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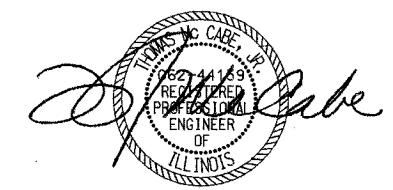
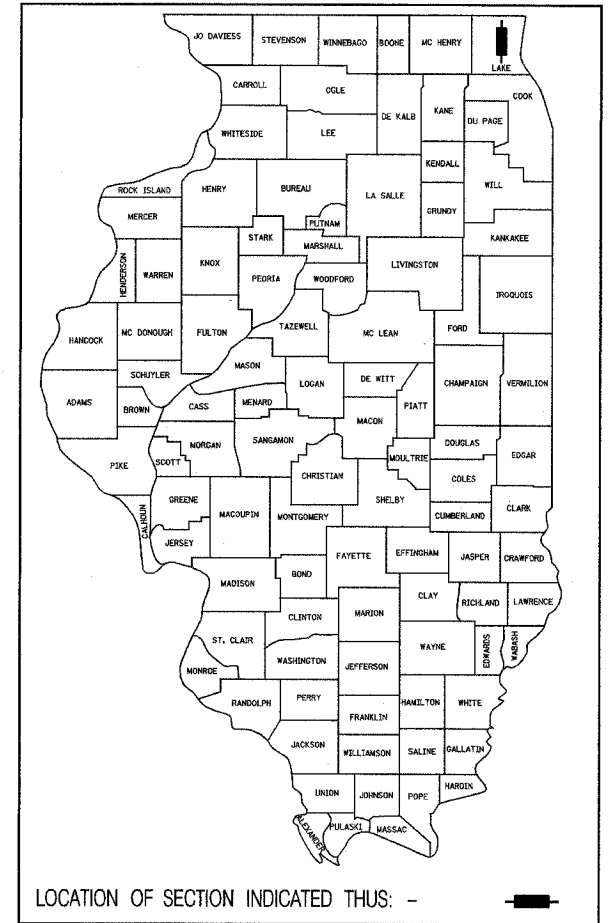
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALES { PLAN 1" = 20' AND 1" = 50'
PROFILE HORIZ. N.A.
PROFILE VERT. N.A.
CROSS SECTION N.A.

DISTRICT 1
CONGESTION MITIGATION AIR QUALITY
FIBER OPTIC COMMUNICATIONS NETWORK
ILLINOIS ROUTE 83 FROM
SHOREWOOD ROAD TO WASHINGTON STREET
F.A.P. ROUTE 866 PROJECT: CMF-0866(006)
SECTION 2005-057TS
C-91-057-06
LAKE COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	1
STA. _____ TO STA. _____				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				
D-91-057-06				



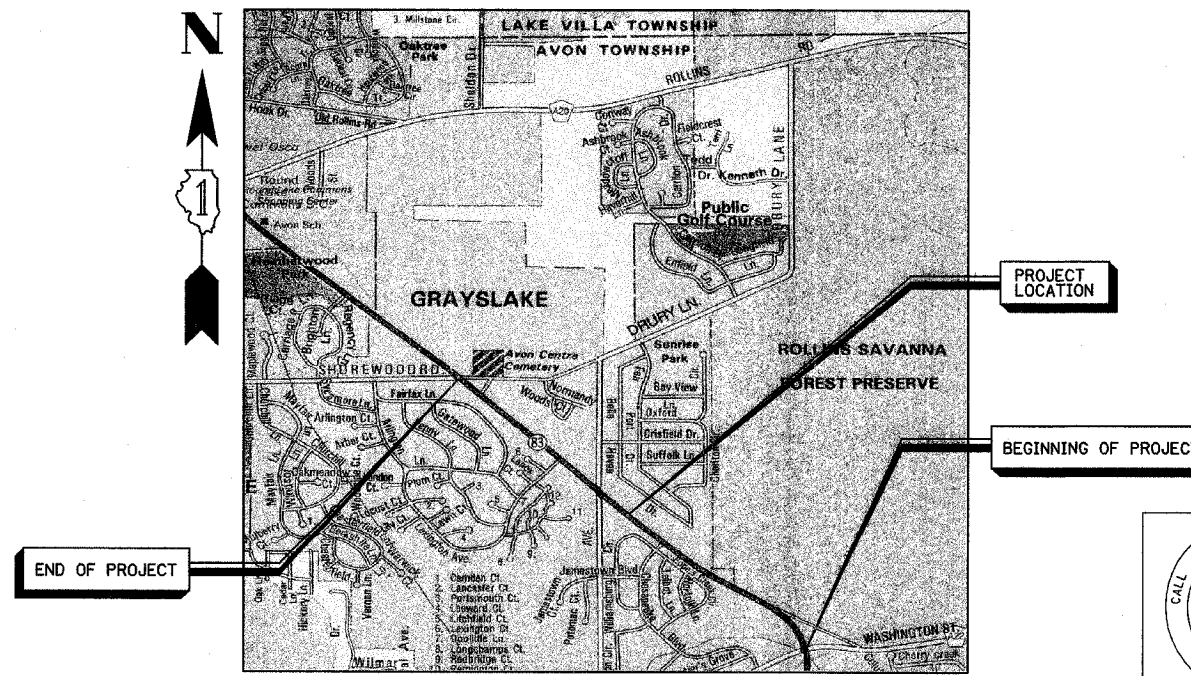
STANDARD DRAWINGS

701006-02	701011-01	701101-01	701301-02	702001-06
424001-04	720001	813001-01	814001-01	814006
857001	877001-02	877006-02	877011-02	878001-05
880001	880006	886001	805001	
701201-02	701316-03	701321-08	701406-04	701501-03
701502-01	701606-04	701601-04	701701-04	701801-03

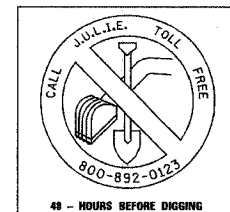
NOTE: STANDARD DRAWINGS REQUIRED (CIRCLED).

CONTRACT NO. 60A46

PREPARED BY: Steve Travia
TRAFFIC ENGINEER
DATE: Jan 18, 2007



AVON TOWNSHIP



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: Jan 11, 2007
Steve Travia
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

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

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

PRINTED BY AUTHORITY OF
THE STATE OF ILLINOIS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60A46				

001.FED./201.STATE

PERCENTAGES				CONSTRUCTION TYPE CODE			
LOCATION OF WORK				IL ROUTE 83 AT WASHINGTON STREET	IL ROUTE 83 AT LAKE STREET	IL ROUTE 83 AT SHOREWOOD ROAD	INTERCONNECT
SUMMARY OF QUANTITIES							
CODE NO.	ITEM	UNIT	TOTAL	Y 031-1F	Y 031-1F	Y 031-1F	Y 031-1F
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	0.5	1	0.5	2
67100100	MOBILIZATION	L.SUM	1	0.25	0.25	0.25	0.25
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L.SUM	1	0.25	0.25	0.25	0.25
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	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
X0140074	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	5		5		
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	5946				5946
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	416				416
81400100	HANDHOLE	EACH	1				1
81400200	HEAVY-DUTY HANDHOLE	EACH	7				7
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	5946				5946
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3	1	1	1	
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1		1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1		1		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	45		45		
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	7147				7147
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM 12F SM12F	FOOT	7147				7147
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	976		976		
87900200	DRILL EXISTING HANDHOLE	EACH	4				4
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8		8		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1		
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4		4		
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4		4		
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION BRACKET MOUNTED	EACH	4		4		
88102710	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2		2		
88102740	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	1		1		
X8050015	SERVICE INSTALLATION, POLE MOUNTED	EACH	1		1		
X0325715	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	3				3

SETON ENGINEERING
 SERVICE CORPORATION
 CIVIL ENGINEERS
 19 S. BOTHWELL STREET
 PALATINE, ILLINOIS 60067
 VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
 IL ROUTE 83 FROM
 WASHINGTON STREET TO
 SHOREWOOD ROAD
 GRAYSLAKE, ILLINOIS

SCALE: N.T.S.
 DATE 5-26-06

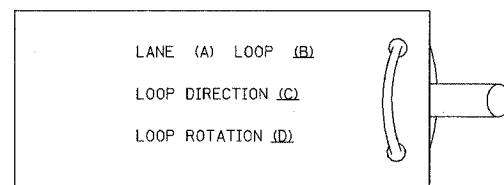
DRAWN BY CWC
 DESIGNED BY VO
 CHECKED BY TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	3
STA. _____ TO STA. _____		FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				

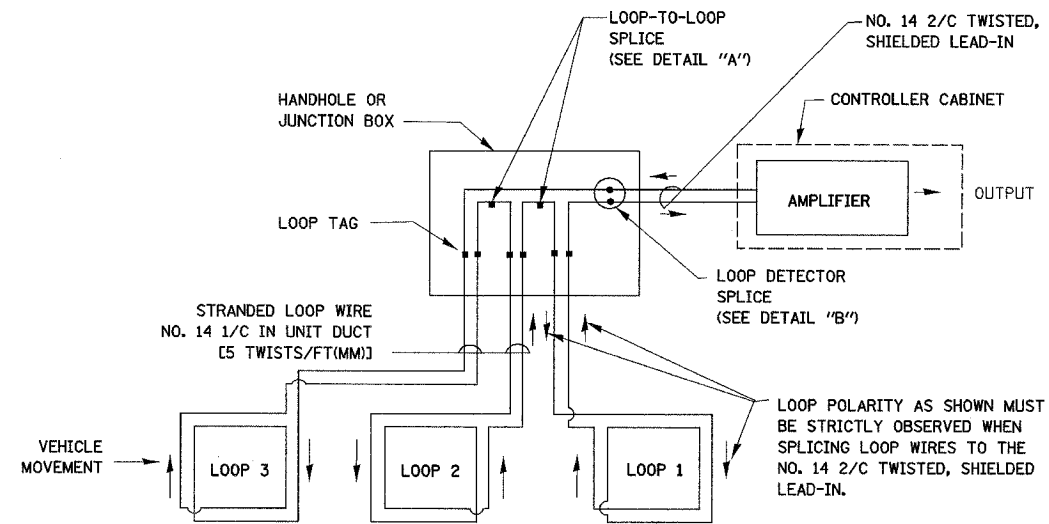
LOOP DETECTOR NOTES

- 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.

LOOP LEAD-IN CABLE TAG

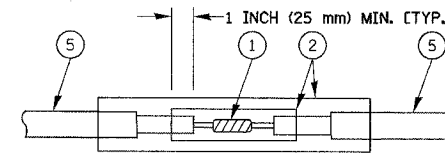


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

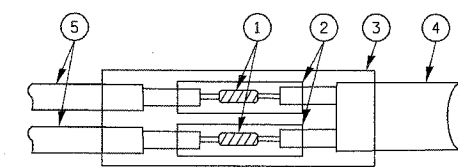


DETECTOR LOOP WIRING SCHEMATIC

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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- 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

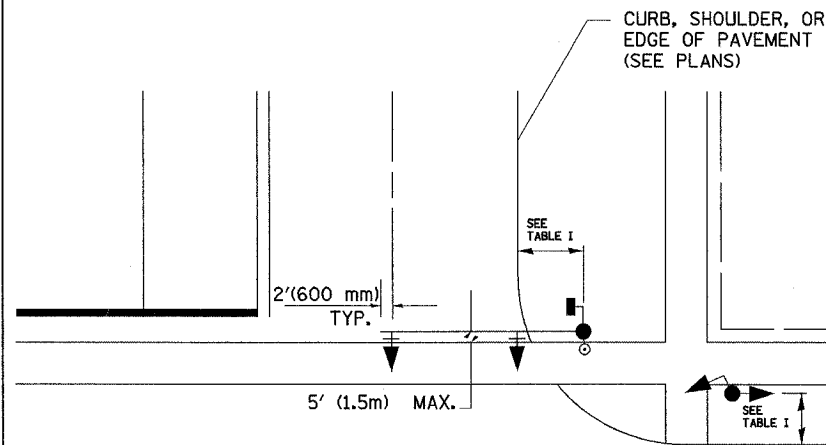
SCALE: N.T.S.
DATE: 5-26-06

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

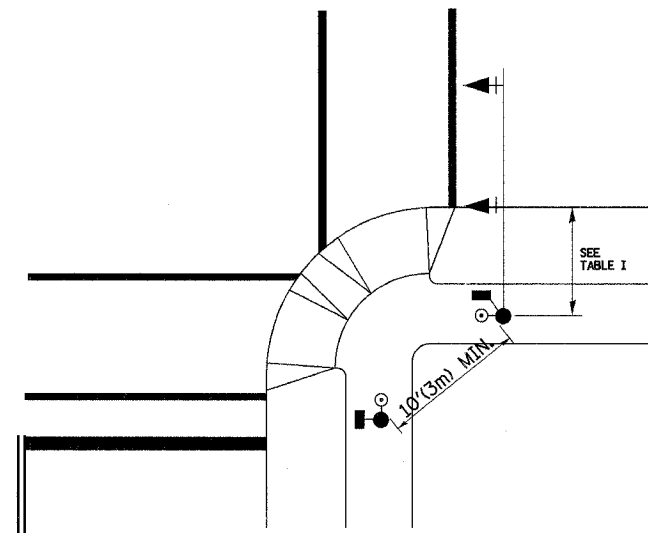
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	4
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				

