

60A47

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058 TS	LAKE	23	1

D-91-058-06

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23. INTERCONNECT SCHEMATIC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

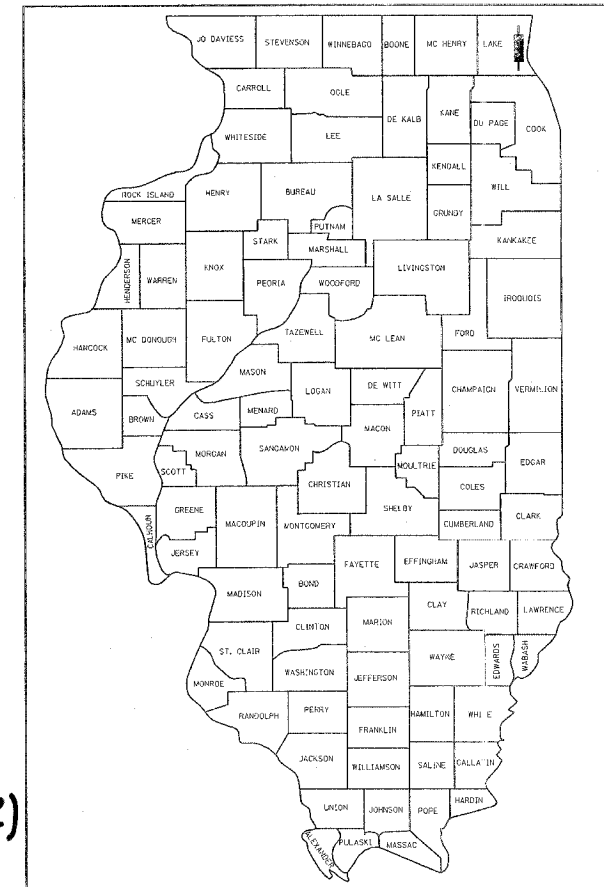
DISTRICT 1

CONGESTION MITIGATION AIR QUALITY FIBER OPTIC COMMUNICATION NETWORK

F.A.P. 346 - U.S. ROUTE. 41 FROM AMHURST PKWY. TO ILLINOIS ROUTE 137

SECTIONS 2005-058 TS
C-91-058-06
LAKE COUNTY

PROJECT: CMF-0346(012)



LOCATION OF SECTION INDICATED THUS: - [Symbol] -

STANDARD DRAWINGS

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

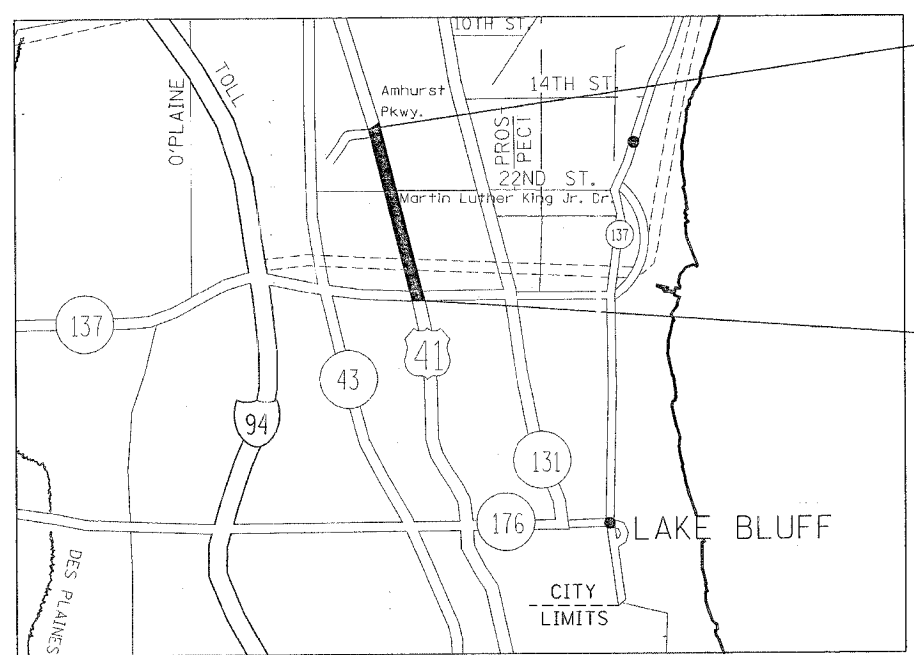
NOTE: STANDARD DRAWINGS REQUIRED (CIRCLED).



CONTRACT NO. 60A47

PREPARED BY: Steve Janner 2/1/07
TRAFFIC ENGINEER DATE

48 - HOURS BEFORE DIGGING



PROJECT BEGIN

PROJECT END



WAUKEGAN TOWNSHIP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: 2/8 20 07
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 23, 20 07
Eric E. Hamrick
ENGINEER OF DESIGN AND ENVIRONMENT

March 23, 20 07
Milton R. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

Rev.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT # 60A47

PERCENTAGES		LOCATION OF WORK		CONSTRUCTION CODE			
SUMMARY OF TRAFFIC SIGNAL QUANTITIES		UNIT	TOTAL	Y031 1F	Y031 1F	Y031 1F	Y031 1F
67100100	MOBILIZATION	L SUM	1	0.30	0.30	0.10	0.30
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.25	0.25	0.25	0.25
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.25	0.25	0.25	0.25
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.25	0.25	0.25	0.25
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	6225				6225
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	235				235
81400200	HEAVY DUTY HANDHOLE	EACH	12				12
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	6225				6225
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3	1	1	1	
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1	1			
X0325706	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	2		1	1	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	3	1	1	1	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3 C	FOOT	1567	580	987		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	198	198			
87301905	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	856		856		
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1 C	FOOT	198	198			
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1 C	FOOT	8027.5				8027.5
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5125 MM12F & SM12F	FOOT	8079.5				8079.5
* X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3C, TWISTED, SHIELDED	FOOT	987		987		
87900200	DRILL EXISTING HANDHOLE	EACH	6				6
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	18	5	13		
88500100	INDUCTIVE LOOP DETECTOR	EACH	45	7	15	23	
* 88700200	LIGHT DETECTOR	EACH	4		4		
* 88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1		
* X0301023	CONFIRMATION BEACON	EACH	3	3			
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	183	183			
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3	1		1	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	15	4	11		
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	9	4	5		
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1	1			
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	3	1	2		
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		2		
88030310	SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1	1			
X8050015	SERVICE INSTALLATION, POLE MOUNTED	EACH	1	1			
89100400	ILLUMINATED SIGN, LED	EACH	2		2		
X0325705	RE OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	3				3
XX006661	UNINTERRUPTABLE POWER SUPPLY	EACH	3	1	1	1	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	1	1	1	

* COST TO BE PAID BY CITY OF NORTH CHICAGO
Y031-30 (1001.0174)

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA 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 AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

MORRIS ENGINEERING, INC.
5100 S. LINCOLN SUITE 100 LISLE, ILLINOIS 60532
PHONE: (630)271-0770 EMAIL: ECIVIL.COM

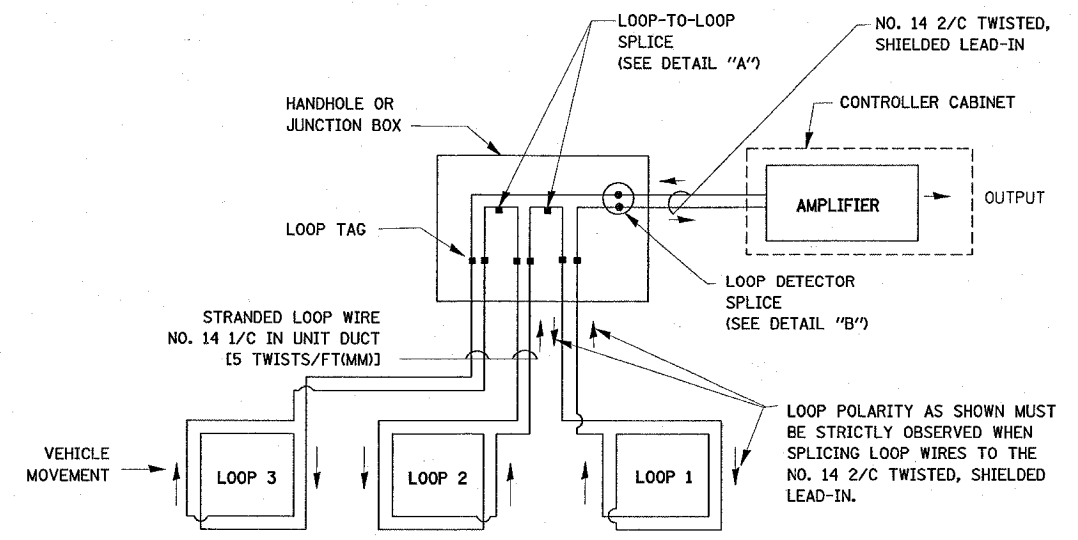
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
U.S. RTE. 41
AMHURST PARKWAY TO
U.S. RTE. 137
SCALE: NTS
DATE: 1/31/07
DRAWN BY: PRT
DESIGNED BY: RKF
CHECKED BY: JVV

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058 TS	LAKE	23	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A47				

LOOP DETECTOR NOTES

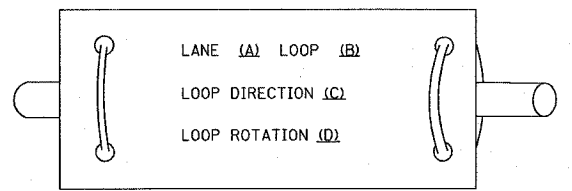
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED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



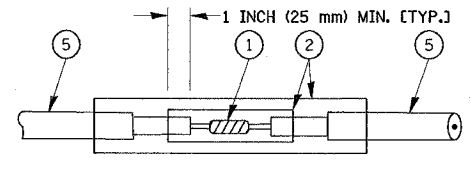
DETECTOR LOOP WIRING SCHEMATIC

- 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.

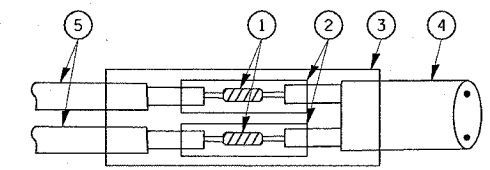
LOOP LEAD-IN CABLE TAG



- 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

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

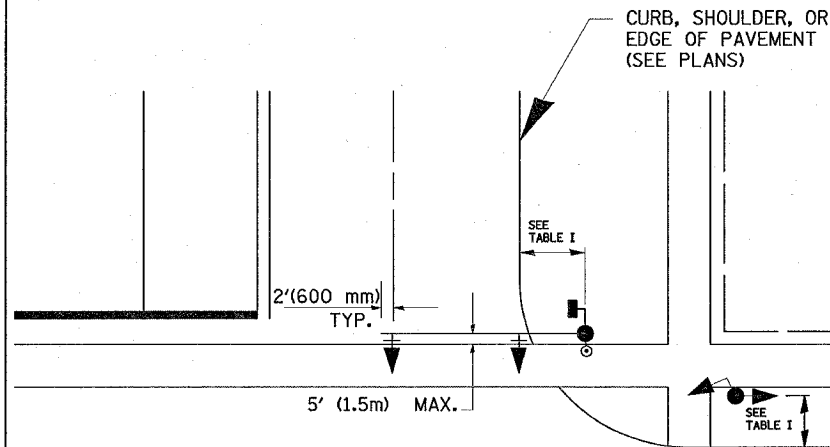
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058 TS	LAKE	23	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

