

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.U. RT. 2588 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 1
ILLINOIS			CONTRACT NO. 63867	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA:

ADT:
CENTER DRIVE 6600 (2012), 7000 (2040)
JANES AVENUE = 6250 (2011), 7000 (2040)

POSTED SPEED LIMIT:

CENTER DRIVE = 30 MPH
JANES AVENUE = 30 MPH

DESIGN DESIGNATION:

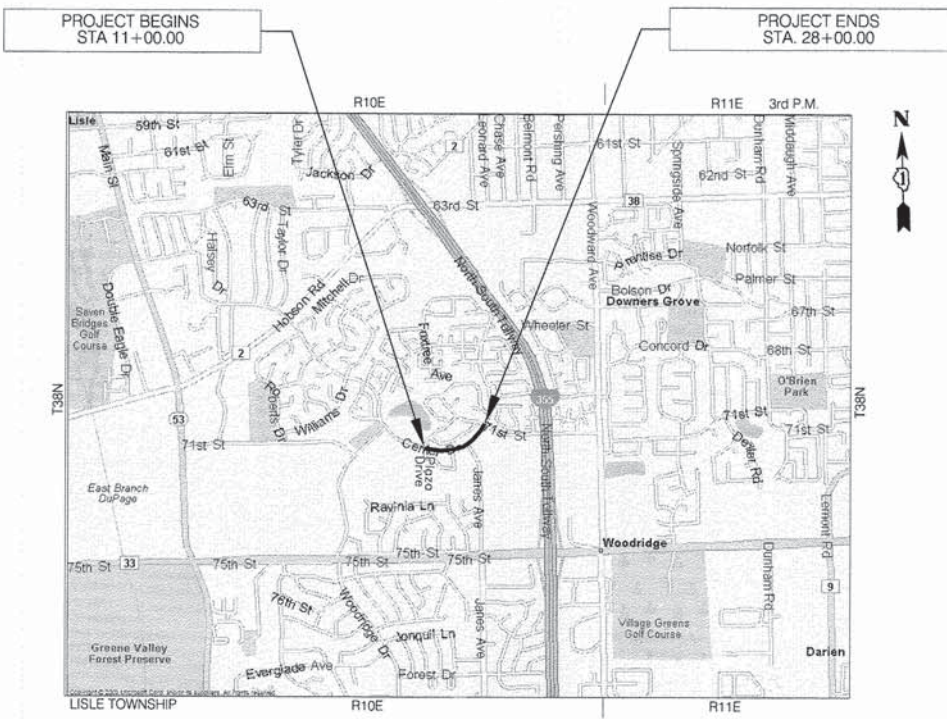
CENTER DRIVE = COLLECTOR-URBAN
JANES AVENUE = COLLECTOR-URBAN

**FAU 3573 (CENTER DRIVE)/FAU 2588 (JANES AVENUE)
PLAZA DRIVE TO 71st STREET (FAU 1533)
TRAFFIC SIGNAL MODERNIZATION
SECTION: 12-00067-00-TL
PROJECT: M-4003(072)
VILLAGE OF WOODRIDGE
DuPAGE COUNTY
C-91-553-12**



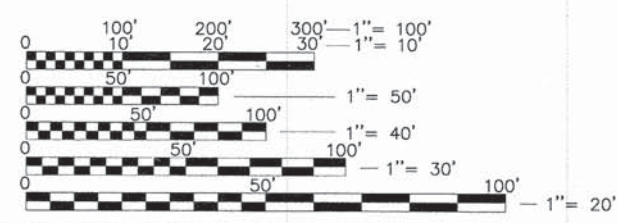
LOCATION OF SECTION INDICATED THUS: - [Symbol] -

PROJECT LOCATED IN
VILLAGE OF WOODRIDGE



LOCATION MAP
SCALE: NTS

GROSS & NET LENGTH OF PROJECT = 1,700 FT. = (0.32 MILES)



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 LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

CONTRACT NO. 63867

COUNTY: DuPAGE SECTION: 12-00067-00-TL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED: August 5 2013
[Signature]
Village of Woodridge, Director of Public Works

PASSED: August 16, 2013
[Signature]
District 1 Engineer of Local Roads & Streets

Releasing for Bid
Based on Limited
Review August 16, 2013

[Signature]
Deputy Director of Highways, Region 1 Engineer

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JAMES J. BENES & ASSOCIATES, INC.

