

60A45

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	1

D-91-056-06

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

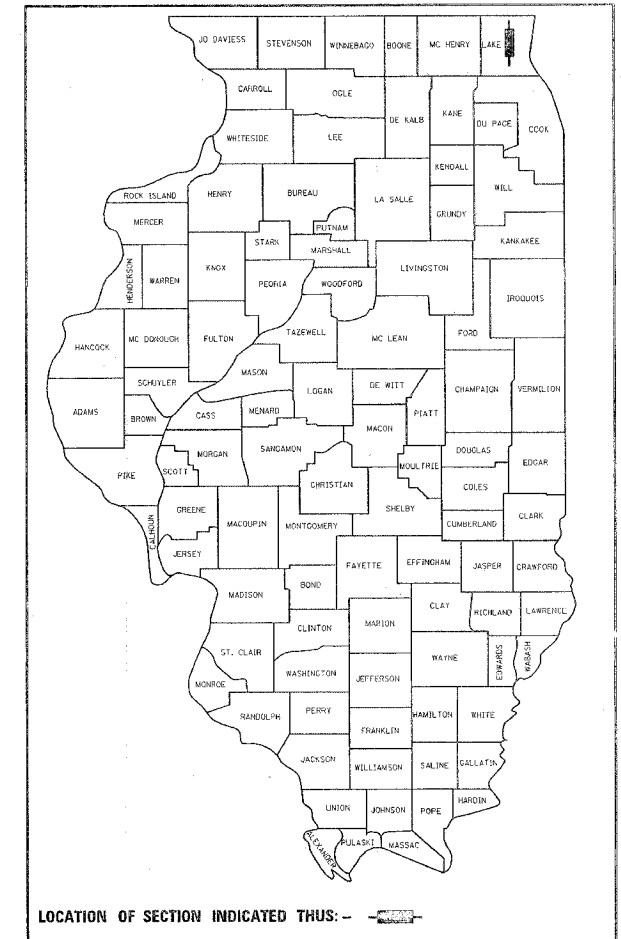
# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1

## CONGESTION MITIGATION AIR QUALITY FIBER OPTIC COMMUNICATION NETWORK

### F.A.P. 344 - U.S. ROUTE 45 FROM GRASS LAKE ROAD TO MILBURN ROAD

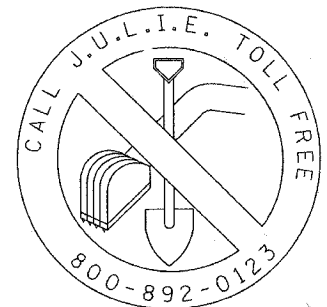
PROJECT: CMF-0344(043)  
SECTIONS 2005-059TS  
C-91-056-06  
LAKE COUNTY



#### STANDARD DRAWINGS

701006-02	701011-01	701101-01	701301-02	702001-06
424001-04	720001	813001-01	814001-01	814006-01
857001	877001-02	877006-02	877011-02	878001-05
880001	880006	886001		
701201-02	701316-03	701321-08	701406-04	701501-03
701502-01	701606-04	701601-04	701701-04	701801-03

NOTE: STANDARD DRAWINGS REQUIRED (CIRCLED).

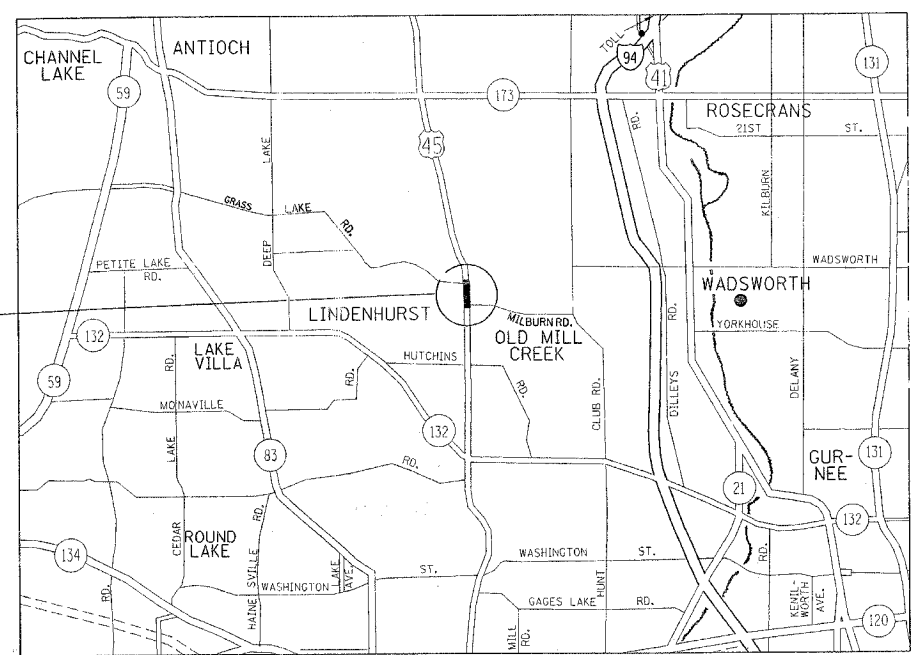


48 - HOURS BEFORE DIGGING

### CONTRACT NO. 60A45

PREPARED BY: *Steve Travia*  
TRAFFIC ENGINEER  
DATE: *Jan 30, 2007*

PROJECT LOCATION



### LAKE VILLA TOWNSHIP



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED: *Jan 30, 2007*

*Donna M. O'Neil*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

*March 23, 2007*  
*Eric E. Harn*  
ENGINEER OF DESIGN AND ENVIRONMENT

*March 23, 2007*  
*Milton R. See, P.E.*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				

SUMMARY OF QUANTITIES			URBAN 201.FED./201.STATE	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	US 45 @ MILLBURN RD. Y031-1F	US 45 @ GRASS LAKE RD. Y031-1F	INTERCONNECT Y031-1F
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	0.50	0.50	1
67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.34
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	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
X8140074	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	6	3	3	
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	84	84		
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	50	50		
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	84	84		
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	1	1	
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1		1	
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1	1		
86000100	MASTER CONTROLLER	EACH	1	1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2	1	1	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	985	440	545	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	71	25	46	
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM 12F SM12F	FOOT	331			331
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	2		
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6	3	3	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4	2	2	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2	1	1	
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1		1	
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED	EACH	2	1	1	
88102710	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	4	2	2	
88102740	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	1		1	
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8	4	4	
88500100	INDUCTIVE LOOP DETECTOR	EACH	10	5	5	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	5	2	3	
X8050015	SERVICE INSTALLATION, POLE MOUNTED	EACH	2	1	1	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2	1	1	
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	2			2
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	300			300
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO.14 1C	FOOT	300			300
XX006661	UNINTERRUPTIBLE POWER SUPPLY	EACH	2	1	1	
* 88700200	LIGHT DETECTOR	EACH	4	2	2	
* 88700300	LIGHT DETECTOR AMPLIFIER	EACH	2	1	1	

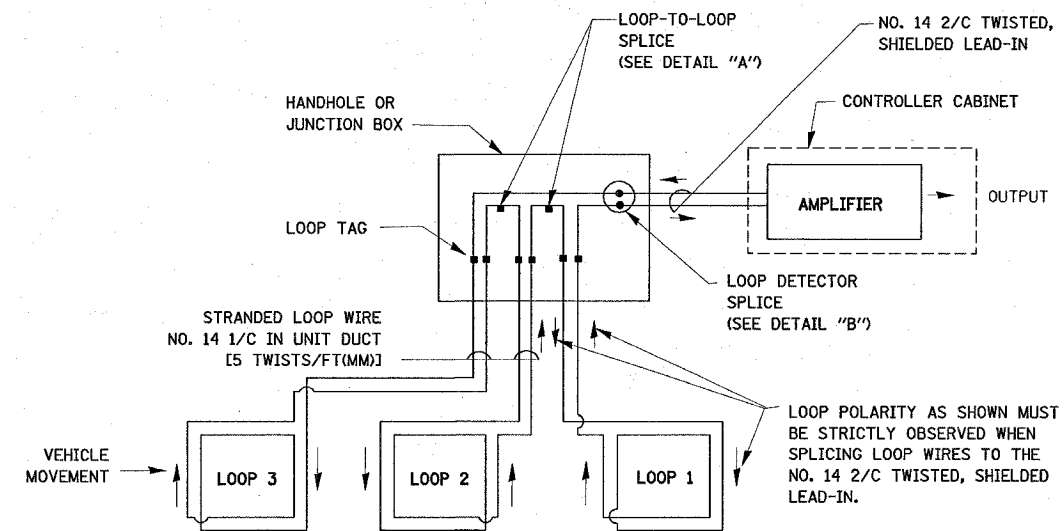
\* 100% COST TO LAKE VILLA FIRE PROTECTION DISTRICT - Y031-30

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SUMMARY OF QUANTITIES U.S. RTE. 45 FROM GRASS LAKE ROAD TO MILBURN ROAD
NAME	DATE	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A45				

### LOOP DETECTOR NOTES

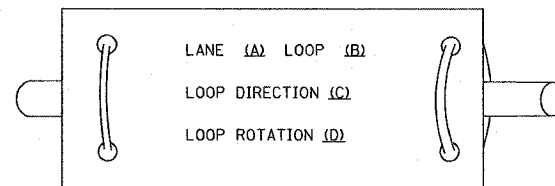
1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED 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.



