

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	60G42	
D-91-404-09				

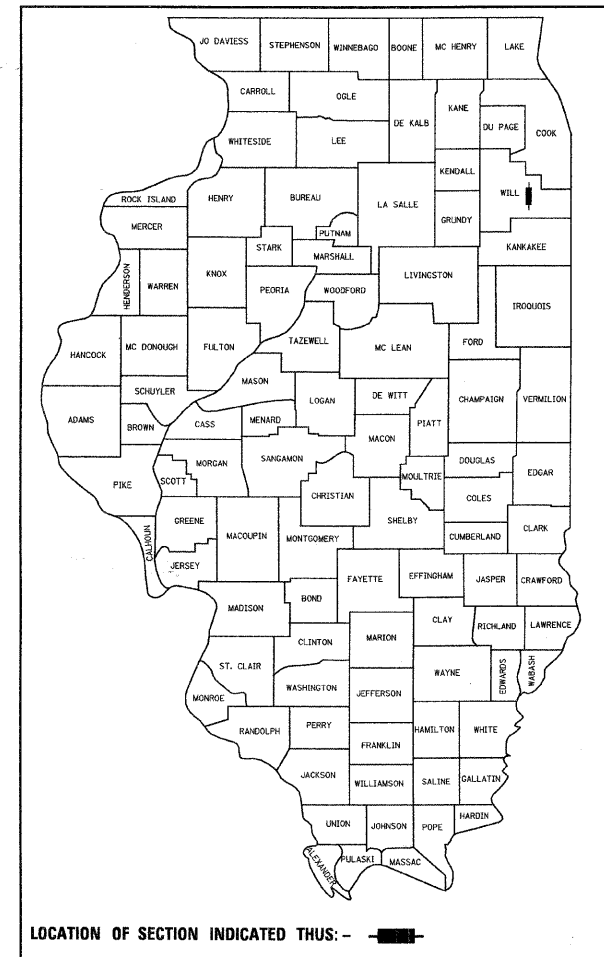
INDEX OF SHEETS

1. TITLE SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
- 4.-7. DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS
8. PLAN - LED TRAFFIC SIGNAL RETROFIT FLASHER LOCATIONS GOVERNORS HIGHWAY AT STUENKEL ROAD
9. TRAFFIC SIGNAL MODERNIZATION PLAN U.S. RTE. 45 AT WILLOW LN. /195th ST.
10. CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM U.S. RTE. 45 AT 195th ST. (WILLOW LANE)
11. TRAFFIC SIGNAL MODERNIZATION PLAN U.S. RTE. 45 AT LA PORTE RD.
12. CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM U.S. RTE. 45 AT LA PORTE RD.
13. TRAFFIC SIGNAL MODERNIZATION PLAN U.S. RTE. 45 AT LINCOLN-WAY HIGH SCHOOL
14. CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM U.S. RTE. 45 AT LINCOLNWAY LANE
15. TRAFFIC SIGNAL MODERNIZATION PLAN U.S. RTE. 45 AT COLORADO AVE.
16. TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. RTE. 45 AT COLORADO AVE.
17. TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN IL ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET
18. TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM IL ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET
19. TRAFFIC SIGNAL MODIFICATION PLAN IL ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET
20. SCHEDULE OF QUANTITIES, CABLE PLAN IL ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET
21. MAST ARM MOUNTED STREET NAME SIGN IL ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

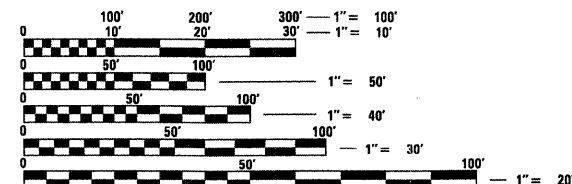
DISTRICT 1
HIGHWAY SAFETY IMPROVEMENT PROJECT
FAP840 Governors Highway @ Stuenkel Road (IL 50)
FAP330 US 45 @ 195th Street
FAP330 US 45 @ LaPorte Road
FAP330 US 45 @ Lincoln Way Lane
FAP330 US 45 @ Colorado Street
FAP876 IL 1 @ Exchange Street
PROJECT: HSI-P-000S(682)

WILL COUNTY
SECTION 2009-037 TS
C-91-404-09



IDOT STANDARDS:

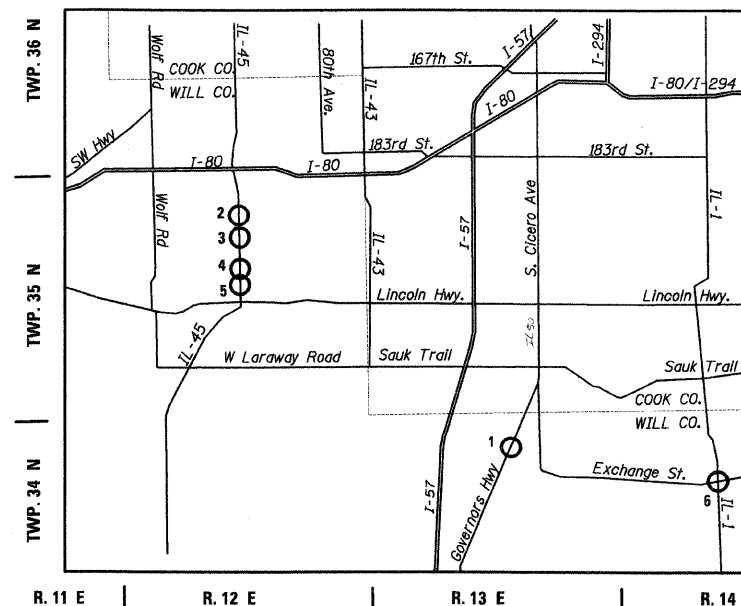
- 424001-05 CURB RAMPS FOR SIDEWALKS
- 701001-02 OFF-RD OPERATIONS, 2L, 2W MORE THAN 15' (4.5m) AWAY
- 701011-02 OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701101-02 OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24' (600 mm) FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
- 701301-03 LANE CLOSURE, 2L, SHORT TIME OPERATIONS
- 701201-03 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
- 701421-02 LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH
- 701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701701-06 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701801-04 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-01 TRAFFIC CONTROL DEVICES
- 728001-01 SIGN PANEL MOUNTING DETAILS
- 814001-02 HANDHOLES
- 814006-02 DOUBLE HANDHOLES
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 886001-01 DETECTOR LOOP INSTALLATION
- 882001-01 UNINTERRUPTABLE POWER SUPPLY (UPS)
- 877001-04 STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 877006-03 STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS
- 878001-07 CONCRETE FOUNDATION DETAILS
- 880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS



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.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

CONTRACT NO. 60G42



LOCATION MAP



LEGEND:

1. Governors Highway @ Stuenkel Road
2. US 45 @ 195th Street
3. US 45 @ LaPorte Road
4. US 45 @ Lincoln Way Lane
5. US 45 @ Colorado Street
6. IL 1 @ Exchange Street



Bruce P. Talbot
03-18-2009
Expires: 11-30-2009

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 20 2009

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May 8, 2009
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2009
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

BUREAU OF TRAFFIC, DISTRICT ONE: STEPHEN TRAVIA / DARYLE DREW (847) 705-4420

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007 (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"); THE LATEST "SUPPLEMENTAL SPECIFICATIONS" AND "RECURRING SPECIAL PROVISIONS"; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
3. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. (1-800-892-0123) AT LEAST 10 DAYS PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. ALL UTILITIES MUST BE NOTIFIED AND STAKED PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL NOTIFY THE ENGINEER AT ONCE OF ANY DISCREPANCIES.
5. THE CONTRACTOR IS REQUIRED TO ATTEND AN ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) PRECONSTRUCTION MEETING AND SHALL INFORM THE IDOT TRAFFIC ENGINEER BEFORE WORK COMMENCES.
6. THE CONTRACTOR SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE IN PROVIDING SAFE AND HEALTHFUL CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE DAMAGE INCURRED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
9. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS AND 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 SEEDING IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS 252 AND 250, RESPECTIVELY.
10. CONTROLLER CABINETS SHALL BE PLACED SO THAT a) THE DOORS OPEN AWAY FROM THE CURB OR TRAVEL WAY., b) AND THE TRAFFIC MOVEMENTS AT THE INTERSECTION ARE VISIBLE FROM THE CONTROLLER.
11. ANY CONTROLLER CABINET WHETHER NEW OR EXISTING TO RECIEVE UPS, WILL HAVE A "L" SHAPED 4 FEET CONCRETE MAINTENANCE PAD INSTALLED. SEE PLANS FOR DETAIL. THE COST OF INSTALLATION OF CONCRETE PAD IS INCIDENTAL TO NEW CONTROLLER AND OR UPS INSTALLATIONS.

FILE NAME = \\MICROSTV352072\02-GENNOTES	USER NAME = RDS	DESIGNED - KK	REVISED -
	PLOT SCALE = 1"=20'	DRAWN - RDS	REVISED -
	PLOT DATE = 03-18-09	CHECKED - BPT	REVISED -
		DATE - 03-18-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:				
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	2
			CONTRACT NO. 60G42	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PAY CODE NUMBER	SUMMARY OF TRAFFIC SIGNAL QUANTITIES ITEM	UNIT	TOTAL QUANTITY	URBAN	90% FED. 10% STATE	90% FED. 5% STATE 2.5% MOKENA 2.5% FRANKFORT	90% FED. 5% STATE 2.5% MOKENA 2.5% FRANKFORT	90% FED. 5% STATE 10% VILLAGE OF FRANKFORT	90% FED. 5% STATE 5% VILLAGE OF FRANKFORT	90% FED. 5% STATE 5% VILLAGE OF FRANKFORT
					GOVERNORS HWY @ STUENKEL RD	CONSTRUCTION TYPE CODE US 45 @ 195TH ST	CONSTRUCTION TYPE CODE US 45 @ LAPORTE RD	CONSTRUCTION TYPE CODE Y-031-1F LINCOLNWAY LN	CONSTRUCTION TYPE CODE US 45 @ COLORADO AVE	CONSTRUCTION TYPE CODE IL 1 @ EXCHANGE ST
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5							
42400800	DETECTABLE WARNINGS	SQFT	76							
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQFT	962							
44000600	SIDEWALK REMOVAL	SQFT	962							
67100100	MOBILIZATION	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17	0.15
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17	0.15
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17	0.15
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.167	0.167	0.17	0.167	0.167	0.167	0.162
* 72000100	SIGN PANEL, TYPE 1	SQ FT	18							18
* 72000200	SIGN PANEL, TYPE 2	SQ FT	23							23
* 78000400	THERMOPLASTIC PAVEMENT MARKING-LINE 6"	FOOT	632			248	384			
* 78000600	THERMOPLASTIC PAVEMENT MARKING-LINE 12"	FOOT	1,538					492	500	546
* 78000650	THERMOPLASTIC PAVEMENT MARKING-LINE 24"	FOOT	703			130	166	145	130	132
* 78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	860			110	124	126	96	404
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	60						25	35
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	79							79
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	74							74
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	4					4		
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	330							330
81400100	HANDHOLE	EACH	3							3
81400200	HEAVY-DUTY HANDHOLE	EACH	4							4
81400300	DOUBLE HANDHOLE	EACH	1							1
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	139						25	114
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	5	1	1	1	1	1	1	1
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1							1
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2027			62		640	650	675
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	4,406			206		1301	1300	1599
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,505							1505
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,499							1499
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1,754							1754
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	262				80		54	128
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	3					1	2	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	5						4	1
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1							1
X8771438	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 14 FT. AND 38 FT.	EACH	1							1
X8771630	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 16 FT. AND 30 FT.	EACH	1							1
X8772036	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 20 FT. AND 36 FT.	EACH	1							1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16					4	8	4
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4							4
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60							60
87900200	DRILL EXISTING HANDHOLE	EACH	3					1	2	
X8803064	SIGNAL HEAD, LED, 1-SECTION, SPAN WIRE MOUNTED, RETROFIT	EACH	4	4						
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	24			4	4	4	4	8
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	17			4	4	4	4	1
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	23			4	4	4	4	7
88102717	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4			2	2			
88102747	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	14			1	1	4	4	4
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	47			8	8	8	8	15
88500100	INDUCTIVE LOOP DETECTOR	EACH	10							10
88600100	DETECTOR LOOP, TYPE I	FOOT	734							734
88800100	PEDESTRIAN PUSH-BUTTON	EACH	18			3	3	4	4	4
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1					1	1	1
89502200	MODIFY EXISTING CONTROLLER	EACH	3			1		1	1	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6,165				80			6085
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	5			1	1	1	1	1
89502380	REMOVE EXISTING HANDHOLE	EACH	8							8
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9							9
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	102.88			20.56	20.6	20.56	20.6	20.56
X8050010	SERVICE INSTALLATION-GROUND MOUNTED	EACH	1							1.0
X8050015	SERVICE INSTALLATION-POLE MOUNTED	EACH	3			1	1		1	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1,376			338	610	14	54	360
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	249							249
X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	5			1	1	1	1	1
X8950200	REBUILD EXISTING HANDHOLE	EACH	2							2

*Specialty Items

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FILE NAME = MICROSTV352072\03-SUMMARY	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - RDS	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-18-09	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

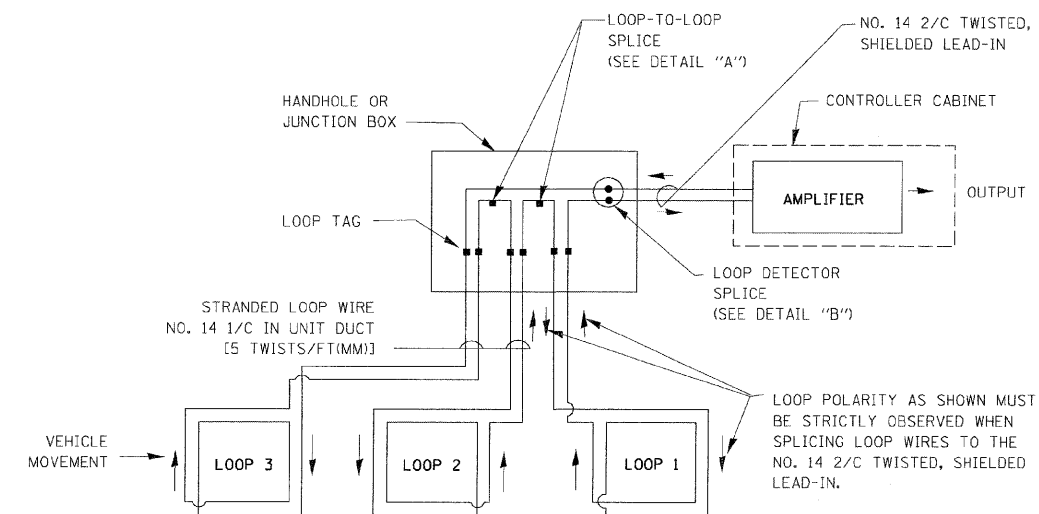
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

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	2009-037 TS	WILL	21	3
CONTRACT NO. 60G42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

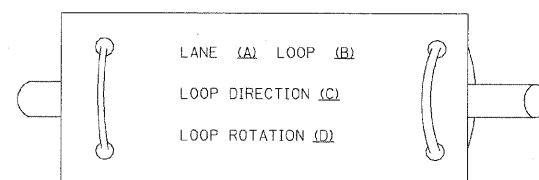
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED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



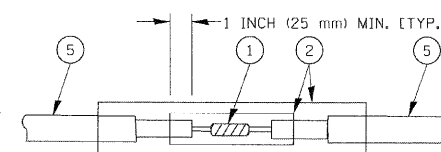
DETECTOR LOOP WIRING SCHEMATIC

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

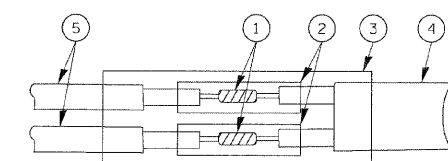
LOOP LEAD-IN CABLE TAG



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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

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

REVISIONS	
NAME	DATE
CADD	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

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

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

PREPARED BY:
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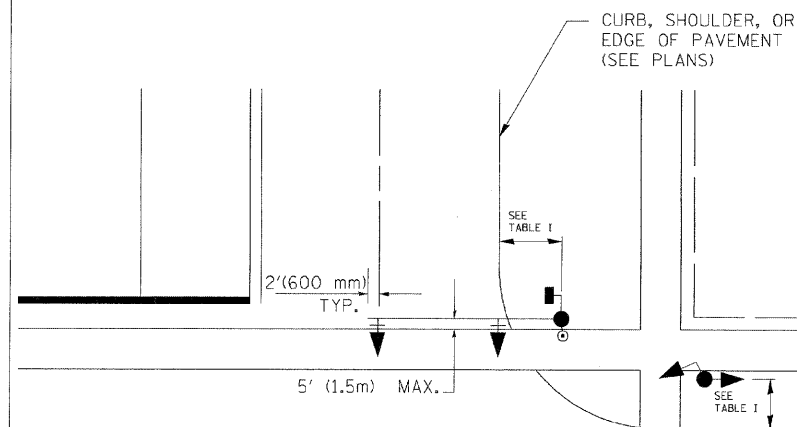
FILE NAME = MICROST\352072\ 04-TS05A	USER NAME = RDS	DESIGNED - KK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 1"=20'	DRAWN - RDS	REVISED -				2009-037 TS	WILL	21	4	
	PLOT DATE = 03-18-09	CHECKED - BPT	REVISED -			SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60C42		
		DATE - 03-18-09	REVISED -						FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

