

60F80

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
631 846	2008-077TS	WILL	18	1

D-91-240-09

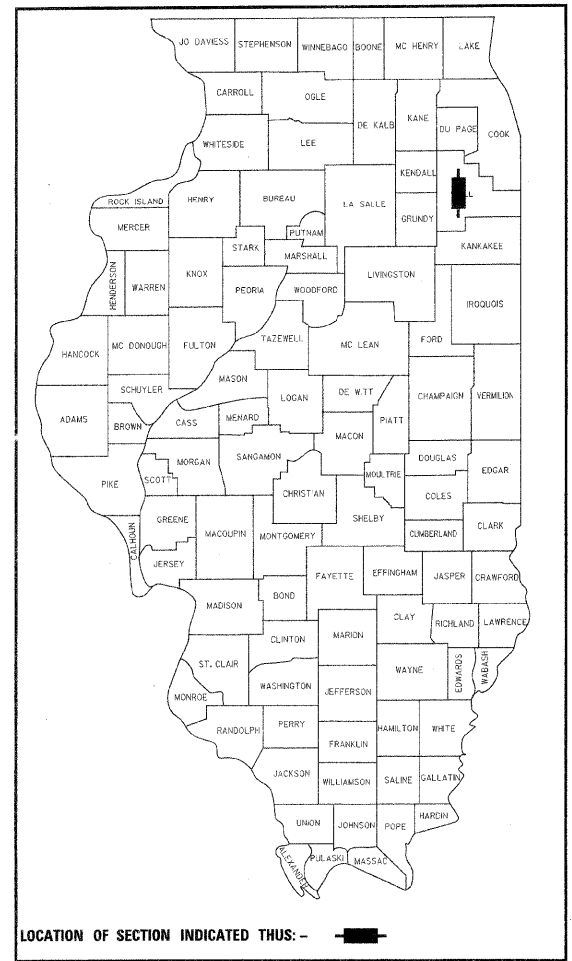
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- DISTRICT ONE TYPICAL PAVEMENT MARKINGS
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1
CONGESTION MITIGATION AIR QUALITY
FIBER OPTIC COMMUNICATION NETWORK
IL. ROUTE 53 (BALTIMORE STREET)
FROM N. FIRST STREET TO IL. ROUTE 102 (WATER STREET)
IL. ROUTE 102 (WATER STREET)
FROM IL. ROUTE 53 TO KAHLER ROAD
PROJECT: ACCMF-000S(690)
WILL COUNTY
F.A.P. 631 /IL. 53 (BALTIMORE STREET)
F.A.P. 846 /IL. 102 (WATER STREET)
SECTION 2008-077TS
C-91-240-09

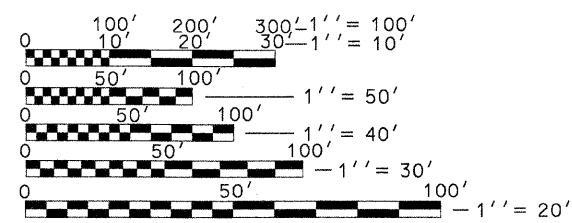


DISTRICT ONE-BUREAU OF TRAFFIC: STEVE TRAVIA/DARYLE DREW (847) 705-4420

Robert H. K...
EXPIRES ON 11/30/2009

STANDARD DRAWINGS

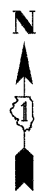
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- 701011-02
- 701101-02
- 701606-06
- 701701-06
- 701901-01
- 814001-02
- 857001-01
- 862001-01
- 880006-01
- 878001-08



CONTRACT NO. 60F80

PREPARED BY *Stan Towner*
TRAFFIC ENGINEER DATE 10/16/09

PROJECT BEGINS STA. 100+00



PROJECT ENDS STA. 0+00

LOCATION MAP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct. 16, 2009
Devin M. O'Keefe
DISTRICT ENGINEER

December 4, 2009
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

December 4, 2009
Christine M. Reed
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

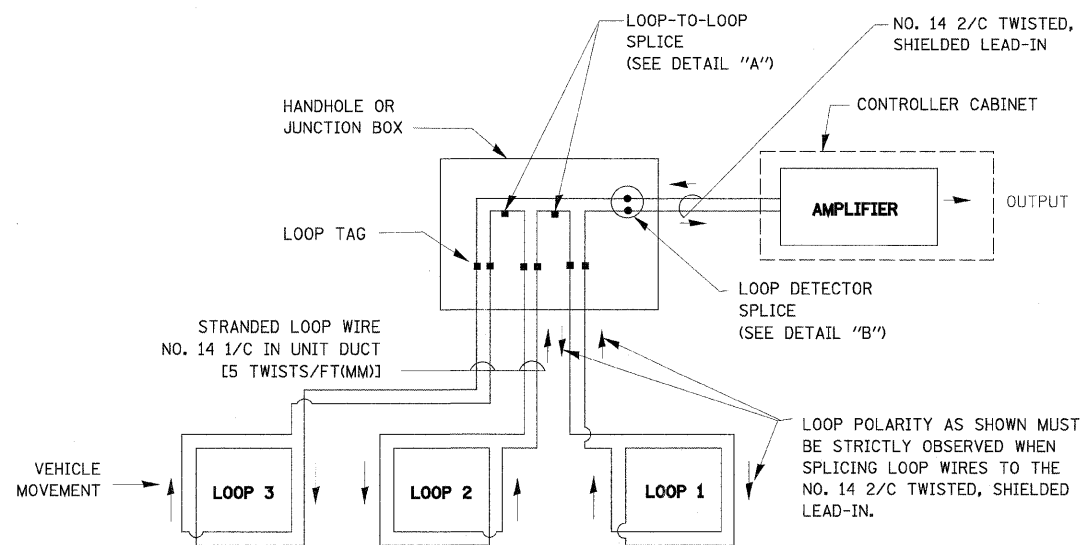
CODE NO.	ITEM	UNIT	URBAN 80% FED. 20% STATE				
			GRAND TOTAL	FAP 831	FAP 846	FAP 846	FAP 846
		CONSTRUCTION	FIRST STREET	IL RTE 53/ IL RTE 102	KAHLER ROAD	INTER-CONNECT	
		CODE	YO31-1F	YO31-1F	YO31-1F	YO31-1F	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4.0	1.0	1.0	1.0	
67100100	MOBILIZATION	L SUM	1.0	0.25	0.25	0.25	
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1.0	0.25	0.25	0.25	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.0	0.25	0.25	0.25	
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	3432.0	0.0	0.0	3432.0	
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	1771.0	0.0	0.0	1771.0	
81400100	HANDHOLE	EACH	7.0	0.0	0.0	7.0	
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	3432.0	0.0	0.0	3432.0	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3.0	1.0	1.0	0.0	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	3.0	1.0	1.0	0.0	
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	790.5	0.0	790.5	0.0	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4.0	0.0	4.0	0.0	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4.0	0.0	4.0	0.0	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4.0	0.0	4.0	0.0	
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	6089.0	0.0	0.0	6089.0	
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM 12F	FOOT	6115.0	0.0	0.0	6115.0	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	53.40	0.0	53.40	0.0	
42400800	DETECTABLE WARNINGS	SQ FT	110.0	0.0	110.0	0.0	
87900200	DRILL EXISTING HANDHOLE	EACH	6.0	1.0	4.0	0.0	
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8.0	0.0	8.0	0.0	
88500100	INDUCTIVE LOOP DETECTOR	EACH	10.0	0.0	10.0	0.0	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	0.0	1.0	0.0	
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1.0	0.0	0.0	1.0	
X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	1.0	0.0	1.0	0.0	
81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	717.0	0.0	0.0	717.0	
81300720	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16"x12"x8"	EACH	3.0	0.0	0.0	3.0	
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	102.8	25.7	51.4	25.7	
85700305	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1.0	0.0	1.0	0.0	
86000105	MASTER CONTROLLER (SPECIAL)	EACH	1.0	0.0	1.0	0.0	
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4.0	0.0	4.0	0.0	
* 88600100	DETECTOR LOOP, TYPE I	FOOT	88.0	0.0	88.0	0.0	
* 78000650	THERMOPLASTIC PAVEMENT MARKING-LINE 24"	FOOT	114.0	0.0	114.0	0.0	
* 78000400	THERMOPLASTIC PAVEMENT MARKING-LINE 6"	FOOT	444.0	0.0	444.0	0.0	
* 78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	56.0	0.0	56.0	0.0	

* Specialty Items

FILE NAME =	USER NAME = (1224-user)	DESIGNED - LC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES IL RTE 53-FIRST ST TO IL RTE 102 IL RTE 102-IL RTE 53 TO KAHLER RD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
P:\P-00\1224\Task 9\DD\N\Sheets\02-1224-S-Sum-Quan.dgn	PLOT SCALE = N/A	DRAWN - BID/LC	REVISED -			631/846	2008-077TS	WILL	18	2	
PLOT DATE = 10/14/2009	DATE = 9/17/2009	CHECKED - ER	REVISED -			CONTRACT NO. 60F80					
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

LOOP DETECTOR NOTES

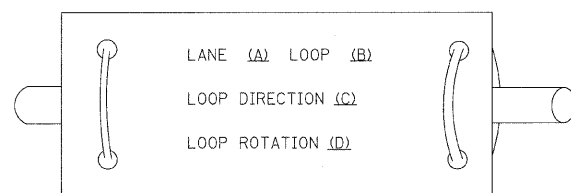
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND 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.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.



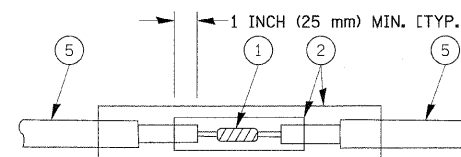
DETECTOR LOOP WIRING SCHEMATIC

- 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.

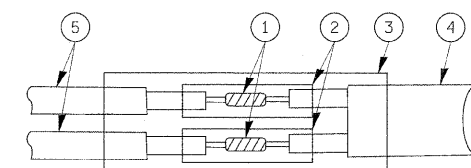
LOOP LEAD-IN CABLE TAG



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



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



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

LOOP DETECTOR SPLICE

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

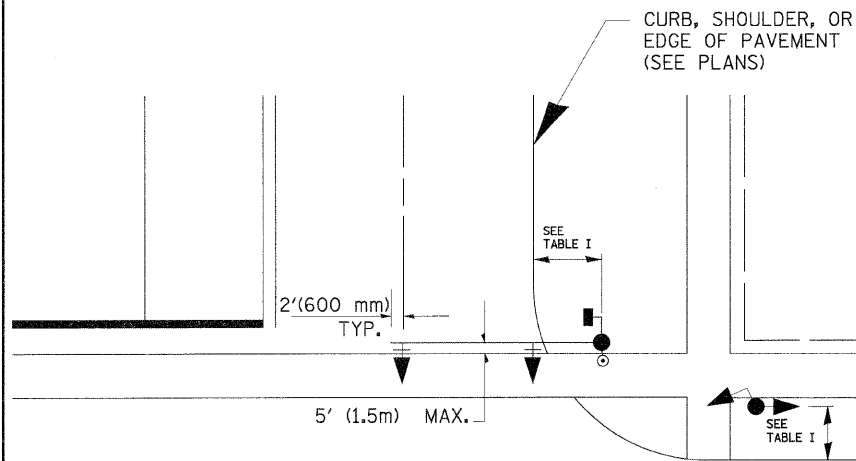
INFRASTRUCTURE ENGINEERING INCORPORATED
33 West Monroe | Suite 1540 | Chicago, IL 60603
P 312.425.9500 | F 312.425.9504 | www.infrastructure-eng.com

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DATE: 01-31-2006
DRAWN BY: RWP
CHECKED BY: DAZ

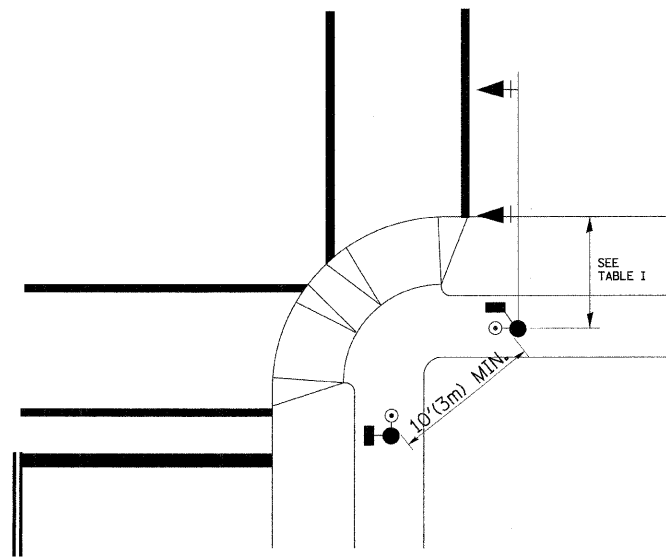
FILE NAME =	USER NAME = (1224-user)	DESIGNED - LC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P:\P-00\1224\Task 9\OGN\Sheets\03-1224-S\Detail-01.dgn	DRAWN - BID/LC	REVISOR - ER	REVISOR -			631/846	2008-077TS	WILL	18	3
PLOT SCALE = 50,0000 1/ IN.	CHECKED - ER	DATE - 9/17/2009	REVISOR -			CONTRACT NO. 60F80				
PLOT DATE = 10/14/2009	DATE - 9/17/2009	REVISOR -	REVISOR -			SCALE: N.T.S. SHEET NO. 1 OF 4 SHEETS STA. TO STA. 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
- 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