TRAFFIC SIGNAL MAST ARM AND POST

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



PEDESTRIAN SIGNAL PUSHBUTTON



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

NOTES:

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

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

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

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

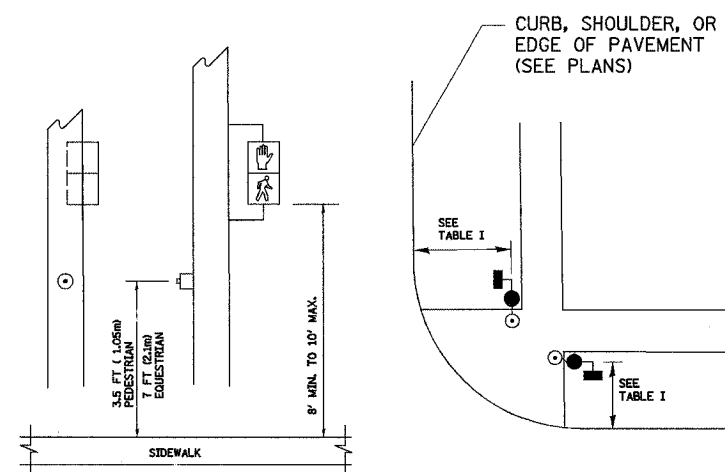


TABLE I

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

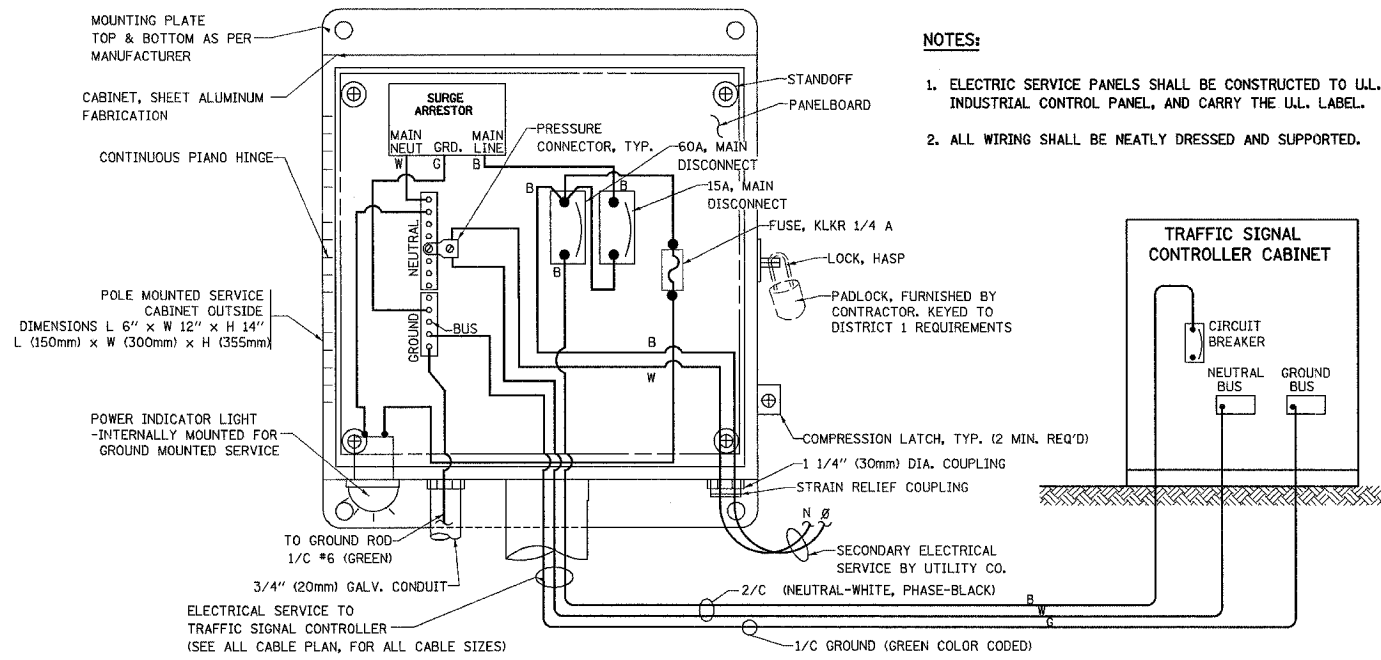
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

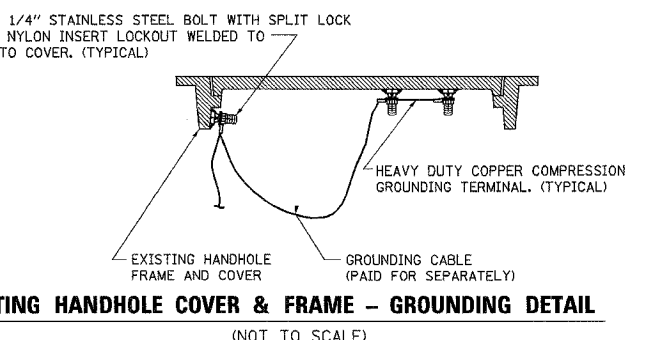
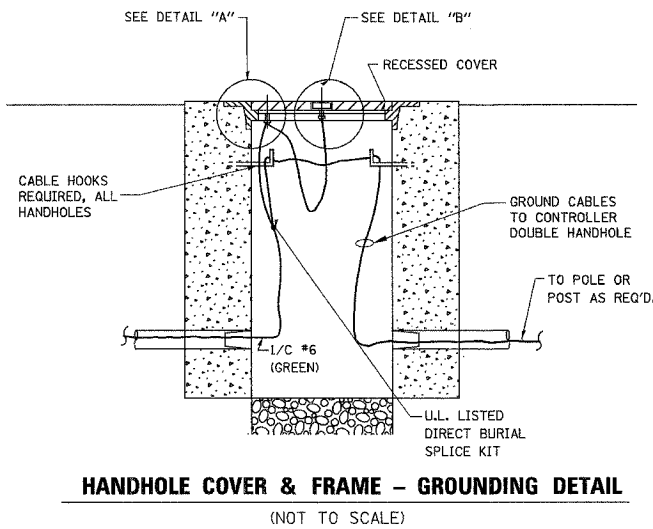
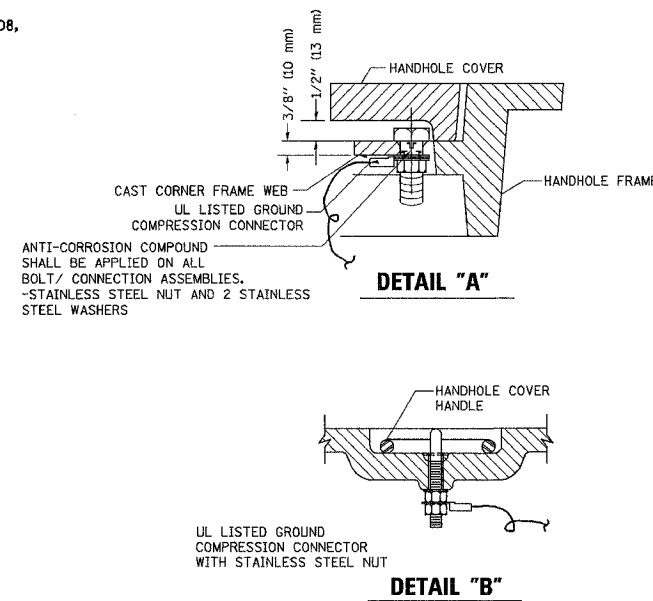
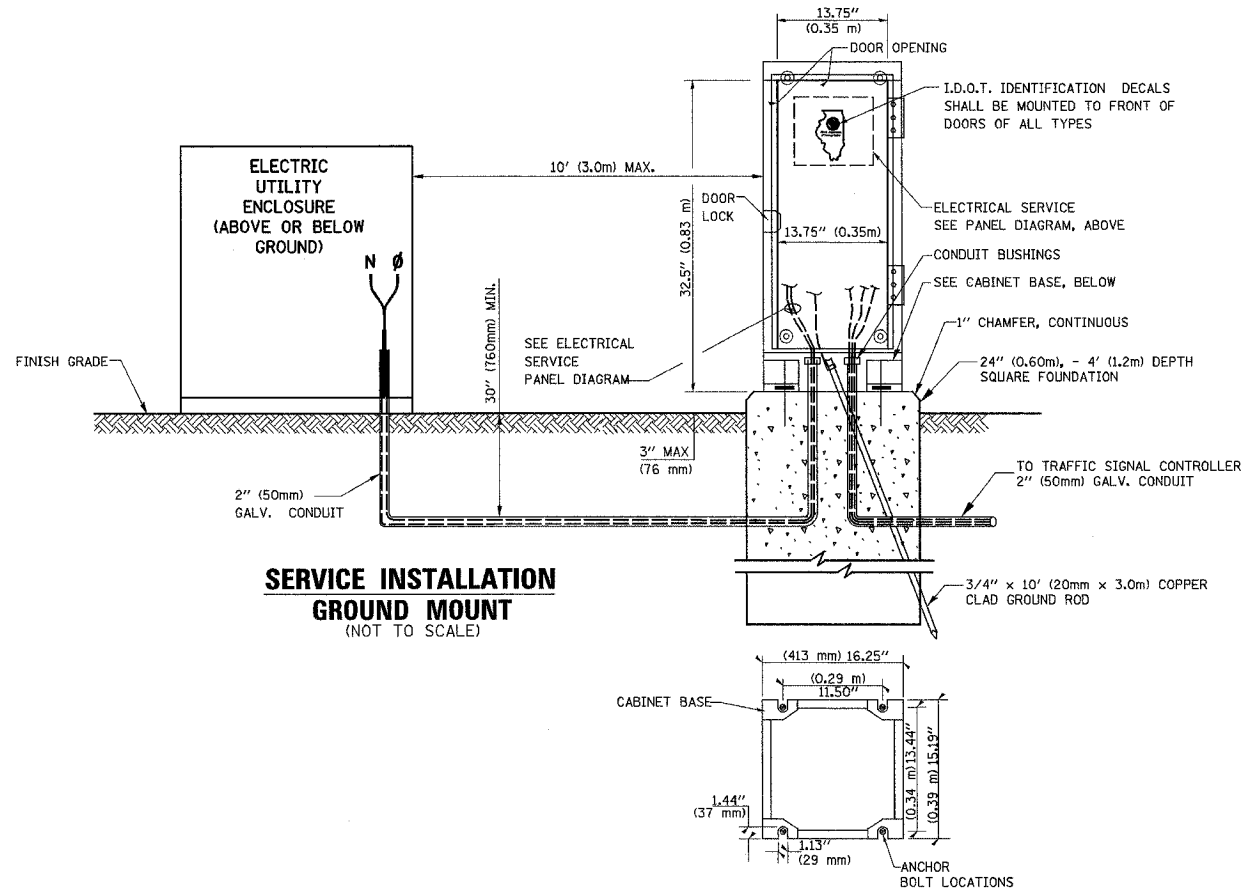
SCALE: N.T.S.
DATE 5-26-06

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

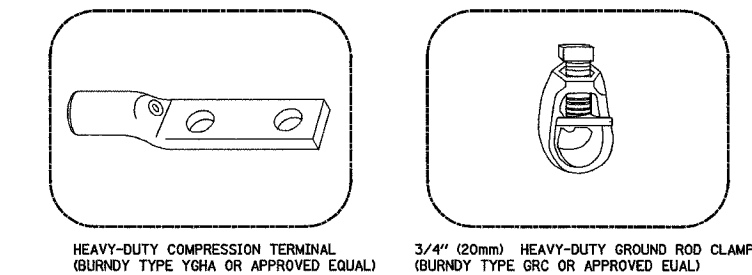
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-05TTS	LAKE	20	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				



