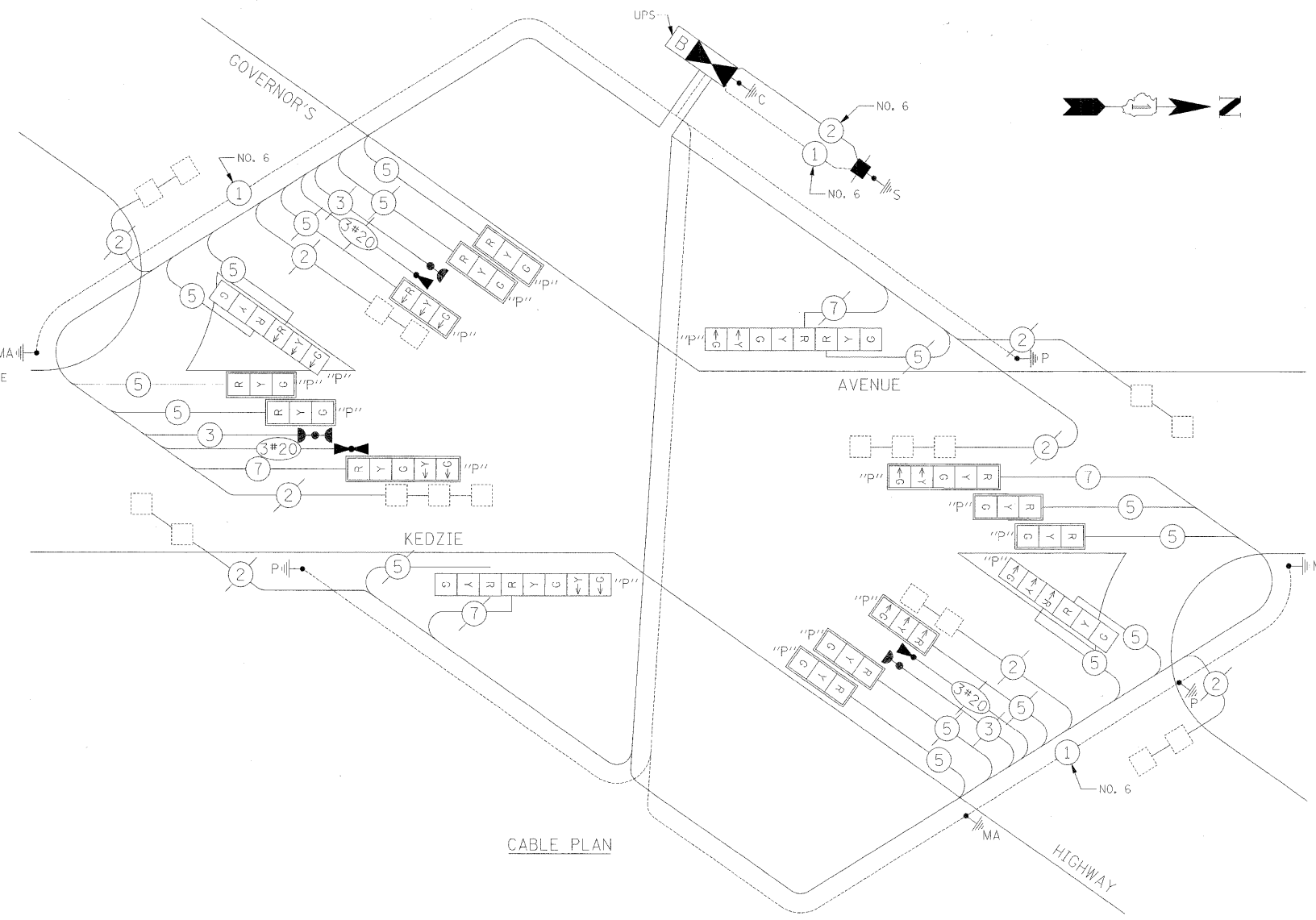
CABLE PLAN LEGEND

PROPOSED	EXISTING	
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
		VEHICLE DETECTOR, INDUCTION LOOP
		DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
		GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
		GROUND ROD AT POST OR MAST ARM POLE
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F & SM12F
		MICROWAVE VEHICLE SENSOR
		VIDEO DETECTOR
		CLOSED CIRCUIT TV
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		UNINTERRUPTIBLE POWER SUPPLY
		PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER