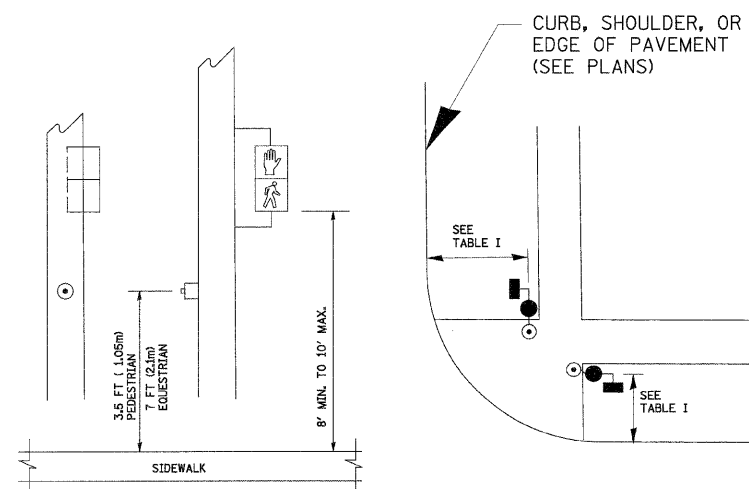


TABLE I

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

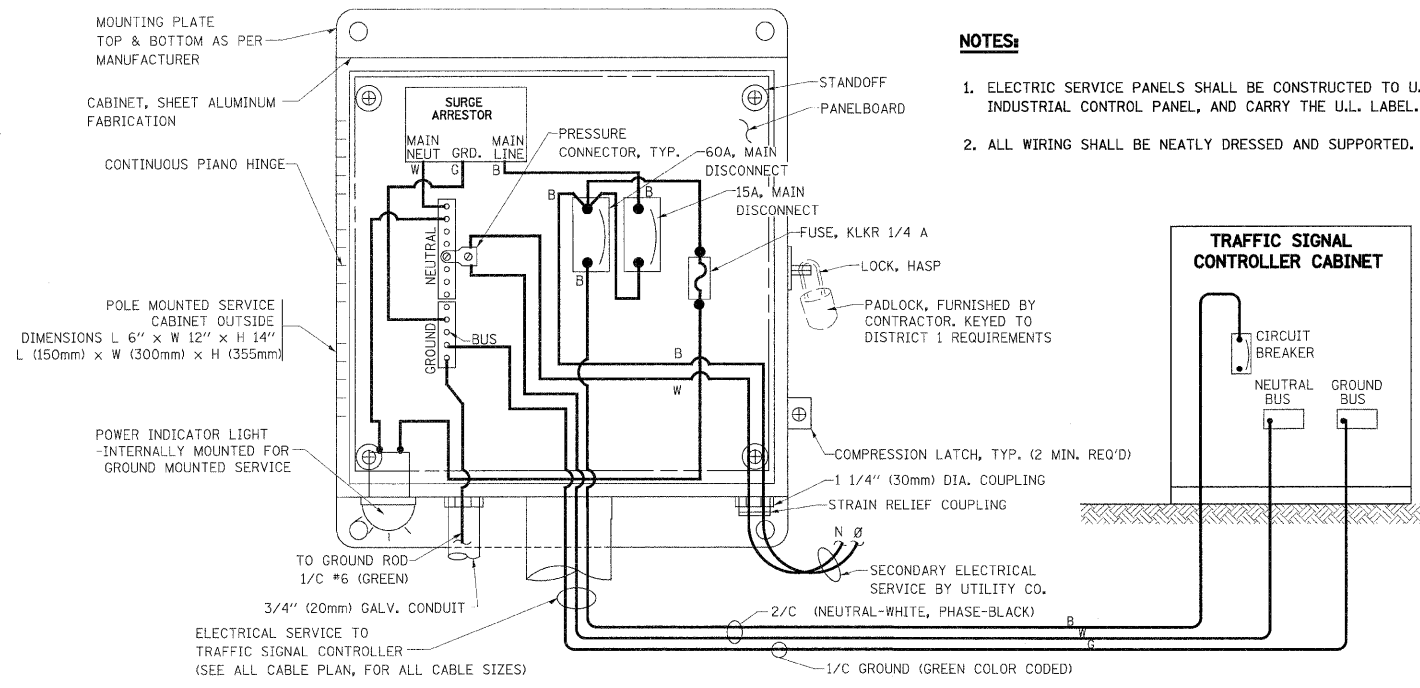
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

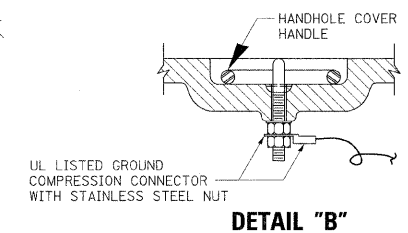
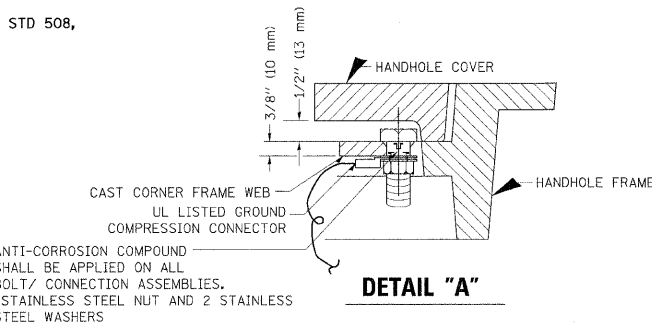
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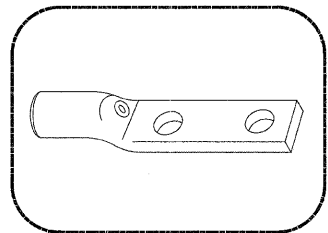
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



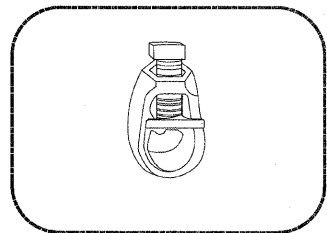
NOTES:

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.



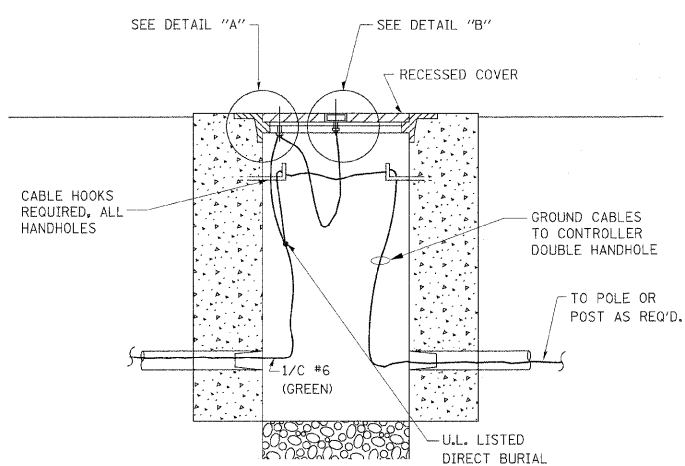
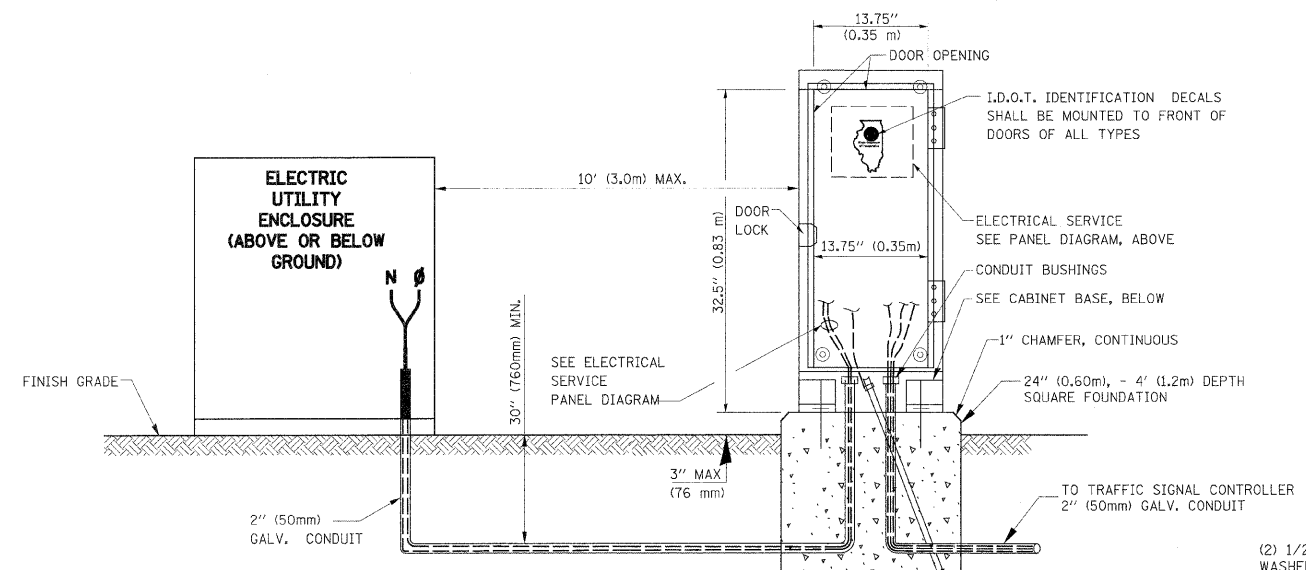
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



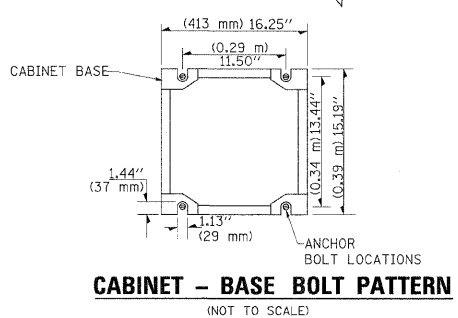
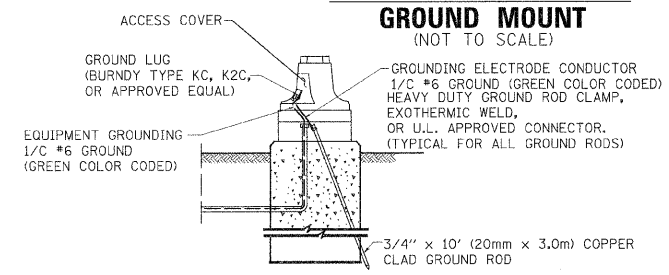
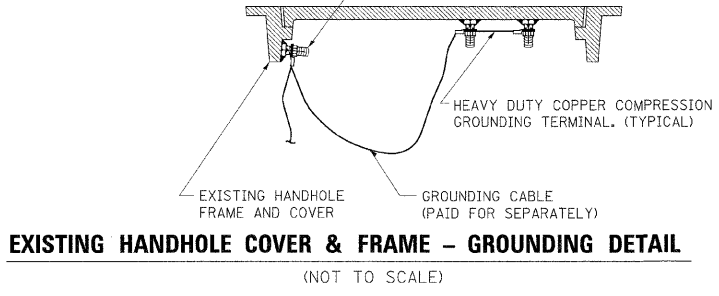
3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

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.