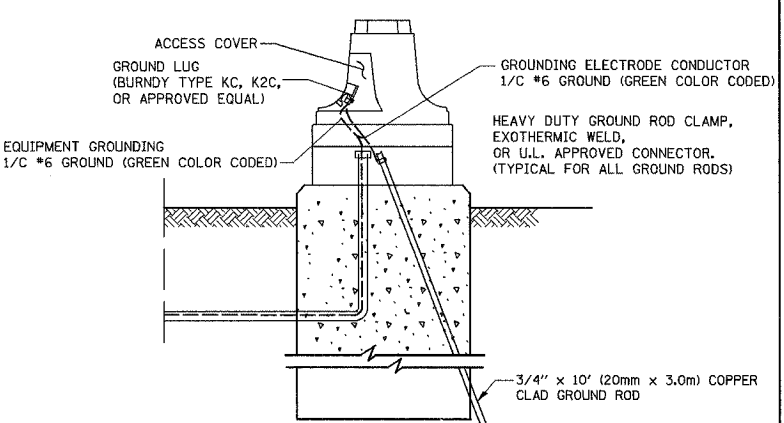
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



- 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 (647) 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, U.L. APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



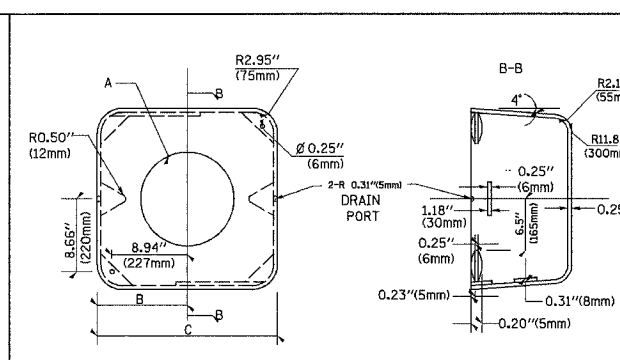
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT ONE
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: N.T.S.
 DATE: 5-26-06

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

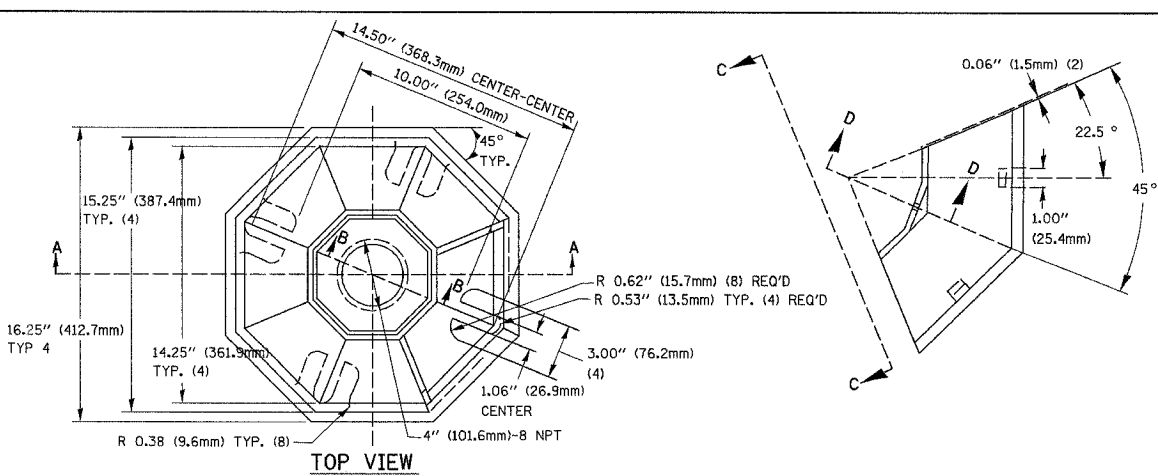
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	6
STA. _____ TO STA. _____		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				



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

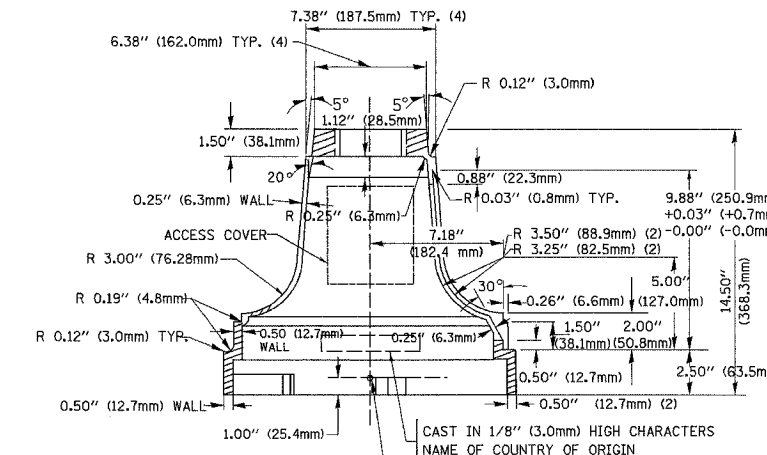
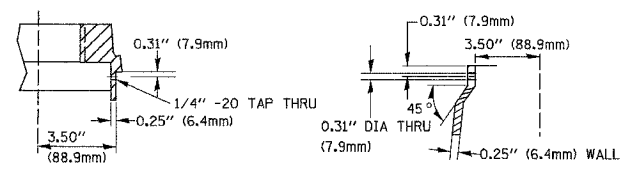
SHROUD DETAIL

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

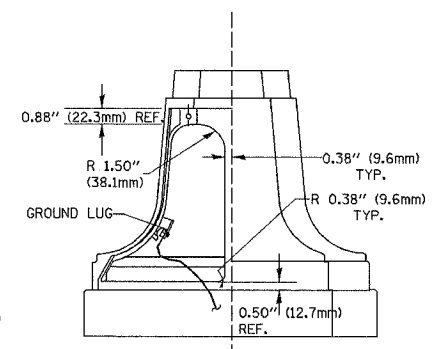


SECTION B-B

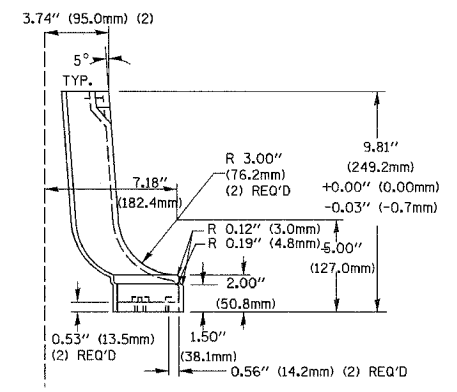
SECTION D-D



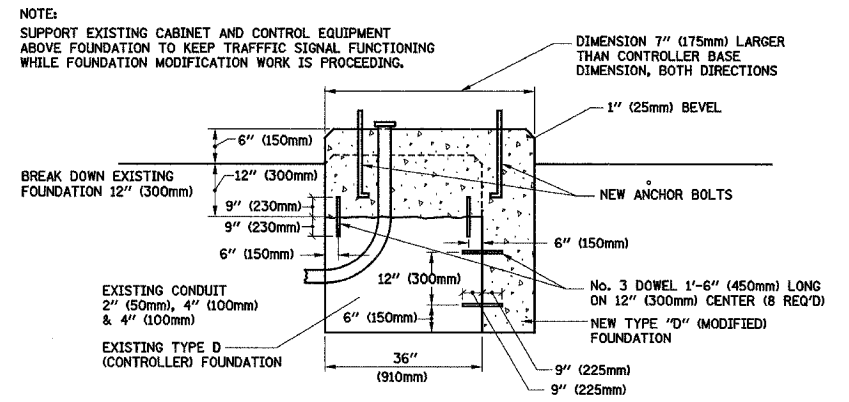
SECTION A-A



VIEW C-C

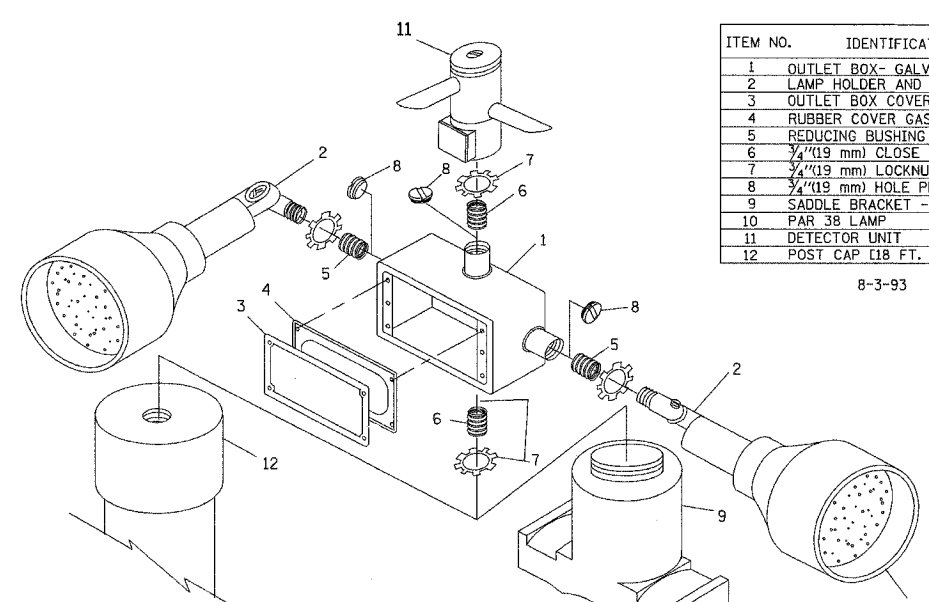


TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)

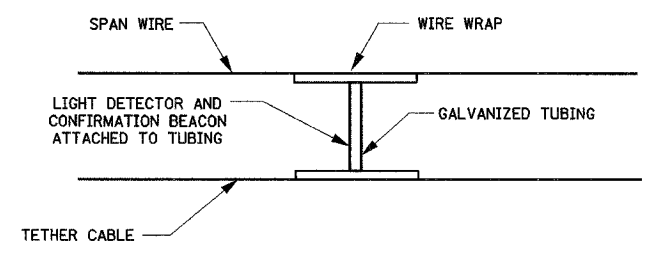


ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU. IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP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

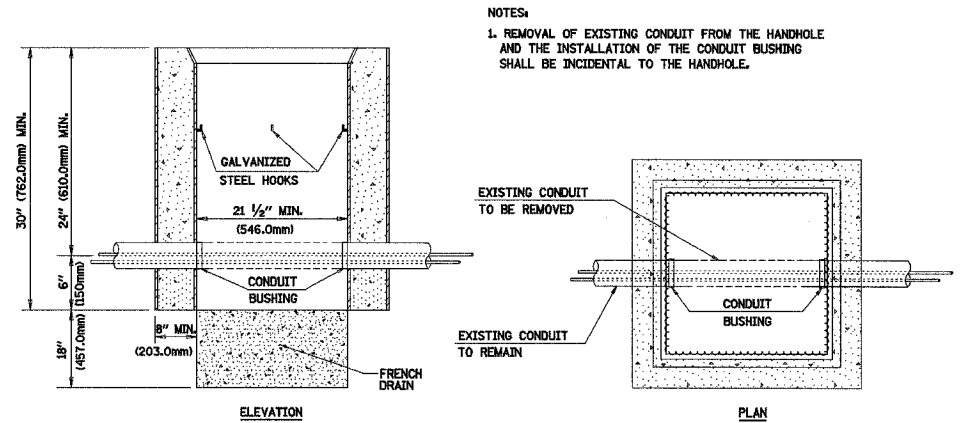
NOTES:

- 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.

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)



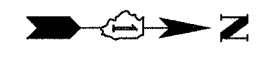
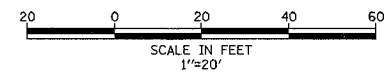
DETAIL
 HANDHOLE TO INTERCEPT EXISTING CONDUIT
 N.T.S.