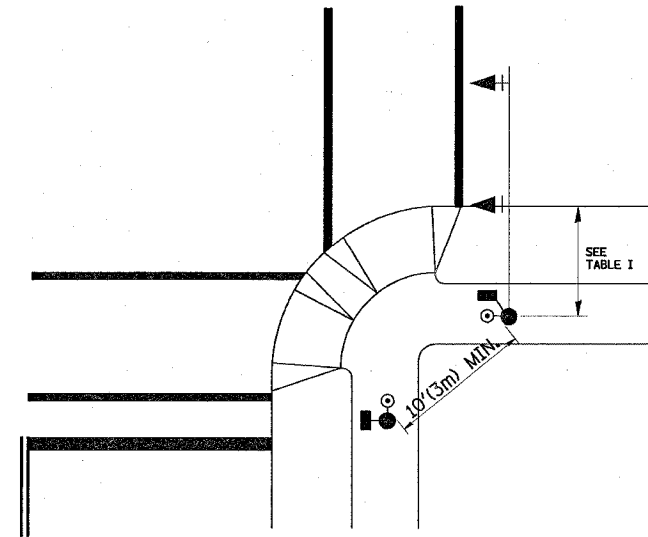
CONTRACT NO. 60A47

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

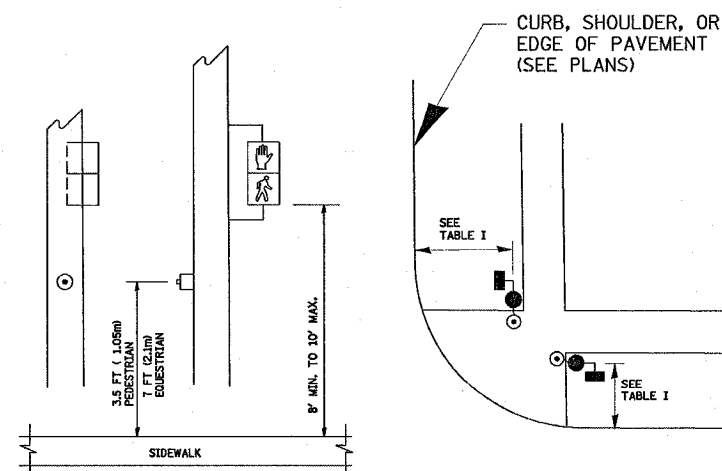


TABLE I

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

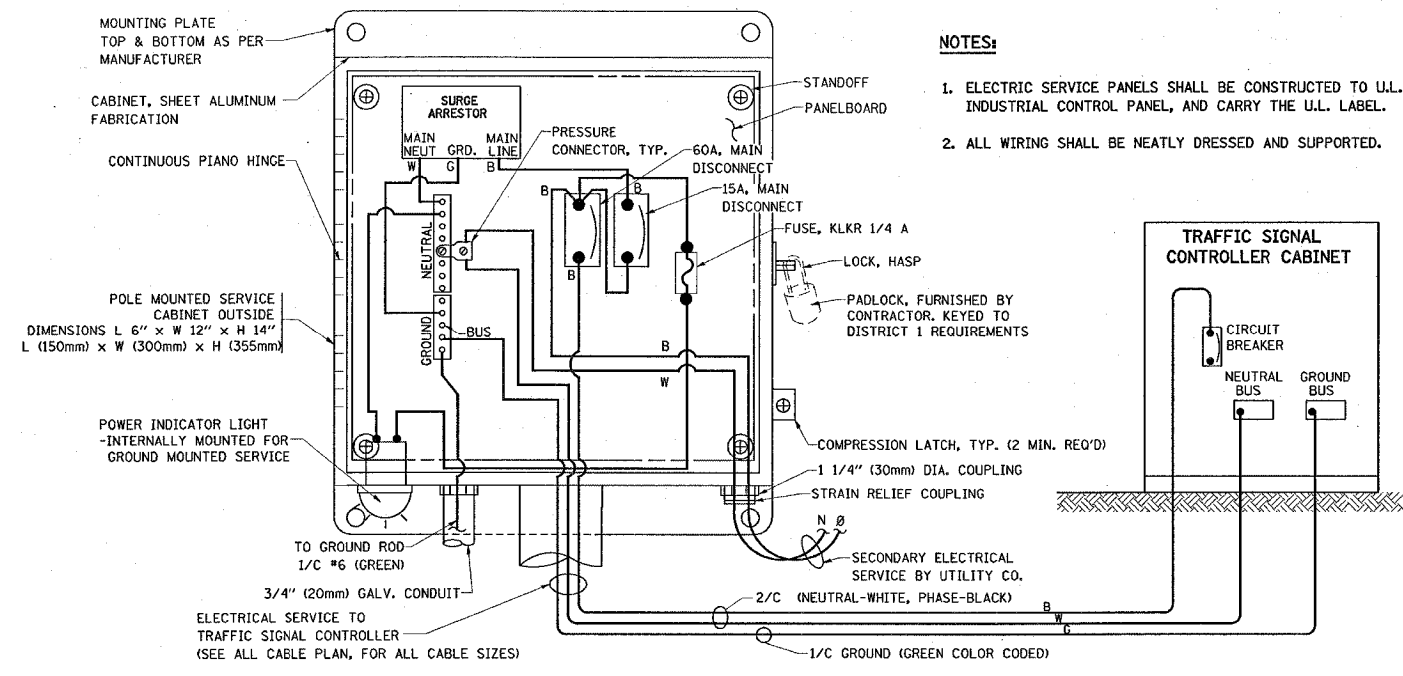
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS
 VERT. SCALE: NONE
 HORIZ. SCALE: NONE
 DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

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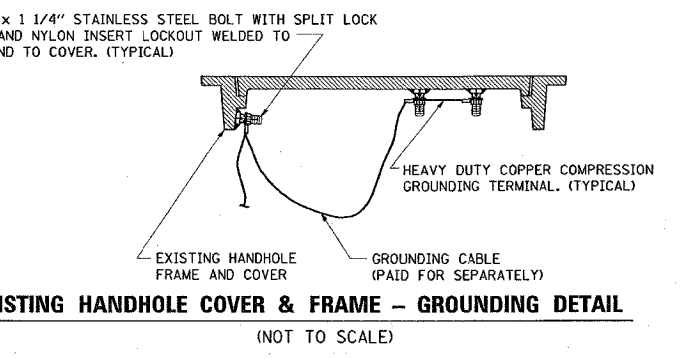
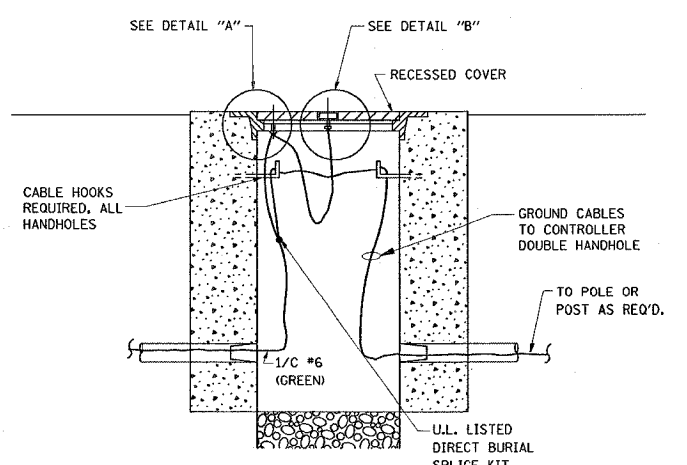
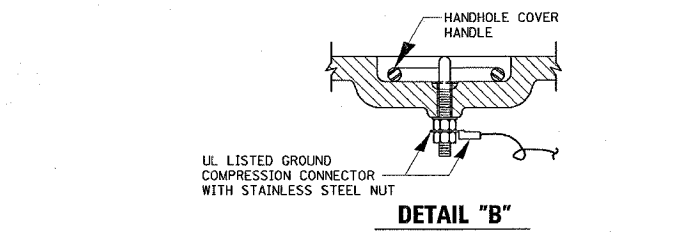
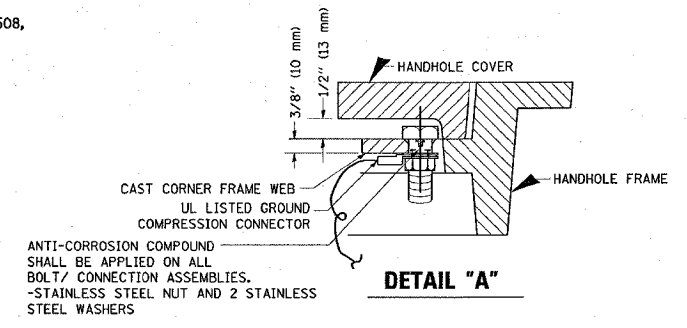
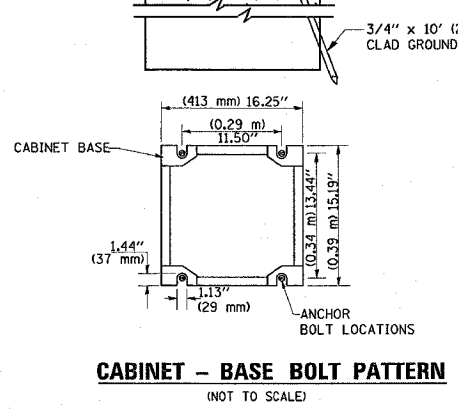
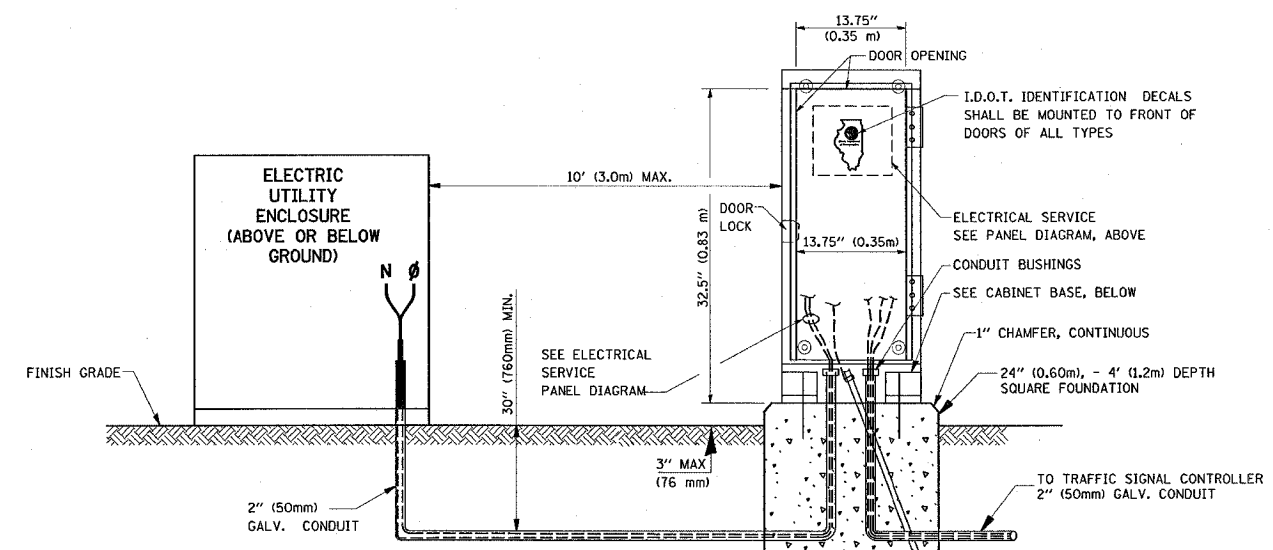
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058 TS	LAKE	23	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60A47



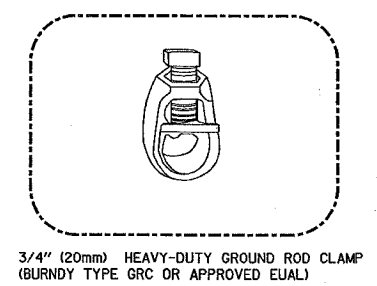
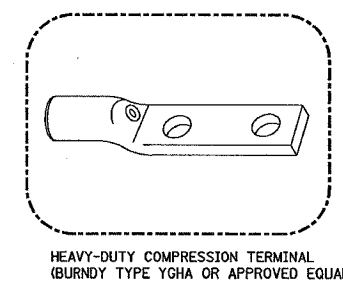
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



NOTES:

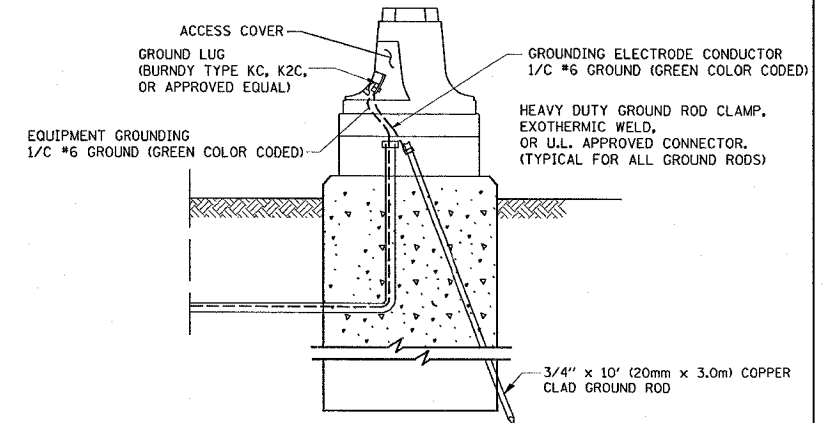
GROUNDING SYSTEM

- 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	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

