F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	C-91-377-08	DUPAGE	30	1
FED. ROAD DIST. NO. 1	ILLINOIS	CONTRACT NO. 63107		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL HIGHWAY

DISTRICT 1
CONGESTION MITIGATION AIR QUALITY
FIBER OPTIC COMMUNICATIONS NETWORK

CHICAGO AVENUE / MAPLE AVENUE
FAU 1487
CHARLES AVENUE TO PATTON DRIVE
AND

COLLEGE ROAD
FAU 2568
MAPLE AVENUE TO GREEN TRAILS ROAD

FEDERAL PROJECT NO.: CMM-8003(992)
SECTION 07-00230-07-TL
DUPAGE COUNTY
C-91-377-08

INDEX OF SHEETS

1	COVER SHEET
2	SUMMARY OF QUANTITIES
3–6	DETAILS
7	INTERCONNECT –CABLE DIAGRAM –HANDHOLE LAYOUT
8–14	INTERCONNECT PLANS
15	CHICAGO AVE. & CHARLES AVE. EXISTING CABLE DIAGRAM
16	CHICAGO AVE. & OLESEN DR. EXISTING CABLE DIAGRAM
17	CHICAGO AVE. / MAPLE AVE. & NAPER BLVD. EXISTING CABLE DIAGRAM
18	MAPLE AVE. & STEEPLE RUN DR. EXISTING CABLE DIAGRAM
19	MAPLE AVE. & IBU ENT. / BENEDICTINE ACADEMY ENT. EXISTING CABLE DIAGRAM
20	MAPLE AVE. & COLLEGE RD. EXISTING CABLE DIAGRAM
21	MAPLE AVE. & BURR OAK RD. EXISTING AND PROPOSED TRAFFIC SIGNAL PLAN
22	MAPLE AVE. & BURR OAK RD. EXISTING CABLE DIAGRAM
23	MAPLE AVE. & PATTON DR. EXISTING CABLE DIAGRAM
24	COLLEGE RD. & GREEN TRAILS RD. EXISTING CABLE DIAGRAM
25	COLLEGE RD. & ABBEYWOOD DR. EXISTING TRAFFIC SIGNAL PLAN AND CABLE DIAGRAM
26	COLLEGE RD. & ABBEYWOOD DR. PROPOSED TRAFFIC SIGNAL PLAN
27	COLLEGE RD. & ABBEYWOOD DR. –PROPOSED CABLE DIAGRAM –PROPOSED PHASING AND EVP SEQUENCING DIAGRAMS –SCHEDULE OF QUANTITIES
28	COLLEGE RD. & IBU ENT. EXISTING TRAFFIC SIGNAL PLAN AND CABLE DIAGRAM
29	COLLEGE RD. & IBU ENT. PROPOSED TRAFFIC SIGNAL PLAN
30	COLLEGE RD. & IBU ENT. –PROPOSED CABLE DIAGRAM –PROPOSED PHASING AND EVP SEQUENCING DIAGRAMS –SCHEDULE OF QUANTITIES

STANDARDS

424001	701301	701601	701701	701801
701901	814006	857001	878001	880001
880006	886001	886006		

PROJECT LOCATIONS

	GROSS LENGTH	NET LENGTH
CHICAGO AVENUE/MAPLE AVENUE – CHARLES AVENUE TO PATTON DRIVE	13900 FEET	13900 FEET
COLLEGE ROAD – MAPLE AVENUE TO GREEN TRAILS ROAD	6000 FEET	6000 FEET
TOTAL	19900 FEET	19900 FEET

0 50' 100' — 1"= 50'

0 50' 100' — 1"= 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

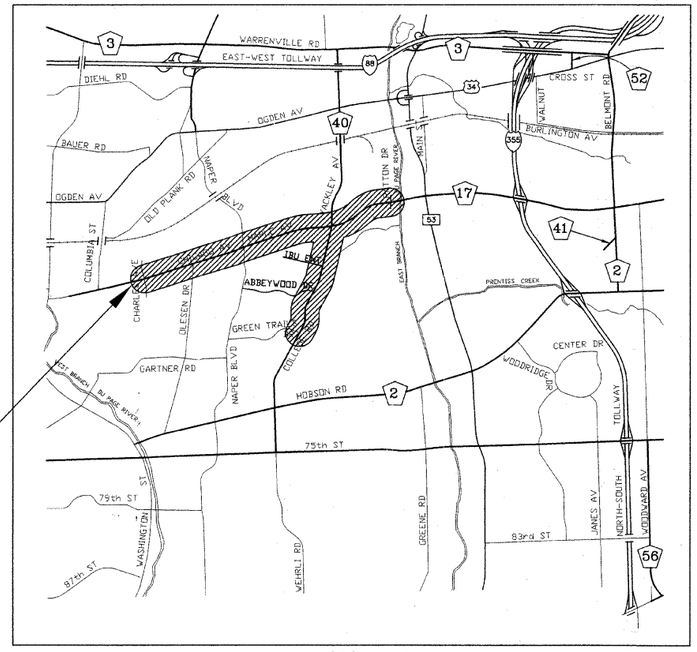
CALL J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
800-893-0123

PLANS PREPARED BY
THOMAS HARDY P.E.
DUPAGE COUNTY DIVISION OF TRANSPORTATION

CONTRACT NO. 63107

STATE OF ILLINOIS — THOMAS HARDY — ENGINEER — NO. 062-056099 — MY LICENSE EXPIRES NOVEMBER 30, 2009

Thomas Hardy
2-4-2009



TRAFFIC SIGNAL INTERCONNECT SITE

LOCATION MAP
NOT TO SCALE

LOCATION OF SECTION INDICATED THUS: – ■

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED February 4 2009
Charles A. Jokarski
DUPAGE COUNTY, COUNTY ENGINEER

PASSED February 10 2009
C HUA CHRISTOPHER HUA
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED REVIEW
FEBRUARY 11, 2009
Dina M. O'Keefe pe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID COORDINATOR: MARILIN SOLOMON (847)–705–4407

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17&40	2008	30	2
SEC. 07-00230-07-TL DUPAGE CO.			

63107

SUMMARY OF QUANTITIES

				CONSTRUCTION CODE Y031-1F												
				FUNDING CODE												
				1	1	1	1	1	1	1	1	1	1	1	1	1
PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES	MAPLE AVE / COLLEGE AVE INTERCONNECT	CHICAGO AVE & CHARLES AVE	CHICAGO AVE & OLESEN DR	CHICAGO AVE/MAPLE AVE & NAPER BLVD	MAPLE AVE & STEEPLE RUN DR	MAPLE AVE & IBU ENTRANCE/ BENEDICTINE ACMY.	MAPLE AVE & COLLEGE/ YACKLEY AVE	MAPLE AVE & BURR OAK RD	MAPLE AVE & PATTON DR	COLLEGE RD & GREEN TRAILS RD	COLLEGE RD & ABBEYWOOD DRIVE	COLLEGE RD & IBU ENTRANCE
67100100	MOBILIZATION	L SUM	1	1											
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1											
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1											
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1											
* 42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	220											220	
* X0006064	SAWCUT CURB	FOOT	23											23	
* 42400800	DETECTABLE WARNINGS	SQ FT	11											11	
25200110	SODDING, SALT TOLERANT	SQ YD	11											11	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	1											1	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	1											1	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	1											1	
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	12531	11566										490	475
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	270											150	120
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	20											10	10
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	1961	1671										115	175
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	510											280	230
81400100	HANDHOLE	EACH	28	24										1	3
81400200	HEAVY DUTY HANDHOLE	EACH	11	6										4	1
81400300	DOUBLE HANDHOLE	EACH	2											1	1
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	12840	11585										650	605
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	11		1	1	1	1	1	1	1	1	1	1	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	6		1	1	1						1	1	1
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1							1					
86000100	MASTER CONTROLLER	EACH	1							1					
86400100	TRANSCEIVER-FIBER OPTIC	EACH	7		1	1	1	1					1	1	1
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C	FOOT	3645											2295	1350
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	2265							200				1420	645
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C	FOOT	2250											1160	1090
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 7C	FOOT	1670											1390	280
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PR	FOOT	735											365	370
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	435											245	190
XX003661	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	200							200					
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	16650	16650											
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	16650	16650											
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	2690		100	100	100	100		100	100		100	1070	920
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	950							200				340	410
X0324477	ELECTRIC CABLE IN CONDUIT NO. 10 1/C	FOOT	1945											1015	930
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	9								3			4	2
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1												1
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1											1	
87702900	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1											1	
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	2											1	1
87702950	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	2											1	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	28											16	12
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	16											8	8
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15											15	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	75											45	30
87900200	DRILL EXISTING HANDHOLE	EACH	12		1	2	2	2	1	2	1		1		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	16								4			8	4
88500100	INDUCTIVE LOOP DETECTOR	EACH	66		9	6	9			8			8	15	11
88600100	DETECTOR LOOP, TYPE 1	FOOT	1100											655	445
88700200	LIGHT DETECTOR	EACH	16		2	2	2			2	2		2	2	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	8		1	1	1			1	1		1	1	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	16			2	8							4	2
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	8		1	1	1			1	1		1	1	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	11								4			4	3
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	5											4	1
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	14								8			2	4
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	5											4	1
88100200	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2												2
88100400	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	4											4	
X8510300	PAINT TRAFFIC SIGNAL POST	EACH	7			3	4								
82102310	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 310 WATT	EACH	5											3	2
X8050010	SERVICE INSTALLATION-GROUND MOUNTED	EACH	2											1	1
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	5		1	1	1			1	1				
XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1							1					
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	11		1	1	1	1	1	1	1	1	1	1	1

* SPECIALTY ITEMS

FUNDING

1. Y031-1F (80% CMAQ & 20% LOCAL)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE TRAFFIC SIGNAL INTERCONNECT SUMMARY OF QUANTITIES

DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00230-07-TL	DU PAGE	30	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

63107

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.

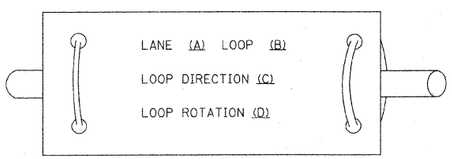
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

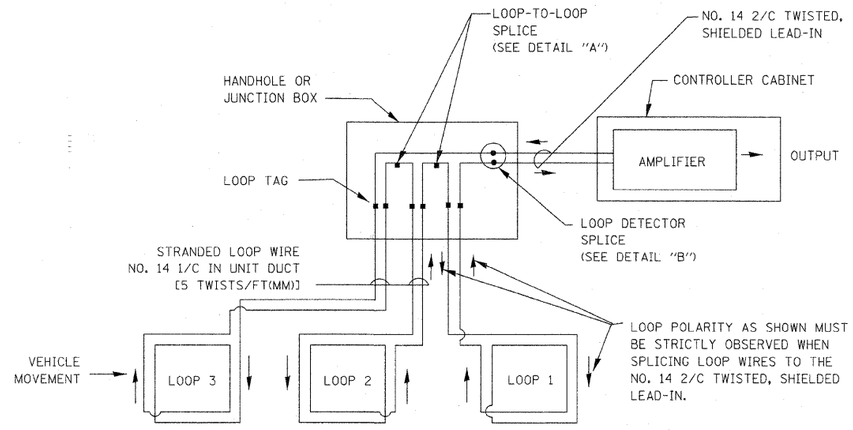


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

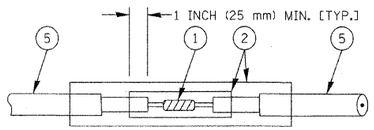
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

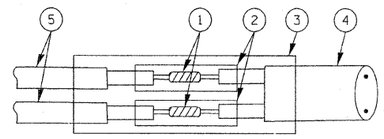


DETECTOR LOOP WIRING SCHEMATIC

- 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.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

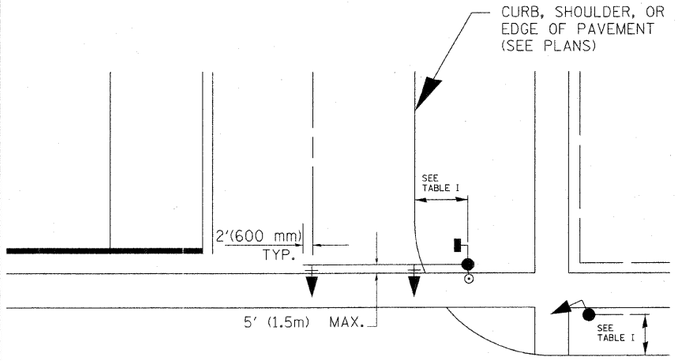
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00230-07-TL	DU PAGE	30	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

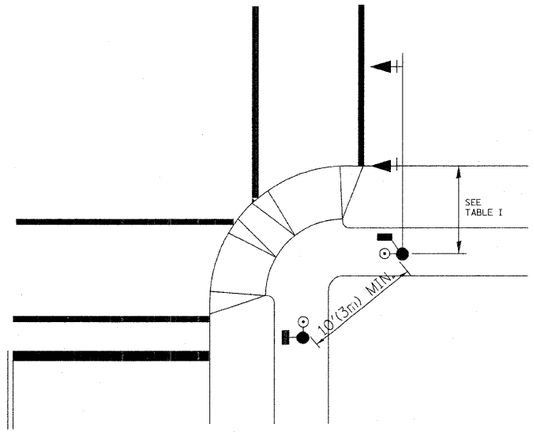
63107

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:

1. 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

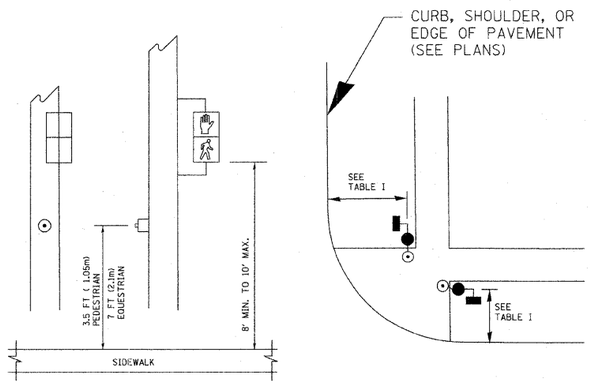


TABLE I

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORIZ. NONE

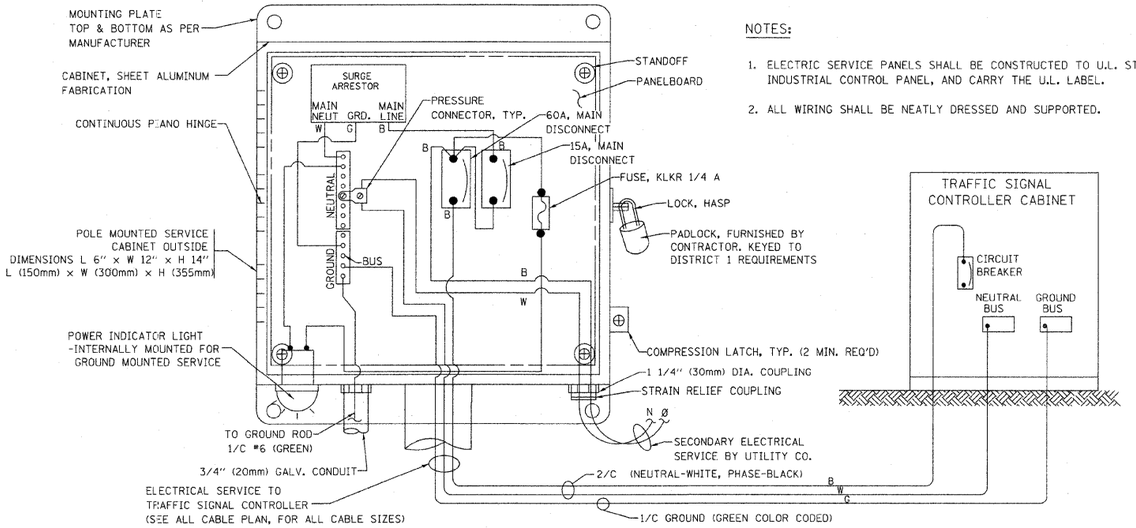
DATE 1-01-02

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

TS05

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00230-07-TL	DU PAGE	30	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

63107



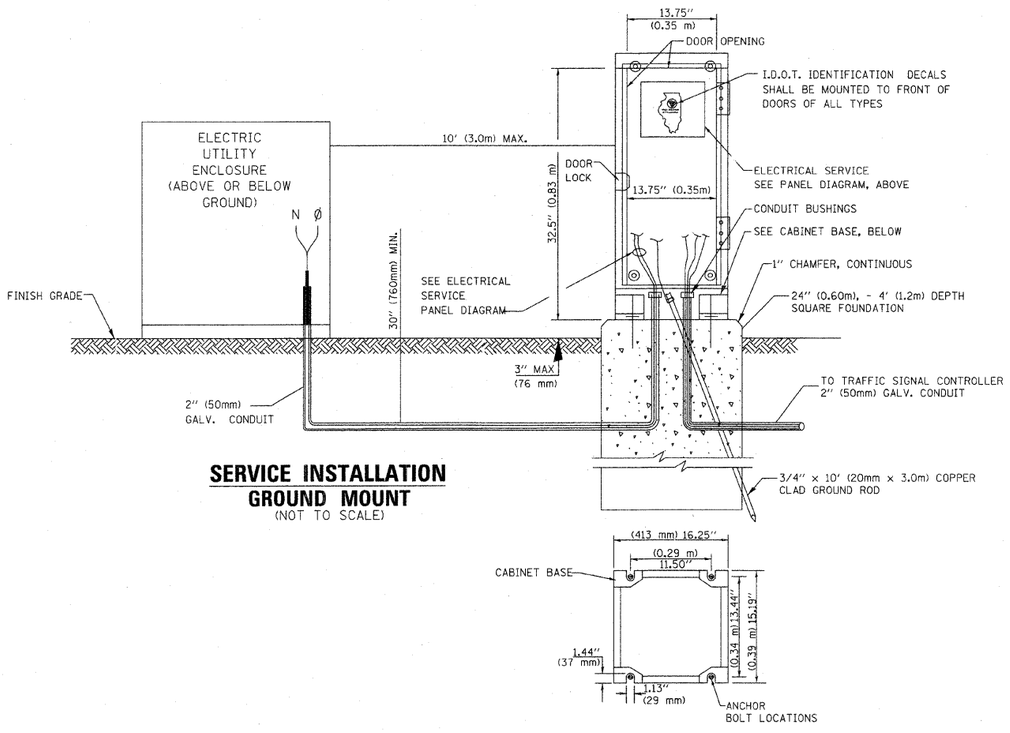
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

