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REGINA WEBSTER
AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60631-1369



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

PREPARED BY: Shane Tamm 1/30/09
TRAFFIC ENGINEER DATE

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

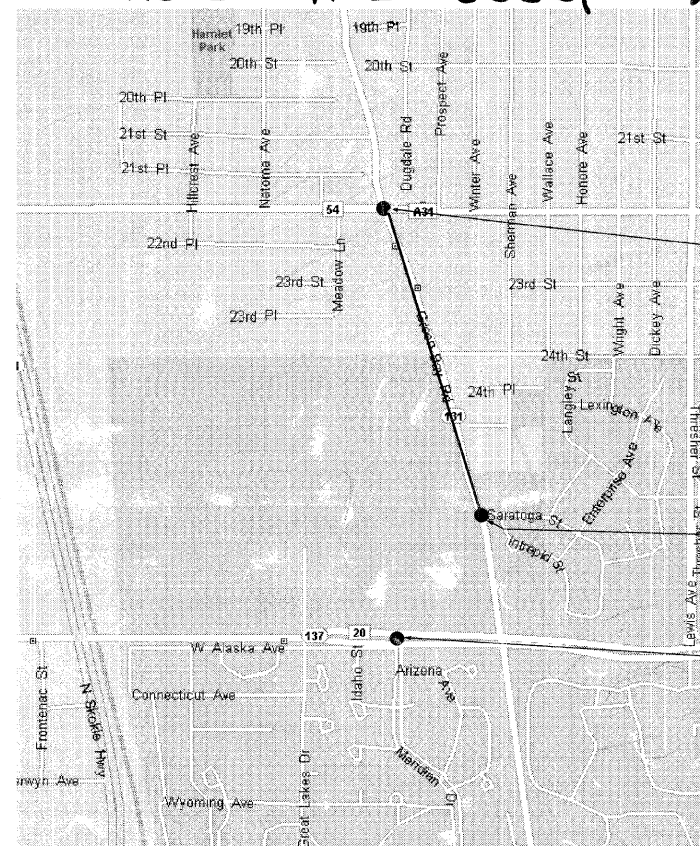
- STANDARDS
- STANDARD 424001-05
 - STANDARD 442101-07
 - STANDARD 606001-04
 - STANDARD 701001-02
 - STANDARD 701006-03
 - STANDARD 701011-02
 - STANDARD 701101-02
 - STANDARD 701106-02
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 - STANDARD 701601-06
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 - STANDARD 877001-04
 - STANDARD 878001-07
 - STANDARD 880001-01
 - STANDARD 880006-01
 - STANDARD 886001-01

CONTRACT NO. 60G02

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1 HIGHWAY SAFETY IMPROVEMENT PROJECT TRAFFIC SIGNAL MODERNIZATION FAU2711, FAP352 AT (3) VARIOUS (IL 131, IL 137) SIGNALIZED INTERSECTIONS IN LAKE COUNTY NORTH CHICAGO, ILLINOIS

SECTION 2009-006 TS
C-91-316-09
LAKE COUNTY
PROJECT: H31P-0005(668)



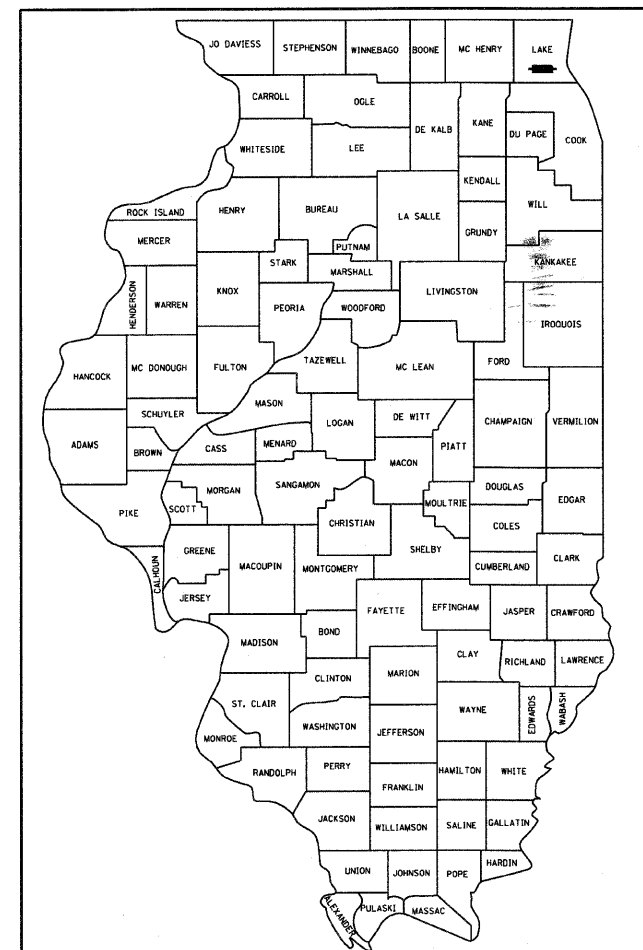
IL 131
& MLK DR.

IL 131
& SARATOGA AVENUE

IL 137
& MERIDAN DRIVE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-006 TS	LAKE	21	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60G02		

D-91-316-09



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan. 30 20 09
Dean M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 27, 20 09
Charles J. Ingarsoll
ENGINEER OF DESIGN AND ENVIRONMENT
March 27, 20 09
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS



Signed James P. STURROCK, P.E. IL Lic. No. 062-051471
Expires 11-30-2009
Date 01/29/09

PROFESSIONAL DESIGN FIRM No. 062-051471
Expires 11-30-2009

SUMMARY OF QUANTITIES

				FAP 352 90% FED. 10% STATE	FAU 2711 90% FED. 10% STATE	FAU 2711 90% FED. 5% STATE 5% LAKE CO.	100% NORTH CHICAGO
LOCATION OF WORK				URBAN			
SUMMARY OF QUANTITIES				CONSTRUCTION CODE	Y031 1F	Y031 1F	Y031 1F
CODE NO.	ITEM	UNIT	GRAND TOTAL	MERIDIAN DR. & IL RT. 137	SARATOGA & IL RT. 131	MLK & IL RT. 131	Y031 3D MLK & IL RT. 131
20200100	EARTH EXCAVATION	CU YD	40			40	
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A, 4"	SQ YD	90			90	
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	12			12	
40800010	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	10			10	
44000500	COMBINATION CURB & GUTTER REMOVAL	FOOT	250.0			250.0	
44003100	MEDIAN REMOVAL AND	SQ FT	650.0			650.0	
44200974	CLASS B PATCHES, TYPE III, 10' INCH	SQ YD	90.0			90.0	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	2	2	2.00	
67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.34	
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.33	0.33	0.34	
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	0.33	0.33	0.34	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.33	0.33	0.34	
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.33	0.33	0.34	
** 72000100	SIGN PANEL - TYPE 1	SQ FT	37.5	37.5			
** 72000200	SIGN PANEL - TYPE 2	SQ FT	110.0	27.5	27.5	55	
** 72400310	REMOVE SIGN PANEL -TYPE 1	SQ FT	37.5	37.5			
** 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	438.0	220.0	218.0		
** 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	485.0			485.0	
** 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	570.0			570.0	
** 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	385.0	210.0	95.0	80.0	
** 78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	1055.0	530.0	260.0	265.0	
20062450	SAWING PAVEMENT (FULL DEPTH)	FOOT	250.0			250.0	
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	891.0		295.0	596.0	
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	202.0	36.0	28.0	138.0	
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10.0			10.0	
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	430.0			430.0	
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	579.0		143.0	436.0	
81400100	HANDHOLE	EACH	8		1	7	
81400200	HEAVY-DUTY HANDHOLE	EACH	4			4	
81400300	DOUBLE HANDHOLE	EACH	1			1	
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1033.0	36.0	323.0	674.0	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	1	1		
85700200	FULL- ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2		1	1	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	335.0		335		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	735.0		335		400
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	4557.0	1759.0	606.0	2192.0	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2241.0		200.0	2041.0	
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2074.0			2074.0	
87301805	ELECTRIC CABLE IN CONDUIT, NO. 6 2C (SERVICE)	FOOT	446.0		403.0	43.0	
87900200	DRILL EXISTING HANDHOLE	EACH	10	2	8		
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1		1		
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	8	6	2		
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2		1	1	
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1		1		
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1			1	
87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1	1			
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	2			2	
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1		1		
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1	1			
87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1			1	
87700260	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1			1	
87700280	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	1			1	
87700300	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1			1	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	4			4.0	
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4			4.0	
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	67.0	15.0	15.0	37.0	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	84.0	15.0	15.0	54.0	
88030050	SIGNAL HEAD, L E D , 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	10	8	2		
88030020	SIGNAL HEAD, L E D , 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	24	10	6	8	
88030100	SIGNAL HEAD, L E D , 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3		2	1	
88030110	SIGNAL HEAD, L E D , 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	9		2	7	
88030210	SIGNAL HEAD, L E D , 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	2			
88600100	INDUCTIVE LOOP DETECTOR	EACH	14		6	8	
88600100	DETECTOR LOOP, TYPE I	FOOT	755			755.0	
88102717	PEDESTRIAN SIGNAL HEAD, L E D , 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6	2	4		
88102747	PEDESTRIAN SIGNAL HEAD, L E D , 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1	1			
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	33	10	8	15	
88700200	LIGHT DETECTOR	EACH	2				2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1				1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	7	3	4		
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1			1	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3	1	1	1	
89502380	REMOVE EXISTING HANDHOLE	EACH	17			17	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9	2	2	5	
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	308.4	102.8	102.8	102.8	
X8050015	SERVICE INSTALLATION-POLE MOUNTED	EACH	2		1	1	
X8620020	UNINTERRUPTABLE POWER SUPPLY	EACH	3	1	1	1	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	1138.0		403.0	735.0	
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	400.0				400

*CITY OF NORTH CHICAGO
100% RESPONSIBLE FOR COSTS
** Specialty Items

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIX TYPE	AC TYPE	AIR VOIDS
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	PG 64-22	4% @ 70 CYRATIONS

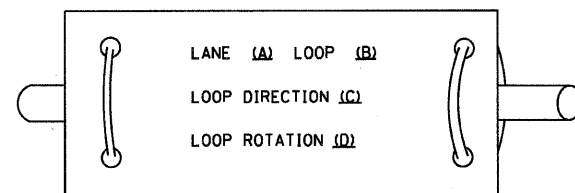
-THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE
QUANTITIES IS 112 LBS/SQYD/IN

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SUMMARY OF QUANTITIES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - DW	REVISED -					VAR.	2009-006 TS	LAKE	21	2
	PLOT SCALE = #SCALE#	CHECKED - JD	REVISED -									
	PLOT DATE = #DATE#	DATE - 01/29/09	REVISED -									
				SCALE: NONE		SHEET NO. 2 OF 21 SHEETS		STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

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 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

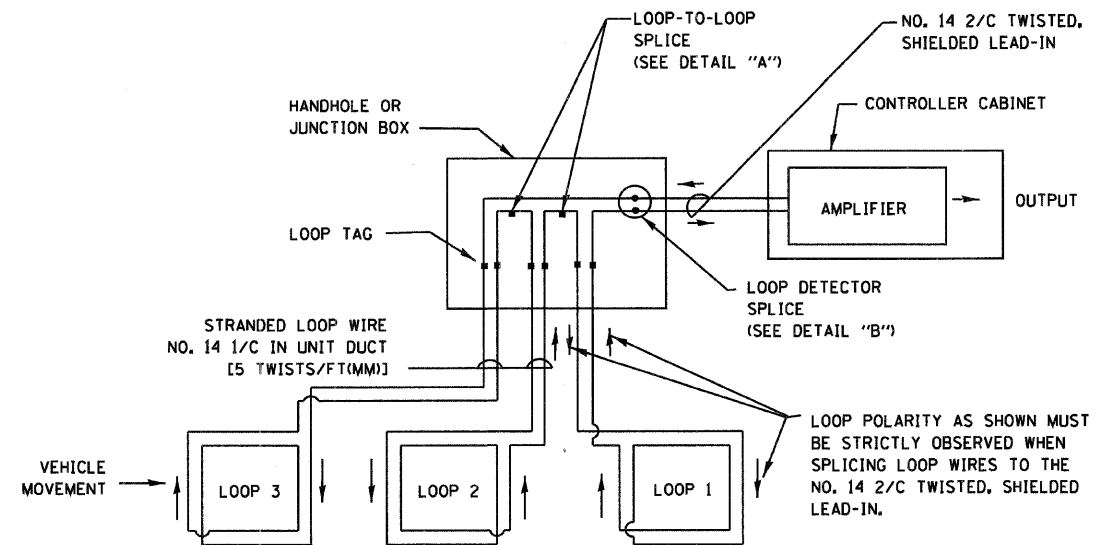


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

NOTE:

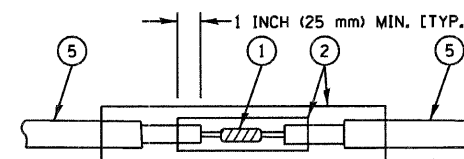
THE COMMONWEALTH EDISON MARKETING REPRESENTATIVE FOR THIS PROJECT IS:

NAME: AL AHERIES
TELEPHONE: (630) 691-4379

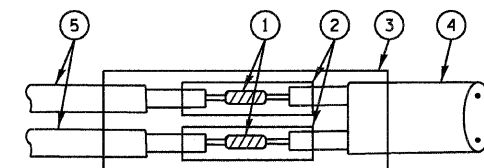


DETECTOR LOOP WIRING SCHEMATIC

- 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

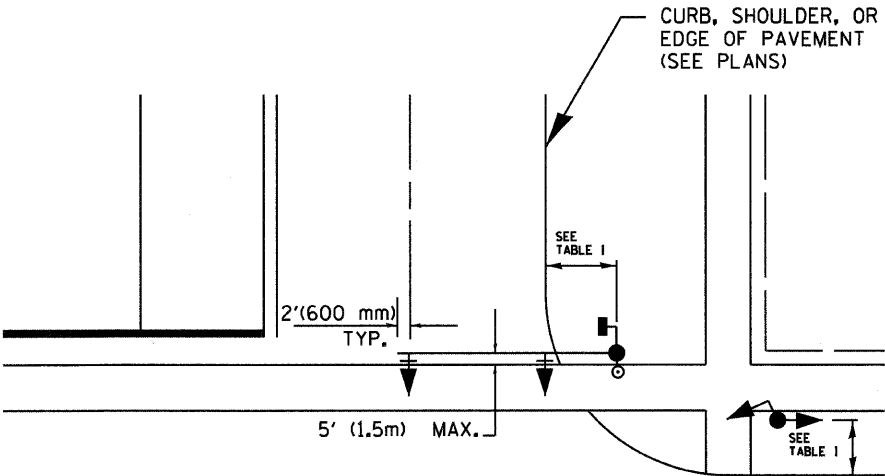
SCALE: VERT. NONE
HORIZ. 2009-006 TS
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

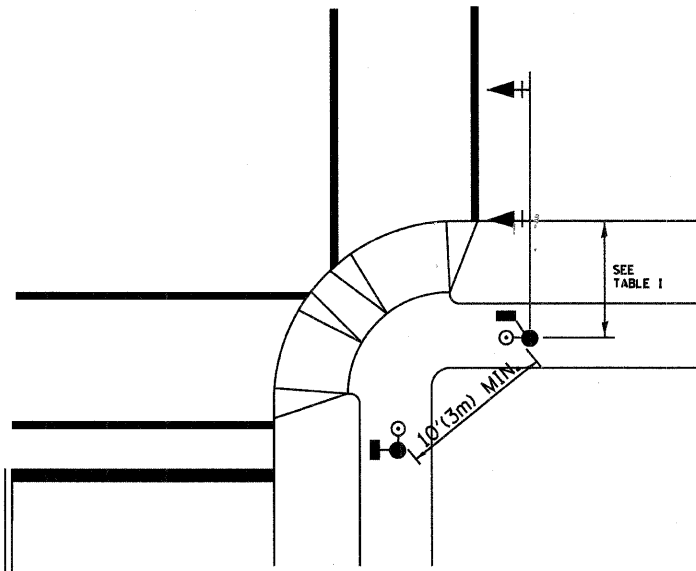
FILE NAME =		USER NAME = *USER*		DESIGNED - JS		REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		STANDARD TRAFFIC SIGNAL DESIGN DETAILS - SHEET 1 OF 4		F.A.P. RTE. SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
FILE		PLOT SCALE = *SCALE*		DRAWN - DW		REVISED -						VAR. 2009-006 TS		LAKE		21		3	
		PLOT DATE = *DATE*		CHECKED - JD		REVISED -				SCALE: NONE		SHEET NO. 3 OF 21 SHEETS		STA.		TO STA.		CONTRACT NO. 60G02	
		DATE - 01/29/09		DATE - 01/29/09		REVISED -						FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT			

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 PUSHBUTTON 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

2. 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.