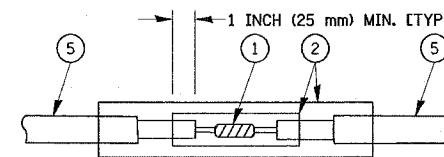
DETECTOR LOOP WIRING SCHEMATIC

- 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.

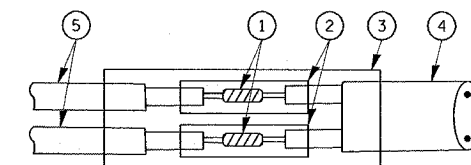
LOOP LEAD-IN CABLE TAG



- 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.



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

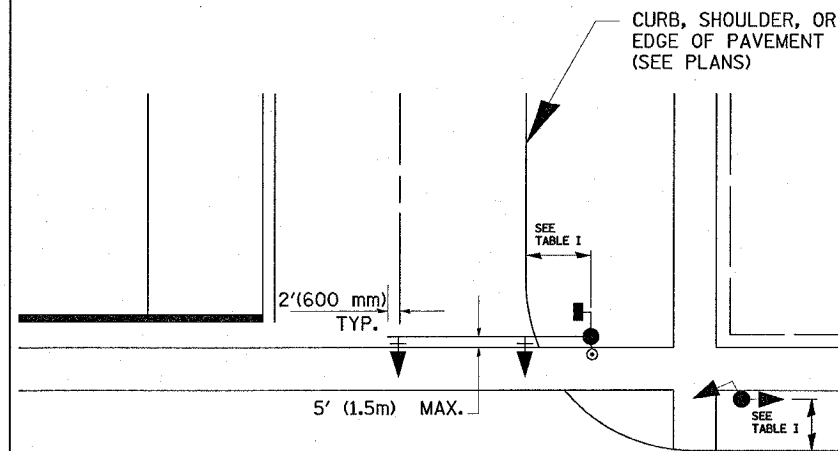
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HORIZ. NONE  
DATE 1-01-02

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

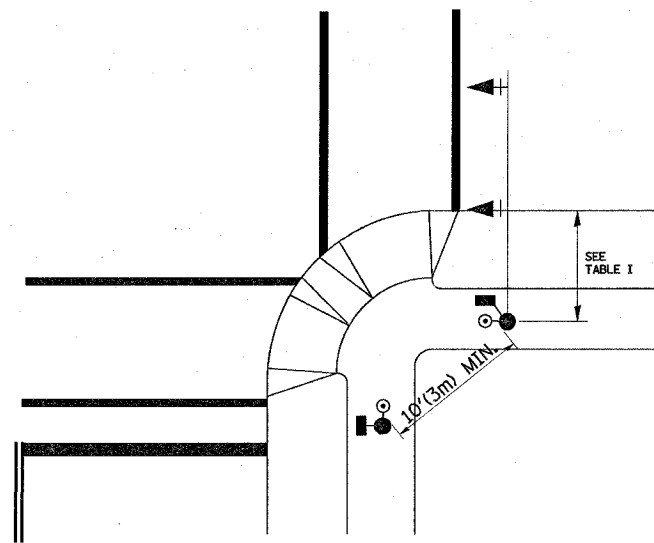
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### TRAFFIC SIGNAL MAST ARM AND POST

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

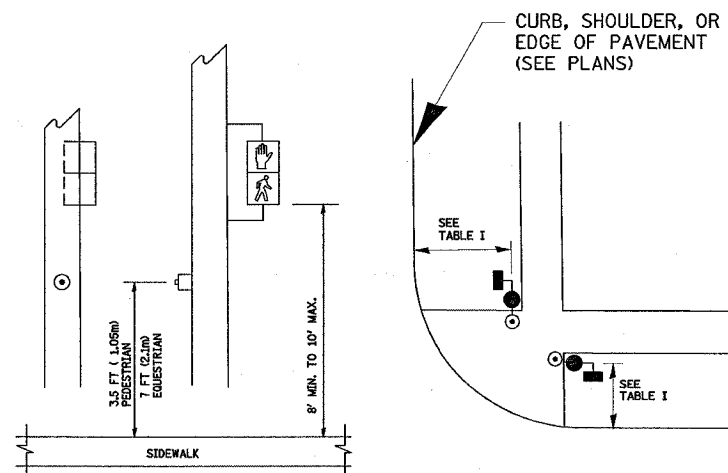


TABLE I

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

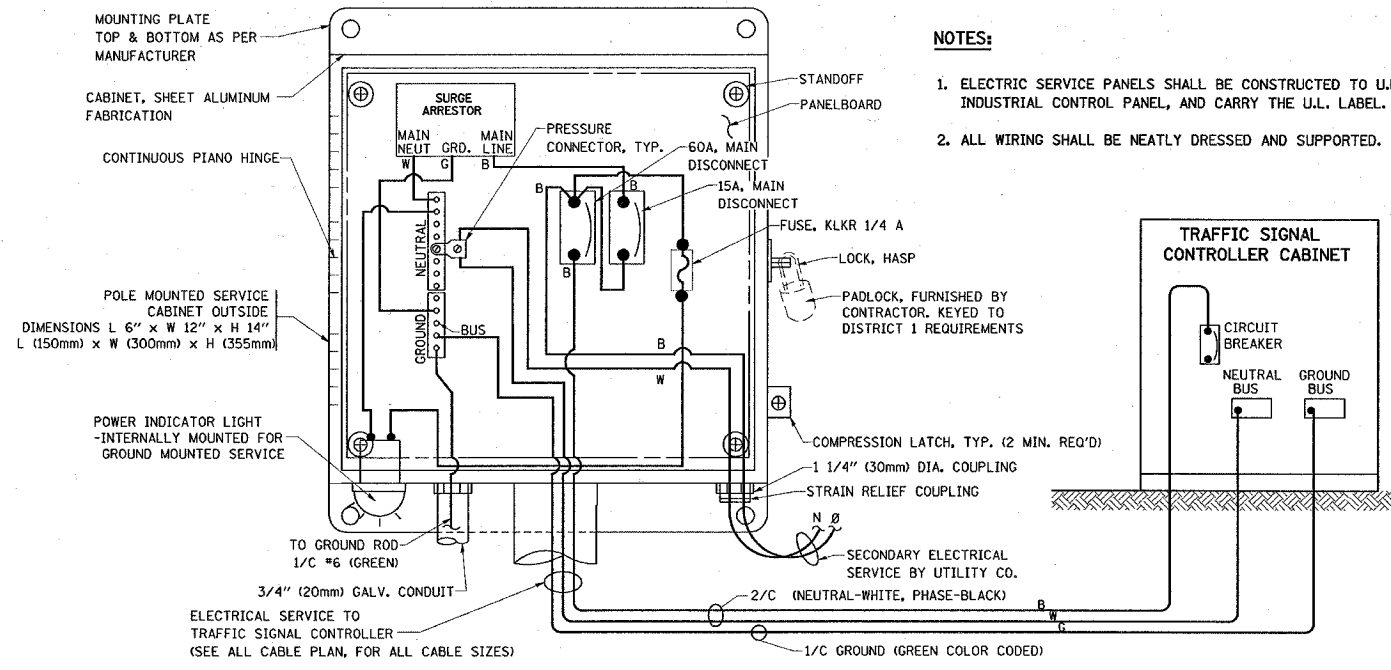
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT 1  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS

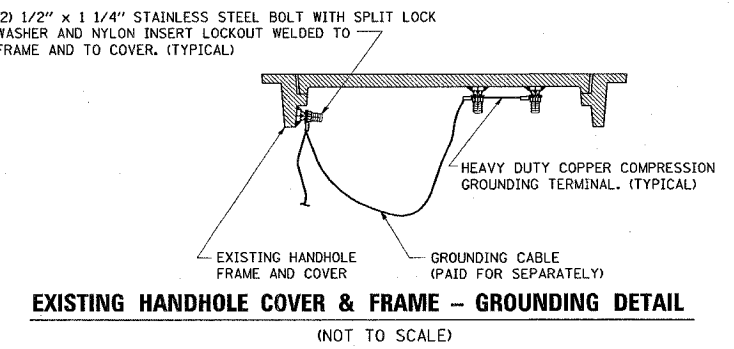
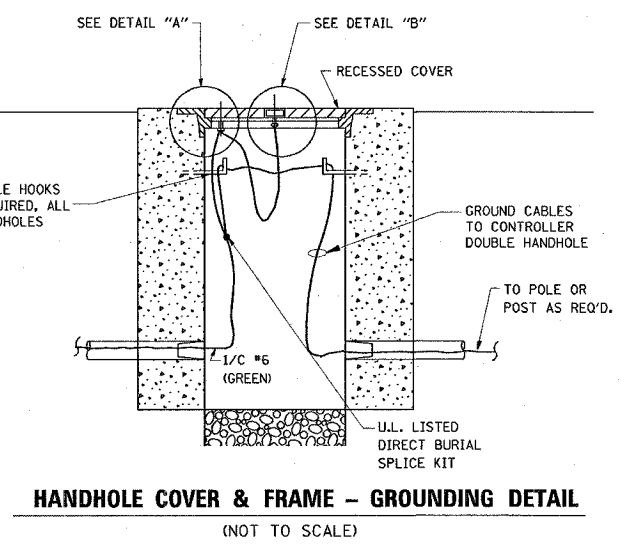
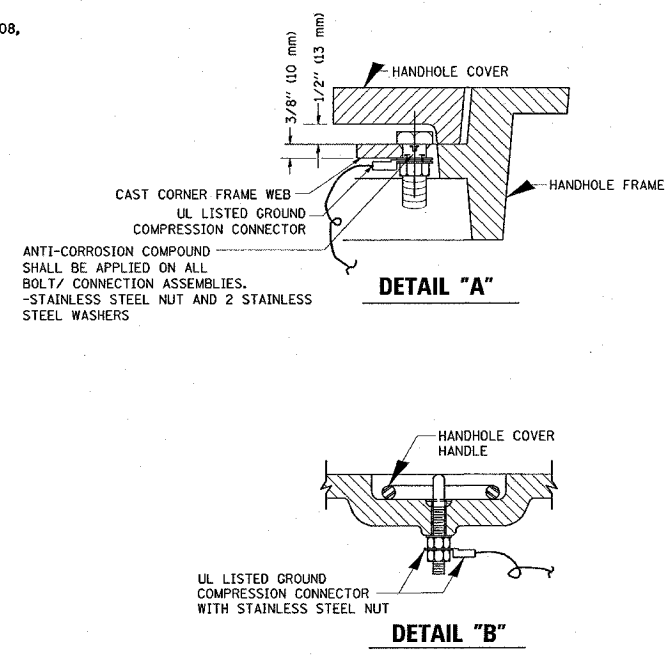
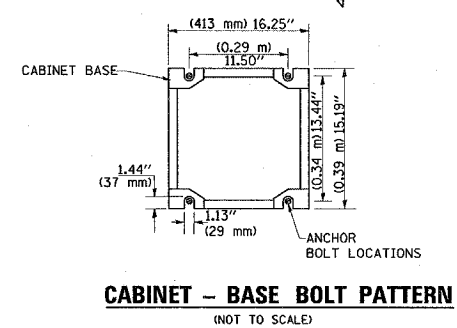
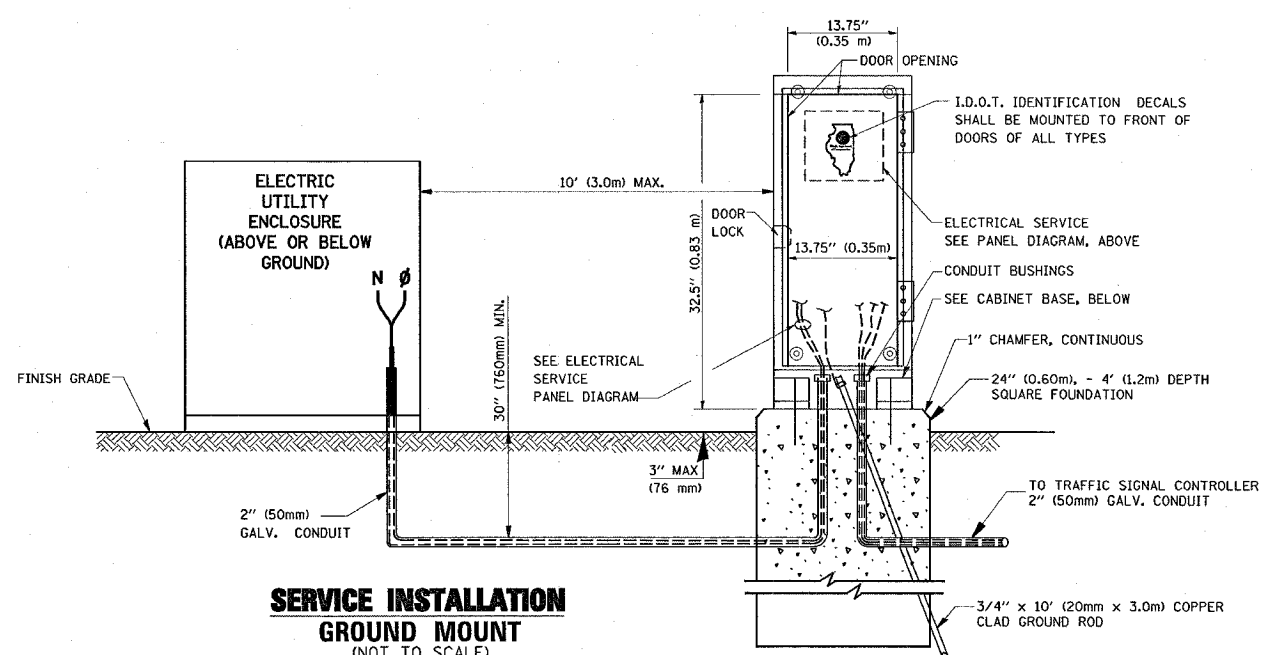
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HORIZ. NONE  
DATE 1-01-02

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

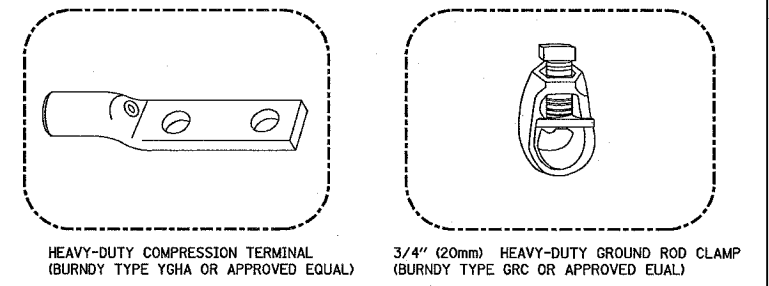
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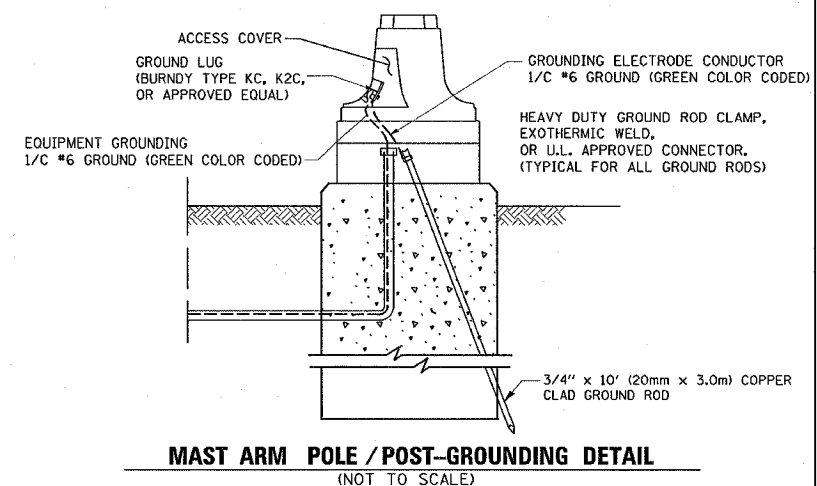
**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