REVISION DATE: 01/01/02

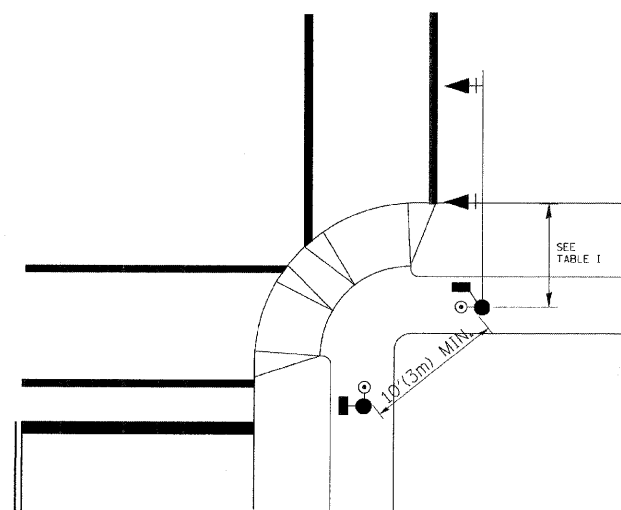
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

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



PEDESTRIAN SIGNAL PUSHBUTTON



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

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.
 AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.
 PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

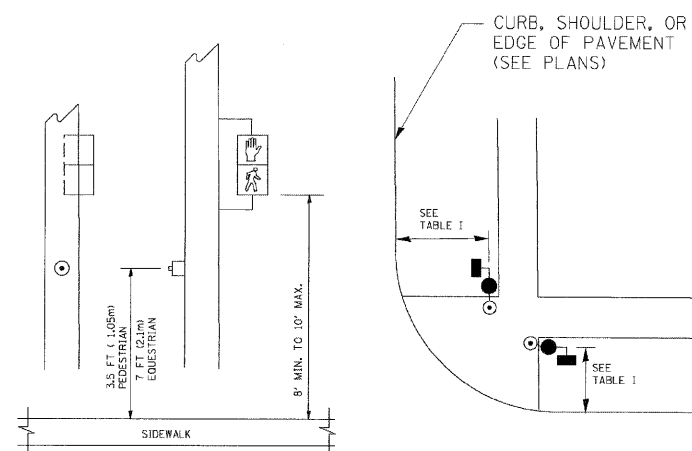


TABLE I

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

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
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 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

SCALE: VERT. NONE
 HORIZ. NONE
 DATE 10/18/2002
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

TS05

REVISION DATE: 01/01/02

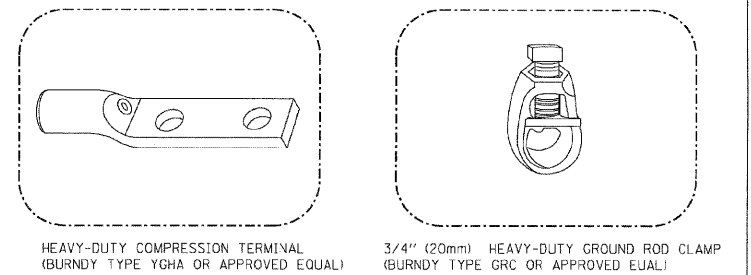
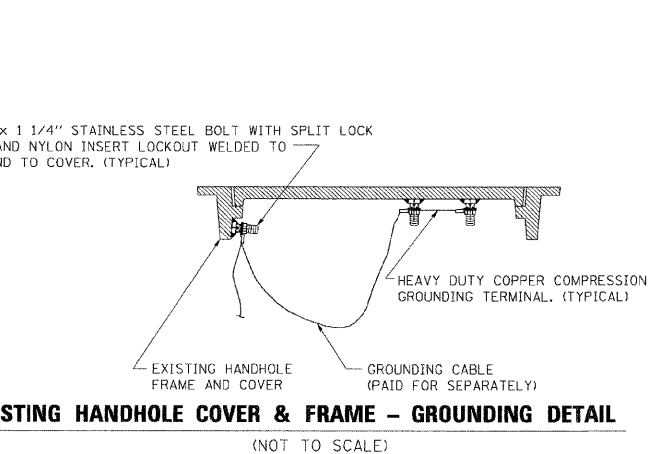
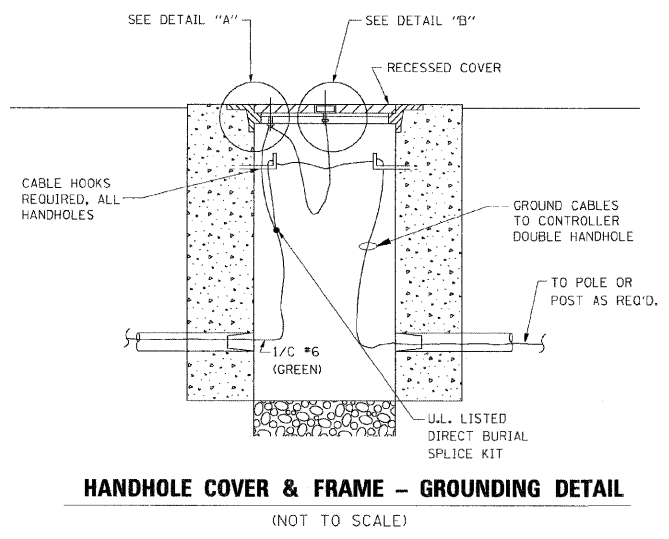
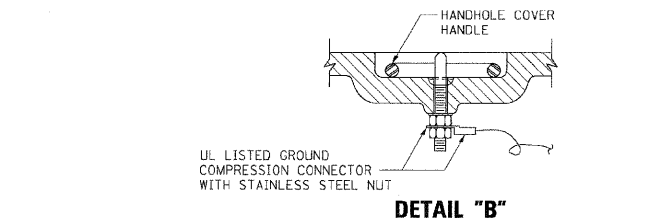
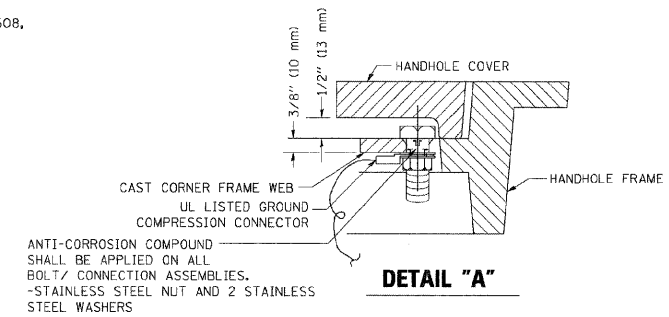
FILE NAME = \MICROST\352072\05-TS05B	USER NAME = RDS	DESIGNED - KK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 1"=20'	DRAWN - RDS	REVISED -			2009-037 TS	WILL	21	5		
	PLOT DATE = 03-18-09	CHECKED - BPT	REVISED -			CONTRACT NO. 60G42					
		DATE - 03-18-09	REVISED -			SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES:

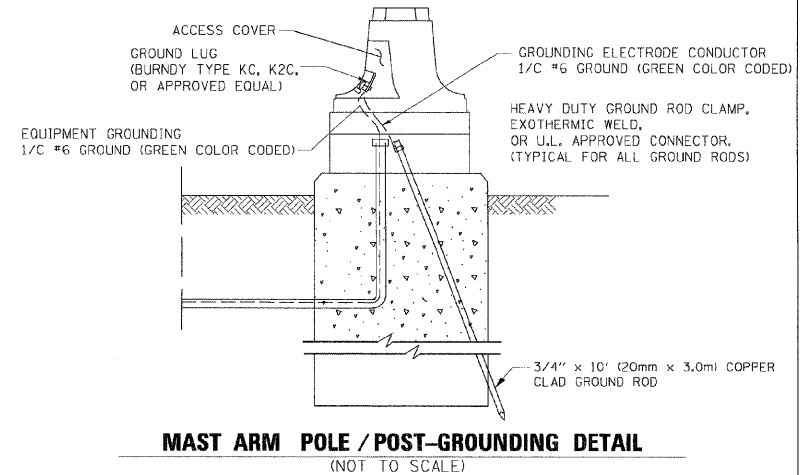
GROUNDING SYSTEM

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 (647) 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.



NOTES:

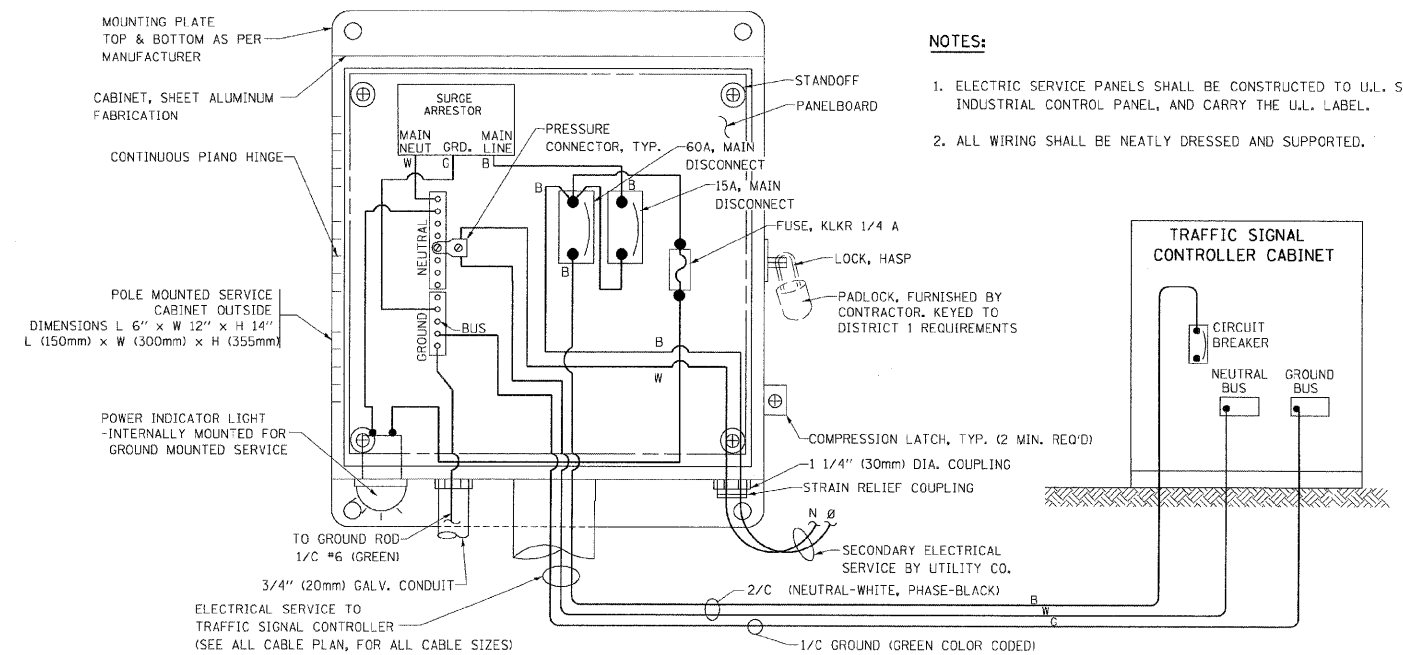
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



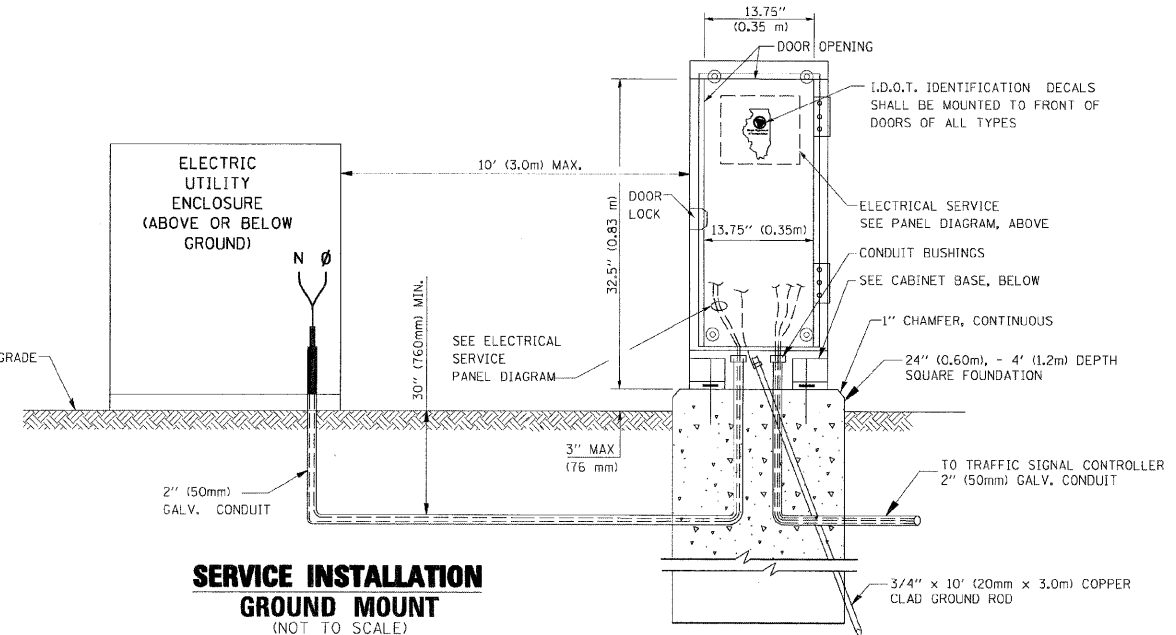
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	DISTRICT 1	
CADD	5/30/00	STANDARD TRAFFIC SIGNAL	
CADD	3/15/01	DESIGN DETAILS	
BUREAU OF TRAFFIC	1/01/02	SCALE: VERT. NONE HORIZ. NONE DATE 10/18/2002	
		DRAWN BY: RWP DESIGNED BY: DAD CHECKED BY: DAZ SHEET 3 OF 4	

NOTES:

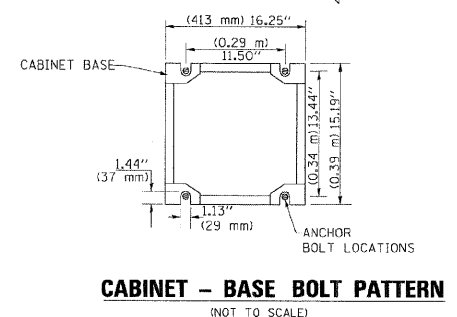
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



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)

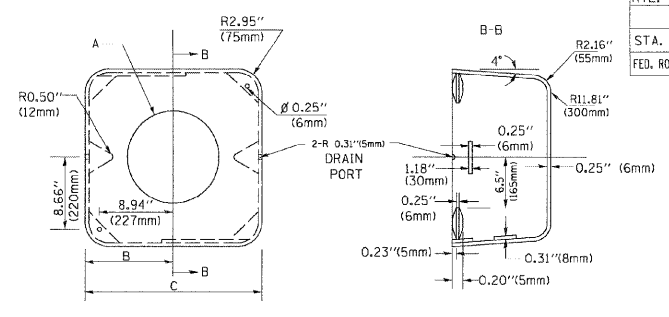
PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
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10/18/2002
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VHT505

FILE NAME = \MICROST\352072\06-TS05C	USER NAME = RDS	DESIGNED - KK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 1"=20'	DRAWN - RDS	CHECKED - BPT	REVISED -			2009-037 TS	WILL	21	6	CONTRACT NO. 60G42	
PLOT DATE = 03-18-09	DATE - 03-18-09	REVISED -	REVISED -			SCALE: N.T.S.	SHEET NO.	OF	SHEETS	STA.	TO STA.
						FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

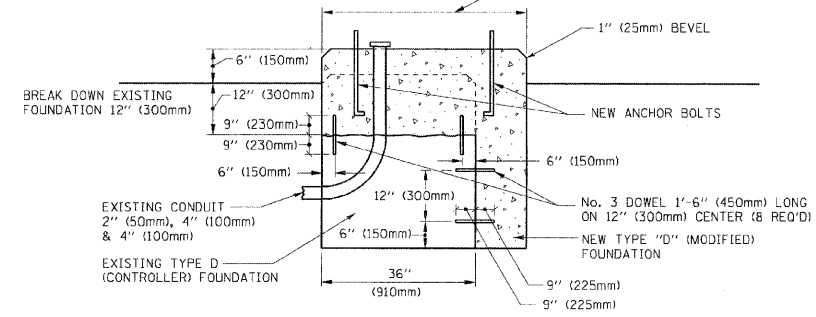
MATERIAL:
 - ASTM A48 CLASS 30 GREY IRON
 - ASTM A123 HOT DIPPED GALVANIZED



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

SHROUD DETAIL

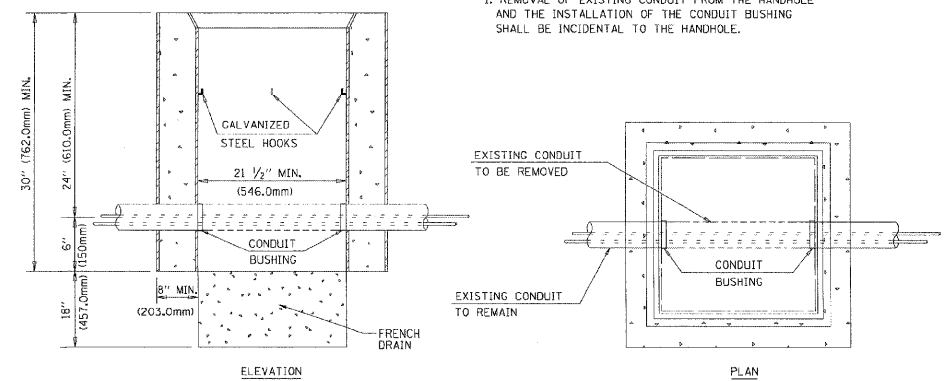
NOTE:
 SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)