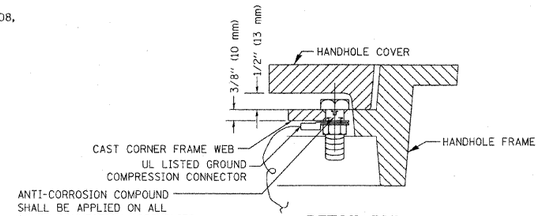


SERVICE INSTALLATION GROUND MOUNT

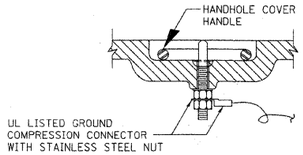
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

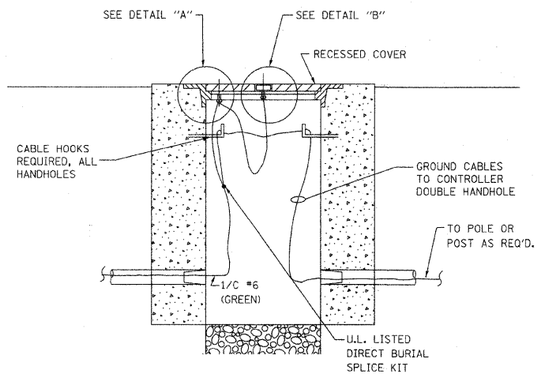
(NOT TO SCALE)



DETAIL "A"

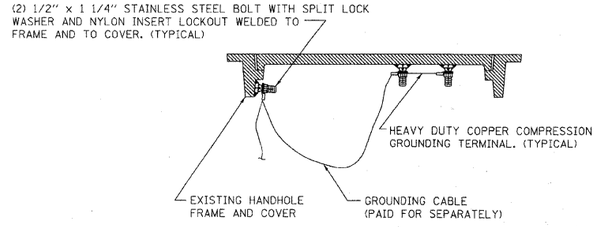


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



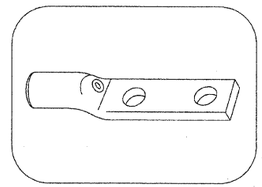
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

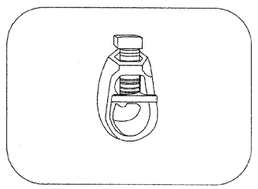
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



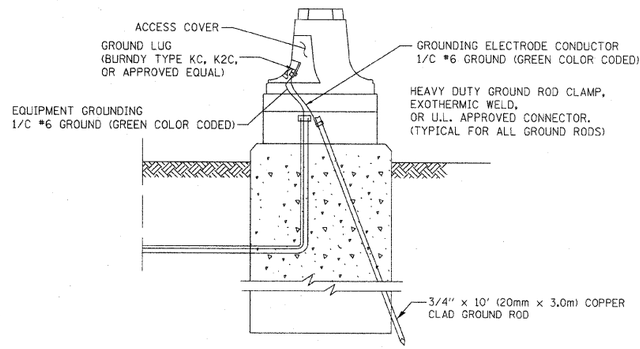
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



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

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

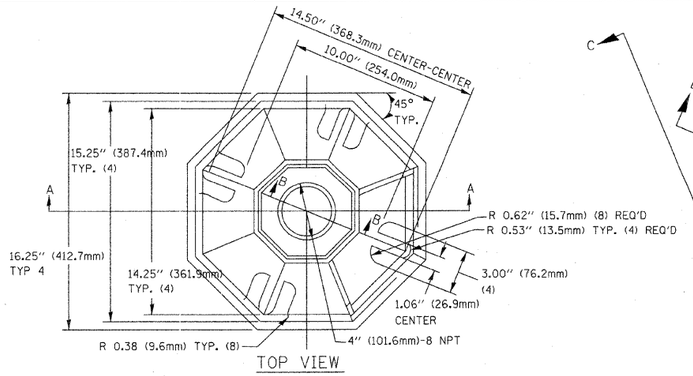
SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

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

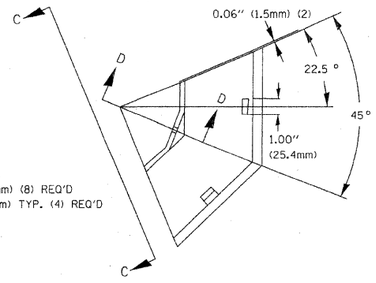
TS05

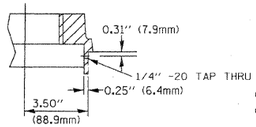
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00230-07-TL	DU PAGE	30	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

63107

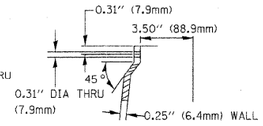


TOP VIEW

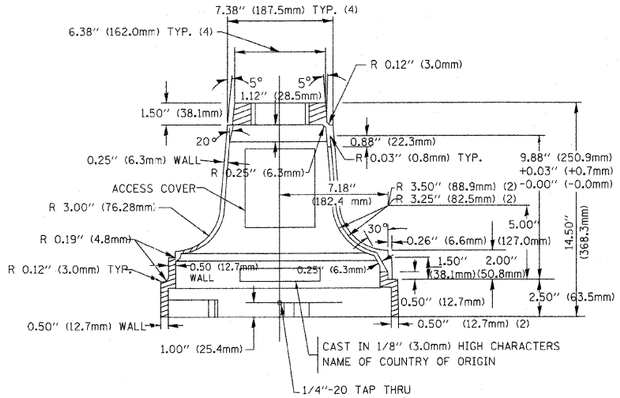




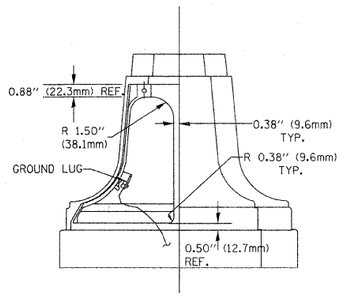
SECTION B-B



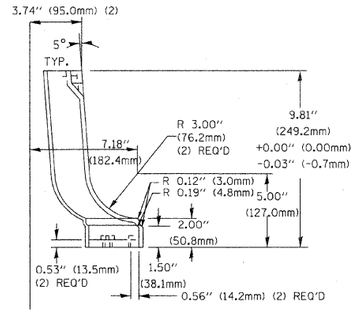
SECTION D-D



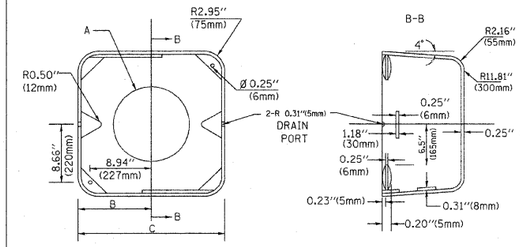
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



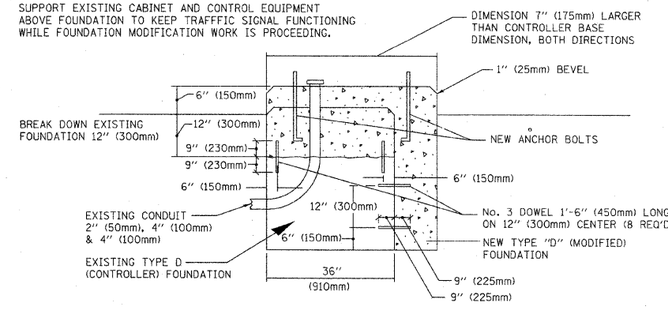
MATERIAL:

- 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

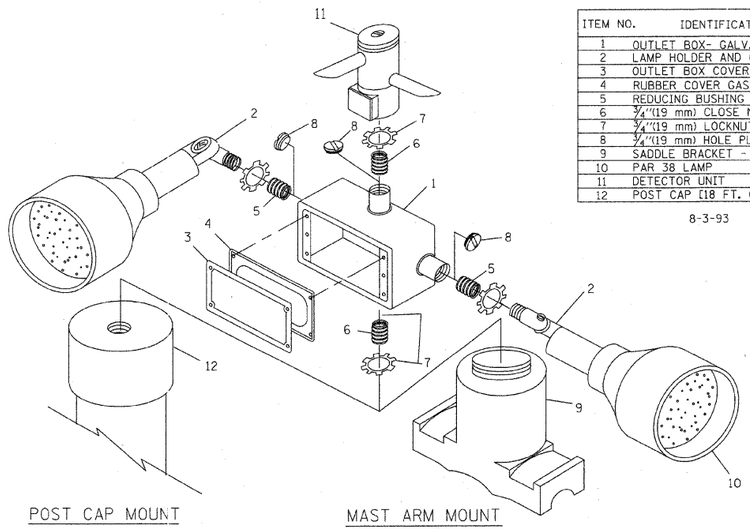
SHROUD DETAIL

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



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



POST CAP MOUNT

MAST ARM MOUNT

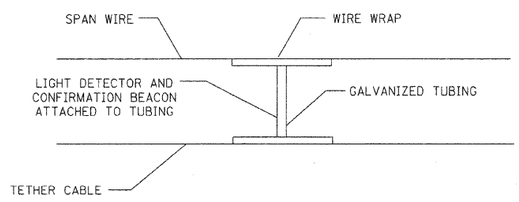
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(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

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 ¾"(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.

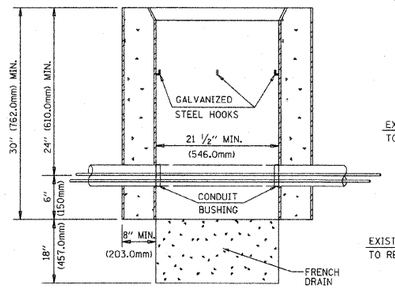


LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

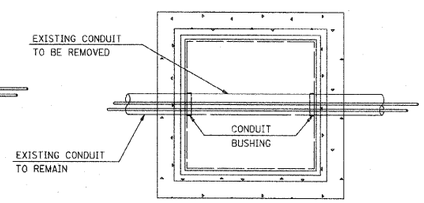
(NOT TO SCALE)

NOTES:

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



ELEVATION



PLAN

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

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

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

TS05

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	7
SEC. 07-00230-07-TL DUPAGE CO.			

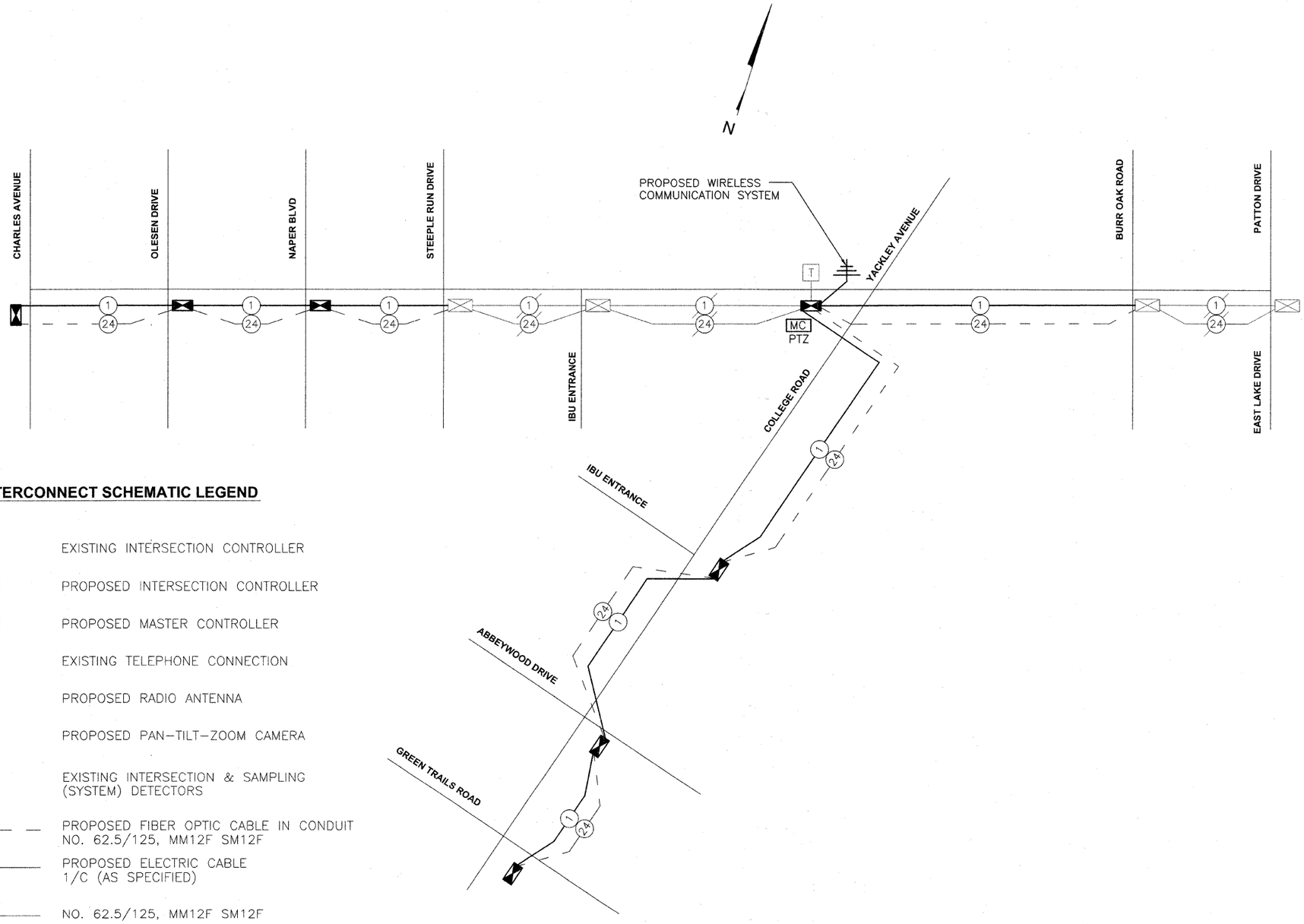
63107

PROPOSED HANDHOLE DATA FOR CHICAGO/MAPLE AVENUE

STATION/OFFSET	DESCRIPTION
M1 38+50 30' RT	STANDARD HANDHOLE
M2 42+70 30' RT	STANDARD HANDHOLE
M3 46+00 30' RT	STANDARD HANDHOLE
M4 49+81 33' RT	STANDARD HANDHOLE
M5 53+05 37' RT	STANDARD HANDHOLE
M6 62+50 37' RT	STANDARD HANDHOLE
M7 66+00 36' RT	STANDARD HANDHOLE
M8 69+58 31' RT	STANDARD HANDHOLE
M9 73+00 30' RT	STANDARD HANDHOLE
M10 76+50 36' RT	STANDARD HANDHOLE
M11 80+00 41' RT	STANDARD HANDHOLE
M12 90+50 36' RT	STANDARD HANDHOLE
M13 94+00 30' RT	STANDARD HANDHOLE
M14 97+50 30' RT	STANDARD HANDHOLE
M15 139+00 39' RT	STANDARD HANDHOLE
M16 142+50 37' RT	STANDARD HANDHOLE
M17 146+00 35' RT	STANDARD HANDHOLE
M18 149+50 33' RT	STANDARD HANDHOLE
M19 153+50 32' RT	STANDARD HANDHOLE

PROPOSED HANDHOLE DATA FOR COLLEGE AVENUE

STATION/OFFSET	DESCRIPTION
C1 109+00 23' LT	STANDARD HANDHOLE
C2 112+00 22' LT	STANDARD HANDHOLE
C3 115+50 24' LT	STANDARD HANDHOLE
C4 119+00 24' LT	STANDARD HANDHOLE
C5 122+50 35' LT	HEAVY DUTY HANDHOLE
C6 132+50 26' LT	HEAVY DUTY HANDHOLE
C7 137+00 27' LT	HEAVY DUTY HANDHOLE
C8 144+33 28' RT	HEAVY DUTY HANDHOLE
C9 148+00 37' RT	HEAVY DUTY HANDHOLE
C10 151+30 37' RT	HEAVY DUTY HANDHOLE
C11 155+72 33' RT	STANDARD HANDHOLE



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- T — EXISTING TELEPHONE CONNECTION
- PROPOSED RADIO ANTENNA
- PTZ — PROPOSED PAN-TILT-ZOOM CAMERA
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- (24) — PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125, MM12F SM12F
- (1) — PROPOSED ELECTRIC CABLE 1/C (AS SPECIFIED)
- (24) — NO. 62.5/125, MM12F SM12F
- (1) — EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE & COLLEGE ROAD
INTERCONNECT SCHEMATIC & SCHEDULE OF QUANTITIES

SCALE: NONE
DATE: 10/24/08

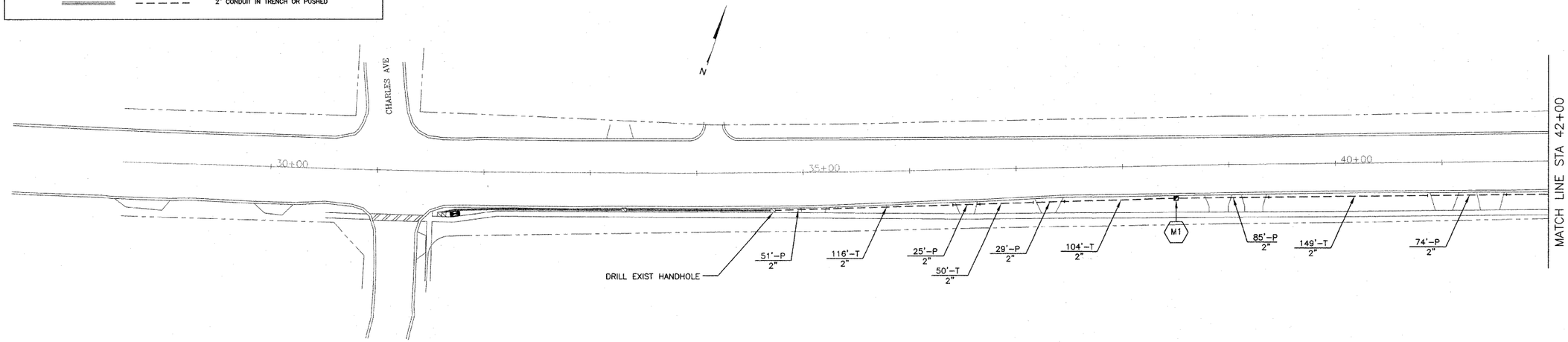
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

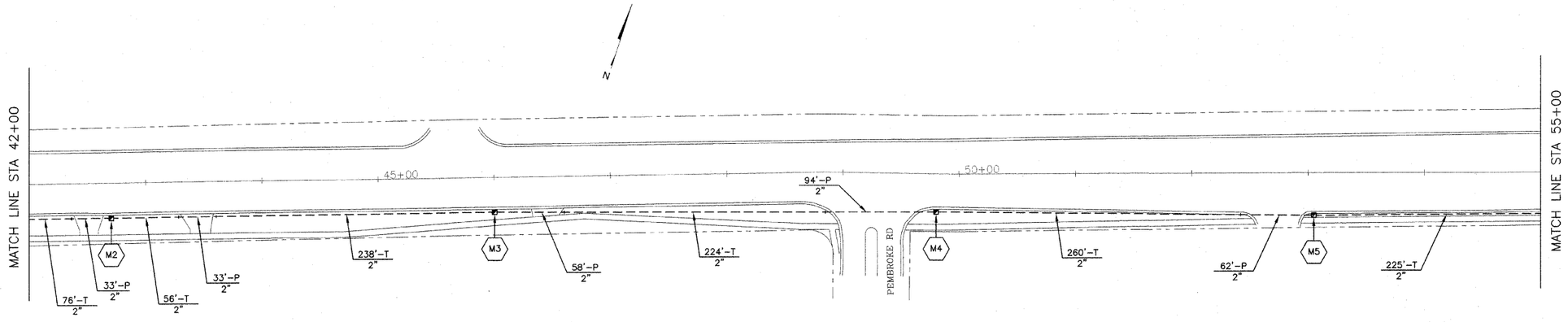
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	8
SEC. 07-00230-07-TL	DUPAGE CO.		