LEGEND

	SINGLE ENTRY PHASE
	DUAL ENTRY PHASE
	OVERLAP
	PEDESTRIAN PHASE
	NUMBER REFERS TO ASSOCIATED PHASE



SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	QUANTITY	UNIT	ITEM
40	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	10	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION OPTICALLY PROGRAMMED, MAST ARM MOUNTED
1	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION OPTICALLY PROGRAMMED, MAST ARM MOUNTED
1	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	2	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-3 SECTION OPTICALLY PROGRAMMED, BRACKET MOUNTED
1	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	2	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION OPTICALLY PROGRAMMED, BRACKET MOUNTED
1	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
18	SQ FT	SIGN PANEL - TYPE 1	8	EACH	INDUCTIVE LOOP DETECTOR
343	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	* 3	EACH	LIGHT DETECTOR
686	SQ FT	THERMOPLASTIC PAVEMENT MARKING REMOVAL	* 1	EACH	LIGHT DETECTOR AMPLIFIER
12	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	4058	EACH	REMOVE ELECTRIC CABLE FROM CONDUIT
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	2	EACH	REMOVE EXISTING CONCRETE FOUNDATION
1	EACH	UNINTERRUPTIBLE POWER SUPPLY	102.8	SQ FT	TEMPORARY INFORMATION SIGNING
632	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	1	EACH	SERVICE INSTALLATION, POLE MOUNT
2356	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C			
650	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C			
97	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C			
794	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C			
* 323	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED			
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.			
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.			
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.			
22	FOOT	CONCRETE FOUNDATION, TYPE E 36" DIAMETER			
2	EACH	DRILL EXISTING HANDHOLE			

* 100% COST TO VILLAGE OF FLOSSMOOR

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	20	17	0.50	170.00	
(YELLOW)	20	25	0.25	125.00	
(GREEN)	20	15	0.25	75.00	
ARROW	8	12	0.10	9.60	
PED. SIGNAL	-	25	1.00	0.00	
CONTROLLER	1	100	1.00	100.00	
ILLUM. SIGN			0.05	-	
FLASHER			0.05	-	

ENERGY COSTS TO: VILLAGE OF FLOSSMOOR 2800 FLOSSMOOR ROAD FLOSSMOOR, IL 60422 TOTAL= 479.60

ENERGY SUPPLY CONTACT: GREG TRIEMSTRA (708) 235-2331 COMMONWEALTH EDISON

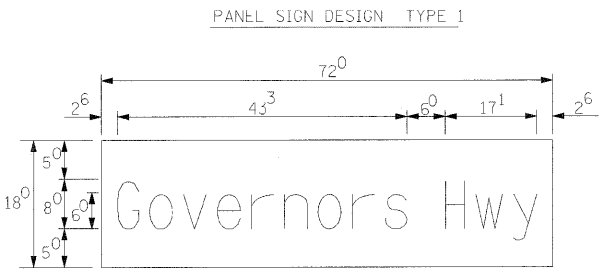
FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'±L-2'± (6m±L-0.6m)±
E - M. ARM POLE	2 (1.0)	SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