3. 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.

4. 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

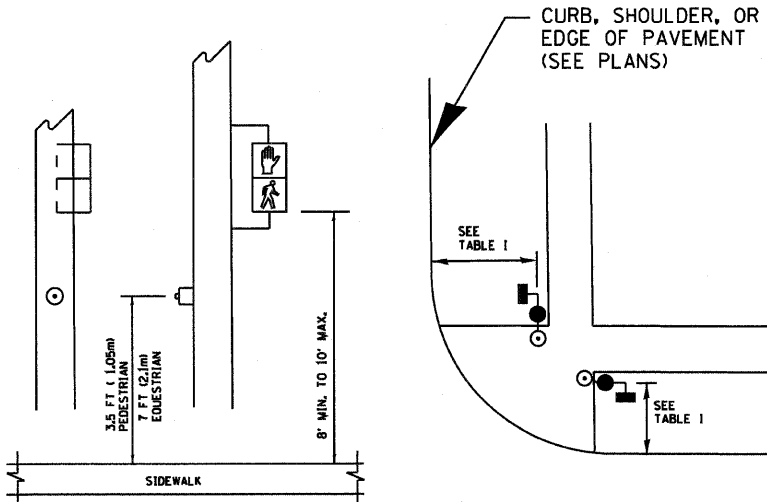


TABLE 1

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 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. NONE
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

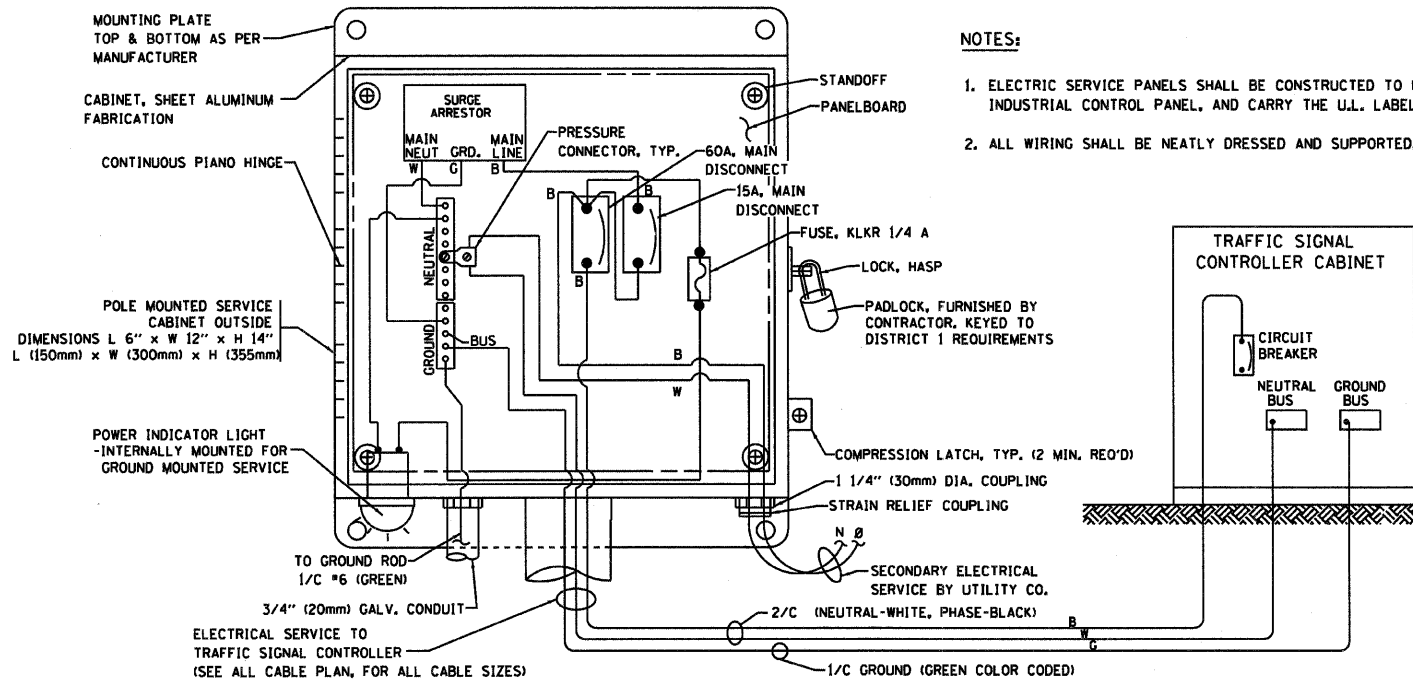
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	PLOT DATE = #DATE#	DATE - 01/29/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

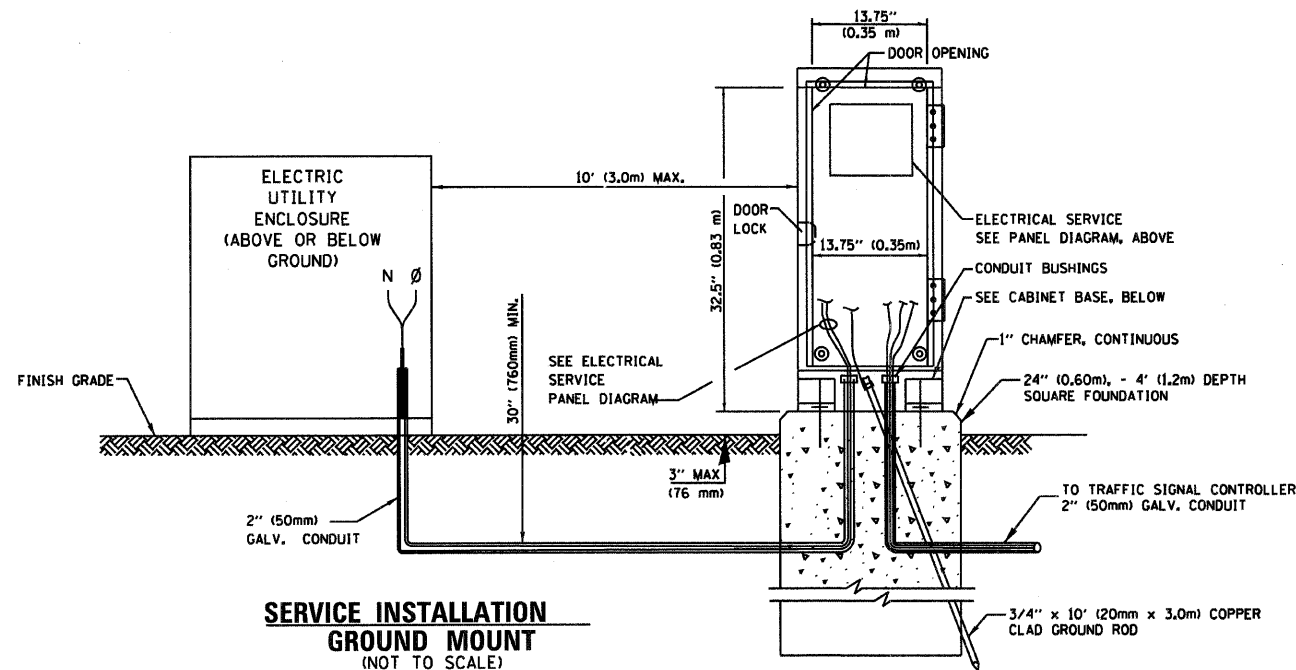
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS - SHEET 2 OF 4

SCALE: NONE SHEET NO. 4 OF 21 SHEETS STA. TO STA.

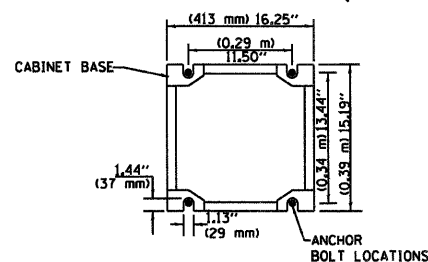
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-006 TS	LAKE	21	4
CONTRACT NO. 60G02				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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



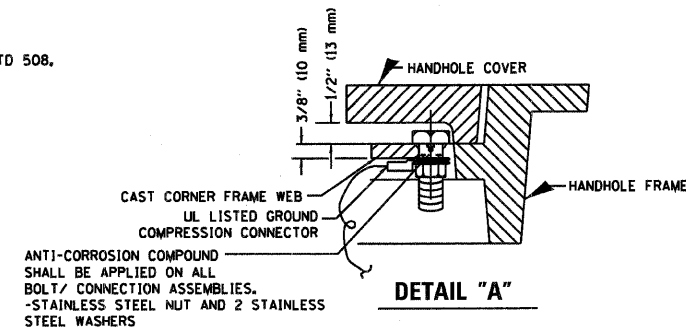
SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)



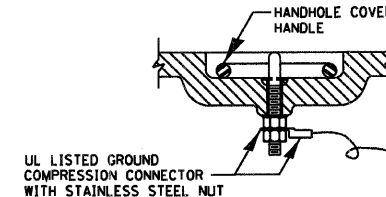
CABINET - BASE BOLT PATTERN (NOT TO SCALE)

NOTES:

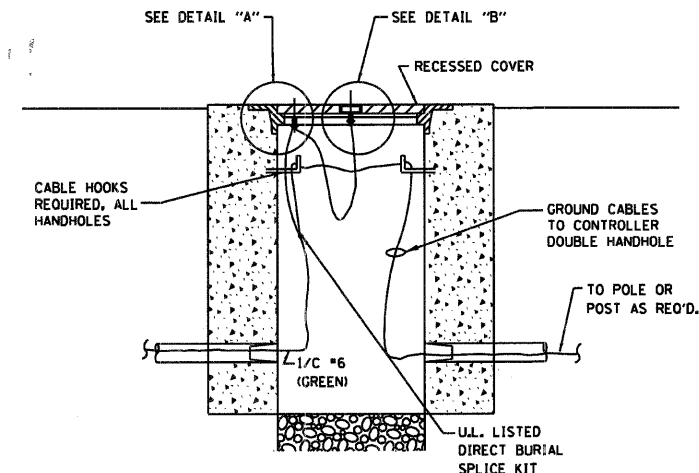
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



DETAIL "A"



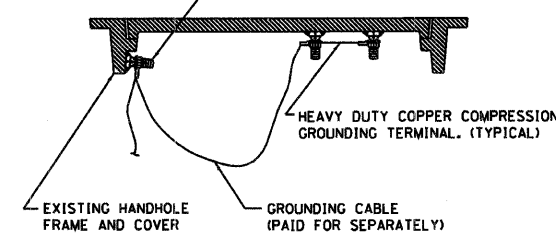
DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL)



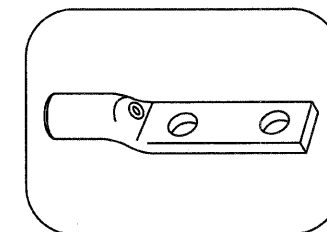
EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

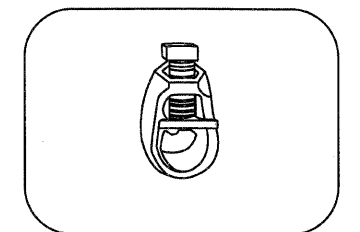
NOTES:

GROUNDING SYSTEM

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



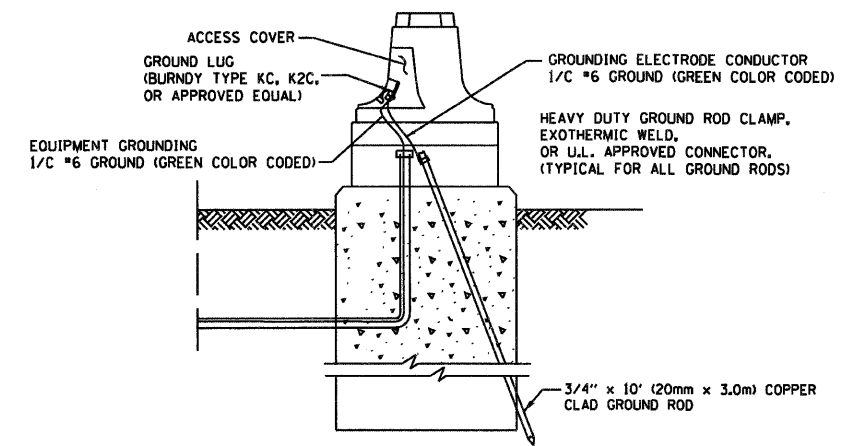
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YCHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

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)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

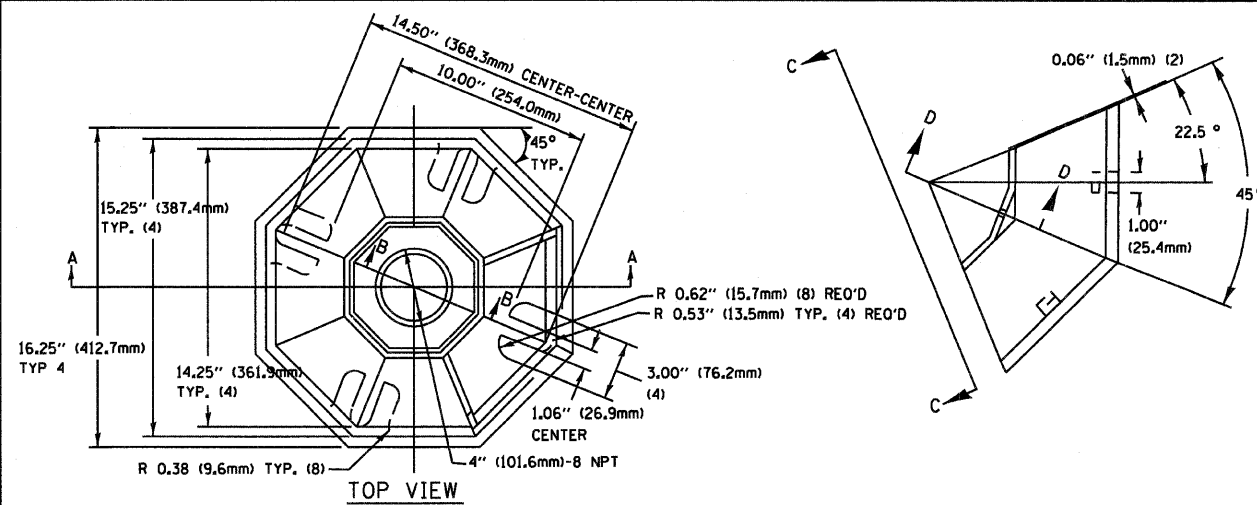
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-006 TS	LAKE	21	5
CONTRACT NO. 60G02				
FED. ROAD DIST. NO. ILLINOIS/FED. AID PROJECT				

FILE NAME =	USER NAME = *USER*	DESIGNED - JS	REVISED -
FILE		DRAWN - DW	REVISED -
	PLOT SCALE = *SCALE*	CHECKED - JD	REVISED -
	PLOT DATE = *DATE*	DATE - 01/29/09	REVISED -

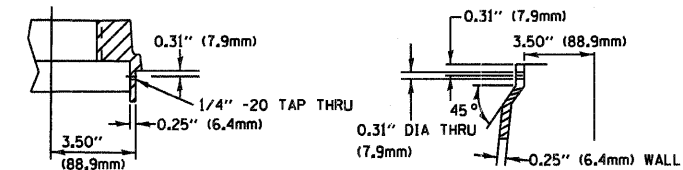
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL
DESIGN DETAILS - SHEET 3 OF 4