(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)



INFRASTRUCTURE ENGINEERING
 33 West Monroe | Suite 1540 | Chicago, IL 60603
 P 312.425.9500 | F 312.425.9594 | www.infrastructure-eng.com

REVISIONS	
NAME	DATE

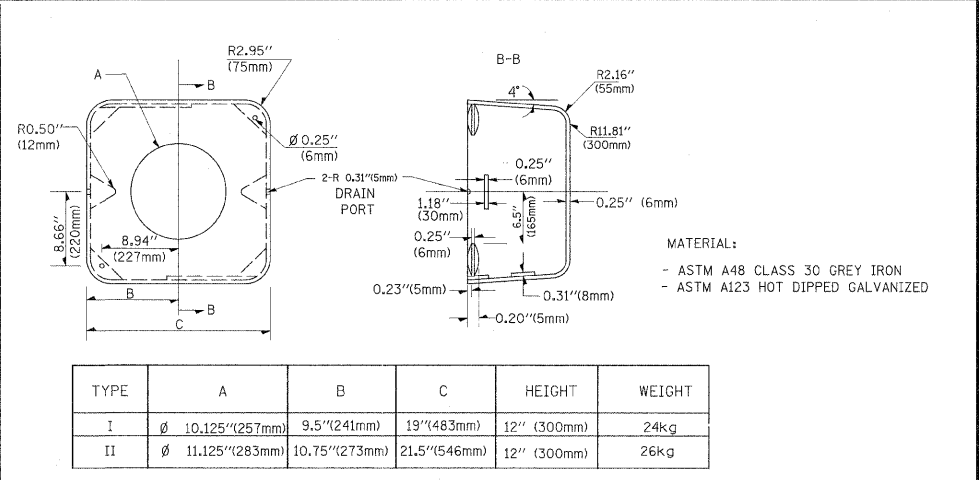
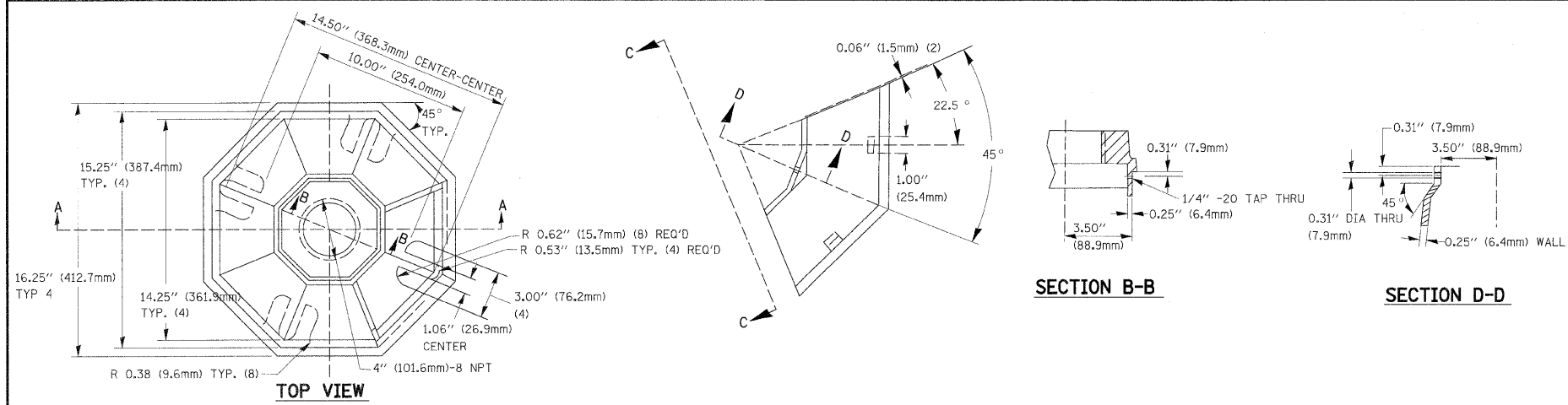
ILLINOIS DEPARTMENT OF TRANSPORTATION				
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS				
SCALE: NTS	DATE: 01-31-2006	DRAWN BY: RWP	CHECKED BY: DAZ	
F.A.P. RITE. 631/846	SECTION 2008-077TS	COUNTY WILL	TOTAL SHEETS 18	SHEET NO. 5
CONTRACT NO. 60F80				

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		DRAWN - BID/LC	REVISED -
		CHECKED - ER	REVISED -
		DATE - 9/17/2009	REVISED -

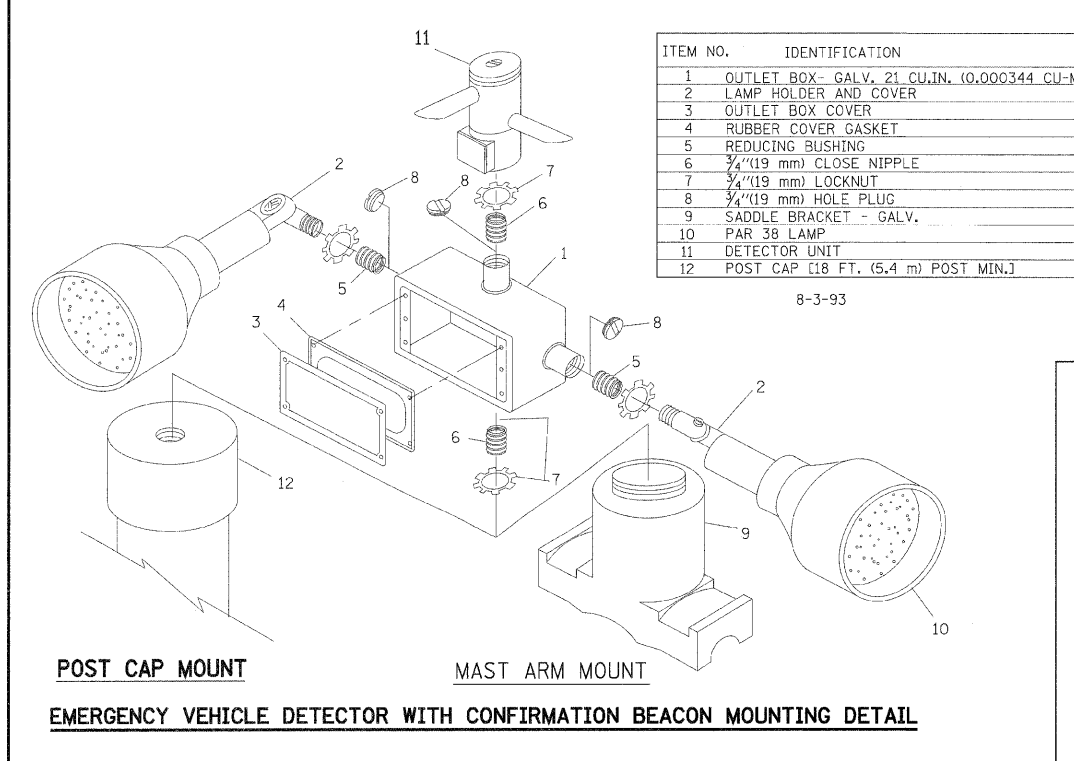
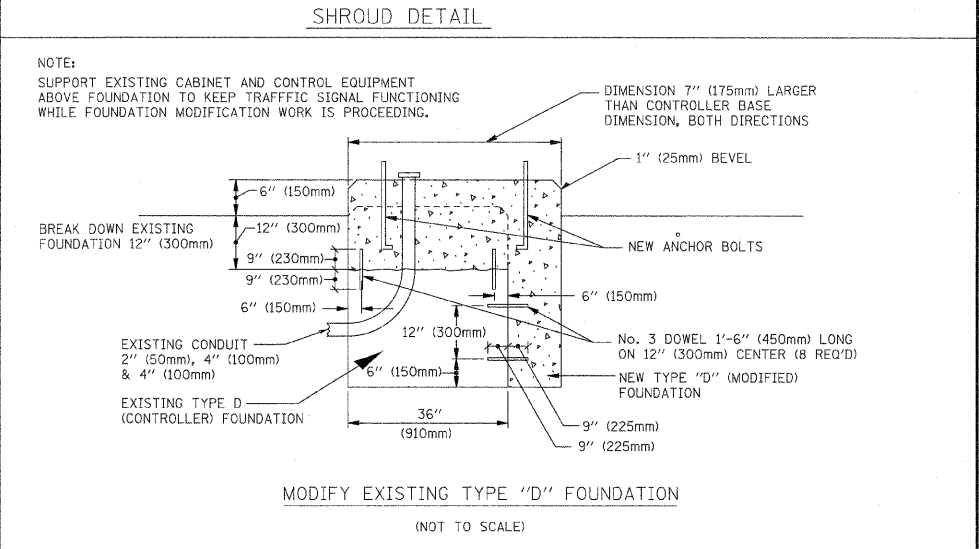
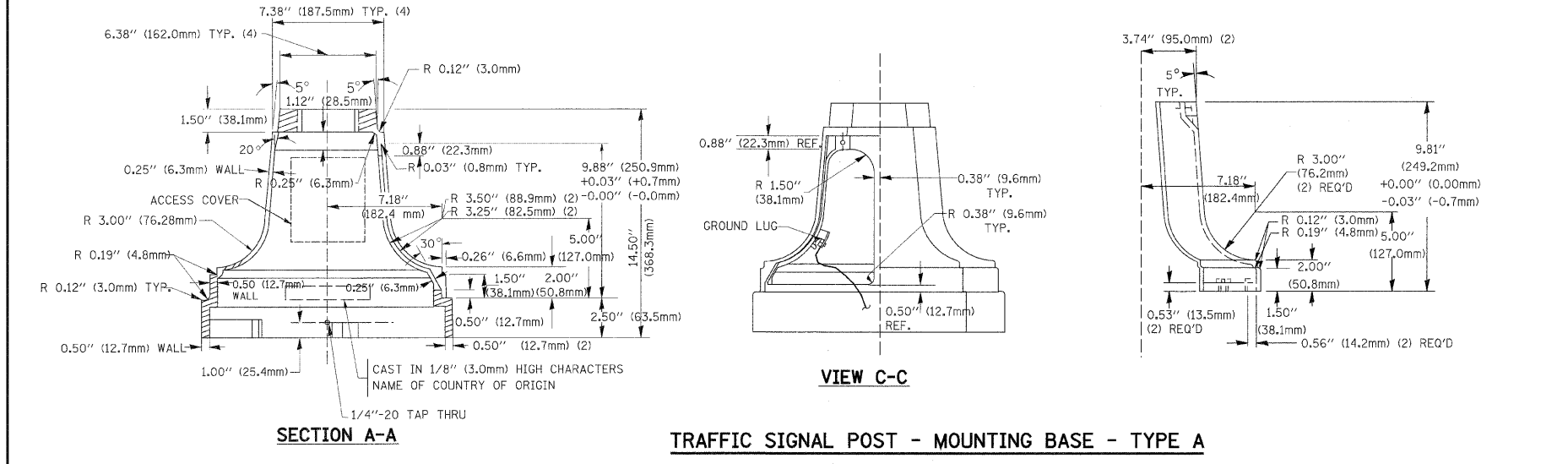
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
 SCALE: N.T.S. SHEET NO. 3 OF 4 SHEETS STA. TO STA.

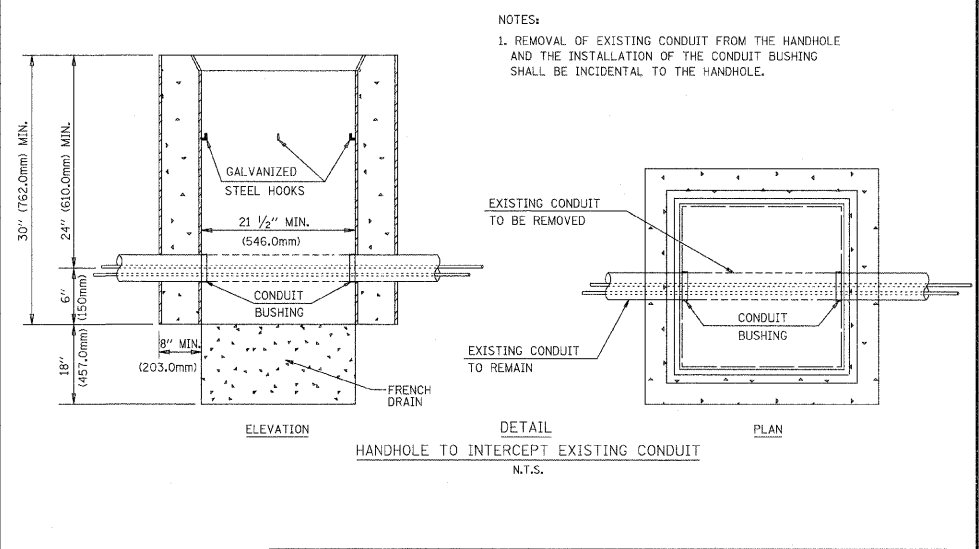
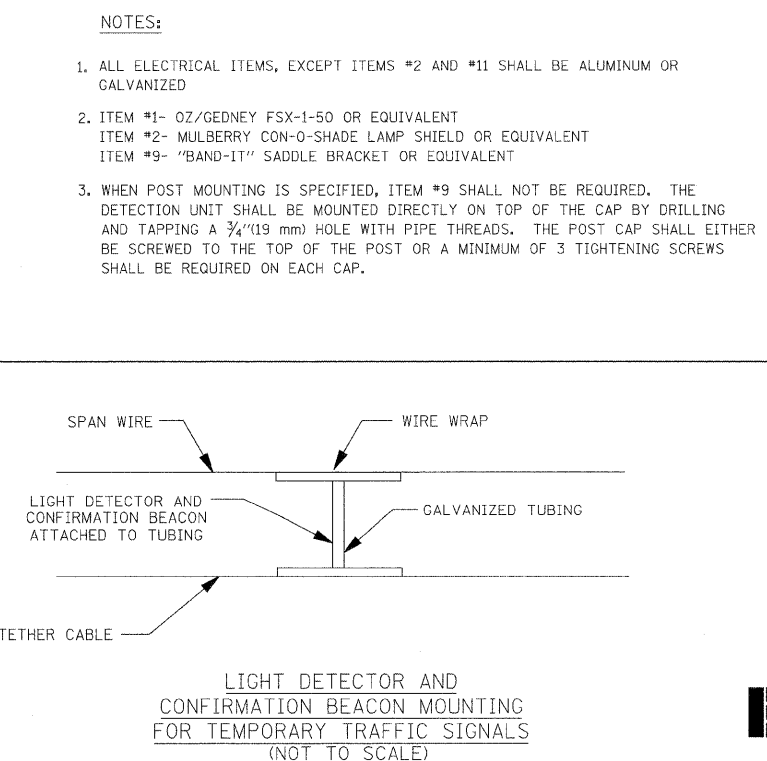
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
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TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\"(300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\"(300mm)	26kg