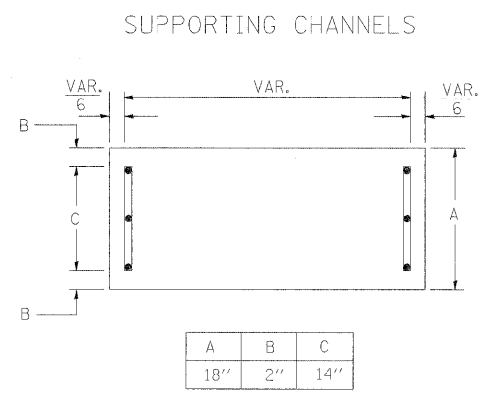
PROPOSED CABLE PLAN GOVERNOR'S HIGHWAY AND KEDZIE AVENUE

FILE NAME = P:\P-08-1600-4\Design\2-Governors Hwy at Kedzie\Sh1\SH1212.dgn	USER NAME = USER#	DESIGNED - NB/TCM	REVISED -	SHEET NO. OF SHEETS	STA. TO STA.	F.A.U R.T.E. 2820	SECTION 2009-011 TS	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 12	CONTRACT NO. 60G09
PLOT SCALE = 1/8" = 1' IN.	PLOT DATE = 1/27/2009	CHECKED - NB/TCM	REVISED -	SCALE: NTS		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

EXAMPLE, 2³ DENOTES 3/8"



____ Sq. M. each
 9.00 Sq. Ft. each
 2 Required
 Design Series C



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

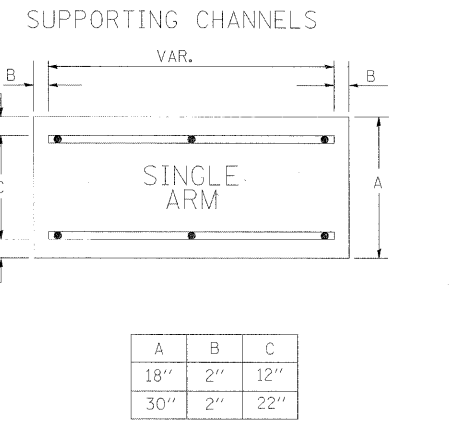
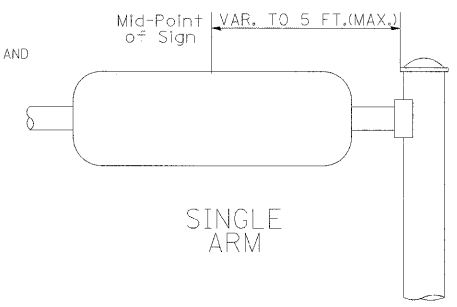
FIRST LETTER	SECOND LETTER															
	a c d e		b h i k l		f w		j		s t		v y		x		z	
	g o q	m n p r u														
A W X	12	14	14	15	12	14	06	10	11	14	06	10	11	12	12	14
B	14	15	20	21	14	15	11	12	14	15	12	14	12	14	16	17
C E G	14	15	20	21	12	14	06	10	12	14	12	14	14	15	14	15
D O Q R	14	15	20	21	14	15	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

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	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

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. WALWATOSA, 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.

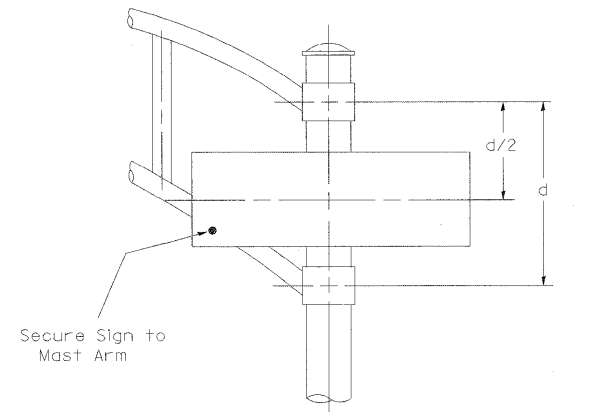


Lower Case To Lower Case
 Spacing Chart 6 Inch Series "C & D"

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

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	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	05	06	12	14	14	15	11	12	14	15	12	14
8	16	17	16	17	14	15	12	14	14	15	16	17	12	14	16	17	14	15	14	15



DUAL ARM
 SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM
 Shall be used. See Note #5.