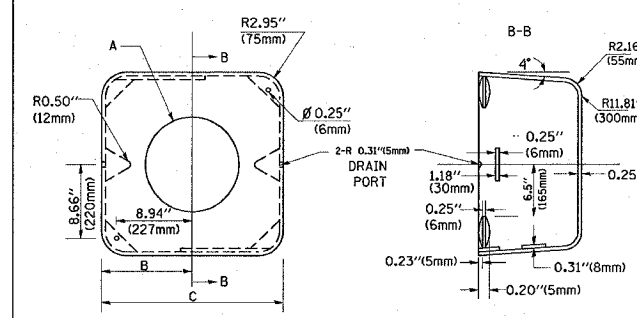
SCALE: VERT. NONE
 HORIZ. NONE
 DATE 1-01-02

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

2/8/2007
 c:\projects\traffsig\002500\025-1.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058 TS	LAKE	23	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A47				

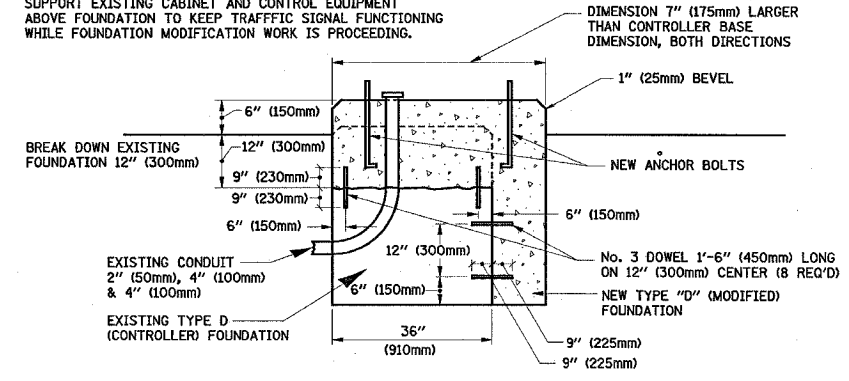
MATERIAL:
 - ASTM A48 CLASS 30 GREY IRON
 - ASTM A123 HOT DIPPED GALVANIZED



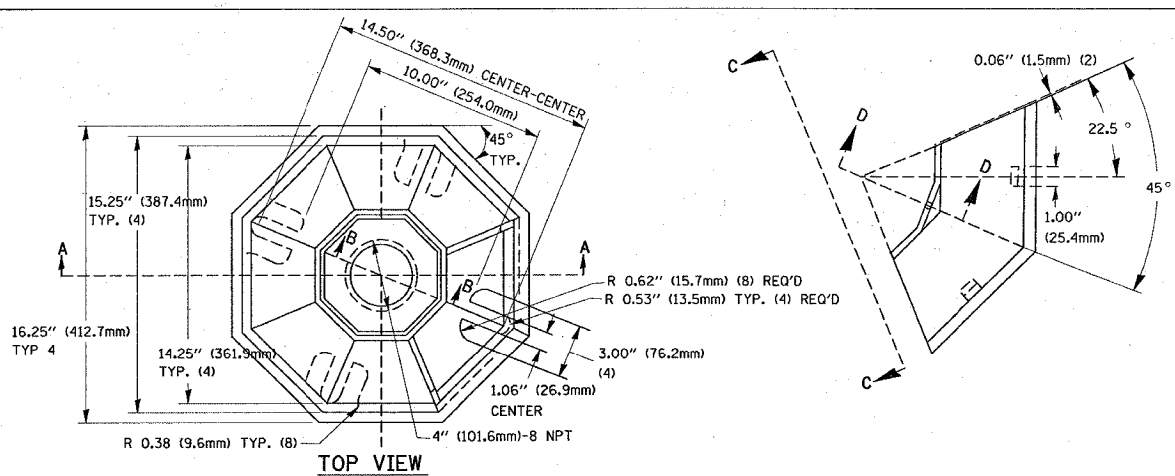
TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125" (257mm)	9.5" (241mm)	19" (483mm)	12" (300mm)	24kg
II	Ø 11.125" (283mm)	10.75" (273mm)	21.5" (546mm)	12" (300mm)	26kg

SHROUD DETAIL

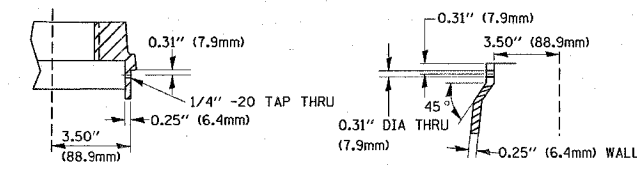
NOTE:
 SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



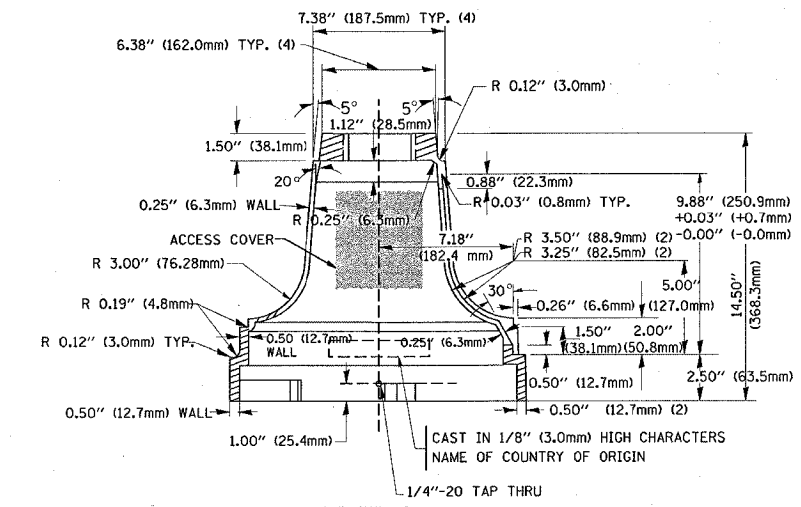
MODIFY EXISTING TYPE "D" FOUNDATION
(NOT TO SCALE)



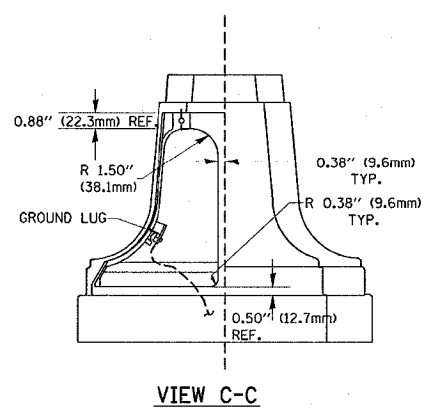
SECTION B-B



SECTION D-D



SECTION A-A

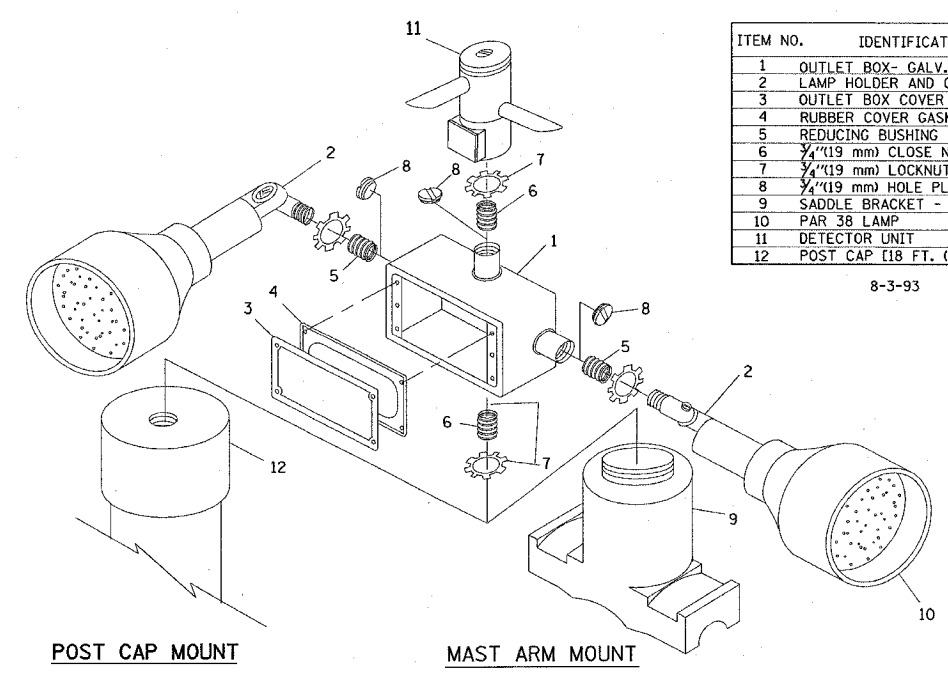


VIEW C-C

TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

NOTES:

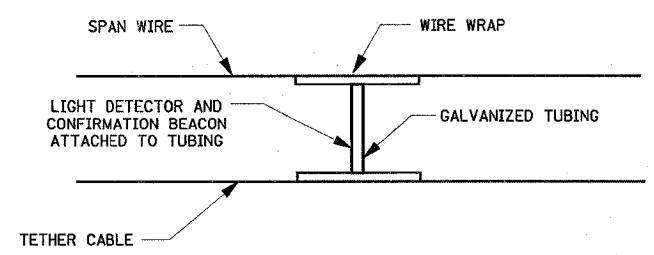
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
 ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION 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.



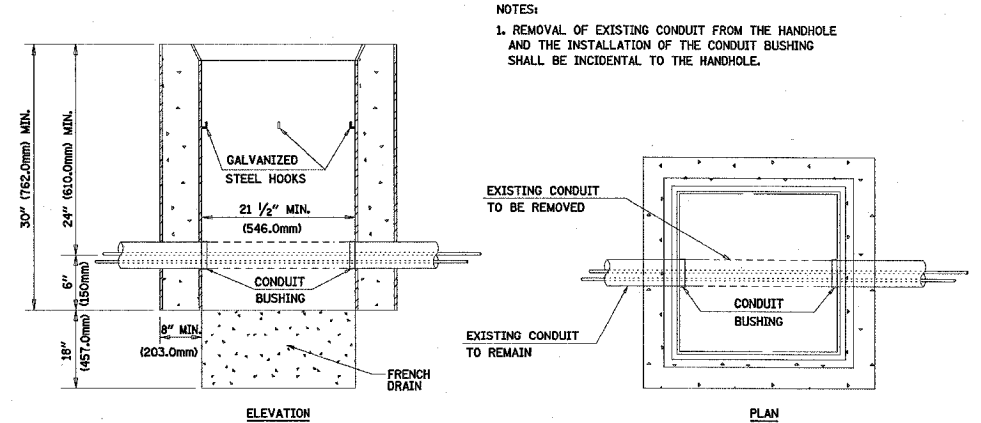
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18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



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

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

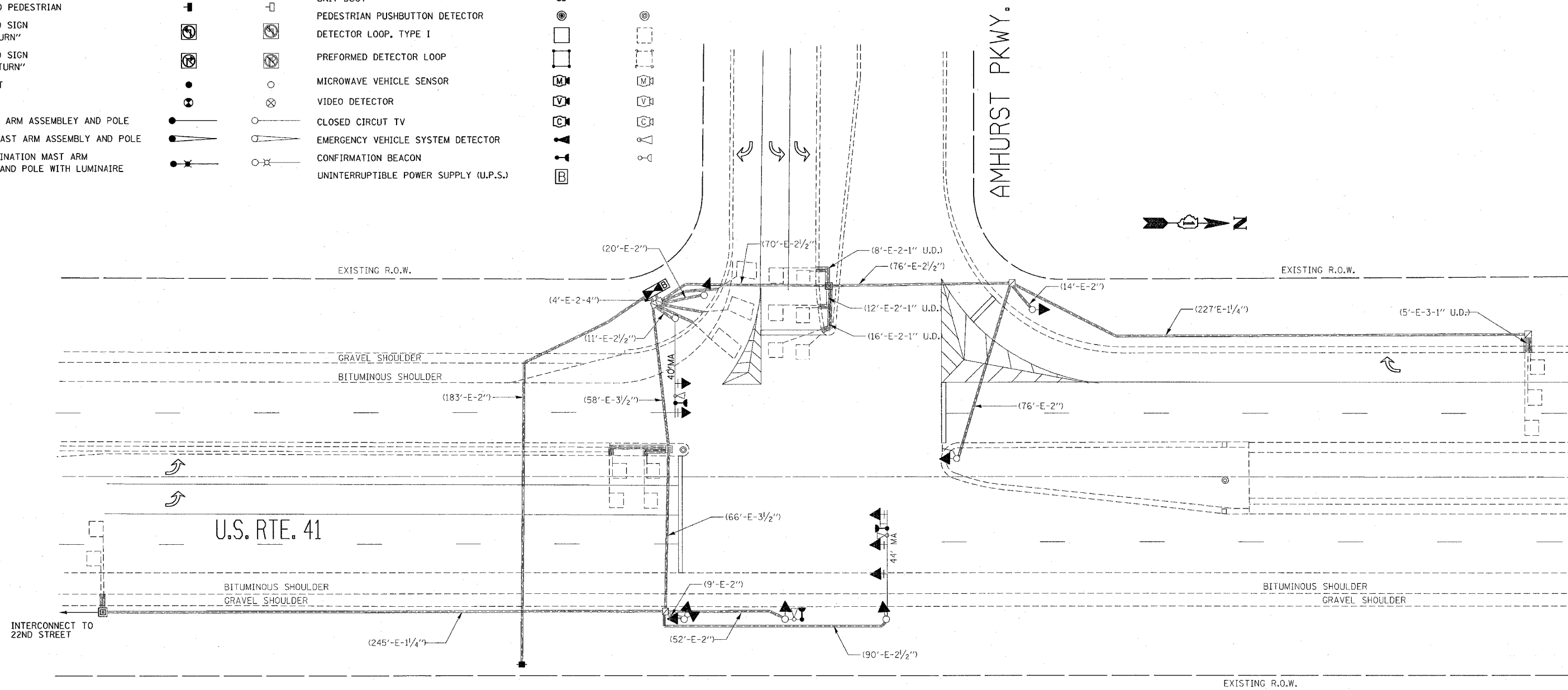
SCALE: VERT. NONE
 HORIZ. 1-01-02
 DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	7
STA.	TO STA.			
FED. ROAD DIST. NO.	MILEAGE	FED. AID PROJECT		

