STATE OF ILLINOIS

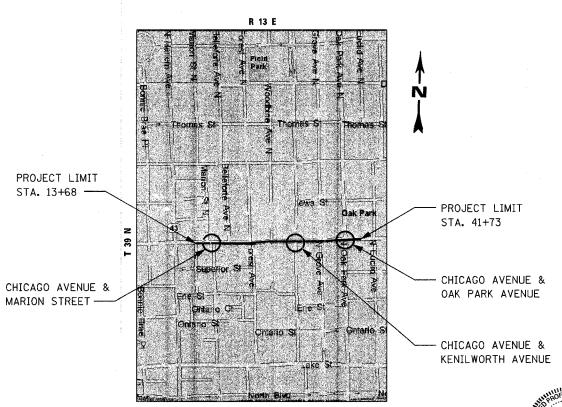
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU ROUTE 1398 (CHICAGO AVENUE) FROM MARION STREET TO OAK PARK AVENUE CMAQ TRAFFIC SIGNAL INTERCONNECTION PLAN SECTION 06-00241-00-TL PROJECT NO. CMM-8003 (624) JOB NO.: C-91-304-06

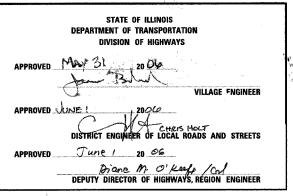
> **COOK COUNTY VILLAGE OF OAK PARK**



GROSS PROJECT LENGTH: 2,805 FEET = 0.53 MILES NET PROJECT LENGTH: 2,805 FEET = 0.53 MILES

SECTION 1398 06-00241-00-TL COOK





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



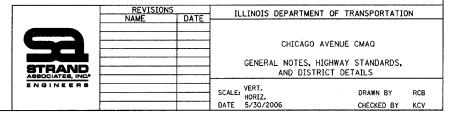
ASSOCIATES, INC. 1170 SOUTH HOUBOLT ROAD

CONTRACT NO. 83860

GENERAL NOTES

- 1. THE LOCATIONS OF THE VARIOUS UNDERGROUND UTILITIES
 AS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL
 USE SPECIAL CARE WHEN CONDUCTING CONSTRUCTION OPERATIONS NEAR
 THEM TO PREVENT DAMAGE.
- 2. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AND THE VILLAGE OF OAK PARK PUBLIC WORKS (708-358-5700) FOR FIELD LOCATIONS OF VARIOUS UTILITIES.
- THE CONTRACTOR SHALL COORDINATE VARIOUS CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- 4. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKER MONUMENTS UNTIL THE OWNER, AN AUTHORIZED AGENT, OR LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUB-SECTION MONUMENTS DISRUPTED BY HIS/HER OPERATIONS.
- BARRICADES: ALL UNBALLASTED TYPE I AND TYPE II BARRICADES SHALL HAVE TWO (2) SANDBAGS ON THE BOTTOM RAIL. A TYPE III BARRICADE SHALL REQUIRE A MINIMUM OF FOUR (4) SANDBAGS.
- 6. THE CONTRACTOR SHALL ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED AT ALL TIMES DURING AND AFTER REPLACEMENT OF COMBINATION CONCRETE CURB AND GUTTER. THE CONTRACTOR SHALL DETERMINE THE PROPOSED GRADE OF THE GUTTER LINE TO ENSURE POSITIVE DRAINAGE.
- 7. TEN FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS TO EXISTING CURBS AND GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCIDENTAL TO THE CONTRACT
- 8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF EXISTING PLANT MATERIAL FOR WHICH THE CONTRACT DOES NOT PROVIDE REMOVAL. THE PROTECTION OF EXISTING PLANT MATERIAL AND THE REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL DAMAGED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 201 OF THE STANDARD SPECIFICATIONS.
- 9. CONTRACTOR SHALL TAKE CARE TO PROTECT EXISTING LANDSCAPING AT LOCATIONS NOT SHOWN IN THE PLANS TO BE REMOVED AND AS DIRECTED BY THE ENGINEER. LANDSCAPING TO BE PROTECTED THAT IS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN KIND AT HIS/HER EXPENSE.
- 10. ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND THE VILLAGE OF OAK PARK.
- 11. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS AT ALL TIMES TO ALL PRIVATE AND COMMERCIAL PROPERTIES DURING THE CONSTRUCTION OF THIS PROJECT.
- 12. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PARKING METERS ALONG THE PROJECT CORRIDOR. IF THE PARKING METERS ARE FOUND TO INTERFERE WITH CONSTRUCTION ACITIVITY, THEY SHALL BE CAREFULLY REMOVED FROM THEIR METAL SUPPORT POST, STORED, AND IMMEDIATELY REINSTALLED WHEN THE HAZARD NO LONGER EXISTS, OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE CAREFUL NOT TO DAMAGE THE SUPPORT OR FOUNDATION WHEN REMOVING THE ADJACENT SIDEWALK. ANY DAMAGE TO OR LOSS OF ANY COMPONENT SHALL BE REPLACED OR REPAIRED AT NO EXTRA COST.
- 13. THE VILLAGE OF OAK PARK WATER DEPARTMENT (708-445-3340 EXT. 3375) SHALL BE RESPONSIBLE FOR TURNING THE WATER MAIN VALVES ON AND OFF. THE CONTRACTOR IS NOT ALLOWED TO TURN THE VILLAGE OF OAK PARK OWNED WATER MAIN VALVES ON AND OFF. THE CONTRACTOR SHALL CONTACT THE VILLAGE OF OAK PARK FOR A WATER METER IF NECESSARY.
- 14. A CONTRACT ITEM HAS BEEN INCLUDED FOR REOPTIMIZATION OF THE EXISTING TRAFFIC SIGNAL SYSTEM. THE ACTUAL NEED FOR THE LINE ITEM WILL BE DETERMINED AT THE TIME OF CONSTRUCTION BY THE ENGINEER.

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	HIGHWAY	STANDARDS					1398	06-00241-00	-TL	соок	23	2
	000001-04	STANDARD SYMBOLS, ABE	BREVIATIONS, AND PATTERNS				STA.	AR DIOT NO		STA.	DDO IFOT	
	424001-04	SIDEWALK RAMPS ACCESS	SIBLE TO THE DISABLED				lana marana	90 45 61	LLINUIS	FED. AID	PROJECT	Milestonia strata d'Al-
	442201-Ò1	CLASS C AND D PATCHES	\$		•		83	860				
Z.	606001-02	CONCRETE CURB TYPE B CONCRETE CURB AND GU										
	701301-02	LANE CLOSURE 2L, 2W S	W SHORT TIME OPERATIONS <u>DISTRICT STANDARDS</u>									
	701601-04	URBAN LANE CLOSURE M NON-TRANSVERSABLE MEI	ULTILANE 1W OR 2W WITH DIAN		BD-24	CURB OR CURB REPLACEMENT	AND G	UTTER REM	4OVAL	. AND		
	701606-04	URBAN LANE CLOSURE M MEDIAN	ULTILANE 2W WITH MOUNTABLE		TC-10	TRAFFIC CONTRO				FOR SIDE	ROADS,	
	701701-04	URBAN LANE CLOSURE M	ULTILANE INTERSECTION		TC-14 TRAFFIC CONTR			D PROTECT	ION A	AT TURN	BAYS	
	701801-03		RE MULTILANE 1W OR 2W CROSSWALK OR			(TO REMAIN OPEN TO TRAFFIC)						
		SIDEWALK CLOSURE			TC-22	TEMPORARY INFO	DRMAT	ION SIGNIN	1G			
	702001-06	TRAFFIC CONTROL DEVIC	ES		TS-05	DISTRICT ONE S	STANDARD TRAFFIC SI		IGNAL DESIGN	IGN		
	814001	CONCRETE HANDHOLES				DETAIL (4 SHEETS)						
	857001	STANDARD PHASE DESIGN	NATION DIAGRAMS AND PHASE S	EQUENCES								
	886001	DETECTOR LOOP INSTALL	ATION									
	886006	TYPICAL LAYOUTS FOR E	DETECTION LOOPS			`						