JAMES J. BENES & ASSOCIATES
CONSULTING ENGINEERS
950 WARRENVILLE ROAD, SUITE 101
LISLE, IL 60532
(630) 719-7570

SIGNATURE: *[Signature]*
DATE: 7-29-13
IL LICENSE NO. 062-039438
EXP. DATE: NOVEMBER 30, 2013
FIELD: JAMES J. BENES AND ASSOCIATES, INC.
CIVIL ENGINEERING

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLER, P.E. (847) 705-4406, SCHAUMBURG, IL
CONSULTANT: JAMES J. BENES AND ASSOCIATES, INC. (630) 719-7570

INDEX OF SHEETS

SHEET NO.	TITLE
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22-23	DISTRICT ONE DETAILS

SUGGESTED SEQUENCE TO MINIMIZE SIGNAL SHUT-DOWN TIME

- INSTALL NEW FOUNDATIONS AND CONDUITS FOR POSTS AND MAST ARMS.
- INSTALL NEW FOUNDATIONS FOR NEW SERVICE BOXES. COORDINATE NEW SERVICES WITH COMED.
- MODIFY CONTROLLER FOUNDATIONS.
- INSTALL NEW POSTS AND MAST ARMS.
- INSTALL NEW SIGNAL HEADS AND CABLES (BAG AS NECESSARY).
- INSTALL INTERCONNECT CONDUITS AND CABLES.
- USE "FLASHING RED" MODE WHEN POSSIBLE TO CONTINUE WORK.
- WHEN SIGNAL SIGNAL SHUT DOWN IS NECESSARY TO INSTALL NEW CONTROLLERS, PROVIDE:
INFORMATION ON THE CHANGEABLE MESSAGE SIGNS,
"STOP AHEAD" SIGNS AND 4-WAY STOP SIGNS WITH RED FLASHING BEACONS.

COMMITMENTS: NONE

GENERAL NOTES

- ACCESS TO LOCAL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE THE ENGINEER, MUNICIPALITY, AND JAMES J. BENES AND ASSOCIATES, INC. THREE (3) WORKING DAYS NOTICE PRIOR TO THE COMMENCEMENT OF WORK.
(VILLAGE OF WOODRIDGE: (630) 719-4753)
(JAMES J. BENES AND ASSOCIATES, INC.: (630) 719-7570)
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTING BOLT PATTERN ON EXISTING FOUNDATIONS THAT ARE SPECIFIED TO BE RE-USED.
- THE ENGINEER OR THE OWNER, SHALL NOT ASSUME ANY OF THE RESPONSIBILITIES OF THE CONTRACTOR'S SUPERINTENDENT OR OF SUBCONTRACTORS. ADDITIONALLY, THE ENGINEER SHALL NOT ADVISE ON, OR ISSUE DIRECTIONS CONCERNING, ASPECTS OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND/OR PROGRAMS IN CONNECTION WITH THE WORK.
- THE LOCATIONS OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THEIR ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES. THE CONTRACTOR SHALL REPORT ANY ENCOUNTERED DISCREPANCIES TO THE ENGINEER AT ONCE. THE CONTRACTOR SHALL TAKE DUE CARE IN ALL PHASES OF CONSTRUCTION TO PROTECT ANY UTILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH ARTICLES 105.07, 107.20, AND 107.31.
- THE CONTRACTOR SHALL KEEP THE CONSTRUCTION AREA FREE OF DEBRIS DURING CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE SITE DAILY FOR DEBRIS ON THE ROADWAY SURFACE IN ACCORDANCE WITH ARTICLE 107.15. THE RIGHT-OF-WAY SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH ARTICLE 107.20.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION AND SHALL REPAIR ANY DRAINAGE FACILITIES DAMAGED DURING CONSTRUCTION. THIS WORK SHALL BE INCLUDED IN THE COST OF THE CONTRACT AND WILL NOT BE PAID FOR SEPARATELY.
- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, GAS, SEWERS AND WATER UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED.)
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ALL UTILITY COMPANIES AND THE VILLAGE OF WOODRIDGE.
- SAW CUTTING OF PAVEMENT, SHOULDERS, CURB AND GUTTER, ETC. SHALL BE TO FULL DEPTH AND SHALL RESULT IN A CLEAN, STRAIGHT EDGE ON THE PORTION REMAINING. ALL SAW CUTTING SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM REMOVED.
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2013; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" JULY 2009 SIXTH EDITION, THE "DETAILS" IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS.
- THE RELOCATION OF SIGNS AND SIGN PANELS ARE INCLUDED IN THE COST OF THE CONTRACT AND WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH ARTICLE 107.25.