- NOTES:**
- GROUNDING SYSTEM**
- 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.
  - 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.
  - ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
  - THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



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



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		

**DISTRICT 1**  
**STANDARD TRAFFIC SIGNAL**  
**DESIGN DETAILS**

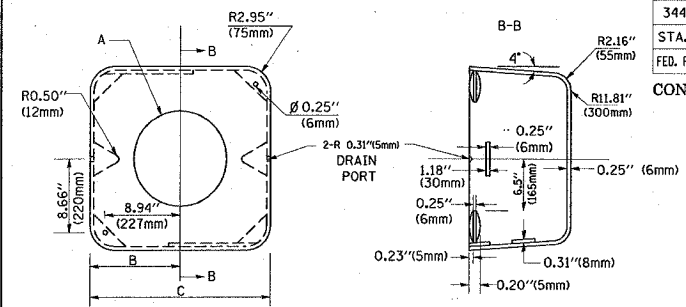
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 DATE 1-01-02

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	6
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FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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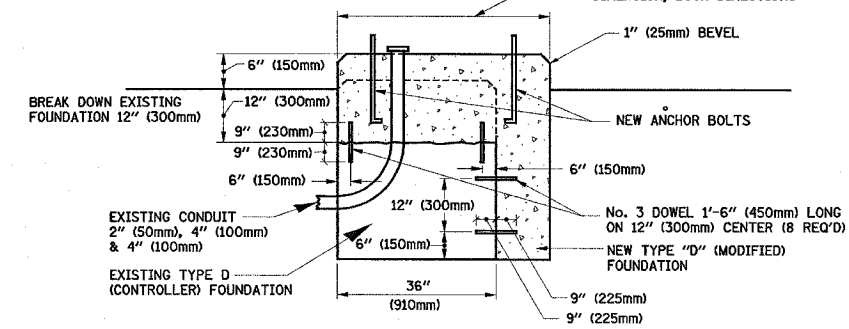
MATERIAL:  
 - ASTM A48 CLASS 30 GREY IRON  
 - ASTM A123 HOT DIPPED GALVANIZED



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

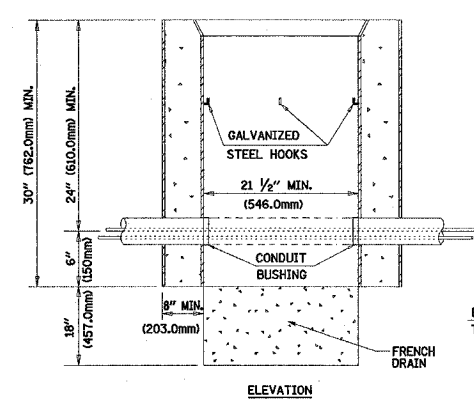
SHROUD DETAIL

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



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



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

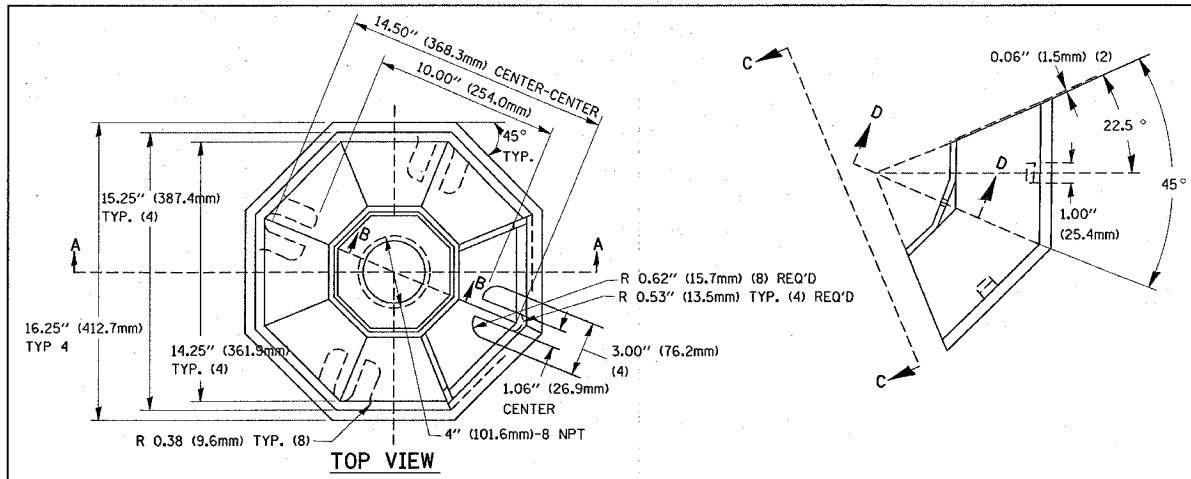
DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT N.T.S.

REVISIONS	
NAME	DATE

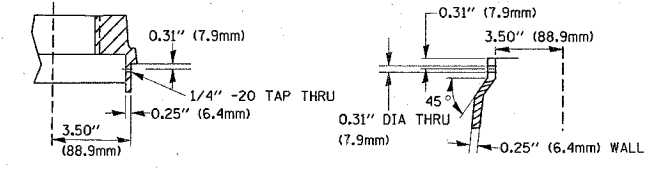
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DISTRICT 1  
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE  
 HORIZ. DATE 1-01-02  
 DRAWN BY: RWP  
 DESIGNED BY: DAZ  
 CHECKED BY: DAZ  
 SHEET 4 OF 4

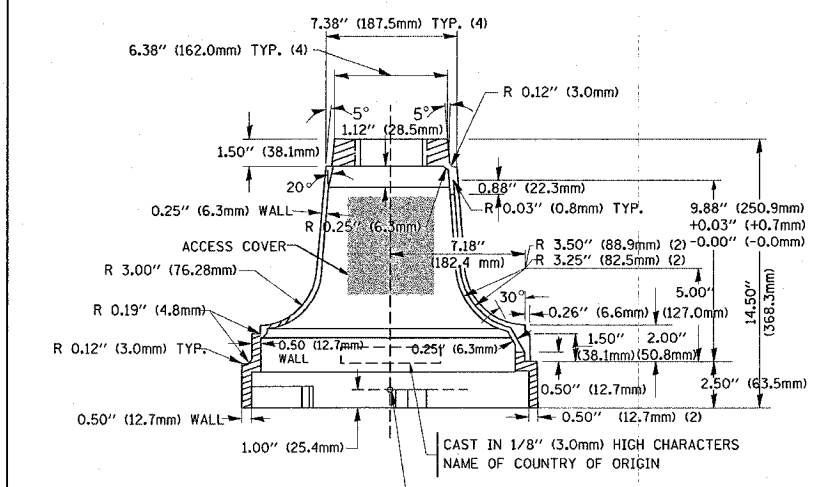
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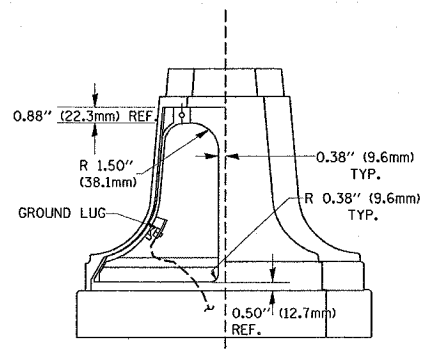
SECTION B-B