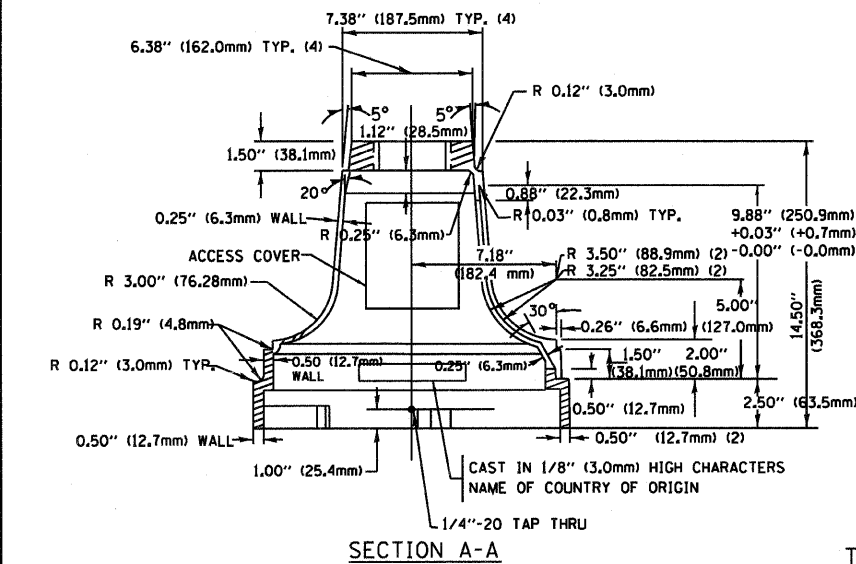
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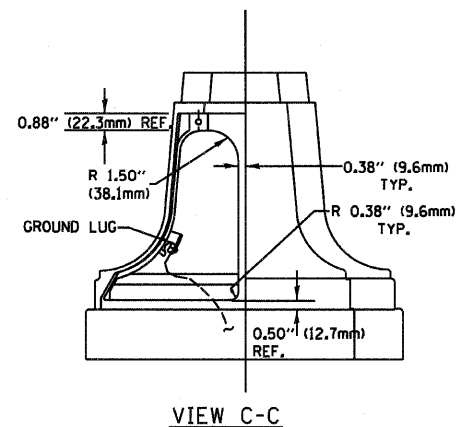
SECTION B-B



SECTION D-D

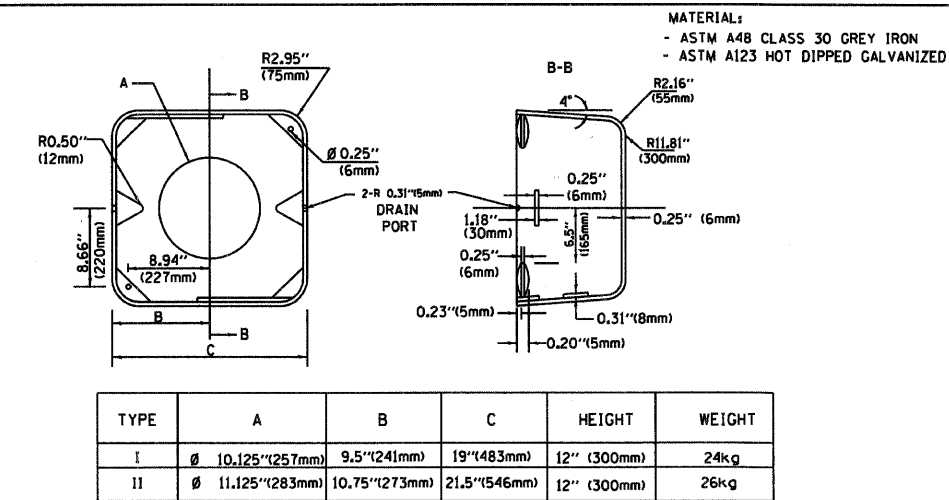


SECTION A-A



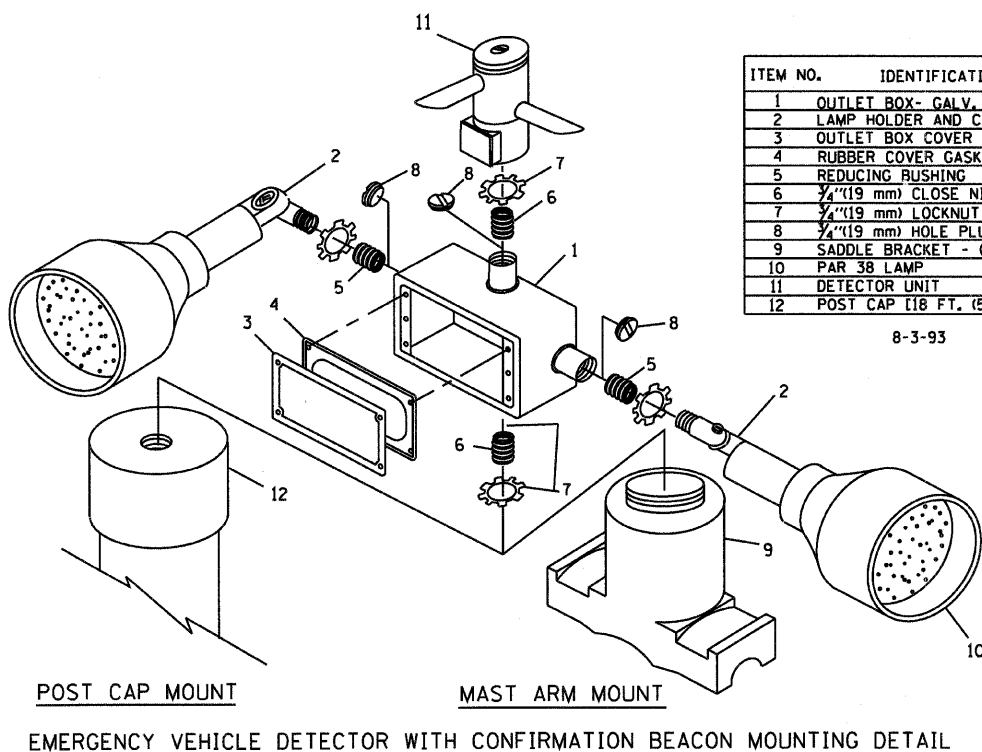
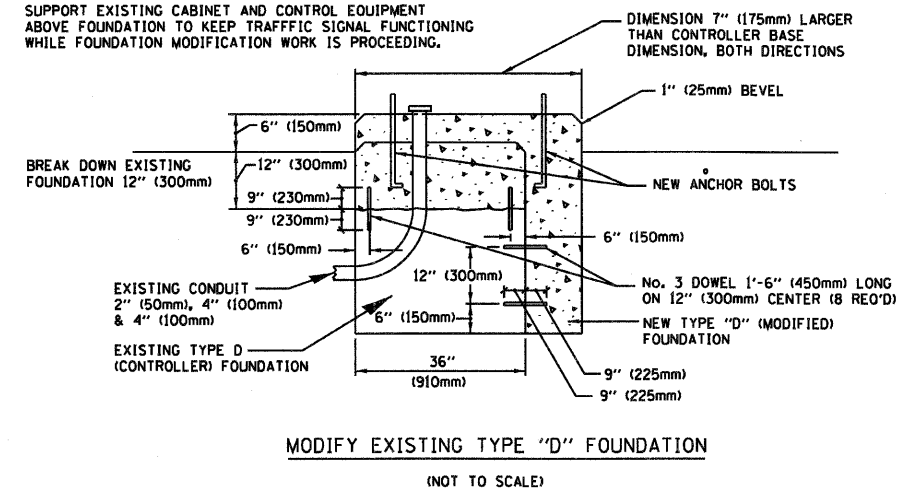
VIEW C-C

TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



SHROUD DETAIL

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT
ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING
WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.

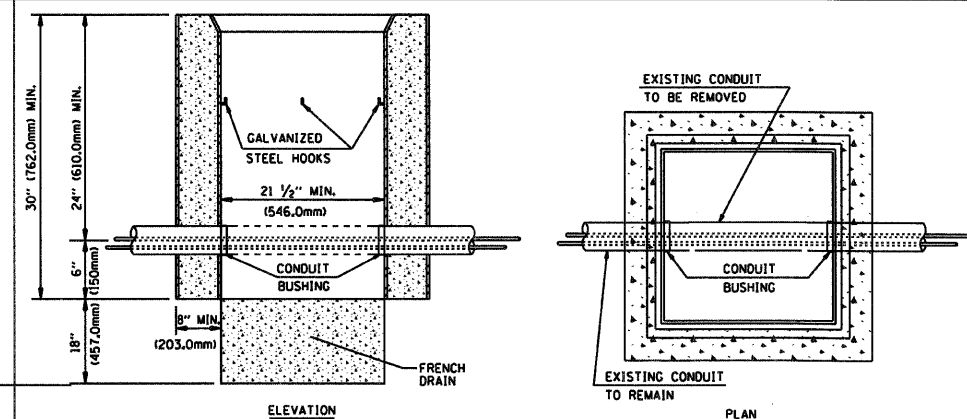
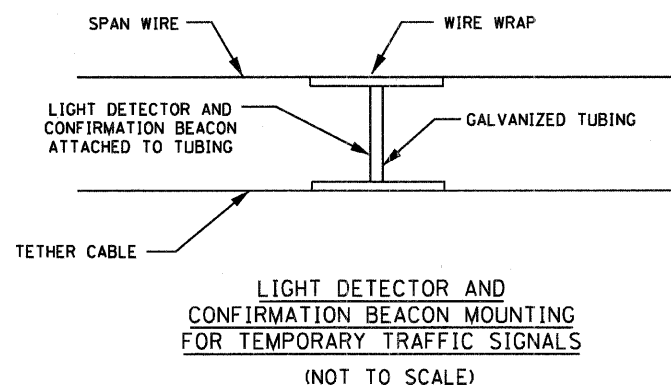


ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18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

8-3-93

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 C@N-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE
AND THE INSTALLATION OF THE CONDUIT BUSHING
SHALL BE INCIDENTAL TO THE HANDHOLE.

DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE HORIZ. 1-01-02	F.A.P. RTE. SECTION VAR. 2009-006 TS	COUNTY LAKE	TOTAL SHEETS 21	SHEET NO. 6
DRAWN BY: RWP DESIGNED BY: DAD CHECKED BY: DAZ SHEET 4 OF 4				
CONTRACT NO. 60G02				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

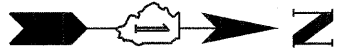
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS - SHEET 4 OF 4

SCALE: NONE SHEET NO. 6 OF 21 SHEETS STA. TO STA.

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 SEEDD IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

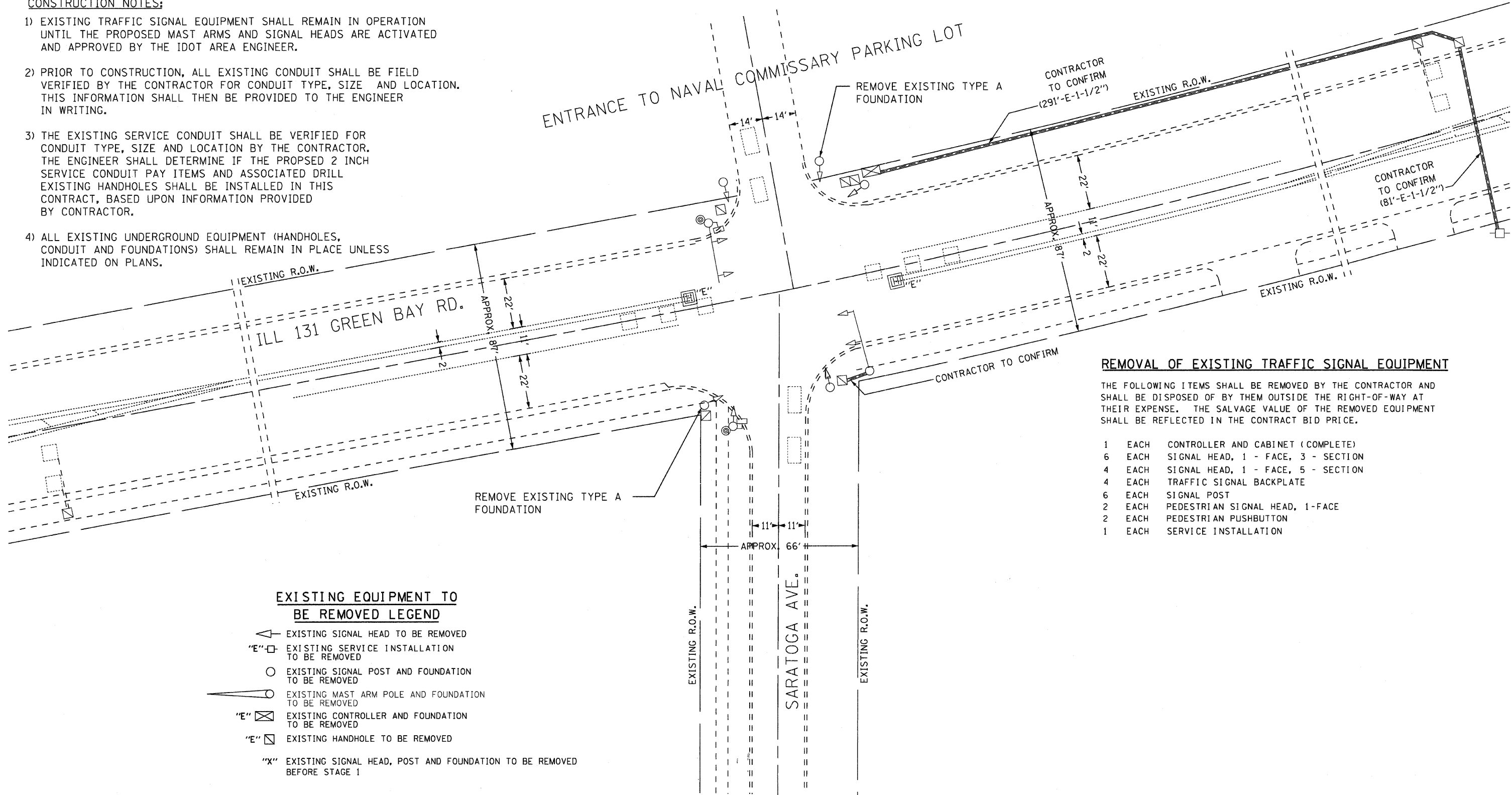
CONSTRUCTION NOTES:

- 1) EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL THE PROPOSED MAST ARMS AND SIGNAL HEADS ARE ACTIVATED AND APPROVED BY THE IDOT AREA ENGINEER.
- 2) PRIOR TO CONSTRUCTION, ALL EXISTING CONDUIT SHALL BE FIELD VERIFIED BY THE CONTRACTOR FOR CONDUIT TYPE, SIZE AND LOCATION. THIS INFORMATION SHALL THEN BE PROVIDED TO THE ENGINEER IN WRITING.
- 3) THE EXISTING SERVICE CONDUIT SHALL BE VERIFIED FOR CONDUIT TYPE, SIZE AND LOCATION BY THE CONTRACTOR. THE ENGINEER SHALL DETERMINE IF THE PROPOSED 2 INCH SERVICE CONDUIT PAY ITEMS AND ASSOCIATED DRILL EXISTING HANDHOLES SHALL BE INSTALLED IN THIS CONTRACT, BASED UPON INFORMATION PROVIDED BY CONTRACTOR.
- 4) ALL EXISTING UNDERGROUND EQUIPMENT (HANDHOLES, CONDUIT AND FOUNDATIONS) SHALL REMAIN IN PLACE UNLESS INDICATED ON PLANS.



REGINA WEBSTER
AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
560 North Cicero Avenue, Suite 500
Chicago, Illinois 60631-1569

RWA
Regina Webster & Associates, Inc.