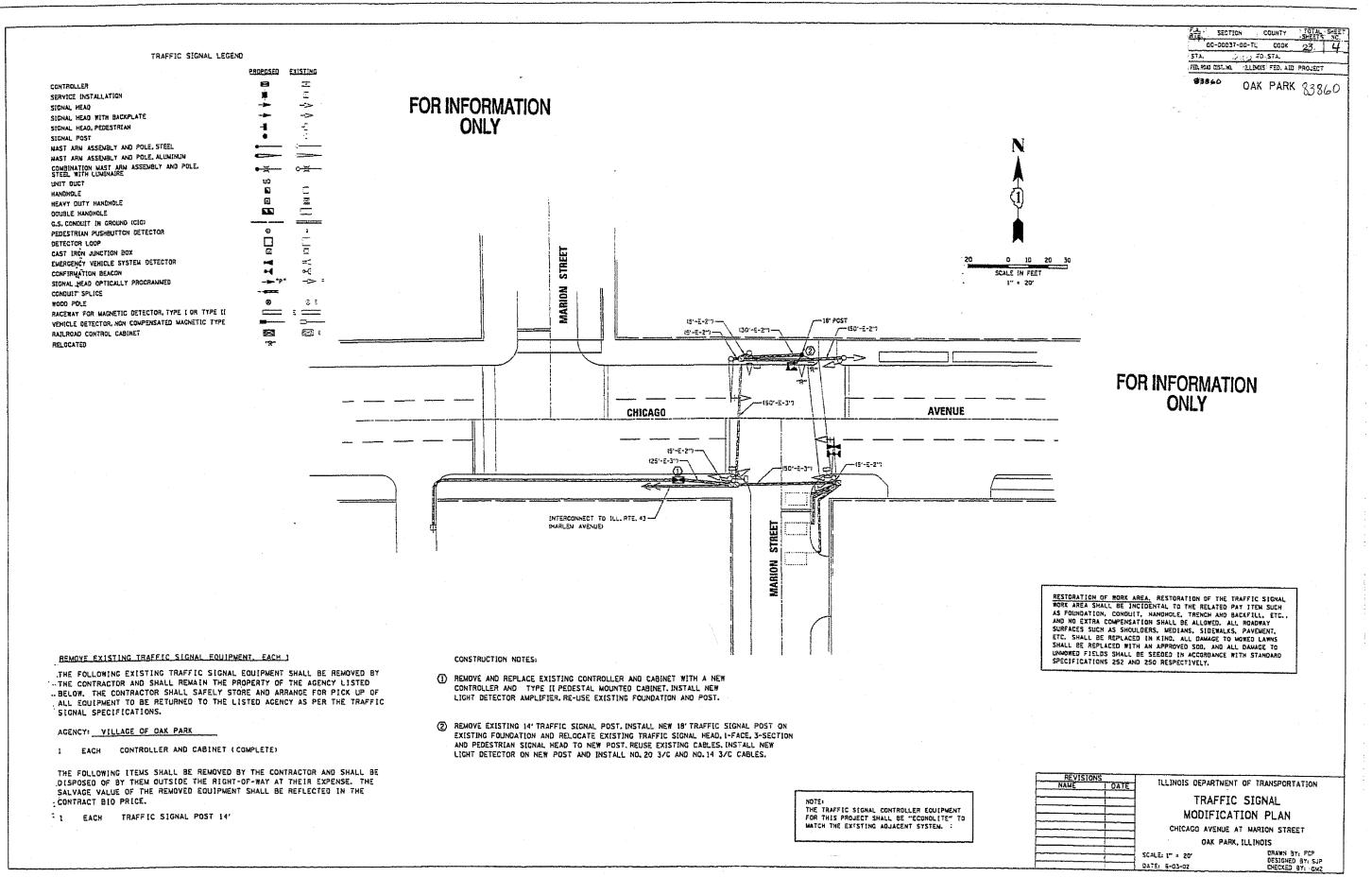


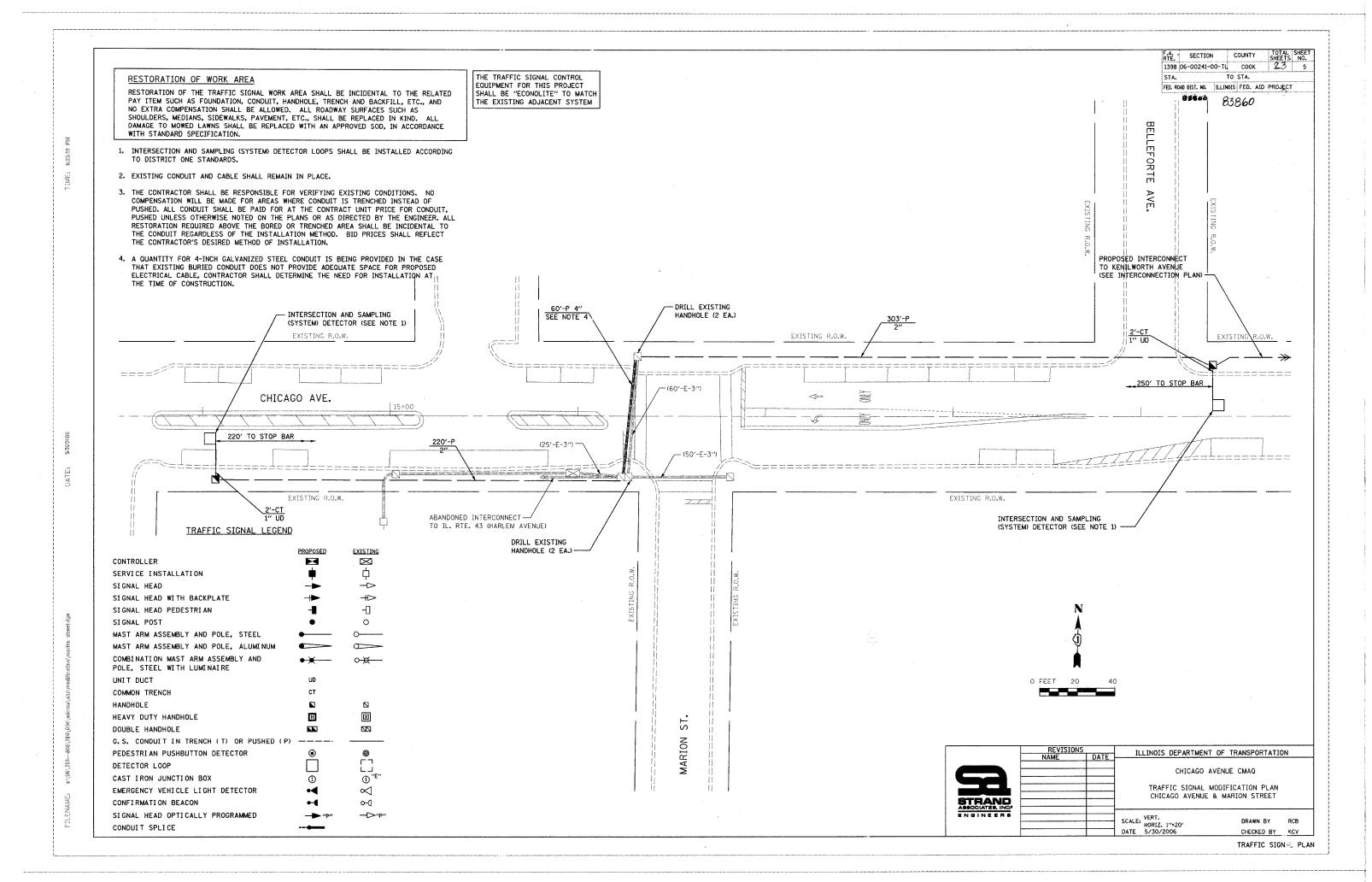
SUMMARY OF QUANTITIES

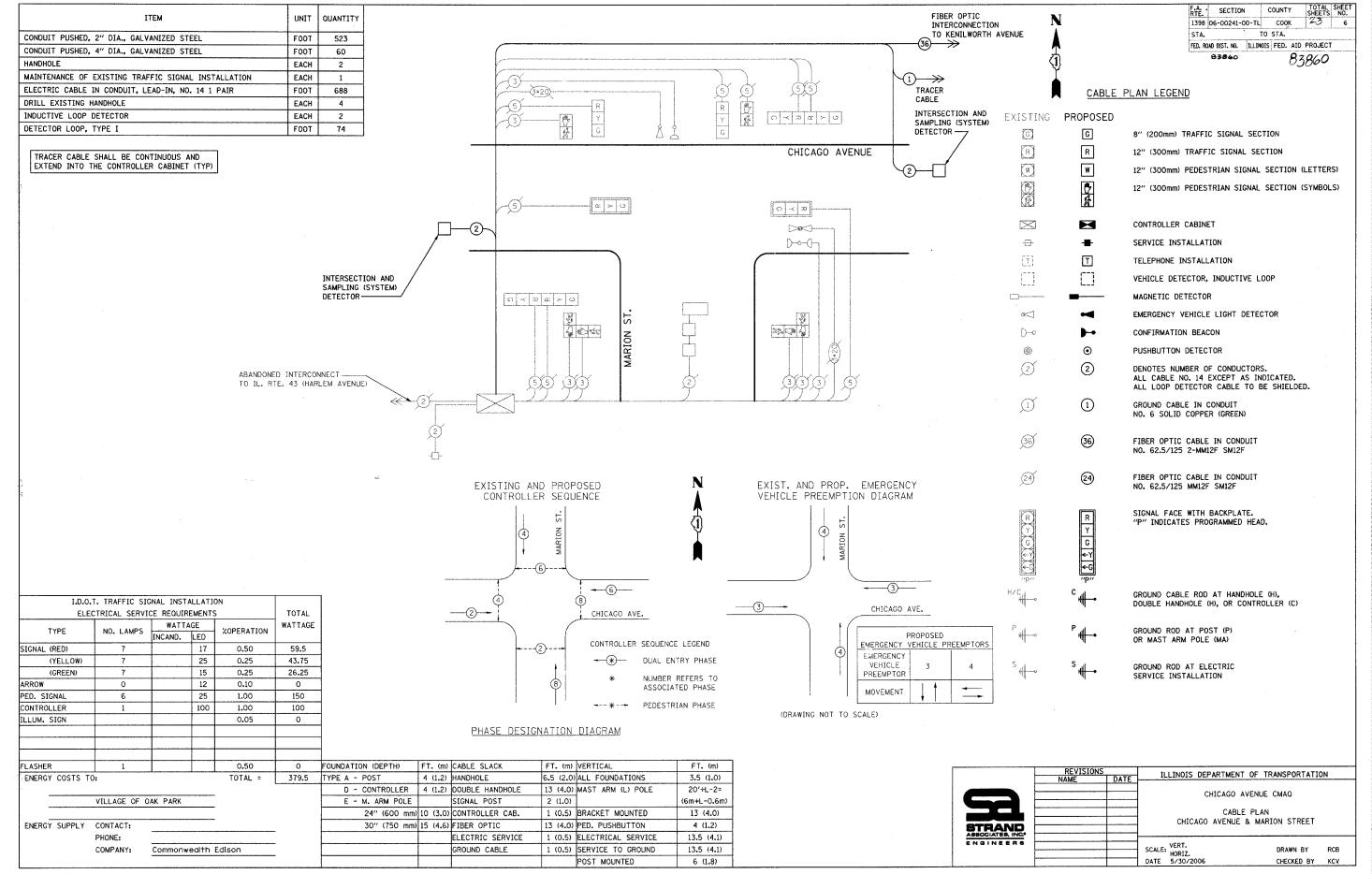
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SP .	CODE NO.	SUMMARY OF QUANTITIES ITEM	TUNIT	TOTAL	SEQ. 01 MARION ST.	KENILWORTĤ AVE.	OAK PARK	INTERCONNECT
31		MOBILIZATION	L. SUM	1		AVE	AVE.	1
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*	70102625	TRAFFIC CONTROL AND PROTECTION STANDARD 701606	L. SUM	1	0.3	0.3	0.3	0,1
*	70102630	TRAFFIC CONTROL AND PROTECTION STANDARD 701601	L. SUM	1	0.3	0.3	0.3	0.1
*	70102635	TRAFFIC CONTROL AND PROTECTION STANDARD 701701	L. SUM	1	0.3	0.3	0.3	0.1
*	70102640	TRAFFIC CONTROL AND PROTECTION STANDARD 701801	L. SUM	1	0.3	0.3	0.3	0.1
	81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FT	3,044	523	495	501	1525
	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FT	60	60			
	81400100	HANDHOLE	EACH	7	2	2	2	1
	85000200 MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION 85700500 FULL-ACTUATED CONTROLLER IN EXISTING CABINET		EACH	3	1	1	1	
			EACH	1		1		
	86400100	TRANSCEIVER - FIBER OPTIC	EACH	2	***************************************			2
	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR		2,129	688	684	757	
	87900200	DRILL EXISTING HANDHOLE	EACH	10	4	3	3	·
	88500100	INDUCTIVE LOOP DETECTOR	EACH	6	2	2	2	
	88600100	DETECTOR LOOP, TYPE I	FT	217	74	71	72	
	88800100	PEDESTRIAN PUSH-BUTTON	EACH	1		1		
	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1		
	X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO 14/1C	FOOT	2,364				2364
*	XX002056	REOPTIMIZE EXISTING SIGNAL SYSTEM	EACH	1				1
	XX003660	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM24F SM 12F	FT	2,364				2364
	XX006614	MODIFY EXISTING CABINET EQUIPMENT AND APPURTENANCES	EACH	4				4