LIST OF STATE STANDARDS

00001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-07	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424011-01	CORNER PARALLEL CURB
424021-01	DEPRESSED CORNER FOR SIDEWALK
606001-05	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701601-08	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-08	URBAN LANE CLOSURE MULTI-LANE INTERSECTION
701801-05	SIDEWALK CORNER OR CROSSWALK CLOSURE
701901-02	TRAFFIC CONTROL DEVICES
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
814001-02	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
876001-02	PEDESTRIAN PUSH BUTTON POST
877001-05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-09	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

LIST OF DISTRICT ONE DETAILS


TC-10	TRAFFIC CONTROL AND PROTECTION PLAN FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TS-05	STANDARD TRAFFIC SIGNAL DESIGN DETAILS

FILE NAME	USER NAME	DESIGNED	REVISIONS
		— SJG	—
		DRAWN — SMP	REVISIONS —
		CHECKED — SJG	REVISIONS —
		DATE —	REVISIONS —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS
AND LIST OF STATE STANDARDS

SCALE: N/A SHEET NO. OF SHEETS STA. TO STA.

 JAMES J. BENES & ASSOCIATES, INC. 950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589				
F.A.U. RTE. 2588 & 3575	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 2
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE			
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	TRAFFIC SIGNALS CENTER @ PLAZA	TRAFFIC SIGNALS CENTER @ JAMES	TRAFFIC SIGNALS JAMES @ 71ST	TRAFFIC SIGNAL INTERCONNECT
				75% FED 25% VILLAGE 0021	75% FED 25% VILLAGE 0021	75% FED 25% VILLAGE 0021	75% FED 25% VILLAGE 0021
* 20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	26			26	
* 40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	44			44	
* 42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	715			715	
* 42400900	DETECTABLE WARNINGS	SQ FT	118			118	
* 44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	122			122	
* 44000600	SIDEWALK REMOVAL	SQ FT	715			715	
* 44201670	CLASS D PATCHES, TYPE 1, 2 INCH	SQ YD	30	10	10	10	
* 60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	46			46	
* 60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	76			76	
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
70102630	TRAFFIC CONTROL AND PROTECTION - STANDARD 701601	L SUM	1	0.25	0.25	0.25	0.25
70102635	TRAFFIC CONTROL AND PROTECTION - STANDARD 701701	L SUM	1	0.25	0.25	0.25	0.25
70102640	TRAFFIC CONTROL AND PROTECTION - STANDARD 701801	L SUM	1	0.25	0.25	0.25	0.25
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	6	2	2	2	
* 78000400	THERMOPLASTIC PAVEMENT MARKINGS-LINE 6"	FOOT	108			108	
* 78000600	THERMOPLASTIC PAVEMENT MARKINGS-LINE 12"	FOOT	420			420	
* 78000650	THERMOPLASTIC PAVEMENT MARKINGS-LINE 24"	FOOT	121			121	
80500010	SERVICE INSTALLATION - GROUND MOUNTED	EACH	3	1	1	1	
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1,147	29	115	43	960
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	399	139	165	95	
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	53	0	12	41	
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	21	7	7	7	
81028270	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1" DIA.	FOOT	200	22	100	78	
81400100	HANDHOLE	EACH	4	1	1	0	2
81400300	DOUBLE HANDHOLE	EACH	1	0	0	1	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3	1	1	1	
88400100	TRANSCIVER-FIBER OPTIC	EACH	3	0	0	0	3
87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1,681	0	0	0	1,681
87300925	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	1,618	0	0	0	1,618
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	21	8	6	7	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	3,436	1,338	673	1,425	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	4,690	1,805	1,101	1,784	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	4,973	1,852	1,767	1,334	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,353	474	497	1,382	
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	5,876	2,162	1,771	1,943	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	90	30	30	30	
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1,707	662	541	504	
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4	2	1	1	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	9	4	2	3	
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	3	1	2	0	
87802000	PEDESTRIAN PUSH-BUTTON POST	EACH	1	0	0	1	
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	2		1	1	
87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1			1	
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	2		1	1	
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1	1			
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1	1			
87700270	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1			1	

SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE			
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	TRAFFIC SIGNALS CENTER @ PLAZA	TRAFFIC SIGNALS CENTER @ JAMES	TRAFFIC SIGNALS JAMES @ 71ST	TRAFFIC SIGNAL INTERCONNECT
				75% FED 25% VILLAGE 0021	75% FED 25% VILLAGE 0021	75% FED 25% VILLAGE 0021	75% FED 25% VILLAGE 0021
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	60	24	20	16	
87502220	MODIFY EXISTING CONCRETE FOUNDATION	EACH	3	1	1	1	
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	38		14	24	
87900200	DRILL EXISTING HANDHOLE	EACH	31	8	12	8	3
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	12	4	4	4	
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5	2	3	0	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6	2	0	4	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	7	2	1	4	
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3	2	1	0	
88030240	SIGNAL HEAD, LED, 2-FACE, 1 3-SECTION, 1 5-SECTION, BRACKET MOUNTED	EACH	7	2	1	4	
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	14	8	2	4	
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	3	0	1	2	
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	19	6	5	8	
88500100	INDUCTIVE LOOP DETECTOR	EACH	25	9	7	9	
88600100	DETECTOR LOOP, TYPE 1	FOOT	795	132	363	300	
88700200	LIGHT DETECTOR	EACH	6	2	2	2	
88700300	LIGHT DETECTOR AMPLIFIER	EACH	3	1	1	1	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	20	8	4	8	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	16,955	5,855	4,139	6,961	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3	1	1	1	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	7	3	3	1	
* X2501020	SEEDING, CLASS 2A (SPECIAL)	ACRE	0.37	0.10	0.10	0.10	0.07
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2	1		1	
X8570231	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1		1		
X8600105	MASTER CONTROLLER (SPECIAL)	EACH	1		0		1
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	1,119	402	400	317	

* DENOTES SPECIALTY ITEMS

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR Voids @Ndes
PATCHING	
CLASS D PATCHES, 2" (HMA SURFACE IL-9.5mm)	4% @ 70 Gyr.

- NOTES:
- 1) THE UNIT WEIGHT USED TO CALCULATE ALL HMA QUANTITIES IS 112 LB/SY/IN.
 - 2) THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

LEGEND
* -DENOTES SPECIALTY ITEM

FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --
		DRAWN -- SMP	REVISED --
		CHECKED -- SJG	REVISED --
		DATE --	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES		
SCALE: N/A	SHEET NO. OF SHEETS	STA. TO STA.