63107

INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
H	H	HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED





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, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

DATE: 10/24/08

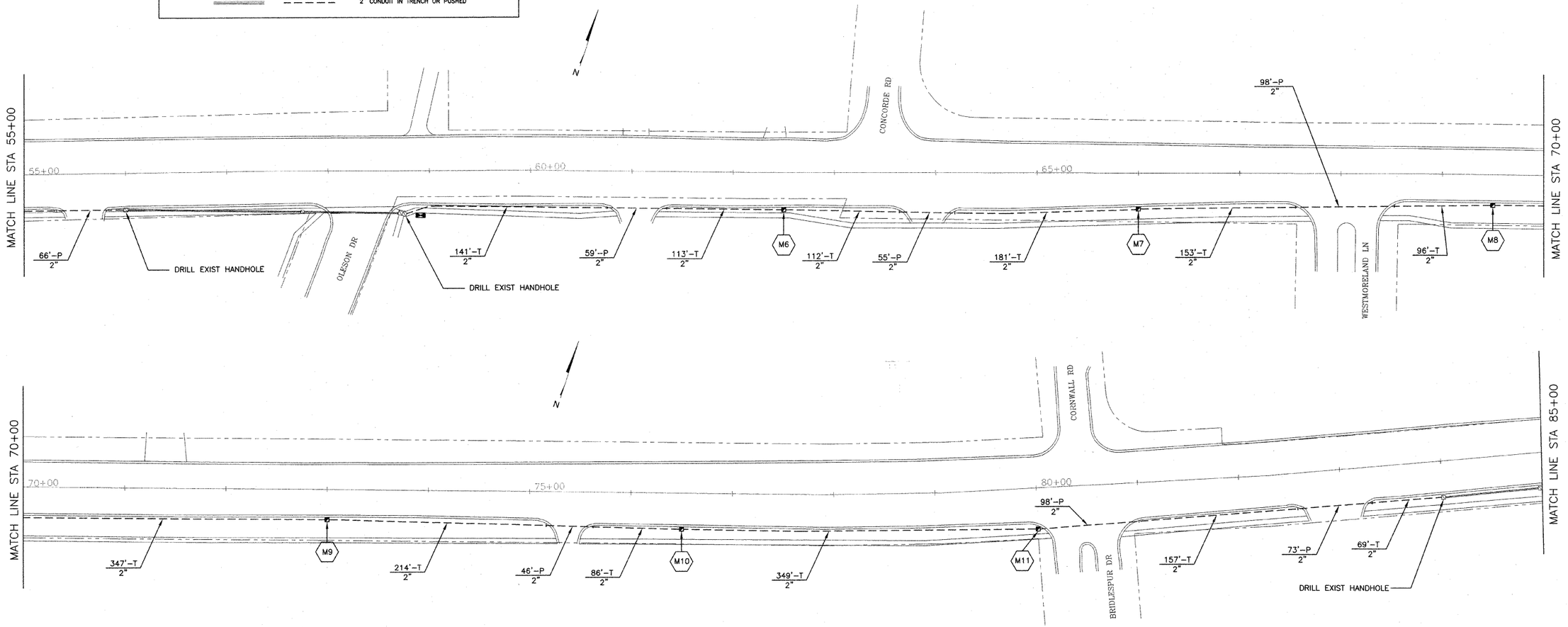
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	9
SEC. 07-00230-07-TL DUPAGE CO.			

63107

INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
H	H	HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED



RESTORATION OF WORK AREA

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REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

DATE: 10/24/08

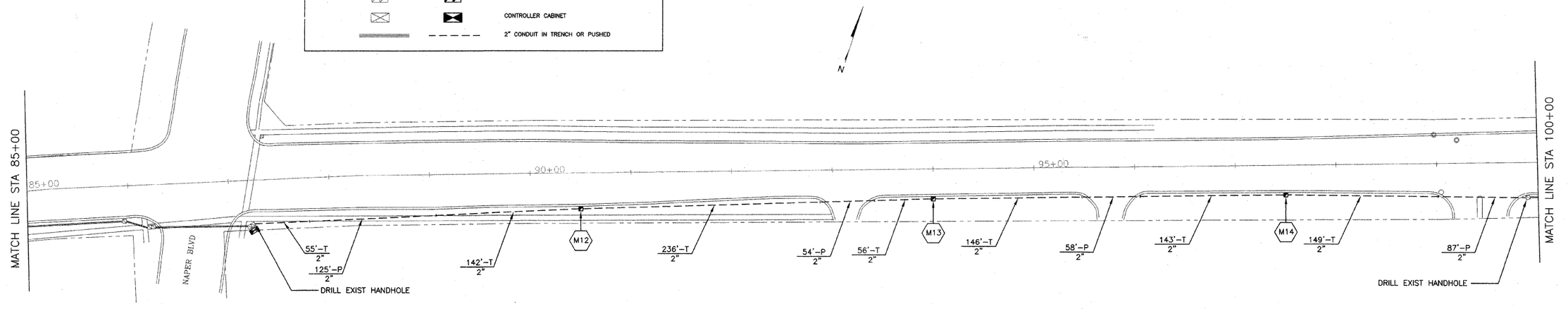
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

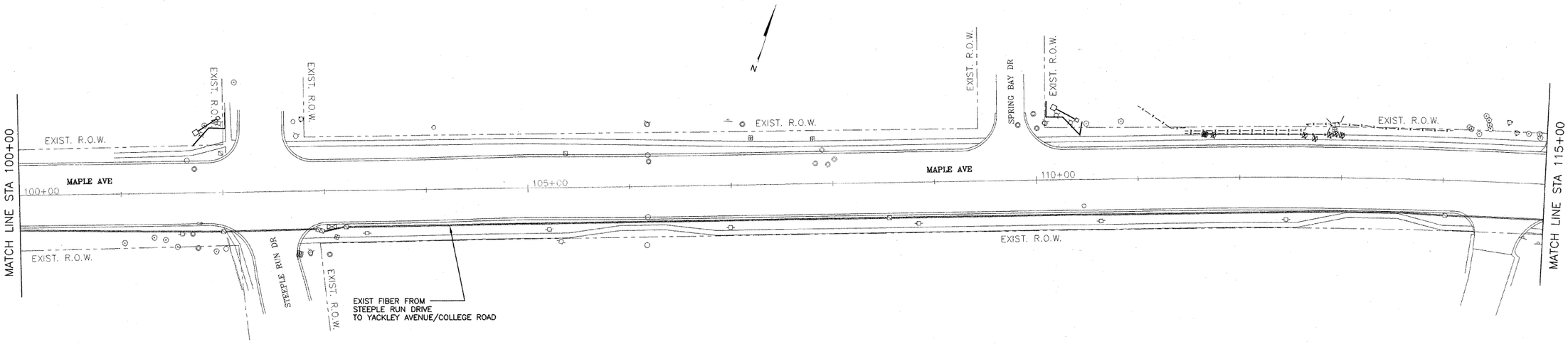
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	10
SEC. 07-00230-07-TL DUPAGE CO.			

63107

INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
H	H	HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED





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, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	11
SEC. 07-00230-07-TL DUPAGE CO.			

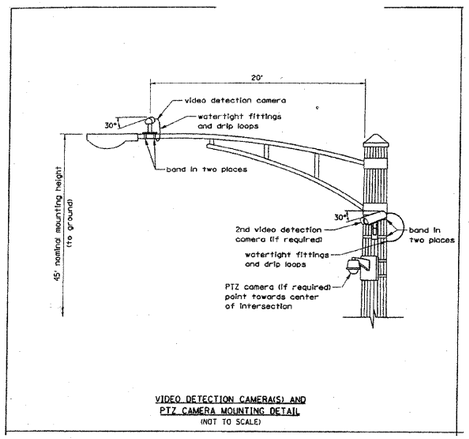
63107

INTERCONNECT PLAN LEGEND

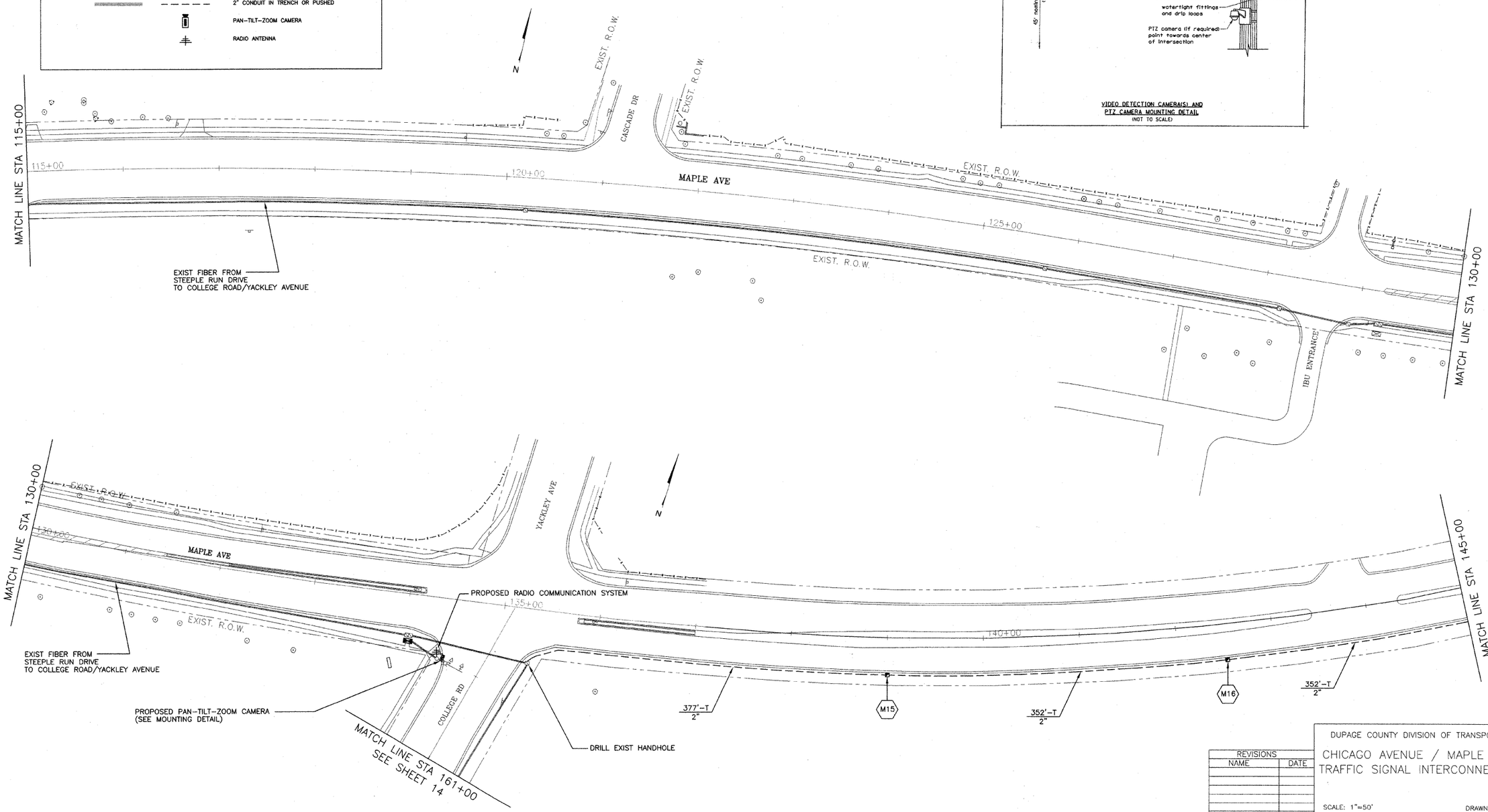
EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
		HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED
		PAN-TILT-ZOOM CAMERA
		RADIO ANTENNA

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, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



VIDEO DETECTION CAMERA(S) AND PTZ CAMERA MOUNTING DETAIL
(NOT TO SCALE)



REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

DATE: 10/24/08

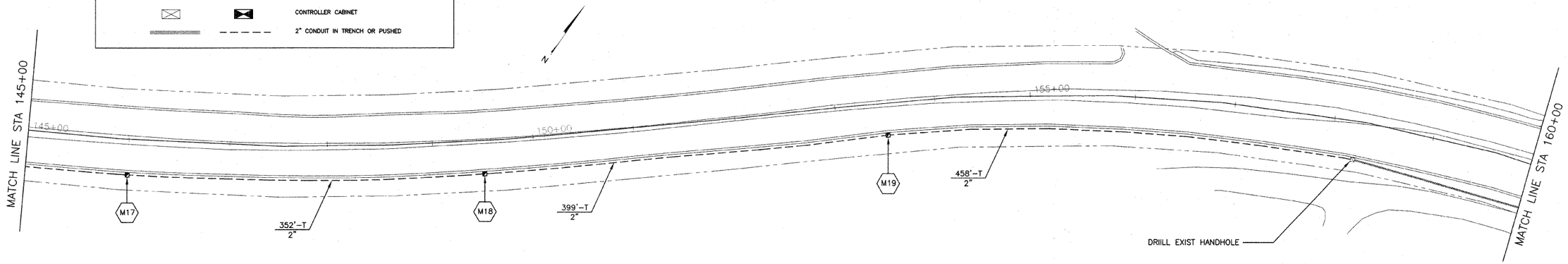
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

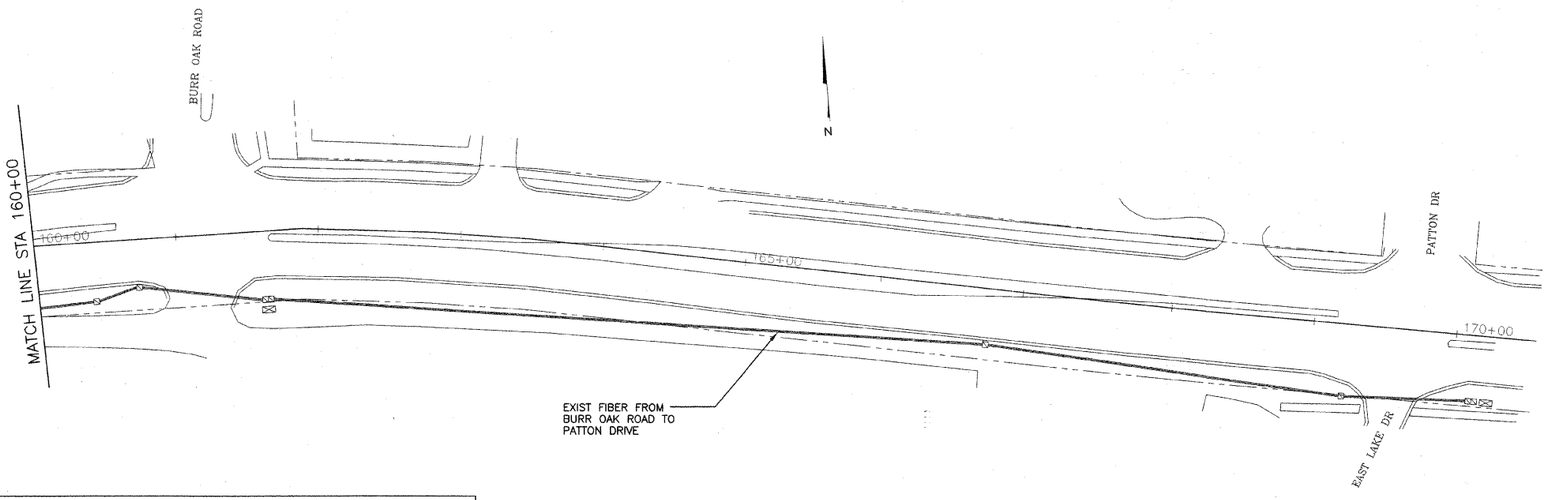
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	12
SEC. 07-00230-07-TL DUPAGE CO.			