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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 AND CABINET (COMPLETE) |
| 6 | EACH | SIGNAL HEAD, 1 - FACE, 3 - SECTION |
| 4 | EACH | SIGNAL HEAD, 1 - FACE, 5 - SECTION |
| 4 | EACH | TRAFFIC SIGNAL BACKPLATE |
| 6 | EACH | SIGNAL POST |
| 2 | EACH | PEDESTRIAN SIGNAL HEAD, 1-FACE |
| 2 | EACH | PEDESTRIAN PUSHBUTTON |
| 1 | EACH | SERVICE INSTALLATION |

EXISTING EQUIPMENT TO
BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING SIGNAL HEAD, POST AND FOUNDATION TO BE REMOVED BEFORE STAGE 1

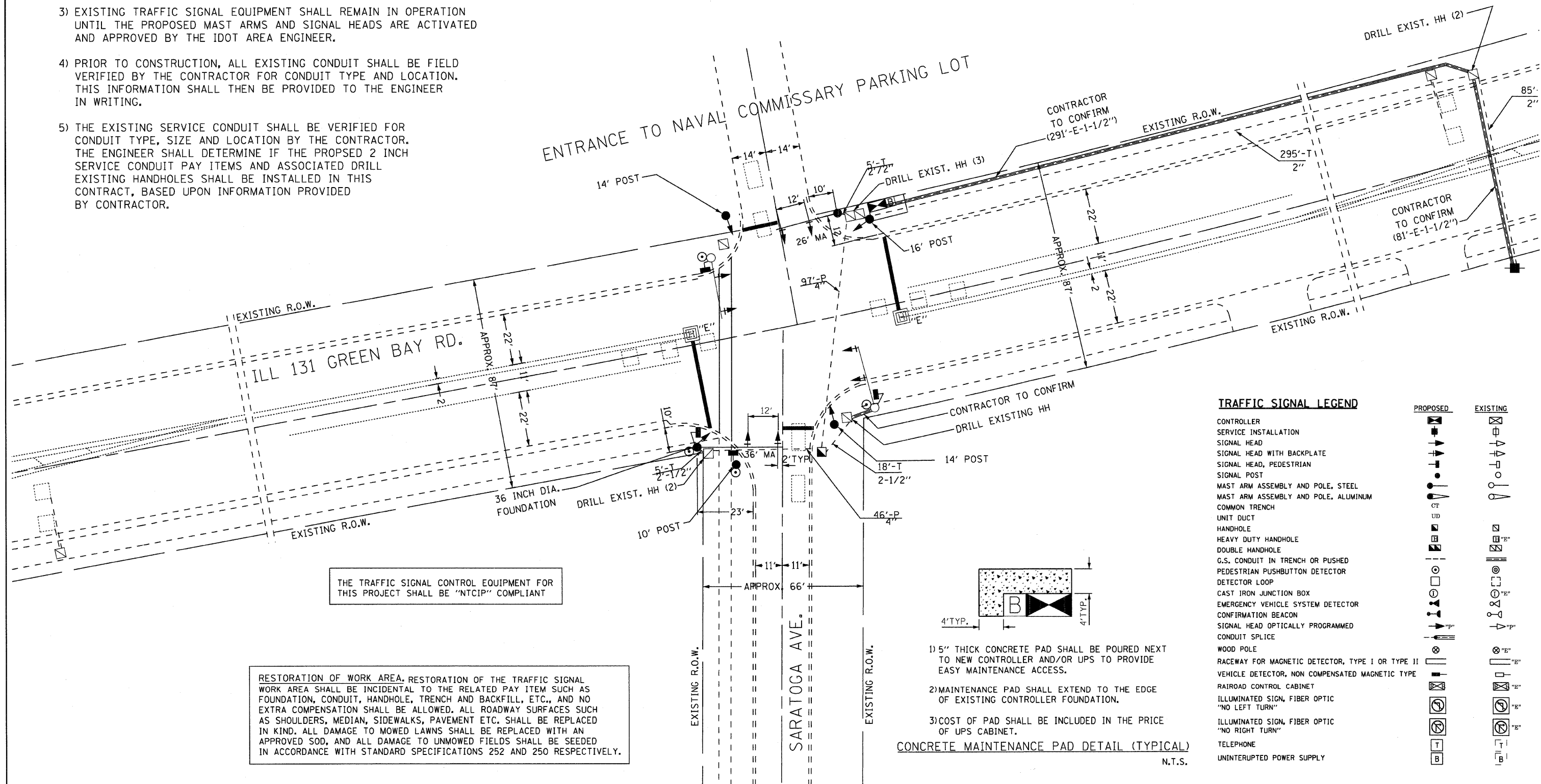
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#FILE#		DRAWN - DW	REVISED -			VAR.	2009-006 TS	LAKE	21	7
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	PLOT DATE = #DATE#	DATE - 01/29/09	REVISED -							
				SCALE: 1"=20'	SHEET NO. 7 OF 21 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

CONSTRUCTION NOTES:

- 1) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- 2) ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF LED SIGNAL INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM UNINTERRUPTABLE POWER SUPPLY.
- 3) EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL THE PROPOSED MAST ARMS AND SIGNAL HEADS ARE ACTIVATED AND APPROVED BY THE IDOT AREA ENGINEER.
- 4) PRIOR TO CONSTRUCTION, ALL EXISTING CONDUIT SHALL BE FIELD VERIFIED BY THE CONTRACTOR FOR CONDUIT TYPE AND LOCATION. THIS INFORMATION SHALL THEN BE PROVIDED TO THE ENGINEER IN WRITING.
- 5) THE EXISTING SERVICE CONDUIT SHALL BE VERIFIED FOR CONDUIT TYPE, SIZE AND LOCATION BY THE CONTRACTOR. THE ENGINEER SHALL DETERMINE IF THE PROPOSED 2 INCH SERVICE CONDUIT PAY ITEMS AND ASSOCIATED DRILL EXISTING HANDHOLES SHALL BE INSTALLED IN THIS CONTRACT, BASED UPON INFORMATION PROVIDED BY CONTRACTOR.

REGINA WEBSTER
AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
560 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369

RWA
Regina Webster & Associates, Inc.



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT

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.

TRAFFIC SIGNAL LEGEND

PROPOSED	EXISTING

1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.

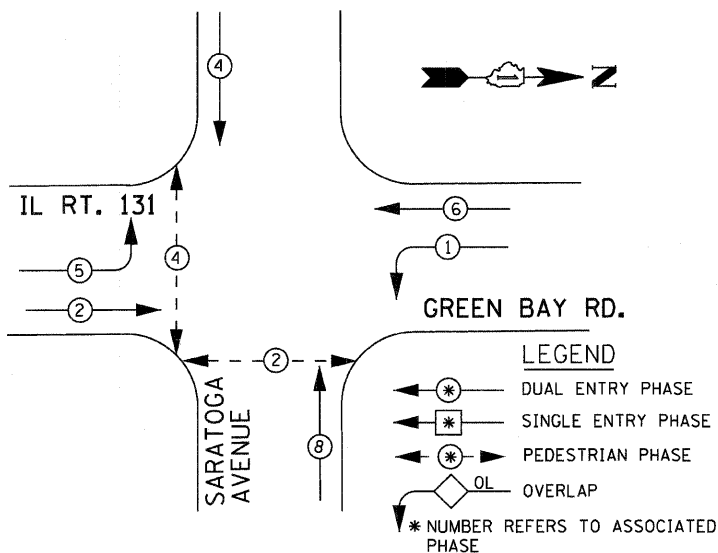
2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.

3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)
N.T.S.

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 131 (GREEN BAY RD.) AND SARATOGA AVE. TRAFFIC SIGNAL MODERNIZATION PLAN	F.A.P. RTE. VAR.		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - DW	REVISED -				2009-006 TS	LAKE	21	8	
		CHECKED - JD	REVISED -								
		DATE - 01/29/09	REVISED -								
						SCALE: 1"=20'	SHEET NO. 8 OF 21 SHEETS	STA.	TO STA.	CONTRACT NO. 60G02	
						FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

CONTROLLER SEQUENCE

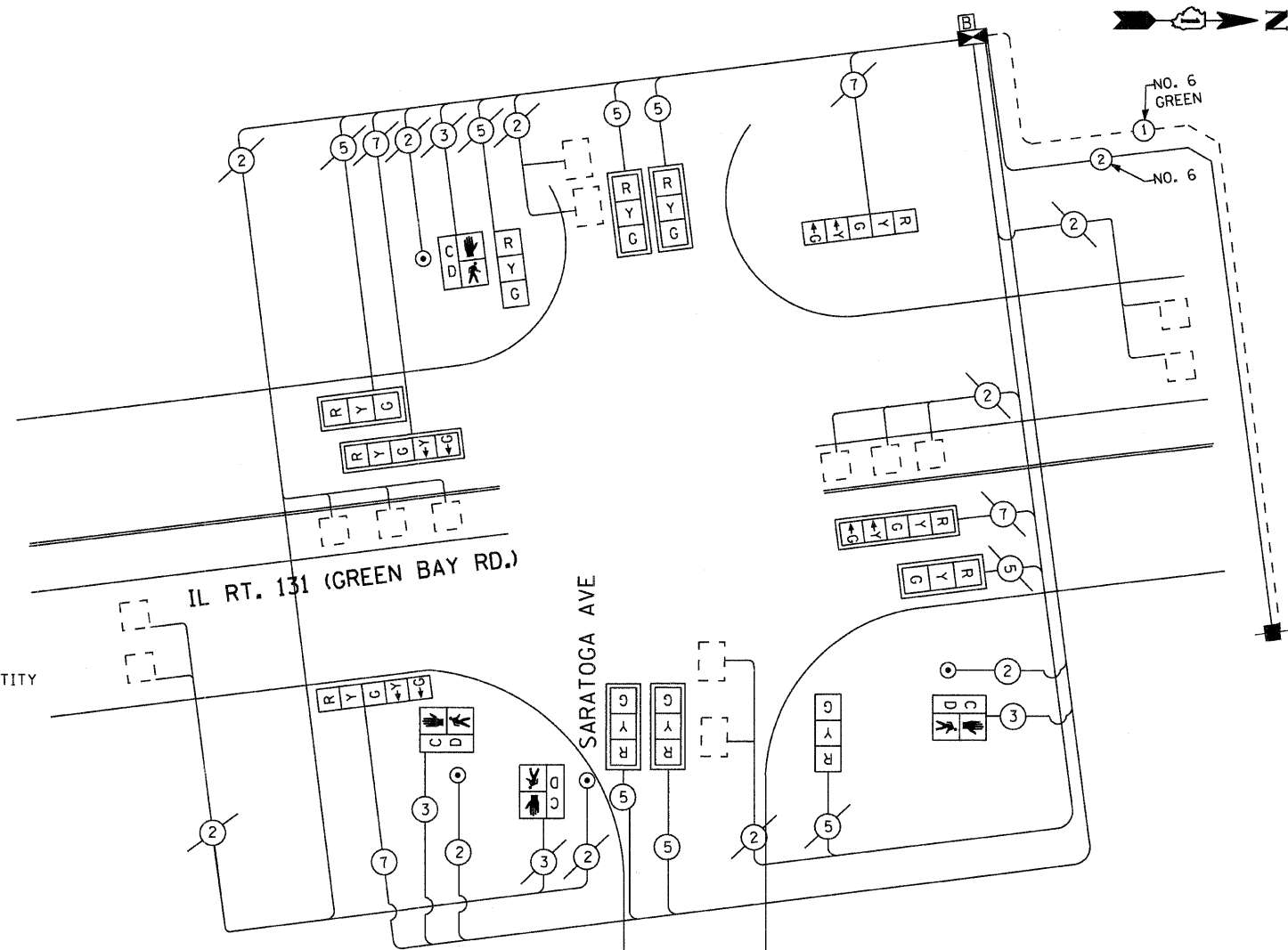


PHASE DESIGNATION DIAGRAM

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNIT	QUANTITY
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	218
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	95
THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	260
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	295
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	28
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	143
HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	323
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULLY ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	335
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	335
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	606
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	200
ELECTRIC CABLE IN CONDUIT, NO. 6 2C	FOOT	403
DRILL EXISTING HANDHOLE	EACH	8
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
INDUCTIVE LOOP DETECTOR	EACH	6
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED	EACH	4
WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	102.8
SERVICE INSTALLATION, POLE MOUNT	EACH	1
UNINTERRUPTABLE POWER SUPPLY (UPS)	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	403
SIGN PANEL - TYPE II	SQ FT	27.5



CABLE PLAN LEGEND

CABLE PLAN

EXISTING PROPOSED

		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION W/ COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
		DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.

EXISTING PROPOSED

		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 & SM12F
		UNINTERRUPTED POWER SUPPLY

I. D. O. T.					
TRAFFIC SIGNAL INSTALLATION					
ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	252	25	0.05	-
VIDEO SYSTEM	-	150	-	1.00	-
FLASHER LED					

TOTAL = 431.6

ENERGY COSTS-
BILLED TO: NORTH CHICAGO
1850 LEWIS AVE
NORTH CHICAGO, IL 60064
NEW BUSINESS
CONTACT
PHONE 1-866-639-3552
COMPANY COMED

FOUNDATION	DEPTH	DEPTH (FT.)	CABLE SLACK	(FT.)	VERTICAL	(FT.)
TYPE A - POST	4		HANDHOLE	6.5	ALL FOUNDATIONS	3.5
D - CONTROLLER	4		DOUBLE HANDHOLE	13	MAST ARM (L) POLE	=20' H-2
E - MAST ARM POLE			SIGNAL POST	2	BRACKET MOUNTED	13
30"	15		CONTROLLER CAB.	1	PED. PUSHBUTTON	4
36"	15		FIBER OPTIC	13	ELECTRICAL SERVICE	13.5
42"	25		ELECTRICAL SERVICE	1	SERVICE TO GROUND	13.5
			GROUND CABLE	1	POSTMOUNTED	6

FILE NAME =	USER NAME = *USER*	DESIGNED - JS	REVISED -
FILEL		DRAWN - DW	REVISED -
	PLOT SCALE = *SCALE*	CHECKED - JD	REVISED -
	PLOT DATE = *DATE*	DATE - 01/29/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 131 (GREEN BAY RD) AND SARATOGA AVE. - SCHEDULE OF
QUANTITIES, CABLE PLAN & PHASE DESIGNATION DIAGRAM

SCALE: NONE SHEET NO. 9 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-006 TS	LAKE	21	9
CONTRACT NO. 60G02				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ISLAND TO BE REMOVED

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

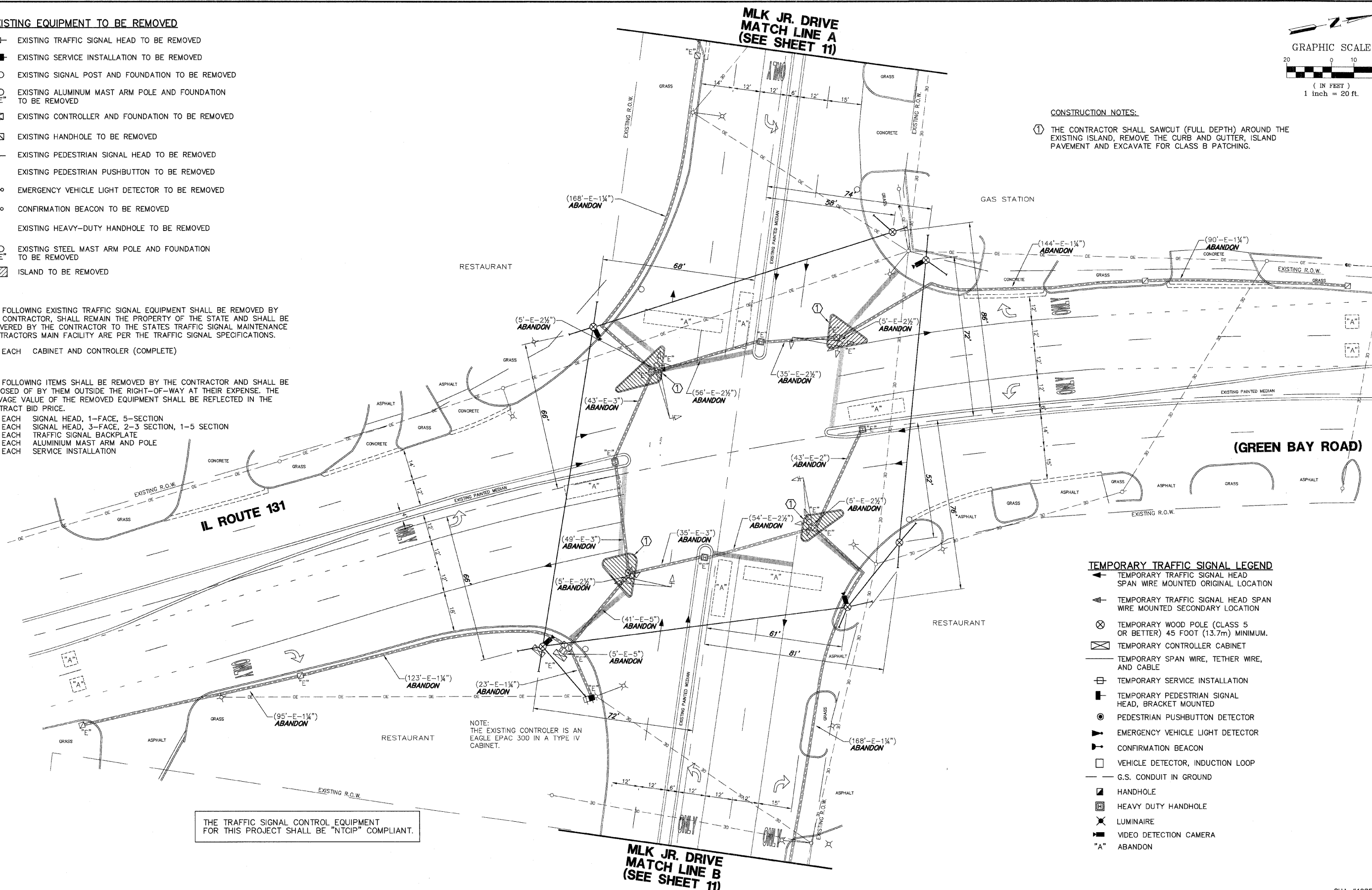
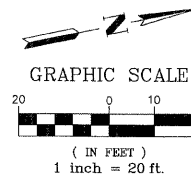
- 1 EACH CABINET AND CONTROLLER (COMPLETE)

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

- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 4 EACH SIGNAL HEAD, 3-FACE, 2-3 SECTION, 1-5 SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH ALUMINUM MAST ARM AND POLE
- 1 EACH SERVICE INSTALLATION

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL SAWCUT (FULL DEPTH) AROUND THE EXISTING ISLAND, REMOVE THE CURB AND GUTTER, ISLAND PAVEMENT AND EXCAVATE FOR CLASS B PATCHING.