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

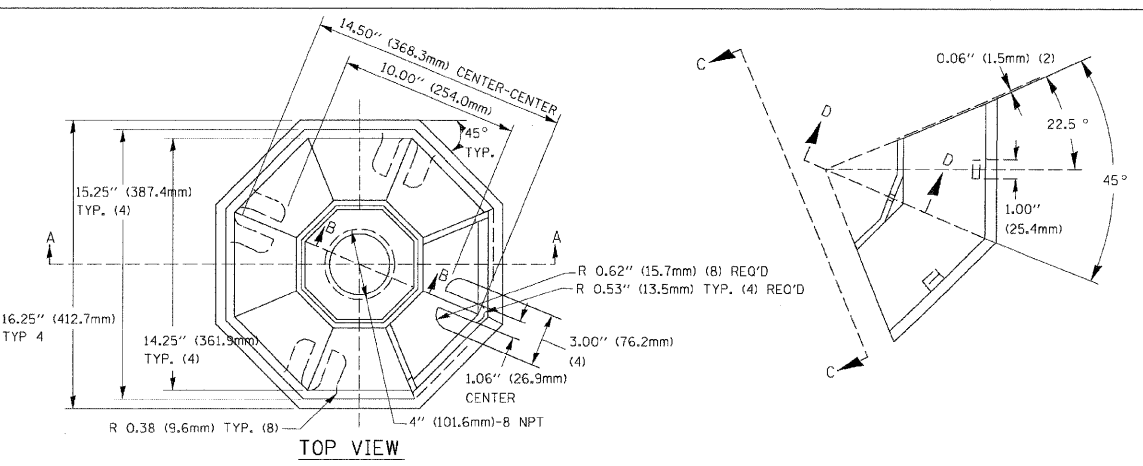


DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT

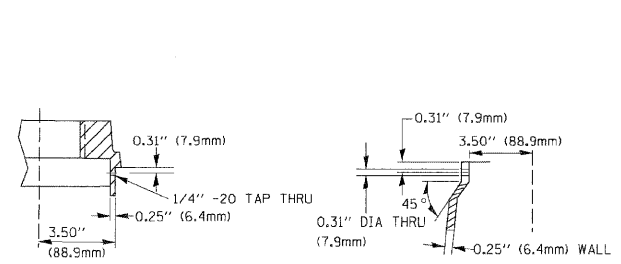
ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

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

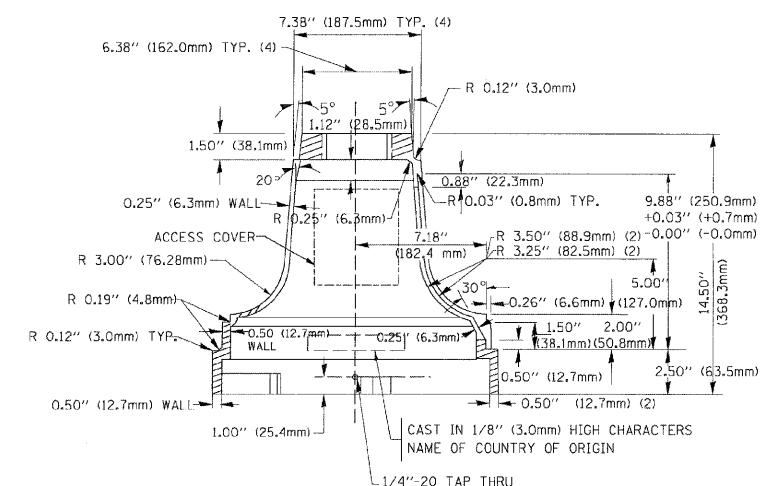


TOP VIEW

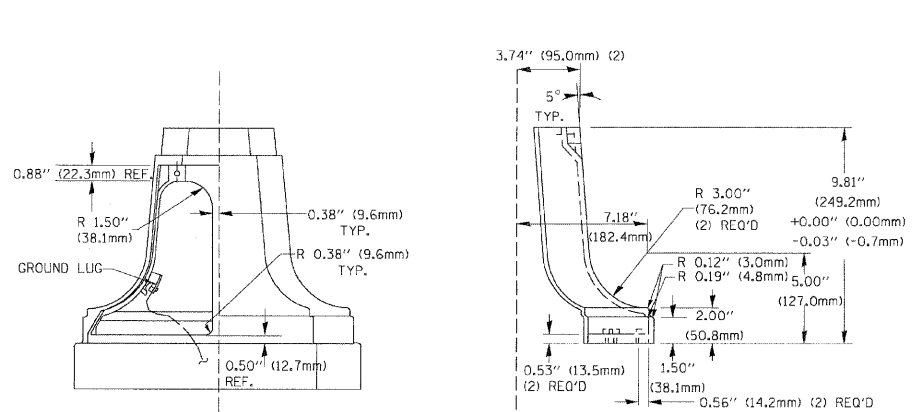


SECTION B-B

SECTION D-D

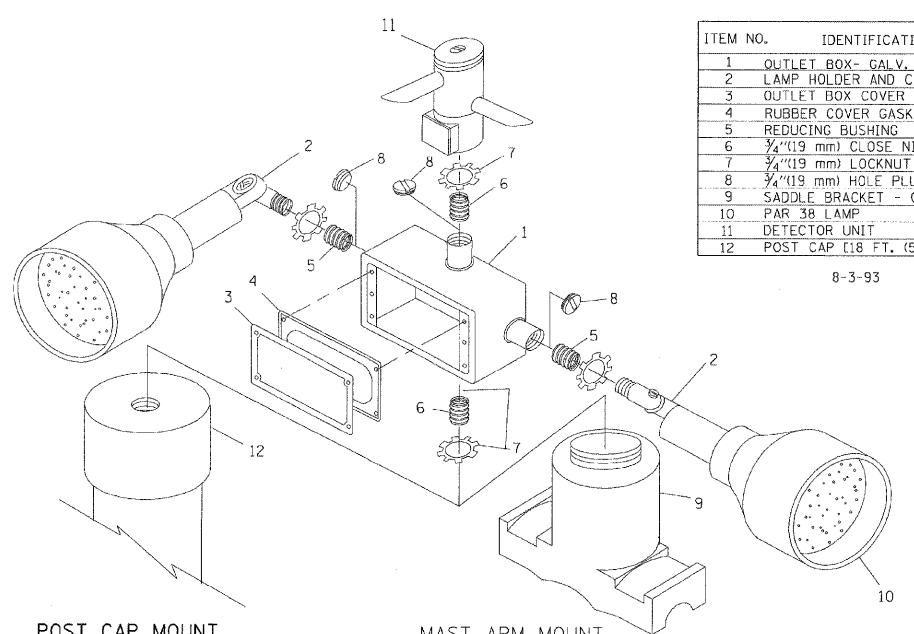


SECTION A-A



VIEW C-C

TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



POST CAP MOUNT

MAST ARM MOUNT

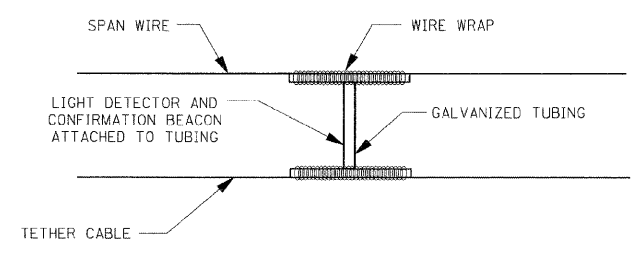
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	3/4 (19 mm) CLOSE NIPPLE
7	3/4 (19 mm) LOCKNUT
8	3/4 (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

NOTES:

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



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)



PREPARED BY:
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 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9675
 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

TS05
 REVISION DATE: 01/01/02

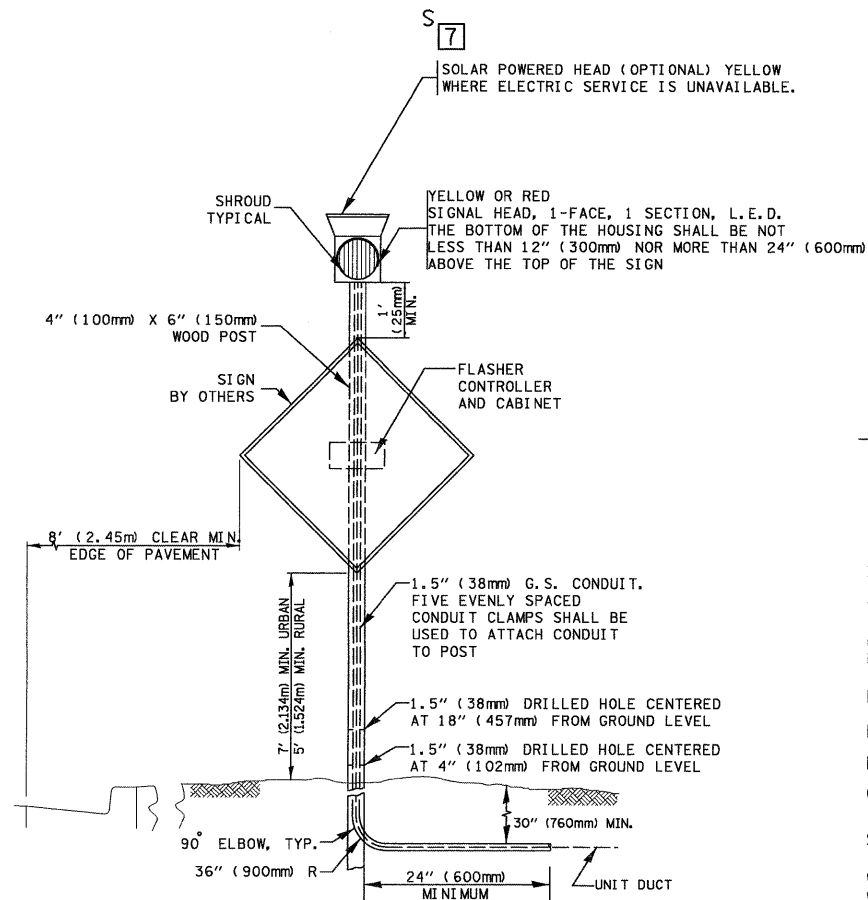
FILE NAME = \MICROSTV352072\07-TS050	USER NAME = RDS	DESIGNED - KK	REVISED -
PLOT SCALE = 1"=20'	CHECKED - BPT	DRAWN - RDS	REVISED -
PLOT DATE = 03-18-09	DATE - 03-18-09	CHECKED - BPT	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

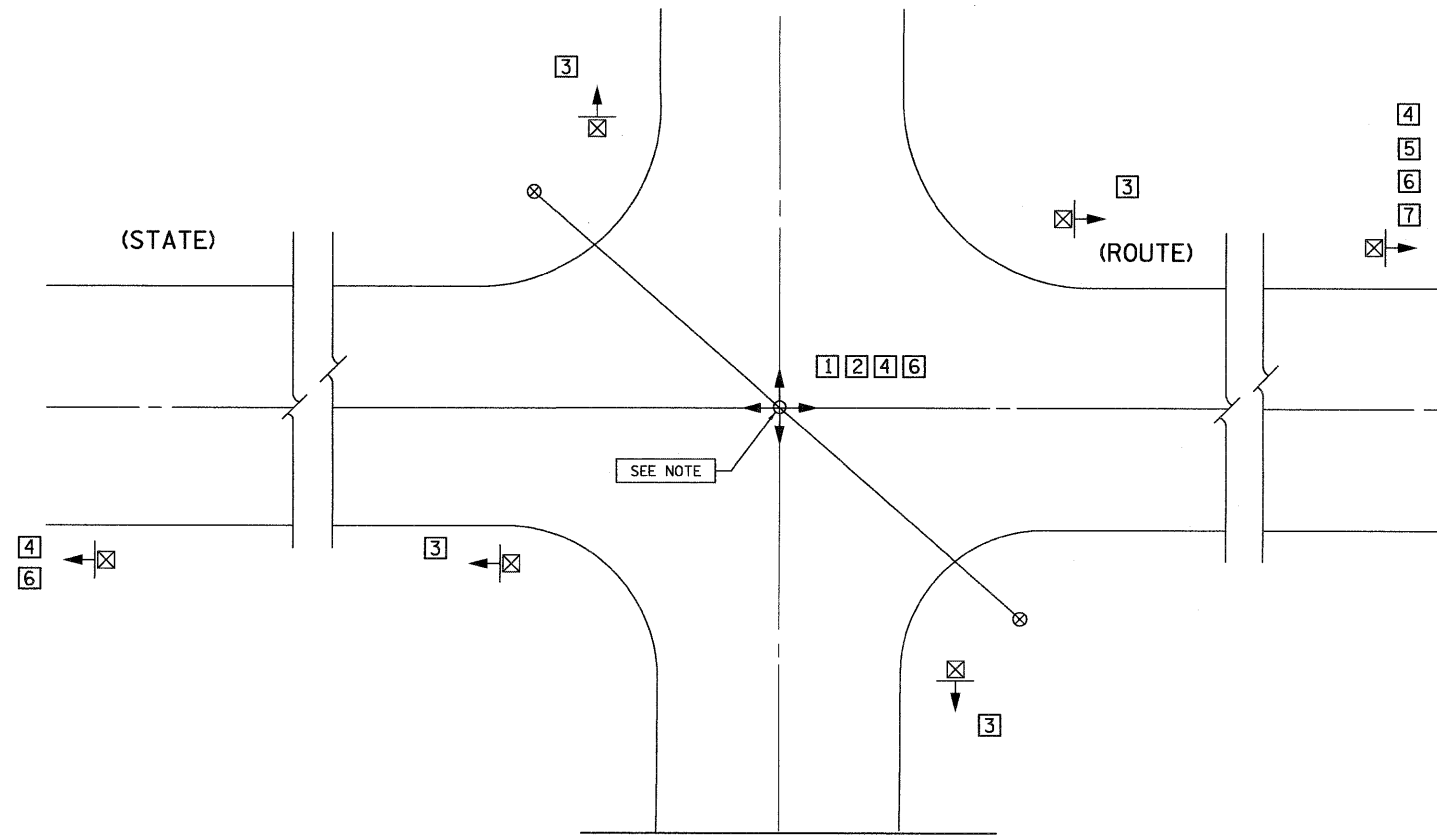
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	7
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60G42	



FLASHER SIGNAL LEGEND

	PROPOSED	EXISTING
FLASHER CONTROL CABINET	☒	☒
SERVICE INSTALLATION	■	□
12" SIGNAL HEAD (LED)	→	→
WOOD POST, 4" x 6"	☒	☒ "E"
CONDUIT IN GROUND OR UNIT DUCT IN TRENCH	---	===
HANDHOLE	▣	▣
HEAVY-DUTY HANDHOLE	⊠	⊠ "E"
ELECTRICAL POLE	●	○
GROUND ROD	⚡	⚡
SIGNAL FACE WITH BACKPLATE	Ⓡ	Ⓡ
W2-1 OR W2-2 WARNING SIGN W/ STREET PANEL	Ⓡ	Ⓡ
JUNCTION BOX - STAINLESS STEEL	Ⓡ	Ⓡ



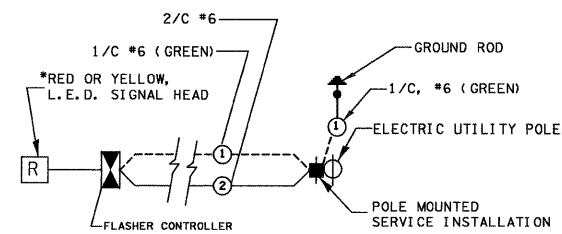
- 1 U.S. ROUTE 45/52 @ WILMINGTON/ PEOTONE RD. (VILLAGE OF PEOTONE)
- 2 GOVERNORS HWY. @ STUENKEL RD. (VILLAGE OF UNIVERSITY PARK)
- 3 U.S. ROUTE 52 @ LARAWAY RD. (CITY OF JOLIET)
- 4 U.S. ROUTE 6 @ PARKER RD. (VILLAGE OF MOKENA)
- 5 U.S. ROUTE 6 @ BRANDON RD. (CITY OF JOLIET)
- 6 IL. ROUTE 129 @ STRIP MINE RD. (CITY OF WILMINGTON)
- 7 IL. ROUTE 126 @ ESSINGTON RD. (CITY OF PLAINFIELD)

NOTES:

REMOVAL OF INCANDESCENT OPTICS ARE INCLUDED IN L.E.D. RETROFIT PAY ITEM

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SIGNAL HEAD, L.E.D. 1-SECTION, SPAN WIRE MOUNTED, RETROFIT	EACH	4



TYPICAL CABLE PLAN

- YELLOW FLASHER - MOUNTED IN ADVANCE OF INTERSECTION
- RED FLASHER - MOUNTED AT INTERSECTION

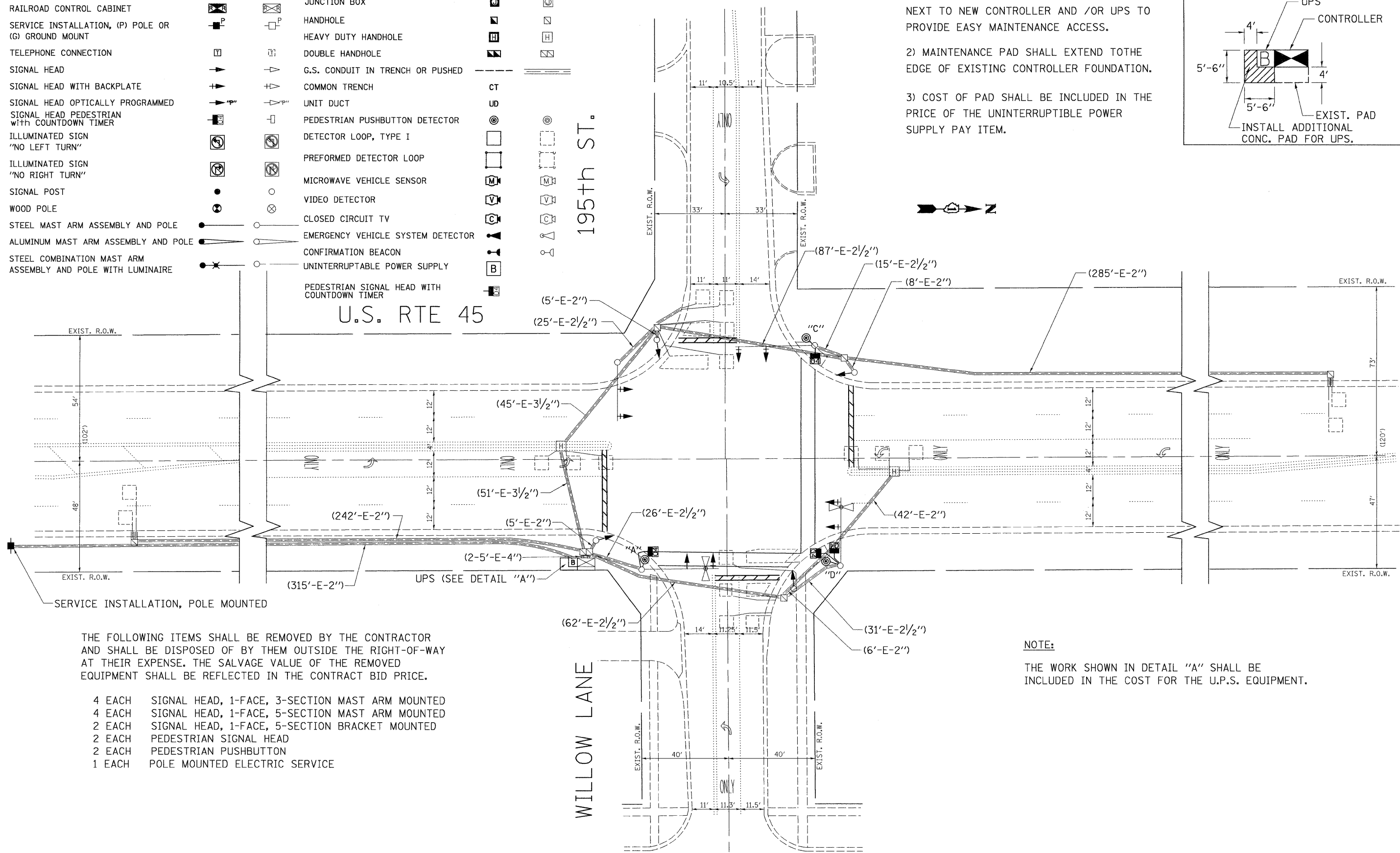
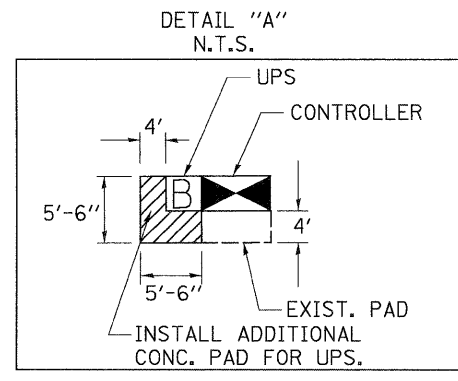
L.E.D. FLASHERS - SCHEDULE OF QUANTITIES							
	1	2	3	4	5	6	7
ITEM DESCRIPTION	U.S. RTE. 45/52 @ WILMINGTON PEOTONE RD.	GOVERNOR'S HWY @ STUENKEL ROAD	U.S. RTE. 52 @ LARAWAY ROAD	U.S. RTE. 6 @ PARKER ROAD	U.S. RTE. 6 @ BRANDON ROAD	IL. RTE. 129 @ STRIP MINE RD.	IL. RTE. 126 @ ESSINGTON RD.
TRAFFIC SIGNAL FLASHER 1-SECTION, L.E.D.- (RED)	4	4	4	4		4	
TRAFFIC SIGNAL FLASHER 1-SECTION, L.E.D.- (YELLOW)				2	* 1	2	S ₁

- * ADVANCED WARNING FLASHER WESTBOUND U.S. ROUTE 6 (IDOT CONTRACT)
- △ ADVANCED WARNING FLASHER(S) NORTH & SOUTHBOUND IL. ROUTE 129 @ STRIP MINE RD.
- ADVANCED WARNING FLASHER(S) EAST & WESTBOUND U.S. ROUTE 6 @ PARKER RD.
- S ADVANCED WARNING FLASHER WESTBOUND (SOLAR POWERED) ON IL. ROUTE 126
- ▨ NOT APPLICABLE THIS LOCATION

TRAFFIC SIGNAL LEGEND

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

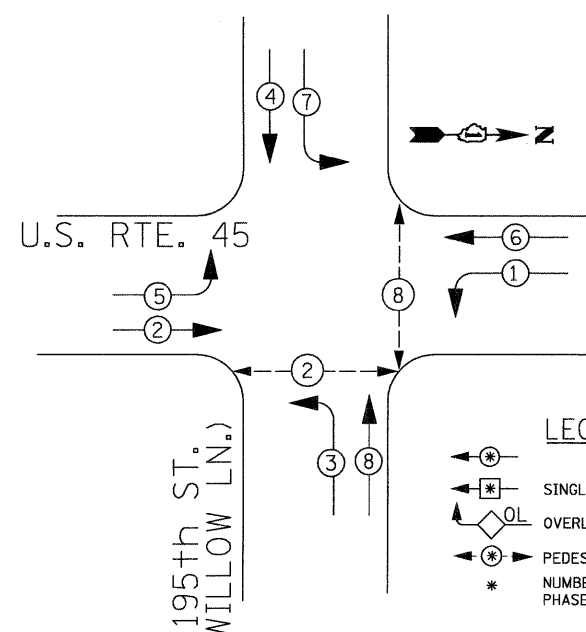
- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.



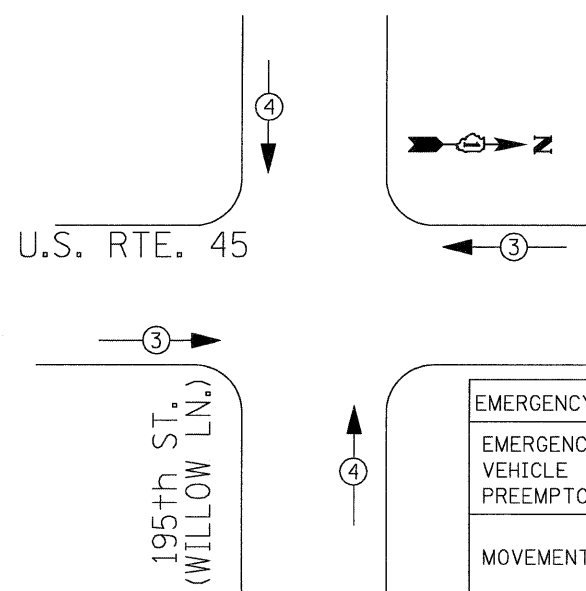
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION MAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION MAST ARM MOUNTED
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION BRACKET MOUNTED
- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSHBUTTON
- 1 EACH POLE MOUNTED ELECTRIC SERVICE

NOTE:
THE WORK SHOWN IN DETAIL "A" SHALL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.



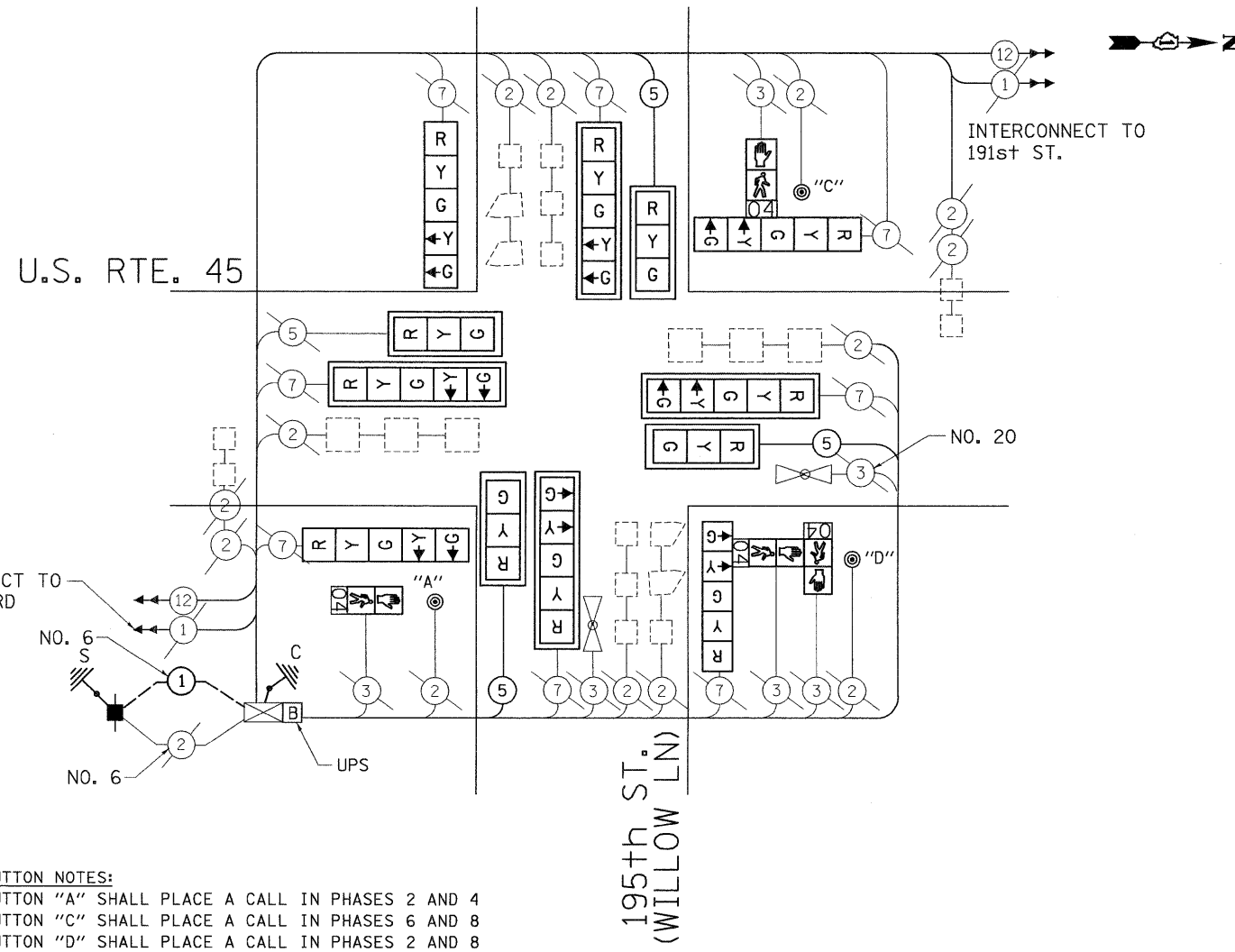
PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↑ ↓

PUSH BUTTON NOTES:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
 PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
THERMOPLASTIC PAVEMENT MARKING LINE 6"	FOOT	248
THERMOPLASTIC PAVEMENT MARKING LINE 24"	FOOT	130
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	338
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, MAST ARM. MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, BRKT. MNTD.	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	3
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	1
THERMOPLASTIC PAVEMENT MARKING REMOVAL	FOOT	110
MODIFY EXISTING CONTROLLER	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2/C	FOOT	62
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3/C	FOOT	206

CABLE PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE	[Symbol]	[Symbol]
FIBER OPTIC CABLE IN CONDUIT, NUMBER OF FIBERS AS NOTED	[Symbol]	[Symbol]
ELECTRIC CABLE IN CONDUIT, NO. 14, UNLESS OTHERWISE NOTED. NUMBER OF CONDUCTORS AS NOTED	[Symbol]	[Symbol]
GROUND CABLE IN CONDUIT NO. 6 COPPER (GREEN)	[Symbol]	[Symbol]
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD	[Symbol]	[Symbol]
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE	[Symbol]	[Symbol]
12" (300mm) TRAFFIC SIGNAL SECTION	[Symbol]	[Symbol]
12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER	[Symbol]	[Symbol]
ILLUMINATED SIGN "NO LEFT TURN"	[Symbol]	[Symbol]
ILLUMINATED SIGN "NO RIGHT TURN"	[Symbol]	[Symbol]
PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
PREFORMED DETECTOR LOOP	[Symbol]	[Symbol]
MICROWAVE VEHICLE SENSOR	[Symbol]	[Symbol]
VIDEO DETECTOR	[Symbol]	[Symbol]
CLOSED CIRCUIT TV	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
UNINTERRUPTIBLE POWER SUPPLY	[Symbol]	[Symbol]

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE LED	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.00
(YELLOW)	12	135	25	0.25	75.00
(GREEN)	12	135	15	0.25	45.00
ARROW	16	135	12	0.10	19.20
PED. SIGNAL	4	90	25	1.00	100.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	

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'-H-2-
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	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)

ENERGY COSTS TO: TOTAL = 441.20

ENERGY SUPPLY CONTACT: 708-410-5069
 PHONE: COM. EDISON
 COMPANY:

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM
 U.S. RTE. 45 AT 195th ST. (WILLOW LANE)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	10
CONTRACT NO. 60G42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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

- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION MAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION MAST ARM MOUNTED
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION BRACKET MOUNTED
- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSHBUTTON
- 1 EACH POLE MOUNTED ELECTRIC SERVICE

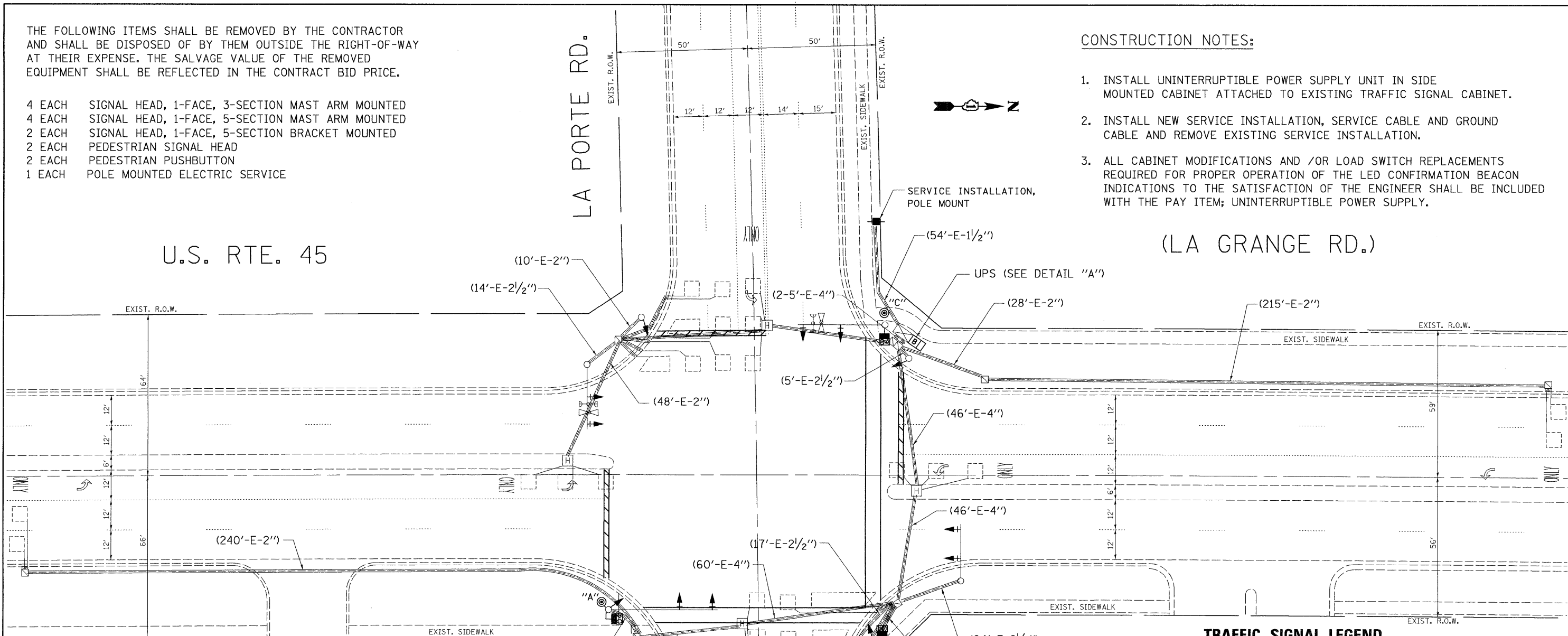
U.S. RTE. 45

LA PORTE RD.

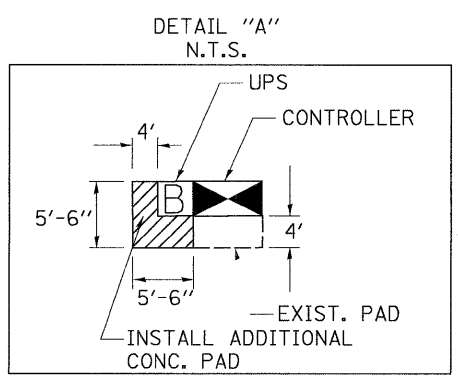
CONSTRUCTION NOTES:

1. INSTALL UNINTERRUPTIBLE POWER SUPPLY UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
2. INSTALL NEW SERVICE INSTALLATION, SERVICE CABLE AND GROUND CABLE AND REMOVE EXISTING SERVICE INSTALLATION.
3. ALL CABINET MODIFICATIONS AND /OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF THE LED CONFIRMATION BEACON INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH THE PAY ITEM; UNINTERRUPTIBLE POWER SUPPLY.

(LA GRANGE RD.)

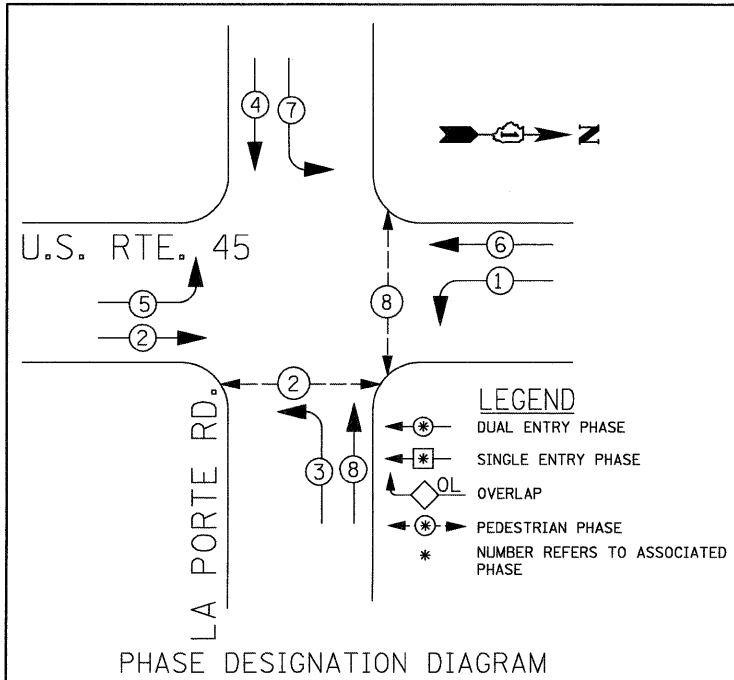


NOTE:
THE WORK SHOWN IN DETAIL "A" SHALL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.