63107

INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
		HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED





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, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

DATE: 10/24/08

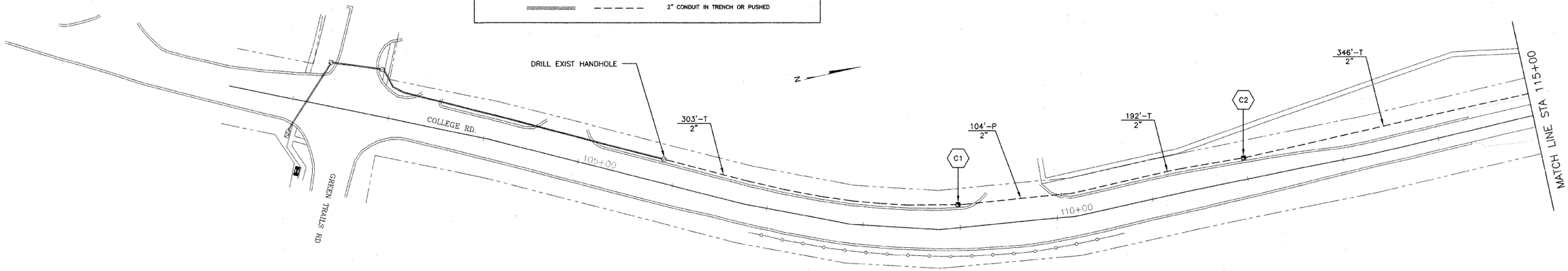
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

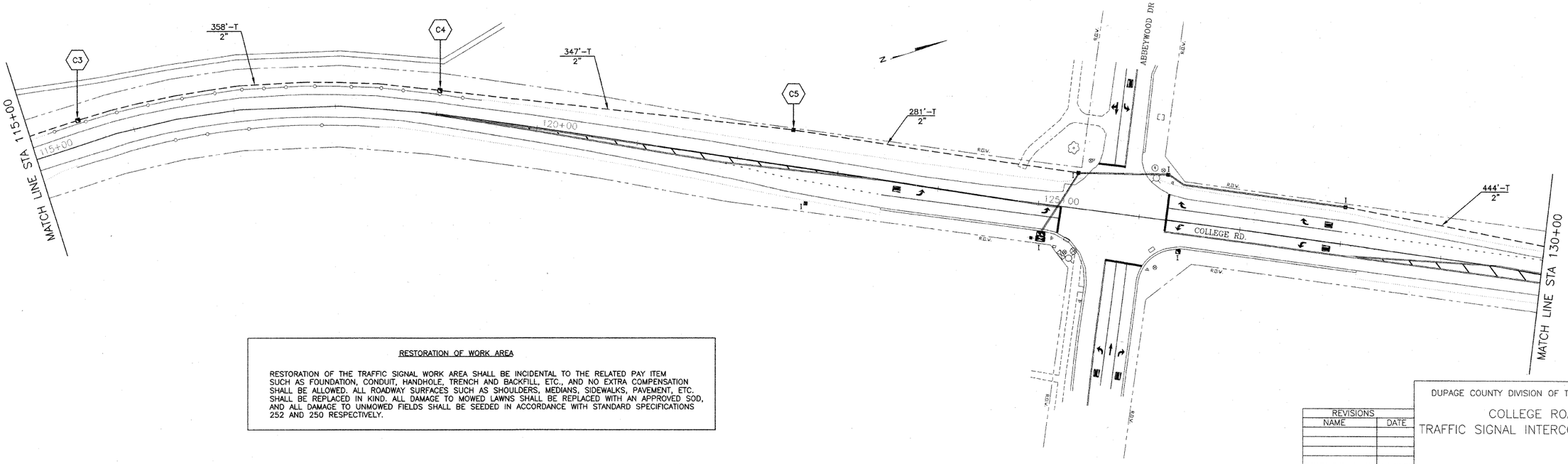
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	13
SEC. 07-00230-07-TL DUPAGE CO.			

63107

INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
		HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED





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, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	14
SEC. 07-00230-07-TL DUPAGE CO.			

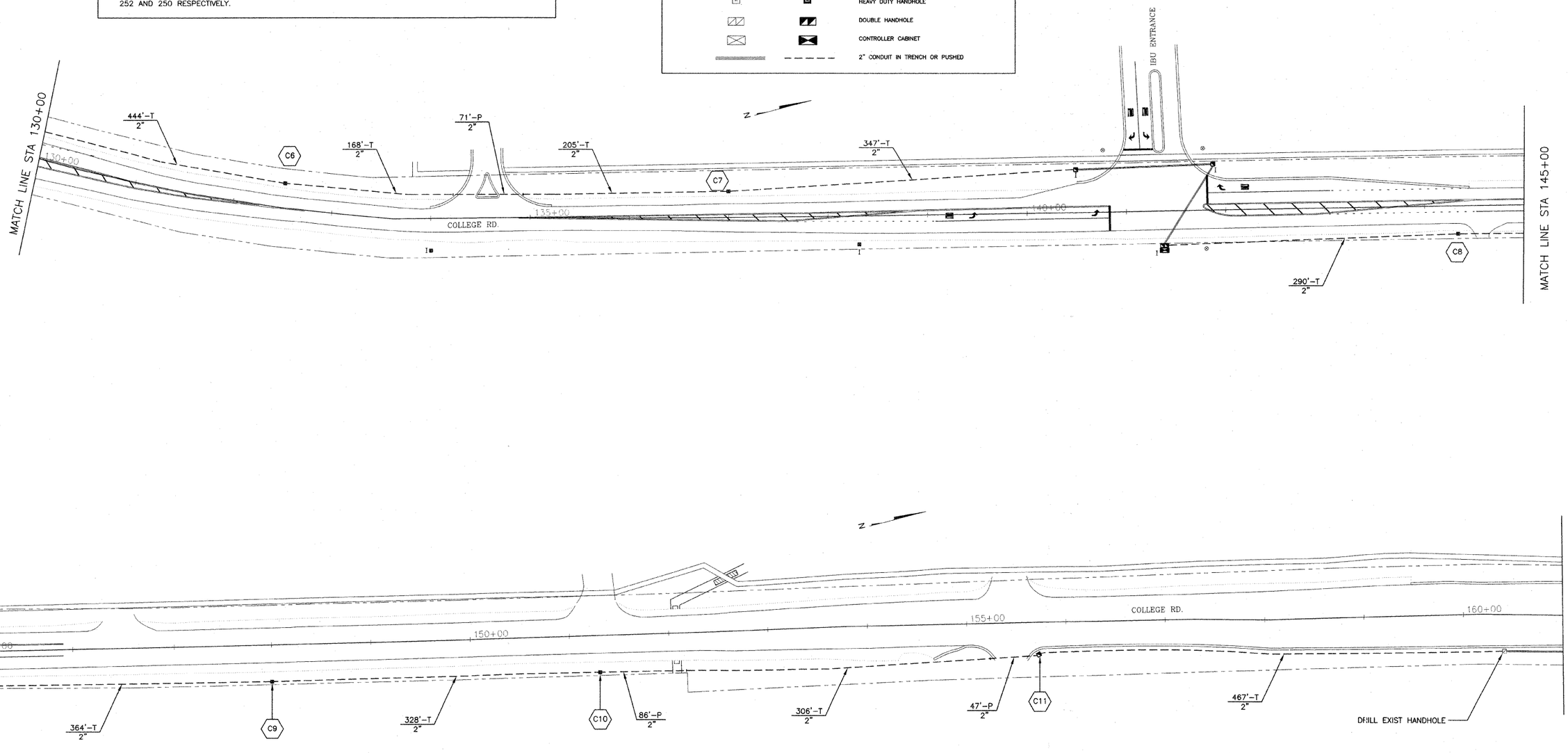
63107

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, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
		STANDARD HANDHOLE
		INTERSECTION HANDHOLE
		HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		CONTROLLER CABINET
		2" CONDUIT IN TRENCH OR PUSHED



REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1"=50'

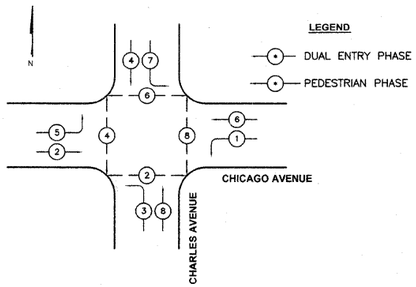
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

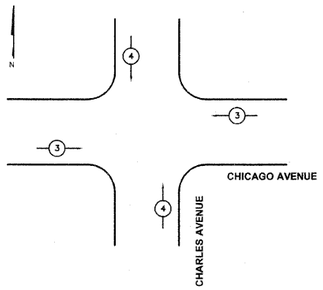
CABLE PLAN

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	15
SEC. 07-00230-07-TL DUPAGE CO.			

63107

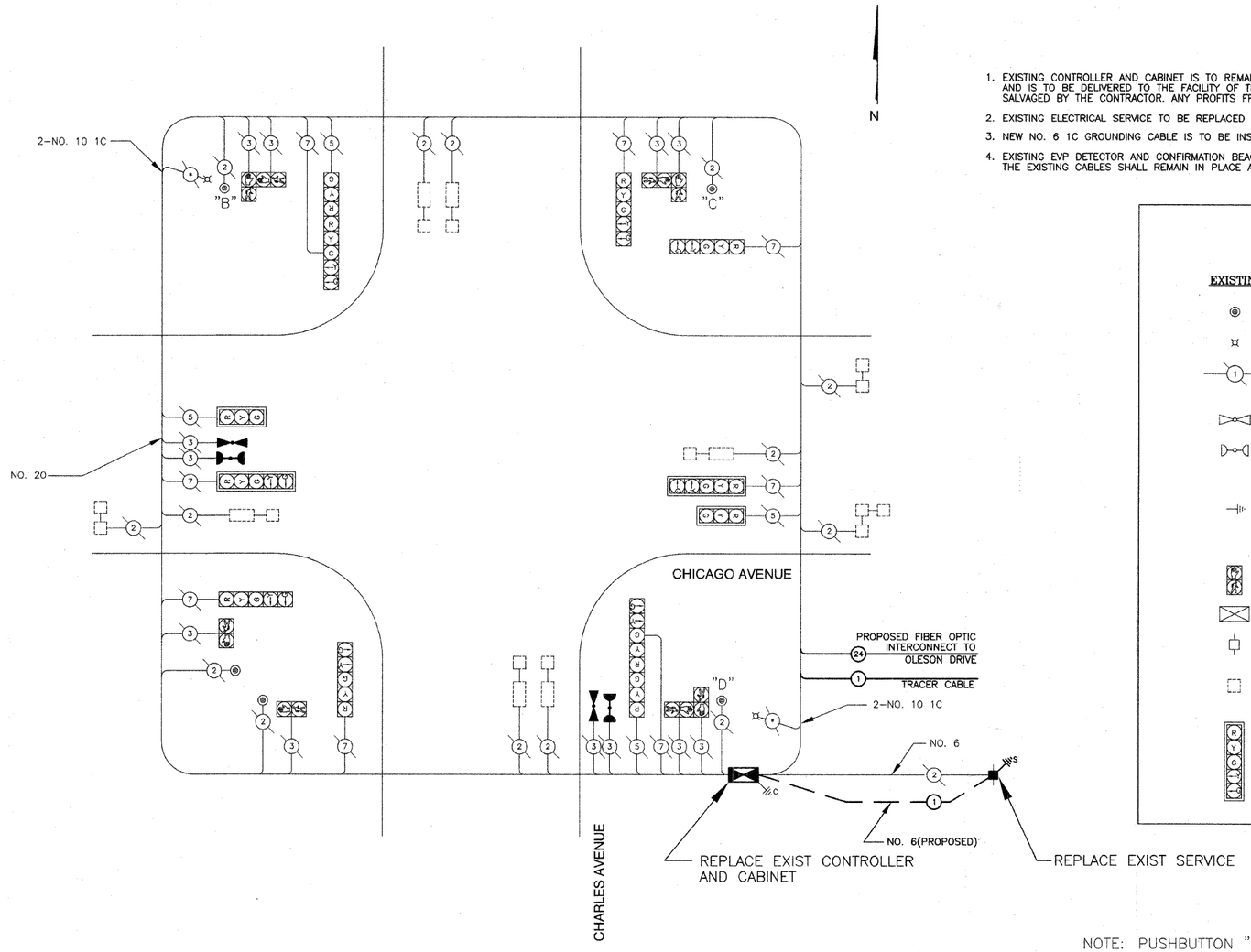


PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	=	||

EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW SERVICE.
3. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.
4. EXISTING EVP DETECTOR AND CONFIRMATION BEACON TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
◎	◎	PUSHBUTTON DETECTOR
✕	✕	LUMINAIRE
—(1)	—(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
▷◁	▶◀	EMERGENCY VEHICLE LIGHT DETECTOR
▷○◁	▶●◀	CONFIRMATION BEACON
⊣	⊣	GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		12" PEDESTRIAN SIGNAL SECTION
☒	▣	CONTROLLER CABINET
□	■	SERVICE INSTALLATION
⬚	□	VEHICLE DETECTOR, INDUCTION LOOP
		SIGNAL FACE WITH BACKPLATE

NOTE: PUSHBUTTON "B" SHALL PLACE CALLS IN PHASES 4 AND 6.
PUSHBUTTON "C" SHALL PLACE CALLS IN PHASES 6 AND 8.
PUSHBUTTON "D" SHALL PLACE CALLS IN PHASES 2 AND 8.

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	100
87900200	DRILL EXISTING HANDHOLE	EACH	1
88500100	INDUCTIVE LOOP DETECTOR	EACH	9
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE & CHARLES AVENUE EXISTING CABLE DIAGRAM AND SCHEDULE OF QUANTITIES

SCALE: NONE

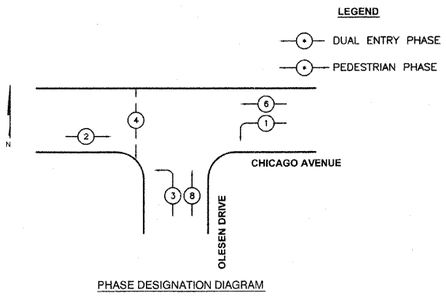
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

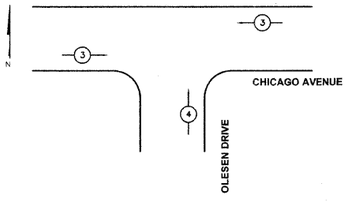
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	16
SEC. 07-00230-07-TL DUPAGE CO.			

63107

CABLE PLAN

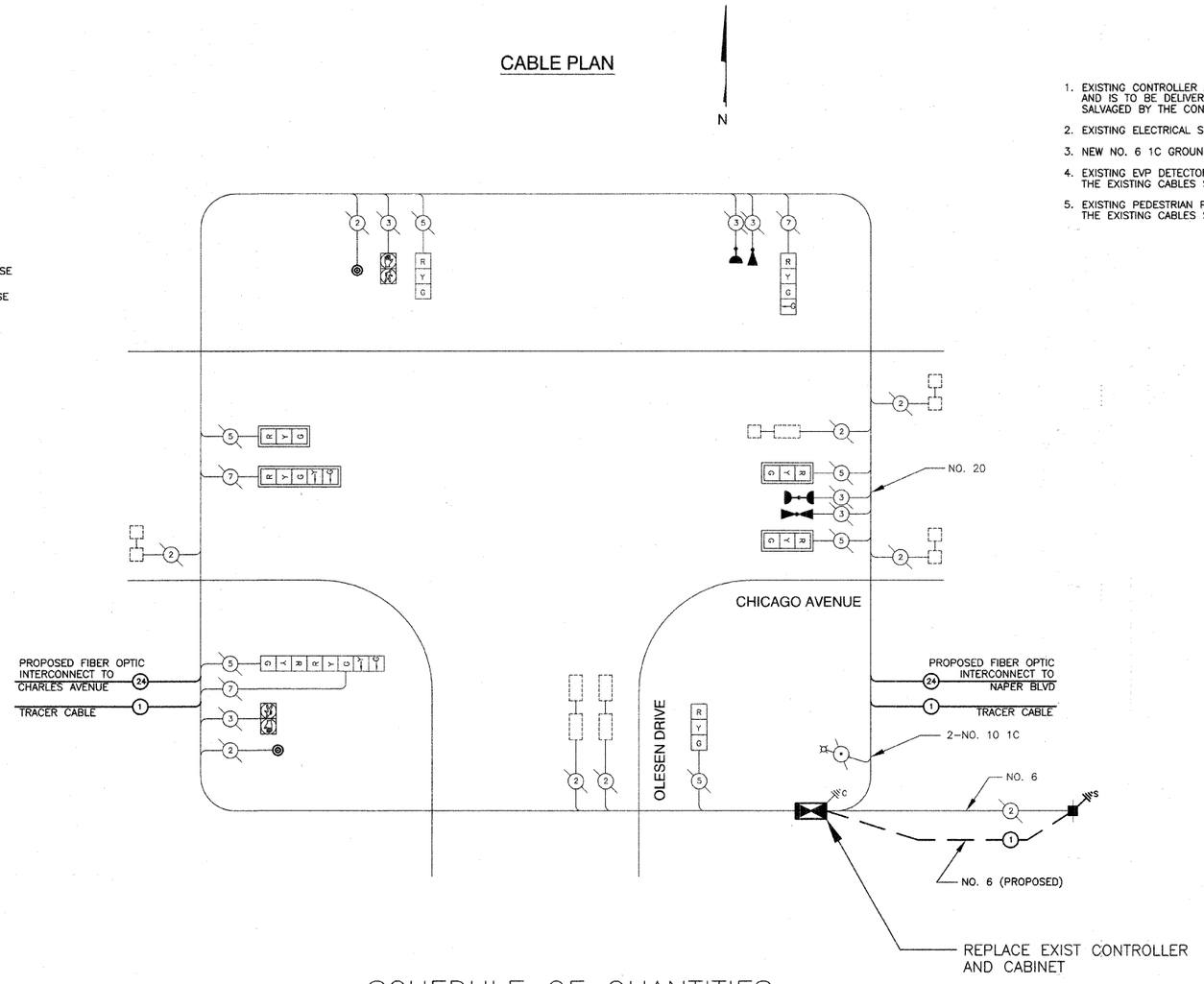


PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW SERVICE.
3. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.
4. EXISTING EVP DETECTOR AND CONFIRMATION BEACON TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.
5. EXISTING PEDESTRIAN PUSH BUTTONS TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		PUSHBUTTON DETECTOR
		LUMINAIRE
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
R Y G	R Y G	SIGNAL FACE WITH BACKPLATE

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	100
87900200	DRILL EXISTING HANDHOLE	EACH	2
88500100	INDUCTIVE LOOP DETECTOR	EACH	6
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	2
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X8510300	PAINT TRAFFIC SIGNAL POST	EACH	3
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE & OLESEN DRIVE
EXISTING CABLE DIAGRAM AND
SCHEDULE OF QUANTITIES

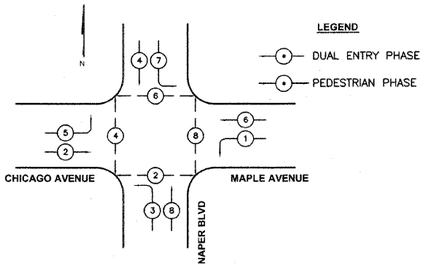
SCALE: NONE
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

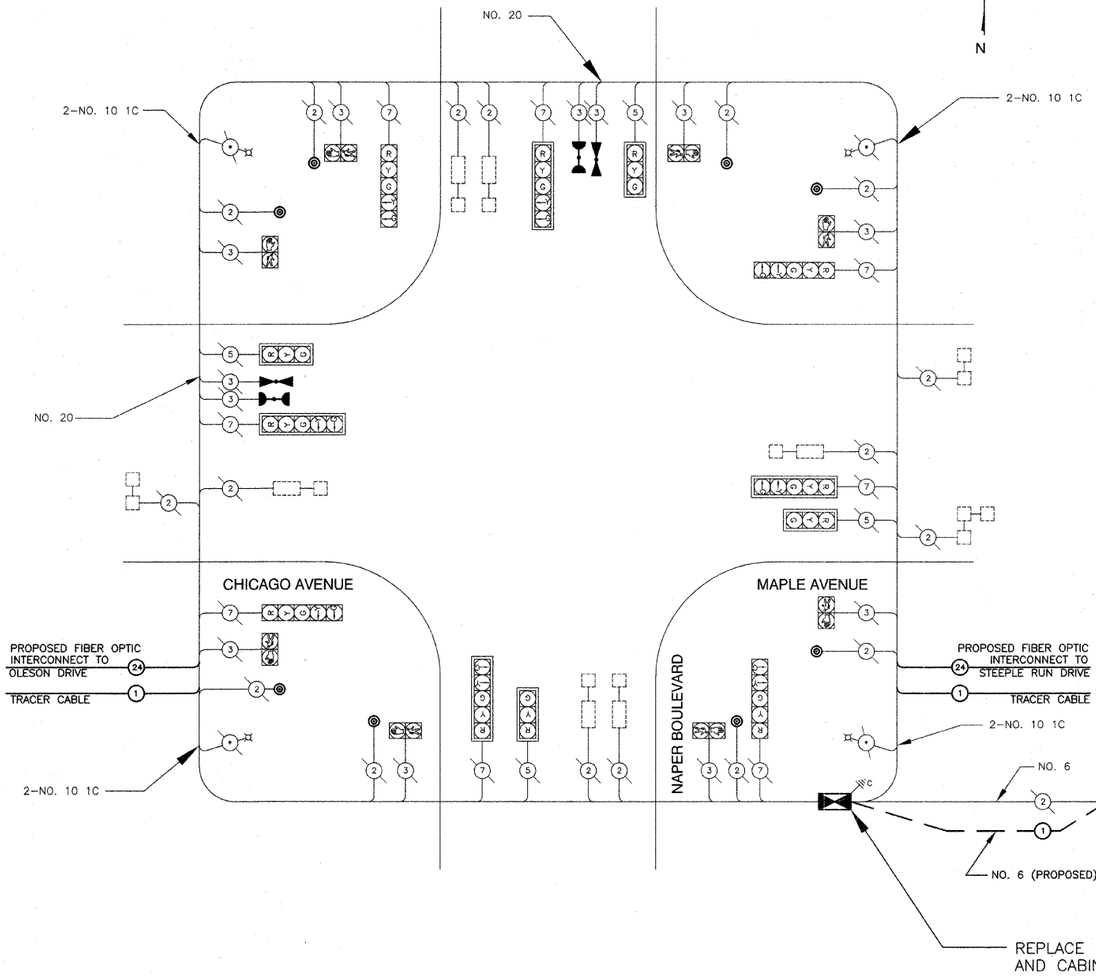
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	17
SEC. 07-00230-07-TL	DUPAGE CO.		