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- "A" ABANDON

FILE NAME = 4085.800-TR1.dgn

USER NAME =

DESIGNED - JRD

REVISED -

DRAWN - LJD

REVISED -

PLOT SCALE = 1"=20'

CHECKED - KLB

REVISED -

PLOT DATE = 1/30/09

DATE - 1/30/09

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

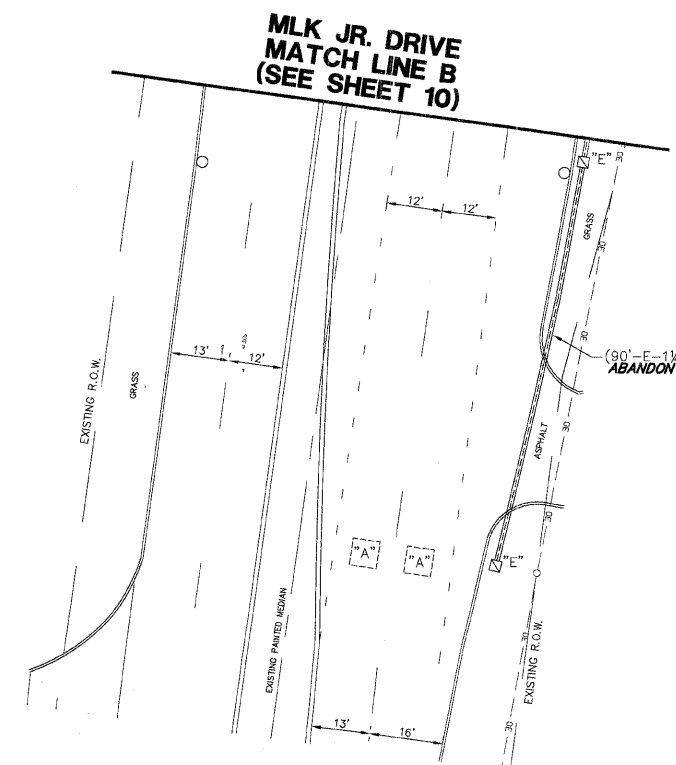
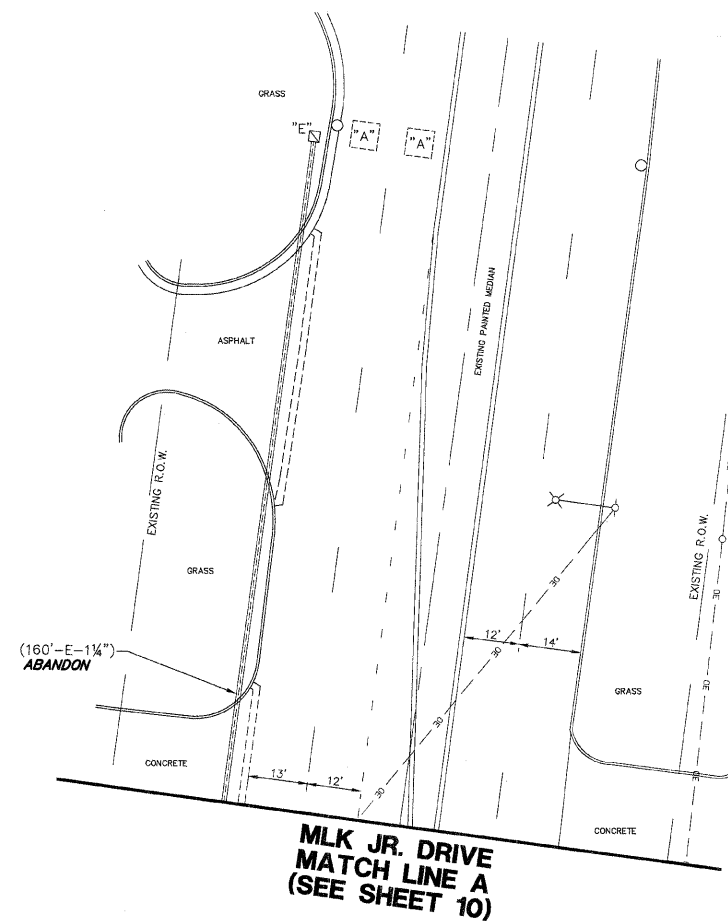
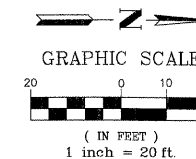
TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL
OF EXISTING TRAFFIC SIGNAL EQUIPMENT
ILL RTE 131 (GREEN BAY RD.) AND MARTIN LUTHER KING JR. DRIVE
SCALE: 1"=20' SHEET NO. 10 OF 21 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2711	2009-006 TS	097(LAKE/K)	21	10
CONTRACT NO. 60602				
ILLINOIS FED. AID PROJECT				

GHA #4085.805

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED



TEMPORARY TRAFFIC SIGNAL LEGEND

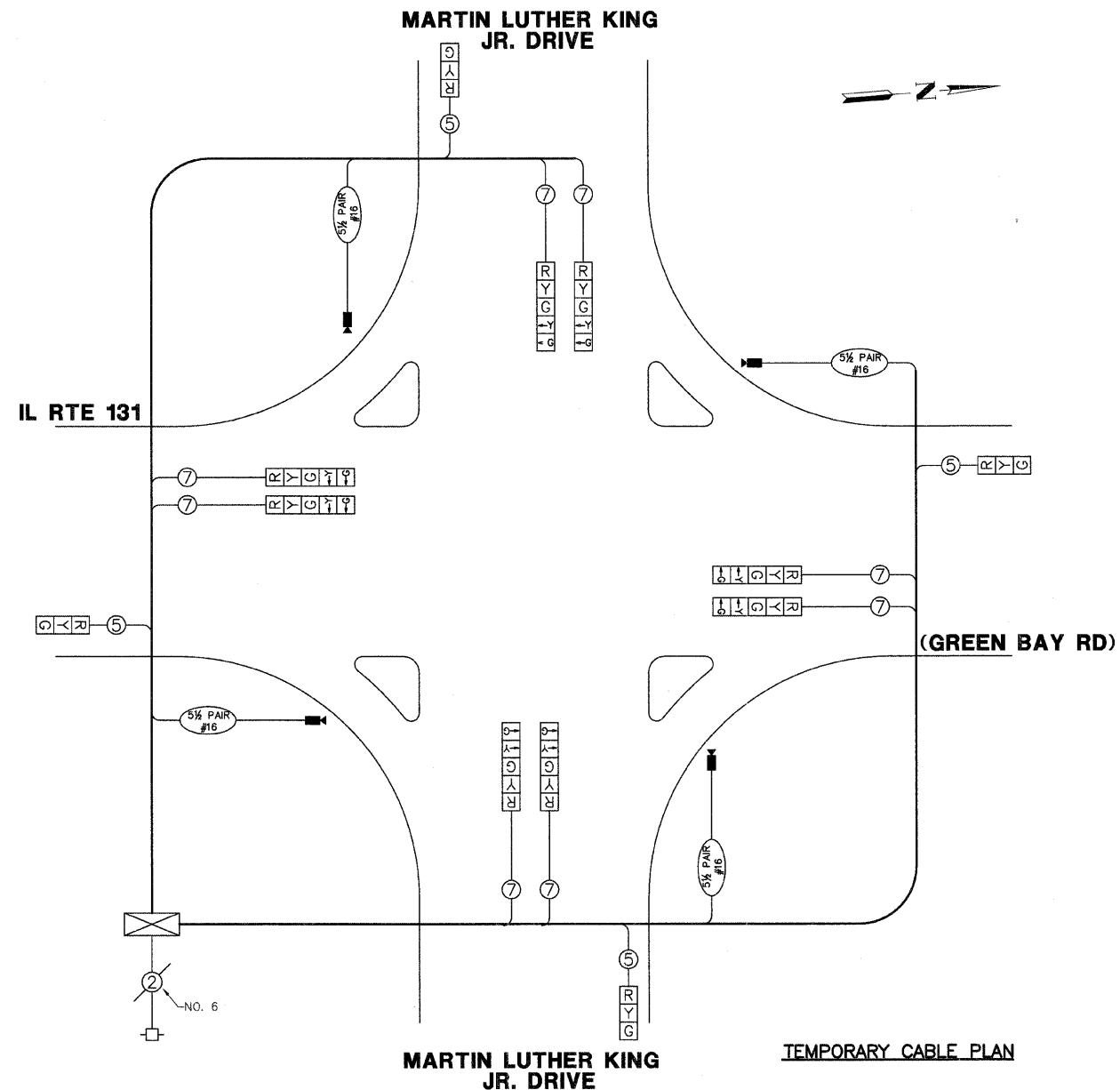
- TEMPORARY TRAFFIC SIGNAL HEAD
- SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- "A" ABANDON

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

FILE NAME = 4085.800-TR1.dgn	USER NAME =	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT ILL RTE 131 (GREEN BAY RD.) AND MARTIN LUTHER KING JR. DRIVE				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1"=20'	DRAWN - LJD	REVISED -		27W	2009-006 TS	097LAKE/ILK	21	II				
	PLOT DATE = 1/30/09	CHECKED - KLB	REVISED -										
		DATE - 1/30/09	REVISED -										
												CONTRACT NO. 60G02	
												ILLINOIS FED. AID PROJECT	

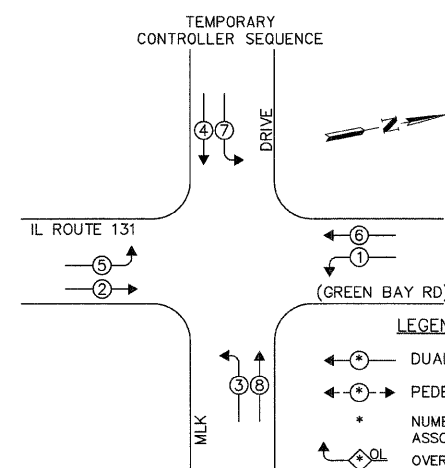
CHA #4085.805

SCALE: 1"=20' SHEET NO. 11 OF 21 SHEETS STA. TO STA.



TEMPORARY CABLE PLAN LEGEND

- TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12'
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA



TEMPORARY PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE	INCAND.	L.E.D.	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	75.0
SIGNAL (GREEN)	12	135	15	0.25	45.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	150.0
BATTERY BACKUP	-	-	25	1.00	-
TOTAL =					491.2

ENERGY COSTS - BILLED TO: CITY OF NORTH CHICAGO
(ADDRESS) 1850 LEWIS AVENUE
(ADDRESS) NORTH CHICAGO, IL 60064
ENERGY SUPPLY - CONTACT: NEW BUSINESS
PHONE: 1-866-639-3552
COMPANY: COMED

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

FILE NAME 4085.800-TR1.dgn	USER NAME	DESIGNED JRD	REVISED -
	PLOT SCALE=NONE	DRAWN - LJD	REVISED -
	PLOT DATE =1/30/09	CHECKED - KLB	REVISED -
		DATE - 1/30/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

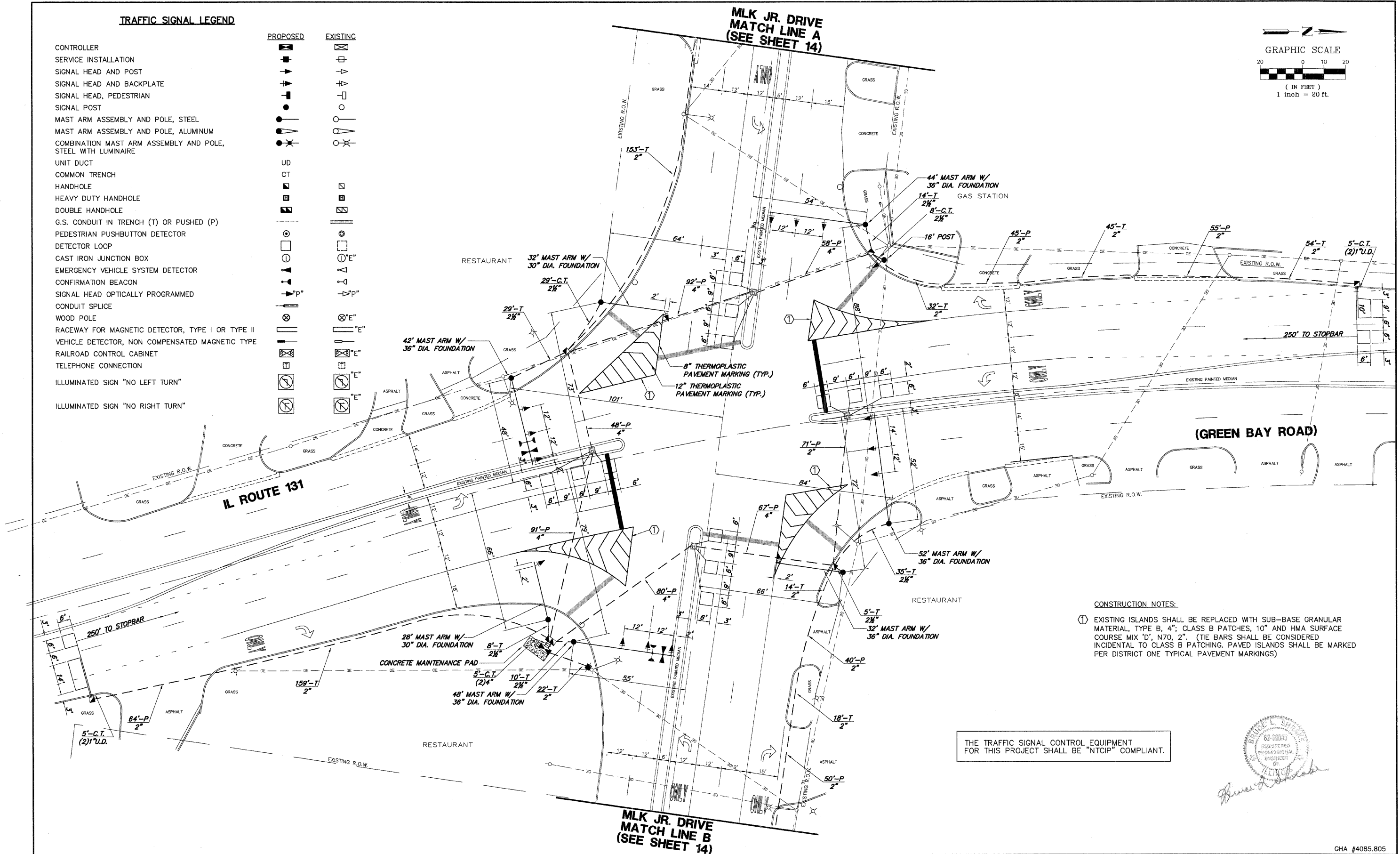
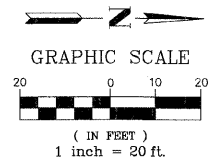
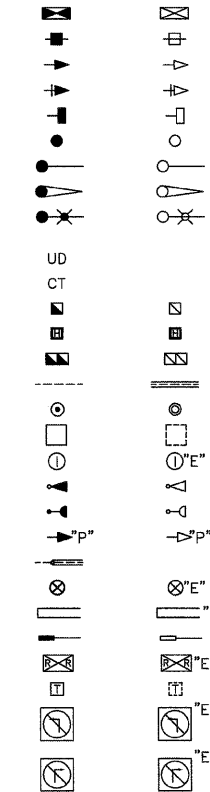
TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM			
ILL RTE 131 (GREEN BAY RD.) AND MARTIN LUTHER KING JR. DRIVE			
SCALE: NONE	SHEET NO. 12 OF 21 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27II	2009-006 TS	097(LAKE)K	21	12
CONTRACT NO. 60G02				
ILLINOIS FED. AID PROJECT				