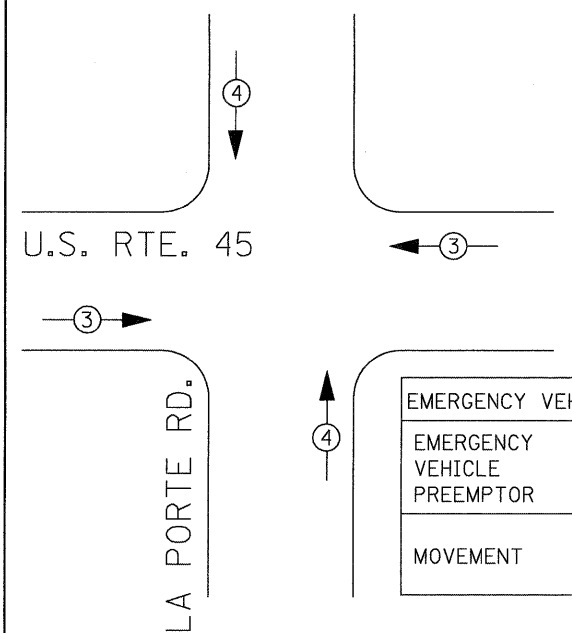


- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.

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



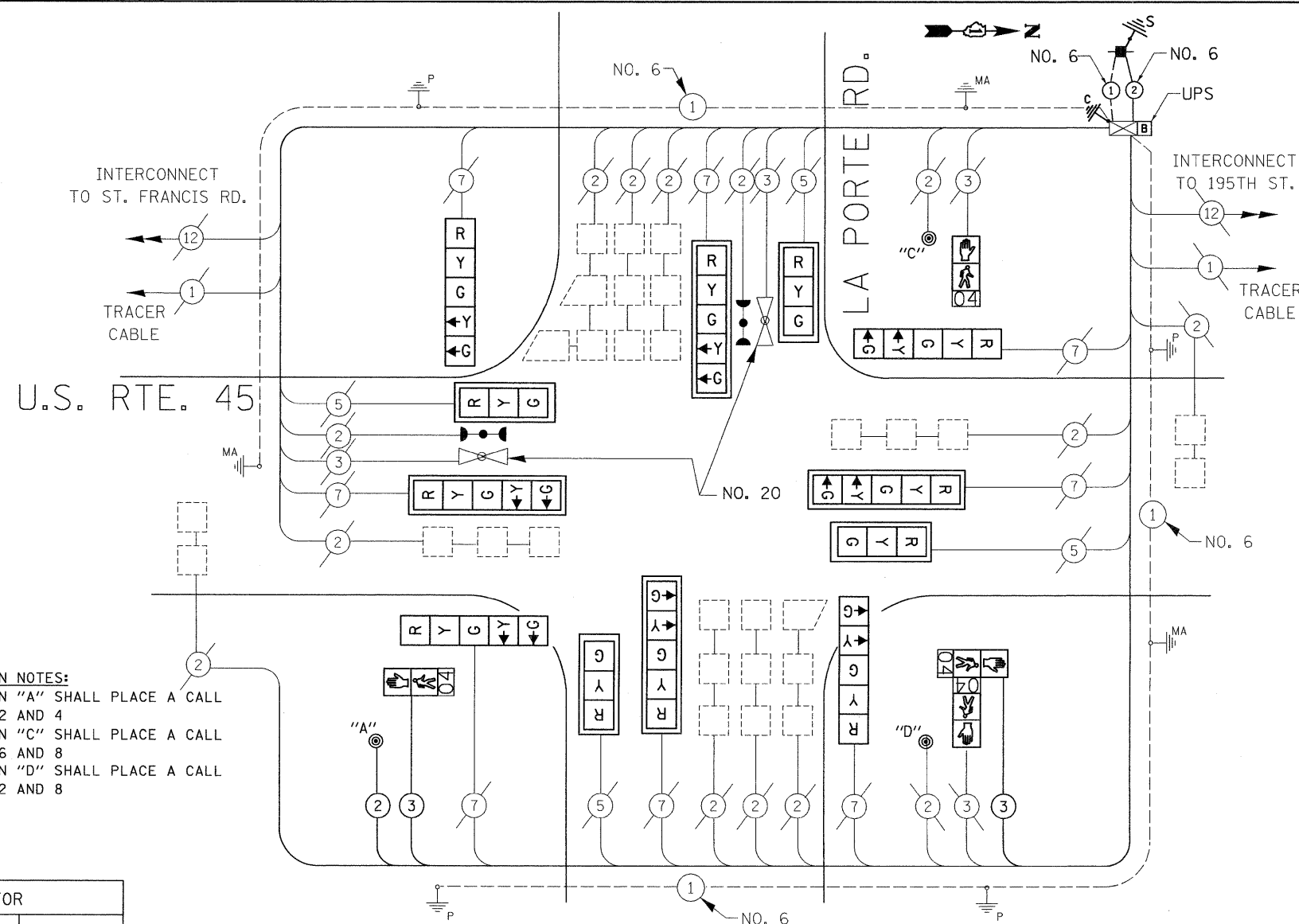
LEGEND
 * DUAL ENTRY PHASE
 * SINGLE ENTRY PHASE
 OL OVERLAP
 * PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE



EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↑ ↓

PUSH BUTTON NOTES:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
 PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8



CABLE PLAN LEGEND

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

12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE

12" (300mm) TRAFFIC SIGNAL SECTION
 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER

ILLUMINATED SIGN "NO LEFT TURN"
 ILLUMINATED SIGN "NO RIGHT TURN"

PUSHBUTTON DETECTOR
 DETECTOR LOOP
 PREFORMED DETECTOR LOOP

MICROWAVE VEHICLE SENSOR
 VIDEO DETECTOR
 CLOSED CIRCUIT TV

EMERGENCY VEHICLE SYSTEM DETECTOR
 CONFIRMATION BEACON
 UNINTERRUPTIBLE POWER SUPPLY

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
THERMOPLASTIC PAVEMENT MARKING LINE 6"	FOOT	384
THERMOPLASTIC PAVEMENT MARKING LINE 24"	FOOT	166
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	610
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, BRKT. MNTD.	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	3
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	1
REMOVE ELECTRICAL CABLE FROM CONDUIT	FOOT	80
THERMOPLASTIC PAVEMENT MARKING REMOVAL	FOOT	124
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C	FOOT	261
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	426
MODIFY EXISTING CONTROLLER	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 6 2C	FOOT	80
CONFIRMATION BEACON	EACH	2

I.D.O.T
TRAFFIC SIGNAL INSTALLATION
 ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102.00
(YELLOW)	12	135	25	0.25	75.00
(GREEN)	12	135	15	0.25	45.00
ARROW	16	135	12	0.10	19.20
PED. SIGNAL	3	90	25	1.00	75.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	

ENERGY COSTS TO: TOTAL = 416.20

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' H-2-
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m H-0.6m) =	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	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)

ENERGY SUPPLY CONTACT:
 PHONE: 708-410-5069
 COMPANY: COM. EDISON

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

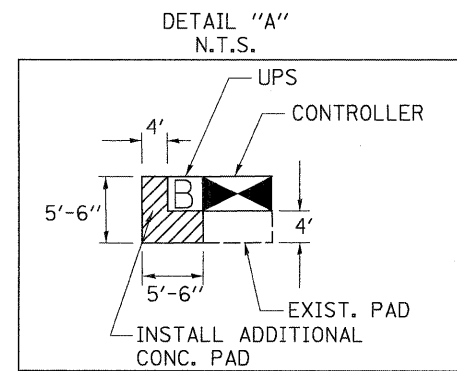
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM
 U.S. RTE. 45 AT LA PORTE RD.
 SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

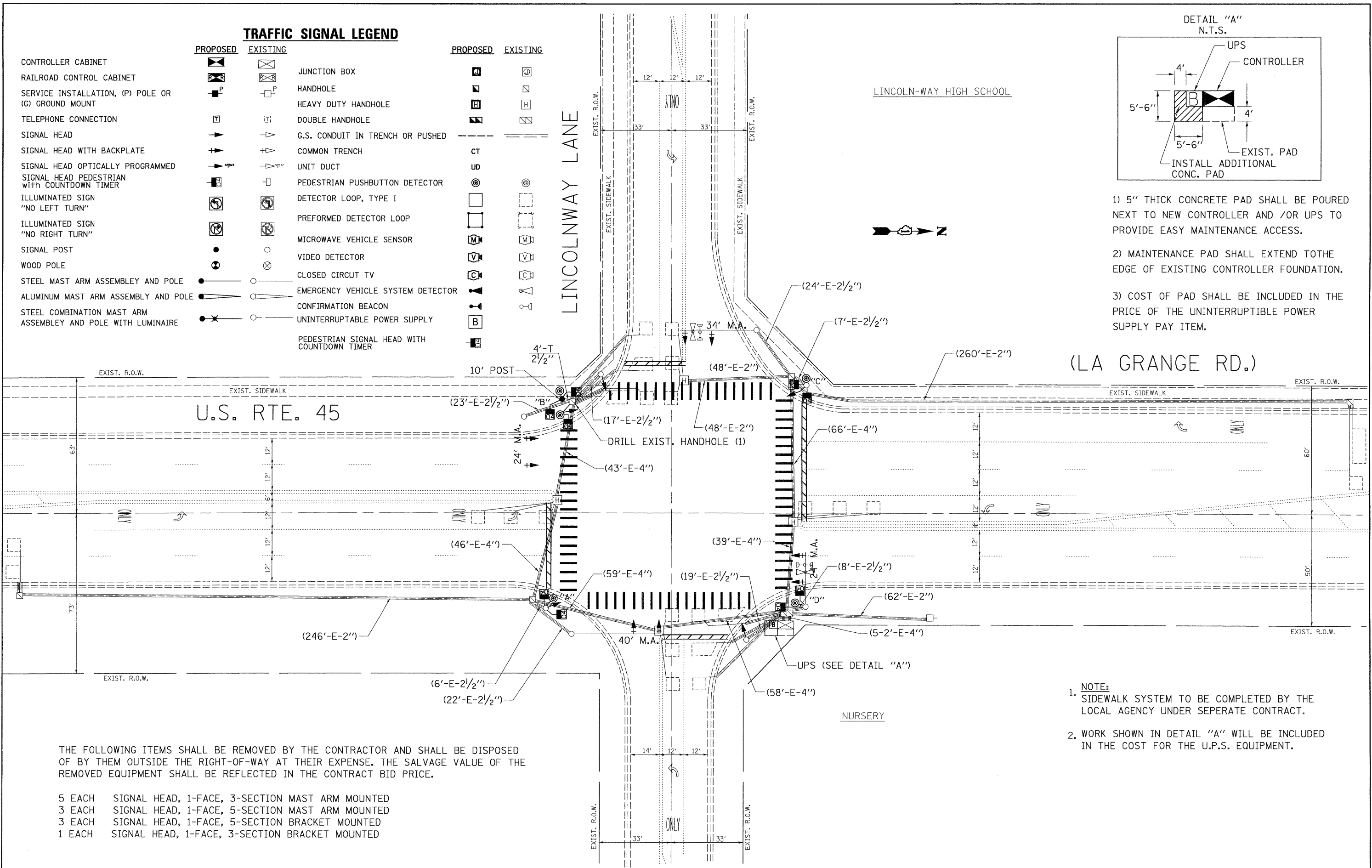
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	12
CONTRACT NO. 60642			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

TRAFFIC SIGNAL LEGEND

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



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.

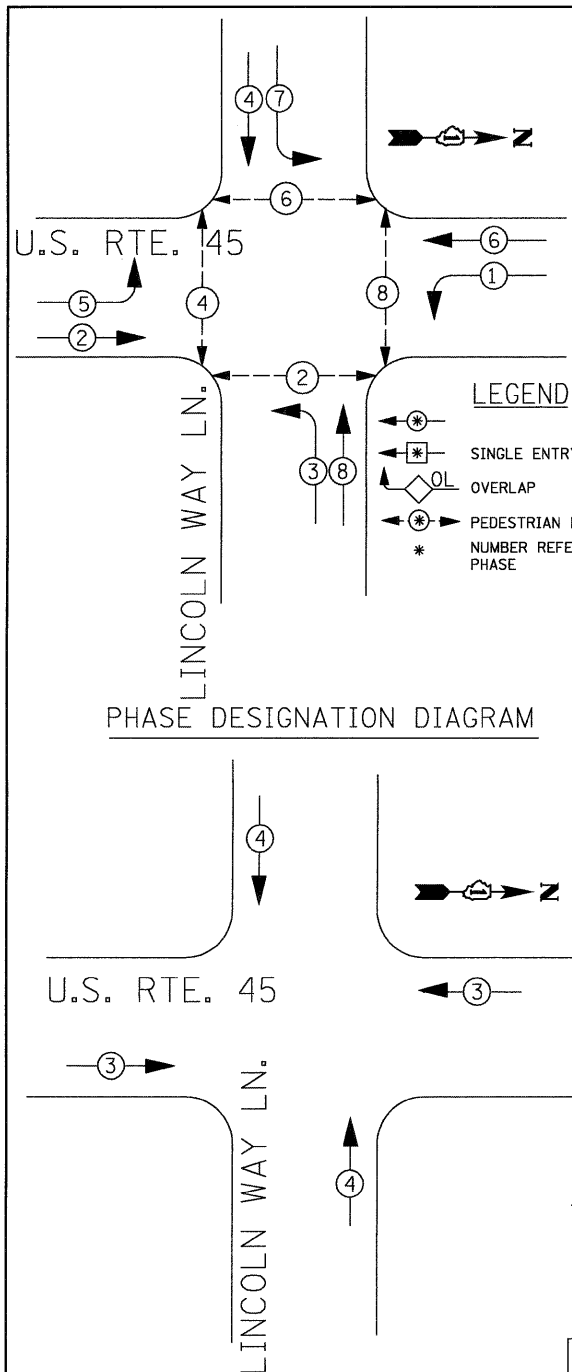


(LA GRANGE RD.)

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

- 5 EACH SIGNAL HEAD, 1-FACE, 3-SECTION MAST ARM MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION MAST ARM MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 1-FACE, 3-SECTION BRACKET MOUNTED

- NOTE:**
1. SIDEWALK SYSTEM TO BE COMPLETED BY THE LOCAL AGENCY UNDER SEPERATE CONTRACT.
 2. WORK SHOWN IN DETAIL "A" WILL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.

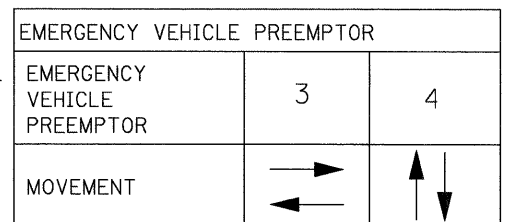


LEGEND

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

PUSH BUTTON NOTES:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 3 AND 6
 PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 3

EMERGENCY VEHICLE PREEMPTION SEQUENCE

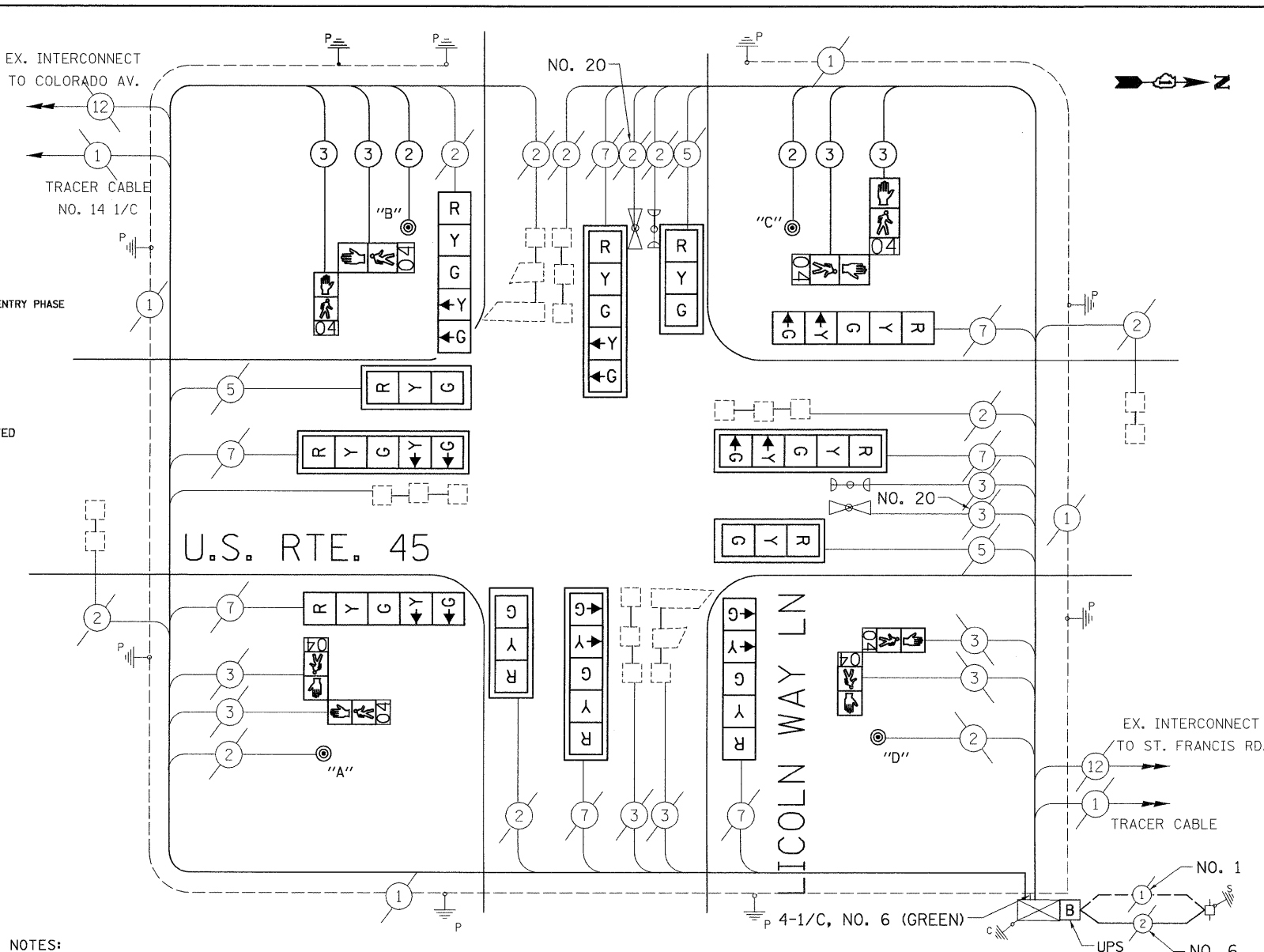


I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE (LED)	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.00
(YELLOW)	12	135	25	0.25	75.00
(GREEN)	12	135	15	0.25	45.00
ARROW	16	135	12	0.10	19.20
PED. SIGNAL	8	90	25	1.00	300.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	