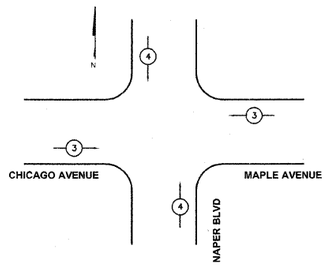
63107

CABLE PLAN



PHASE DESIGNATION DIAGRAM





PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW SERVICE.
3. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.
4. EXISTING EVP DETECTOR AND CONFIRMATION BEACON TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.
5. EXISTING PEDESTRIAN PUSH BUTTONS TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		PUSHBUTTON DETECTOR
		LUMINAIRE
		DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		SERVICE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SIGNAL FACE WITH BACKPLATE

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	100
87900200	DRILL EXISTING HANDHOLE	EACH	2
88500100	INDUCTIVE LOOP DETECTOR	EACH	9
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X8510300	PAINT TRAFFIC SIGNAL POST	EACH	4
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CHICAGO AVENUE / MAPLE AVENUE & NAPER BLVD
EXISTING CABLE DIAGRAM AND SCHEDULE OF QUANTITIES

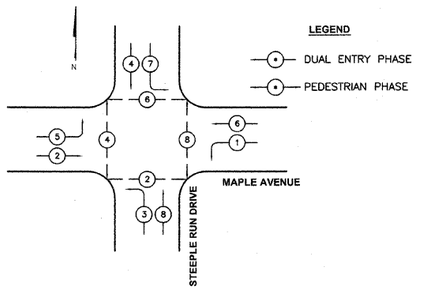
SCALE: NONE
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

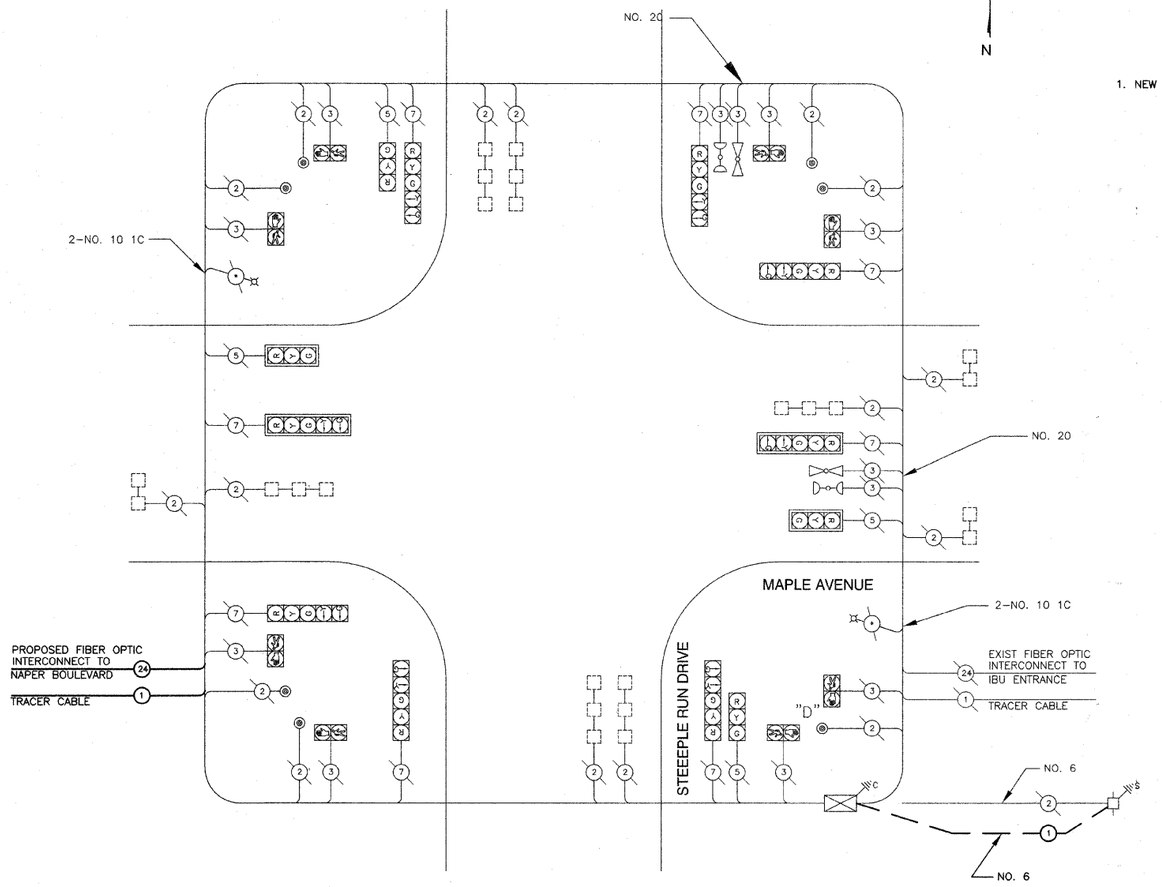
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	18
SEC. 07-00230-07-TL DUPAGE CO.			

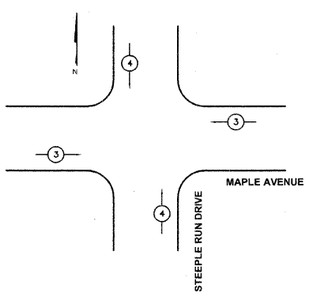
63107.

CABLE PLAN



PHASE DESIGNATION DIAGRAM





PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		PUSHBUTTON DETECTOR
		LUMINAIRE
		DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		SIGNAL FACE WITH BACKPLATE

NOTE: PUSHBUTTON "D" SHALL PLACE CALLS IN PHASES 2 AND 8.

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	100
87900200	DRILL EXISTING HANDHOLE	EACH	2
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

MAPLE AVENUE & STEEPLE RUN DRIVE
EXISTING CABLE DIAGRAM AND SCHEDULE OF QUANTITIES

SCALE: NONE

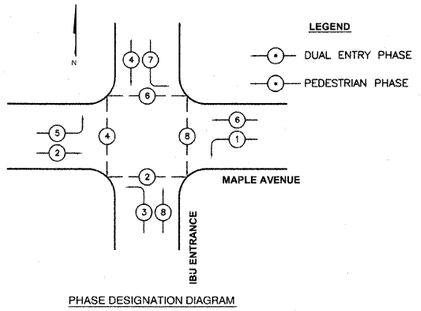
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

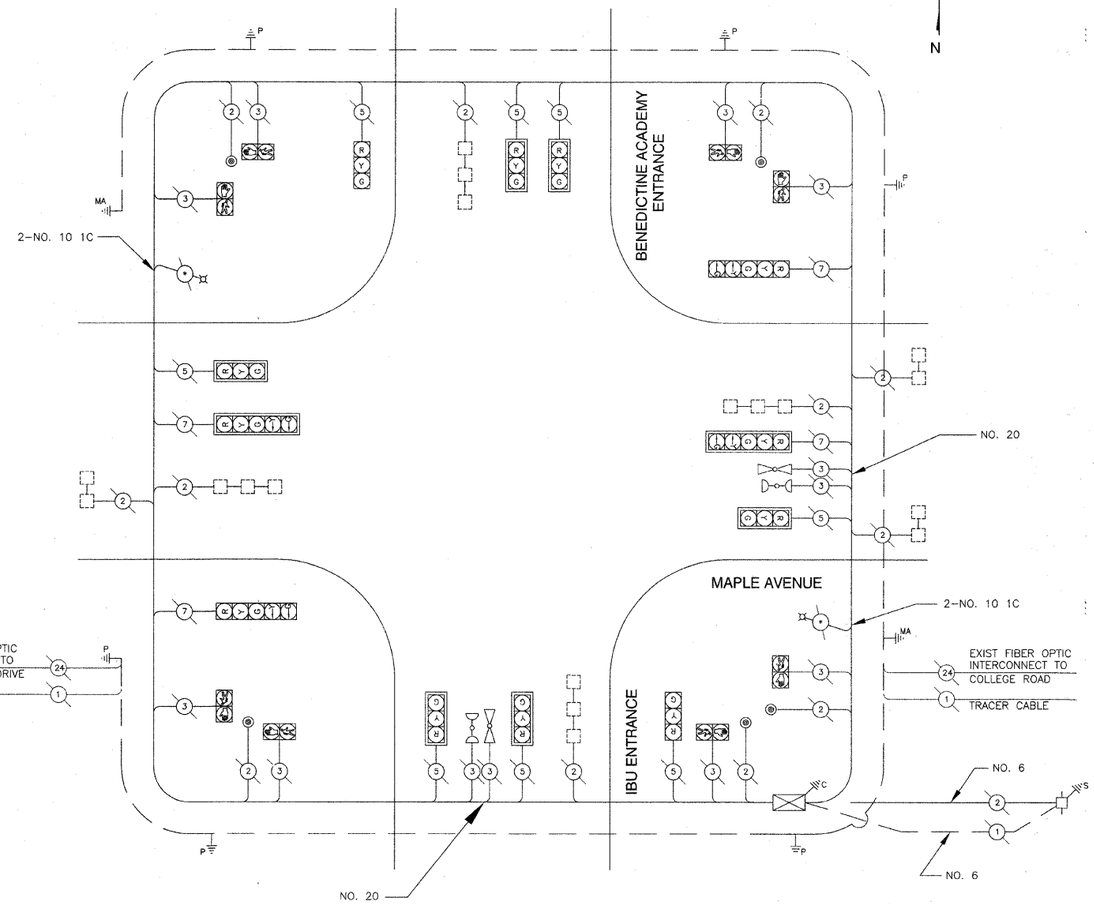
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	19
SEC. 07-00230-07-TL DUPAGE CO.			

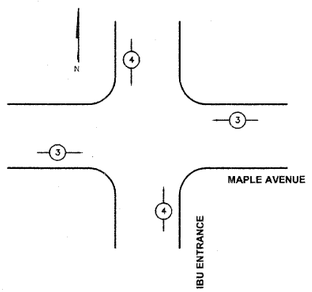
63107

CABLE PLAN



PHASE DESIGNATION DIAGRAM





PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EMERGENCY VEHICLE PREEMPTION SEQUENCE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		PUSHBUTTON DETECTOR
		LUMINAIRE
		DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		SIGNAL FACE WITH BACKPLATE

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
87900200	DRILL EXISTING HANDHOLE	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

MAPLE AVENUE & IBU ENTRANCE / BENEDICTINE ACADEMY ENTRANCE EXISTING CABLE DIAGRAM AND SCHEDULE OF QUANTITIES

SCALE: NONE

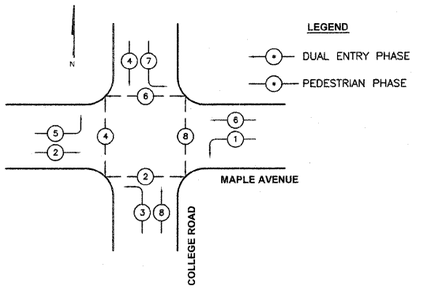
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

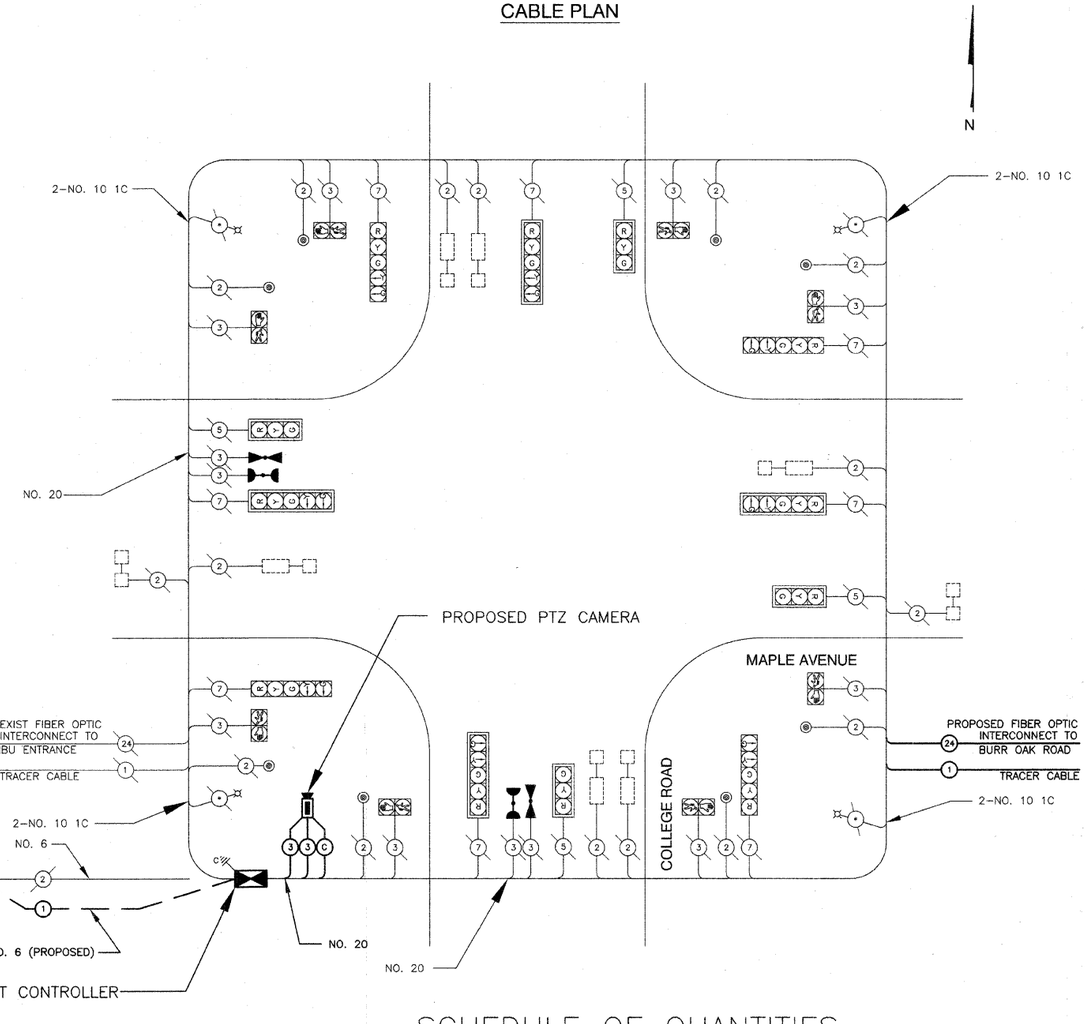
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	20
SEC. 07-00230-07-TL	DUPAGE CO.		