GHA #4085.805

CONTROLLER
 SERVICE INSTALLATION
 SIGNAL HEAD AND POST
 SIGNAL HEAD AND BACKPLATE
 SIGNAL HEAD, PEDESTRIAN
 SIGNAL POST
 MAST ARM ASSEMBLY AND POLE, STEEL
 MAST ARM ASSEMBLY AND POLE, ALUMINUM
 COMBINATION MAST ARM ASSEMBLY AND POLE,
 STEEL WITH LUMINAIRE
 UNIT DUCT
 COMMON TRENCH
 HANDHOLE
 HEAVY DUTY HANDHOLE
 DOUBLE HANDHOLE
 G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
 PEDESTRIAN PUSHBUTTON DETECTOR
 DETECTOR LOOP
 CAST IRON JUNCTION BOX
 EMERGENCY VEHICLE SYSTEM DETECTOR
 CONFIRMATION BEACON
 SIGNAL HEAD OPTICALLY PROGRAMMED
 CONDUIT SPLICE
 WOOD POLE
 RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
 VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
 RAILROAD CONTROL CABINET
 TELEPHONE CONNECTION
 ILLUMINATED SIGN "NO LEFT TURN"
 ILLUMINATED SIGN "NO RIGHT TURN"

<u>PROPOSED</u>	<u>EXISTING</u>
1	1
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6	6
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92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100



CONSTRUCTION NOTES:

- ① EXISTING ISLANDS SHALL BE REPLACED WITH SUB-BASE GRANULAR MATERIAL, TYPE B, 4"; CLASS B PATCHES, 10" AND HMA SURFACE COURSE MIX "D", N70, 2". (TIE BARS SHALL BE CONSIDERED INCIDENTAL TO CLASS B PATCHING. PAVED ISLANDS SHALL BE MARKED PER DISTRICT ONE TYPICAL PAVEMENT MARKINGS)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT
FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

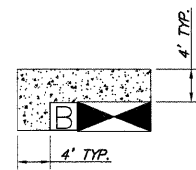
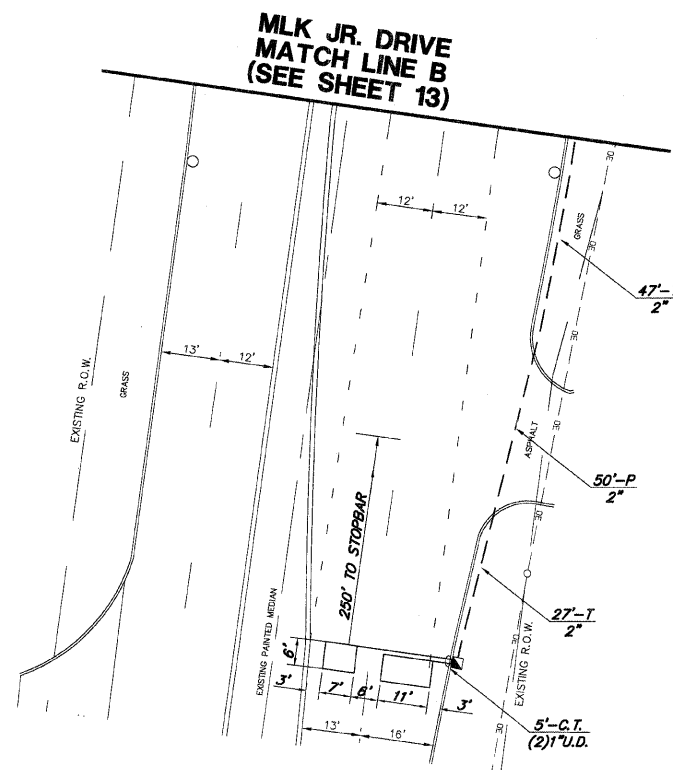
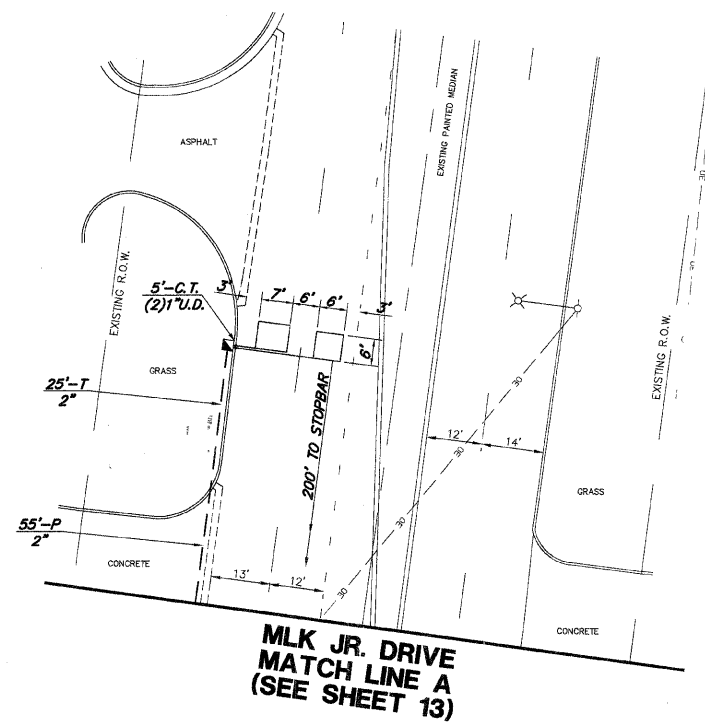


FILE NAME = 4085.800-TR1.dgn	USER NAME =	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - LJD	REVISED -		ILL RTE 131 (GREEN BAY RD.) AND MARTIN LUTHER KING JR. DRIVE				27H	2009-006 TS	097(LAKE)LK	21	13	
	PLOT SCALE = 1"=20'	CHECKED - KLB	REVISED -		SCALE: 1"=20'				SHEET NO. 13 OF 21 SHEETS		STA. TO STA.		CONTRACT NO. 60G02	
	PLOT DATE = 1/30/09	DATE - 1/30/09	REVISED -								ILLINOIS FED. AID PROJECT			

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

CONTROLLER
 SERVICE INSTALLATION
 SIGNAL HEAD AND POST
 SIGNAL HEAD AND BACKPLATE
 SIGNAL HEAD, PEDESTRIAN
 SIGNAL POST
 MAST ARM ASSEMBLY AND POLE, STEEL
 MAST ARM ASSEMBLY AND POLE, ALUMINUM
 COMBINATION MAST ARM ASSEMBLY AND POLE,
 STEEL WITH LUMINAIRE
 UNIT DUCT
 COMMON TRENCH
 HANDHOLE
 HEAVY DUTY HANDHOLE
 DOUBLE HANDHOLE
 G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
 PEDESTRIAN PUSHBUTTON DETECTOR
 DETECTOR LOOP
 CAST IRON JUNCTION BOX
 EMERGENCY VEHICLE SYSTEM DETECTOR
 CONFIRMATION BEACON
 SIGNAL HEAD OPTICALLY PROGRAMMED
 CONDUIT SPLICE
 WOOD POLE
 RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
 VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
 RAILROAD CONTROL CABINET
 TELEPHONE CONNECTION
 ILLUMINATED SIGN "NO LEFT TURN"
 ILLUMINATED SIGN "NO RIGHT TURN"



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)
N.T.S.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT
FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

FILE NAME = 4085.800-TR1.dgn	USER NAME =	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN			F.A.U. SHEETS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - LJD	REVISED -		ILL RTE 131 (GREEN BAY RD.) AND MARTIN LUTHER KING JR. DRIVE			27th	2009-006 TS	097(LAKEVIEW)	21	14
	PLOT SCALE = 1"=20'	CHECKED - KLB	REVISED -		SCALE: 1"=20' SHEET NO. 14 OF 21 SHEETS STA. TO STA.			CONTRACT NO. 60G02				
	PLOT DATE = 1/30/09	DATE = 1/30/09	REVISED -					ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES

ILLINOIS ROUTE 131 (GREEN BAY ROAD) AND MARTIN LUTHER KING JR. DRIVE

QUANT.	UNIT	ITEM
1.	40	CU.YD. EARTH EXCAVATION
2.	90	SQ.YD. SUB-BASE GRANULAR MATERIAL, TYPE B, 4"
3.	12	TON HOT-MIX ASPHALT REPLACEMENT OVER PATCHES
4.	10	GAL BITUMINOUS MATERIALS (PRIME COAT)
5.	250	FOOT COMBINATION CURB & GUTTER REMOVAL
6.	650	SQ.FT. MEDIAN REMOVAL
7.	90	SQ.YD. CLASS B PATCHES, TYPE III, 10"
8.	0.34	L.SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701606-06
9.	0.34	L.SUM TRAFFIC CONTROL AND PROTECTION, STANDARD 701701-06
10.	55	SQ.FT. SIGN PANEL - TYPE 2
11.	485	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 8"
12.	570	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 12"
13.	80	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 24"
14.	265	SQ.FT. PAVEMENT MARKING REMOVAL
15.	250	FOOT SAWING PAVEMENT (FULL DEPTH)
16.	596	FOOT CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
17.	138	FOOT CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
18.	10	FOOT CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
19.	430	FOOT CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
20.	436	FOOT CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
21.	7	EACH HANDHOLE
22.	4	EACH HEAVY-DUTY HANDHOLE
23.	1	EACH DOUBLE HANDHOLE
24.	674	FOOT TRENCH AND BACKFILL FOR ELECTRICAL WORK
25.	1	EACH FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
*26.	400	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
27.	2192	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
28.	2041	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
29.	2074	FOOT ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
30.	43	FOOT ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
31.	735	FOOT ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
*32.	400	FOOT ELECTRIC CABLE IN CONDUIT, NO. 20 3/C TWISTED, SHIELDED
33.	1	EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT
34.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 28 FT
35.	2	EACH STEEL MAST ARM ASSEMBLY AND POLE, 32 FT
36.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 42 FT
37.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 44 FT
38.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 48 FT
39.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 52 FT
40.	4	FOOT CONCRETE FOUNDATION, TYPE A
41.	4	FOOT CONCRETE FOUNDATION, TYPE C
42.	37	FOOT CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
43.	54	FOOT CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
44.	8	EACH SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
45.	1	EACH SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
46.	7	EACH SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
47.	15	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
48.	8	EACH INDUCTIVE LOOP DETECTOR
49.	755	FOOT DETECTOR LOOPS, TYPE 1
*50.	2	EACH LIGHT DETECTOR
*51.	1	EACH LIGHT DETECTOR AMPLIFIER
52.	1	EACH TEMPORARY TRAFFIC SIGNAL INSTALLATION
53.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
54.	17	EACH REMOVE EXISTING HANDHOLE
55.	5	EACH REMOVE EXISTING CONCRETE FOUNDATION
56.	1	EACH SERVICE INSTALLATION, POLE MOUNT
57.	1	EACH UNINTERRUPTIBLE POWER SUPPLY (UPS)

*100% COST TO CITY OF NORTH CHICAGO

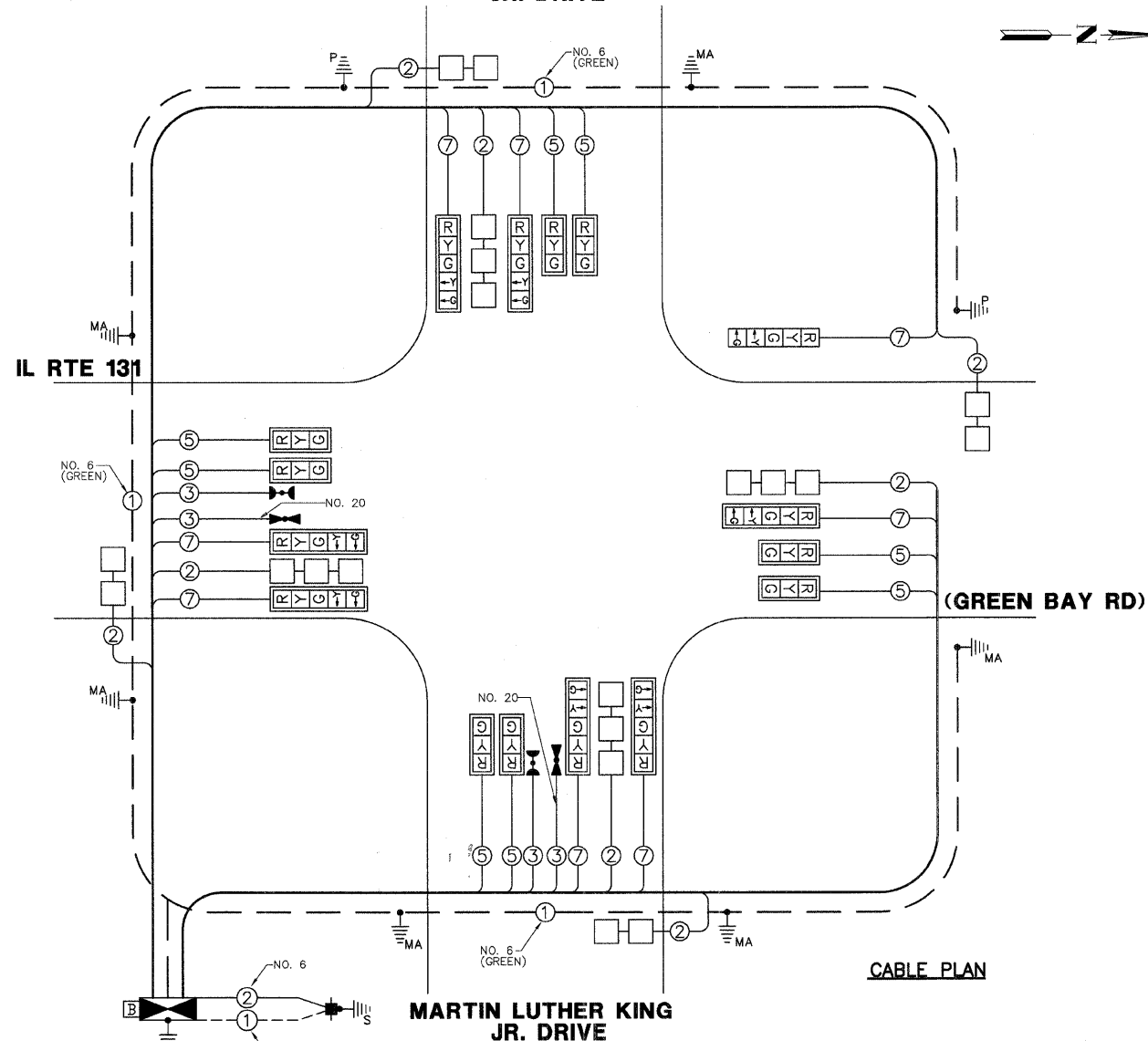
TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND. L.E.D.	% OPERATION		
SIGNAL (RED)	16	135	17	0.50	136.0
SIGNAL (YELLOW)	16	135	25	0.25	100.0
SIGNAL (GREEN)	16	135	15	0.40	96.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
TOTAL =					476.2