REVISIONS	
NAME	DATE

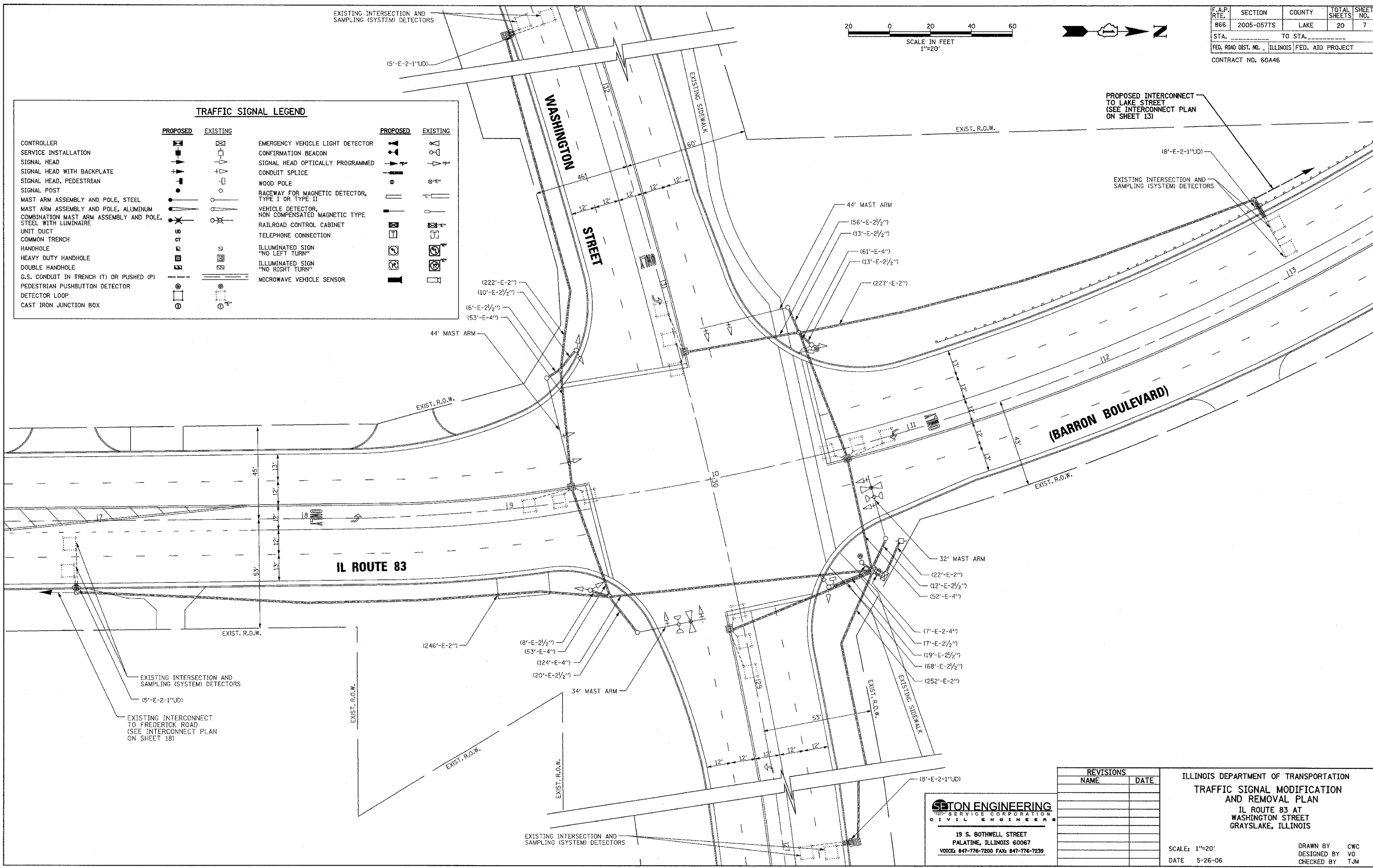
ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT ONE
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: N.T.S.
 DATE: 5-26-06
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	7
STA.	TO STA.			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60A46				



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



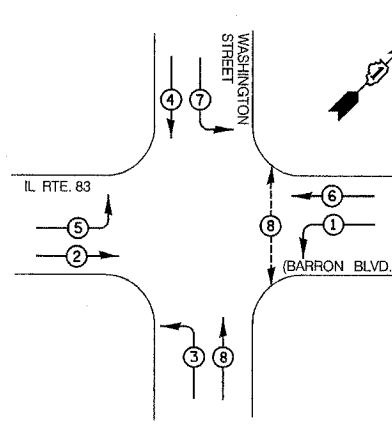
REVISIONS	
NAME	DATE

STON ENGINEERING
MEMBER SERVICE CORPORATION
 CIVIL ENGINEERS
 19 S. BOTHWELL STREET
 PALATINE, ILLINOIS 60067
 VOICE: 847-776-7200 FAX: 847-776-7239

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC SIGNAL MODIFICATION
 AND REMOVAL PLAN
 IL ROUTE 83 AT
 WASHINGTON STREET
 GRAYSLAKE, ILLINOIS

SCALE: 1"=20'
 DATE: 5-26-06
 DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

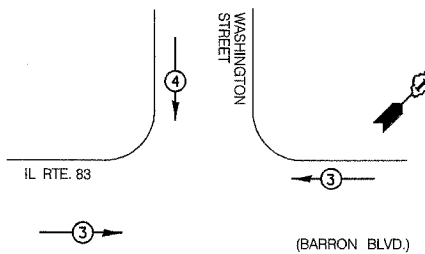
CONTROLLER SEQUENCE



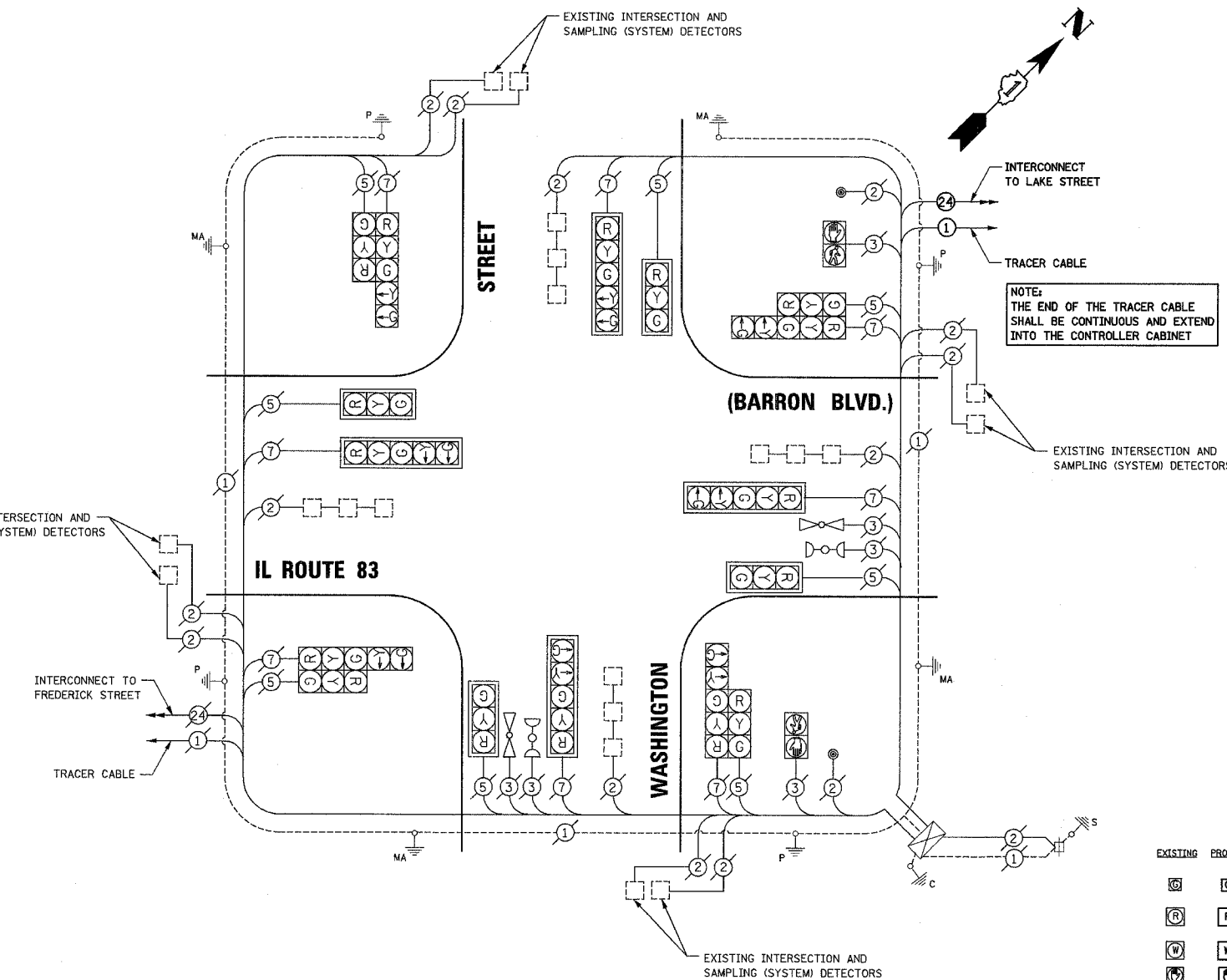
- LEGEND**
- ⊛ DUAL ENTRY PHASE
 - ⊠ SINGLE ENTRY PHASE
 - OL OVERLAP
 - ⊙ PEDESTRIAN PHASE
 - * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	→	↑	



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

CABLE PLAN LEGEND

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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	X % OPERATION	
SIGNAL (RED)	16	135	17	0.50	136.0
(YELLOW)	16	135	25	0.25	100.0
(GREEN)	16	135	15	0.25	60.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	2	90	25	1.00	50.0
CONTROLLER	1	100	100	1.00	100.0
TOTAL =					465.2

SCHEDULE OF QUANTITIES

ENGINEER'S FIELD OFFICE. TYPE A MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

ITEM	UNIT	QUANTITY
CAL MD	EACH	0.5
		1

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 - FOUNDATION	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20' + L - 2' = (6m+L-0.6m)=
C - M. ARM POLE		SIGNAL POST	2 (0.6)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	SERVICE TO GROUND	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	POST MOUNTED	6 (1.8)
		GROUND CABLE	1 (0.5)		

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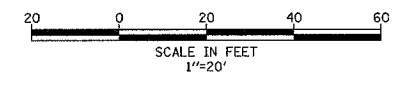
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 CABLE PLAN, PHASE DESIGNATION DIAGRAM,
 EMERGENCY VEHICLE PREEMPTION SEQUENCE
 AND SCHEDULE OF QUANTITIES
 IL ROUTE 83 AT
 WASHINGTON STREET
 GRAYSLAKE, ILLINOIS

SCALE: N.T.S.
 DATE: 5-26-06

DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	9
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60A46				



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.

- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 1 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 8 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 8 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 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 FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH CONTROLLER AND CABINET COMPLETE

CONSTRUCTION NOTES:

- 1 REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET, SPECIAL, 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 EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION. INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- 3 REMOVE EXISTING SIGNAL HEAD, 1-FACE, 5-SECTION. INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- 4 REMOVE EXISTING SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
- 5 REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 1-FACE. INSTALL NEW PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED.
- 6 REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 2-FACE. INSTALL NEW PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED.
- 7 THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

TRAFFIC SIGNAL LEGEND

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

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

SETON ENGINEERING
CONSULTING SERVICE CORPORATION
 CIVIL ENGINEERS
 19 S. BOWWELL STREET
 PALATINE, ILLINOIS 60067
 VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC SIGNAL MODIFICATION
 AND REMOVAL PLAN
 IL ROUTE 83 AT
 LAKE STREET
 GRAYSLAKE, ILLINOIS

SCALE: 1"=20"
 DATE: 5-26-06

DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	10
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60A46				

SCHEDULE OF QUANTITIES

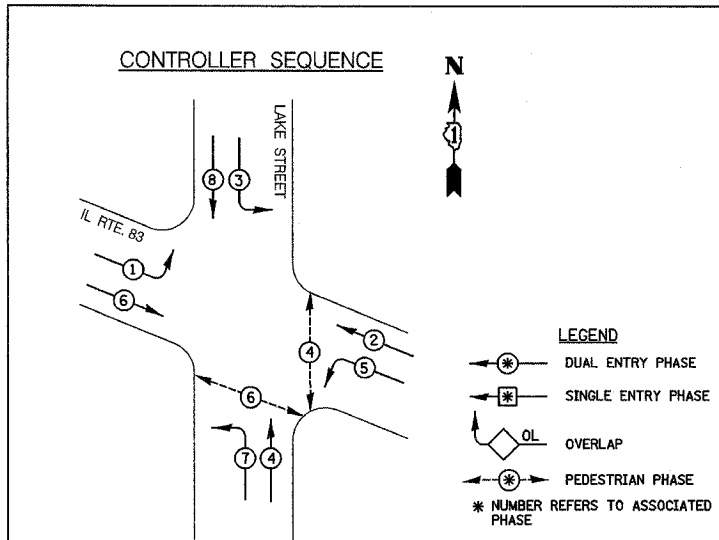
ITEM	UNIT	QUANTITY
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1
GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
TRANSCIEVER, FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	45
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	976
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	1
SERVICE INSTALLATION, POLE-MOUNTED	EACH	1

CONSTRUCTION NOTES:

- REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET, SPECIAL, 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 EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION. INSTALL NEW SIGNAL HEAD, L.E.D. 1-FACE, 3-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- REMOVE EXISTING SIGNAL HEAD, 1-FACE, 5-SECTION. INSTALL NEW SIGNAL HEAD, L.E.D. 1-FACE, 5-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- REMOVE EXISTING SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
- REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 1-FACE. INSTALL NEW PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED.
- REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 2-FACE. INSTALL NEW PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED.
- RE-USE EXISTING TRAFFIC SIGNAL CABLE.