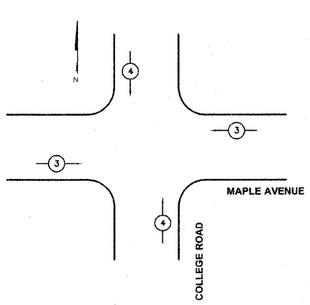
63107

CABLE PLAN



PHASE DESIGNATION DIAGRAM





PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⇄	⇅

EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. THE PAN-TILT-ZOOM (PTZ) CAMERA FOR THE REMOTE CONTROLLED VIDEO SYSTEM SHALL BE MOUNTED ON THE POLE OF THE SOUTHBOUND COMBINATION MAST ARM AND POLE AT THE SOUTHWEST QUADRANT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE WORK FOR THE PTZ CAMERA INSTALLATION SHALL BE PAID FOR UNDER THE PAY ITEM "REMOTE CONTROLLED VIDEO SYSTEM".
4. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW SERVICE.
5. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.
6. EXISTING EVP DETECTOR AND CONFIRMATION BEACON TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
◉	◉	PUSHBUTTON DETECTOR
⌑	✱	LUMINAIRE
—①—	—①—	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
▷◁	▶◀	EMERGENCY VEHICLE LIGHT DETECTOR
▷○◁	▶●◀	CONFIRMATION BEACON
	▬	PTZ CAMERA
⊣	⊣	GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		12" PEDESTRIAN SIGNAL SECTION
▭	▬	CONTROLLER CABINET
▯	■	SERVICE INSTALLATION
▯	□	VEHICLE DETECTOR, INDUCTION LOOP
		SIGNAL FACE WITH BACKPLATE

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	**1**
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	**1**
86000100	MASTER CONTROLLER	EACH	**1**
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	**200**
XX003661	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	**200**
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	**100**
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	**200**
87900200	DRILL EXISTING HANDHOLE	EACH	**2**
88500100	INDUCTIVE LOOP DETECTOR	EACH	**8**
88700200	LIGHT DETECTOR	EACH	**2**
88700300	LIGHT DETECTOR AMPLIFIER	EACH	**1**
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	**1**
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	**1**
XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	**1**
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	**1**

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

MAPLE AVENUE & COLLEGE ROAD / YACKLEY AVENUE

EXISTING CABLE DIAGRAM AND SCHEDULE OF QUANTITIES

SCALE: NONE

DATE: 10/24/08

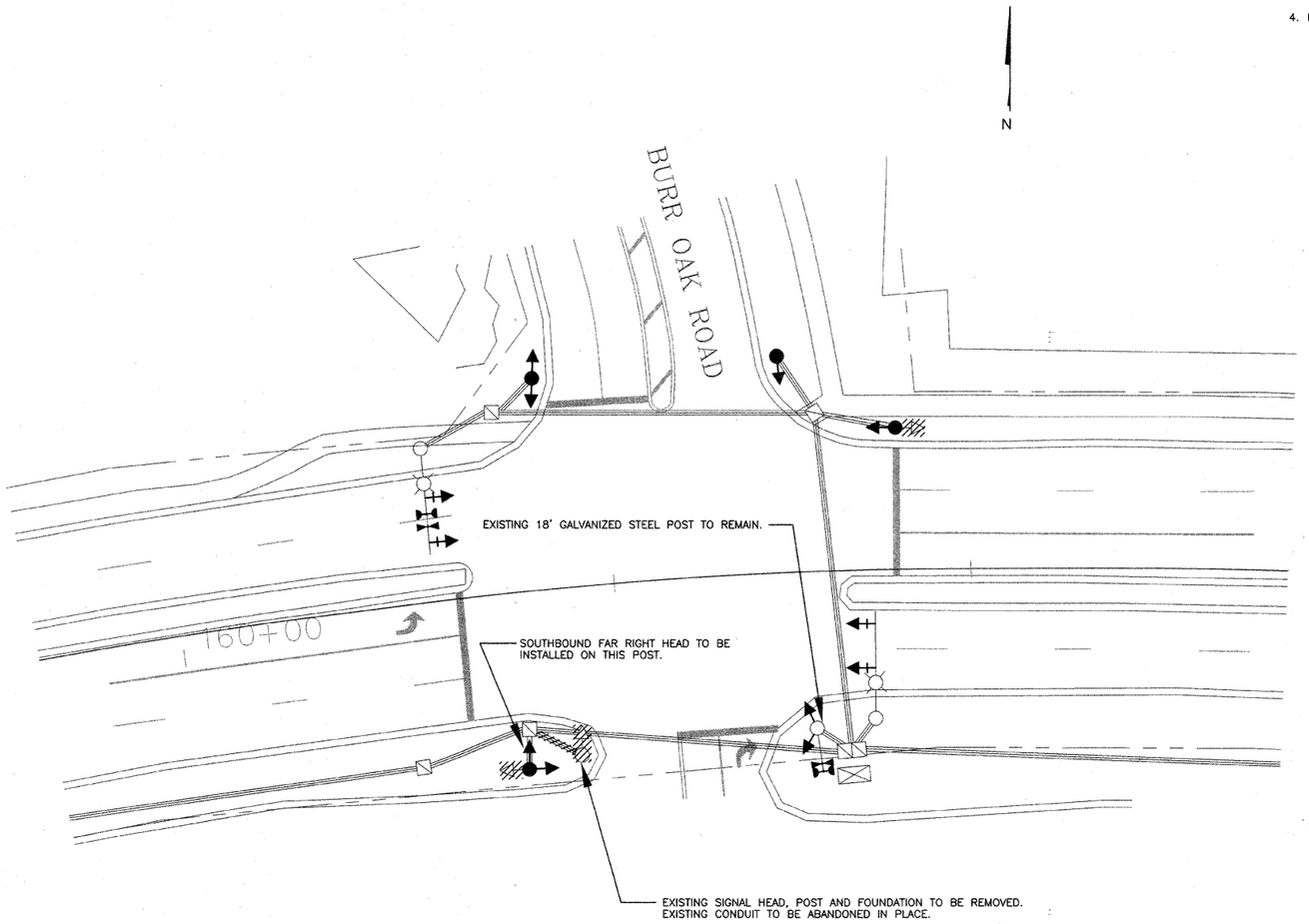
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	21
SEC. 07-00230-07-TL DUPAGE CO.			

63107

NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. EAST AND WESTBOUND NEAR RIGHT SIGNALS ARE TO BE REMOVED AS SHOWN ON PLAN.
3. EXISTING PAINTED POSTS TO BE REMOVED AND REPLACED WITH GALVANIZED STEEL POSTS AS SHOWN ON PLAN.
4. EXISTING SIGNAL HEADS TO BE REPLACED BY POLYCARBONATE LED HEADS.



TRAFFIC SIGNAL PLAN LEGEND

PROPOSED	EXISTING	
		CONTROLLER
		HANDHOLE
		HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		SIGNAL HEAD
		EXISTING SIGNAL EQUIPMENT TO BE REMOVED
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		TRAFFIC SIGNAL POST
		DETECTOR LOOP
		GALV STEEL CONDUIT, IN TRENCH OR PUSHED

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

MAPLE AVENUE & BURR OAK ROAD EXISTING AND PROPOSED TRAFFIC SIGNAL PLAN

SCALE: 1"=20'
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	22
SEC. 07-00230-07-TL	DUPAGE CO.		

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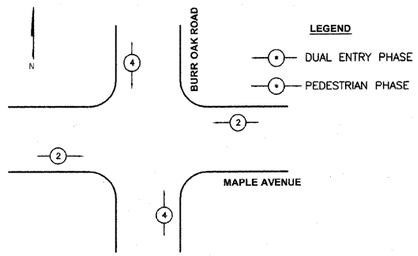
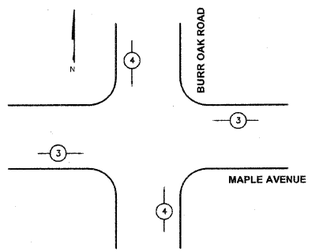
NOTES:

1. REMOVAL OF EXISTING SIGNAL EQUIPMENT IS TO BE PAID UNDER THE PAY ITEM "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT".
2. ALL EXISTING SIGNAL HEADS ARE TO BE REPLACED WITH POLYCARBONATE LED HEADS WITH 12" DISPLAYS. THE EXISTING CABLE SHALL BE SPLICED ONTO THE NEW EQUIPMENT.
3. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW SERVICE.
4. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.
5. EXISTING EVP DETECTOR AND CONFIRMATION BEACON TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.

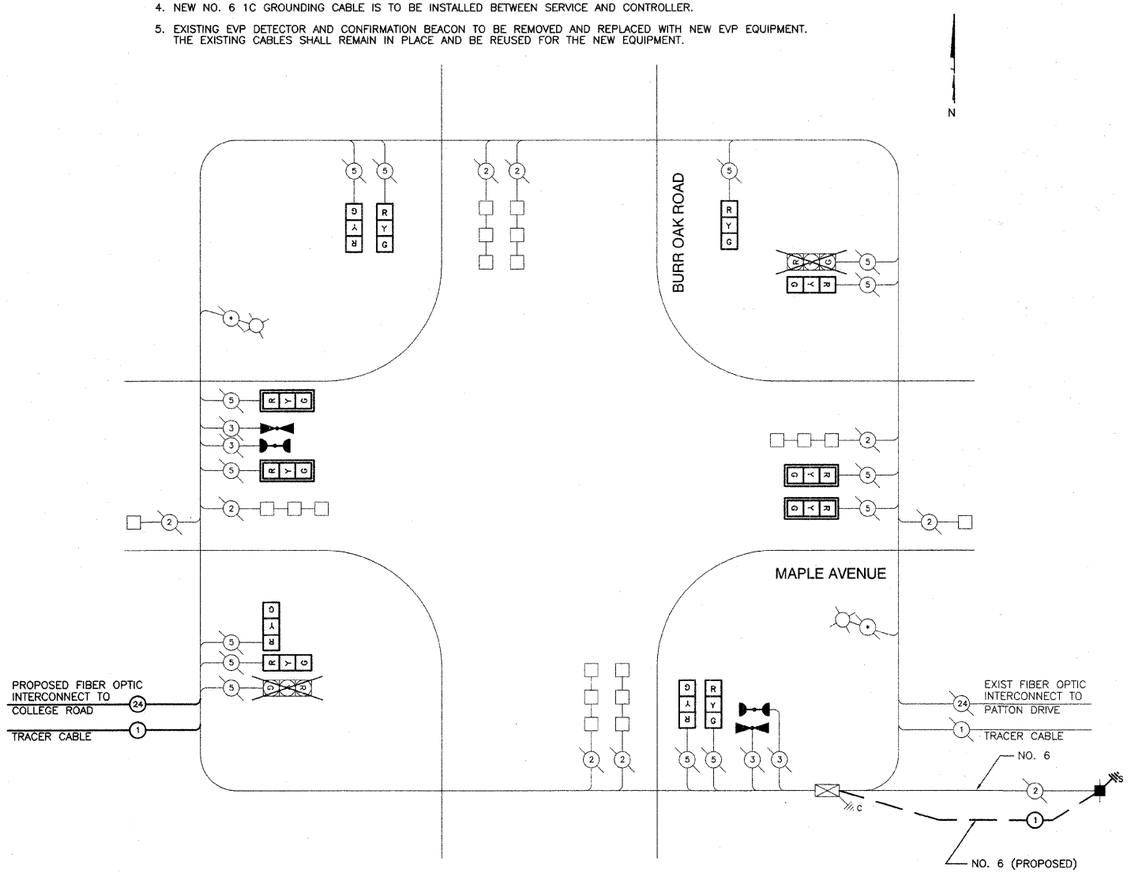


PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		SERVICE INSTALLATION
		LUMINAIRE
R Y G	R Y G	SIGNAL FACE WITH BACKPLATE
	R Y G	EXISTING SIGNAL HEAD TO BE REMOVED

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	**1**
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	**100**
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	**3**
87900200	DRILL EXISTING HANDHOLE	EACH	**1**
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	**4**
88700200	LIGHT DETECTOR	EACH	**2**
88700300	LIGHT DETECTOR AMPLIFIER	EACH	**1**
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	**1**
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	**4**
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	**8**
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	**1**
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	**1**

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	12	135	10	0.60	72
YELLOW BALL	12	135	22	0.03	7.9
GREEN BALL	12	135	12	0.37	53.3
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	0	135	10	0.02	0
GREEN ARROW	0	135	5	0.13	0
PED - WALK	0	90	5	0.05	0
PED- DON'T WALK	0	90	6	0.95	0
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	310
				TOTAL=	543

FOUNDATION(DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

MAPLE AVENUE & BURR OAK ROAD
EXISTING AND PROPOSED
CABLE PLAN AND PHASING DIAGRAM

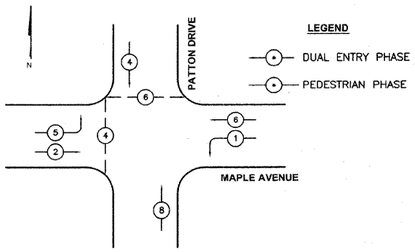
SCALE: 1"=20'
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

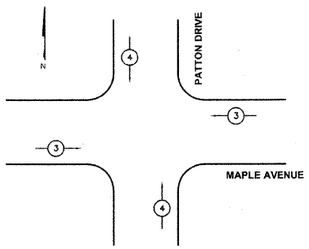
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	23

SEC. 07-00230-07-TL DUPAGE CO.

63107

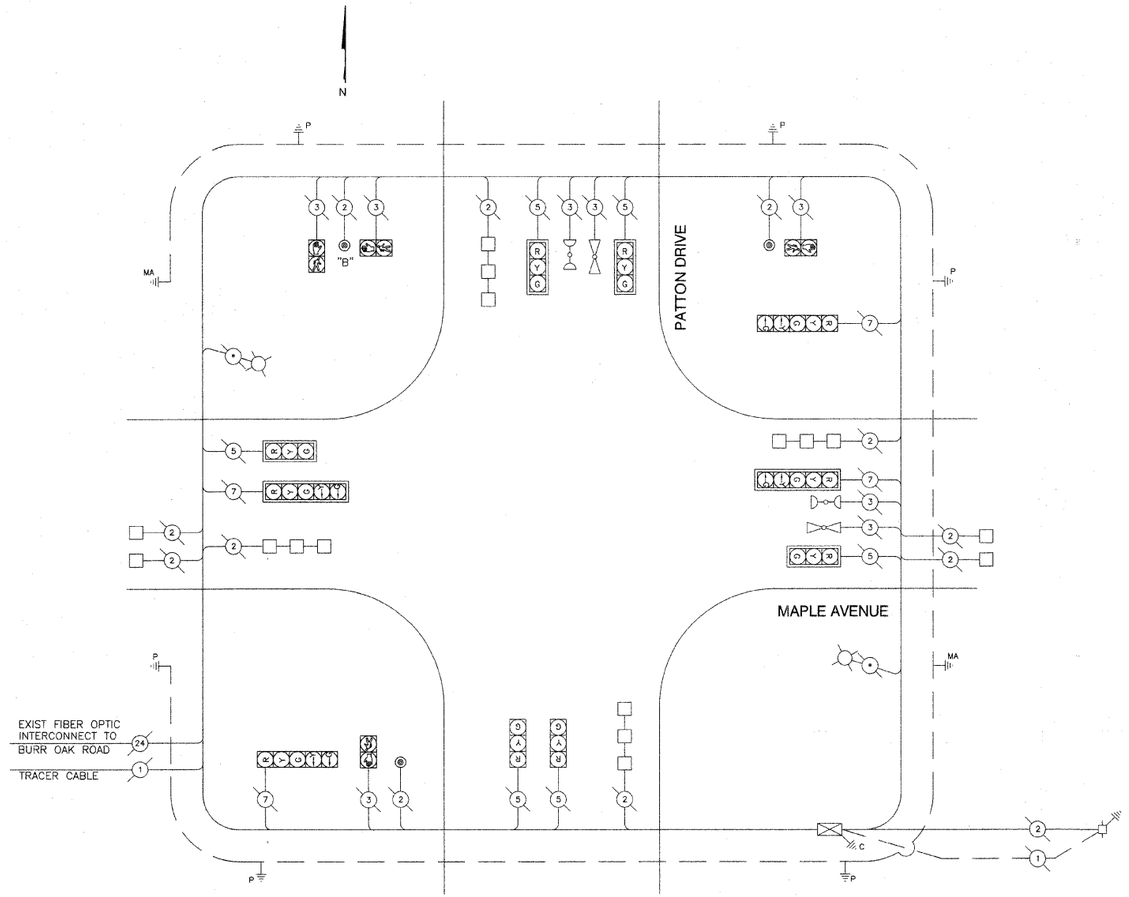


PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTE: PUSH BUTTON "B" SHALL MAKE A CALL IN PHASES 4 AND 6

CABLE PLAN LEGEND

PROPOSED	EXISTING	
	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		SIGNAL FACE WITH BACKPLATE

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	10	135	10	0.60	60
YELLOW BALL	10	135	22	0.03	6.6
GREEN BALL	10	135	12	0.37	44.4
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	4	135	10	0.02	0.8
GREEN ARROW	4	135	5	0.13	2.6
PED - WALK	4	90	5	0.05	1
PED- DON'T WALK	4	90	6	0.95	22.8
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	310
				TOTAL=	548

FOUNDATION(DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

MAPLE AVENUE & PATTON DRIVE EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

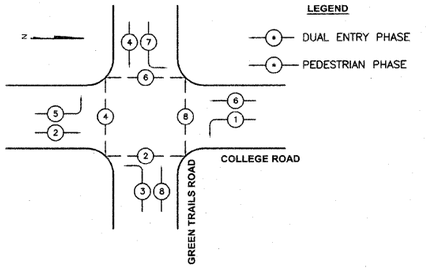
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

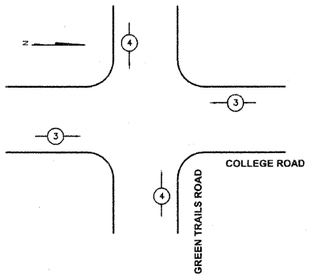
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
VARIOUS	2008	30	24
SEC. 07-00230-07-TL, DUPAGE CO.			

63107

CABLE PLAN

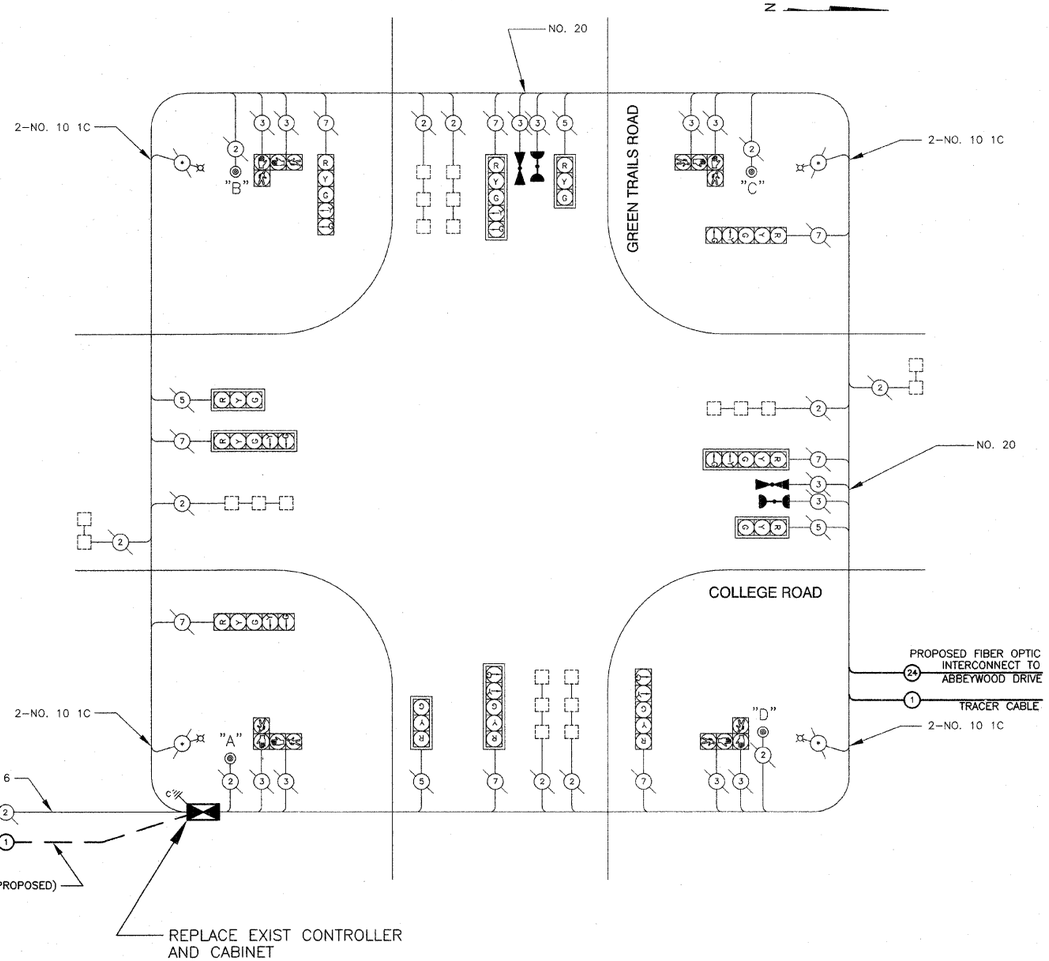


PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	=	||

EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW SERVICE.
3. NEW NO. 6 1C GROUNDING CABLE IS TO BE INSTALLED BETWEEN SERVICE AND CONTROLLER.
4. EXISTING EVP DETECTOR AND CONFIRMATION BEACON TO BE REMOVED AND REPLACED WITH NEW EVP EQUIPMENT. THE EXISTING CABLES SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW EQUIPMENT.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
◎	◎	PUSHBUTTON DETECTOR
⌑	✖	LUMINAIRE
—①—	—①—	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
▷◁	▶◀	EMERGENCY VEHICLE LIGHT DETECTOR
▷o◁	▶●◀	CONFIRMATION BEACON
—⊩—	—⊩—	GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		12" PEDESTRIAN SIGNAL SECTION
⊠	⧓	CONTROLLER CABINET
▫	■	SERVICE INSTALLATION
□	□	VEHICLE DETECTOR, INDUCTION LOOP
		SIGNAL FACE WITH BACKPLATE

NOTE: PUSHBUTTON "A" SHALL PLACE CALLS IN PHASES 2 AND 4.
PUSHBUTTON "B" SHALL PLACE CALLS IN PHASES 4 AND 6.
PUSHBUTTON "C" SHALL PLACE CALLS IN PHASES 6 AND 8.
PUSHBUTTON "D" SHALL PLACE CALLS IN PHASES 2 AND 8.