CONTRACT# 60A47

TRAFFIC SIGNAL LEGEND

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



MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 53)
 Lisle, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

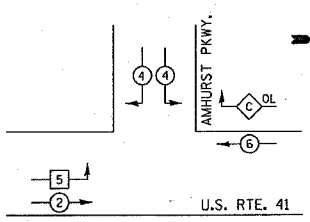
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL PLAN
 U.S. RTE. 41 AT
 AMHURST PARKWAY
 SCALE: 1"=20'
 DATE: 1/31/07
 DRAWN BY: PRT
 DESIGNED BY: RKF
 CHECKED BY: JVV

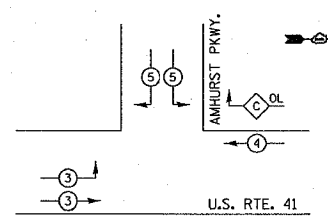
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	8
STA.	TO STA.			
FED. ROAD DIST. NO.	BILLING	FED. AID PROJECT		

CONTRACT# 60A47

CONTROLLER SEQUENCE



EMERGENCY VEHICLE PREEMPTION SEQUENCE



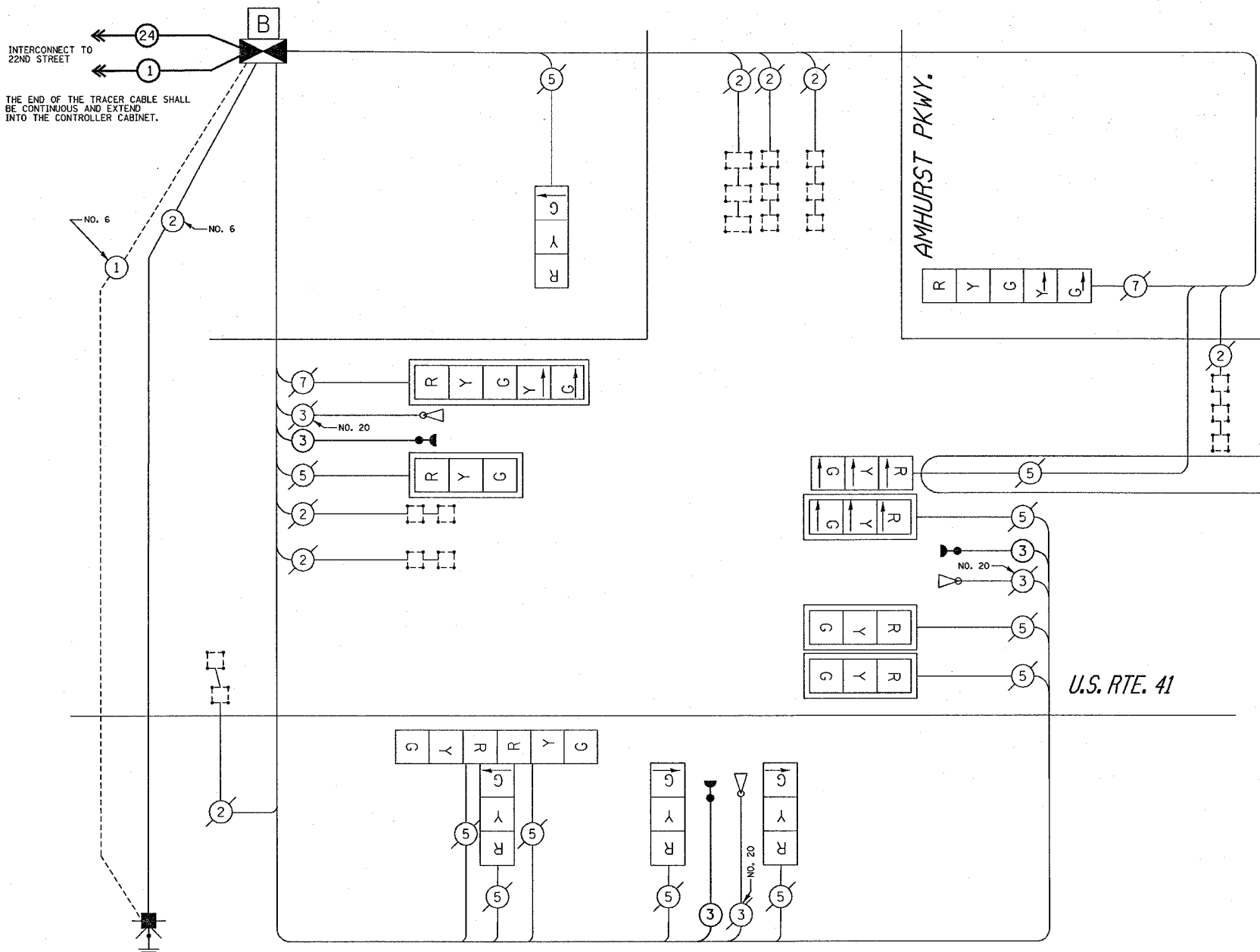
- LEGEND**
- [] SINGLE ENTRY PHASE
 - [OL] OVERLAP
 - [P] PEDESTRIAN PHASE
 - * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE			
PROPOSED EMERGENCY VEHICLE PREEMPTORS	3	4	5
EMERGENCY VEHICLE PREEMPTOR			
MOVEMENT	←	→	↑

SCHEDULE OF QUANTITIES

UNIT	QNTY.	PAY ITEM
L SUM	0.25	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
L SUM	0.25	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
L SUM	0.25	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
EACH	1	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
EACH	1	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)
EACH	1	TRANSCEIVER - FIBER OPTIC
FOOT	198	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
FOOT	198	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
EACH	5	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
EACH	7	INDUCTIVE LOOP DETECTOR
FOOT	183	REMOVE ELECTRIC SERVICE CABLE FROM CONDUIT
EACH	1	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
EACH	4	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
EACH	4	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
EACH	1	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
EACH	1	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
EACH	1	SIGNAL HEAD, L.E.D., 3-FACE, 3-SECTION, BRACKET MOUNTED
EACH	1	SERVICE INSTALLATION, POLE MOUNT
EACH	1	UNINTERRUPTIBLE POWER SUPPLY
EACH	3	CONFIRMATION BEACON
FOOT	580	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3/C



CABLE PLAN LEGEND

- | EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [G] | [G] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [R] | [R] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [W] | [W] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [P] | [P] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [C] | [C] | CONTROLLER CABINET |
| [S] | [S] | SERVICE INSTALLATION |
| [T] | [T] | TELEPHONE CONNECTION |
| [M] | [M] | MAGNETIC DETECTOR |
| [E] | [E] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [C] | [C] | CONFIRMATION BEACON |
| [P] | [P] | PUSHBUTTON DETECTOR |
| [V] | [V] | VEHICLE DETECTOR, INDUCTION LOOP |
| [2] | [2] | 2 DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [M] | [M] | MICROWAVE VEHICLE SENSOR |
| [R] | [R] | SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD |
| [E] | [E] | RAILROAD CONTROL CABINET |
| [E] | [E] | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" |
| [E] | [E] | ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN" |
| [H/C] | [H/C] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C). |
| [P] | [P] | GROUND ROD AT POST (P), OR MAST ARM POLE (MA). |
| [S] | [S] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [1] | [1] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [24] | [24] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F |
| [B] | [B] | UNINTERRUPTIBLE POWER SUPPLY (UPS) |

CABLE PLAN

REMOVAL NOTES

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN 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 & CABINET, COMPLETE

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

8 EACH, SIGNAL HEAD, 1-FACE 3-SECTION
 2 EACH, SIGNAL HEAD, 1-FACE 5-SECTION
 1 EACH, SIGNAL HEAD, 3-FACE 3-SECTION
 5 EACH, TRAFFIC SIGNAL BACKPLATE
 1 EACH, SERVICE INSTALLATION

NOTES

1. RELOCATION OF THE LIGHT DETECTOR AMPLIFIER(S) FROM THE OLD CONTROLLER CABINET TO THE NEW CABINET IS NECESSARY. THE COST OF THIS WORK SHALL BE INCLUDED TO THE COST OF THE NEW CONTROLLER AND CABINET.

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

I. D. O. T.				TOTAL
TRAFFIC SIGNAL INSTALLATION				WATTAGE
ELECTRICAL SERVICE REQUIREMENTS				
TYPE	NO. LAMPS	WATTAGE INCANDESCENT	% OPERATION	
SIGNAL (RED)	13	135	17	0.50
(YELLOW)	13	135	25	0.25
(GREEN)	13	135	15	0.25
ARROW	4	90	12	0.10
PED. SIGNAL		90	25	1.00
CONTROLLER	1		100	100.00
ILLUM. SIGN	84			0.05
FLASHER				0.50
TOTAL =				342.30

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER ST.
 SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: LARRY WOODLE
 PHONE: (815) 724-5674
 COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST		HANDHOLE		ALL FOUNDATIONS	
D - CONTROLLER		DOUBLE HANDHOLE		MAST ARM (L) POLE	
E - M. ARM POLE		SIGNAL POST			
		CONTROLLER CAB.		BRACKET MOUNTED	
		FIBER OPTIC		PED. PUSHBUTTON	
		ELECTRIC SERVICE		ELECTRIC SERVICE	
		GROUND CABLE		SERVICE TO GROUND	
				POST MOUNTED	

MORRIS ENGINEERING, INC.

5100 S. LINCOLN AVE. (RTE. 53)
 LISLE, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, EVP SEQUENCE, PHASE DESIGNATION DIAGRAM