CABLE PLAN LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED

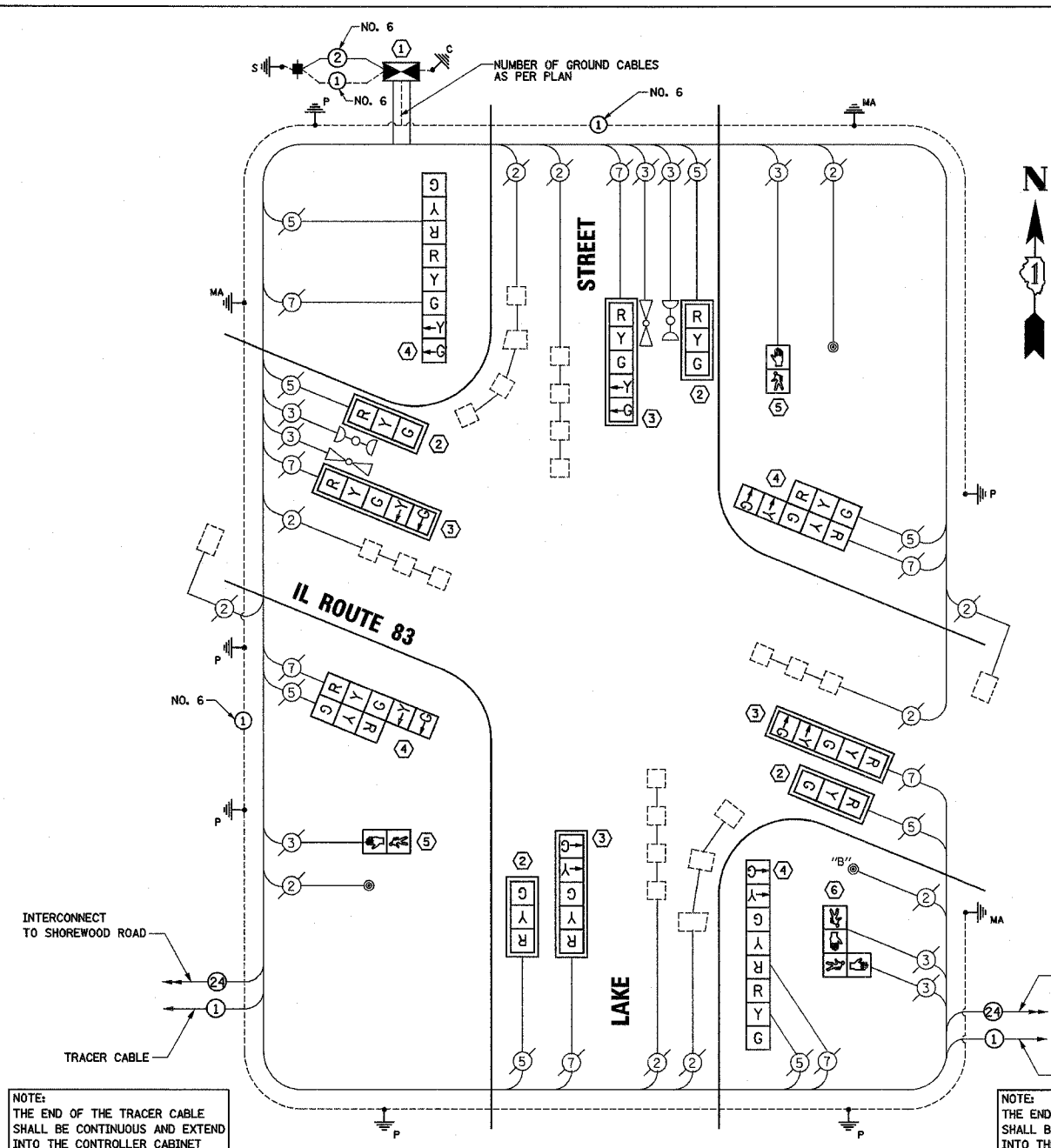


LEGEND

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



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT			



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

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

PUSH-BUTTON NOTES:
PUSH-BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	X% OPERATION	
SIGNAL (RED)	16	135	17	0.50	136.0
(YELLOW)	16	135	25	0.25	100.0
(GREEN)	16	135	15	0.25	60.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	100	100	1.00	100.0
TOTAL =					515.2

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 - FOUNDATION	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20' + L - 2 =
C - 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)

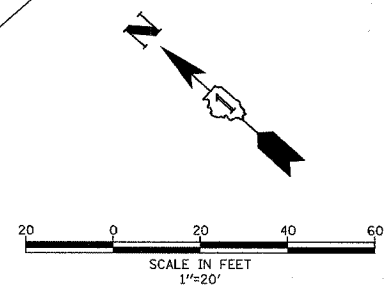
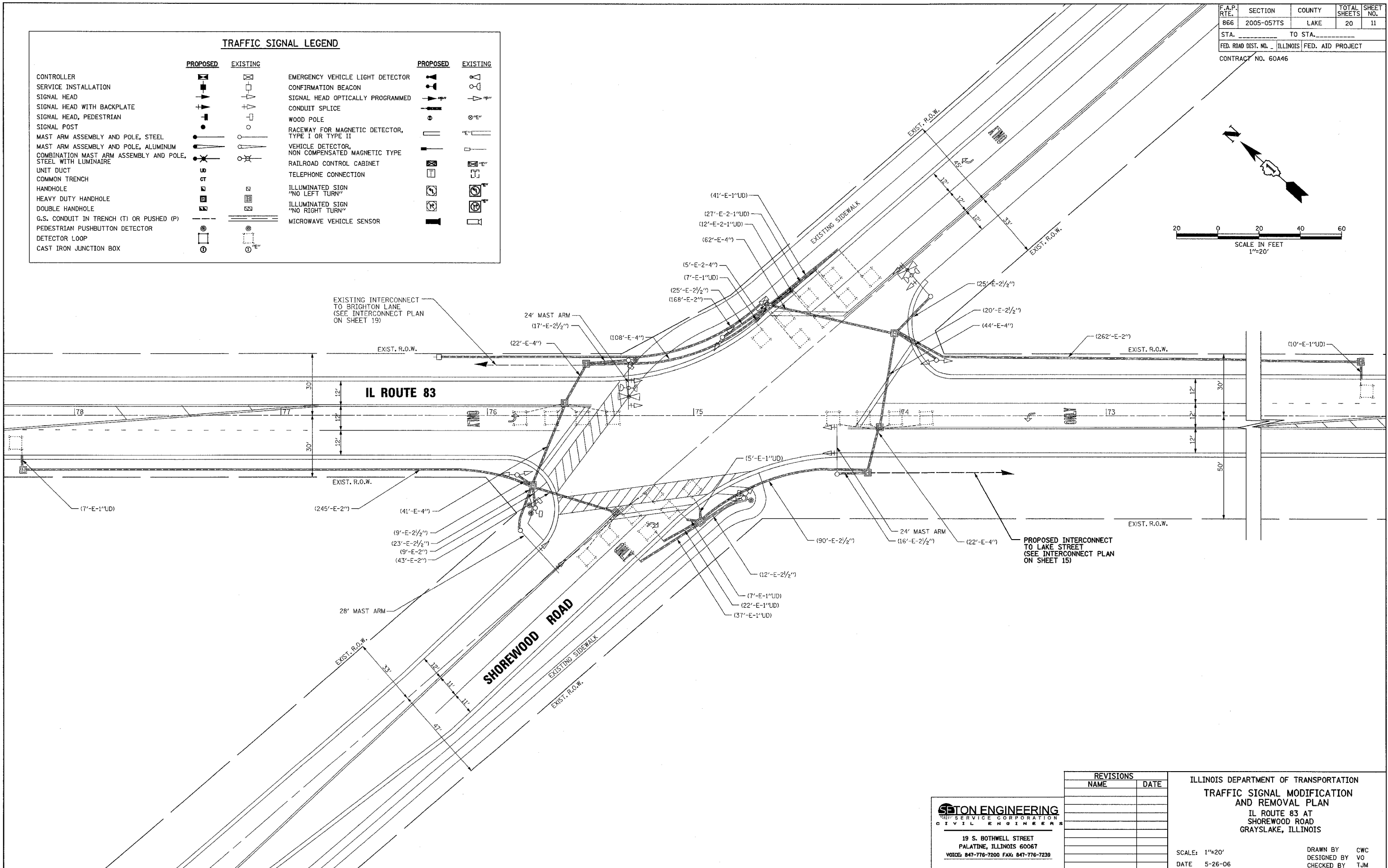
SETON ENGINEERING
SERVICE CORPORATION
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19 S. BOWELL STREET
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VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN, PHASE DESIGNATION DIAGRAM,
EMERGENCY VEHICLE PREEMPTION SEQUENCE
AND SCHEDULE OF QUANTITIES
IL ROUTE 83 AT
LAKE STREET
GRAYSLAKE, ILLINOIS
SCALE: N.T.S. DRAWN BY CWC
DATE 5-26-06 DESIGNED BY VO
CHECKED BY TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	11
STA.	TO STA.			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60A46				

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



SETON ENGINEERING
CONSULTING SERVICE CORPORATION
 CIVIL ENGINEERS
 19 S. BOTHWELL STREET
 PALATINE, ILLINOIS 60067
 VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

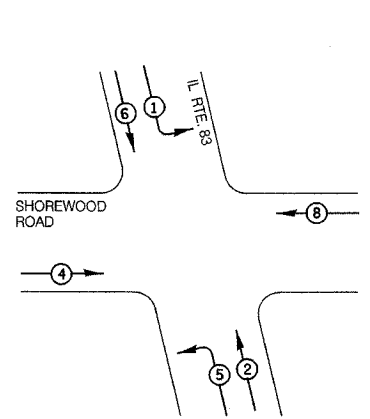
ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC SIGNAL MODIFICATION
 AND REMOVAL PLAN
 IL ROUTE 83 AT
 SHOREWOOD ROAD
 GRAYSLAKE, ILLINOIS

SCALE: 1"=20'
 DATE: 5-26-06

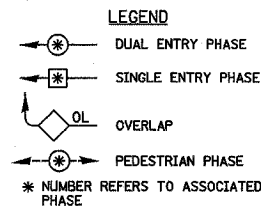
DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	12
STA.		TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60A46				

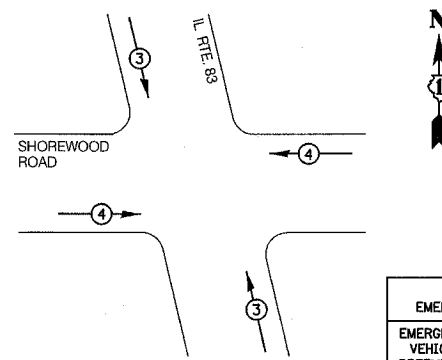
CONTROLLER SEQUENCE



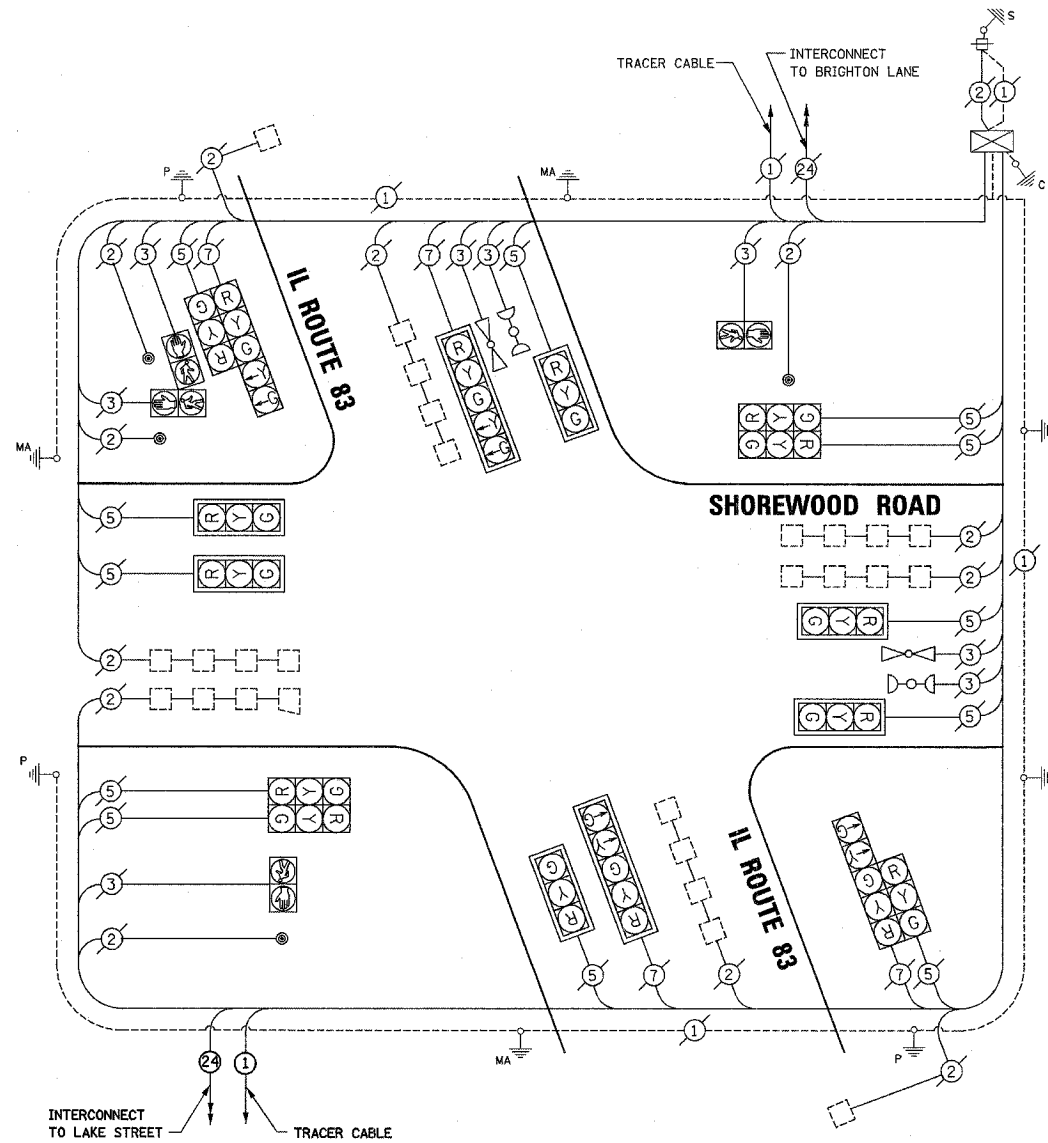
PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE