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	100
87900200	DRILL EXISTING HANDHOLE	EACH	1
88500100	INDUCTIVE LOOP DETECTOR	EACH	8
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD & GREEN TRAILS ROAD
EXISTING CABLE DIAGRAM AND
SCHEDULE OF QUANTITIES

SCALE: NONE
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17&40	2008	30	25

SEC. 07-00230-07-TL DUPAGE CO.

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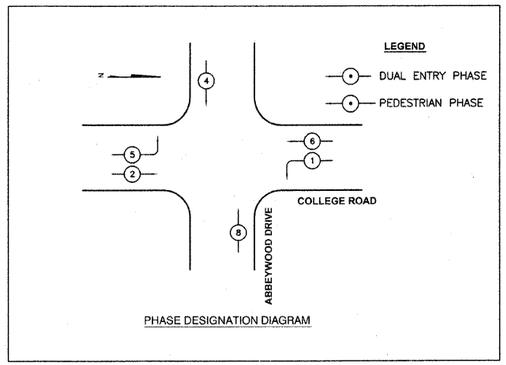


PHASE DESIGNATION DIAGRAM

NOTES:

1. EXISTING CONTROLLER AND CABINET IS TO REMAIN THE PROPERTY OF THE DUPAGE COUNTY DIVISION OF TRANSPORTATION (DOT) AND IS TO BE DELIVERED TO THE FACILITY OF THE DOT SIGNAL MAINTENANCE CONTRACTOR. ALL OTHER EQUIPMENT SHALL BE SALVAGED BY THE CONTRACTOR. ANY PROFITS FROM SALVAGED EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT BID ITEMS.
2. THE EXISTING TEMPORARY TRAFFIC SIGNAL SHALL BE REMOVED INCLUDING ALL POLES, CABLES AND WIRES. THIS WORK SHALL BE PAID FOR UNDER THE PAY ITEM "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT".

TRAFFIC SIGNAL PLAN LEGEND

PROPOSED	EXISTING	
		CONTROLLER
		SERVICE INSTALLATION
		HANDHOLE
		HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		WOOD POLE
		GUY WIRE
		SIGNAL HEAD
		DETECTOR LOOP
		GALV STEEL CONDUIT, IN TRENCH OR PUSHED

CABLE PLAN LEGEND

- DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
- GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
- VEHICLE DETECTOR, INDUCTION LOOP
- SIGNAL FACE, SPAN MOUNTED

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD & ABBEYWOOD DRIVE EXISTING TRAFFIC SIGNAL PLAN, CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17&40	2008	30	26
SEC. 07-00230-07-TL DUPAGE CO.			

63107

TRAFFIC SIGNAL NOTES

THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING AT HANDHOLES, JACKING PITS AND INSPECTION OPENINGS SHALL BE SAW CUT AROUND THE AREA TO BE REMOVED. THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING WILL BE PAID FOR SEPARATELY. LANDSCAPE RESTORATION FOR PROPOSED SIDEWALK WILL BE PAID FOR SEPARATELY.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL J.U.L.I.E. TOLL FREE NUMBER 1-800-892-0123.

ALL SIGNAL POSTS AND MAST ARM POLES SHALL BE LOCATED WITH THEIR CENTERLINES A MINIMUM OF FOUR (4) FEET AND SIX (6) FEET RESPECTIVELY FROM THE BACK OF CURB UNLESS NOTED OR DIMENSIONED TO THE CONTRARY ON THE DRAWINGS. IN NON-CURBED AREAS THE MAST ARM POLE SHALL BE LOCATED A MINIMUM OF TEN (10) FEET BEHIND THE EDGE OF PAVEMENT OR TWO (2) FEET BEHIND THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. SIGNAL POSTS SHALL BE PLACED AT A MINIMUM OF TWO (2) FEET BEHIND THE EDGE OF SHOULDER.

THE CONTRACTOR SHALL CONTACT THE DU PAGE COUNTY DIVISION OF TRANSPORTATION (630/407-6900) FOR TRAFFIC SIGNAL CABLE LOCATION, A MINIMUM OF 48 HOURS IN ADVANCE (SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED) AT ANY LOCATION WITHIN THE RIGHT- OF-WAY.

CONTACT THE DU PAGE COUNTY TRAFFIC SIGNAL COORDINATOR (630/407-6900) TO APPROVE LOCATIONS OF LOOPS, SIGNAL FOUNDATIONS AND SIGNAL HEADS.

LEAD WIRE AND DETECTOR LOOPS SHALL BE SAWCUT 4" DEEP INTO THE PAVEMENT WHERE BITUMINOUS SURFACE COURSE IS NOT A PART OF THE CONTRACT

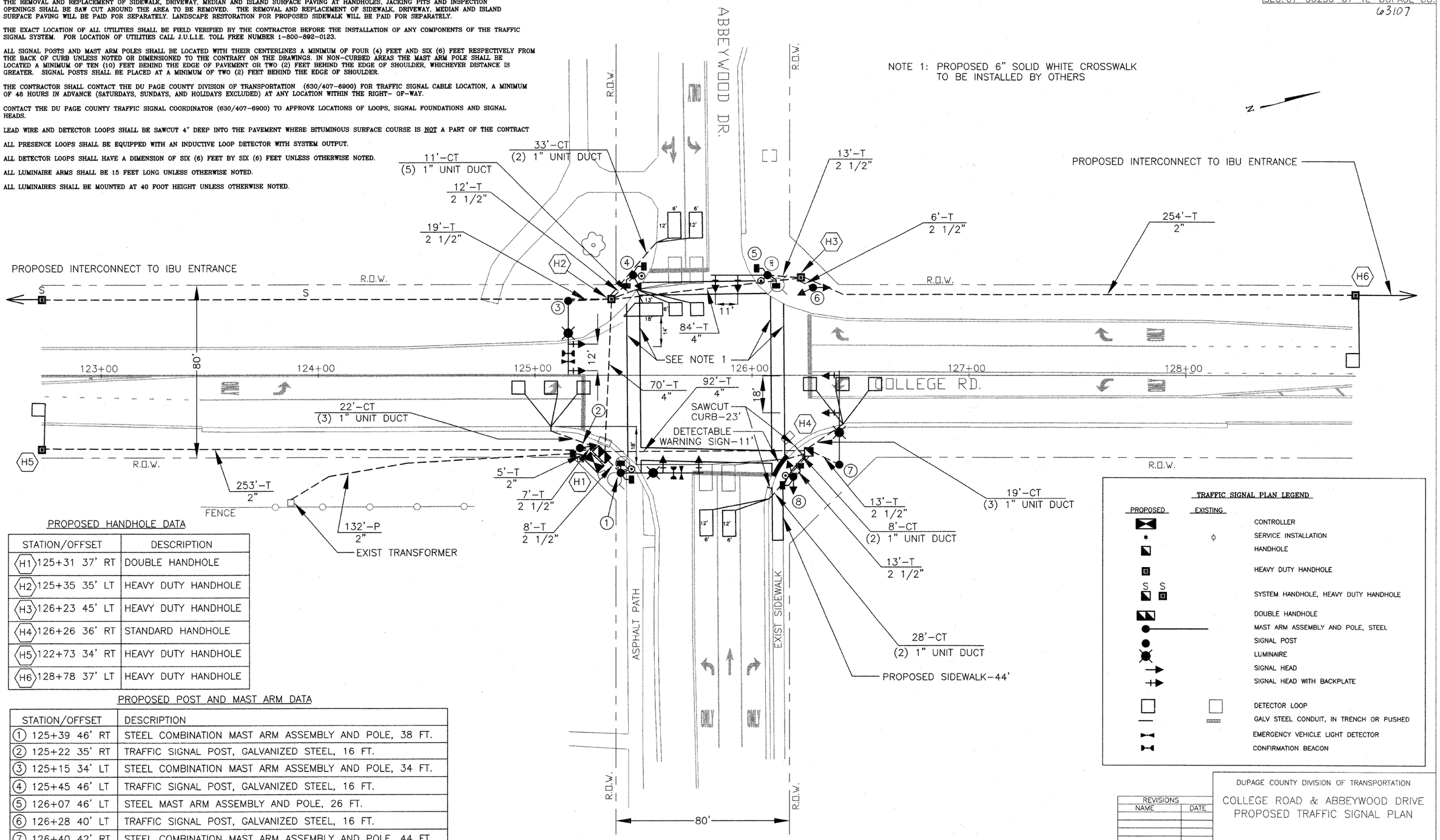
ALL PRESENCE LOOPS SHALL BE EQUIPPED WITH AN INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT.

ALL DETECTOR LOOPS SHALL HAVE A DIMENSION OF SIX (6) FEET BY SIX (6) FEET UNLESS OTHERWISE NOTED.

ALL LUMINAIRE ARMS SHALL BE 15 FEET LONG UNLESS OTHERWISE NOTED.

ALL LUMINAIRES SHALL BE MOUNTED AT 40 FOOT HEIGHT UNLESS OTHERWISE NOTED.

NOTE 1: PROPOSED 6" SOLID WHITE CROSSWALK TO BE INSTALLED BY OTHERS



PROPOSED HANDHOLE DATA

STATION/OFFSET	DESCRIPTION
H1 125+31 37' RT	DOUBLE HANDHOLE
H2 125+35 35' LT	HEAVY DUTY HANDHOLE
H3 126+23 45' LT	HEAVY DUTY HANDHOLE
H4 126+26 36' RT	STANDARD HANDHOLE
H5 122+73 34' RT	HEAVY DUTY HANDHOLE
H6 128+78 37' LT	HEAVY DUTY HANDHOLE

PROPOSED POST AND MAST ARM DATA

STATION/OFFSET	DESCRIPTION
(1) 125+39 46' RT	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 38 FT.
(2) 125+22 35' RT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.
(3) 125+15 34' LT	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 34 FT.
(4) 125+45 46' LT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.
(5) 126+07 46' LT	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.
(6) 126+28 40' LT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.
(7) 126+40 42' RT	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 44 FT.
(8) 126+19 47' RT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.

TRAFFIC SIGNAL PLAN LEGEND

PROPOSED	EXISTING	
		CONTROLLER
		SERVICE INSTALLATION
		HANDHOLE
		HEAVY DUTY HANDHOLE
		SYSTEM HANDHOLE, HEAVY DUTY HANDHOLE
		DOUBLE HANDHOLE
		MAST ARM ASSEMBLY AND POLE, STEEL
		SIGNAL POST
		LUMINAIRE
		SIGNAL HEAD
		SIGNAL HEAD WITH BACKPLATE
		DETECTOR LOOP
		GALV STEEL CONDUIT, IN TRENCH OR PUSHED
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON

REVISIONS NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD & ABBEYWOOD DRIVE PROPOSED TRAFFIC SIGNAL PLAN

SCALE: 1"=20'
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

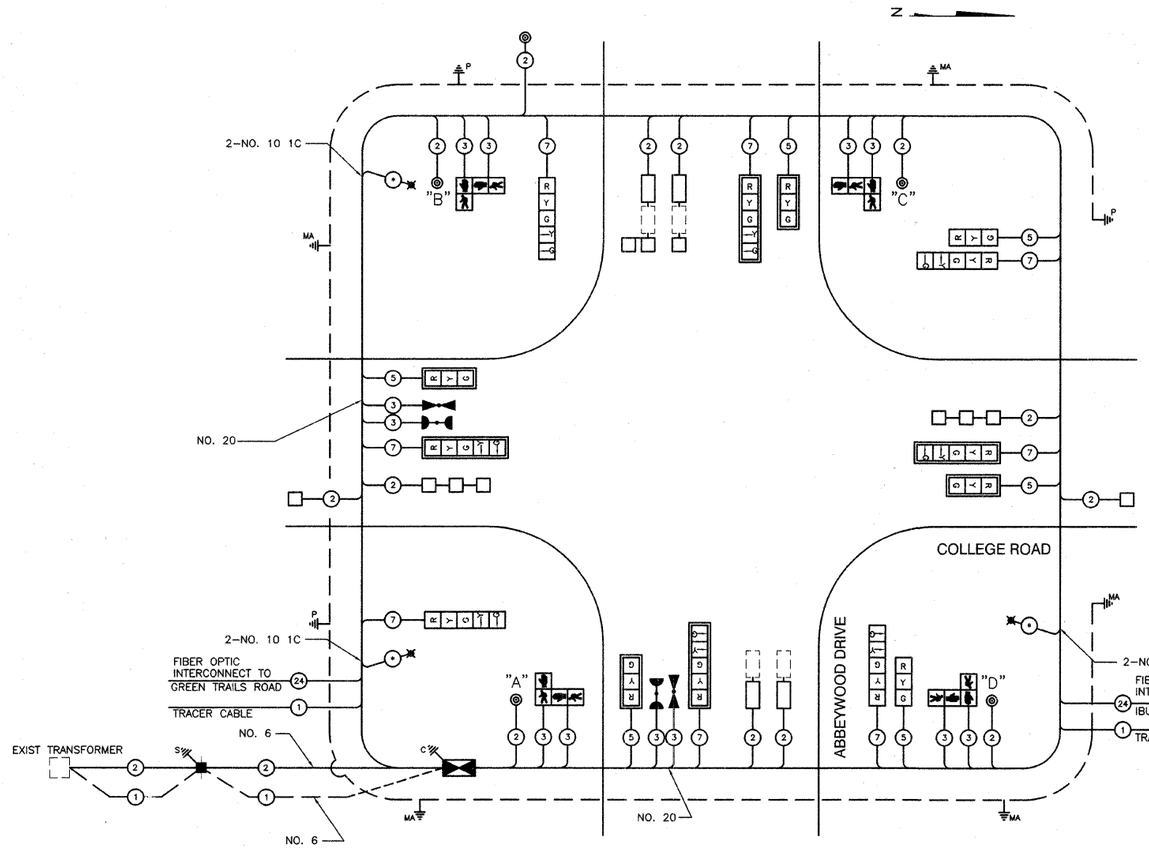
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17&40	2008	30	27
SEC. 07-00230-07-TL		DUPAGE CO.	

63107

SCHEDULE OF QUANTITIES

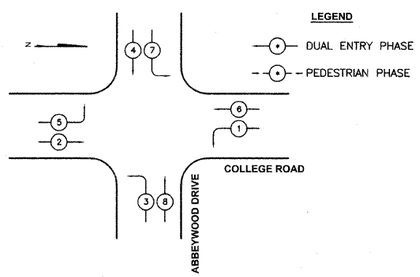
PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	220
XX008064	SAWCUT CURB	FOOT	23
42400800	DETECTABLE WARNINGS	SQ FT	11
25200110	SODDING, SALT TOLERANT	SQ YD	11
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	1
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	1
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	1
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	490
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	150
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	115
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	280
81400100	HANDHOLE	EACH	1
81400200	HEAVY DUTY HANDHOLE	EACH	4
81400300	DOUBLE HANDHOLE	EACH	1
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	650
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C	FOOT	2295
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	1420
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C	FOOT	1160
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 7C	FOOT	1390
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PR	FOOT	365
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	245
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1070
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	340
X0324477	ELECTRIC CABLE IN CONDUIT NO. 10 1/C	FOOT	1015
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
87702900	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1
87702950	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	8
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
88500100	INDUCTIVE LOOP DETECTOR	EACH	15
88600100	DETECTOR LOOP, TYPE 1	FOOT	655
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
88100400	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	4
82102310	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 310 WATT	EACH	3
X8050010	SERVICE INSTALLATION-GROUND MOUNTED	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

CABLE PLAN

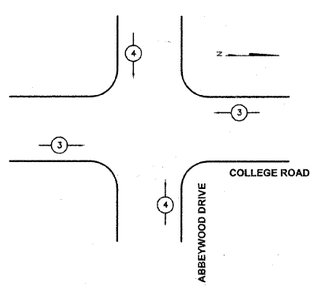


CABLE PLAN LEGEND

- PUSHBUTTON DETECTOR
- LUMINAIRE
- (5) DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTION CAMERA
- GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
- 12" PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP (EXIST)
- VEHICLE DETECTOR, INDUCTION LOOP (PROPOSED)
- SIGNAL FACE WITH BACKPLATE (R, Y, G, L, A, S)



PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	—	| |

EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTE: PUSHBUTTON "A" SHALL PLACE CALLS IN PHASES 2 AND 4.
PUSHBUTTON "B" SHALL PLACE CALLS IN PHASES 4 AND 6.
PUSHBUTTON "C" SHALL PLACE CALLS IN PHASES 6 AND 8.
PUSHBUTTON "D" SHALL PLACE CALLS IN PHASES 2 AND 8.