U.S. RTE. 41 & AMHURST PARKWAY

SCALE: NTS DRAWN BY: PRT
 DATE: 1/25/07 DESIGNED BY: RKF
 CHECKED BY: JJV

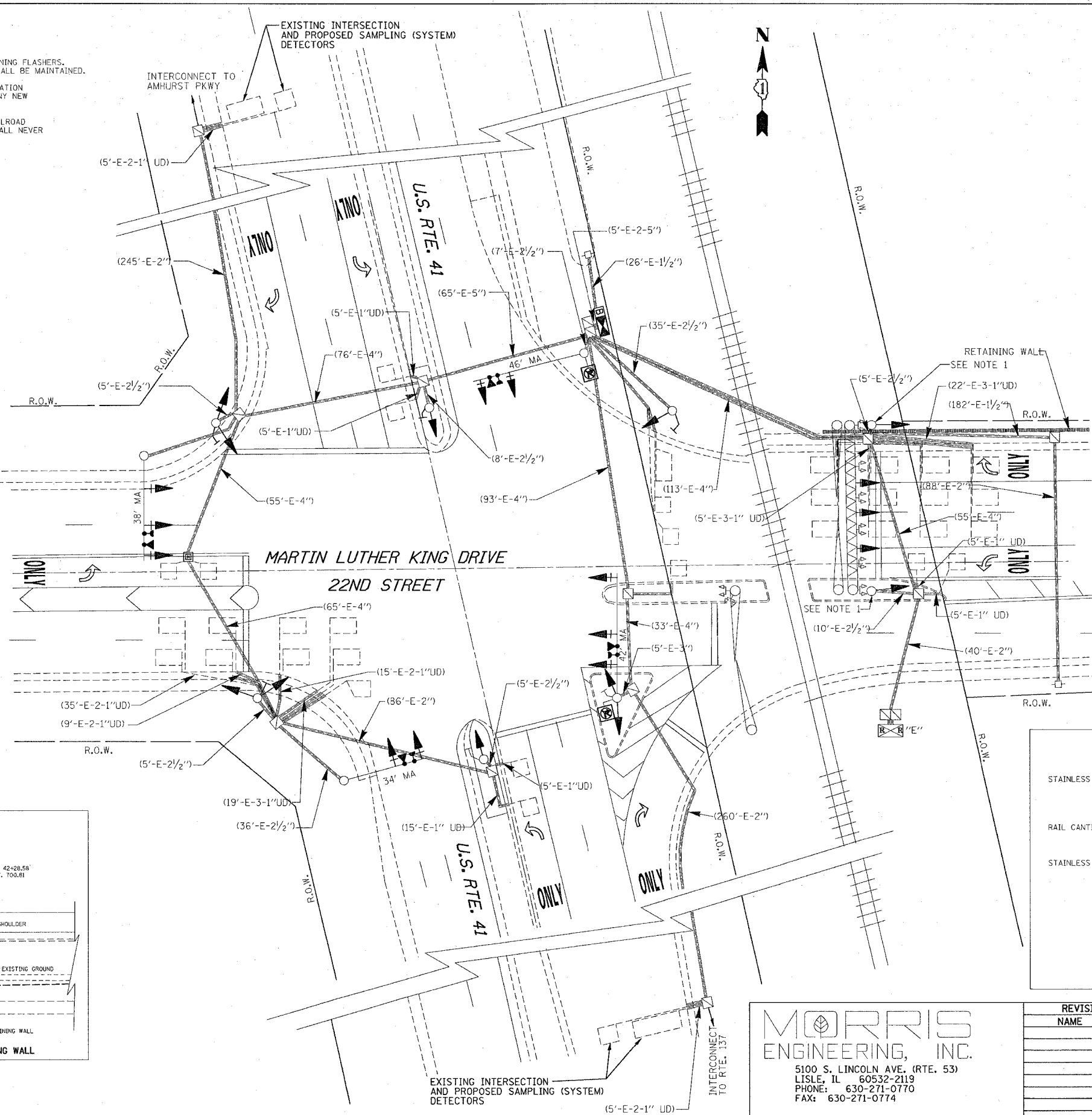
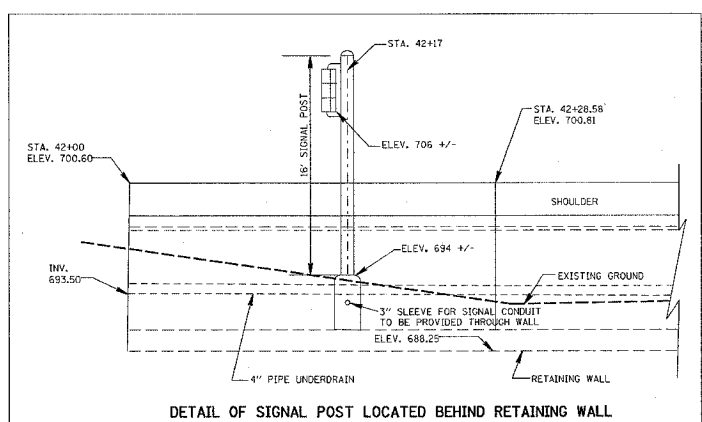
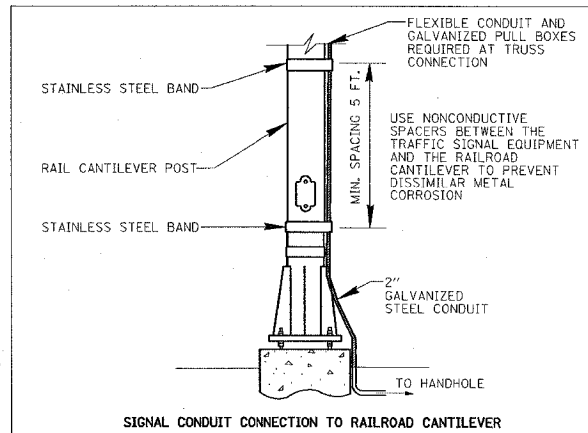
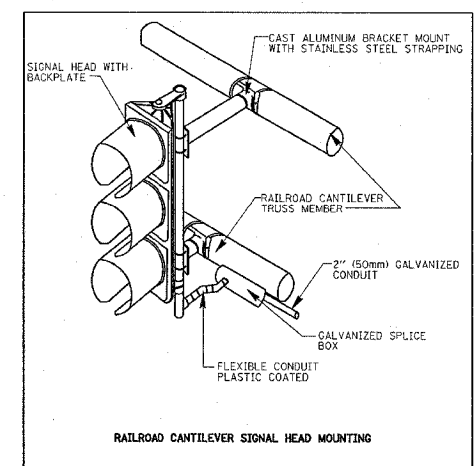
TRAFFIC SIGNAL PLAN NOTES

1. THE TRAFFIC SIGNAL POST AND SIGNAL HEAD SHALL NOT BLOCK RAILROAD WARNING FLASHERS. A HEIGHT OF 8 FT. FROM BOTTOM OF SIGNAL HOUSING TO PAVEMENT GRADE SHALL BE MAINTAINED.
2. THE SIGNAL CONTRACTOR SHALL COORDINATE UNIT DUCT AND CONDUIT INSTALLATION WITH THE ROADWAY CONTRACTOR SUCH THAT REMOVAL AND REPLACEMENT OF ANY NEW SHOULDER OR MEDIAN IS NECESSARY.
3. THE CONTRACTOR SHALL COORDINATE ALL WORK INVOLVING THE PERMANENT RAILROAD PREEMPTION SUCH THAT THE RAILROAD PREEMPTION FOR THE INTERSECTION SHALL NEVER BE OUT OF SERVICE.
4. ALL RAILROAD CROSSING EQUIPMENT TO BE INSTALLED BY OTHERS.
5. ALL EXISTING LOOP DETECTORS NOT SHOWN SHALL BE ABANDONED.

TRAFFIC SIGNAL LEGEND

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
346	2005-058-TS	LAKE	23	9
STA.	TO STA.		FED. ROAD DIST. NO.	ILLINOIS
				FED. AID PROJECT
CONTRACT# 60A47				



MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 53)
 Lisle, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL INSTALLATION
 U.S. RTE. 41 & 22nd STREET
 (MARTIN LUTHER KING JR. DRIVE)
 SCALE: 1" = 20'
 DATE: 1/31/07
 DRAWN BY: PRT
 DESIGNED BY: RKF
 CHECKED BY: JVV

SCHEDULE OF QUANTITIES

UNIT	QNTY.	PAY ITEM
L SUM	0.25	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
L SUM	0.25	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
L SUM	0.25	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
EACH	1	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
EACH	1	TRANSCEIVER - FIBER OPTIC
FOOT	1567	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
FOOT	856	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
FOOT	987	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
EACH	13	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
EACH	4	LIGHT DETECTOR
EACH	1	LIGHT DETECTOR AMPLIFIER
EACH	11	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
EACH	5	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
EACH	2	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
EACH	1	SIGNAL HEAD, L.E.D., 2-FACE, 3-SECTION, BRACKET MOUNTED
EACH	2	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
EACH	1	ILLUMINATED SIGN, L.E.D.
EACH	1	RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)
EACH	1	LOOP DETECTOR AMPLIFIER
EACH	15	INDUCTIVE LOOP DETECTOR

CABLE PLAN LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED	
				8" (200 mm) TRAFFIC SIGNAL SECTION
				12" (300 mm) TRAFFIC SIGNAL SECTION
				12" (300 mm) PEDESTRIAN SIGNAL SECTION
				12" (300 mm) PEDESTRIAN SIGNAL SECTION
				CONTROLLER CABINET
				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
				ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
				ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
				GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
				GROUND ROD AT POST OR MAST ARM POLE
				GROUND ROD AT ELECTRIC SERVICE INSTALLATION
				PUSHBUTTON DETECTOR
				UNINTERRUPTIBLE POWER SUPPLY (UPS)

REMOVAL NOTES:

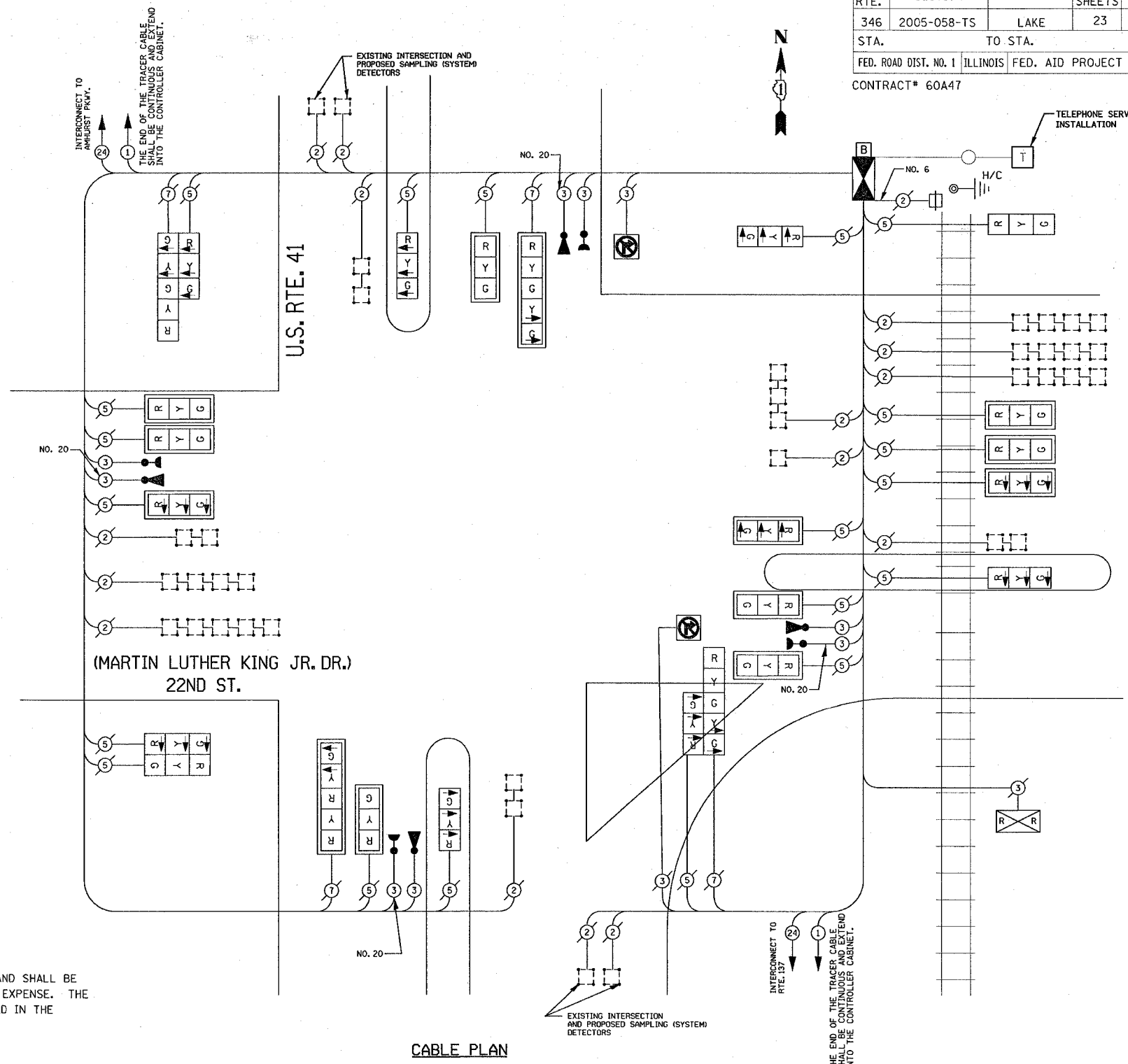
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE OF THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE:

- 16 EACH, SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH, SIGNAL HEAD, 1-FACE, 5-SECTION
- 1 EACH, SIGNAL HEAD, 2-FACE, 3-SECTION
- 2 EACH, SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
- 13 EACH, TRAFFIC SIGNAL BACKPLATE
- 2 EACH, ILLUMINATED SIGN

I. D. O. T.				TOTAL WATTAGE
TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				
TYPE	NO. LAMPS	WATTAGE INCAN LED	% OPERATION	
SIGNAL (RED)	24	17	0.50	204.0
(YELLOW)	24	25	0.25	150.0
(GREEN)	24	15	0.25	90.0
ARROW	8	12	0.10	9.6
PED. SIGNAL		25	1.00	
CONTROLLER	1	100	1.00	100.0
ILLUM. SIGN	2	84	0.05	
FLASHER			0.50	
TOTAL =				553.6

ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER ST.
SCHAUMBERG, ILLINOIS 60196-1096
ENERGY SUPPLY CONTACT: LARRY WOODLE
PHONE: (815) 724-5674
COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT.	VERTICAL	FT.
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' +/- 2' = (6m +/- 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)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)