	EXISTING	EMERGENCY
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		



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

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	0.5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1

CABLE PLAN LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	X% OPERATION	
SIGNAL (RED)	16	135	17	0.50	136.0
(YELLOW)	16	135	25	0.25	100.0
(GREEN)	16	135	15	0.25	60.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100.0
TOTAL =					405.6

ENERGY COSTS - BILLED TO: ILLINOIS DEPT. OF TRANSPORTATION
 (ADDRESS) 201 WEST CENTER COURT
 SCHALMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY - CONTACT: JUDY SCHOMER
 PHONE: (847) 870-2063
 COMPANY: COM ED

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 - FOUNDATION	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20' + L - 2 = (6m+L-0.6m)=
C - M. ARM POLE	2 (0.6)	SIGNAL POST	1 (0.3)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.3)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.3)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.3)	POST MOUNTED	6 (1.8)

STON ENGINEERING
 TRIP SERVICE CORPORATION
 CIVIL ENGINEERS

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REVISIONS	
NAME	DATE

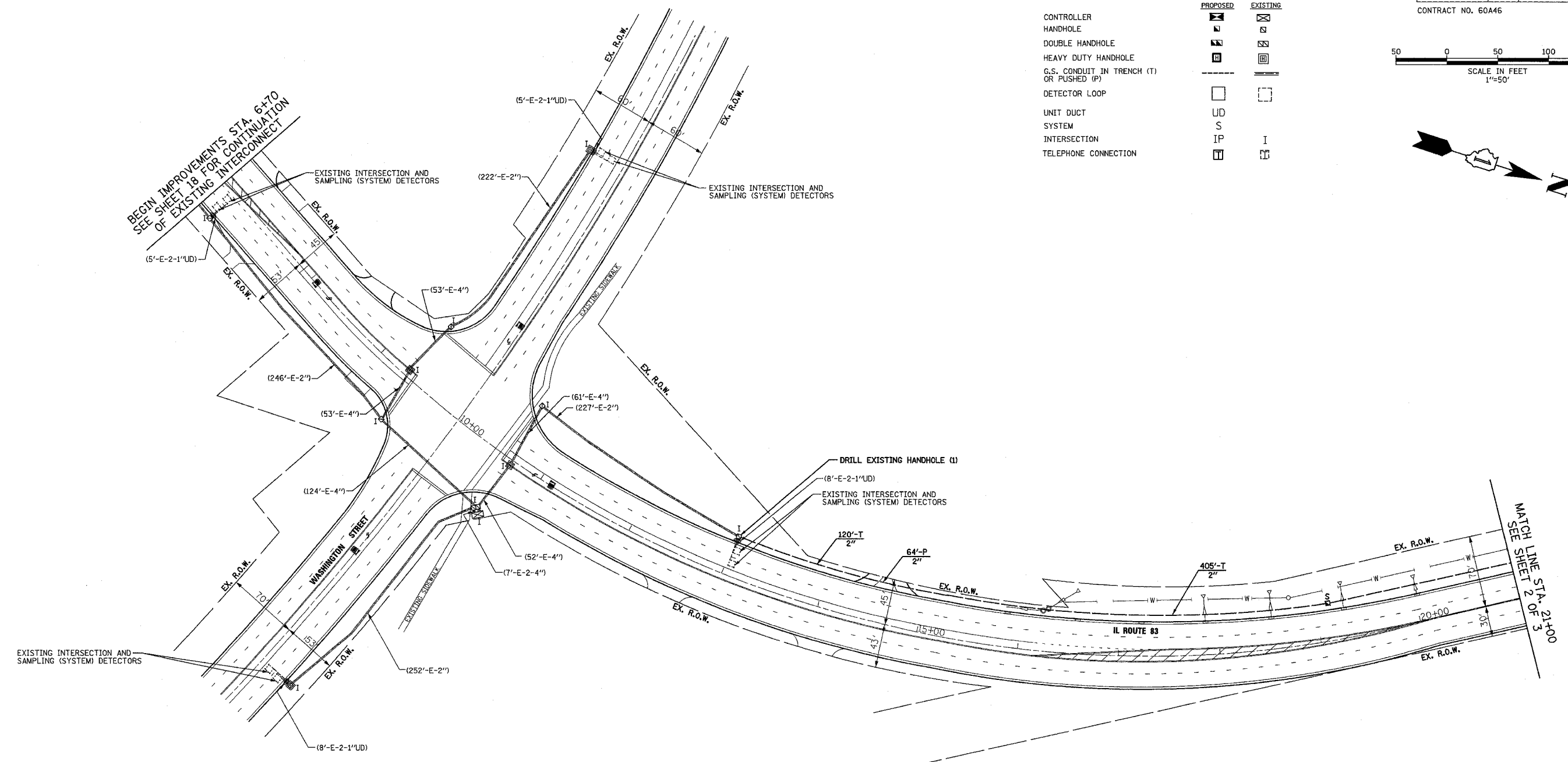
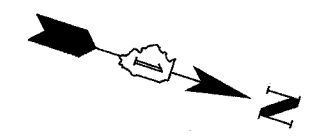
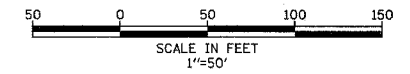
ILLINOIS DEPARTMENT OF TRANSPORTATION
 CABLE PLAN, PHASE DESIGNATION DIAGRAM,
 EMERGENCY VEHICLE PREEMPTION SEQUENCE
 AND SCHEDULE OF QUANTITIES
 IL ROUTE 83 AT
 SHOREWOOD ROAD
 GRAYSLAKE, ILLINOIS

SCALE: N.T.S. DRAWN BY: CWC
 DATE: 5-26-06 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60A46				

INTERCONNECT PLAN LEGEND

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



BEGIN IMPROVEMENTS STA. 6+70
SEE SHEET 18 FOR CONTINUATION
OF EXISTING INTERCONNECT

MATCH LINE STA. 21+00
SEE SHEET 2 OF 3

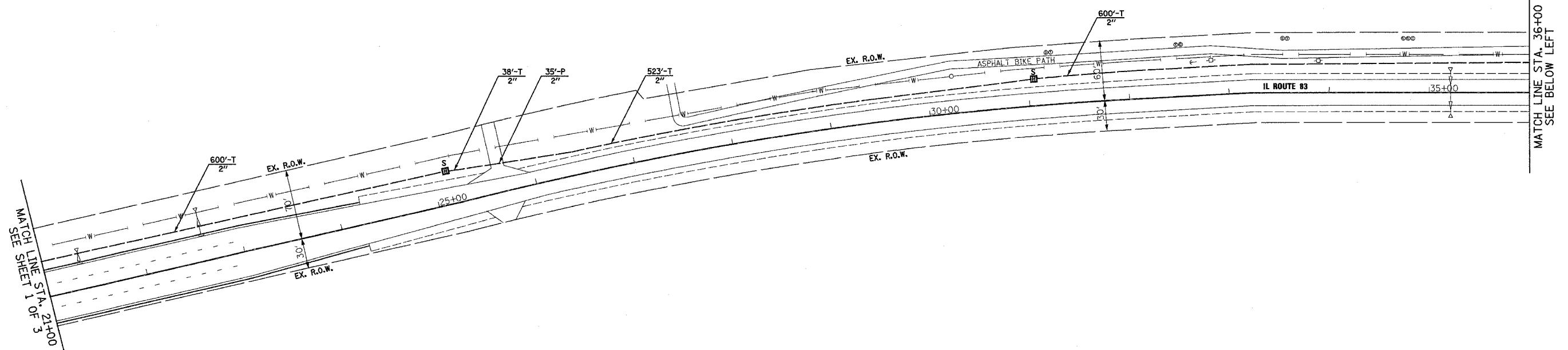
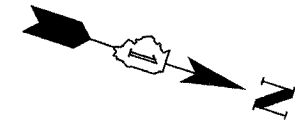
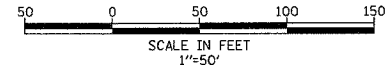
STON ENGINEERING
CONSULTING SERVICE CORPORATION
CIVIL ENGINEERS
19 S. BOTHWELL STREET
PALATINE, ILLINOIS 60067
VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

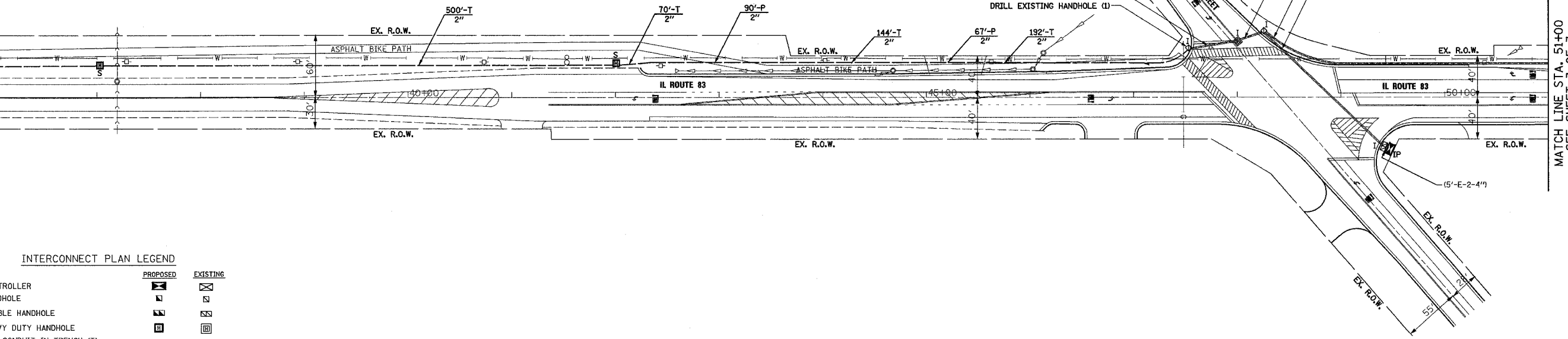
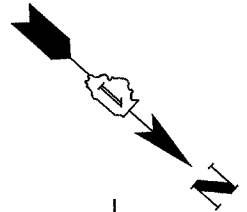
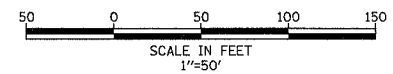
ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
IL ROUTE 83 FROM
WASHINGTON STREET TO
SHOREWOOD ROAD
GRAYSLAKE, IL
SHEET 1 OF 3

SCALE: 1"=50'
DATE: 5-26-06
DRAWN BY: CWC
DESIGNED BY: VO
CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 60A46				