ENERGY COSTS TO: TOTAL = 541.20

ENERGY SUPPLY CONTACT: 708-410-5069
 PHONE: 708-410-5069
 COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2'
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	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)



CABLE PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE	[Symbol]	[Symbol]
FIBER OPTIC CABLE IN CONDUIT, NUMBER OF FIBERS AS NOTED	[Symbol]	[Symbol]
ELECTRIC CABLE IN CONDUIT, NO. 14, UNLESS OTHERWISE NOTED. NUMBER OF CONDUCTORS AS NOTED	[Symbol]	[Symbol]
GROUND CABLE IN CONDUIT NO. 6 COPPER (GREEN)	[Symbol]	[Symbol]
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD	[Symbol]	[Symbol]
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE	[Symbol]	[Symbol]
12" (300mm) TRAFFIC SIGNAL SECTION	[Symbol]	[Symbol]
12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER	[Symbol]	[Symbol]
ILLUMINATED SIGN "NO LEFT TURN"	[Symbol]	[Symbol]
ILLUMINATED SIGN "NO RIGHT TURN"	[Symbol]	[Symbol]
PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
PREFORMED DETECTOR LOOP	[Symbol]	[Symbol]
MICROWAVE VEHICLE SENSOR	[Symbol]	[Symbol]
VIDEO DETECTOR	[Symbol]	[Symbol]
CLOSED CIRCUIT TV	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
UNINTERRUPTIBLE POWER SUPPLY	[Symbol]	[Symbol]

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
THERMOPLASTIC PAVEMENT MARKING LINE 12"	FOOT	492
THERMOPLASTIC PAVEMENT MARKING LINE 24"	FOOT	145
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C	FOOT	640
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	1301
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, BRKT. MNTD.	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	4
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	4
THERMOPLASTIC PAVEMENT MARKING REMOVAL	FOOT	126
MODIFY EXISTING CONTROLLER	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
CONDUIT PUSHED, 2 1/2" DIA. GALVANIZED STEEL	FOOT	4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 6 1C	FOOT	14

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM
 U.S. RTE. 45 AT LINCOLNWAY LANE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	14
CONTRACT NO. 60G42				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FILE NAME = \MICROST\352072\US45@LINCOLNWAY CAB.DGN
 USER NAME =
 DESIGNED -
 DRAWN -
 CHECKED -
 PLOT DATE = 03-18-09

REVISIED -
 REVISIED -
 REVISIED -
 REVISIED -

SCALE: NO SCALE SHEET NO. OF SHEETS STA. TO STA.

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

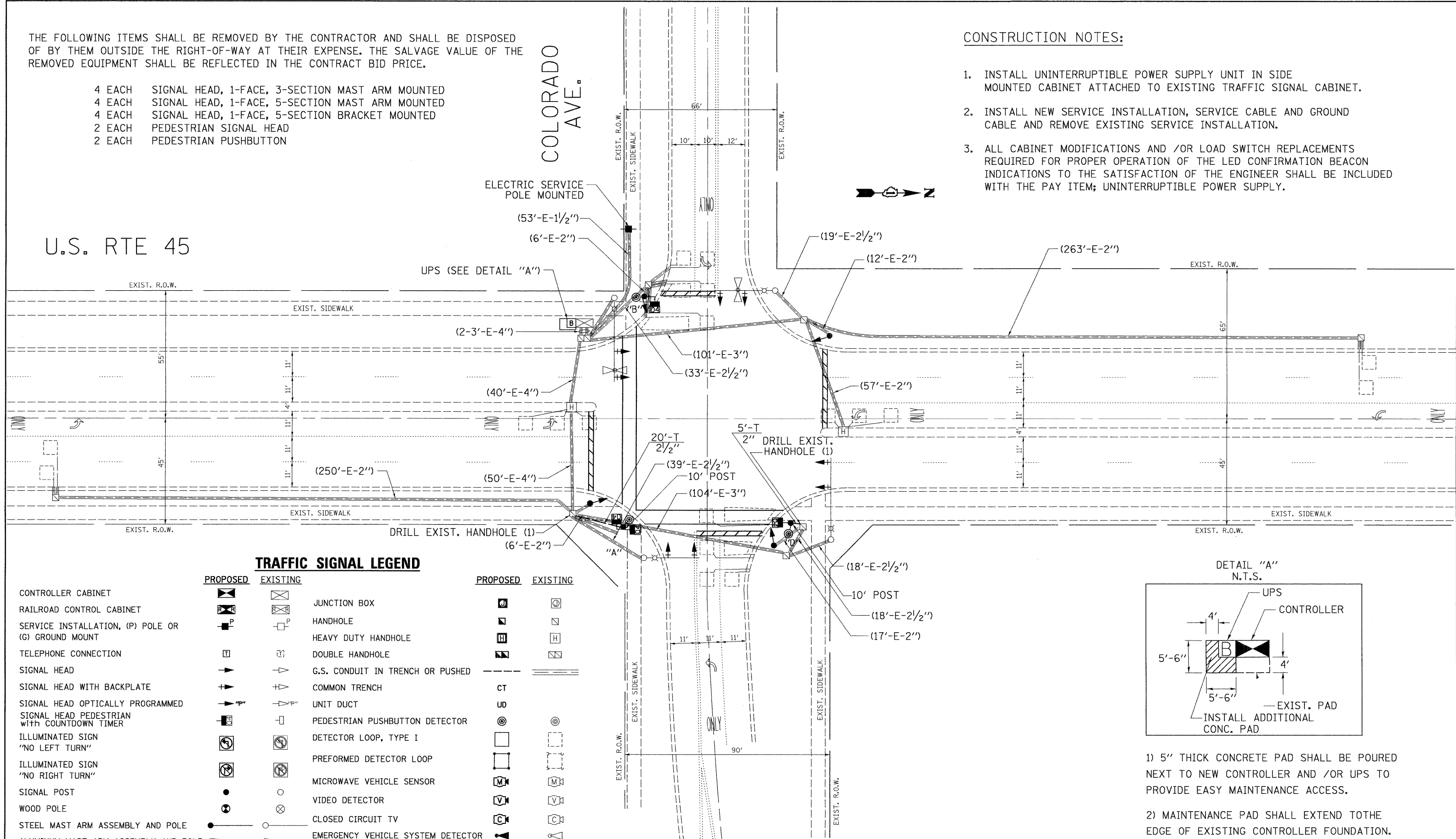
- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION MAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION MAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION BRACKET MOUNTED
- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSHBUTTON

CONSTRUCTION NOTES:

1. INSTALL UNINTERRUPTIBLE POWER SUPPLY UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
2. INSTALL NEW SERVICE INSTALLATION, SERVICE CABLE AND GROUND CABLE AND REMOVE EXISTING SERVICE INSTALLATION.
3. ALL CABINET MODIFICATIONS AND /OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF THE LED CONFIRMATION BEACON INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH THE PAY ITEM; UNINTERRUPTIBLE POWER SUPPLY.

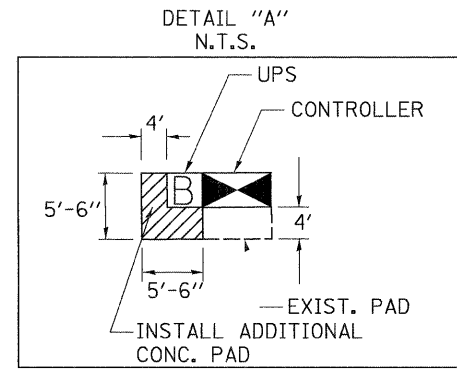
U.S. RTE 45

COLORADO AVE.



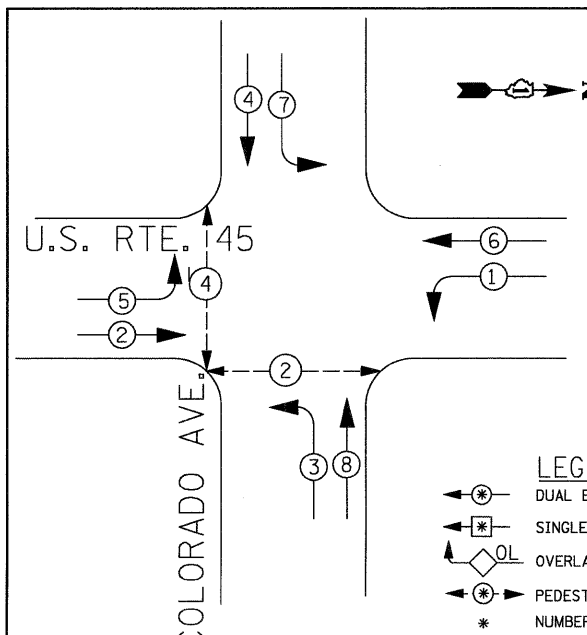
TRAFFIC SIGNAL LEGEND

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

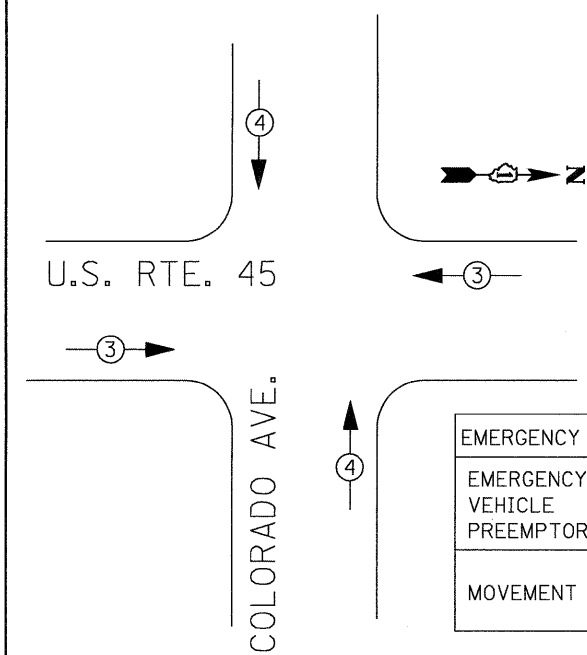


- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.

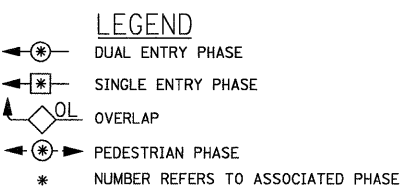
NOTE:
THE WORK SHOWN IN DETAIL "A" SHALL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.



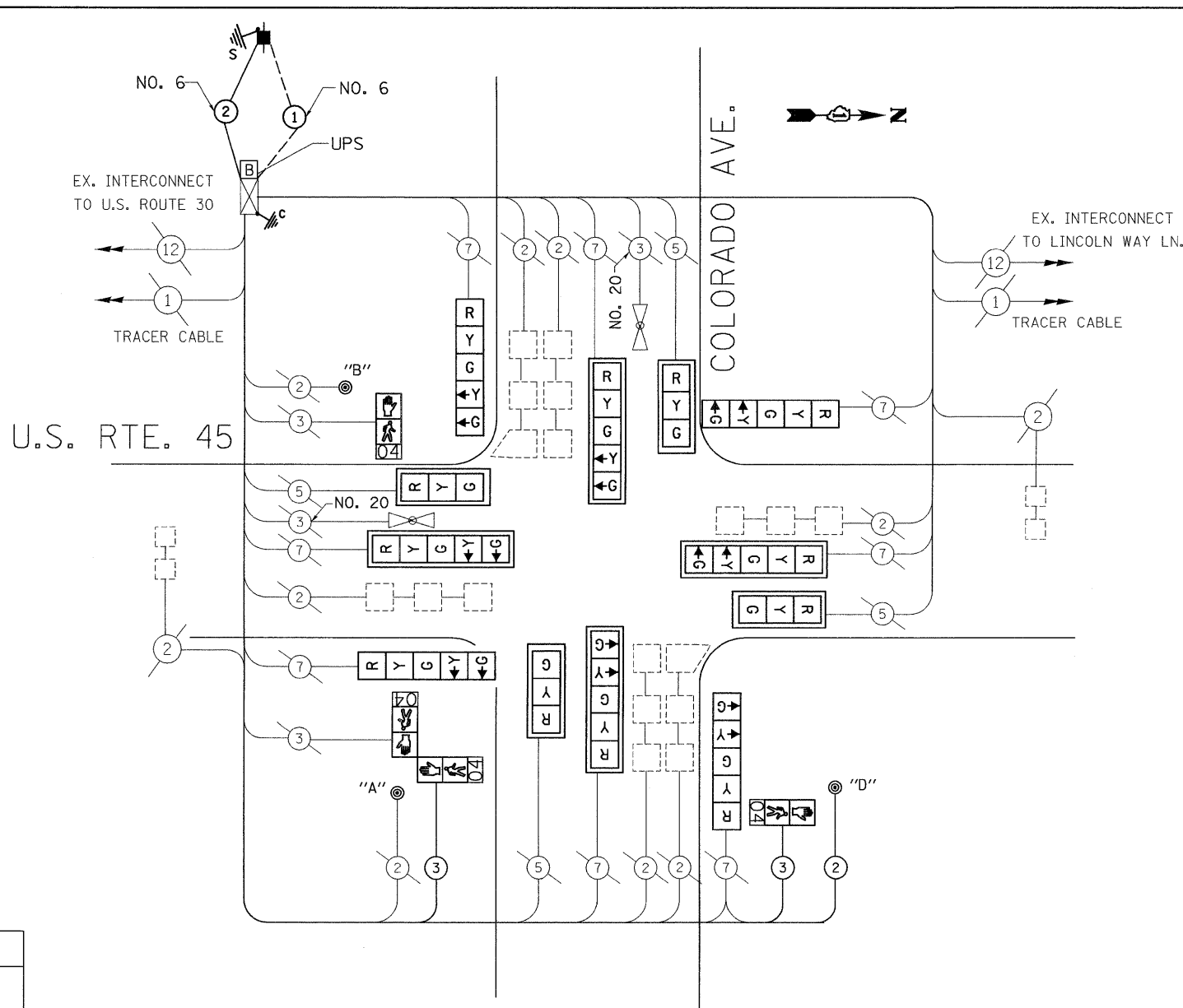
PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE



EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↑ ↓



CABLE PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE	[Symbol]	[Symbol]
FIBER OPTIC CABLE IN CONDUIT, NUMBER OF FIBERS AS NOTED	[Symbol]	[Symbol]
ELECTRIC CABLE IN CONDUIT, NO. 14, UNLESS OTHERWISE NOTED. NUMBER OF CONDUCTORS AS NOTED	[Symbol]	[Symbol]
GROUND CABLE IN CONDUIT NO. 6 COPPER (GREEN)	[Symbol]	[Symbol]
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD	[Symbol]	[Symbol]
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE	[Symbol]	[Symbol]
12" (300mm) TRAFFIC SIGNAL SECTION	[Symbol]	[Symbol]
12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER	[Symbol]	[Symbol]
ILLUMINATED SIGN "NO LEFT TURN"	[Symbol]	[Symbol]
ILLUMINATED SIGN "NO RIGHT TURN"	[Symbol]	[Symbol]
PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
PREFORMED DETECTOR LOOP	[Symbol]	[Symbol]
MICROWAVE VEHICLE SENSOR	[Symbol]	[Symbol]
VIDEO DETECTOR	[Symbol]	[Symbol]
CLOSED CIRCUIT TV	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
UNINTERRUPTIBLE POWER SUPPLY	[Symbol]	[Symbol]

PUSH BUTTON NOTES:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

SCHEDULE OF QUANTITIES

SCHEDULE OF QUANTITIES

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE (LED)	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.00
(YELLOW)	12	135	25	0.25	75.00
(GREEN)	12	135	15	0.25	45.00
ARROW	16	135	12	0.10	19.20
PED. SIGNAL	4	90	25	1.00	400.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 741.20
ENERGY SUPPLY CONTACT:					
PHONE: 708-410-5069					
COMPANY: COM. EDISON					