ENERGY COSTS - BILLED TO: CITY OF NORTH CHICAGO
ADDRESS: 1850 LEWIS AVENUE
(ADDRESS) NORTH CHICAGO, IL 60064
ENERGY SUPPLY - CONTACT: NEW BUSINESS
PHONE: 1-866-639-3552
COMPANY: COMED

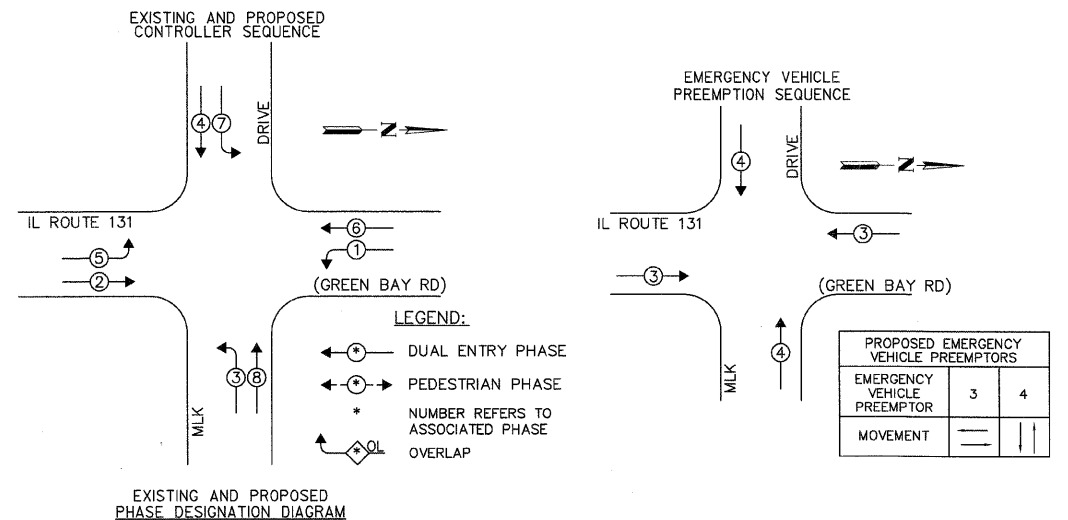
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

FOUNDATION (DEPTH)	(FT.)	CABLE SLACK	(FT.)	VERTICAL	(FT.)
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3.5
TYPE D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20'-1-2"
TYPE E - MAST POLE	10	SIGNAL POST	2	BRACKET MOUNTED	13
30' (30'-40')	13.5	CONTROLLER CAB.	1	PED. PUSHBUTTON	4
36' (40'-48')	13	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
36' (50'-55')	15	ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE	1	POST MOUNTED	6

MARTIN LUTHER KING JR. DRIVE



CABLE PLAN



CABLE PLAN LEGEND

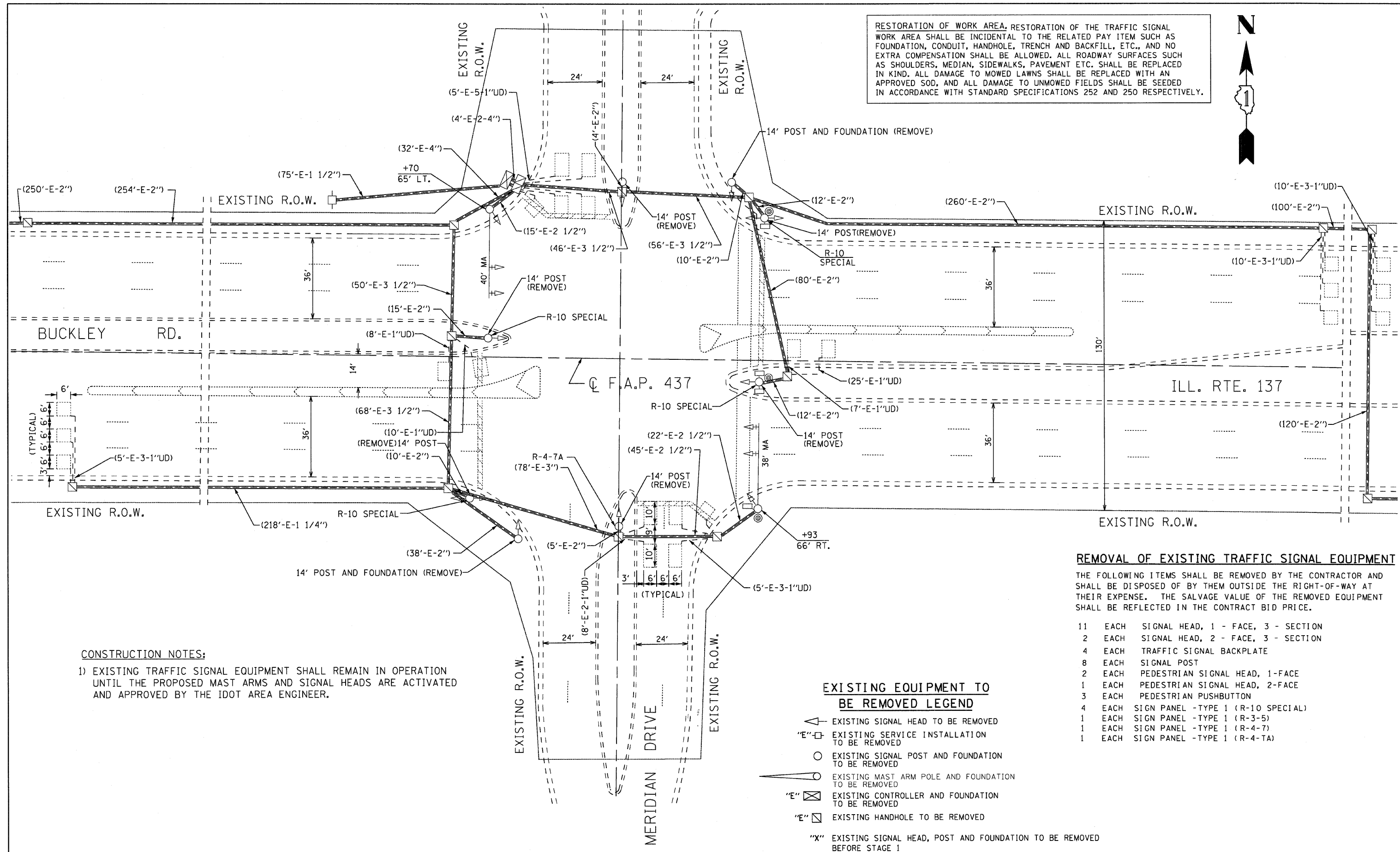
EXISTING	PROPOSED	
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN "NO LEFT TURN"
		ILLUMINATED SIGN "NO RIGHT TURN"
		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
		GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		PTZ CAMERA
		UNINTERRUPTIBLE POWER SUPPLY (UPS)
		VIDEO COMMUNICATIONS CABINET

FILE NAME	USER NAME	DESIGNED	JRD	REVISED	-
4085.800-TR1.dgn		DRAWN	- LJD	REVISED	-
		PLOT SCALE=NONE	CHECKED - KLB	REVISED	-
		PLOT DATE = 1/19/09	DATE - 1/19/09	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES			
ILL RTE 131 (GREEN BAY RD.) AND MARTIN LUTHER KING JR. DRIVE			
SCALE: NONE	SHEET NO. 15 OF 21 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27H	2009-006 TS	097(LAKE)	21	15
CONTRACT NO. 60G02				
ILLINOIS FED. AID PROJECT				



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.



CONSTRUCTION NOTES:

- 1) EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL THE PROPOSED MAST ARMS AND SIGNAL HEADS ARE ACTIVATED AND APPROVED BY THE IDOT AREA ENGINEER.

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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.

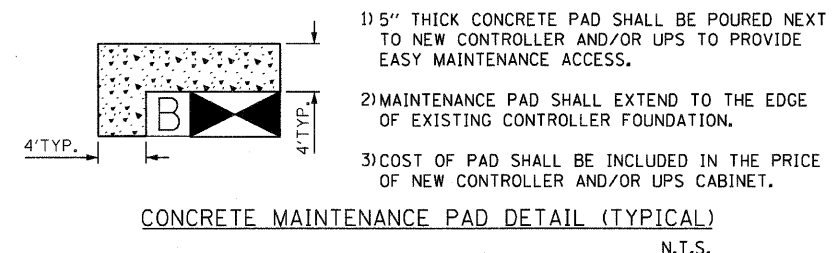
- | | | |
|----|------|------------------------------------|
| 11 | EACH | SIGNAL HEAD, 1 - FACE, 3 - SECTION |
| 2 | EACH | SIGNAL HEAD, 2 - FACE, 3 - SECTION |
| 4 | EACH | TRAFFIC SIGNAL BACKPLATE |
| 8 | EACH | SIGNAL POST |
| 2 | EACH | PEDESTRIAN SIGNAL HEAD, 1-FACE |
| 1 | EACH | PEDESTRIAN SIGNAL HEAD, 2-FACE |
| 3 | EACH | PEDESTRIAN PUSHBUTTON |
| 4 | EACH | SIGN PANEL -TYPE 1 (R-10 SPECIAL) |
| 1 | EACH | SIGN PANEL -TYPE 1 (R-3-5) |
| 1 | EACH | SIGN PANEL -TYPE 1 (R-4-7) |
| 1 | EACH | SIGN PANEL -TYPE 1 (R-4-TA) |

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- ◁ EXISTING SIGNAL HEAD TO BE REMOVED
- ⊠ EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- ⊠ EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ⊠ EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- ⊠ EXISTING HANDHOLE TO BE REMOVED
- ⊠ EXISTING SIGNAL HEAD, POST AND FOUNDATION TO BE REMOVED BEFORE STAGE 1

REGINA WEBSTER
AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369

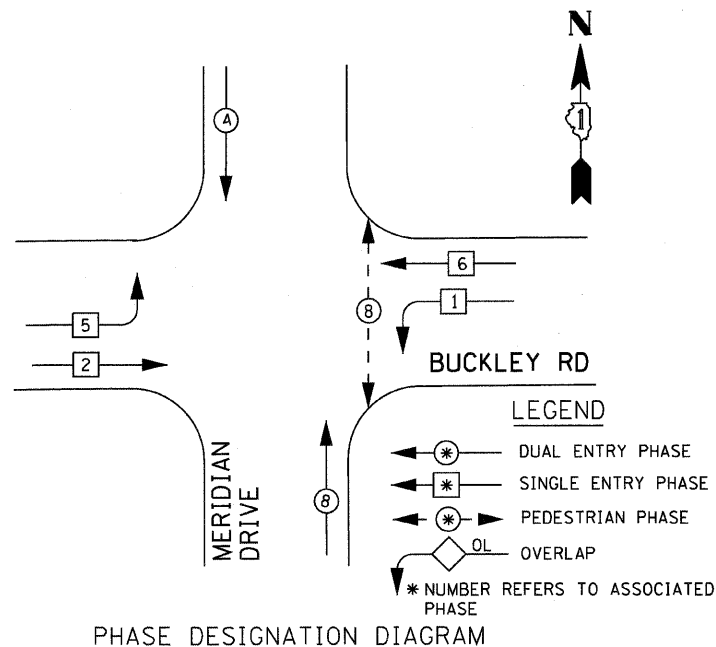
RWA
Regina Webster & Associates, Inc.



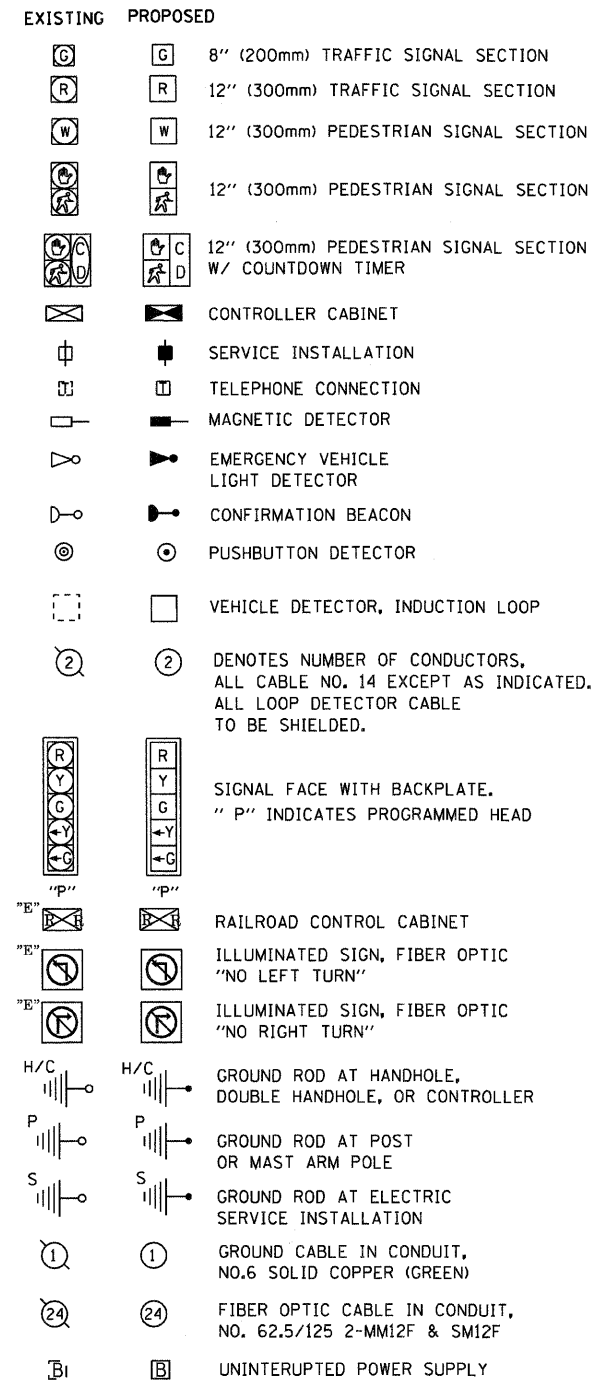
- CONSTRUCTION NOTES:**
- 1) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
 - 2) ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF LED SIGNAL INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM UNINTERRUPTABLE POWER SUPPLY.
 - 3) EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL THE PROPOSED MAST ARMS AND SIGNAL HEADS ARE ACTIVATED AND APPROVED BY THE IDOT AREA ENGINEER.