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	14	135	10	0.60	84
YELLOW BALL	14	135	22	0.03	9
GREEN BALL	14	135	12	0.37	62
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	8	135	10	0.02	1.6
GREEN ARROW	8	135	5	0.13	5.2
PED - WALK	8	90	5	0.05	2
PED- DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	310
				TOTAL=	619

FOUNDATION(DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

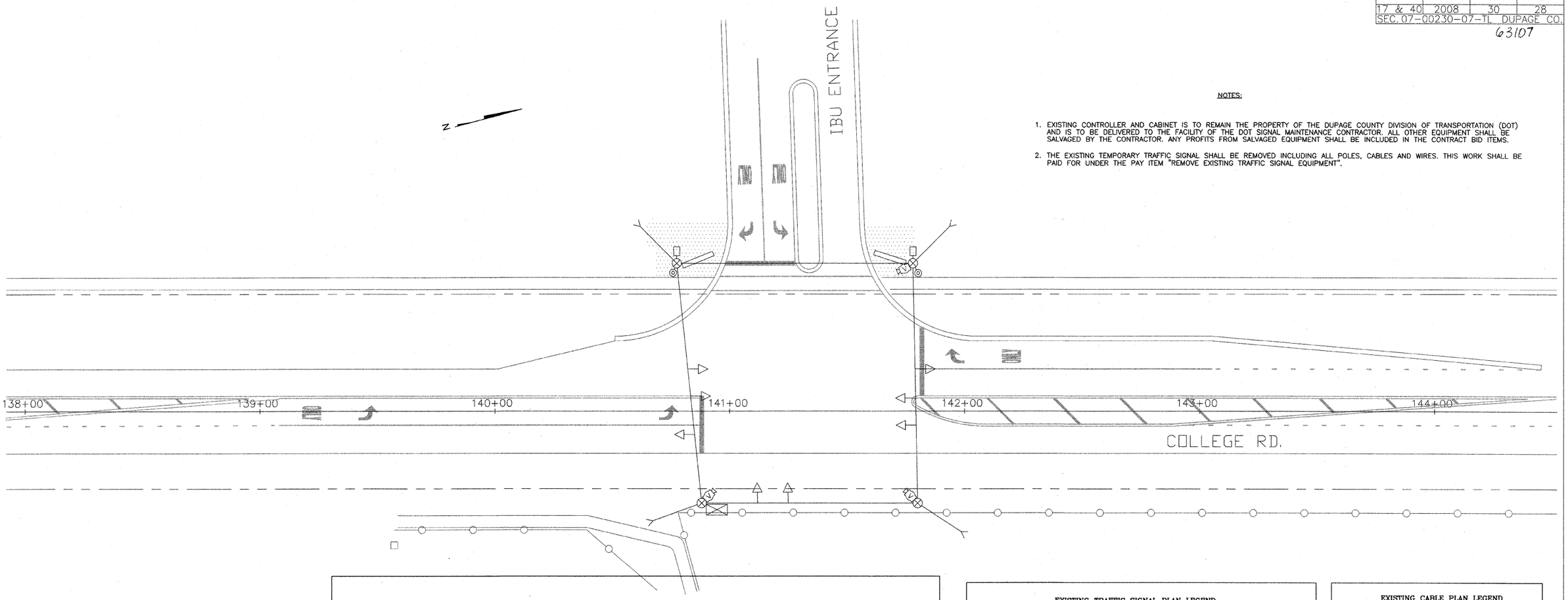
CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES
COLLEGE ROAD & ABBEYWOOD DRIVE

SCALE: NONE
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17 & 40	2008	30	28
SEC. 07-00230-07-TL	DUPAGE CO.		

63107



NOTES:

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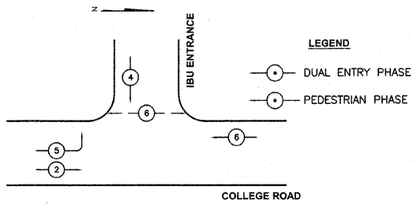
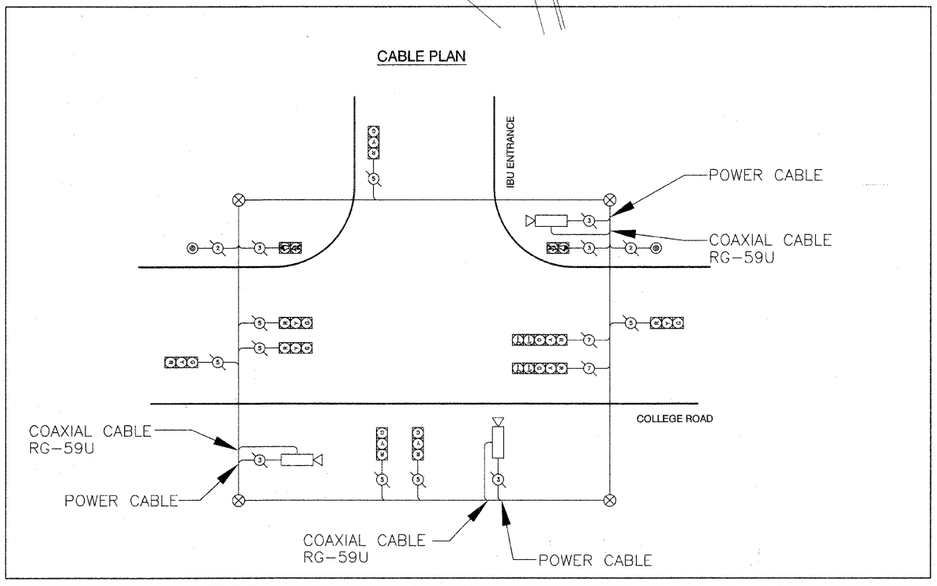
2. THE EXISTING TEMPORARY TRAFFIC SIGNAL SHALL BE REMOVED INCLUDING ALL POLES, CABLES AND WIRES. THIS WORK SHALL BE PAID FOR UNDER THE PAY ITEM "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT".



PHASE DESIGNATION DIAGRAM

CABLE PLAN



EXISTING TRAFFIC SIGNAL PLAN LEGEND

EXISTING

- CONTROLLER
- SERVICE INSTALLATION
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- WOOD POLE
- GUY WIRE
- SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- GALV STEEL CONDUIT, IN TRENCH OR PUSHED
- VIDEO DETECTOR CAMERA

EXISTING CABLE PLAN LEGEND

- DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
- GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
- VIDEO DETECTOR CAMERA
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN SIGNAL HEAD
- SIGNAL FACE, SPAN MOUNTED

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD & IBU ENTRANCE EXISTING TRAFFIC SIGNAL PLAN, CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

DATE: 10/24/08

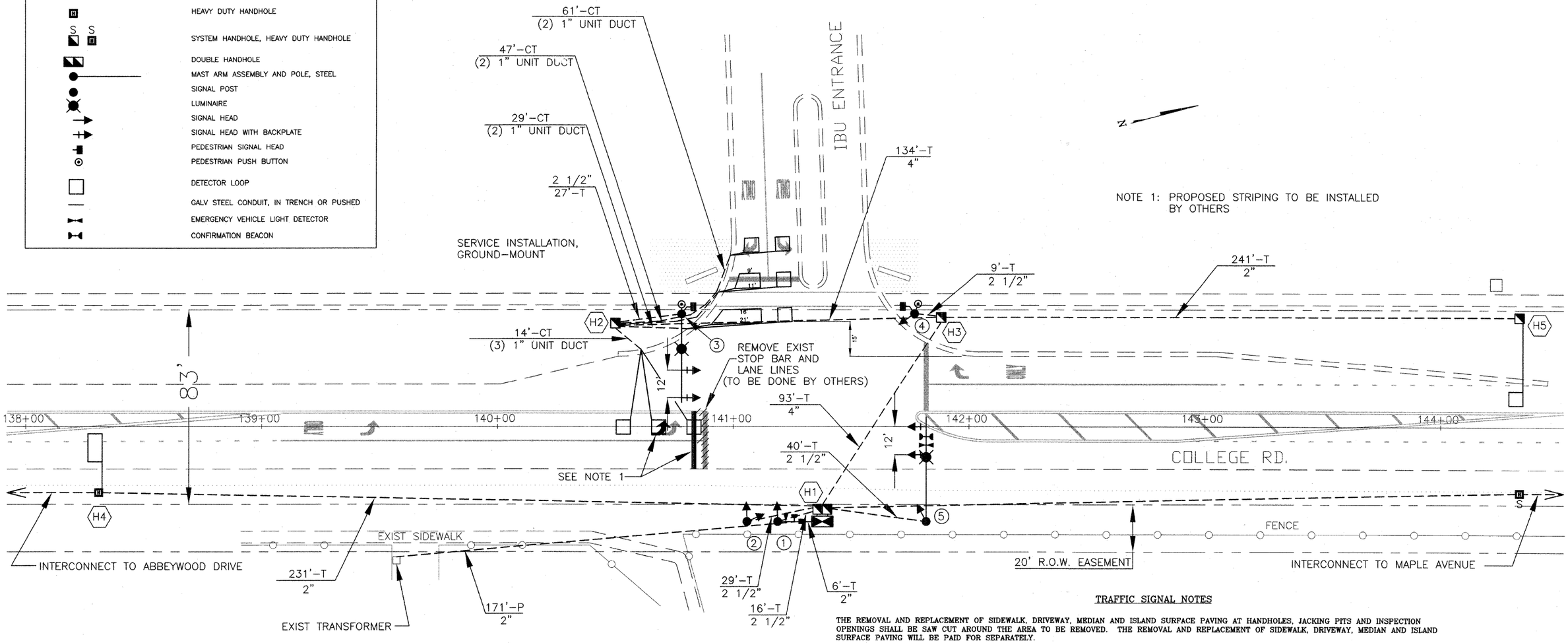
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17&40	2008	30	29
SEC. 07-00230-07-TL DUPAGE CO.			

63107

TRAFFIC SIGNAL PLAN LEGEND

- CONTROLLER
- SERVICE INSTALLATION
- HANDHOLE
- HEAVY DUTY HANDHOLE
- SYSTEM HANDHOLE, HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- MAST ARM ASSEMBLY AND POLE, STEEL
- SIGNAL POST
- LUMINAIRE
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- GALV STEEL CONDUIT, IN TRENCH OR PUSHED
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON



PROPOSED POST AND MAST ARM DATA

STATION/OFFSET	DESCRIPTION
(1) 141+18 40' RT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT.
(2) 141+05 40' RT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.
(3) 140+78 48' LT	STEEL COMBIMATION MAST ARM ASSEMBLY AND POLE, 38 FT.
(4) 141+77 48' LT	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.
(5) 141+82 40' RT	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 44 FT.

PROPOSED HANDHOLE DATA

STATION/OFFSET	DESCRIPTION
H1 141+38 35' RT	DOUBLE HANDHOLE
H2 140+50 44' LT	STANDARD HANDHOLE
H3 141+88 47' LT	STANDARD HANDHOLE
H4 138+31 28' RT	HEAVY DUTY HANDHOLE
H5 144+33 47' LT	STANDARD HANDHOLE

TRAFFIC SIGNAL NOTES

THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING AT HANDHOLES, JACKING PITS AND INSPECTION OPENINGS SHALL BE SAW CUT AROUND THE AREA TO BE REMOVED. THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING WILL BE PAID FOR SEPARATELY.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL J.U.L.I.E. TOLL FREE NUMBER 1-800-892-0123.

ALL SIGNAL POSTS AND MAST ARM POLES SHALL BE LOCATED WITH THEIR CENTERLINES A MINIMUM OF FOUR (4) FEET AND SIX (6) FEET RESPECTIVELY FROM THE BACK OF CURB UNLESS NOTED OR DIMENSIONED TO THE CONTRARY ON THE DRAWINGS. IN NON-CURBED AREAS THE MAST ARM POLE SHALL BE LOCATED A MINIMUM OF TEN (10) FEET BEHIND THE EDGE OF PAVEMENT OR TWO (2) FEET BEHIND THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. SIGNAL POSTS SHALL BE PLACED AT A MINIMUM OF TWO (2) FEET BEHIND THE EDGE OF SHOULDER.

THE CONTRACTOR SHALL CONTACT THE DU PAGE COUNTY DIVISION OF TRANSPORTATION (630/407-6900) FOR TRAFFIC SIGNAL CABLE LOCATION, A MINIMUM OF 48 HOURS IN ADVANCE (SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED) AT ANY LOCATION WITHIN THE RIGHT- OF-WAY.

CONTACT THE DU PAGE COUNTY TRAFFIC SIGNAL COORDINATOR (630/407-6900) TO APPROVE LOCATIONS OF LOOPS, SIGNAL FOUNDATIONS AND SIGNAL HEADS.

LEAD WIRE AND DETECTOR LOOPS SHALL BE SAWCUT 4" DEEP INTO THE PAVEMENT WHERE BITUMINOUS SURFACE COURSE IS NOT A PART OF THE CONTRACT.

ALL PRESENCE LOOPS SHALL BE EQUIPPED WITH AN INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT.

ALL DETECTOR LOOPS SHALL HAVE A DIMENSION OF SIX (6) FEET BY SIX (6) FEET UNLESS OTHERWISE NOTED.

ALL LUMINAIRE ARMS SHALL BE 15 FEET LONG UNLESS OTHERWISE NOTED.

ALL LUMINAIRES SHALL BE MOUNTED AT 40 FOOT HEIGHT UNLESS OTHERWISE NOTED.

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

COLLEGE ROAD & IBU ENTRANCE TRAFFIC SIGNAL PLAN

SCALE: 1"=20'

DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

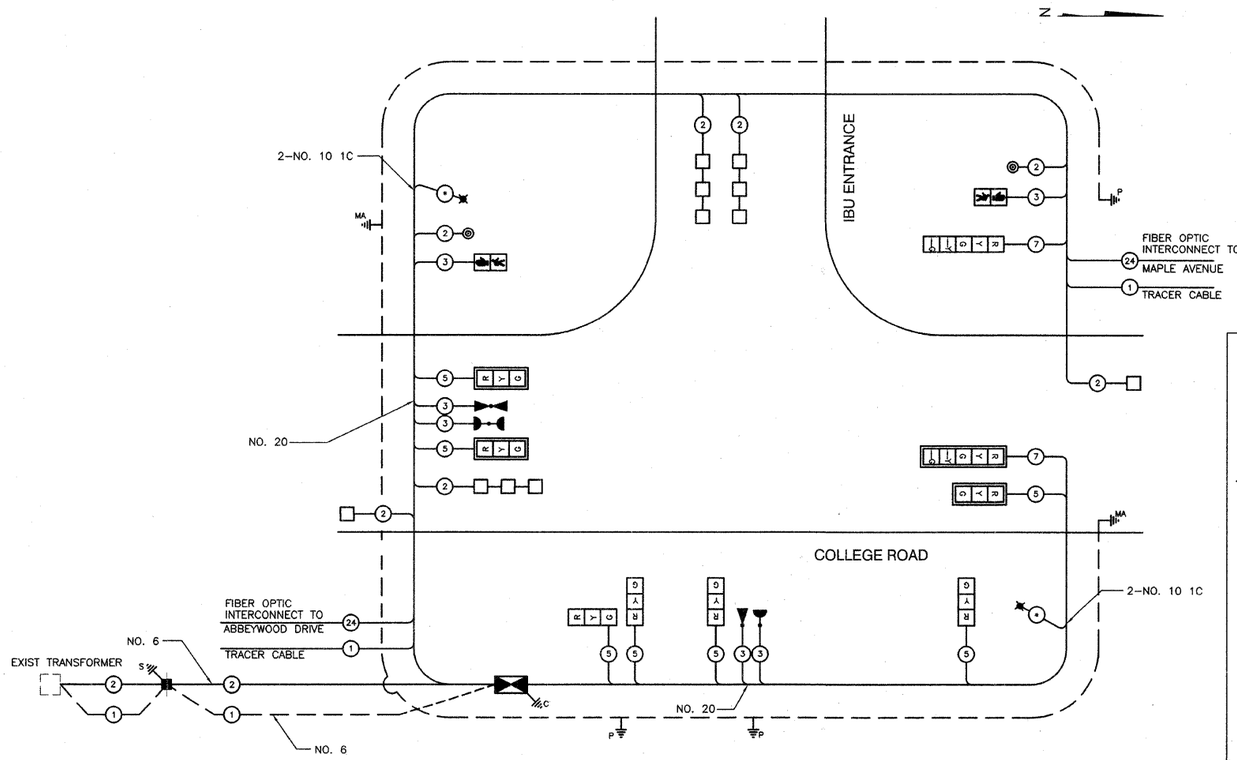
COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
17 & 40	2008	30	30
SEC. 07-00230-07-TL		DUPAGE CO.	

63107

SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	475
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	120
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	175
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	230
81400100	HANDHOLE	EACH	3
81400200	HEAVY DUTY HANDHOLE	EACH	1
81400300	DOUBLE HANDHOLE	EACH	1
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	605
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
86400100	TRANSCEIVER-FIBER OPTIC	EACH	1
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C	FOOT	1350
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	645
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C	FOOT	1090
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 7C	FOOT	280
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PR	FOOT	370
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	190
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	920
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	410
X0324477	ELECTRIC CABLE IN CONDUIT NO. 10 1/C	FOOT	930
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
87702920	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT.	EACH	1
87702950	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	12
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	8
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
88500100	INDUCTIVE LOOP DETECTOR	EACH	11
88600100	DETECTOR LOOP, TYPE 1	FOOT	445
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	2
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
88100200	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2
82102310	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 310 WATT	EACH	2
X8050010	SERVICE INSTALLATION-GROUND MOUNTED	EACH	1
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

CABLE PLAN

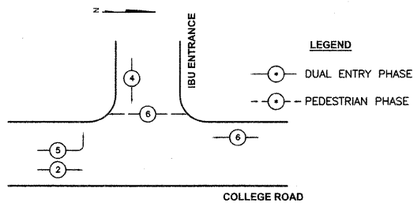


CABLE PLAN LEGEND

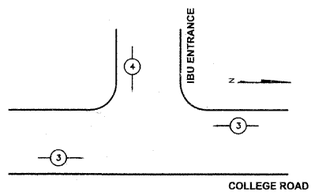
- PUSHBUTTON DETECTOR
- LUMINAIRE
- (5) DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
- 12" PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP
- SIGNAL FACE WITH BACKPLATE (R, Y, G, LT, LT, G)

NOTE:

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8



PHASE DESIGNATION DIAGRAM



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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	OPERATION (%)	
RED BALL	9	135	10	0.60	54
YELLOW BALL	9	135	22	0.03	6
GREEN BALL	9	135	12	0.37	40
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	2	135	10	0.02	0.4
GREEN ARROW	2	135	5	0.13	1.3
PED - WALK	2	90	5	0.05	0.5
PED- DON'T WALK	2	90	6	0.95	11.4
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	310
				TOTAL=	524

FOUNDATION(DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES
COLLEGE ROAD & IBU ENTRANCE

SCALE: 1"=20'
DATE: 10/24/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