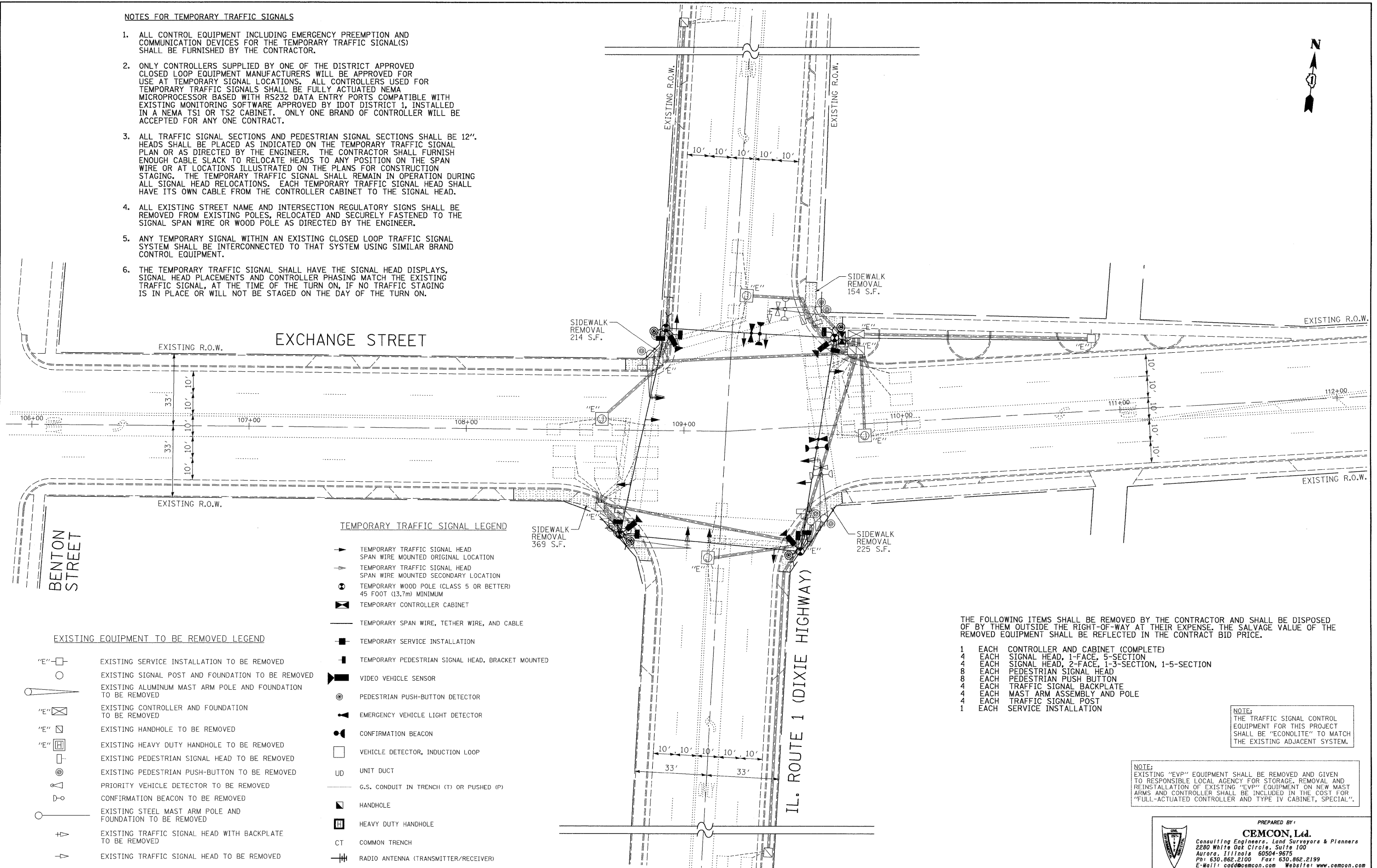
ITEM	UNIT	QUANTITY
THERMOPLASTIC PAVEMENT MARKING LINE 6"	FOOT	190
THERMOPLASTIC PAVEMENT MARKING LINE 24"	FOOT	130
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	54
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	54
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, BRKT. MNTD.	EACH	4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16FT.	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8

ITEM	UNIT	QUANTITY
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	3
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRKT. MNTD. WITH COUNTDOWN TIMER	EACH	1
THERMOPLASTIC PAVEMENT MARKING REMOVAL	FOOT	96
CONDUIT IN TRENCH, 2" DIA., GALV. STEEL	FOOT	25
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	275
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	432
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	EACH	8
DRILL EXISTING HANDHOLE	EACH	2
MODIFY EXISTING CONTROLLER	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	25

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'-H-2'-
E - M. ARM POLE		SIGNAL POST	2 (1.0)		6m+L-0.6m=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	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)

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PREEMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



TEMPORARY TRAFFIC SIGNAL LEGEND

- ▶ TEMPORARY TRAFFIC SIGNAL HEAD
- ◀ TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM
- ⊠ TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- ▣ TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- ▶ VIDEO VEHICLE SENSOR
- ⊙ PEDESTRIAN PUSH-BUTTON DETECTOR
- ▲ EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- UD UNIT DUCT
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- HANDHOLE
- ▣ HEAVY DUTY HANDHOLE
- CT COMMON TRENCH
- ⊠ RADIO ANTENNA (TRANSMITTER/RECEIVER)

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- ⊠ "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- ⊠ EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ⊠ "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- ⊠ "E" EXISTING HANDHOLE TO BE REMOVED
- ⊠ "E" EXISTING HEAVY DUTY HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- PRIORITY VEHICLE DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ▶ EXISTING TRAFFIC SIGNAL HEAD WITH BACKPLATE TO BE REMOVED
- ▶ EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED

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

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 4 EACH SIGNAL HEAD, 2-FACE, 1-3-SECTION
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 8 EACH PEDESTRIAN PUSH BUTTON
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH MAST ARM ASSEMBLY AND POLE
- 4 EACH TRAFFIC SIGNAL POST
- 1 EACH SERVICE INSTALLATION

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

NOTE:
EXISTING "EVP" EQUIPMENT SHALL BE REMOVED AND GIVEN TO RESPONSIBLE LOCAL AGENCY FOR STORAGE, REMOVAL AND REINSTALLATION OF EXISTING "EVP" EQUIPMENT ON NEW MAST ARMS AND CONTROLLER SHALL BE INCLUDED IN THE COST FOR "FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL".

FILE NAME =	USER NAME = RDS	DESIGNED - KK	REVISED -
MICROST\352072\ IL1 @ EXG TEMP SIG.DGN		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-18-09	DATE - 03-18-09	REVISED -

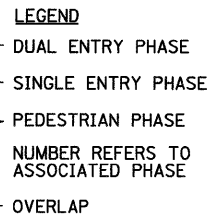
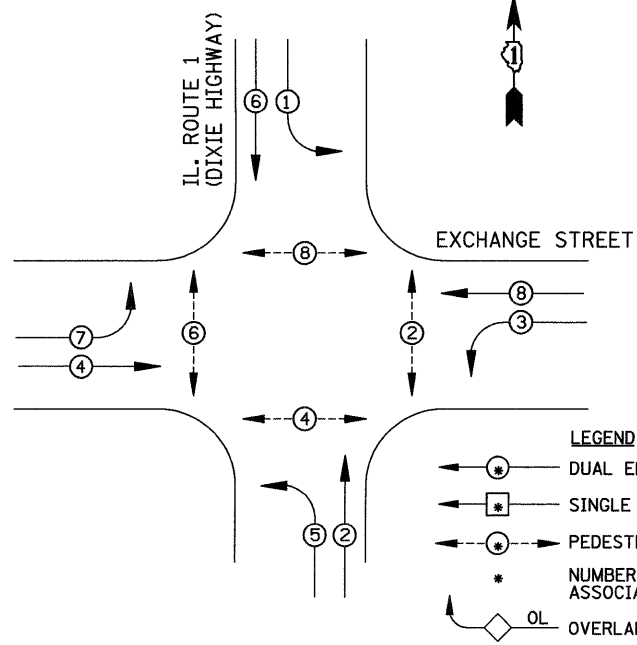
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
IL. ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

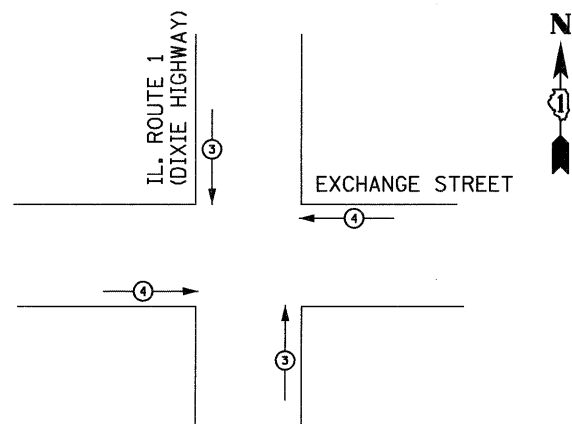
PREPARED BY: CEMCON, Ltd. Consulting Engineers, Land Surveyors & Planners 2280 White Oak Circle, Suite 100 Aurora, Illinois 60504-9675 Ph: 630.862.2100 Fax: 630.862.2199 E-Mail: cadd@cemcon.com Website: www.cemcon.com				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	17
CONTRACT NO. 60G42				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

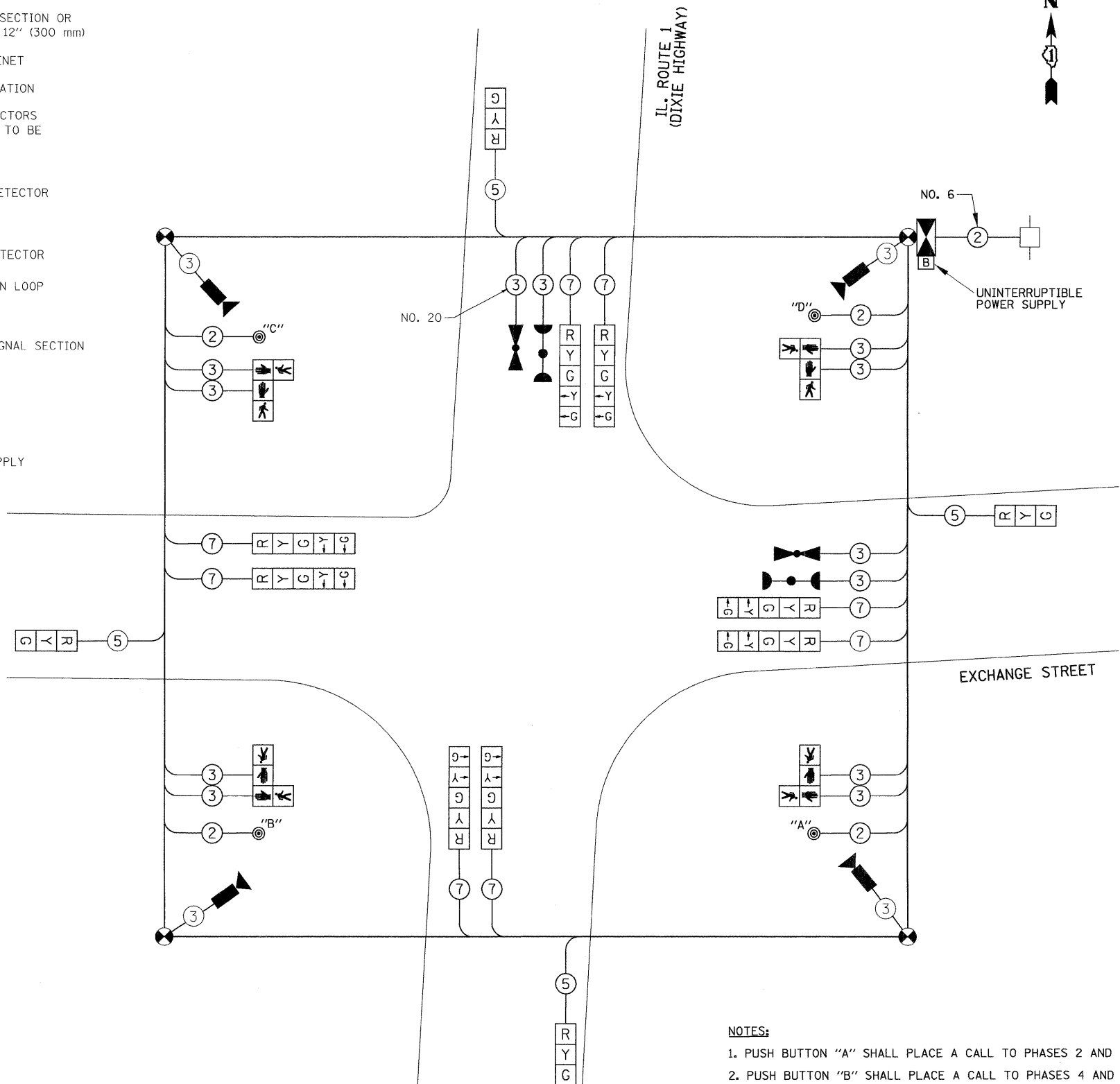
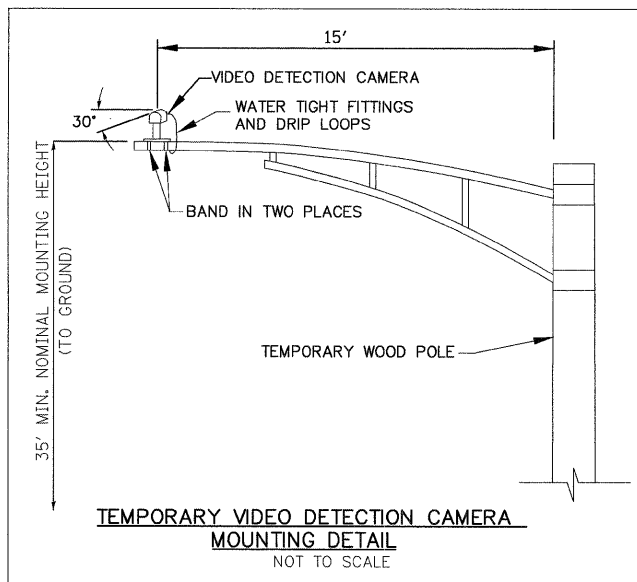
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	↑	←	

TEMPORARY CABLE DIAGRAM LEGEND

- [R] TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300 mm)
- [X] TEMPORARY CONTROLLER CABINET
- [] TEMPORARY SERVICE INSTALLATION
- (5) INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- ▶ EMERGENCY VEHICLE LIGHT DETECTOR
- ◐ CONFIRMATION BEACON
- ⊙ PEDESTRIAN PUSH-BUTTON DETECTOR
- [] VEHICLE DETECTOR, INDUCTION LOOP
- [] 12" (300mm) PEDESTRIAN SIGNAL SECTION
- ▶ VIDEO VEHICLE SENSOR
- ⊙ TEMPORARY WOOD POLE
- [B] UNINTERRUPTIBLE POWER SUPPLY



TEMPORARY CABLE PLAN

NOTES:

1. PUSH BUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.
2. PUSH BUTTON "B" SHALL PLACE A CALL TO PHASES 4 AND 6.
3. PUSH BUTTON "C" SHALL PLACE A CALL TO PHASES 6 AND 8.
4. PUSH BUTTON "D" SHALL PLACE A CALL TO PHASES 2 AND 8.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
TOTAL =					536.4

ENERGY COSTS TO:
VILLAGE OF CRETE
524 W. EXCHANGE STREET
CRETE, IL 60417

ENERGY SUPPLY CONTACT:
PHONE: _____
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.0 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20.0 (6.0)
E - M. ARM POLE		SIGNAL POST	0 (0.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	0 (0.0)	PEDESTRIAN PUSH-BUTTON	6 (2.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	13 (4.0)

FILE NAME = \MICROSTV\352072\ IL1 @ EXG TEMP CAB.DGN
USER NAME = RDS
DESIGNED - KK
DRAWN - RDS
CHECKED - BPT
PLOT SCALE = 1"=20'
PLOT DATE = 03-18-09