FILE NAME = \$FILE\$	USER NAME = \$USER\$	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ILROUTE 137 (BUCKLEY RD.) AND MERIDIAN DR. TRAFFIC SIGNAL MODERNIZATION PLAN			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - DW	REVISED -					VAR.	2009-006 TS	LAKE	21	17
	PLOT SCALE = \$SCALE\$	CHECKED - JD	REVISED -					CONTRACT NO. 60G02				
	PLOT DATE = \$DATE\$	DATE - 01/29/09	REVISED -		SCALE: 1"=20'	SHEET NO. 17 OF 21 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

CONTROLLER SEQUENCE IV



CABLE PLAN LEGEND



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE I	SQ FT	37.5
SIGN PANEL - TYPE II	SQ FT	27.5
REMOVE SIGN PANEL -TYPE I	SQ FT	37.5
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	220
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	210
THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	530
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	36
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	36
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1759
DRILL EXISTING HANDHOLE	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	6
STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	8
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	10
SIGNAL HEAD, L.E.D., 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
PEDESTRIAN PUSH-BUTTON	EACH	3
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	102.8
UNINTERRUPTABLE POWER SUPPLY (UPS)	EACH	1

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	252	25	0.05	-
VIDEO SYSTEM	-	150	-	1.00	-
TOTAL =					547.4
ENERGY COSTS- BILLED TO: CITY OF NORTH CHICAGO					
1850 LEWIS AVENUE					
NORTH CHICAGO, IL 60064					
CONTACT NEW BUSINESS					
PHONE 1-866-639-3552					
COMPANY COMED					
ENERGY SUPPLY -					

FOUNDATION	DEPTH	DEPTH (FT.)	CABLE SLACK	(FT.)	VERTICAL	(FT.)
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3.5	
D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	=20' +L-2	
E - MAST ARM POLE		SIGNAL POST	2	BRACKET MOUNTED	13	
30"	15	CONTROLLER CAB.	1	PED. PUSHBUTTON	4	
36"	15	FIBER OPTIC	13	ELECTRICAL SERVICE	13.5	
42"	25	ELECTRICAL SERVICE	1	SERVICE TO GROUND	13.5	
		GROUND CABLE	1	POSTMOUNTED	6	

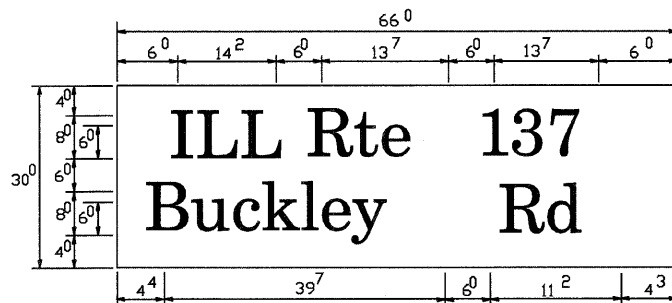
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 137 (BUCKLEY RD) AND MERIDIAN DR. - SCHEDULE OF
QUANTITIES, CABLE PLAN & PHASE DESIGNATION DIAGRAM

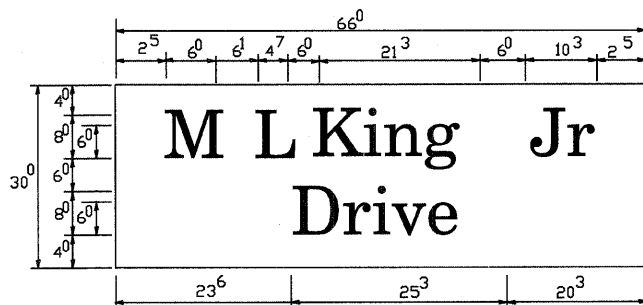
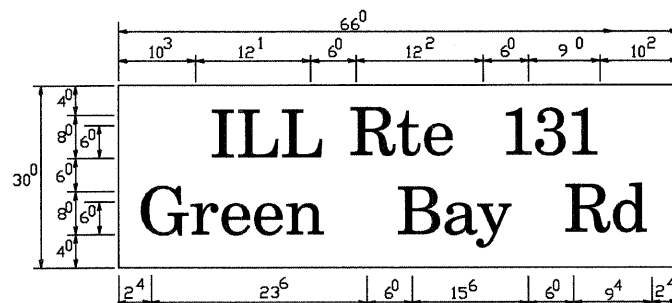
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-006 TS	LAKE	21	18
CONTRACT NO. 60G02				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: NONE SHEET NO. 18 OF 21 SHEETS STA. TO STA.

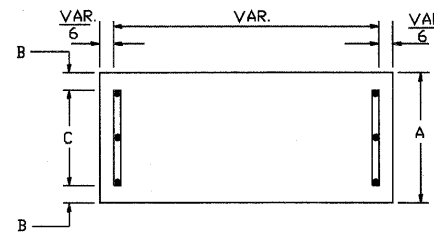
PANEL SIGN DESIGN TYPE 2



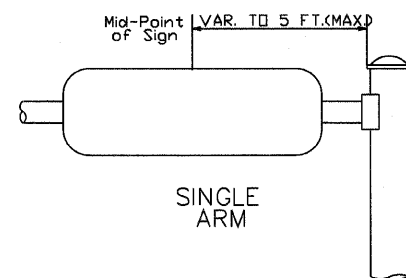
PANEL SIGN DESIGN TYPE 2



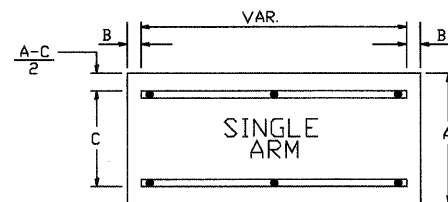
SUPPORTING CHANNELS



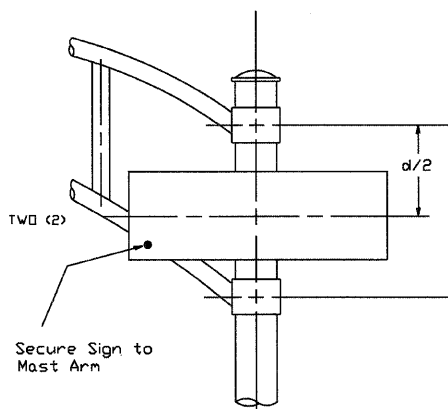
A	B	C
18"	2"	14"



SUPPORTING CHANNELS



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

DUAL ARM
SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

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

EXAMPLE, ③ DENOTES 3/8"

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

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

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

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

UPPER AND LOWER CASE
LETTER WIDTHS

L E T T E R S	6 INCH UPPER CASE LETTERS		8 INCH UPPER CASE LETTERS		L E T T E R S	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

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

GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR IN 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
 - * AMERICAN FABRICATION CO.
 - * SCHAUMBURG, IL
 - * CHICAGO HEIGHTS, IL
 - * TUCKER COMPANY, INC.
 - * WESTERN TRAFFIC CONTROL INC.
 - * WAUWATOSA, WI
 - * CICERO, IL
- PARTS LISTING:
SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
BRACKETS SELF TAPPING WITH NEOPRENE WASHER
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 = #USER#	DESIGNED - JS	REVISED -
#FILE#		DRAWN - DW	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - JD	REVISED -
	PLOT DATE = #DATE#	DATE - 01/29/09	REVISED -

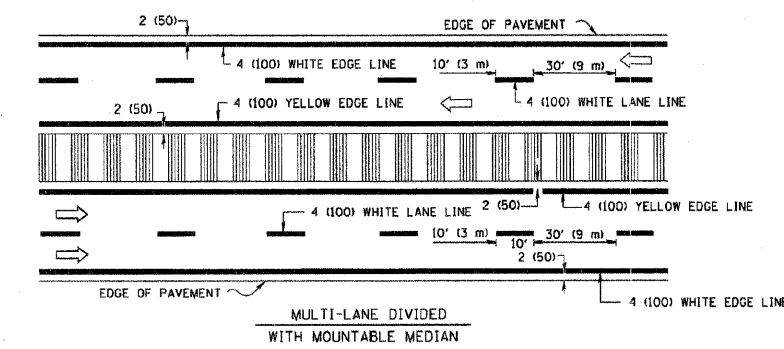
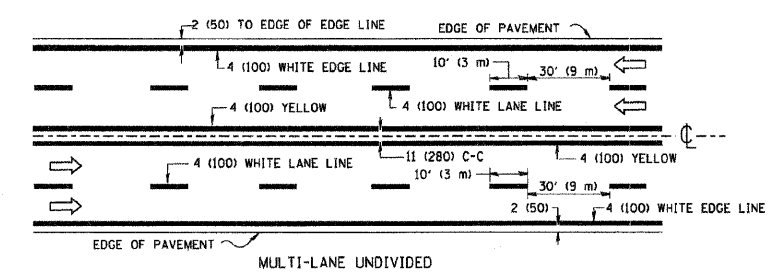
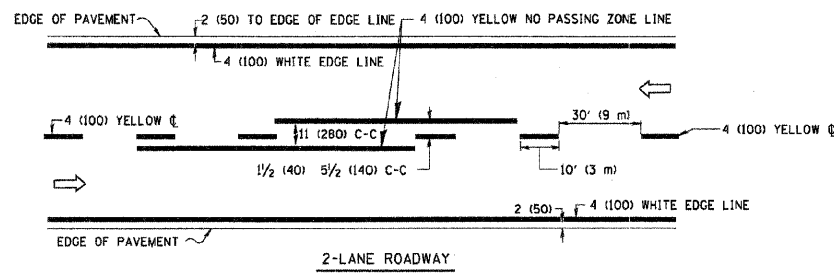
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATIONMAST ARM MOUNTED
STREET NAME SIGNS

SCALE: NONE SHEET NO. 19 OF 21 SHEETS STA. TO STA.

ILLINOIS DEPARTMENT OF TRANSPORTATION

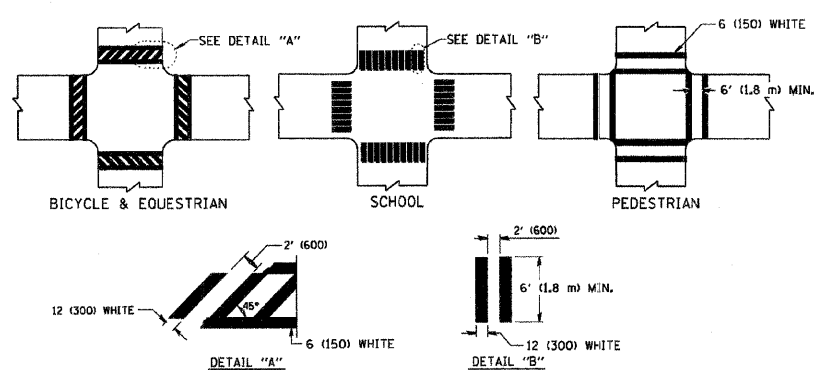
MAST ARM MOUNTED
STREET NAME SIGNSSCALE: VERT. NONE
HORIZ. NONE
DATE 1-01-02DRAWN BY: RDB
DESIGNED BY: JHE
CHECKED BY: DAD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-006 TS	LAKE	21	19
CONTRACT NO. 60G02				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

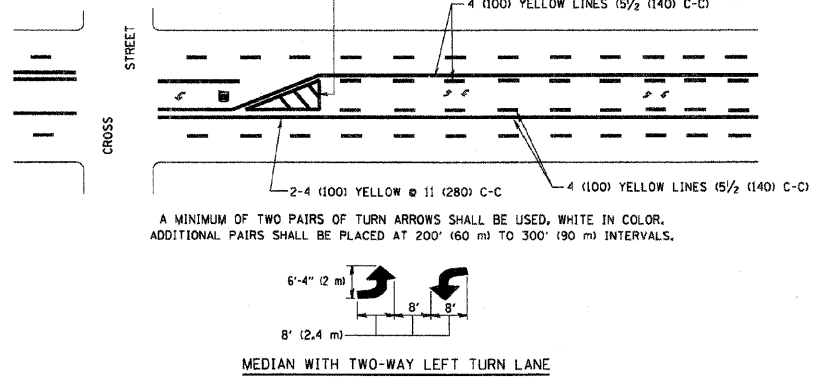
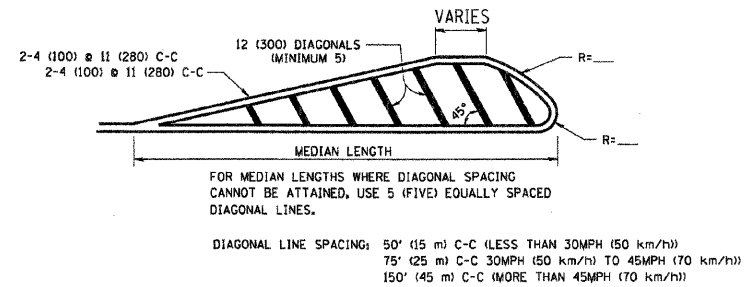
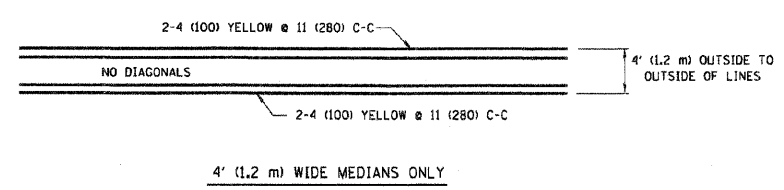


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

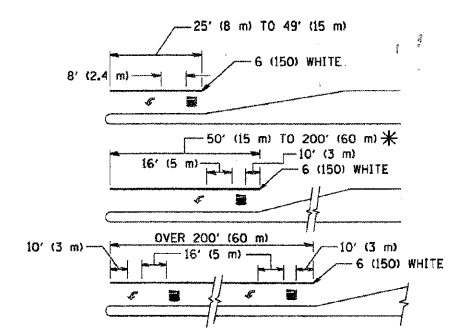
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



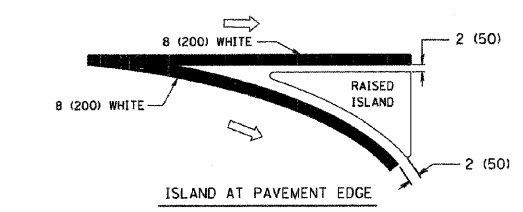
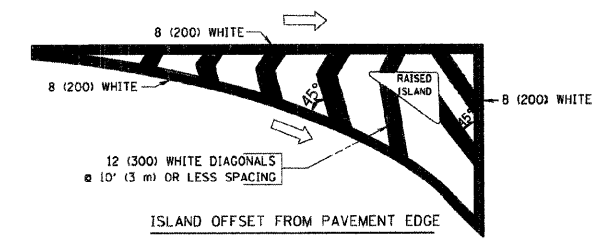
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW. EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACH	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACH	01-06-00

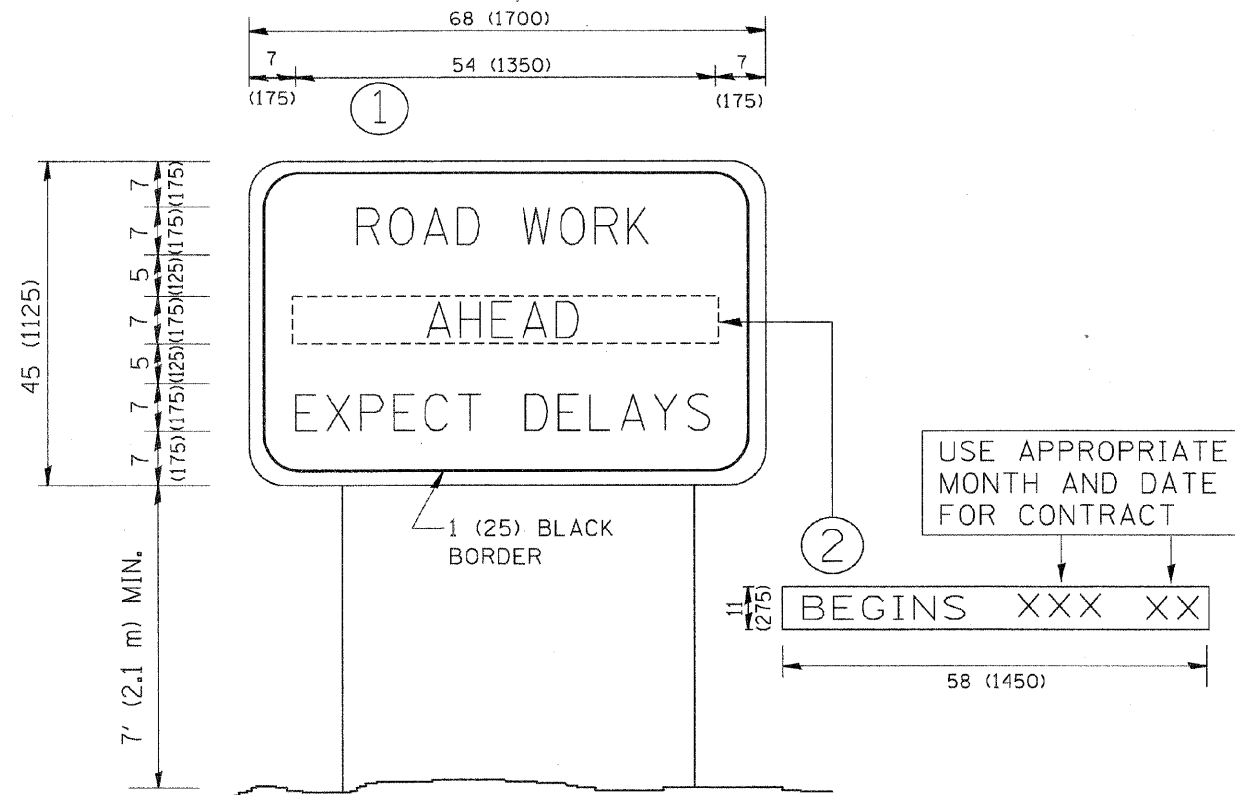
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD
CHECKED BY
TC-13

PLOT DATE = 2/9/2007
FILE NAME = R:\data\1022.dgn
PLOT SCALE = 1/8" = 1'-0"
USER NAME = bcardol



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.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	ARTERIAL ROAD INFORMATION SIGN	
R. MIRS	9-15-97		
R. MIRS	12-11-97		
T. RAMMACHER	2-2-99		
C. JUCIUS	1-31-07		
		SCALE: NONE	
		DRAWN BY DESIGN	
		CHECKED BY	
		TC22	