SECTION D-D



SECTION A-A



VIEW C-C

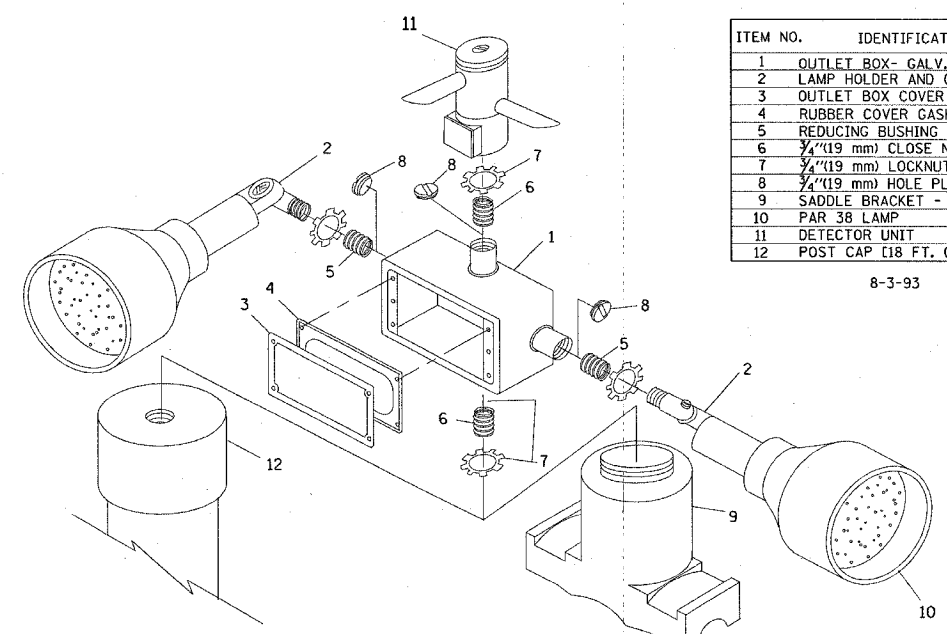
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

NOTES:

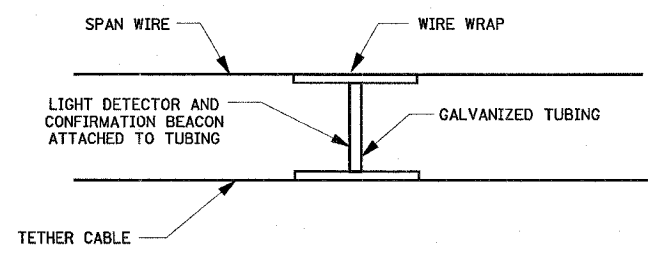
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
 ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE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

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	FAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93



POST CAP MOUNT  
 MAST ARM MOUNT  
 EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS (NOT TO SCALE)

08:22:30 01/30/2007

c:\projects\traffic\050009\us45\egrasik.m32.dgn

1/30/2007  
 c:\projects\traffic\050009\us45\egrasik.m32.dgn

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60A45

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

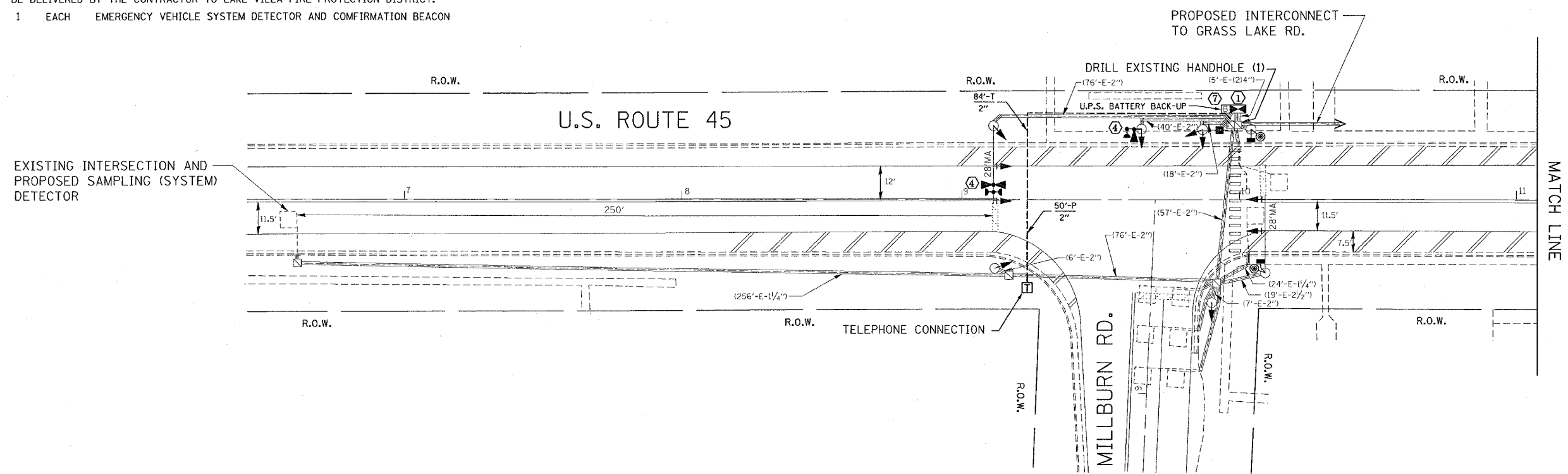
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SIGNAL HEAD, 2 FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
- 2 EACH SIGNAL HEAD, 1 FACE, 3 SECTION, BRACKET MOUNTED
- 2 EACH SIGNAL HEAD, 1 FACE, 5 SECTION, BRACKET MOUNTED
- 3 EACH SIGNAL HEAD, 1 FACE, 3 SECTION, MAST ARM MOUNTED
- 1 EACH SIGNAL HEAD, 1 FACE, 5 SECTION, MAST ARM MOUNTED
- 1 EACH SERVICE INSTALLATION

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

- 1 EACH CONTROLLER AND CABINET, COMPLETE

THE EXISTING EVP EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DELIVERED BY THE CONTRACTOR TO LAKE VILLA FIRE PROTECTION DISTRICT.

- 1 EACH EMERGENCY VEHICLE SYSTEM DETECTOR AND CONFIRMATION BEACON



**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING		PROPOSED	EXISTING
CONTROLLER CABINET			JUNCTION BOX		
RAILROAD CONTROL CABINET			HANDHOLE		
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT			HEAVY DUTY HANDHOLE		
TELEPHONE CONNECTION			DOUBLE HANDHOLE		
SIGNAL HEAD			G.S. CONDUIT IN TRENCH OR PUSHED		
SIGNAL HEAD WITH BACKPLATE			COMMON TRENCH		
SIGNAL HEAD OPTICALLY PROGRAMMED			UNIT DUCT		
SIGNAL HEAD PEDESTRIAN			PEDESTRIAN PUSHBUTTON DETECTOR		
ILLUMINATED SIGN "NO LEFT TURN"			DETECTOR LOOP, TYPE I		
ILLUMINATED SIGN "NO RIGHT TURN"			PERFORMED DETECTOR LOOP		
SIGNAL POST			MICROWAVE VEHICLE SENSOR		
WOOD POLE			VIDEO DETECTOR		
STEEL MAST ARM ASSEMBLY AND POLE			CLOSED CIRCUIT TV		
ALUMINUM MAST ARM ASSEMBLY AND POLE			EMERGENCY VEHICLE SYSTEM DETECTOR		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			CONFIRMATION BEACON		
			UNINTERRUPTIBLE POWER SUPPLY (U.P.S.)		