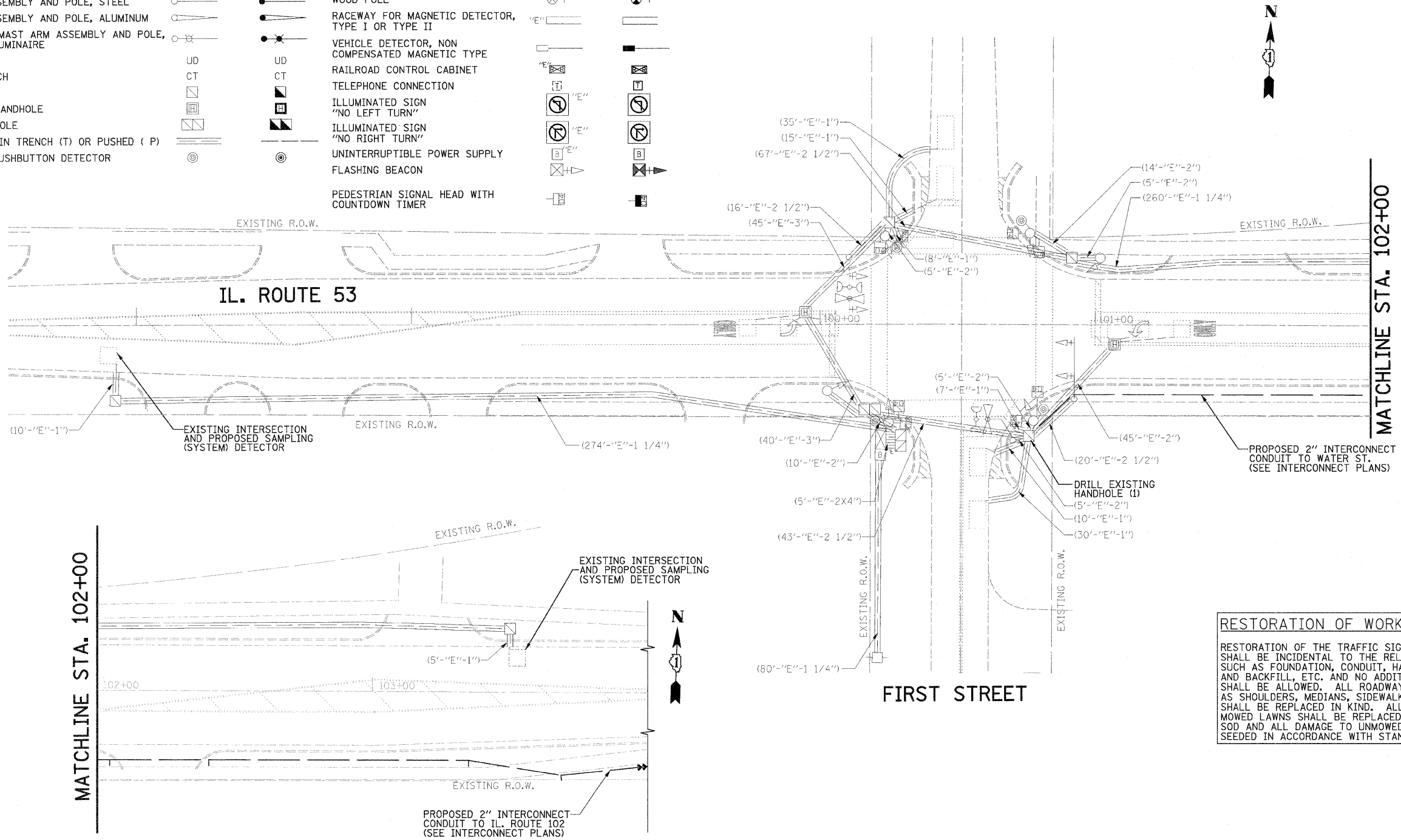


ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18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



TRAFFIC SIGNAL LEGEND

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



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 ADDITIONAL COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH APPROVED SOD AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

FILE NAME - #FILE#	USER NAME - #USER#	DESIGNED - LC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION IL ROUTE 53 AT FIRST STREET	F.A.P. R.I.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - BID/LC	REVISED -			631/846	2008-077TS	WILL	18	7	
		CHECKED - ER	REVISED -			CONTRACT NO. 60F80					
		DATE - 9/17/2009	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

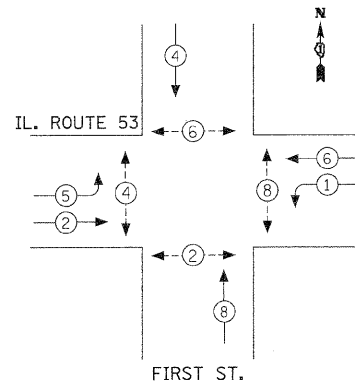


NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THE PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM INSTALLATION

PROPOSED CABLE PLAN

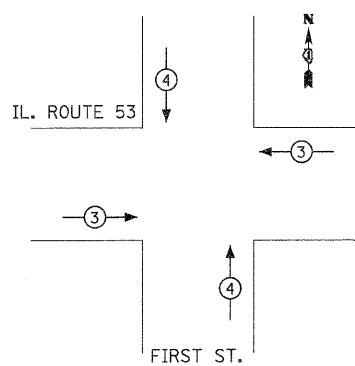
CABLE PLAN LEGEND

CONTROLLER SEQUENCE



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

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

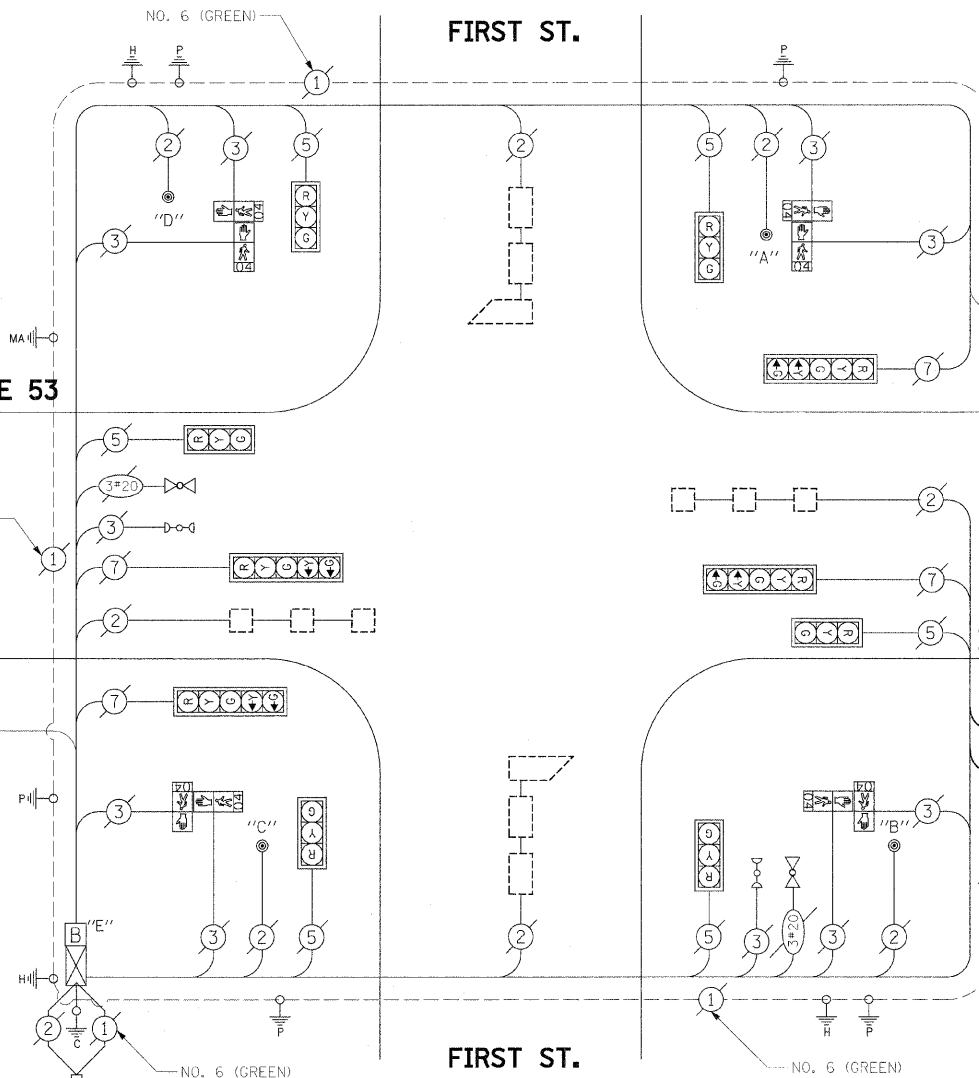
PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	10	135	17	0.50	85.0
(YELLOW)	10	135	25	0.25	62.5
(GREEN)	10	135	15	0.25	37.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	494.6

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 ADDITIONAL COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH APPROVED SOD AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

- NOTES:**
- PUSH-BUTTON "A" SHALL PLACE A CALL IN PHASES 2 & 4
 - PUSH-BUTTON "B" SHALL PLACE A CALL IN PHASES 4 & 6
 - PUSH-BUTTON "C" SHALL PLACE A CALL IN PHASES 3 & 6
 - PUSH-BUTTON "D" SHALL PLACE A CALL IN PHASES 2 & 3

EXISTING INTERSECTION AND PROPOSED SAMPLING (SYSTEM) DETECTOR



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

- EXISTING PROPOSED**
- ⊙ 8" (200mm) TRAFFIC SIGNAL SECTION
 - ⊙ 12" (300mm) TRAFFIC SIGNAL SECTION
 - ⊙ 12" (300mm) PEDESTRIAN SIGNAL SECTION
 - ⊙ 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
 - ⊙ CONTROLLER CABINET
 - ⊙ SERVICE INSTALLATION
 - ⊙ TELEPHONE CONNECTION
 - ⊙ 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.
 - ⊙ 1 GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
 - ⊙ 24 FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
 - ⊙ 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
 - ⊙ VIDEO VEHICLE SENSOR
 - ⊙ UNINTERRUPTIBLE POWER SUPPLY

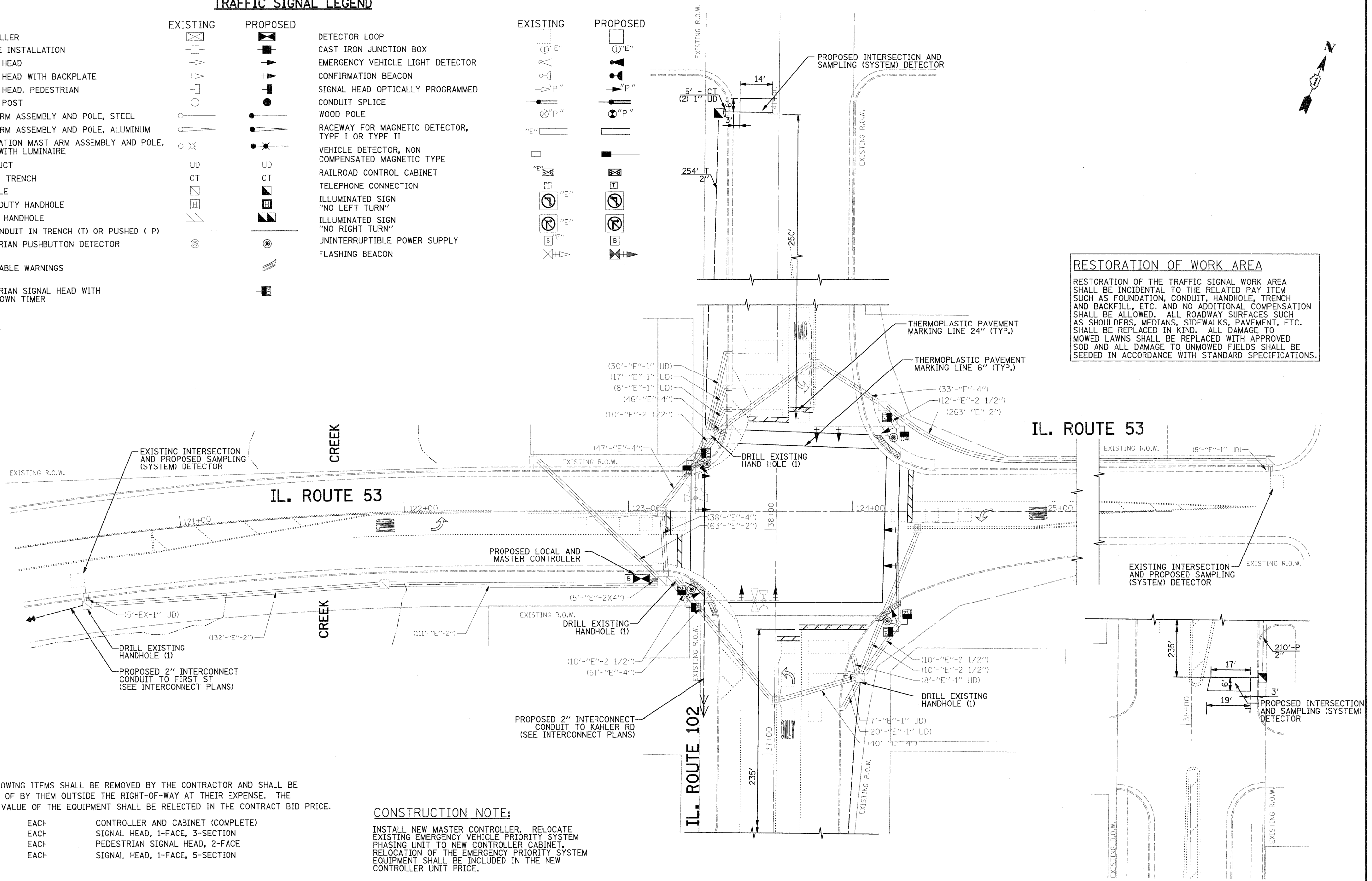
SCHEDULE OF QUANTITIES		
QTY	UNIT	ITEM DESCRIPTION
1.0	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
0.25	L SUM	MOBILIZATION
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	DRILL EXISTING HANDHOLE
25.7	SQ FT	TEMPORARY INFORMATION SIGNING
1.0	EACH	TRANSCEIVER - FIBER OPTIC