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	REVISIONS NAME	DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION		
			CHICAGO AVENUE CMAQ		
STRAND ASSOCIATES, INC.	· · · · · · · · · · · · · · · · · · ·		SUMMARY OF QUANTITIES		
ENGINEERS			SCALE: VERT. NONE DRAWN BY RCB HORIZ. DATE 5/30/2006 CHECKED BY KCV		

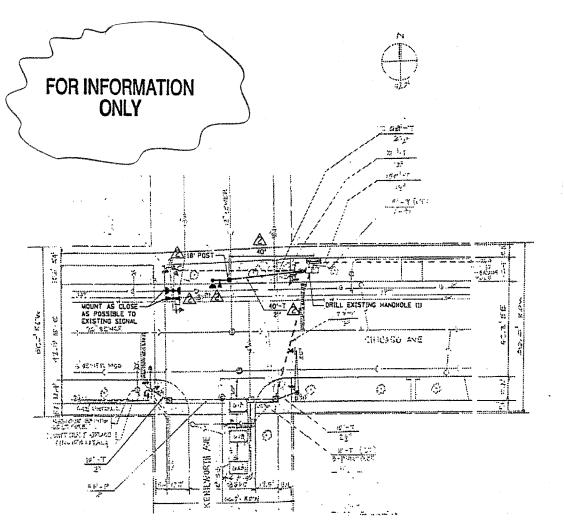






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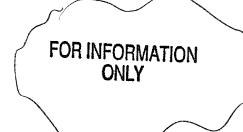
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SIGNAL PLAN

SIGNAL PLAN LEGEND

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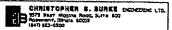


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RESTORATION OF MORK AREA, RESTORATION OF THE TRAFFIC SIGNAL MORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, COMDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NG EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEMARKS, PAYEMENT, ETC. SHALL BE REPLACED IN KIND, ALL DAMAGE TO MOMED LAWNS SHALL BE REPLACED WITH AN APPROVED SOO, AND ALL DAMAGE TO UNMOMED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

A INSTALLATION OF EMERGENCY VEHICLE PREEMPTION 6-03-02

OAK PARK-SHEET 230 OF 365



Revisions

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TRAFFIC SIGNAL INSTALLATION CHICAGO AY, & KENILWOOTH AV.

Chart 18 Sain Spain Shop: 7 of 5

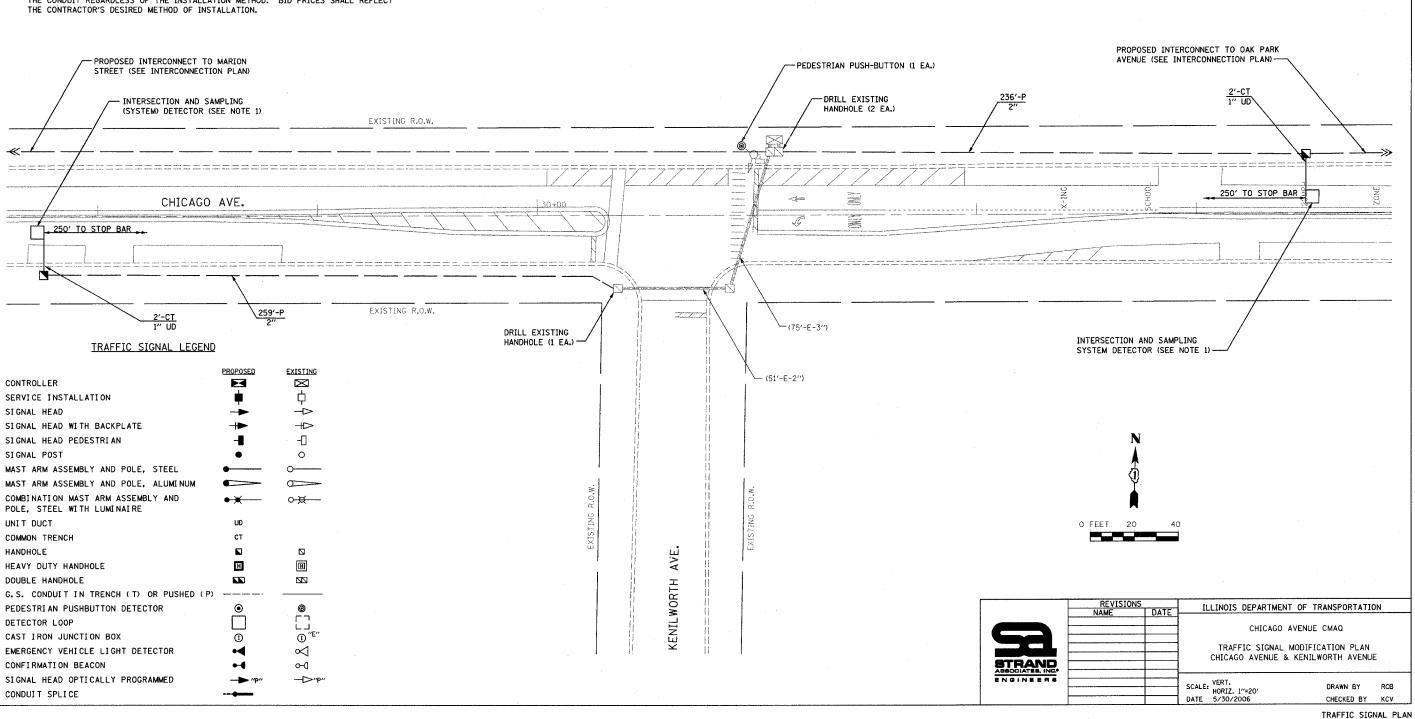
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RESTORATION OF WORK AREA

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC., SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, IN ACCORDANCE WITH STANDARD SPECIFICATION.

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

- 1. INTERSECTION AND SAMPLING (SYSTEM) DETECTOR LOOPS SHALL BE INSTALLED ACCORDING TO DISTRICT ONE STANDARDS.
- 2. EXISTING CONDUIT AND CABLE SHALL REMAIN IN PLACE.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS, NO COMPENSATION WILL BE MADE FOR AREAS WHERE CONDUIT IS TRENCHED INSTEAD OF PUSHED. ALL CONDUIT SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR CONDUIT, PUSHED UNLESS OTHERWISE NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ALL RESTORATION REQUIRED ABOVE THE BORED OR TRENCHED AREA SHALL BE INCIDENTAL TO THE CONDUIT REGARDLESS OF THE INSTALLATION. METHOD. BID PRICES SHALL REFLECT THE CONTRACTOR'S DESIRED METHOD OF INSTALLATION.