**CONSTRUCTION NOTES:**

- ① REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE V CABINET, RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT TO NEW CONTROLLER CABINET. RELOCATION OF THE EXISTING EMERGENCY PRIORITY SYSTEM SHALL BE INCLUDED IN THE NEW CONTROLLER UNIT PRICE
- ② REMOVE ALL EXISTING SIGNAL HEADS AND PEDESTRIAN HEADS. INSTALL ALL NEW L.E.D. SIGNAL HEADS AND PEDESTRIAN HEADS
- ③ REMOVE EXISTING PEDESTRIAN PUSH-BUTTON. INSTALL NEW PEDESTRIAN PUSH BUTTON.
- ④ REMOVE EXISTING E.V.P. AND 2 CHANNEL LIGHT DETECTOR AMPLIFIER AND REPLACE NEW E.V.P. WITH 4 CHANNEL LIGHT DETECTOR AMPLIFIER
- ⑤ THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT
- ⑥ THE EXISTING EVP EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DELIVERED BY THE CONTRACTOR TO LAKE VILLA FIRE PROTECTION DISTRICT.
- ⑦ INSTALL 1 NEW U.P.S. BATTERY BACK-UP

REVISIONS	
NAME	DATE

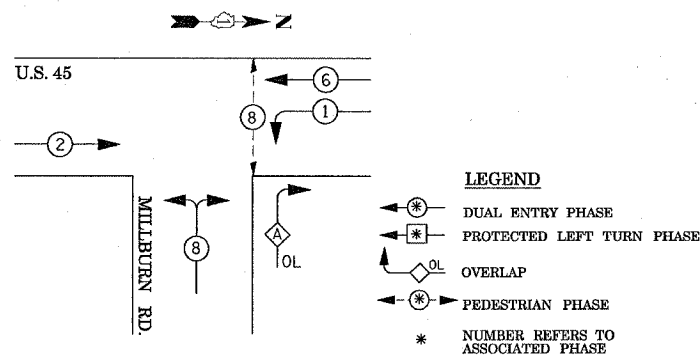
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL MODIFICATION AND REMOVAL PLAN**  
 US 45 AT MILLBURN ROAD  
 SCALE: 1"=20'  
 DATE: 11-25-05  
 DRAWN BY: SN  
 DESIGNED BY: SN  
 CHECKED BY: DAD

13:11:39 01/29/2007  
 PLOT DATE = 1/29/2007  
 PLOT SCALE = 20.0000 / IN.  
 USER NAME = nquinnam



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A45				

### CONTROLLER SEQUENCE



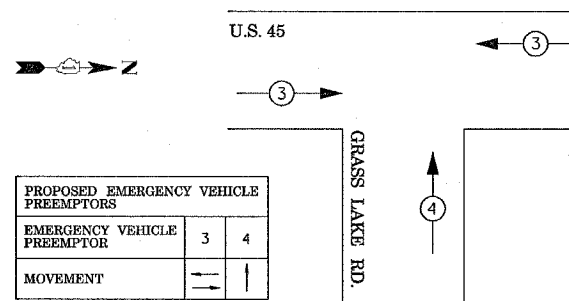
### PHASE DESIGNATION DIAGRAM

DUAL ENTRY  
PROTECTED/PERMITTED LEFT TURN PHASING  
WITH RIGHT TURN OVERLAPS

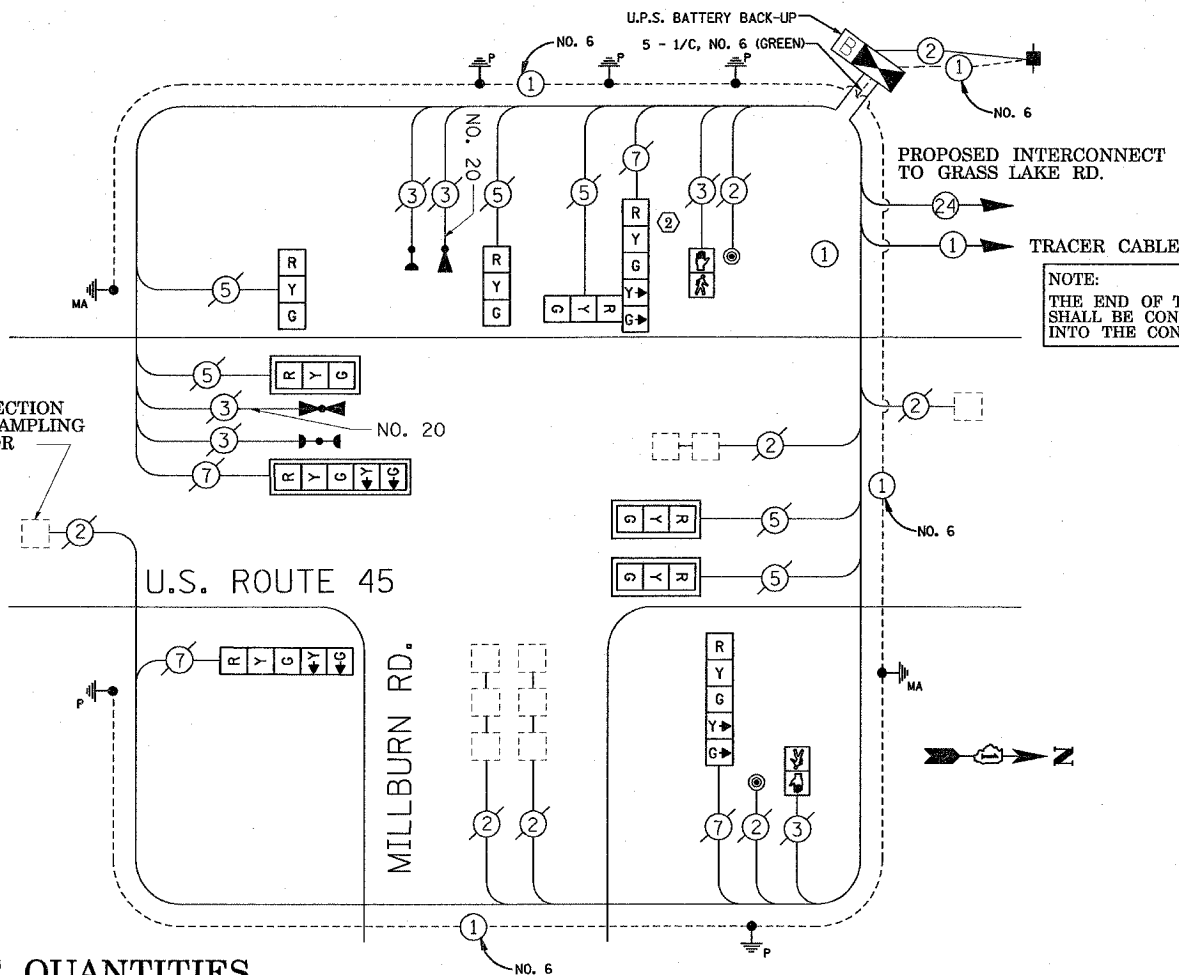
### RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	8	1

### EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING INTERSECTION AND PROPOSED SAMPLING (SYSTEM) DETECTOR



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

### CABLE PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE	[Symbol]	[Symbol]
FIBER OPTIC CABLE IN CONDUIT, NUMBER OF FIBERS AS NOTED	[Symbol]	[Symbol]
ELECTRIC CABLE IN CONDUIT, NO. 14, UNLESS OTHERWISE NOTED. NUMBER OF CONDUCTORS AS NOTED	[Symbol]	[Symbol]
GROUND CABLE IN CONDUIT NO. 6 COPPER (GREEN)	[Symbol]	[Symbol]
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD	[Symbol]	[Symbol]

### SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	0.5
GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	3
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	84
CONDUIT IN PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	50
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	440
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	25
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	5
PEDESTRIAN PUSH-BUTTON	EACH	2
SERVICE INSTALLATION, POLE-MOUNTED	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
* EMERGENCY VEHICLE SYSTEM DETECTOR AND CONFIRMATION BEACON	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1

### CONSTRUCTION NOTES:

- REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE V CABINET, RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT TO NEW CONTROLLER CABINET. RELOCATION OF THE EXISTING EMERGENCY PRIORITY SYSTEM SHALL BE INCLUDED IN THE NEW CONTROLLER UNIT PRICE
- REMOVE ALL EXISTING SIGNAL HEADS AND PEDESTRIAN HEADS. INSTALL ALL NEW L.E.D. SIGNAL HEADS AND PEDESTRIAN HEADS
- REMOVE EXISTING PEDESTRIAN PUSH-BUTTON. INSTALL NEW PEDESTRIAN PUSH-BUTTON.
- REMOVE EXISTING E.V.P. AND 2 CHANNEL LIGHT DETECTOR AMPLIFIER AND REPLACE NEW E.V.P. WITH 4 CHANNEL LIGHT DETECTOR AMPLIFIER
- THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT
- INSTALL 1 NEW U.P.S. BATTERY BACK-UP

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)
		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)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
 EMERGENCY VEHICLE PREEMPTION SEQUENCE  
 AND SCHEDULE OF QUANTITIES**  
 US 45 AT MILLBURN ROAD  
 SCALE: NONE  
 DATE: 1/29/2007  
 DRAWN BY: SN  
 DESIGNED BY: SN  
 CHECKED BY: DAD