CABLE PLAN

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

MORRIS ENGINEERING, INC.
5100 S. LINCOLN AVE. (RTE. 53)
LISLE, IL 60532-2119
PHONE: 630-271-0770
FAX: 630-271-0774

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN AND SCHEDULE OF QUANTITIES
U.S. ROUTE 41/
MARTIN LUTHER KING JR. DRIVE
(22ND ST.)
SCALE: NTS
DATE: 1/25/07
DRAWN BY: PRT
DESIGNED BY: RKF
CHECKED BY: JVV

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	10
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
CONTRACT# 60A47				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	12
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT# 60A47				

PROPOSED RAILROAD PREEMPTION SEQUENCE OF OPERATIONS

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	PRE EMPTOR NO.3								PRE EMPTOR NO.4								PRE EMPTOR NO.5								PRE EMPTOR NO.6								PRE EMPTOR NO.2							
	1	5	7	9	16	23	27	31																																
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER																																								
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	2	3	4	5	CLEAR TO NORMAL SEQUENCE										
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	2	1F	2	1H	2	1K	2	1M	2	1P	2	1R	2	1T	2	1V	2	1X	2	1Z	2	3	4	5													
N/B U.S. RTE. 41- FAR LEFT AND MEDIAN SIGNALS	<Y	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	△									
N/B U.S. RTE. 41- LEFT MAST ARM SIGNAL	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	△								
N/B U.S. RTE. 41- RIGHT MAST ARM AND NEAR RIGHT SIGNALS	R	R	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	△								
S/B U.S. RTE. 41- FAR LEFT AND MEDIAN SIGNALS	<Y	<R	<R	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	△									
S/B U.S. RTE. 41- LEFT MAST ARM SIGNAL	R	R	R	R	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	G	△								
S/B U.S. RTE. 41 RIGHT MAST ARM AND NEAR RIGHT SIGNALS	R	R	R	R	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	G	△								
E/B 22ND STREET FAR LEFT AND LEFT MAST ARM SIGNALS	<R	<R	<R	<R	<R	<R	<R	<R	<Y	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<R	<R	△									
E/B 22ND STREET CENTER & RT. MAST ARM AND NEAR RIGHT SIGNALS	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	Y	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	△								
W/B 22ND STREET EAST OF TRACKS LEFT TRUSS AND MEDIAN SIGNALS	<R	<R	<R	<R	<R	<R	<R	<R	<Y	<R	<R	<R	<Y	<R	<R	<R	<R	<R	<R	<R	<R	<R	<Y	<R	<R	<R	<R	<R	<R	<R	△									
W/B 22ND STREET EAST OF TRACKS CENTER & RT. TRUSS & NR. RT. SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	Y	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	△								
W/B 22ND STREET WEST OF TRACKS FAR LEFT AND LEFT MAST ARM SIGNALS	<R	<R	<R	<R	<R	<R	<R	<R	<G	<G	<R	<R	<G	<G	<R	<R	<R	<R	<R	<R	<R	<R	<R	<G	<G	<G	<Y	<R	<R	<R	△									
W/B 22ND STREET WEST OF TRACKS CENTER & RT. MAST ARM SIGNAL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	R	R	R	R	R	R	G	G	G	Y	R	R	R	△								
N/B US RTE. 41 NO RIGHT TURN ILLUMINATED SIGNS	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	△								

HOLD

NRT - NO RIGHT TURN

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

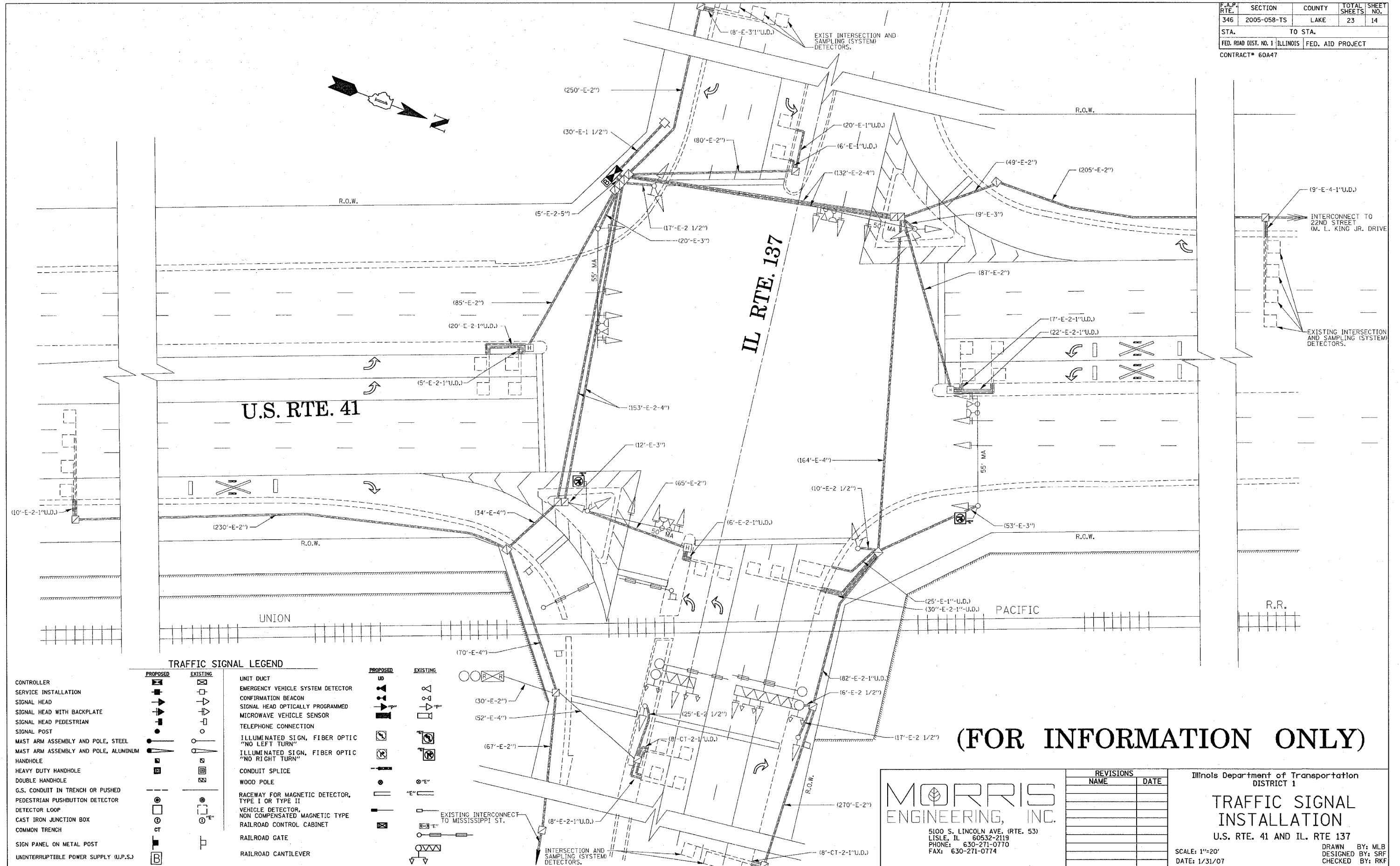
MORRIS ENGINEERING, INC.
 5100 S. LINCOLN SUITE 100 Lisle, ILLINOIS 60532
 PHONE: (630)271-0770 EMAIL: ECIVIL.COM

REVISIONS	
NAME	DATE

Illinois Department of Transportation
 DISTRICT 1
PROPOSED RAILROAD PREEMPTION SEQUENCE OF OPERATIONS
 U.S. RTE. 41 & 22ND ST
 SCALE: NONE
 DATE: 1/25/07
 DRAWN BY: PRT
 DESIGNED BY: RKF
 CHECKED BY: JVV

4:08:57 02/08/2007

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	14
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT# 60A47				



U.S. RTE. 41

IL RTE. 137

UNION

PACIFIC

R.R.

TRAFFIC SIGNAL LEGEND

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

(FOR INFORMATION ONLY)

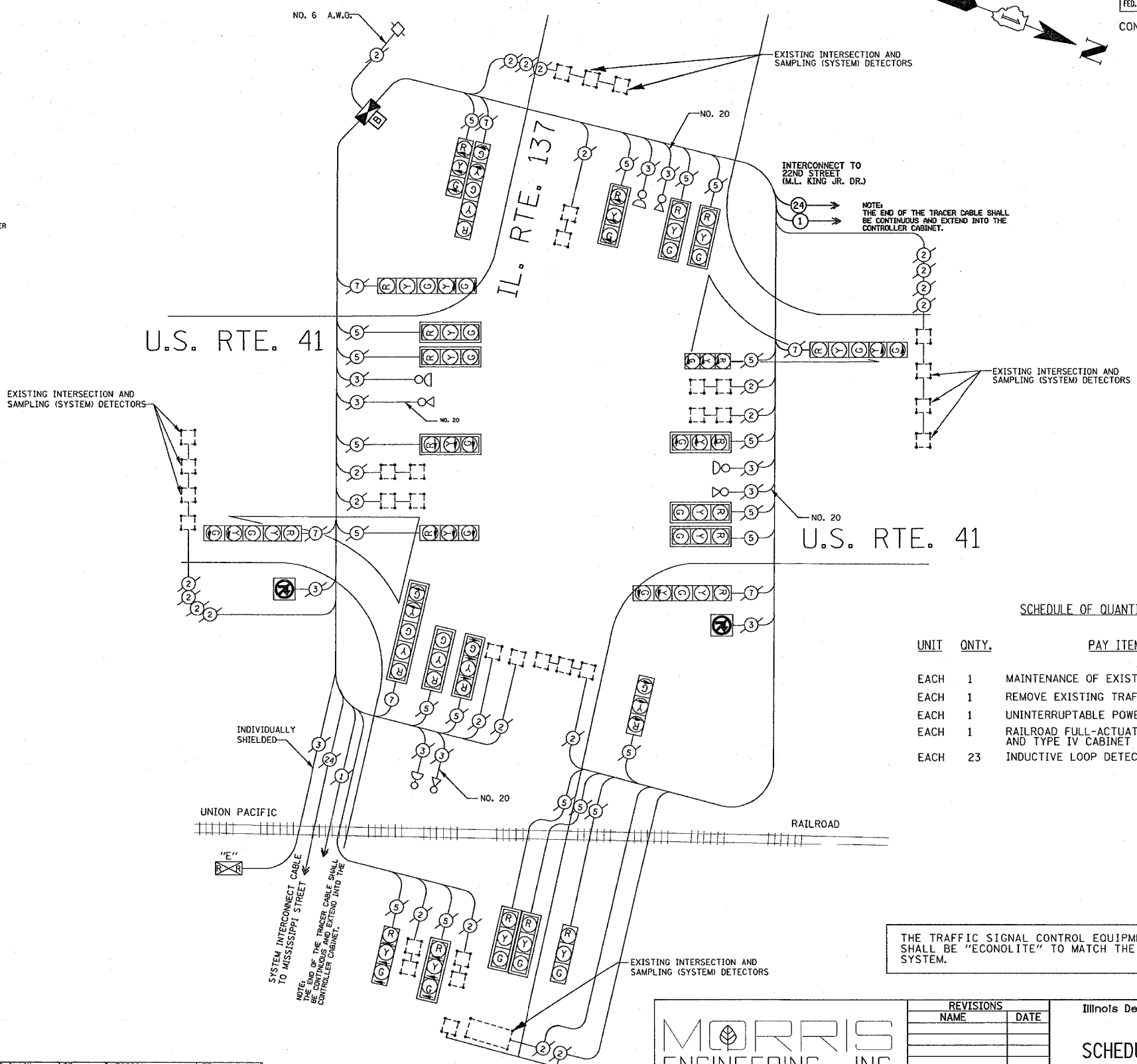
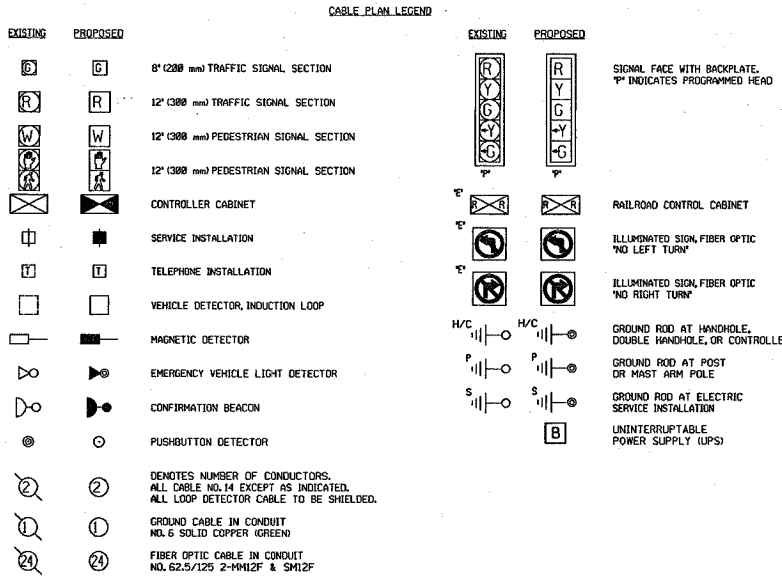
MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 53)
 Lisle, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