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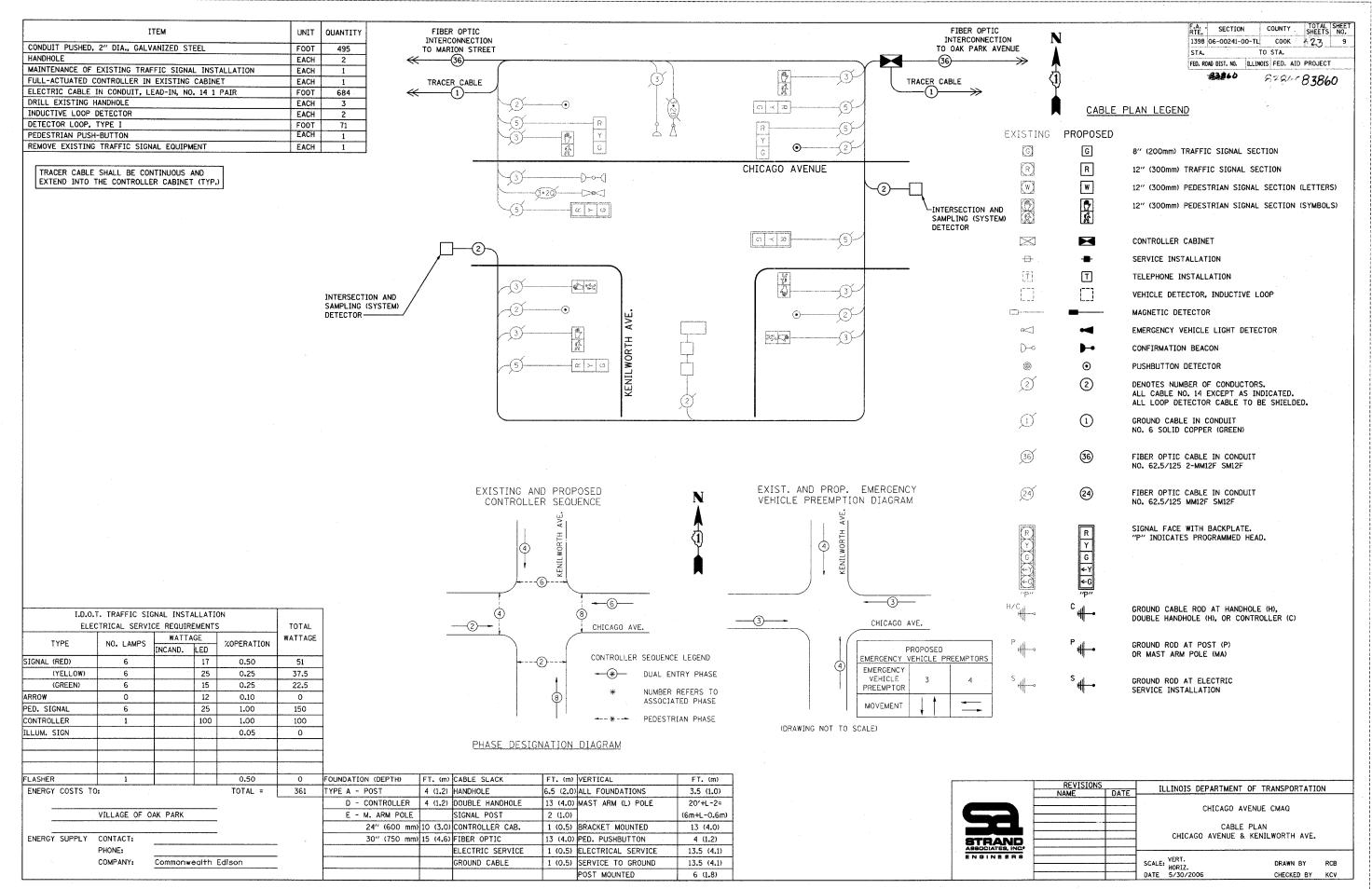
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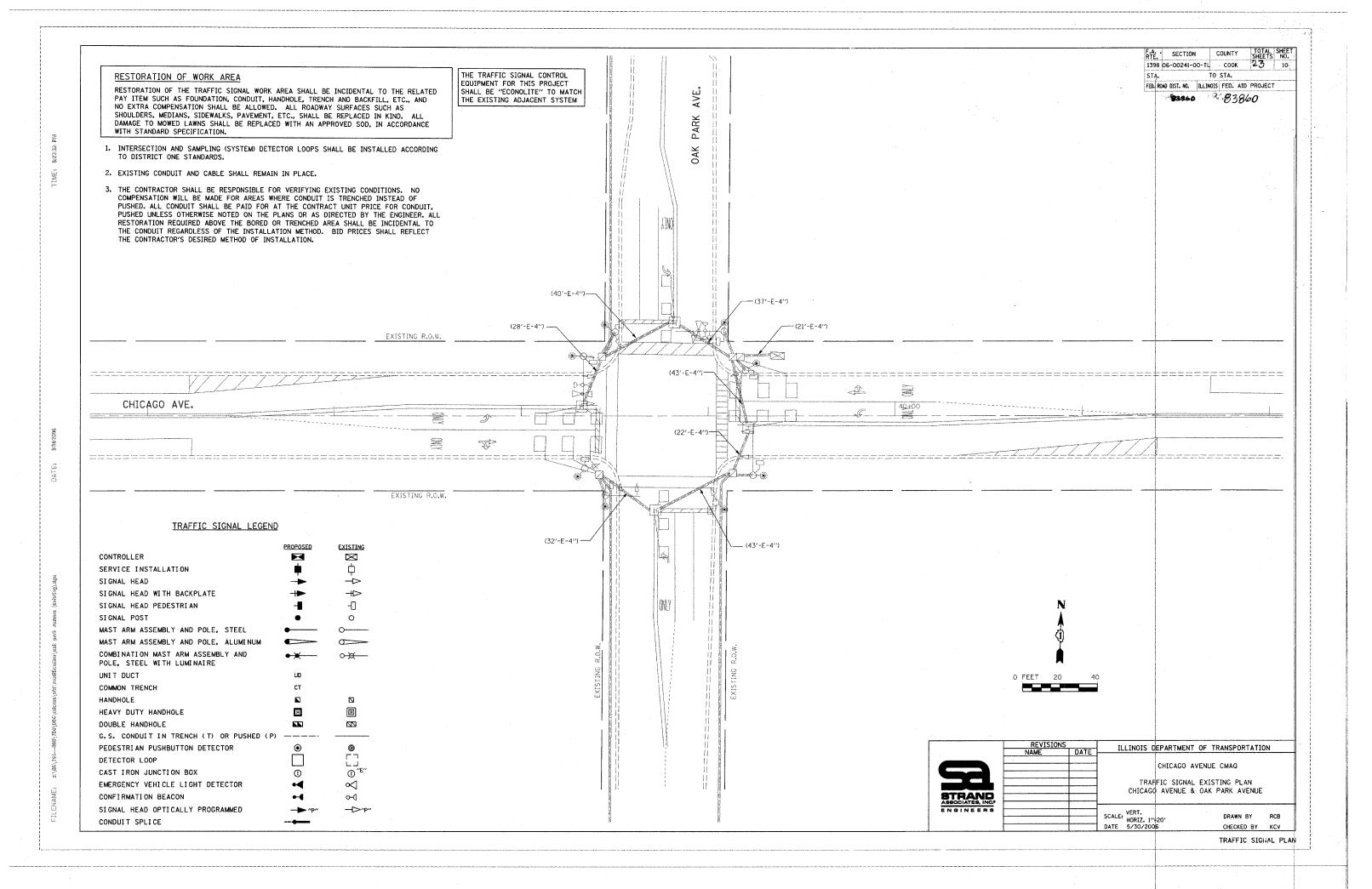
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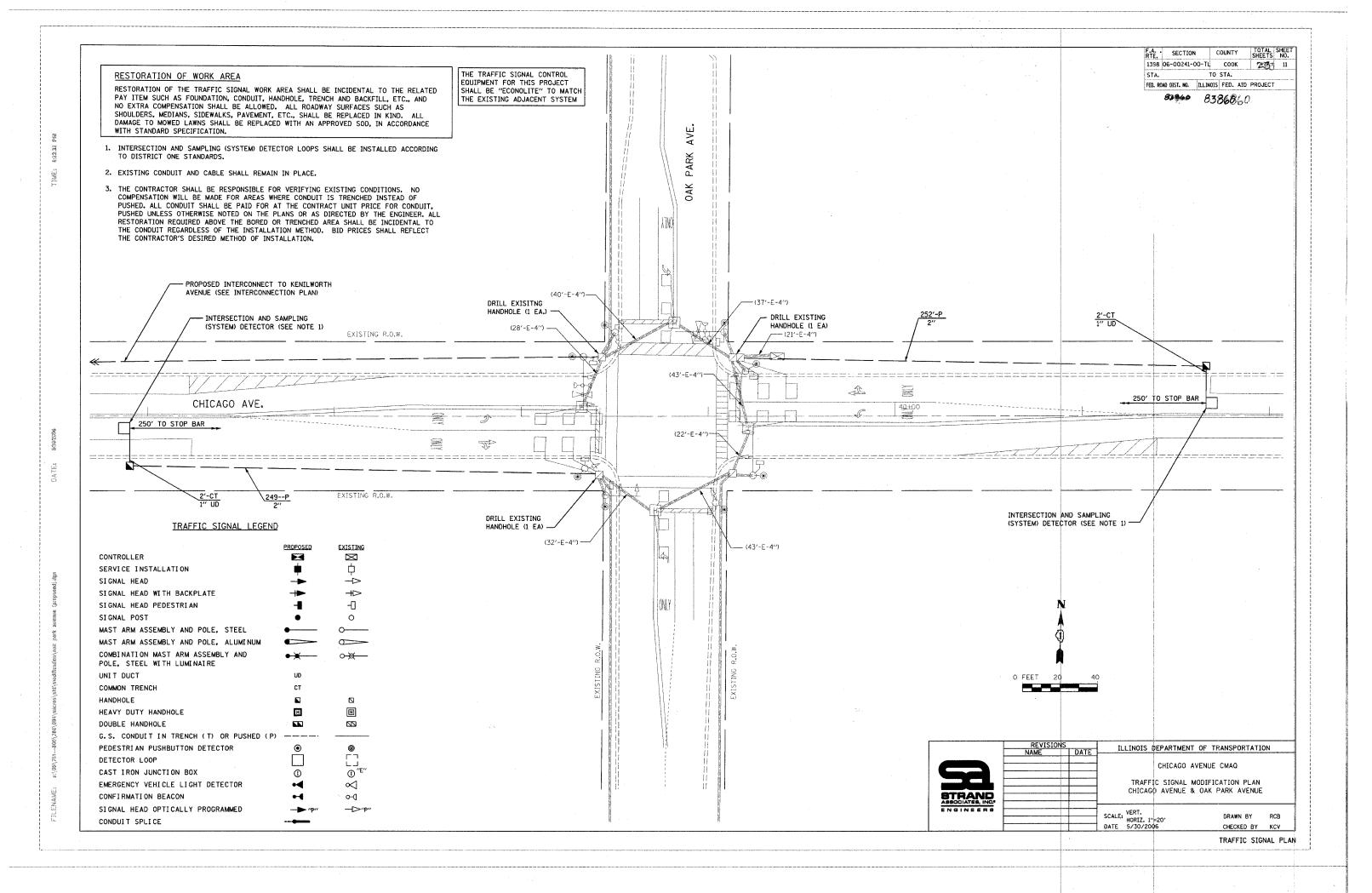