PLT DATE = 1/29/2007  
 FILE NAME = c:\projects\2005-059\ts\45gr-lake\45gr-sch.mxd  
 PLOT SCALE = 20/1000 / 1"  
 USER NAME = rquinnan



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A45				

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

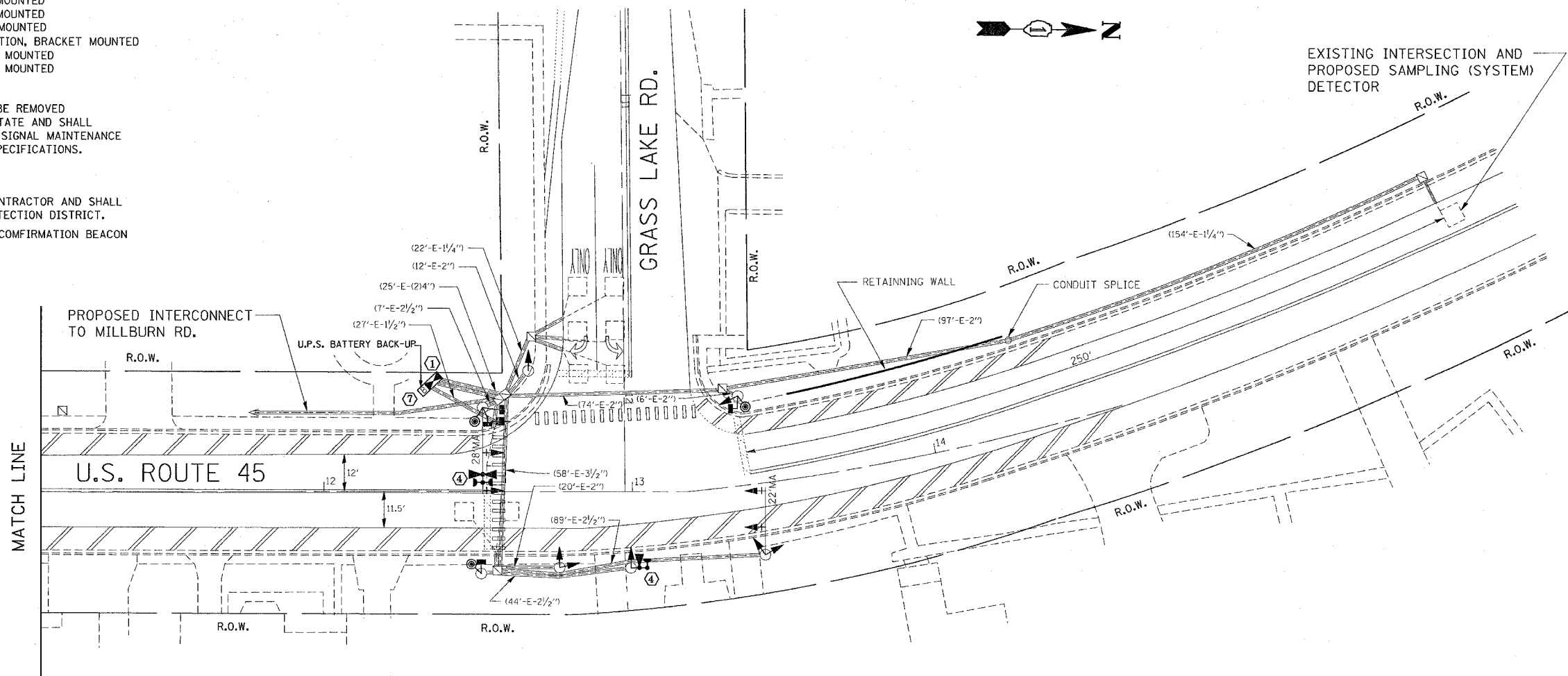
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SIGNAL HEAD, 1 FACE, 3 SECTION, BRACKET MOUNTED
- 2 EACH SIGNAL HEAD, 1 FACE, 5 SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 2 FACE, 3 SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 2 FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
- 3 EACH SIGNAL HEAD, 1 FACE, 5 SECTION, MAST ARM MOUNTED
- 1 EACH SIGNAL HEAD, 1 FACE, 5 SECTION, MAST ARM MOUNTED
- 1 EACH SERVICE INSTALLATION

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

- 1 EACH CONTROLLER AND CABINET, COMPLETE

THE EXISTING EVP EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DELIVERED BY THE CONTRACTOR TO LAKE VILLA FIRE PROTECTION DISTRICT.

- 1 EACH EMERGENCY VEHICLE SYSTEM DETECTOR AND CONFIRMATION BEACON



**TRAFFIC SIGNAL LEGEND**

PROPOSED		EXISTING	
CONTROLLER CABINET		CONTROLLER CABINET	
RAILROAD CONTROL CABINET		RAILROAD CONTROL CABINET	
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT		SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	
TELEPHONE CONNECTION		TELEPHONE CONNECTION	
SIGNAL HEAD		SIGNAL HEAD	
SIGNAL HEAD WITH BACKPLATE		SIGNAL HEAD WITH BACKPLATE	
SIGNAL HEAD OPTICALLY PROGRAMMED		SIGNAL HEAD OPTICALLY PROGRAMMED	
SIGNAL HEAD PEDESTRIAN		SIGNAL HEAD PEDESTRIAN	
ILLUMINATED SIGN "NO LEFT TURN"		ILLUMINATED SIGN "NO LEFT TURN"	
ILLUMINATED SIGN "NO RIGHT TURN"		ILLUMINATED SIGN "NO RIGHT TURN"	
SIGNAL POST		SIGNAL POST	
WOOD POLE		WOOD POLE	
STEEL MAST ARM ASSEMBLY AND POLE		STEEL MAST ARM ASSEMBLY AND POLE	
ALUMINUM MAST ARM ASSEMBLY AND POLE		ALUMINUM MAST ARM ASSEMBLY AND POLE	
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	
JUNCTION BOX		JUNCTION BOX	
HANDHOLE		HANDHOLE	
HEAVY DUTY HANDHOLE		HEAVY DUTY HANDHOLE	
DOUBLE HANDHOLE		DOUBLE HANDHOLE	
G.S. CONDUIT IN TRENCH OR PUSHED		G.S. CONDUIT IN TRENCH OR PUSHED	
COMMON TRENCH		COMMON TRENCH	
UNIT DUCT		UNIT DUCT	
PEDESTRIAN PUSHBUTTON DETECTOR		PEDESTRIAN PUSHBUTTON DETECTOR	
DETECTOR LOOP, TYPE I		DETECTOR LOOP, TYPE I	
PREFORMED DETECTOR LOOP		PREFORMED DETECTOR LOOP	
MICROWAVE VEHICLE SENSOR		MICROWAVE VEHICLE SENSOR	
VIDEO DETECTOR		VIDEO DETECTOR	
CLOSED CIRCUIT TV		CLOSED CIRCUIT TV	
EMERGENCY VEHICLE SYSTEM DETECTOR		EMERGENCY VEHICLE SYSTEM DETECTOR	
CONFIRMATION BEACON		CONFIRMATION BEACON	
UNINTERRUPTIBLE POWER SUPPLY (U.P.S.)		UNINTERRUPTIBLE POWER SUPPLY (U.P.S.)	