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'-H-2" (6m+L-0.6m)=
E - M. ARM POLE		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)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

TRAFFIC SIGNAL LEGEND

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

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 ADDITIONAL COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH APPROVED SOD AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

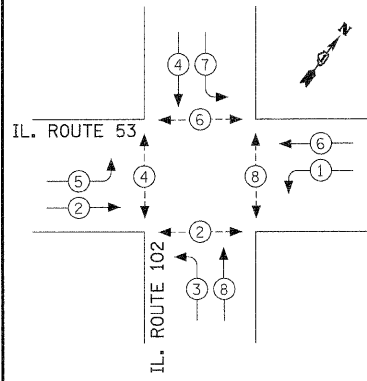


THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE EQUIPMENT SHALL BE RELECTED IN THE CONTRACT BID PRICE.

1.0	EACH	CONTROLLER AND CABINET (COMPLETE)
4.0	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
4.0	EACH	PEDESTRIAN SIGNAL HEAD, 2-FACE
8.0	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION

CONSTRUCTION NOTE:
 INSTALL NEW MASTER CONTROLLER. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET. RELOCATION OF THE EMERGENCY PRIORITY SYSTEM EQUIPMENT SHALL BE INCLUDED IN THE NEW CONTROLLER UNIT PRICE.

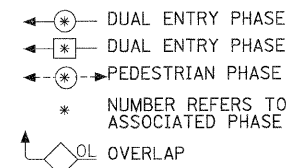
CONTROLLER SEQUENCE



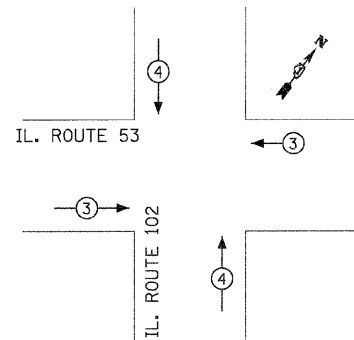
PHASE DESIGNATION DIAGRAM

DUAL ENTRY - ALL LEGS PROTECTED/ PERMITTED LEFT TURN PHASING

LEGEND



EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

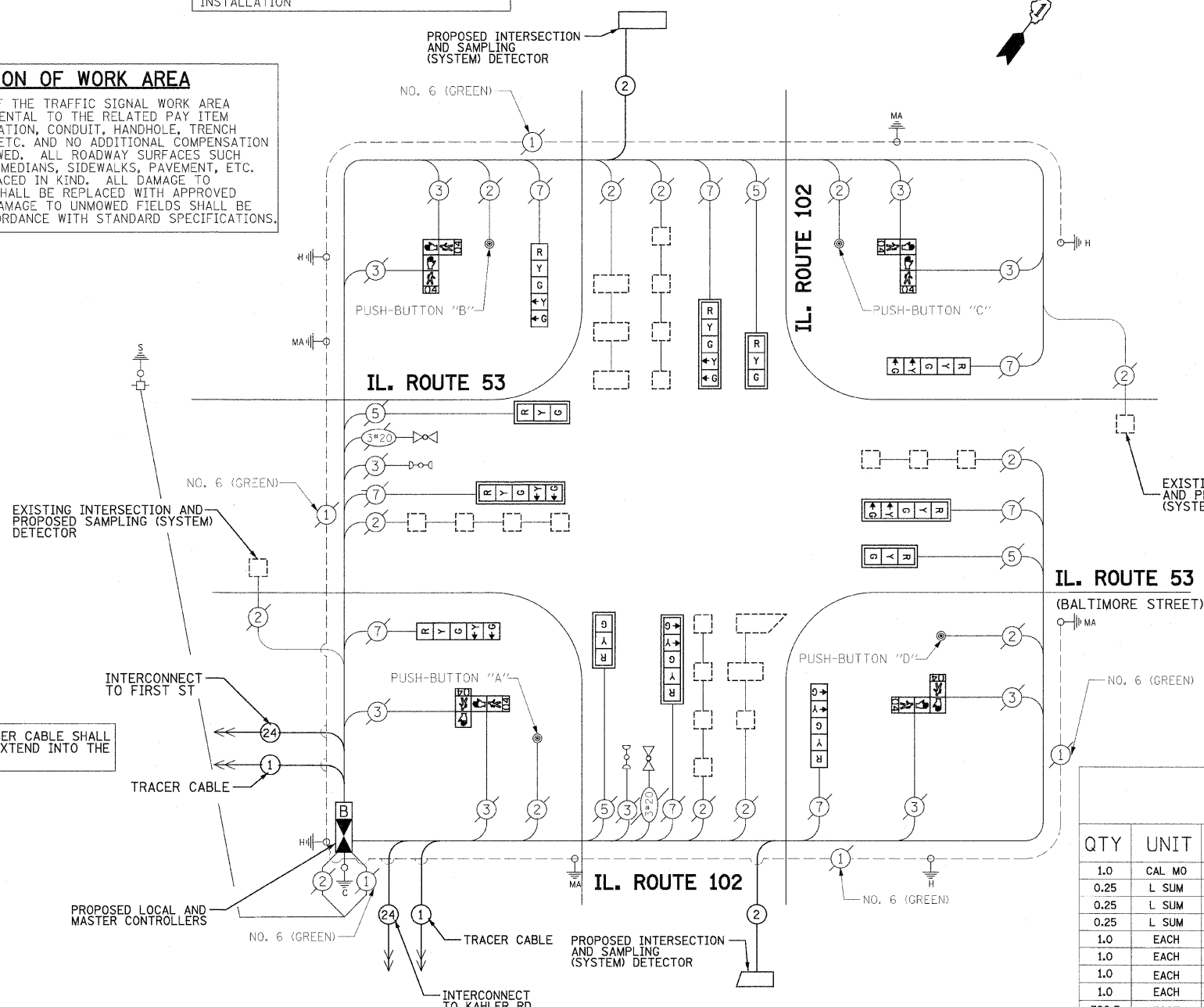
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	16		12	0.10	19.2
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			35	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	441.2

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 ADDITIONAL COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH APPROVED SOD AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THE PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM INSTALLATION

PROPOSED CABLE PLAN



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

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

NOTES:

- PUSH-BUTTON "A" SHALL PLACE A CALL IN PHASES 2 & 4
- PUSH-BUTTON "B" SHALL PLACE A CALL IN PHASES 4 & 6
- PUSH-BUTTON "C" SHALL PLACE A CALL IN PHASES 6 & 8
- PUSH-BUTTON "D" SHALL PLACE A CALL IN PHASES 2 & 8

CABLE PLAN LEGEND

- EXISTING PROPOSED
- 8" (200mm) TRAFFIC SIGNAL SECTION
 - 12" (300mm) TRAFFIC SIGNAL SECTION
 - 12" (300mm) PEDESTRIAN SIGNAL SECTION
 - 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
 - CONTROLLER CABINET
 - SERVICE INSTALLATION
 - TELEPHONE CONNECTION
 - VEHICLE DETECTOR, INDUCTION LOOP
 - MAGNETIC DETECTOR
 - EMERGENCY VEHICLE LIGHT DETECTOR
 - CONFIRMATION BEACON
 - PUSHBUTTON DETECTOR
 - 2 DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
 - 1 GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
 - 24 FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
 - 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
 - VIDEO VEHICLE SENSOR
 - UNINTERRUPTIBLE POWER SUPPLY

SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM DESCRIPTION
1.0	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
0.25	L SUM	MOBILIZATION
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MASTER CONTROLLER (SPECIAL)
1.0	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, (SPECIAL)
1.0	EACH	TRANSCEIVER - FIBER OPTIC
790.5	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
4.0	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
4.0	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
4.0	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
110.0	SQ FT	DETECTABLE WARNINGS
4.0	EACH	DRILL EXISTING HANDHOLE
8.0	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
10.0	EACH	INDUCTIVE LOOP DETECTOR
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	UNINTERRUPTIBLE POWER SUPPLY
4.0	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
114.0	FOOT	THERMOPLASTIC PAVEMENT MARKING LINE 24"
444.0	FOOT	THERMOPLASTIC PAVEMENT MARKING LINE 6"
56.0	SQ FT	THERMOPLASTIC PAVEMENT MARKING REMOVAL
88.0	FOOT	DETECTOR LOOP, TYPE I
51.4	SQ FT	TEMPORARY INFORMATION SIGNING
53.4	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK, 5-INCH

PROPOSED 2" INTERCONNECT TO IL RTE. 53

DRILL EXISTING HANDHOLE (1)

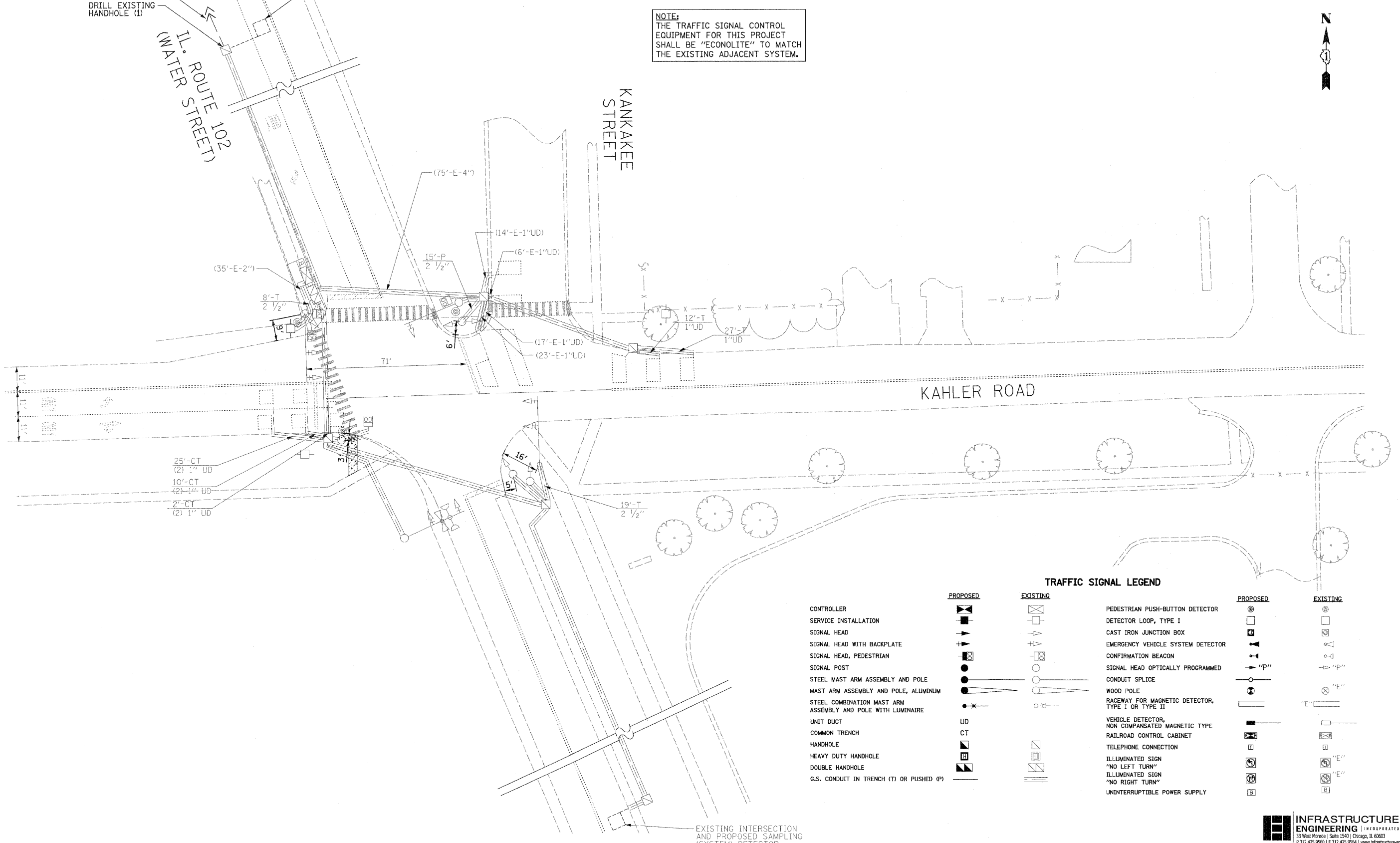
IL. ROUTE 102 (WATER STREET)