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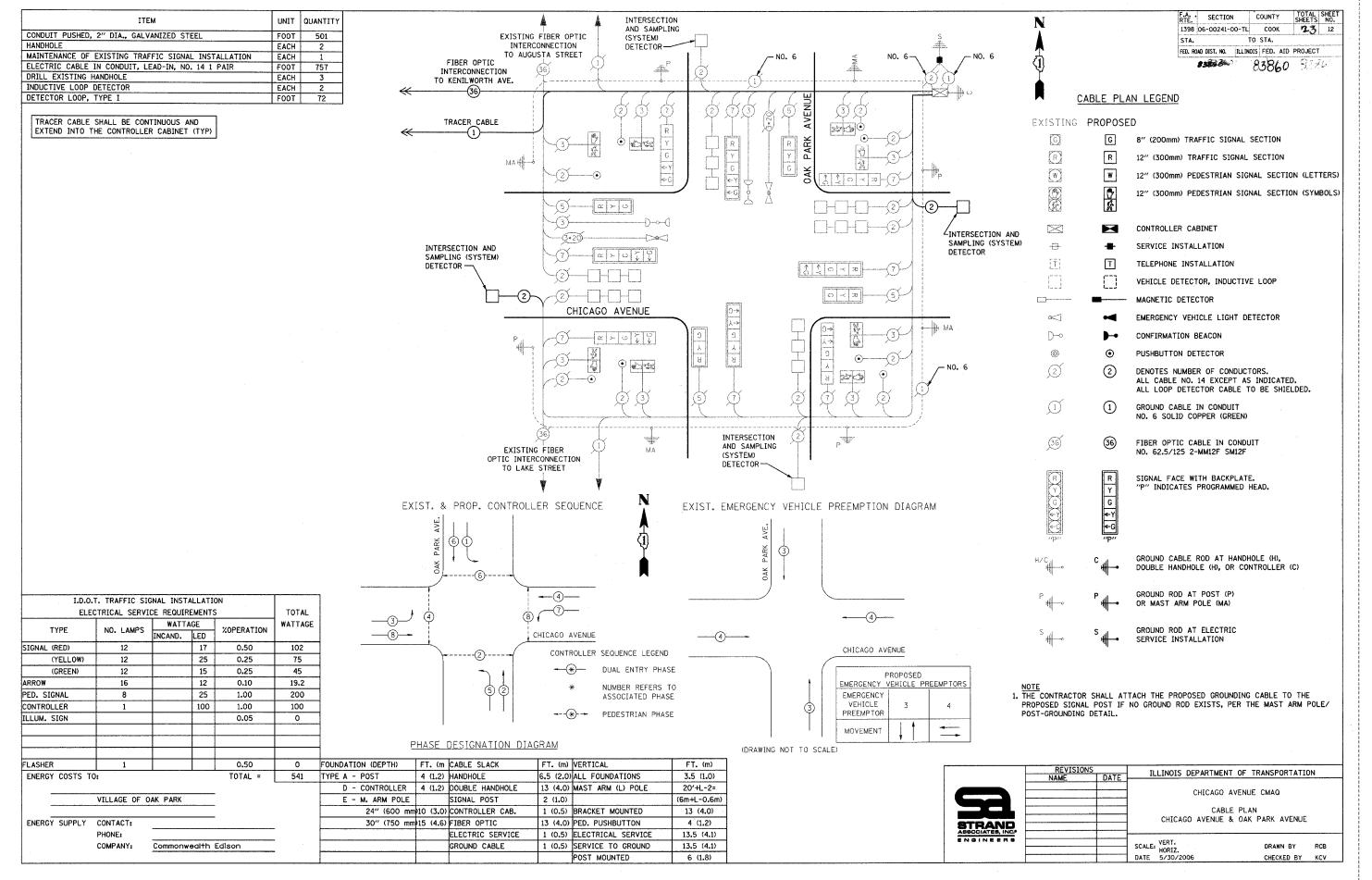
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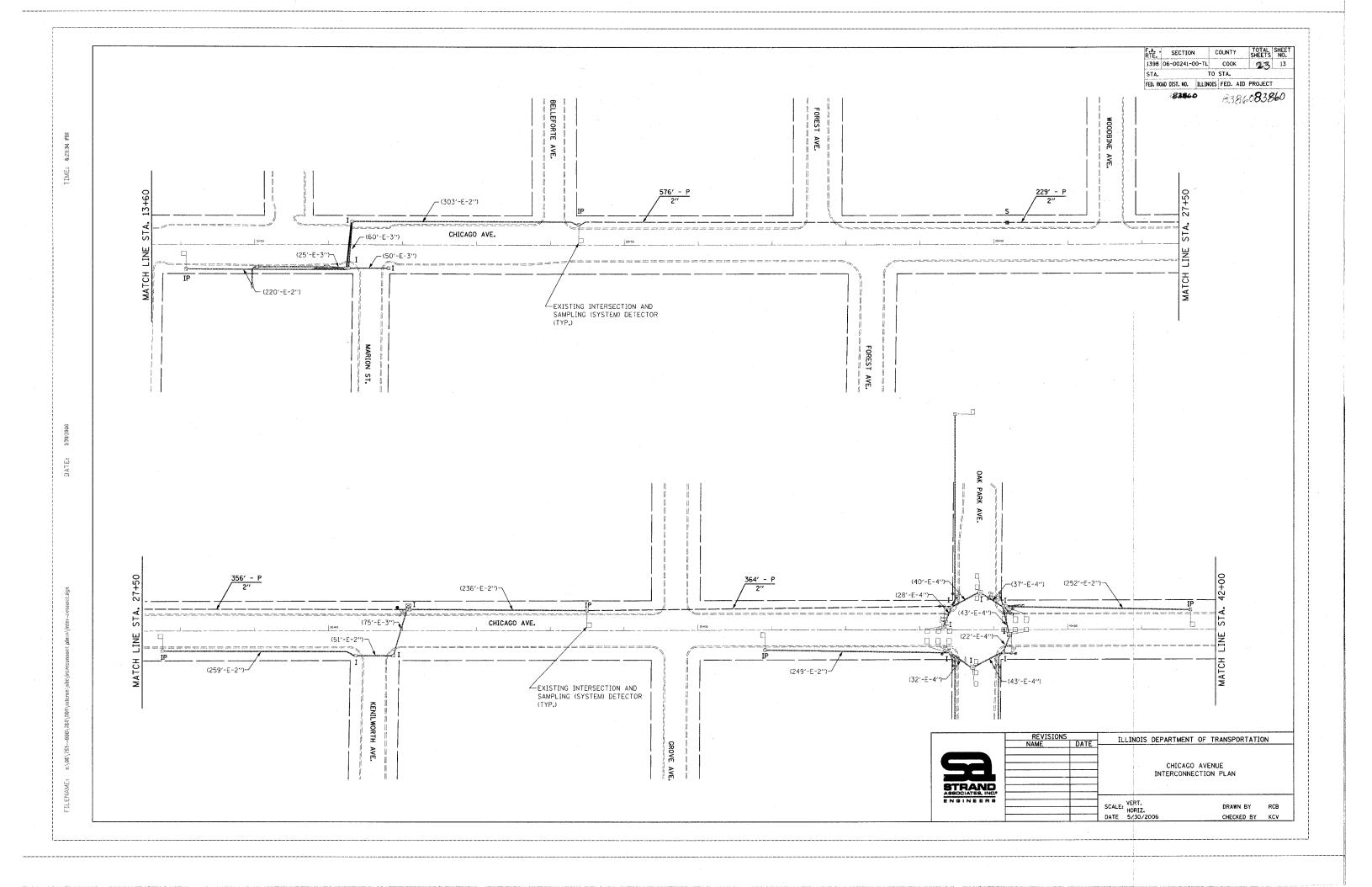
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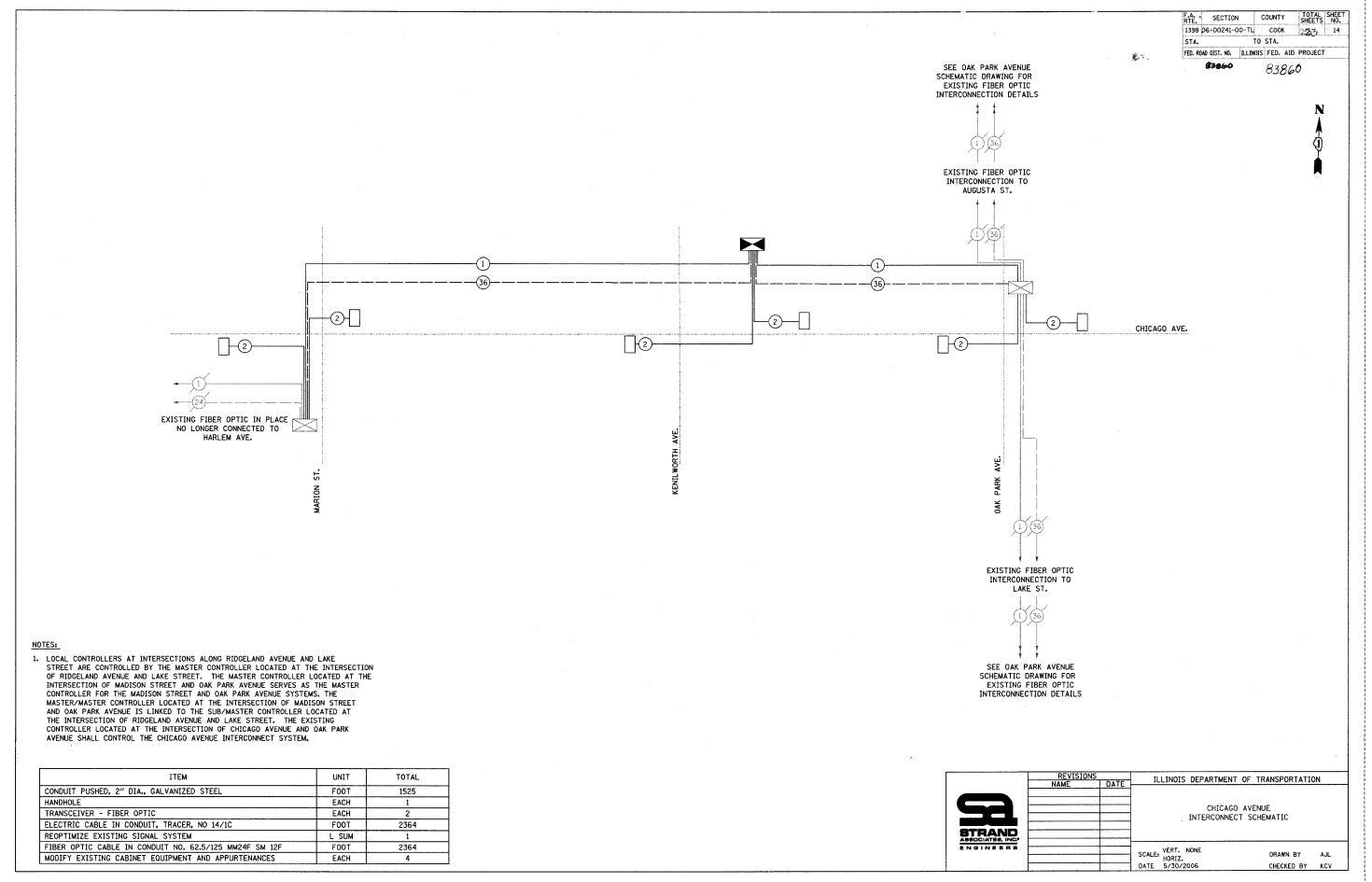