**CONSTRUCTION NOTES:**

- ① REMOVE EXISTING CONTROLLER AND CABINET. INSTALL A NEW CONTROLLER IN TYPE IV CABINET. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET. RELOCATION OF THE EXISTING EMERGENCY PRIORITY SYSTEM SHALL BE INCLUDED IN THE NEW CONTROLLER UNIT PRICE
- ② REMOVE ALL EXISTING SIGNAL HEADS AND PEDESTRIAN HEADS. INSTALL ALL NEW L.E.D. SIGNAL HEADS AND PEDESTRIAN HEADS
- ③ REMOVE EXISTING PEDESTRIAN PUSH-BUTTON. INSTALL NEW PEDESTRIAN PUSH BUTTON.
- ④ REMOVE EXISTING E.V.P. AND 2 CHANNEL LIGHT DETECTOR AMPLIFIER AND REPLACE NEW E.V.P. WITH 4 CHANNEL LIGHT DETECTOR AMPLIFIER
- ⑤ THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT
- ⑥ THE EXISTING EVP EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DELIVERED BY THE CONTRACTOR TO LAKE VILLA FIRE PROTECTION DISTRICT.
- ⑦ INSTALL 1 NEW U.P.S. BATTERY BACK-UP

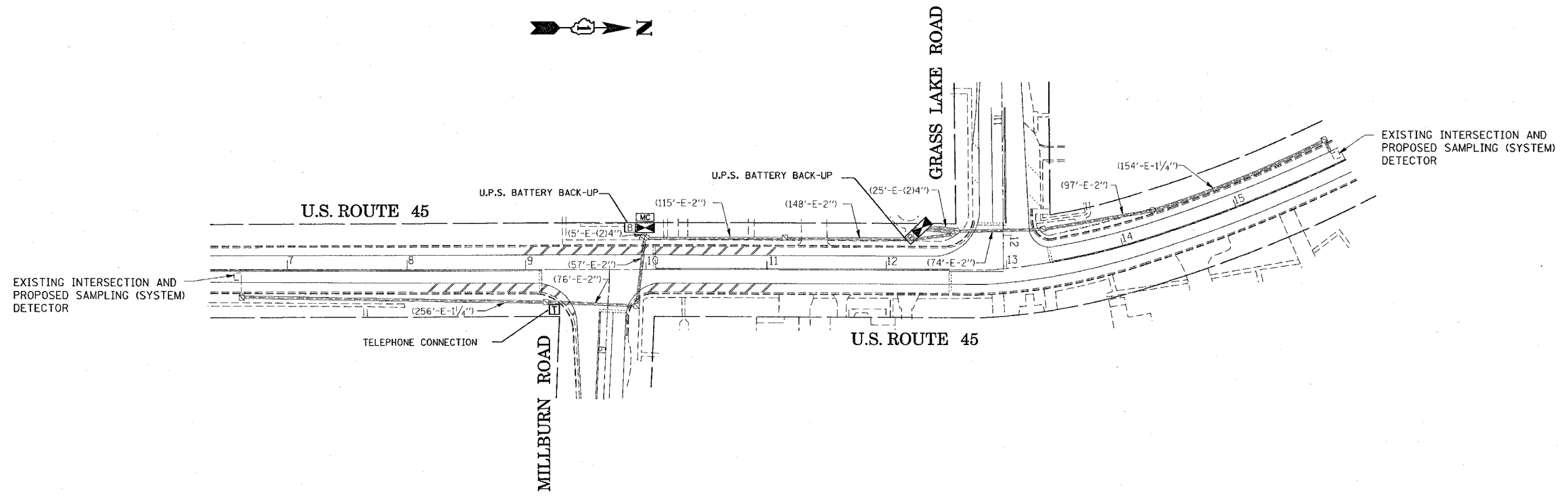
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL MODIFICATION AND REMOVAL PLAN**  
**U.S. 45 AT GRASS LAKE ROAD**  
 SCALE: 1"=20'  
 DATE: 1/29/2007  
 DRAWN BY: SN  
 DESIGNED BY: SN  
 CHECKED BY: DAD



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60A45



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP		
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	
COMMON TRENCH	CT	
TELEPHONE CONNECTION		
UNINTERRUPTIBLE POWER SUPPLY (U.P.S.)		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**INTERCONNECT PLANS**

U. S. ROUTE. 45 FROM  
GRASS LAKE ROAD TO MILLBURN ROAD

SCALE: 1" = 50'  
DATE: 1/29/2007

DRAWN BY: SN  
DESIGNED BY: SN  
CHECKED BY: DAD

PLOT DATE = 1/29/2007  
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PLOT SCALE = 50.0000' / 1" IN.  
USER NAME = nguyensm

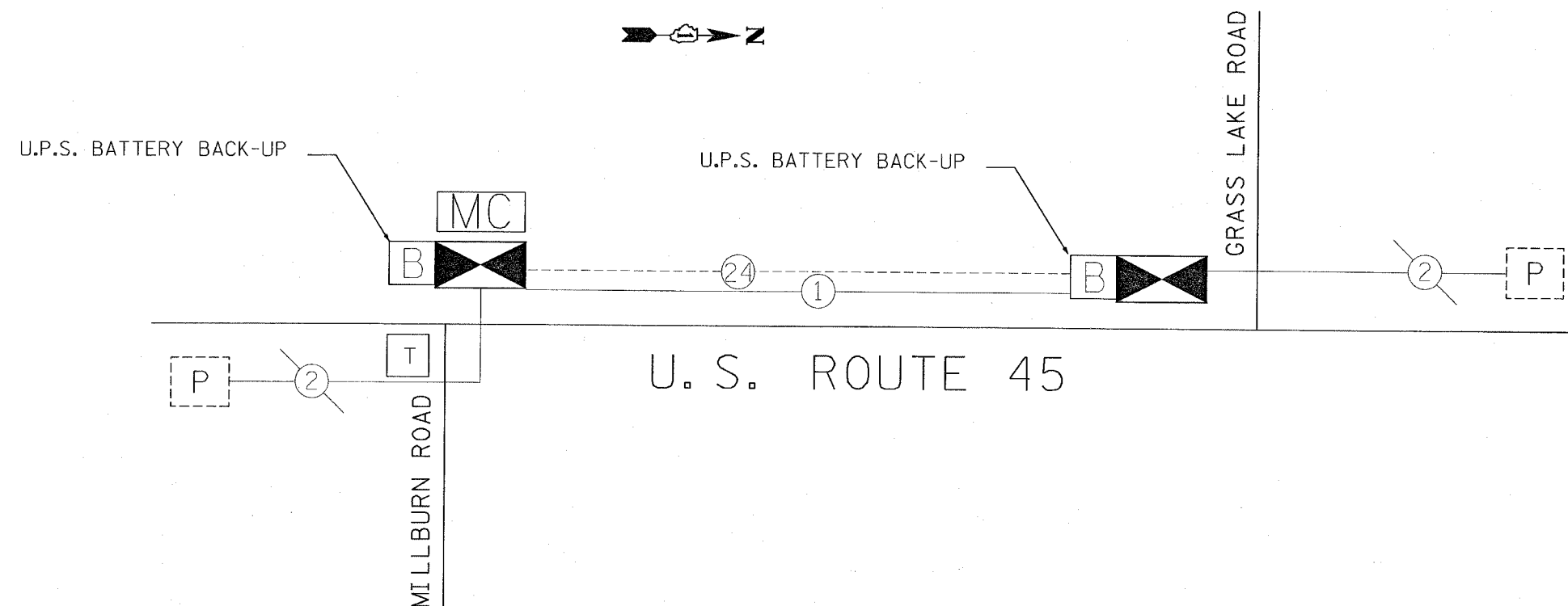
1/29/2007  
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nguyensm

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
344	2005-059 TS	LAKE	12	12
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

CONTRACT NO. 60A45

**INTERCONNECT SCHEMATIC LEGEND**

EXISTING INTERSECTION CONTROLLER	
PROPOSED INTERSECTION CONTROLLER	
EXISTING MASTER CONTROLLER	
PROPOSED MASTER CONTROLLER	
MASTER MASTER CONTROLLER	
EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS	
PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	
EXISTING INTERSECTION LOOP DETECTORS	
PROPOSED SAMPLING (SYSTEM) DETECTORS	
EXISTING SAMPLING (SYSTEM) DETECTORS	
PROPOSED SAMPLING (SYSTEM) DETECTORS	
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS.	
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS.	
EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	
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 SMI2F	
PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SMI2F	
EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	
PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	
EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	
PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	
EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	
PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	
EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)	
PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)	
EXISTING TELEPHONE CONNECTION	
PROPOSED TELEPHONE CONNECTION	
UNINTERRUPTIBLE POWER SUPPLY (U.P.S.)	



**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM 12F & SM12F	FOOT	331
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	300
ELECTRIC CABLE IN CONDUIT, TRACER NO.14 1C	FOOT	300
MASTER CONTROLLER	EACH	1
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	2

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION <b>INTERCONNECT SCHEMATIC</b> U. S. ROUTE. 45 FROM GRASS LAKE ROAD TO MILLBURN ROAD SCALE: NONE DATE: 2/5/2007	DRAWN BY: SN DESIGNED BY: SN CHECKED BY: DAD
NAME	DATE		

11:07:37 02/05/2007