JAMES J. BENES & ASSOCIATES, INC.
950 Warrenville Road, Suite 101, Lisle, Illinois 60532
Tel. (630) 719-7570 • Fax (630) 719-7589

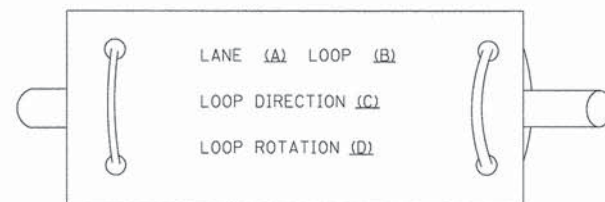
F.A.U. R.T.E. 357.5	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 3
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ILLINOIS FED. AID PROJECT

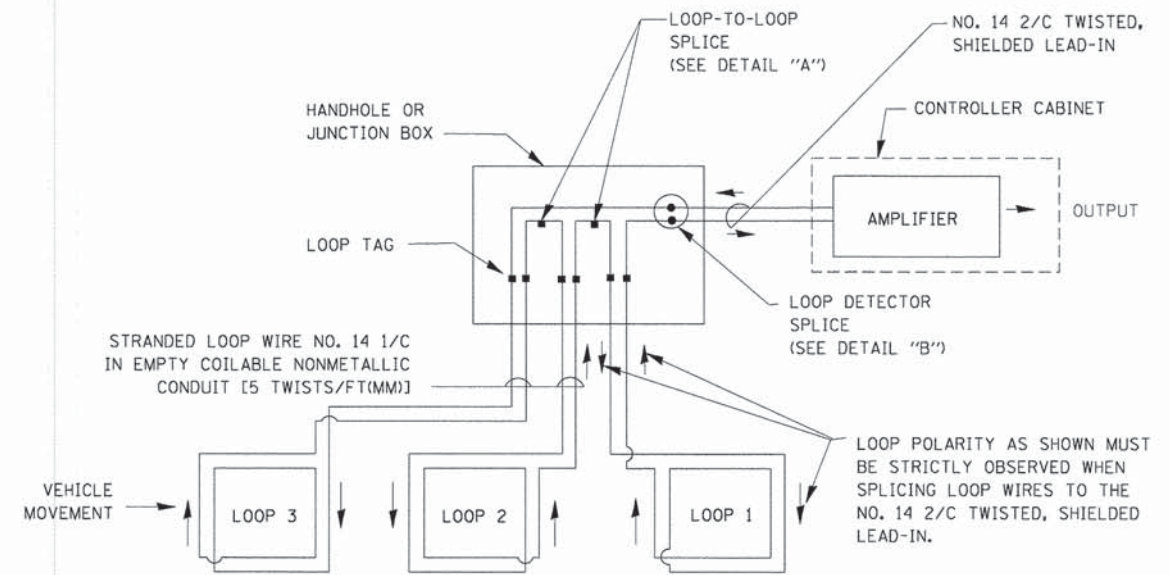
LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT 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 DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