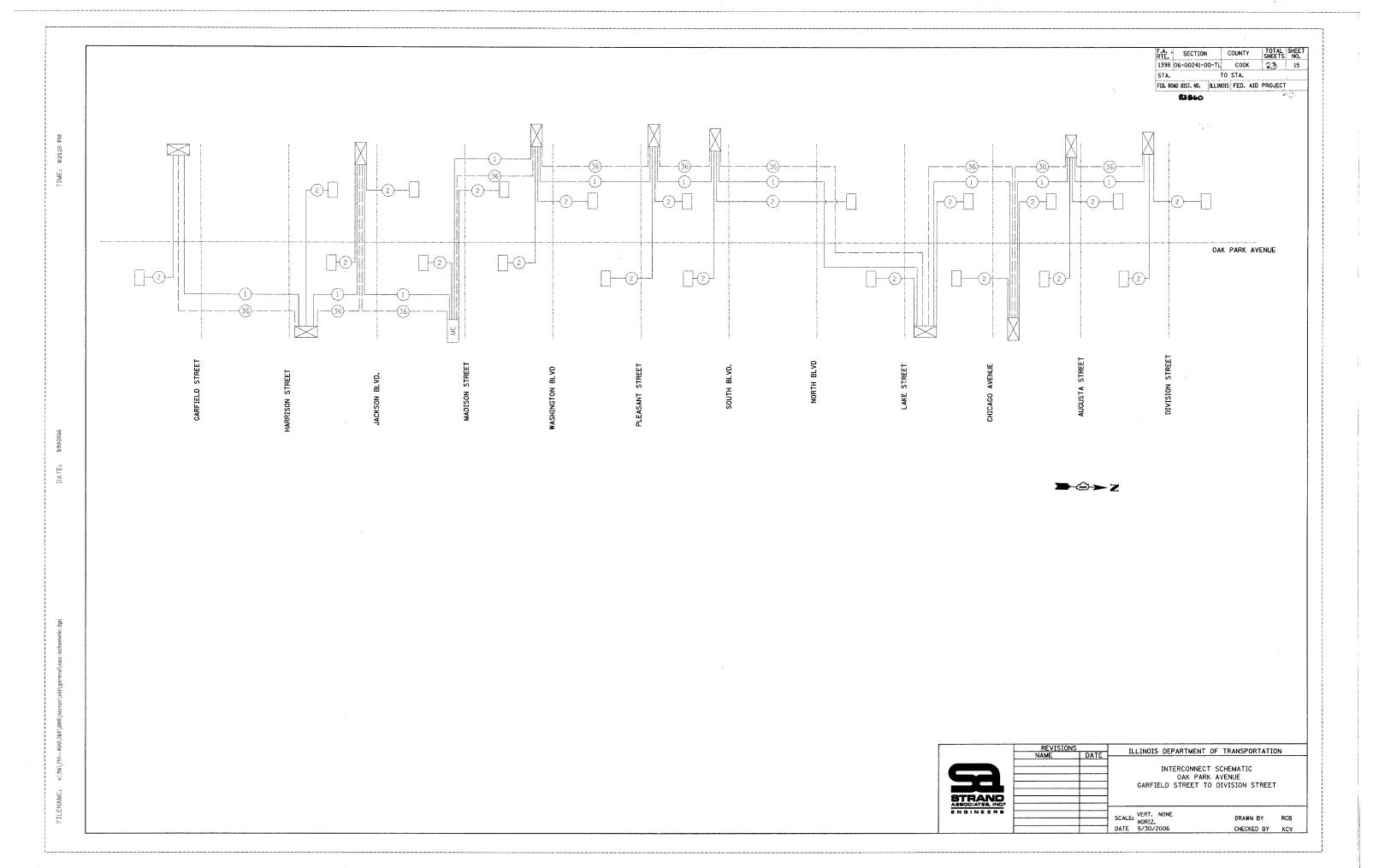


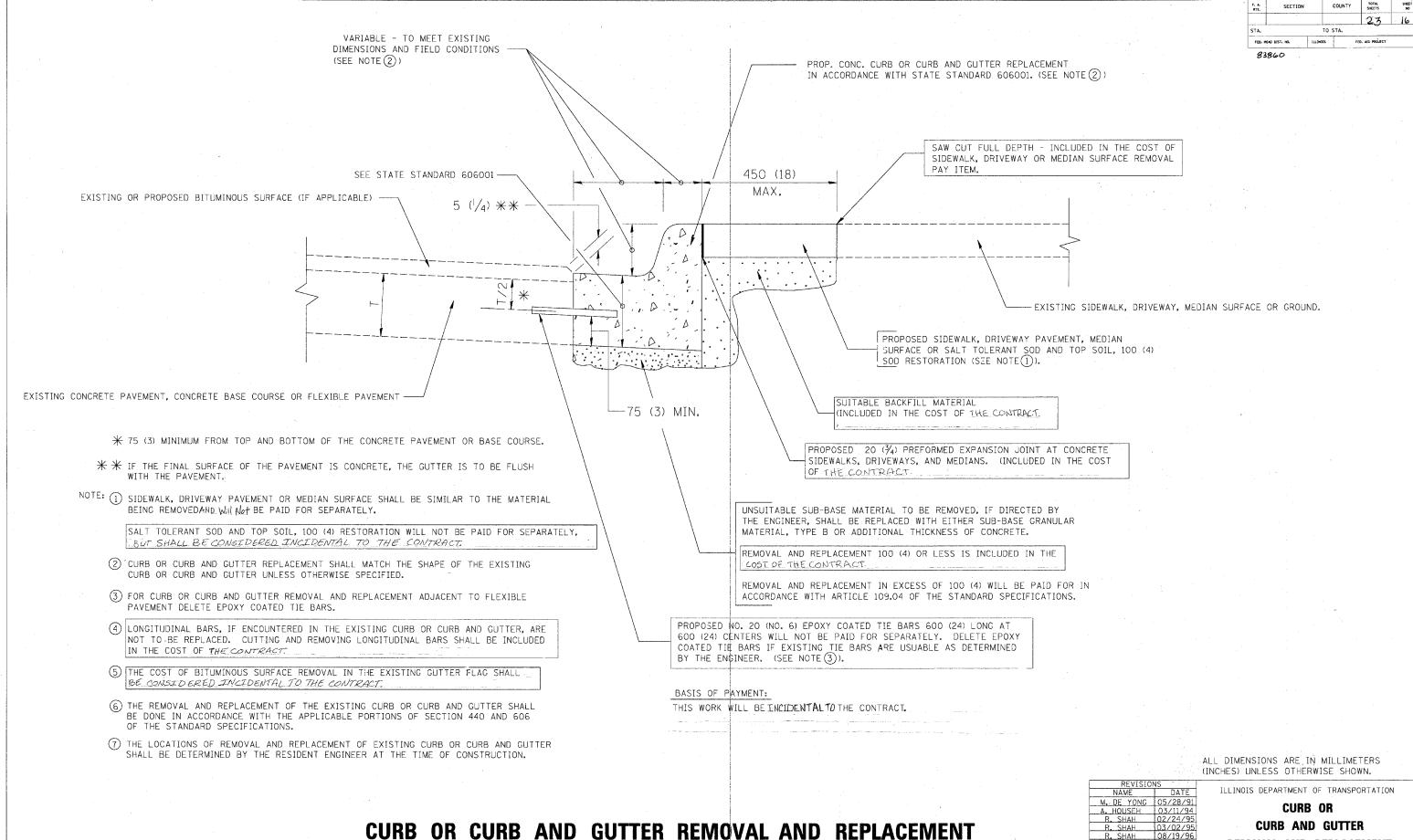












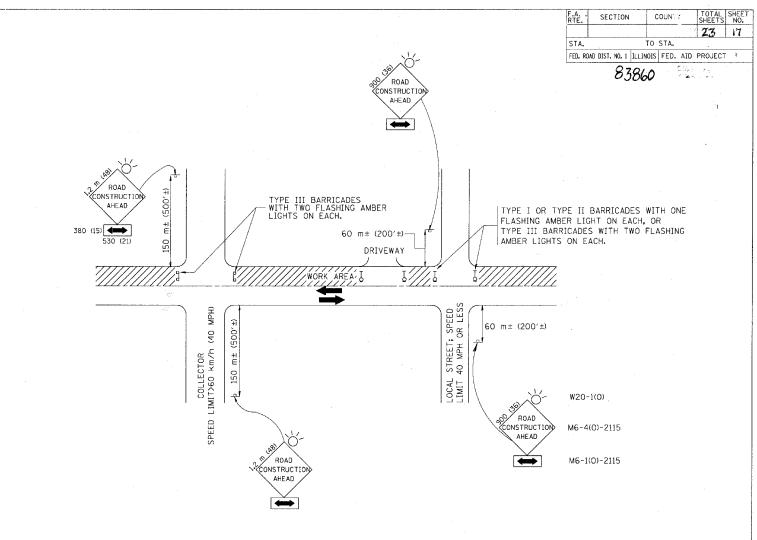
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REMOVAL AND REPLACEMENT

01/22/01

R. SHAH R. SHAH

BD600-06 (BD-24) REVISION DATE: 12/06/88



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

- 1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- O'ONE ROAD CONSTRUCTION AHEAD SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200") IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- g) ONE ROAD CONSTRUCTION AHEAD SIGN 1.2 m \times 1.2 m (48 \times 48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500°) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE SLANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

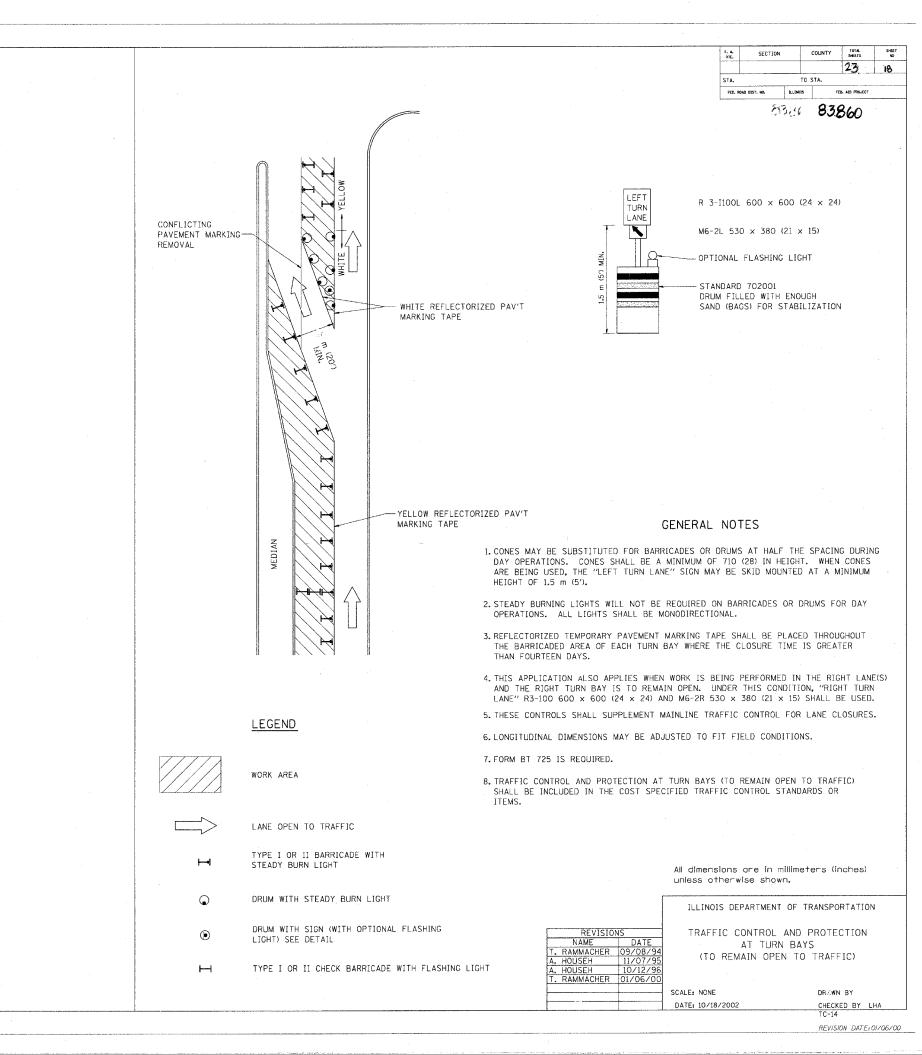
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

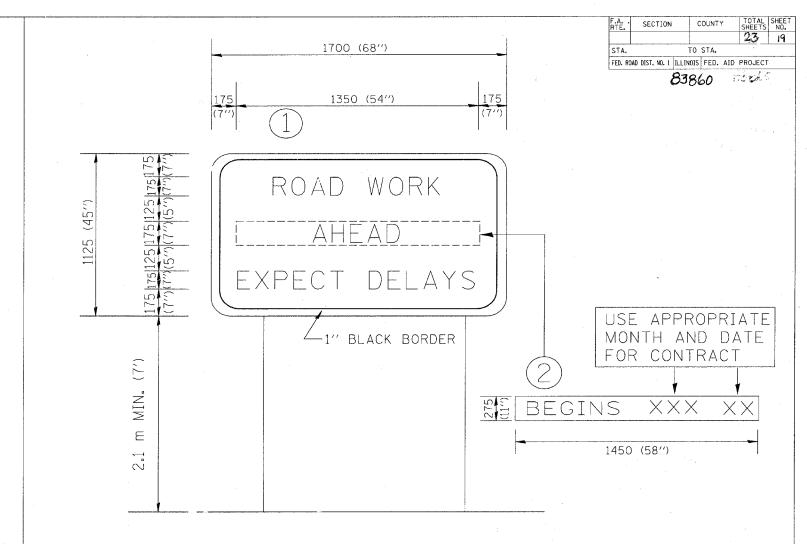
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.T. RAMMACHER	09/08/94	MALLIC CONT	NOL AND INVILCTION	
J. ÖBERLE 10/18/95		FOR		
A. HOUSEH 03/06/96		CIDE DOADC INTERCECTIONS AND		
A. HOUSEH 10/15/96		SIDE ROADS, INTERSECTIONS, AND		
T. RAMMACHER 01/06/0		DRIVEWAYS		
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NOTES:

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL 2 SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 2.3 SQ. M. (25.70 SQ. FT.)