Illinois Department of Transportation
 DISTRICT 1
TRAFFIC SIGNAL INSTALLATION
 U.S. RTE. 41 AND IL RTE 137
 SCALE: 1"=20'
 DATE: 1/31/07
 DRAWN BY: MLB
 DESIGNED BY: SRF
 CHECKED BY: RKF

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	15
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT # 60A47



REMOVAL NOTES:

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

- 1 EACH, CONTROLLER AND CABINET COMPLETE

SCHEDULE OF QUANTITIES

UNIT	QNTY.	PAY ITEM
EACH	1	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
EACH	1	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
EACH	1	UNINTERRUPTABLE POWER SUPPLY
EACH	1	RAILROAD FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)
EACH	23	INDUCTIVE LOOP DETECTOR

I. D. O. T.				TOTAL WATTAGE
TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				
TYPE	NO. LAMPS	WATTAGE INCANDESCENT	% OPERATION	
SIGNAL (RED)	24	17	0.50	204.0
(YELLOW)	24	25	0.25	150.0
(GREEN)	24	15	0.25	90.0
ARROW	8	12	0.10	9.6
PED. SIGNAL	25	25	1.00	100.0
CONTROLLER	1	100	1.00	100.0
ILLUM. SIGN	2	84	0.05	
FLASHER				0.50
TOTAL =				553.6

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER ST.
 SCHAMBERG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: LARRY WOODLE
 PHONE: (815) 724-5674
 COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT.	VERTICAL	FT.
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	2 (1.0)	SIGNAL POST	2 (1.0)	1.6mH-0.5mL	
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)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

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

MORRIS ENGINEERING, INC.

5100 S. LINCOLN AVE. (RTE. 53)
 LISLE, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

Illinois Department of Transportation
 DISTRICT 1

**SCHEDULE OF QUANTITIES
 CABLE PLAN**

U.S. RTE. 41 AND IL. RTE 137

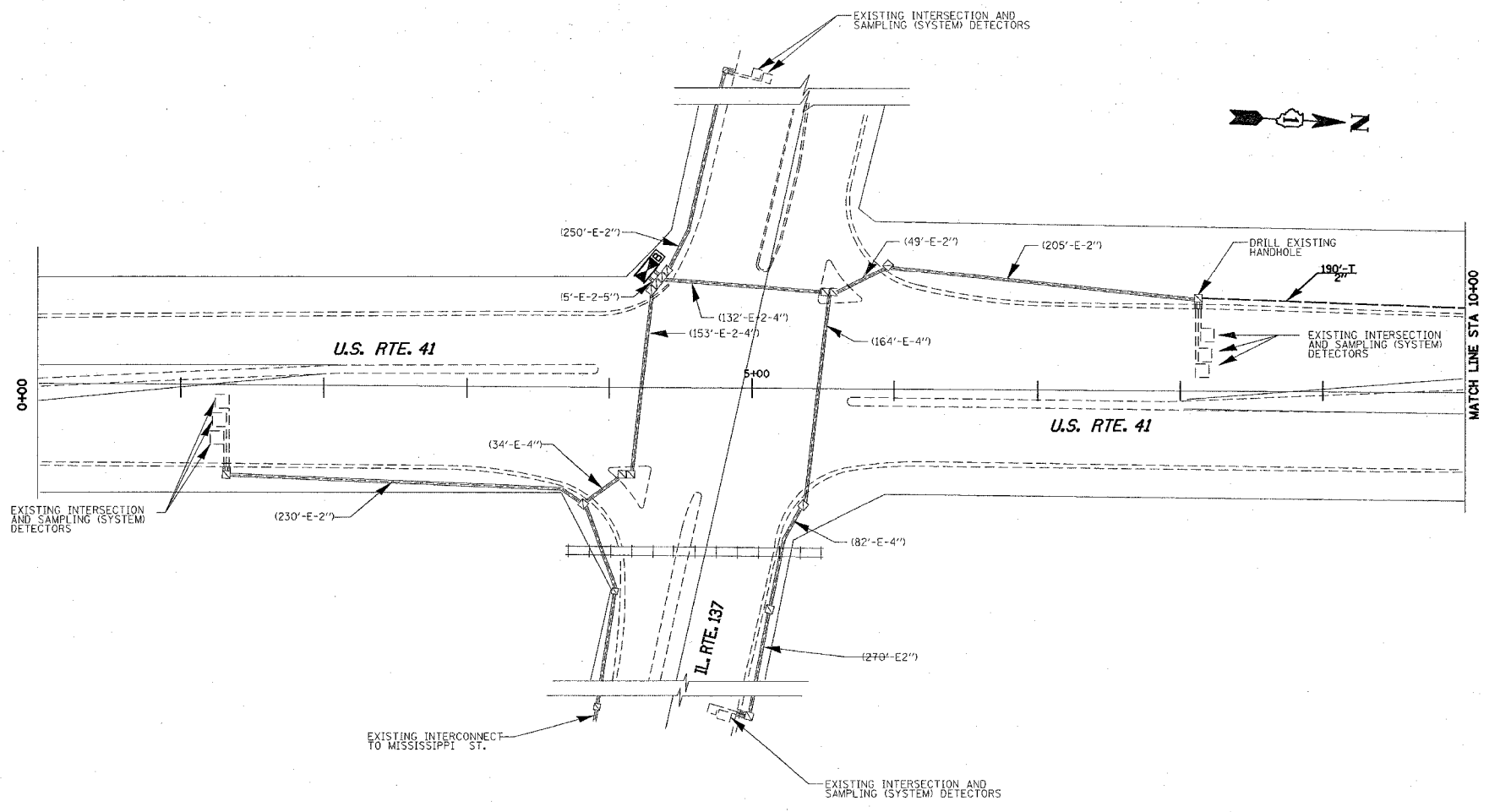
SCALE: N.T.S.
 DATE: 1/25/07

DRAWN BY: PRT
 DESIGNED BY: RKF
 CHECKED BY: JVV

CABLE PLAN

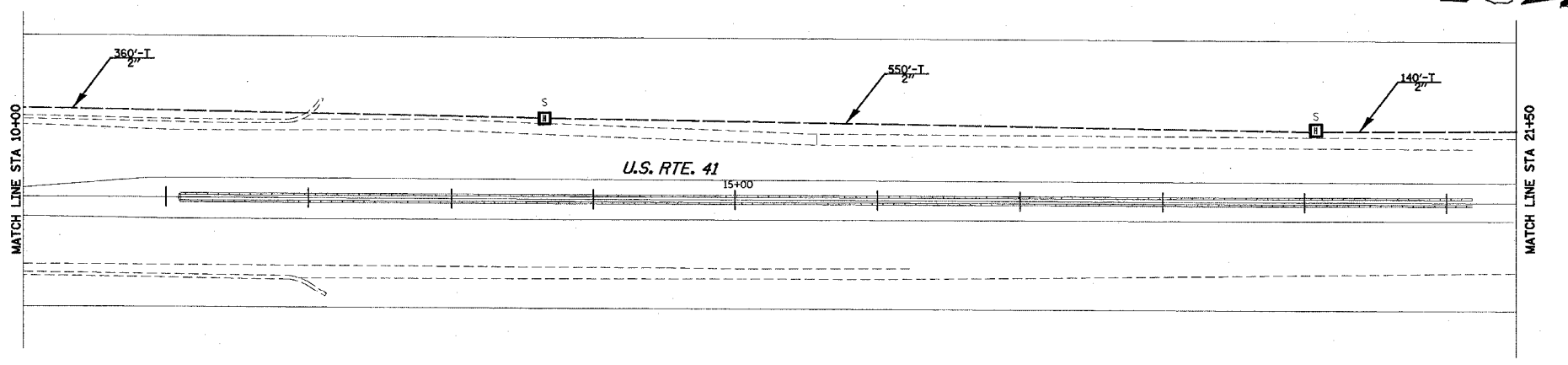
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	19
STA.	TO STA.			
FED. ROAD DIST. NO.	BLINDS	FED. AID PROJECT		

CONTRACT# 60A47



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP		
SYSTEM		
INTERSECTION		
UNIT DUCT		
COMMON TRENCH		



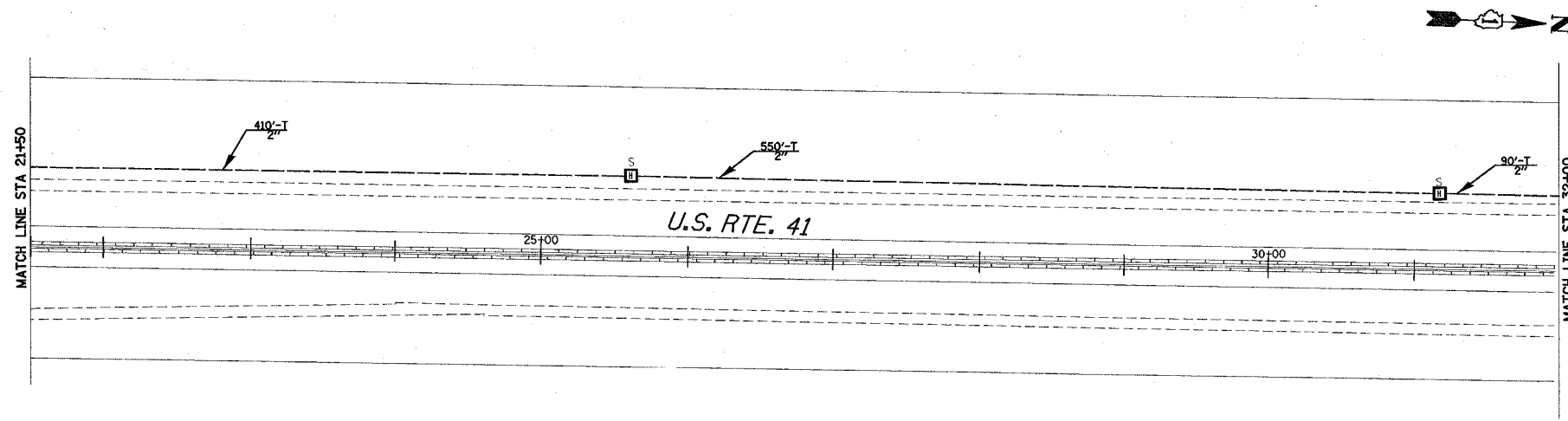
MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 53)
 LISLE, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
 U.S. RTE. 41 &
 IL. RTE. 137
 (SHEET 1 OF 4)
 SCALE: 1"=50'
 DATE: 1/31/07
 DRAWN BY: PRT
 DESIGNED BY: RKF
 CHECKED BY: JVV

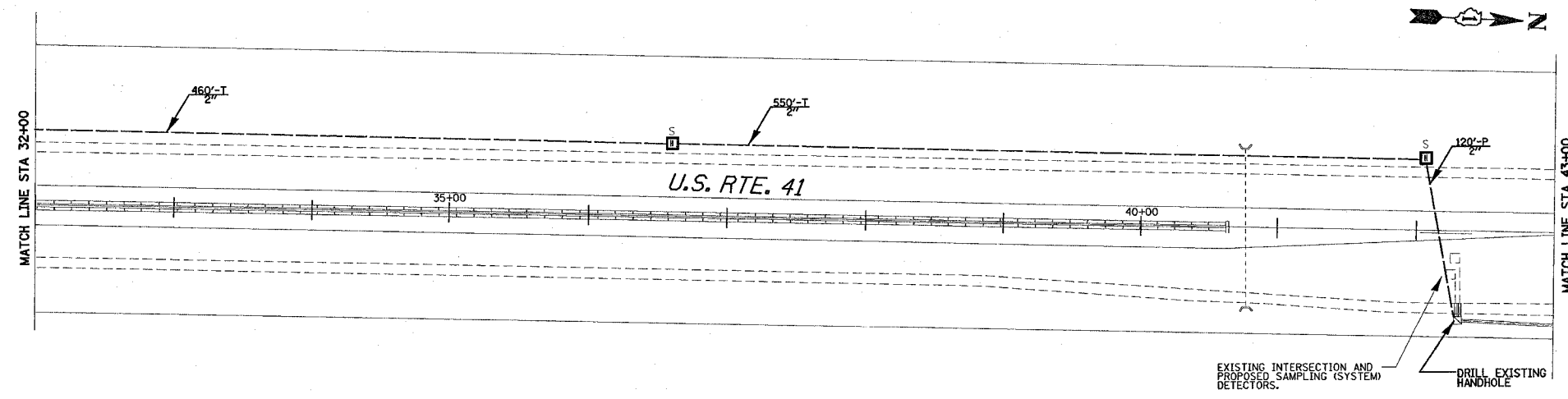
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
346	2005-058-TS	LAKE	23	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT# 60A47