EXISTING INTERSECTION AND PROPOSED SAMPLING (SYSTEM) DETECTOR

NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

KANKAKEE STREET

KAHLER ROAD



EXISTING INTERSECTION AND PROPOSED SAMPLING (SYSTEM) DETECTOR

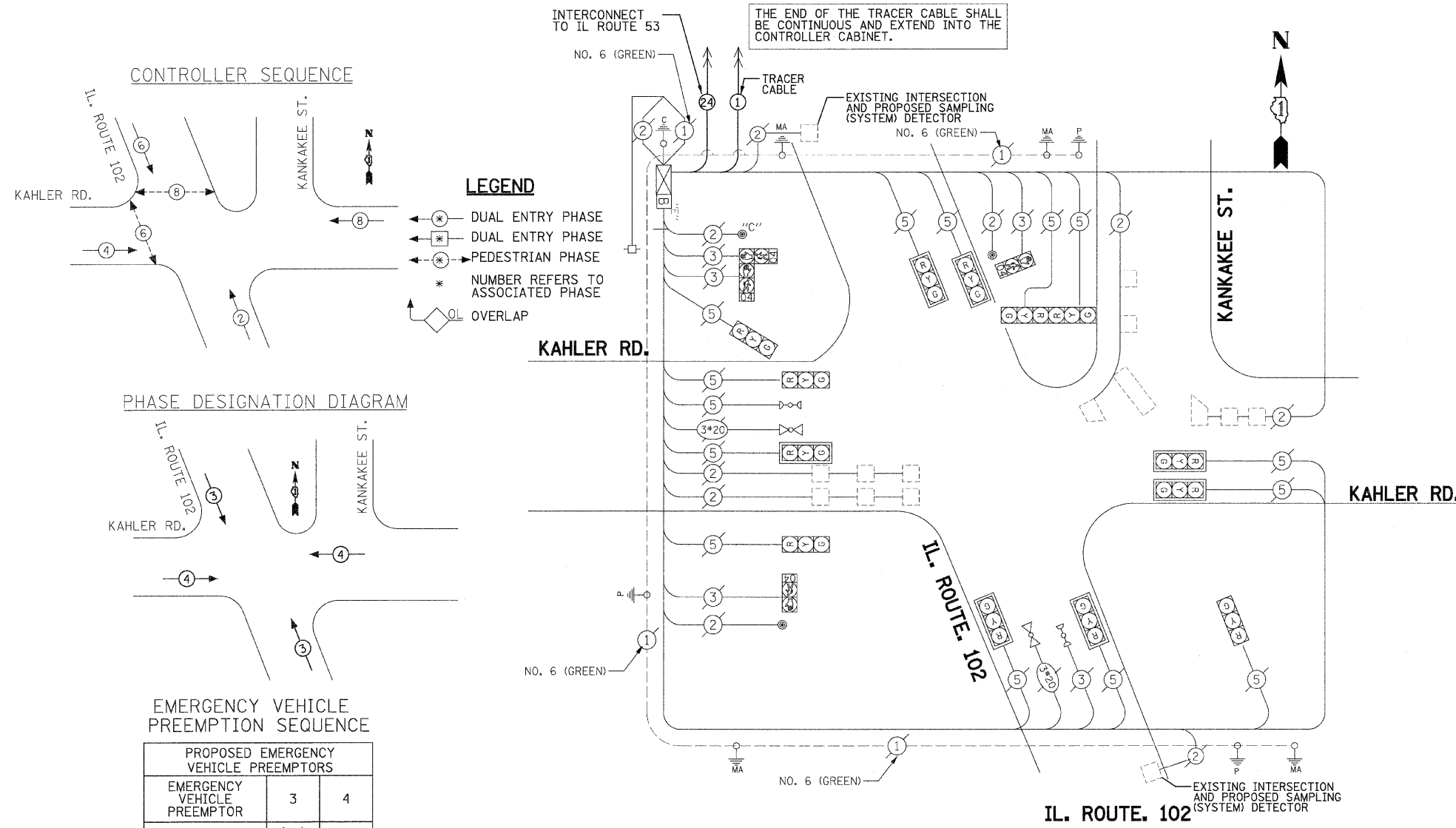
TRAFFIC SIGNAL LEGEND

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

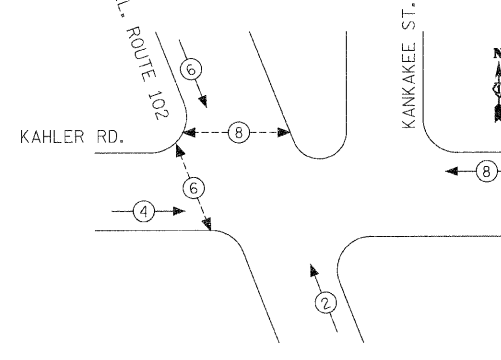
FILE NAME =	USER NAME = (1224_user)	DESIGNED - LC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION IL. ROUTE 102 AT KAHLER ROAD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P:\P-00\1224\Task 9\DDN\Sheets\11-1224-S-T9-TSM-03.dgn	DRAWN - BID/LC	REVISED -	631/846			2008-077TS	WILL	18	11	
PLOT SCALE = 20,000' / IN.	CHECKED - ER	REVISED -	CONTRACT NO. 60F80							
PLOT DATE = 10/14/2009	DATE - 9/17/2009	REVISED -	ILLINOIS FED. AID PROJECT							
						SCALE:	SHEET NO. OF SHEETS	STA. TO STA.		



PROPOSED CABLE PLAN



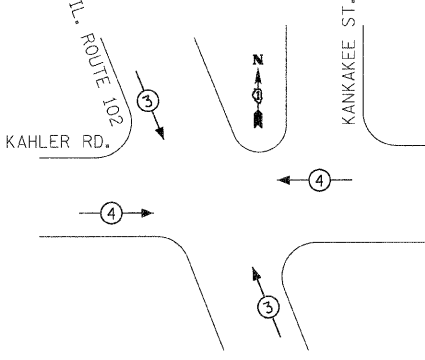
CONTROLLER SEQUENCE



LEGEND

- ⊗ DUAL ENTRY PHASE
- ⊗ DUAL ENTRY PHASE
- ⊗ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

CABLE PLAN LEGEND

- EXISTING PROPOSED
- ⊗ 8" (200mm) TRAFFIC SIGNAL SECTION
 - ⊗ 12" (300mm) TRAFFIC SIGNAL SECTION
 - ⊗ 12" (300mm) PEDESTRIAN SIGNAL SECTION
 - ⊗ 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
 - ⊗ CONTROLLER CABINET
 - ⊗ SERVICE INSTALLATION
 - ⊗ TELEPHONE CONNECTION
 - ⊗ 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.
 - ⊗ 1 GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
 - ⊗ 24 FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
 - ⊗ 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
 - ⊗ VIDEO VEHICLE SENSOR
 - ⊗ "E" UNINTERRUPTIBLE POWER SUPPLY

NOTE:
1. PUSH BUTTON "C" SHALL PLACE A CALL TO PHASES 6 AND 8.

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 ADDITIONAL COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH APPROVED SOD AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

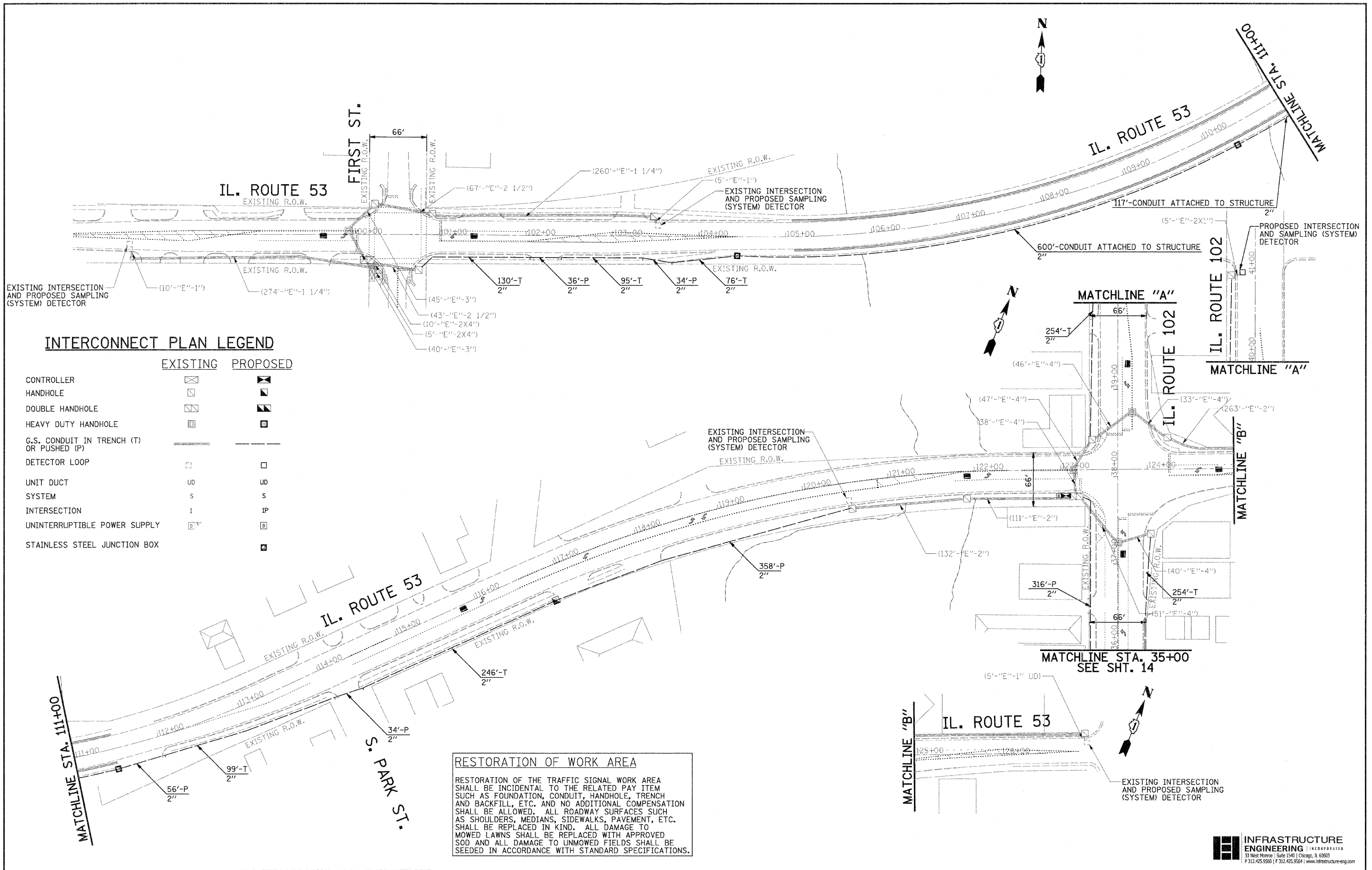
NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THE PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM INSTALLATION

SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM DESCRIPTION
1.0	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
0.25	L SUM	MOBILIZATION
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	DRILL EXISTING HANDHOLE
25.7	SQ FT	TEMPORARY INFORMATION SIGNING
1.0	EACH	TRANSCEIVER - FIBER OPTIC

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	13	135	17	0.50	110.5
(YELLOW)	13	135	25	0.25	81.25
(GREEN)	13	135	15	0.25	48.75
ARROW	-	135	12	0.10	-
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	440.5

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)



INTERCONNECT PLAN LEGEND

	EXISTING	PROPOSED
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY DUTY HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
DETECTOR LOOP		
UNIT DUCT	UD	UD
SYSTEM	S	S
INTERSECTION	I	IP
UNINTERRUPTIBLE POWER SUPPLY		
STAINLESS STEEL JUNCTION BOX		

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 ADDITIONAL COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH APPROVED SOD AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

FILE NAME =	USER NAME = (1224_user)	DESIGNED - LC	REVISED -
P:\P-00\1224\Task_9\DDN\Sheets\13-1224-S-T9-INTERCONNECT-01.dgn		DRAWN - BID/LC	REVISED -
PLOT SCALE = 50,000' / IN.		CHECKED - ER	REVISED -
PLOT DATE = 12/14/2009		DATE = 9/17/2009	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN IL. ROUTE 53
 FROM FIRST ST. TO IL. ROUTE 102**

SCALE: 1"=20' SHEET NO. 1 OF 3 SHEETS STA. TO STA.