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES)

UNLESS OTHERWISE SHOWN.

REVISIONS
NAME DATE
R. MIRS 9-15-97
R. MIRS 12-11-91
T. RAMMACHER 2-2-99

SCALE: DRAWN BY: BUR. OF DESIGN
DATE 10/18/2002 CHECKED BY

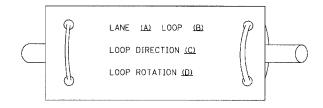
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LOOP DETECTOR NOTES

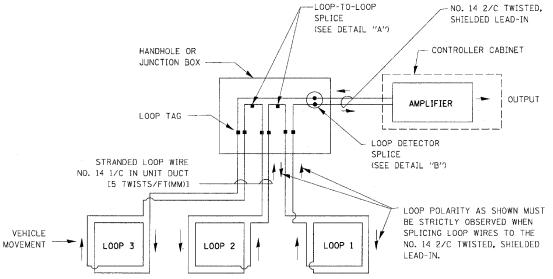
- 1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- 3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE, EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- 6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG



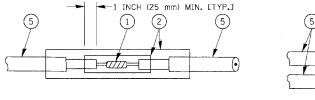
- A. LANE I IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



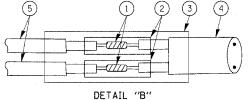


DETECTOR LOOP WIRING SCHEMATIC

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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

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

NAME CADD	DATE 5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

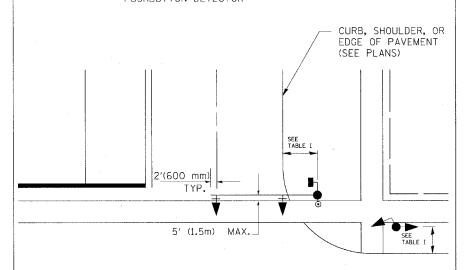
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

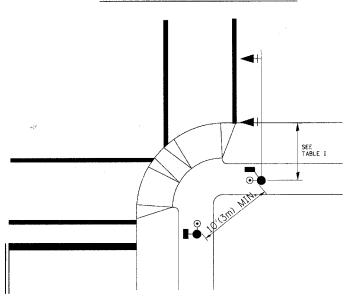
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TRAFFIC SIGNAL MAST ARM AND POST

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



PEDESTRIAN SIGNAL PUSHBUTTON



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

NOTES:

F.A. SECTION COUNTY TOTAL SHEETS NO.

STA. TO STA.