MATCH LINE STA. 36+00
SEE ABOVE RIGHT



MATCH LINE STA. 51+00
SEE SHEET 3 OF 3

INTERCONNECT PLAN LEGEND

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

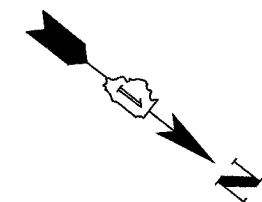
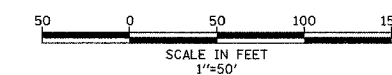
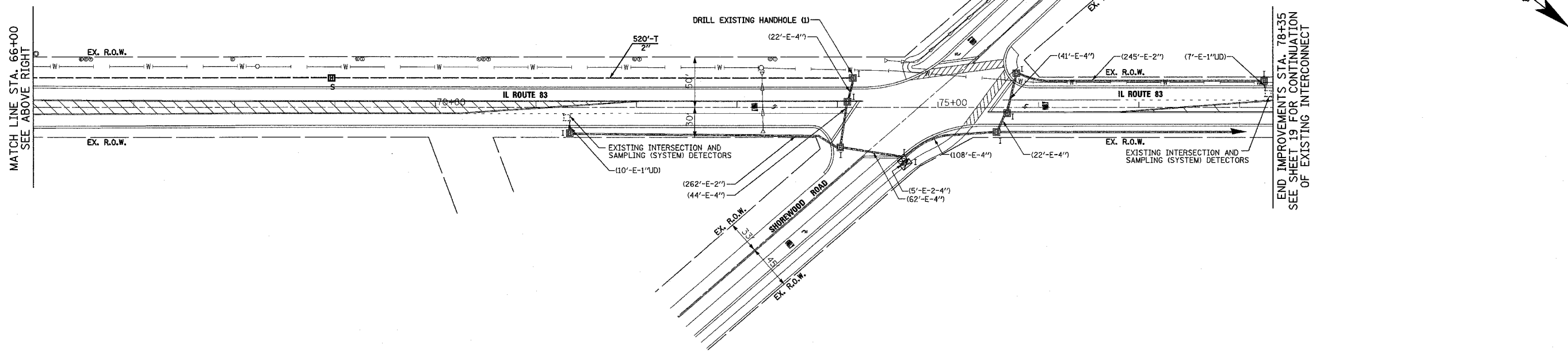
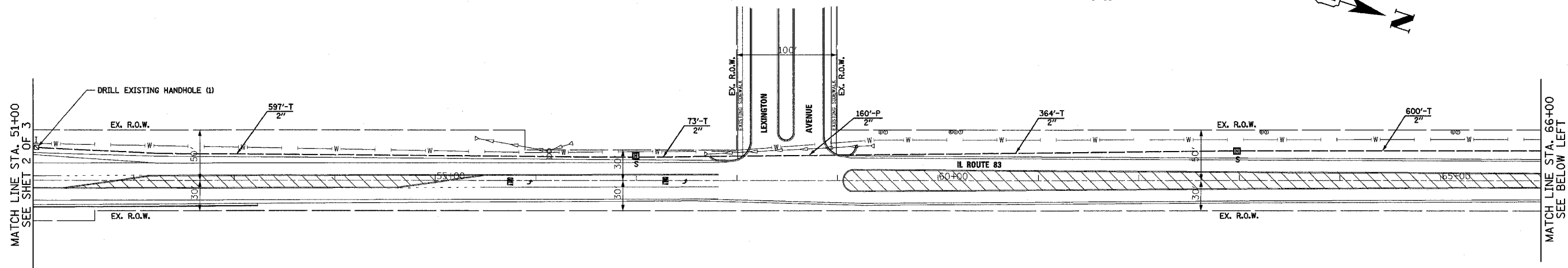
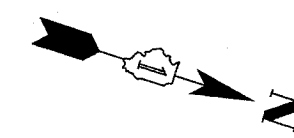
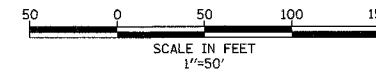
REVISIONS	
NAME	DATE

SEITON ENGINEERING
CONSULTING SERVICE CORPORATION
CIVIL ENGINEERS
19 S. BOTHWELL STREET
PALATINE, ILLINOIS 60067
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ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
IL ROUTE 83 FROM
WASHINGTON STREET TO
SHOREWOOD ROAD
GRAYSLAKE, IL
SHEET 2 OF 3

SCALE: 1"=50'
DATE: 5-26-06
DRAWN BY: CWC
DESIGNED BY: VO
CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				



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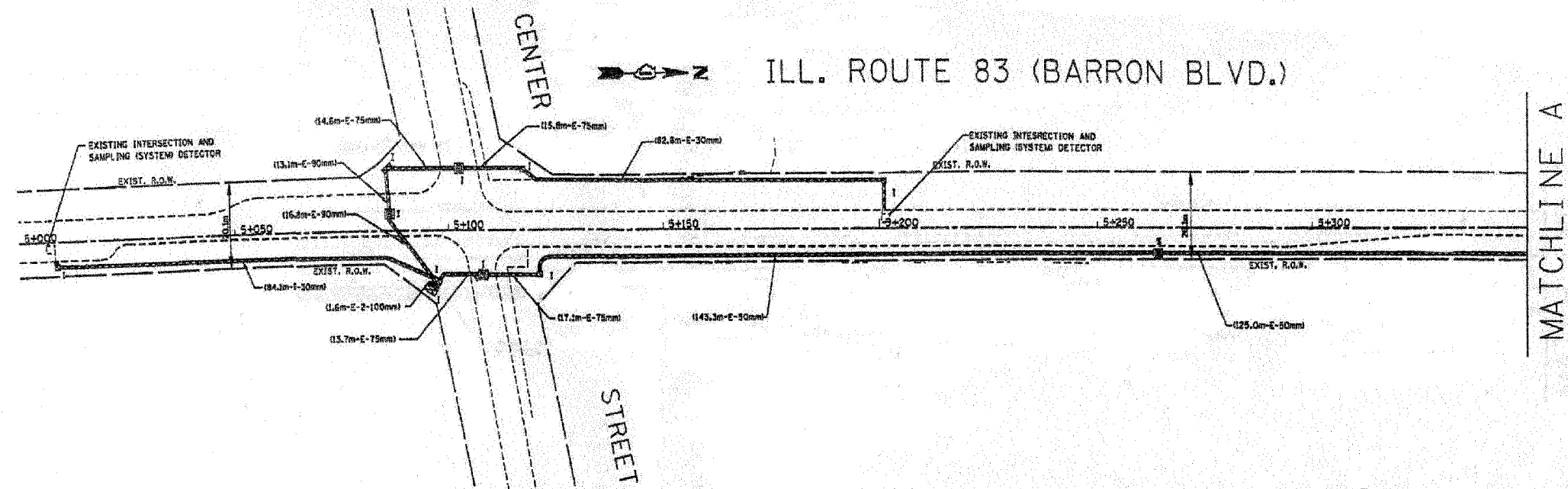
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
 IL ROUTE 83 FROM
 WASHINGTON STREET TO
 SHOREWOOD ROAD
 GRAYSLAKE, IL
 SHEET 3 OF 3

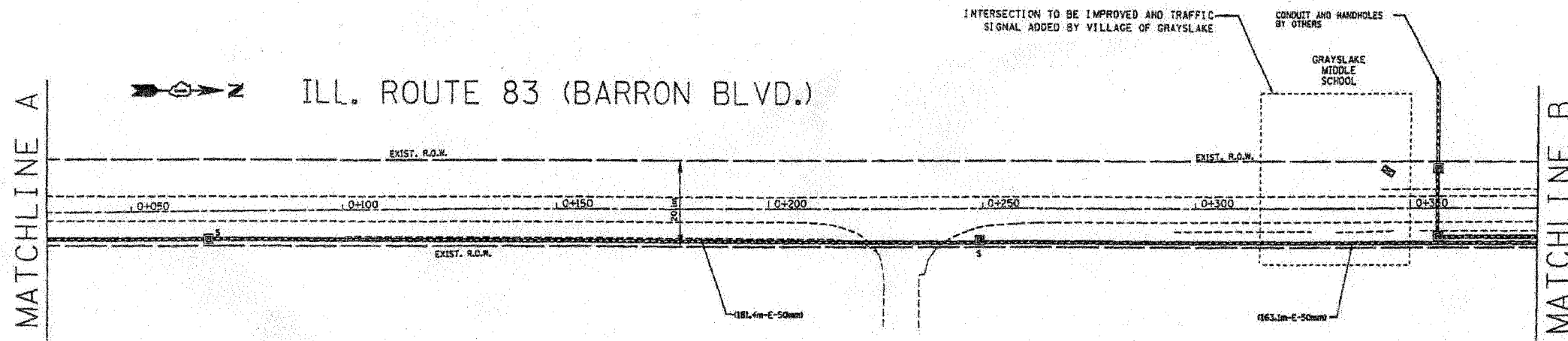
SCALE: 1"=50'
 DATE: 5-26-06

DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	16
STA. _____ TO STA. _____		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				



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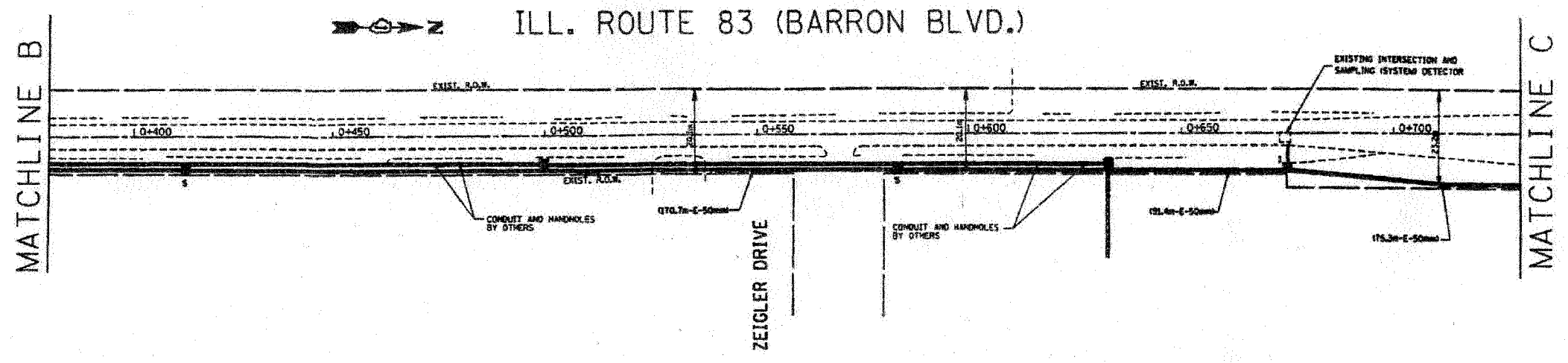
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 19 S. BOTHWELL STREET
 PALATINE, ILLINOIS 60067
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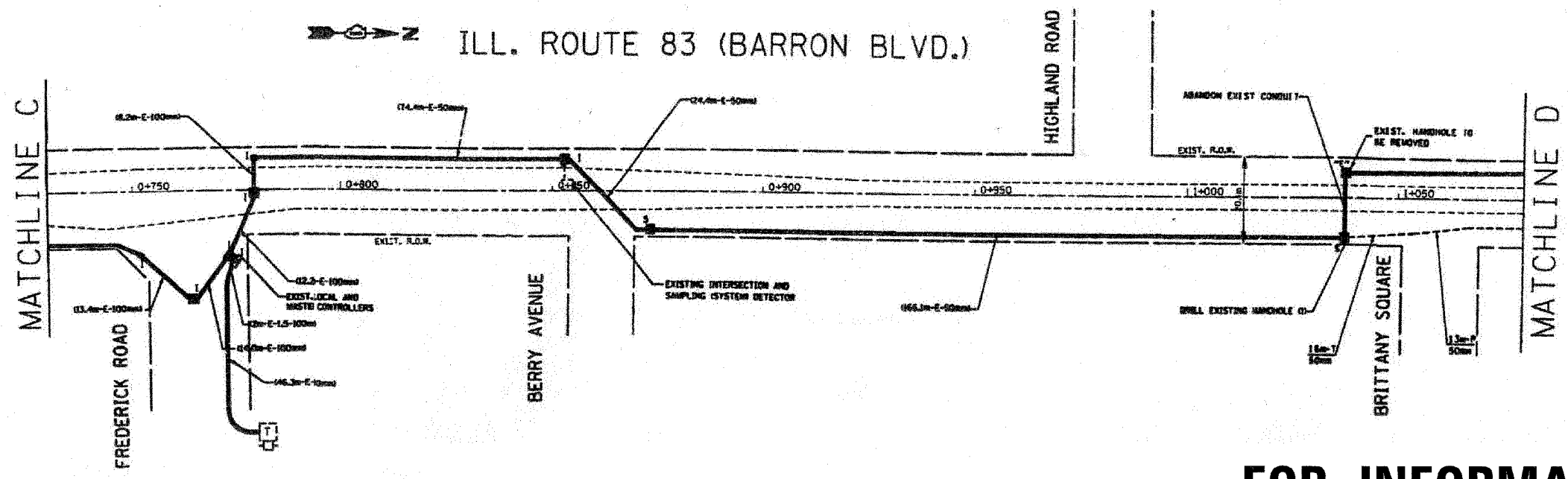
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EXISTING INTERCONNECT PLAN
 IL ROUTE 83 FROM
 CENTER STREET TO
 WASHINGTON STREET
 GRAYS LAKE, IL
 SHEET 1 OF 3
 (FOR INFORMATION ONLY)
 SCALE: N.T.S.
 DATE: 5-26-06
 DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	17
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 60A46				