REVISOR - _____
REVISOR - _____
REVISOR - _____
REVISOR - _____
DATE - 03-18-09

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

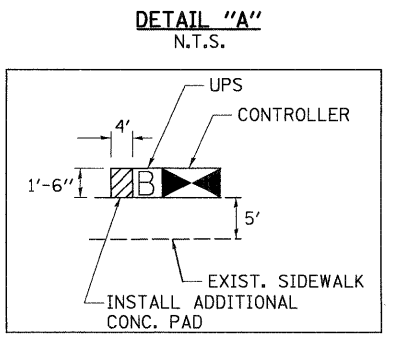
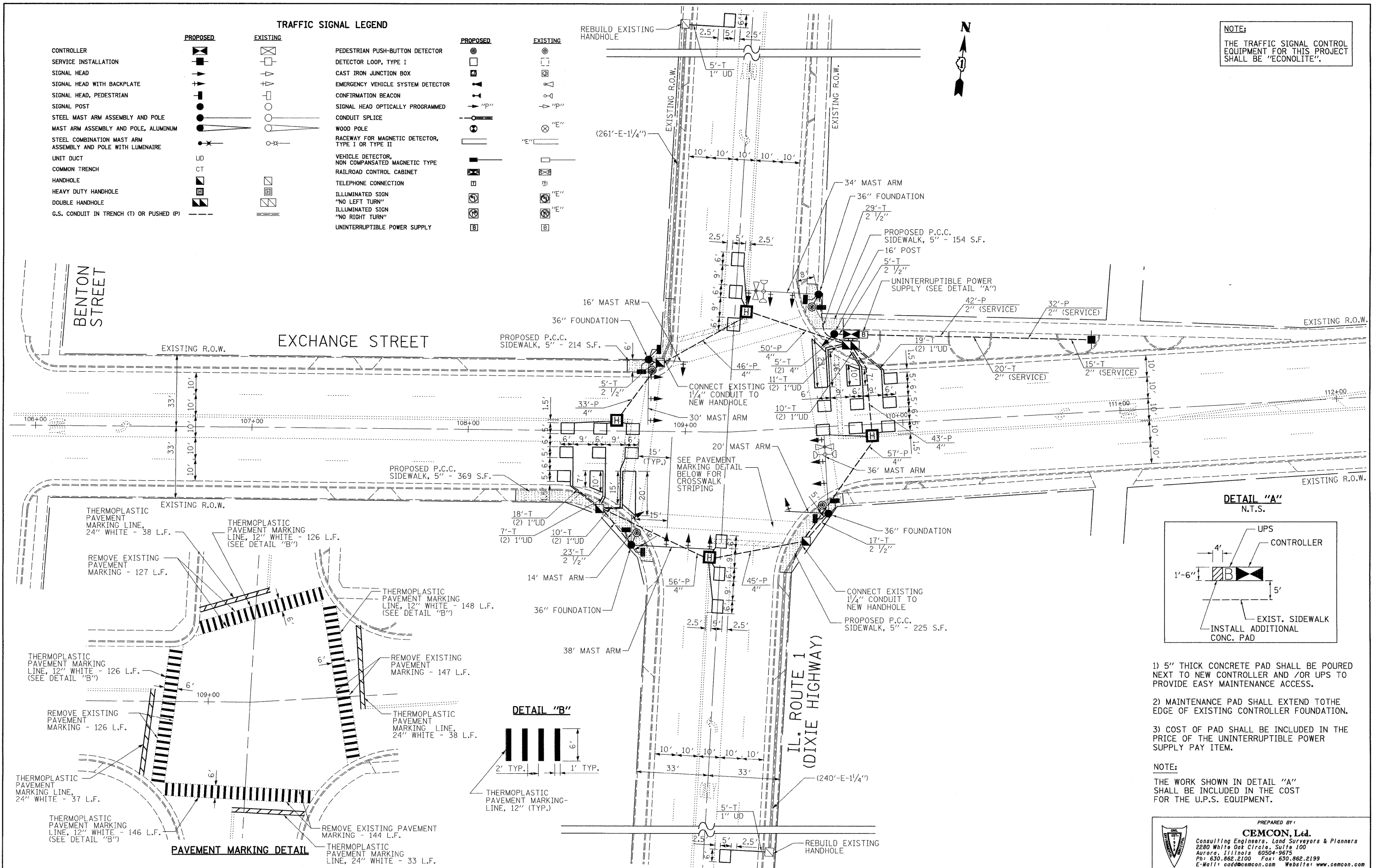
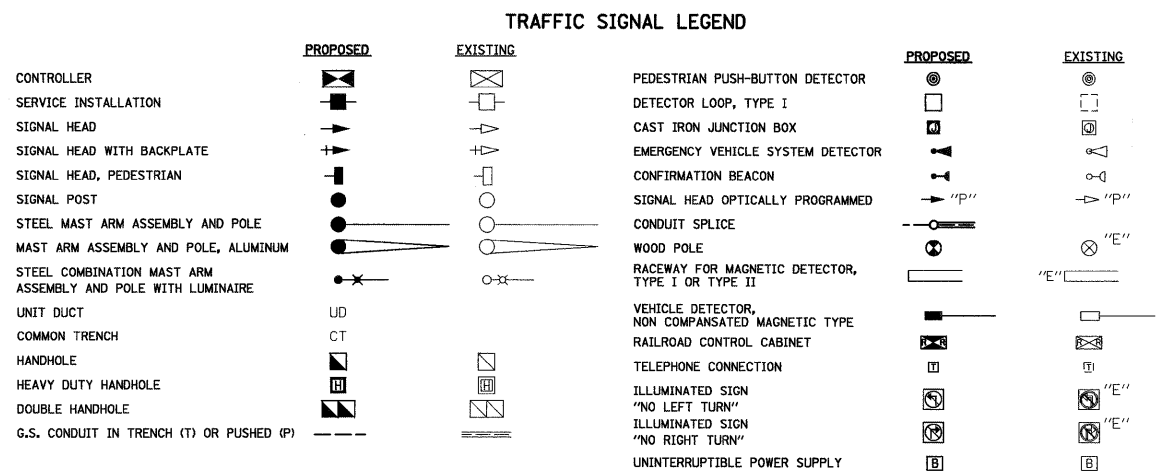
**TEMPORARY CABLE PLAN
AND PHASE DESIGNATION DIAGRAM
IL. ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

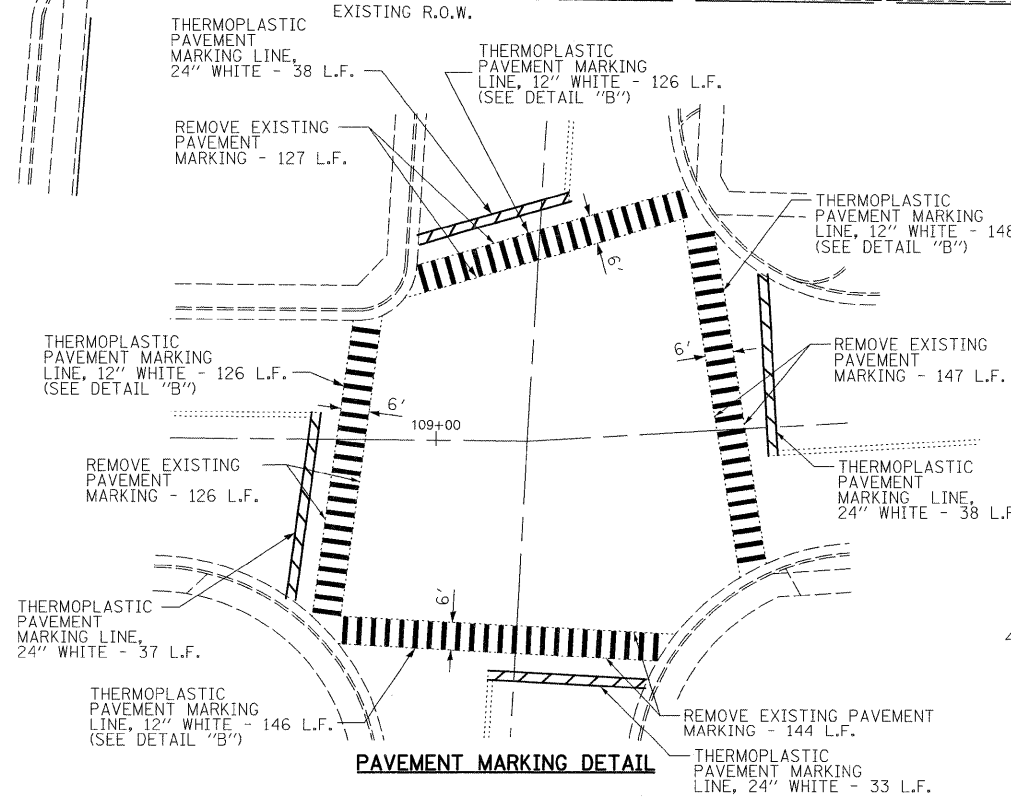
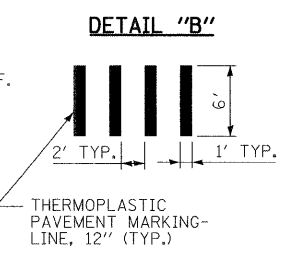
PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	18
CONTRACT NO. 60G42				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND /OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF THE UNINTERRUPTIBLE POWER SUPPLY PAY ITEM.



NOTE:
THE WORK SHOWN IN DETAIL "A" SHALL BE INCLUDED IN THE COST FOR THE U.P.S. EQUIPMENT.

FILE NAME = \MICROST\352072\ IL1 @ EXCHANGE SIG.DGN	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-18-09	DATE - 03-18-09	REVISED -

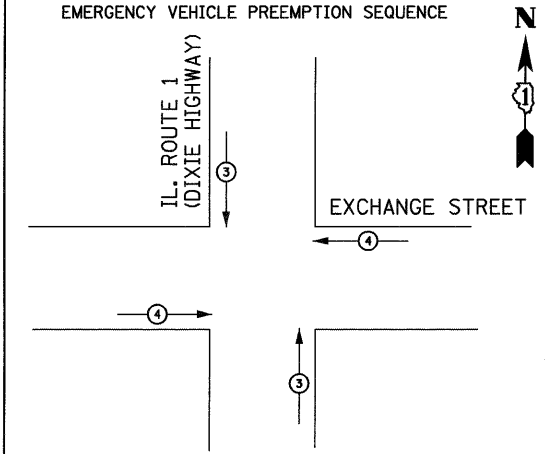
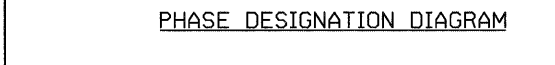
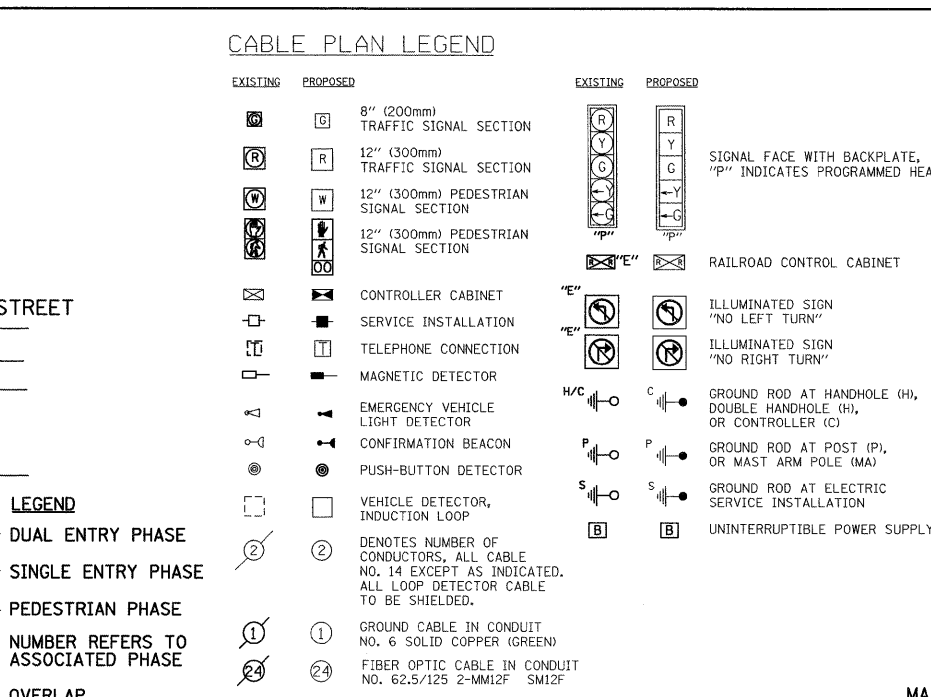
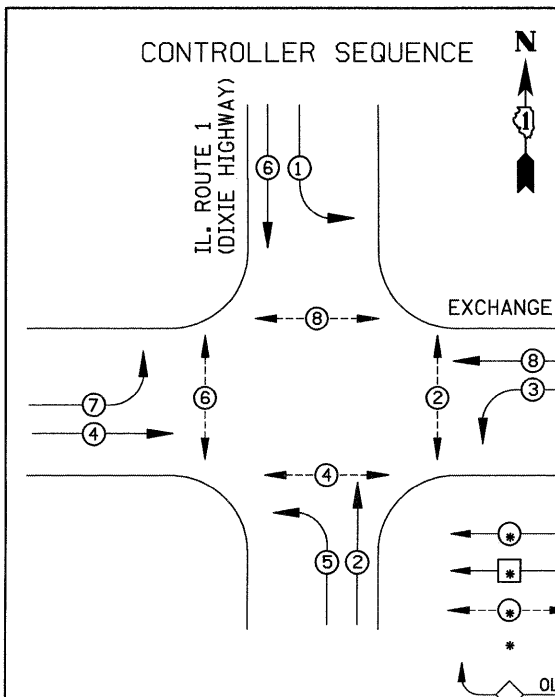
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
IL ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

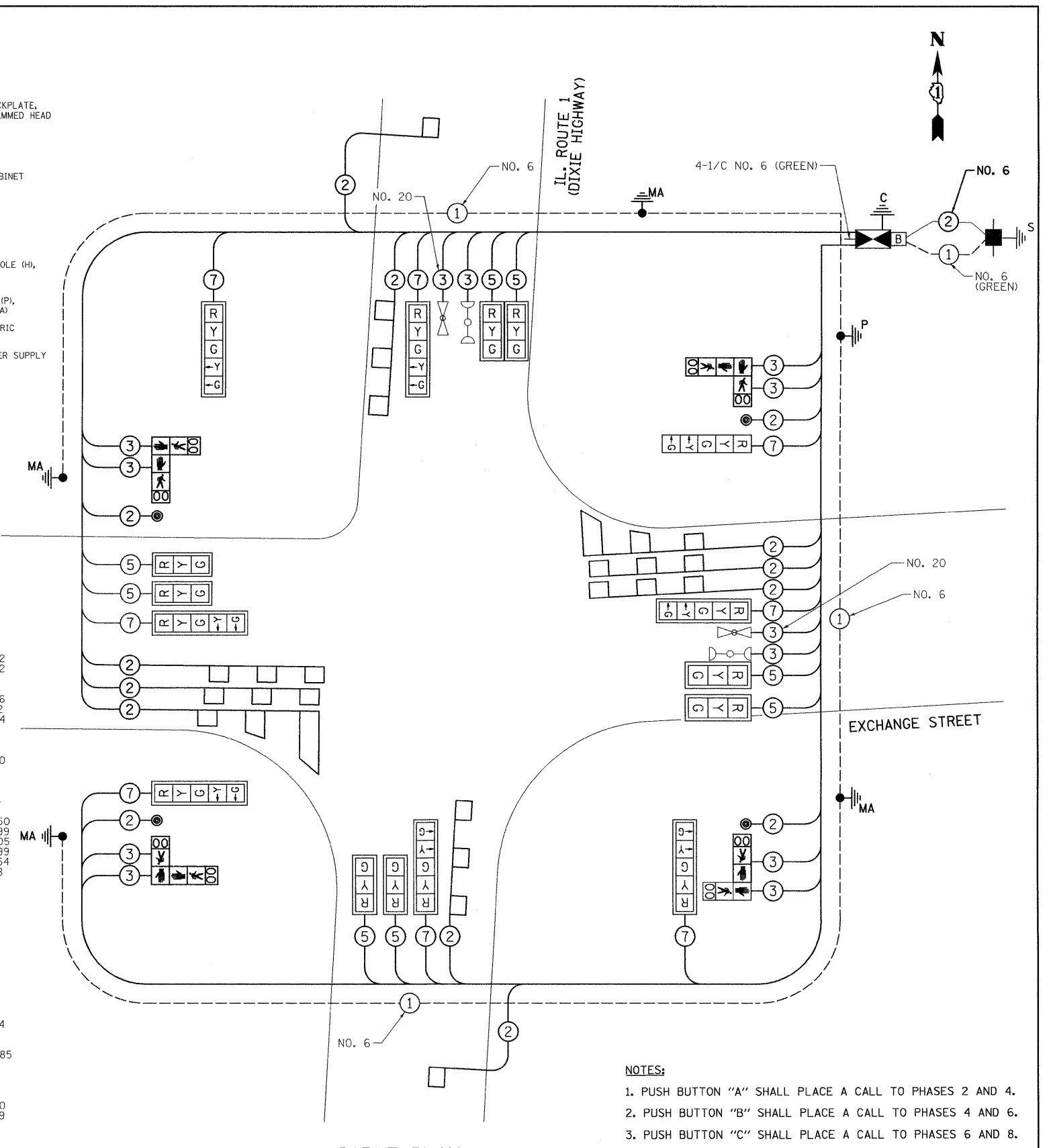
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	19
				CONTRACT NO. 60G42
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



SCHEDULE OF QUANTITIES

DETECTABLE WARNINGS	SOFT	76
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SOFT	962
SIDEWALK REMOVAL	SOFT	962
SIGN PANEL, TYPE 1	SO FT	18
SIGN PANEL, TYPE 2	SO FT	23
THERMOPLASTIC PAVEMENT MARKING, LINE-12"	FOOT	546
THERMOPLASTIC PAVEMENT MARKING, LINE-24"	FOOT	132
THERMOPLASTIC PAVEMENT MARKING REMOVAL	SO FT	404
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	35
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	79
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	74
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	330
HANDHOLE	EACH	3
HEAVY DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	114
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1350
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1599
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1505
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1499
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1754
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	128
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 14 FT. AND 38 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 16 FT. AND 30 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 20 FT. AND 36 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	4
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	7
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	15
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE 1	FOOT	734
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6085
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	8
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
SERVICE INSTALLATION, GROUND MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	360
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	249
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
REBUILD EXISTING HANDHOLE	EACH	2



PROPOSED EMERGENCY VEHICLE PREEMPTOR

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	→

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	LED	ZOPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	

ENERGY COSTS TO:

VILLAGE OF CRETE
524 W. EXCHANGE STREET
CRETE, IL 60417

ENERGY SUPPLY CONTACT: _____
PHONE: _____
COMPANY: COMED

FLASHER	0.50	
TOTAL =		615.2

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.0 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20.0 (6.0)
E - M. ARM POLE		SIGNAL POST	0 (0.0)	BRACKET MOUNTED	13 (4.0)
		24" (600mm)	10 (3.0)	PED. PUSH-BUTTON	6 (2.0)
		30" (750mm)	15 (4.6)	ELECTRIC SERVICE	13.5 (4.1)
		CONTRROLLER CAB.	0 (0.0)	SERVICE TO GROUND	13.5 (4.1)
		FIBER OPTIC	13 (4.0)	POST MOUNTED	13 (4.0)
		ELECTRIC SERVICE	1 (0.5)		
		GROUND CABLE	1 (0.5)		

NOTE: THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

- ### NOTES:
- PUSH BUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.
 - PUSH BUTTON "B" SHALL PLACE A CALL TO PHASES 4 AND 6.
 - PUSH BUTTON "C" SHALL PLACE A CALL TO PHASES 6 AND 8.
 - PUSH BUTTON "D" SHALL PLACE A CALL TO PHASES 2 AND 8.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM

IL. ROUTE 1 (DIXIE HIGHWAY) AT EXCHANGE STREET

SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-037 TS	WILL	21	20

CONTRACT NO. 60G42
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