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID | PROJECT

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

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

PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

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

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

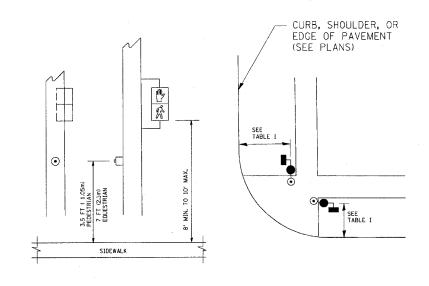


TABLE I

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

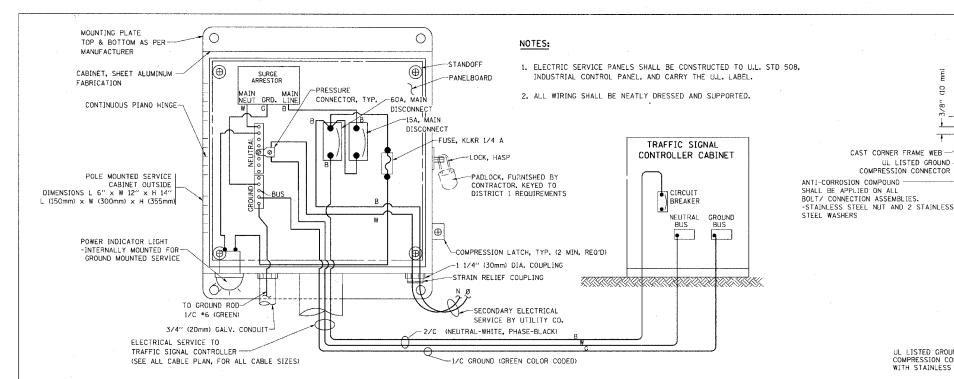
REVISIONS
NAME DATE
BUREAU OF TRAFFIC 1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

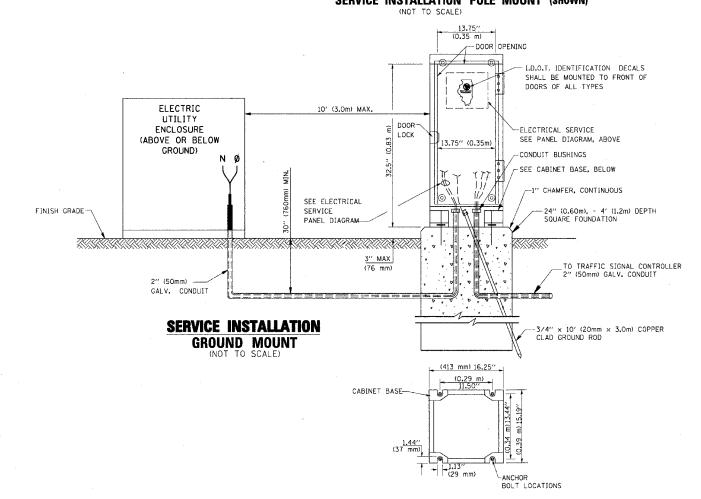
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE HORIZ. NONE DATE 10/18/2002

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



ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN)



CABINET - BASE BOLT PATTERN

(NOT TO SCALE)

NOTES:

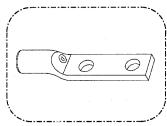
GROUNDING SYSTEM

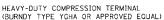
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COUNTY

SECTION

- 1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLF, 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, THINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139
- 2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



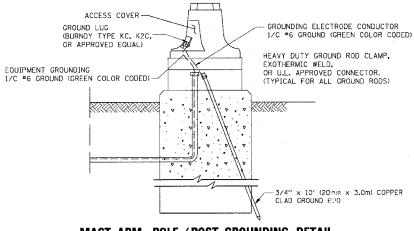




3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

• ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED. • GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4,0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)

REVISIONS		JELINOIS DEPARTMENT OF TRANSPORTATION			
NAME	DATE	TELINOIS DEL ANTIMENT OF TRANSFORTATION			
CADD 5/30/00					
CADD	3/15/01	DISTRICT 1			
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		L STANDARD TRAFFIC SIGNAL			
		DESIGN DETAILS			
		DESIGN DETAILS			

SCALE: VERT. NONE DATE 10/18/2002

HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

HANDHOLE COVER

DETAIL "A"

HANDHOLE COVER

HANDLE

DETAIL "B"

RECESSED COVER

-U.L. LISTED

(PAID FOR SEPARATELY)

GROUND CARLES

TO CONTROLLER
DOUBLE HANDHOLE

TO POLE OR

POST AS REQ'D.

- SEE DETAIL "B"

CAST CORNER FRAME WEB-

III LISTED GROUND. COMPRESSION CONNECTOR

UL LISTED GROUND

£1/c #6 (GREEN)

SEE DETAIL "A"

CABLE HOOKS

HANDHOLES

PRESSION CONNECTOR WITH STAINLESS STEEL NUT ANDHOLE FRAME

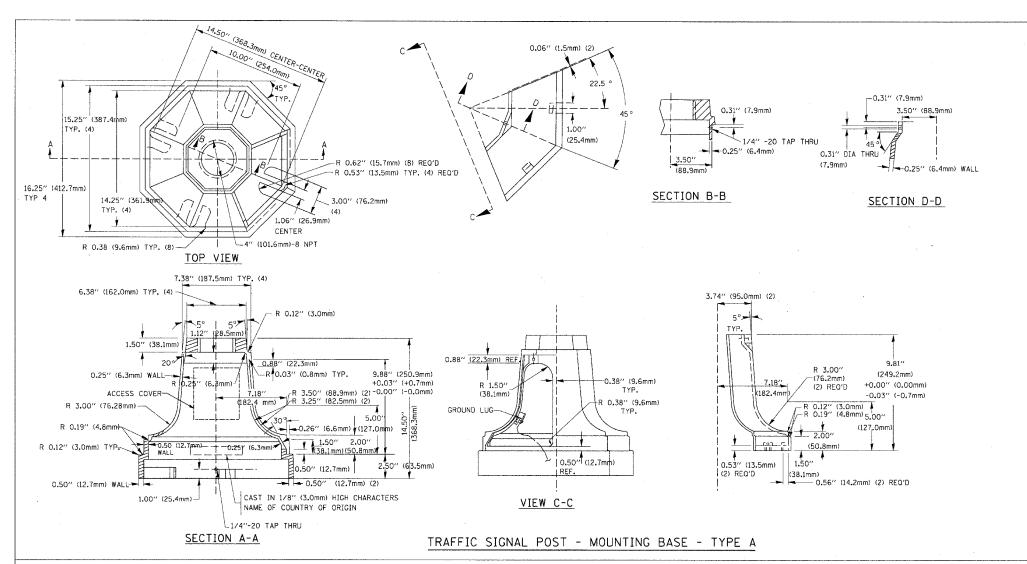
(2) 1/2" \times 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO $\overline{}$ FRAME AND TO COVER, (TYPICAL) HEAVY DUTY COPPER COMPRESSION GROUNDING TERMINAL, (TYPICAL) - EXISTING HANDHOLE GROUNDING CABLE

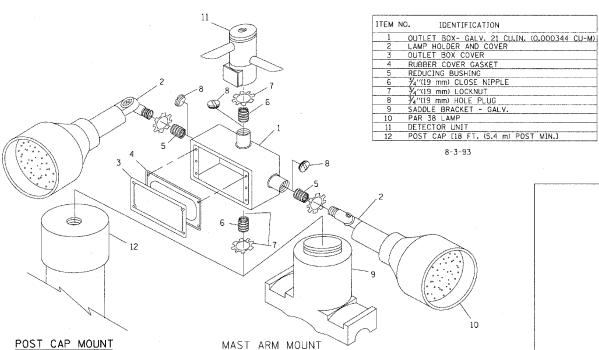
EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

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REVISION DATE: 01/01/02

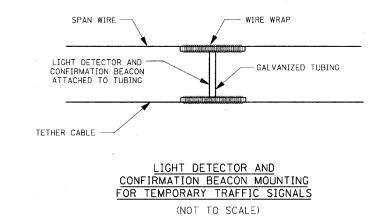


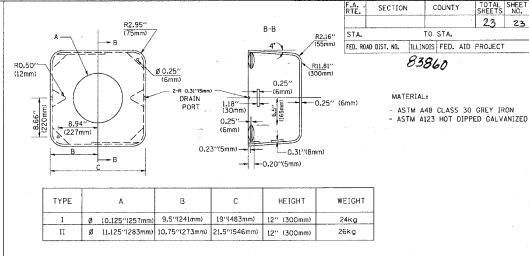


EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

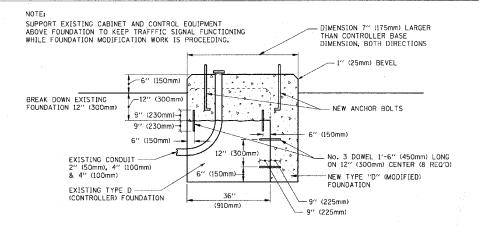
NOTES:

- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- 2. 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
- 3. 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.



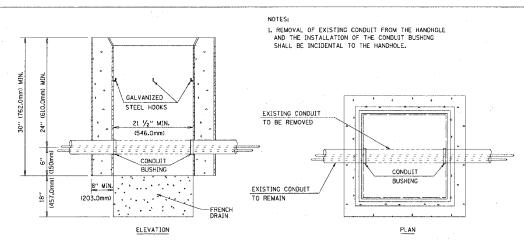


SHROUD DETAIL



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



HANDHOLE TO INTERCEPT EXISTING CONDUIT

DEVISIONS			·	
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION		
NAME	DATE	TEETHOTS DEL ANTIMENT	OF TRANSFORTATION	
BUREAU OF TRAFFIC	5/30/00			
BUREAU OF TRAFFIC	3/15/01	DISTRICT 1		
BUREAU OF TRAFFIC	11/12/01	D10,,(1	0 1 1	
BUREAU OF TRAFFIC 1-01-02		STANDARD TRAFFIC SIGNAL		
		DESIGN DETAILS		
		SCALE: VERT. NONE	DRAWN BY: RWP DESIGNED BY: DAD CHECKED BY: DAZ	
	<u> </u>	DATE 10/18/2002	SHEET 4 OF 4	