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
SYSTEM	S	
INTERSECTION	I	I
UNIT DUCT	UD	
COMMON TRENCH	CT	



MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 53)
 LISLE, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

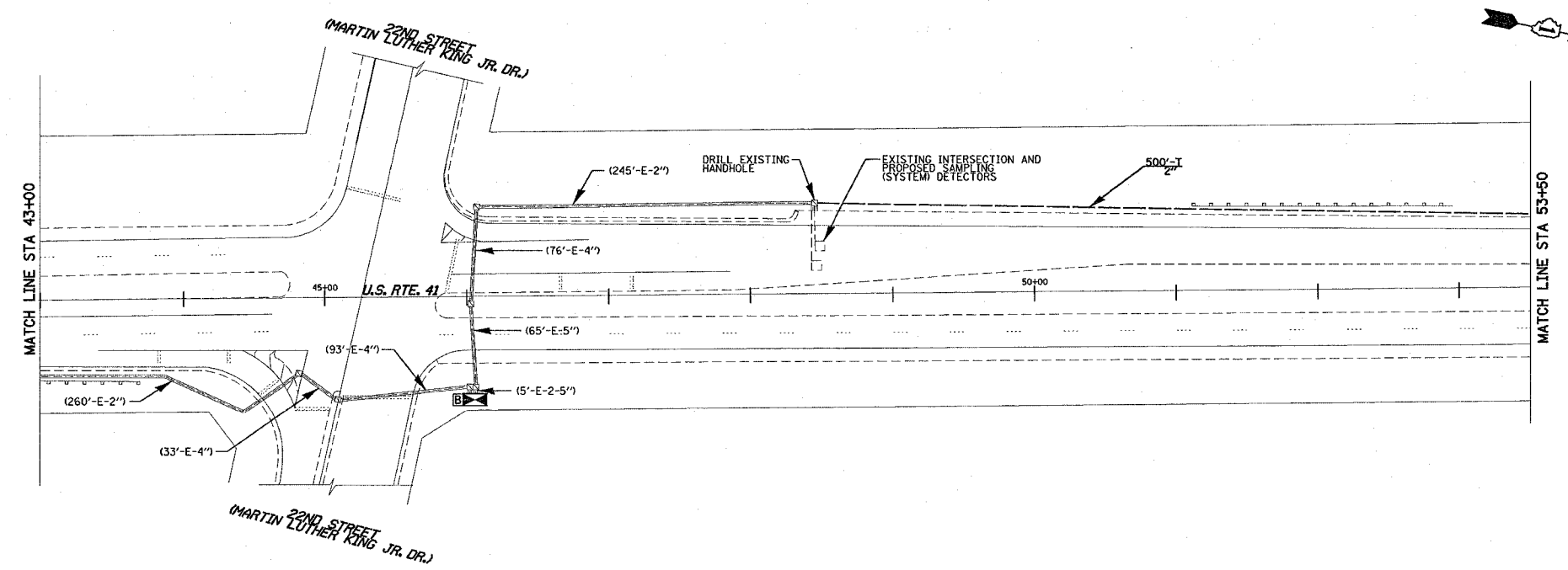
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
 U.S. RTE. 41 &
 IL. RTE. 137
 (SHEET 2 OF 4)
 SCALE : 1"=50'
 DATE : 1/31/07
 DRAWN BY : PRT
 DESIGNED BY : RKF
 CHECKED BY : JVV

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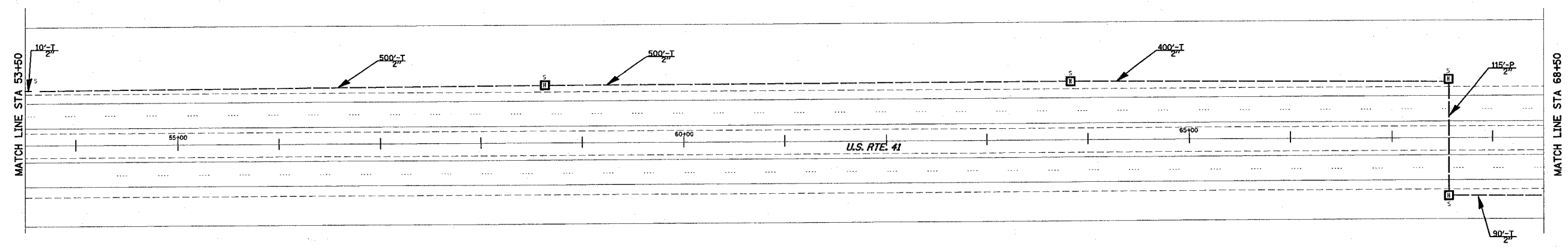
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	21
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT# 60A47



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP		
SYSTEM	S	I
INTERSECTION	IP	I
UNIT DUCT	UD	
COMMON TRENCH	CT	



MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 53)
 LISLE, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

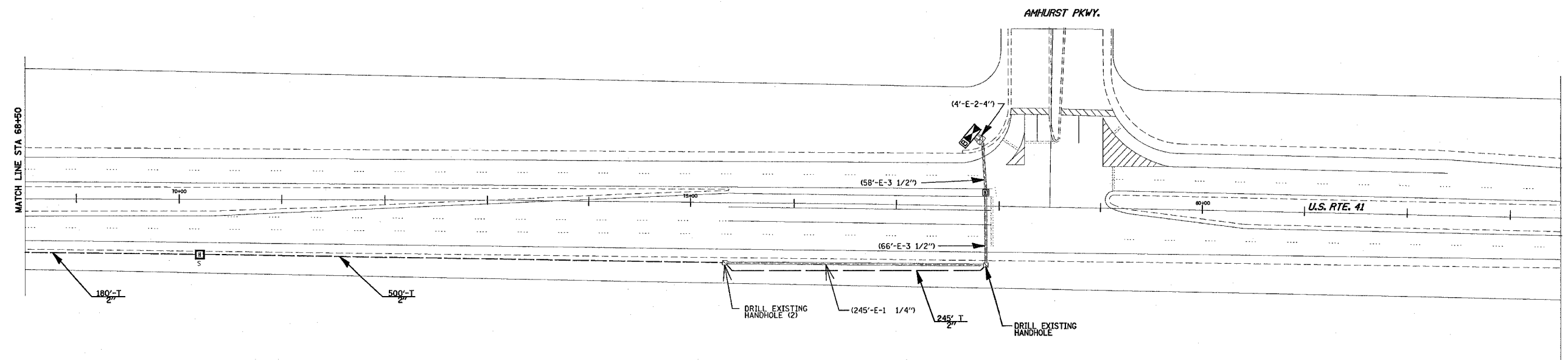
ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
 U.S. RTE. 41 &
 IL. RTE. 137
 (SHEET 3 OF 4)
 SCALE : 1"=50'
 DATE : 1/31/07
 DRAWN BY : PRT
 DESIGNED BY : RKF
 CHECKED BY : JVV

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
346	2005-058-TS	LAKE	23	22
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT# 60A47

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	



MORRIS ENGINEERING, INC.
 5100 S. LINCOLN AVE. (RTE. 58)
 LISLE, IL 60532-2119
 PHONE: 630-271-0770
 FAX: 630-271-0774

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
 U.S. RTE. 41 &
 IL. RTE. 137
 (SHEET 4 OF 4)
 SCALE: 1"=50'
 DATE: 1/31/07
 DRAWN BY: PRT
 DESIGNED BY: RKF
 CHECKED BY: JVV

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	2005-058-TS	LAKE	23	23
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

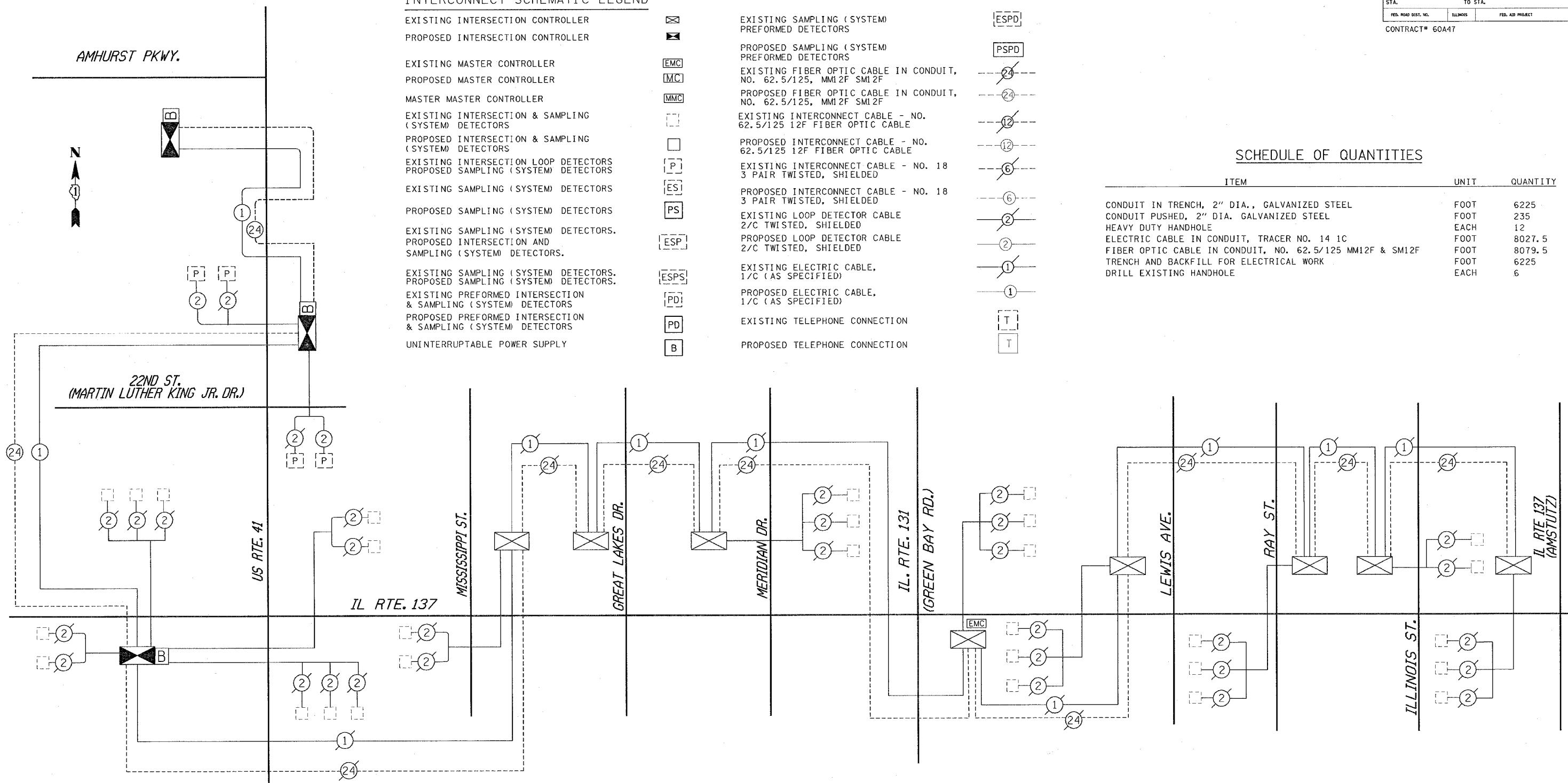
CONTRACT# 60A47

INTERCONNECT SCHEMATIC LEGEND

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	6225
CONDUIT PUSHED, 2" DIA. GALVANIZED STEEL	FOOT	235
HEAVY DUTY HANDHOLE	EACH	12
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	8027.5
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F	FOOT	8079.5
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	6225
DRILL EXISTING HANDHOLE	EACH	6



INTERCONNECT SCHEMATIC

<p>MORRIS ENGINEERING, INC. 5100 S. LINCOLN AVE. (RTE. 53) LITTLE, IL 60532-2119 PHONE: 630-271-0770 FAX: 630-271-0774</p>	<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS		NAME	DATE							<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>INTERCONNECT SCHEMATIC</p> <p>U.S. RTE. 41 / MARTIN LUTHER KING JR. DRIVE</p> <p>SCALE : NTS DATE : 1/31/07</p> <p>DRAWN BY : PRT DESIGNED BY : RKF CHECKED BY : JVV</p>
	REVISIONS											
	NAME	DATE										