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 PALATINE, ILLINOIS 60067
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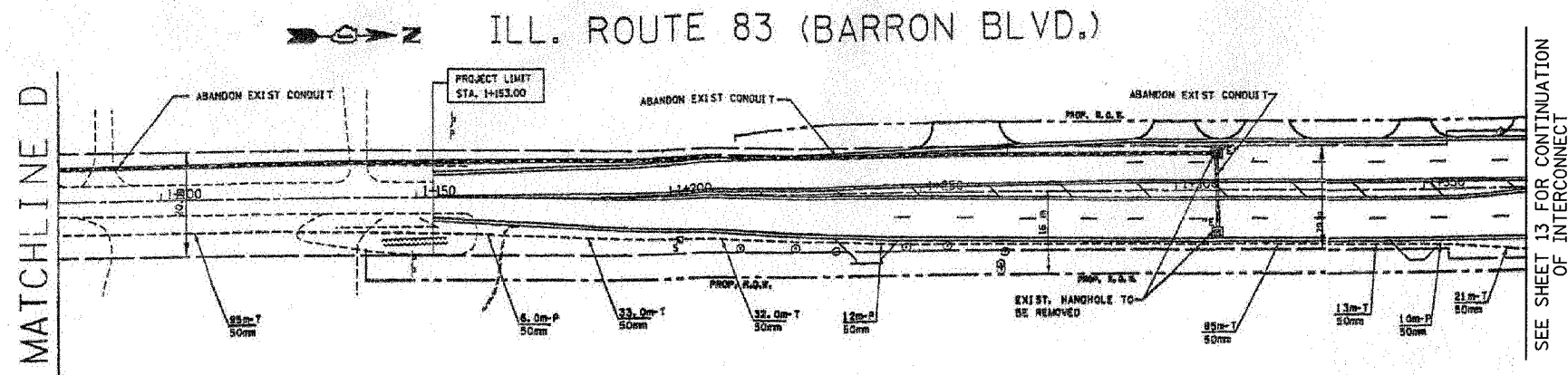
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EXISTING INTERCONNECT PLAN
 IL ROUTE 83 FROM
 CENTER STREET TO
 WASHINGTON STREET
 GRAYSLAKE, IL
 SHEET 2 OF 3
 (FOR INFORMATION ONLY)

SCALE: N.T.S.
 DATE: 5-26-06

DRAWN BY: CWC
 DESIGNED BY: VO
 CHECKED BY: TJM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60A46				



FOR INFORMATION ONLY

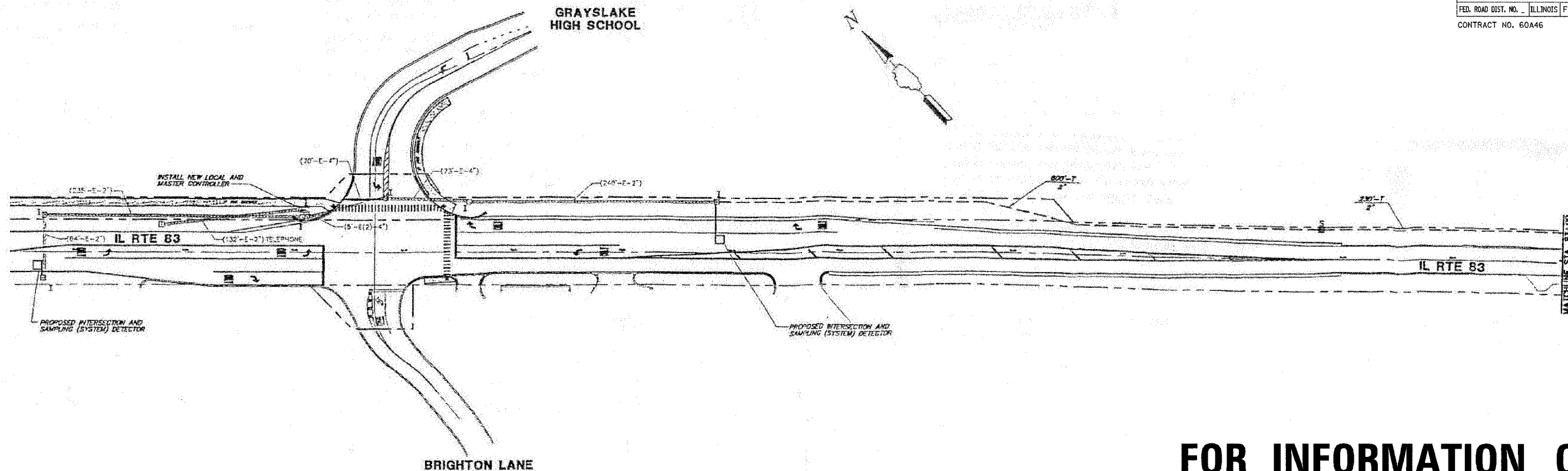
SETON ENGINEERING
CONSULTING SERVICE CORPORATION
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 19 S. BOTHWELL STREET
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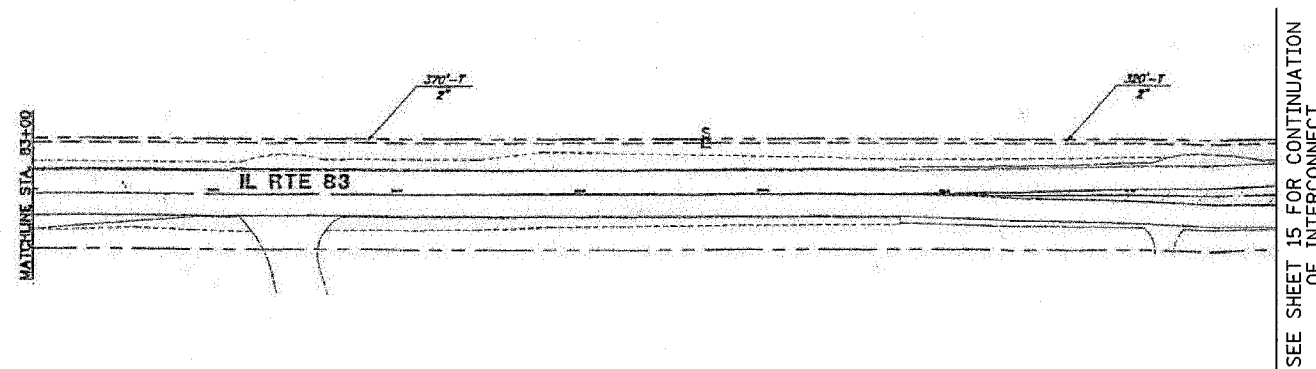
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EXISTING INTERCONNECT PLAN
 IL ROUTE 83 FROM
 CENTER STREET TO
 WASHINGTON STREET
 GRAYSLAKE, IL
 SHEET 3 OF 3
 (FOR INFORMATION ONLY)

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	19
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60A46				



FOR INFORMATION ONLY



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STON ENGINEERING
CONSULTING SERVICE CORPORATION
 CIVIL ENGINEERS

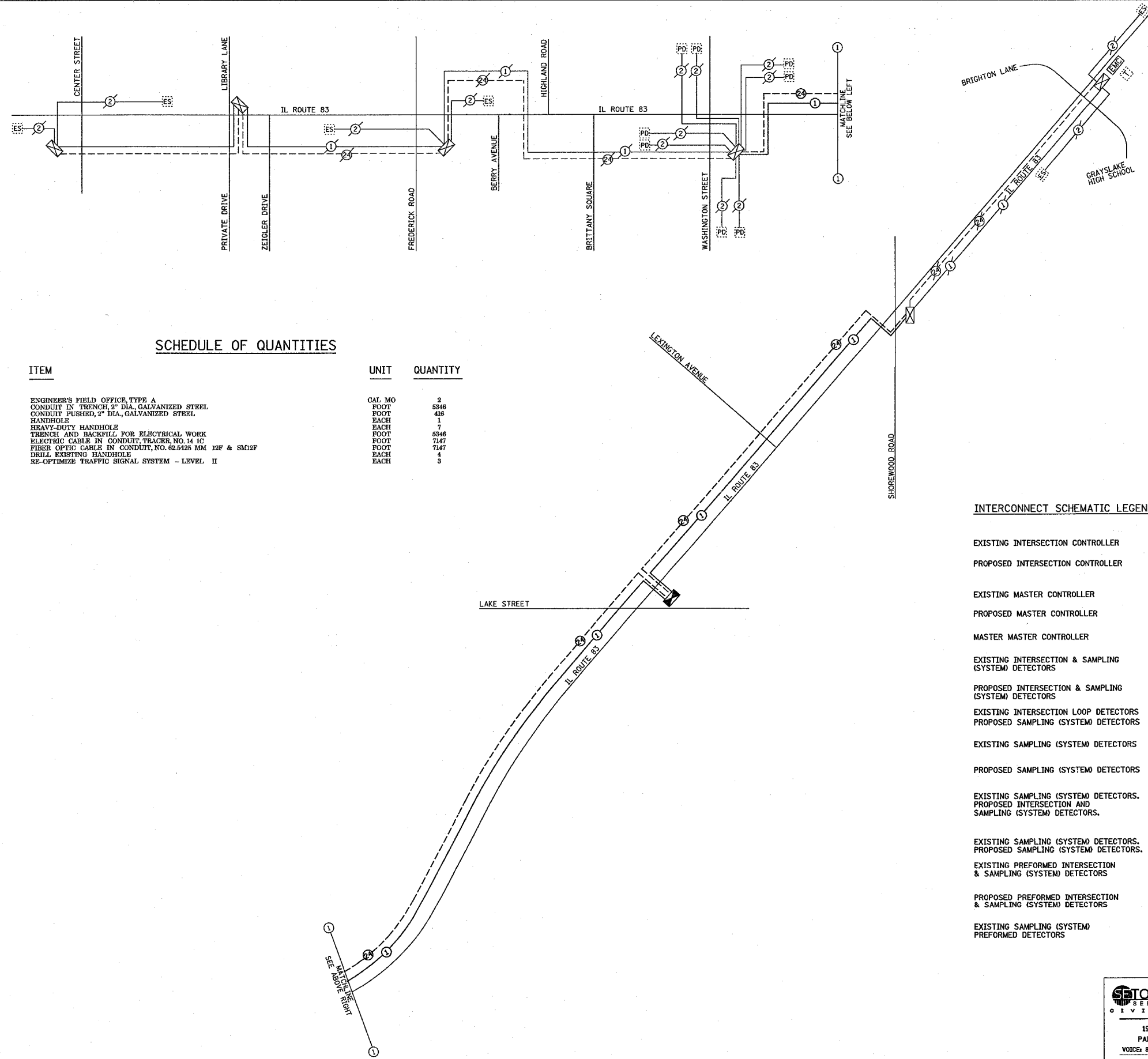
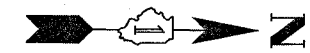
19 S. BOTHWELL STREET
 PALATINE, ILLINOIS 60067
 VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EXISTING INTERCONNECT PLAN
 IL ROUTE 83 FROM
 SHOREWOOD ROAD TO
 BRIGHTON LANE
 GRAYSLAKE, IL
 SHEET 1 OF 1
 (FOR INFORMATION ONLY)

SCALE: N.T.S. DRAWN BY: CWC
 DATE: 5-26-06 DESIGNED BY: VO
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
866	2005-057TS	LAKE	20	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 60A46				



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
CONDUIT IN TRENCH, 2" DIA, GALVANIZED STEEL	FOOT	5846
CONDUIT PUSHED, 2" DIA, GALVANIZED STEEL	FOOT	418
HANDHOLE	EACH	1
HEAVY-DUTY HANDHOLE	EACH	7
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	5846
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	7147
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM 12F & SM12F	FOOT	7147
DRILL EXISTING HANDHOLE	EACH	4
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	3

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

1 EACH MASTER CONTROLLER

INTERCONNECT SCHEMATIC LEGEND

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

REVISIONS	
NAME	DATE

SETON ENGINEERING
SERVICE CORPORATION
CIVIL ENGINEERS
19 S. BOTHWELL STREET
PALATINE, ILLINOIS 60067
VOICE: 847-776-7200 FAX: 847-776-7239

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT SCHEMATIC
IL ROUTE 83 FROM
CENTER STREET TO
BRIGHTON LANE
GRAYSLAKE, IL
SCALE: N.T.S.
DATE 5-26-06
DRAWN BY CWC
DESIGNED BY VO
CHECKED BY TJM