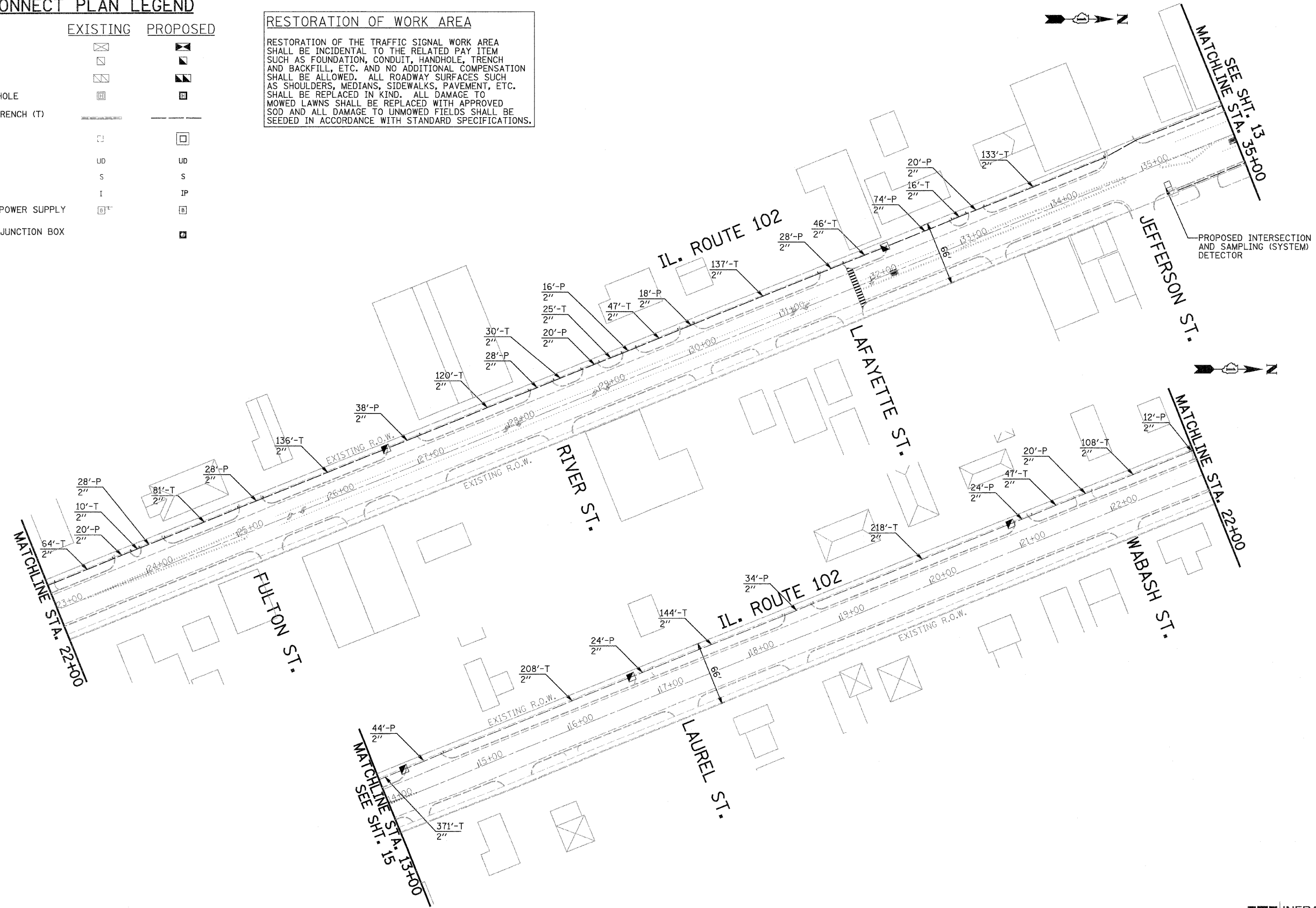
F.A.P. RTE. 631/846	SECTION 2008-077TS	COUNTY WILL	TOTAL SHEETS 18	SHEET NO. 13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60F80	

INFRASTRUCTURE ENGINEERING INCORPORATED
 33 West Monroe | Suite 1540 | Chicago, IL 60603
 P 312.425.9569 | F 312.425.9564 | www.infrastructure-eng.com

INTERCONNECT PLAN LEGEND

	EXISTING	PROPOSED
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY DUTY HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
DETECTOR LOOP		
UNIT DUCT	UD	UD
SYSTEM	S	S
INTERSECTION	I	IP
UNINTERRUPTIBLE POWER SUPPLY		
STAINLESS STEEL JUNCTION BOX		

RESTORATION OF WORK AREA
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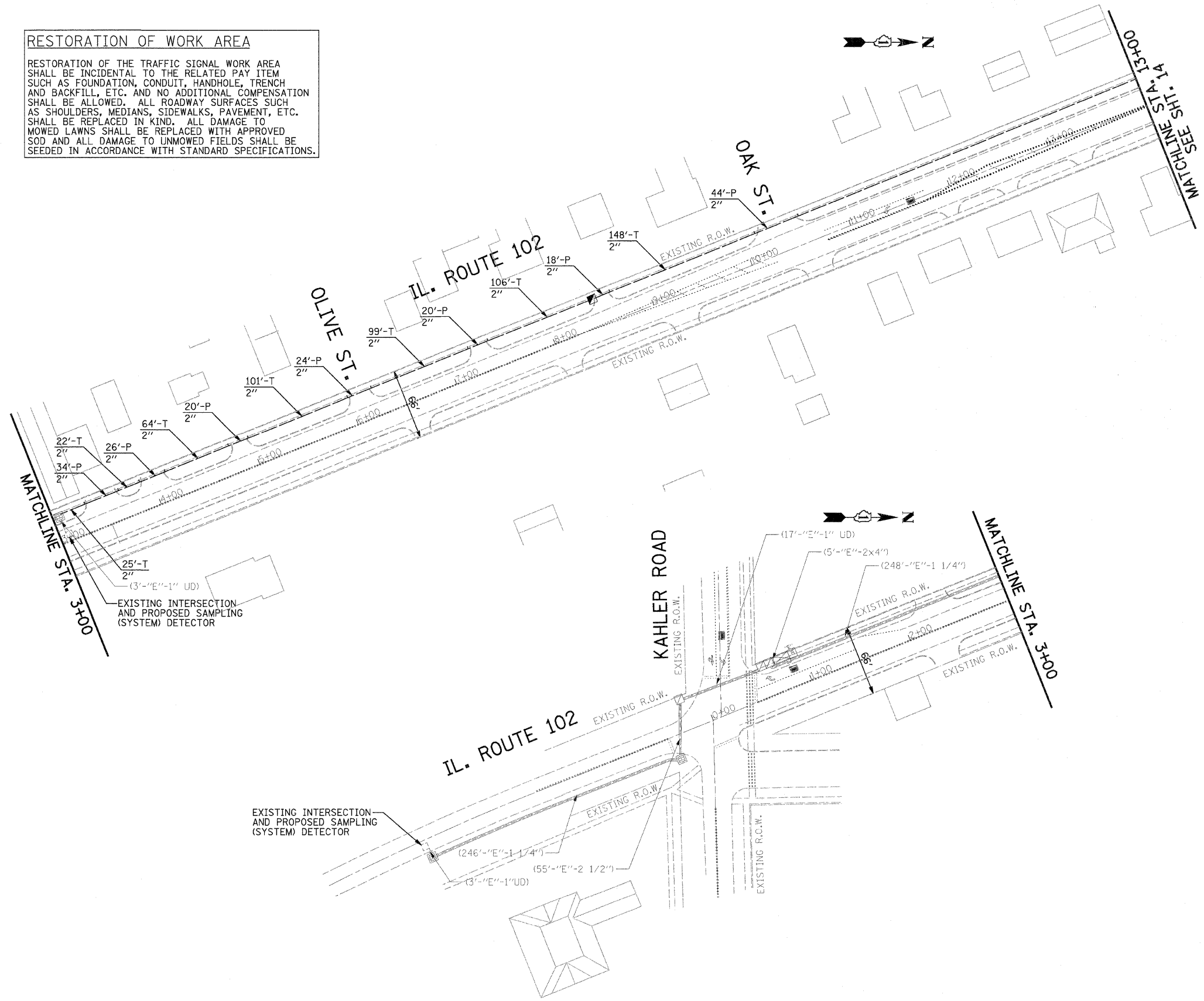


FILE NAME =	USER NAME = (1224_user)	DESIGNED - LC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERCONNECT PLAN IL ROUTE 102 FROM IL ROUTE 53 TO KAHLER RD.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P:\P-00\1224\Task 9\DCN\Sheets\14-1224-S-T9-INTERCONNECT-02.dgn	DRAWN - BID/LC	REVISED -	631/846			2008-077TS	WILL	18	14	
PLOT SCALE = 50.0000' / IN.	CHECKED - ER	REVISED -	CONTRACT NO. 60F80							
PLOT DATE = 10/14/2009	DATE - 9/17/2009	REVISED -	SCALE: 1"=20' SHEET NO. 2 OF 3 SHEETS STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

INTERCONNECT PLAN LEGEND

	EXISTING	PROPOSED
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY DUTY HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
DETECTOR LOOP		
UNIT DUCT	UD	UD
SYSTEM	S	S
INTERSECTION	I	IP
UNINTERRUPTIBLE POWER SUPPLY		
STAINLESS STEEL JUNCTION BOX		

RESTORATION OF WORK AREA
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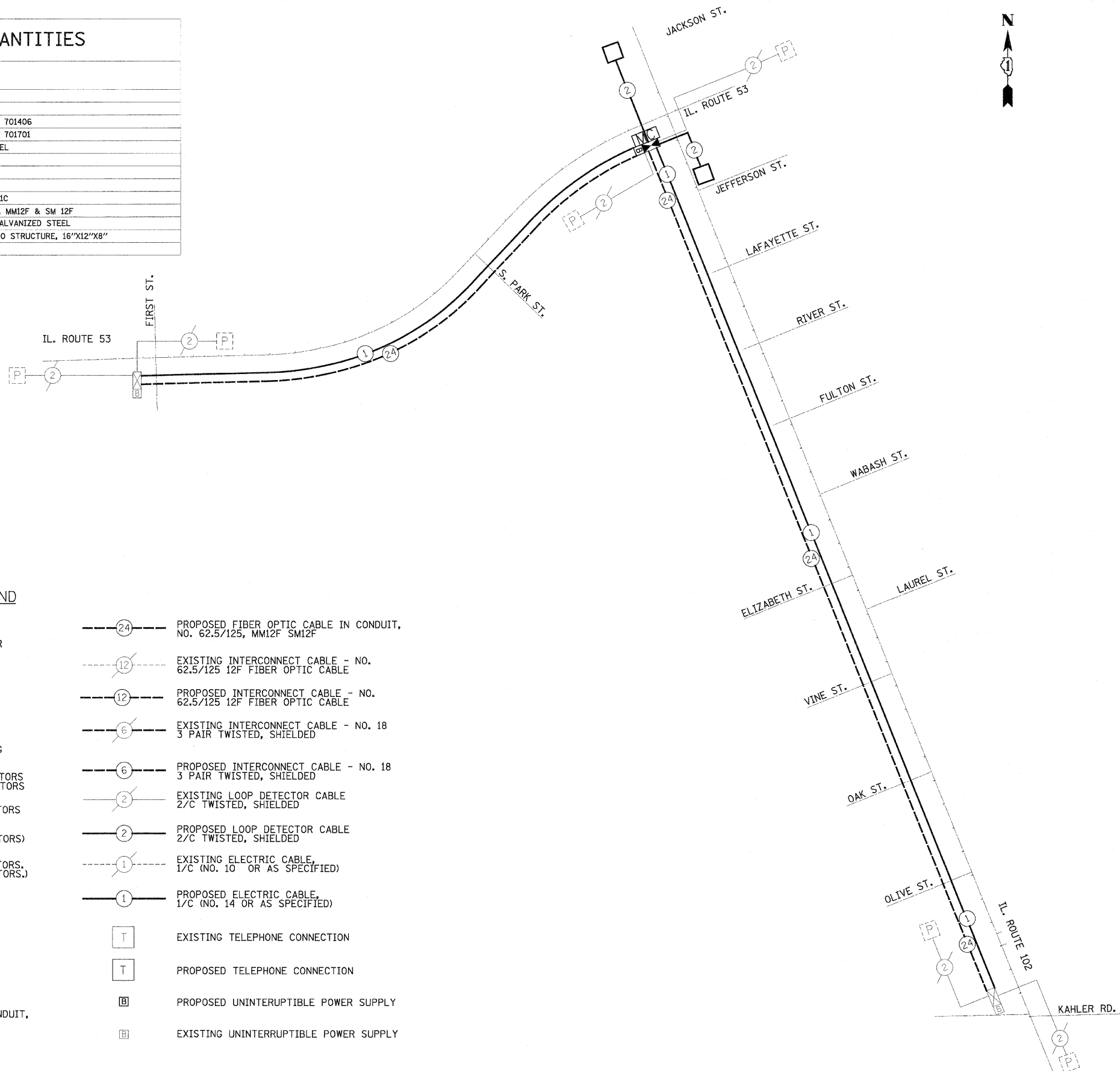


FILE NAME =	USER NAME = (1224_user)	DESIGNED - LC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERCONNECT PLAN IL. ROUTE 102 FROM IL. ROUTE 53 TO KAHLER RD.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P:\P-00\1224\Task 9\DWG\Sheets\15-1224-S-T9-INTERCONNECT-03.dgn	DRAWN - BID/LC	CHECKED - ER	REVISED -			631/846	2008-077TS	WILL	18	15
PLOT SCALE = 50.0000' / IN.	DATE - 9/17/2009	REVISED -	REVISED -			CONTRACT NO. 60F80				
PLOT DATE = 10/14/2009						SCALE: 1"=20'		SHEET NO. 3 OF 3 SHEETS		STA. TO STA.



SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM DESCRIPTION
1.0	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
0.25	L SUM	MOBILIZATION
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
3432.0	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
1771.0	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
7.0	EACH	HANDHOLE
3432.0	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
6089.0	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
6115.0	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F & SM 12F
717.0	FOOT	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL
3.0	EACH	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16"X12"X8"
1.0	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM

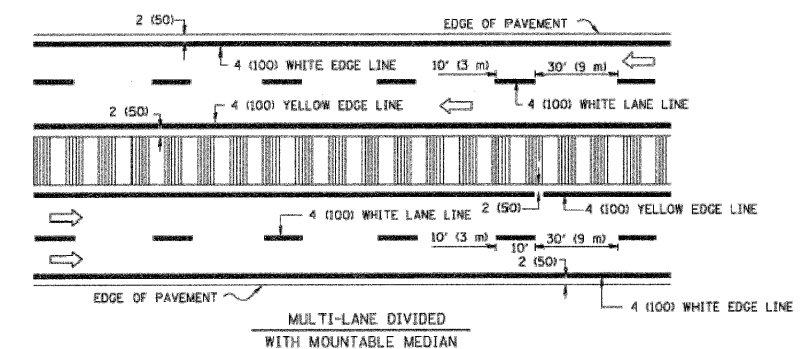
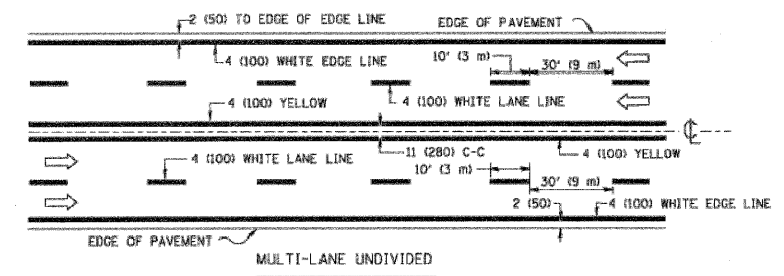
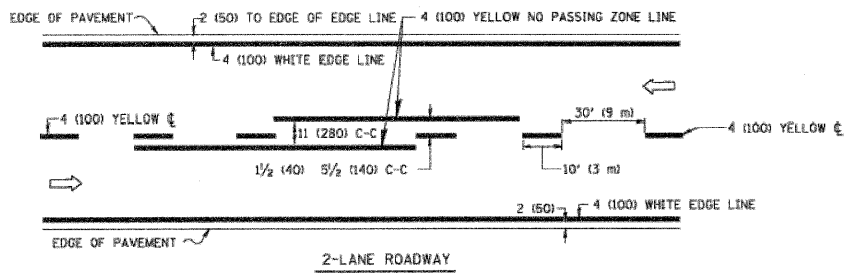


INTERCONNECT SCHEMATIC LEGEND

- | | | | |
|--|---|--|--|
| | EXISTING INTERSECTION CONTROLLER | | PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F |
| | PROPOSED INTERSECTION CONTROLLER | | EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE |
| | EXISTING MASTER CONTROLLER | | PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE |
| | PROPOSED MASTER CONTROLLER | | EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED |
| | MASTER MASTER CONTROLLER | | PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED |
| | EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS | | EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED |
| | PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS | | PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED |
| | EXISTING INTERSECTION LOOP DETECTORS | | EXISTING ELECTRIC CABLE, 1/C (NO. 10 OR AS SPECIFIED) |
| | PROPOSED SAMPLING (SYSTEM DETECTORS) | | PROPOSED ELECTRIC CABLE, 1/C (NO. 14 OR AS SPECIFIED) |
| | EXISTING SAMPLING (SYSTEM) DETECTORS | | EXISTING TELEPHONE CONNECTION |
| | PROPOSED SAMPLING (SYSTEM DETECTORS) | | PROPOSED TELEPHONE CONNECTION |
| | EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM DETECTORS.) | | PROPOSED UNINTERRUPTIBLE POWER SUPPLY |
| | EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS | | EXISTING UNINTERRUPTIBLE POWER SUPPLY |
| | PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS | | |
| | EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS | | |
| | PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS | | |
| | EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F | | |

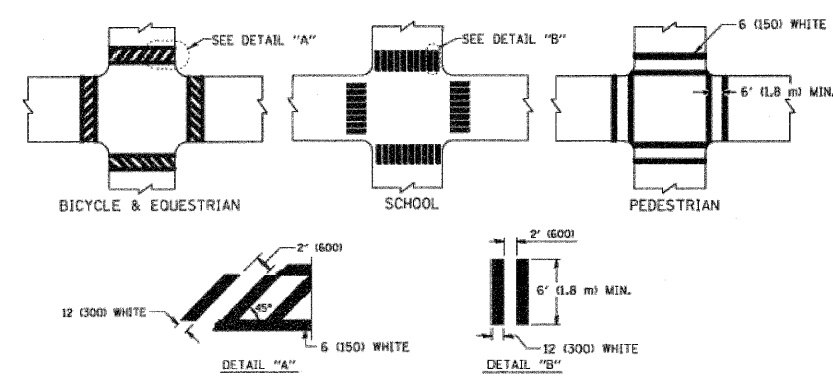


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

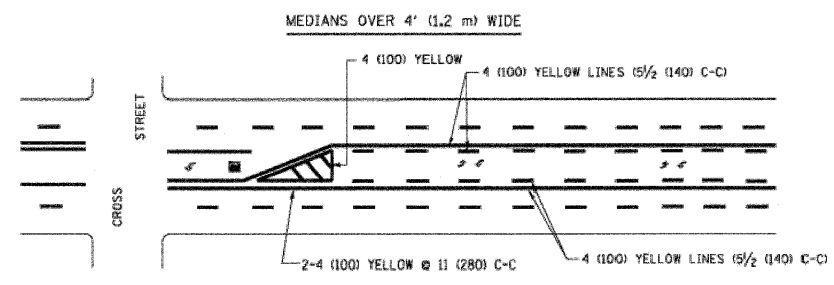
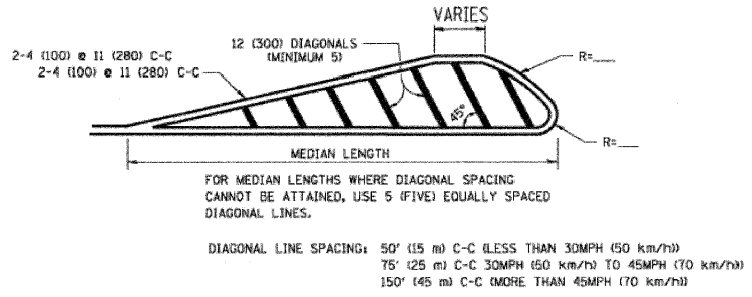
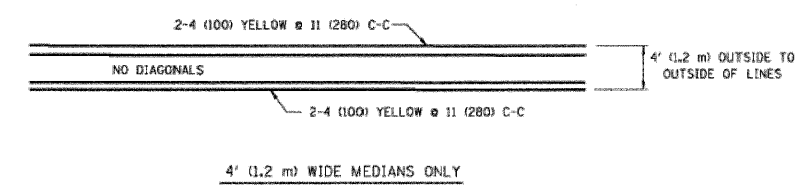


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

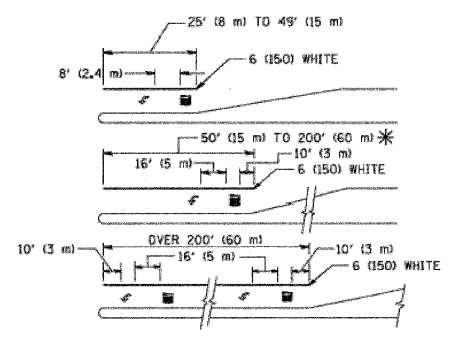
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



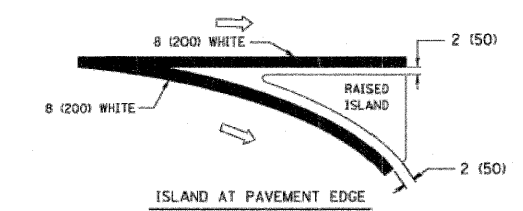
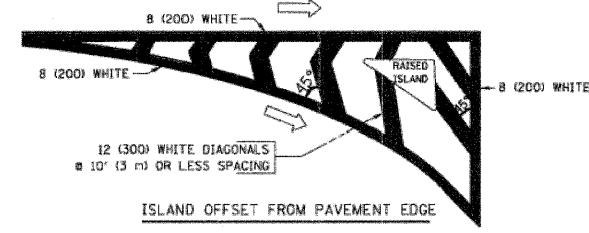
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 * 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 (1000)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (1000)	SOLID	YELLOW	11 (2800) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (1000)	SOLID	YELLOW	5/2' (1400) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 4 (1000)	SOLID	YELLOW	11 (2800) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (1000)	SKIP-DASH	WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
LANE LINES	5 (1250) ON FREEWAYS	SKIP-DASH	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 (1000)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (1500) LINES FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (1000) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2' (1400) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
TWO WAY LEFT TURN MARKING	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL))	2 @ 6 (1500) 12 (3000) @ 45° 12 (3000) @ 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 (1000) WITH 12 (3000) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (2800) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (2000) WITH 12 (3000) 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" 15 6' (1.8 m) LETTERS; 16 (4000) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (3000) @ 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
EYERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE

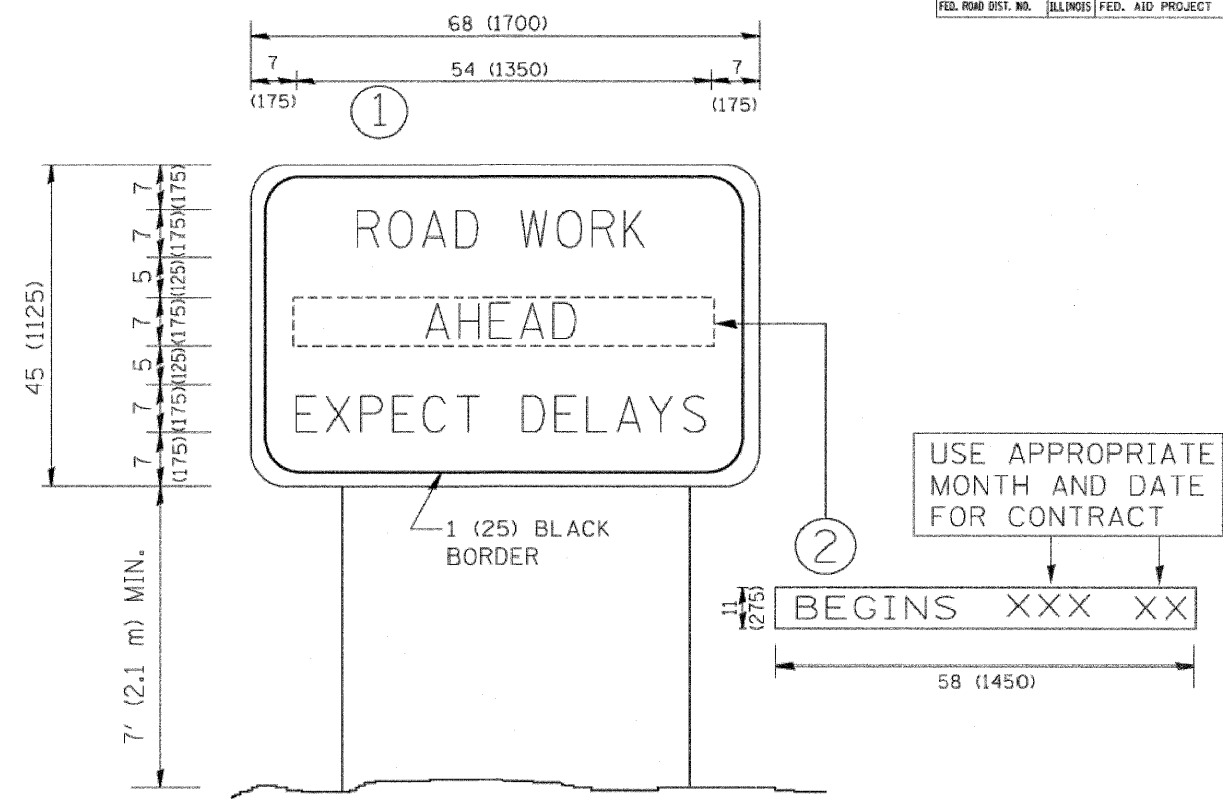
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD

CHECKED BY

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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.

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