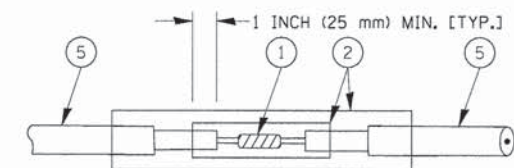


- LANE #1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

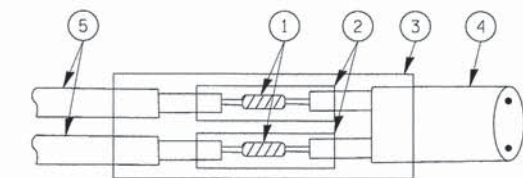


DETECTOR LOOP WIRING SCHEMATIC

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

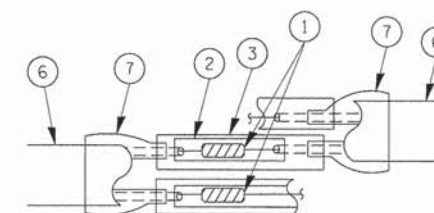


DETAIL "A"
LOOP-TO-LOOP SPLICE

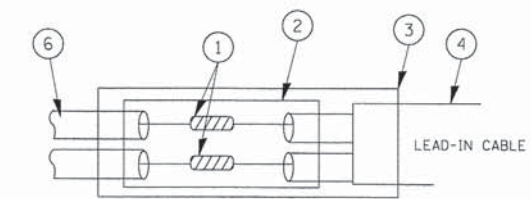


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

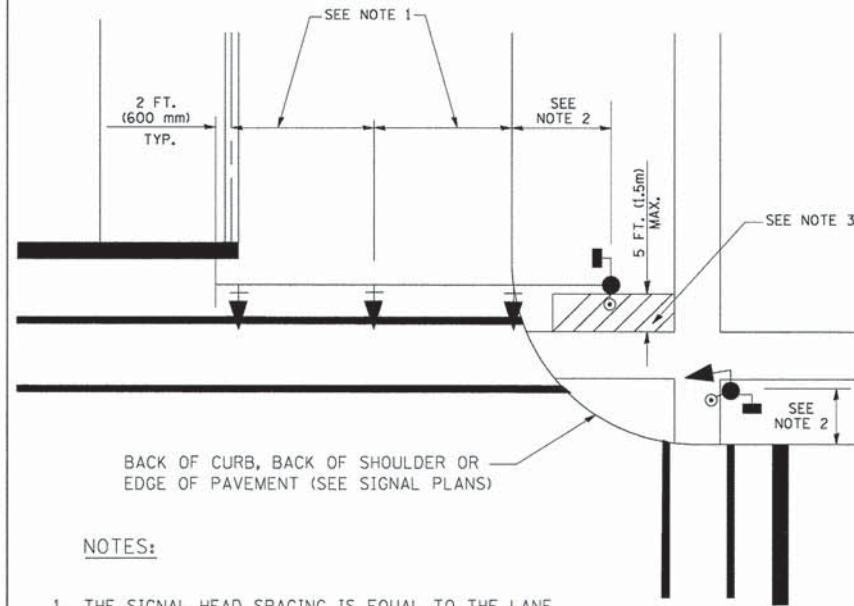
LOOP DETECTOR SPLICE

- 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.
- PREFORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = bauerd	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.U. RTE. 2588 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 4	SHEET NO. 23	
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PLOT SCALE = 58.0000' / IN.	DATE - 10-28-09	REVISED -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
PLOT DATE = 11/4/2009											

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

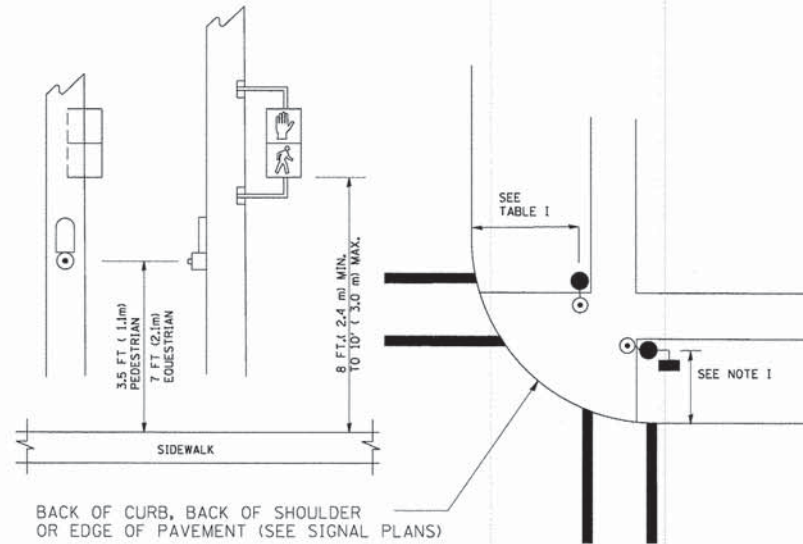
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

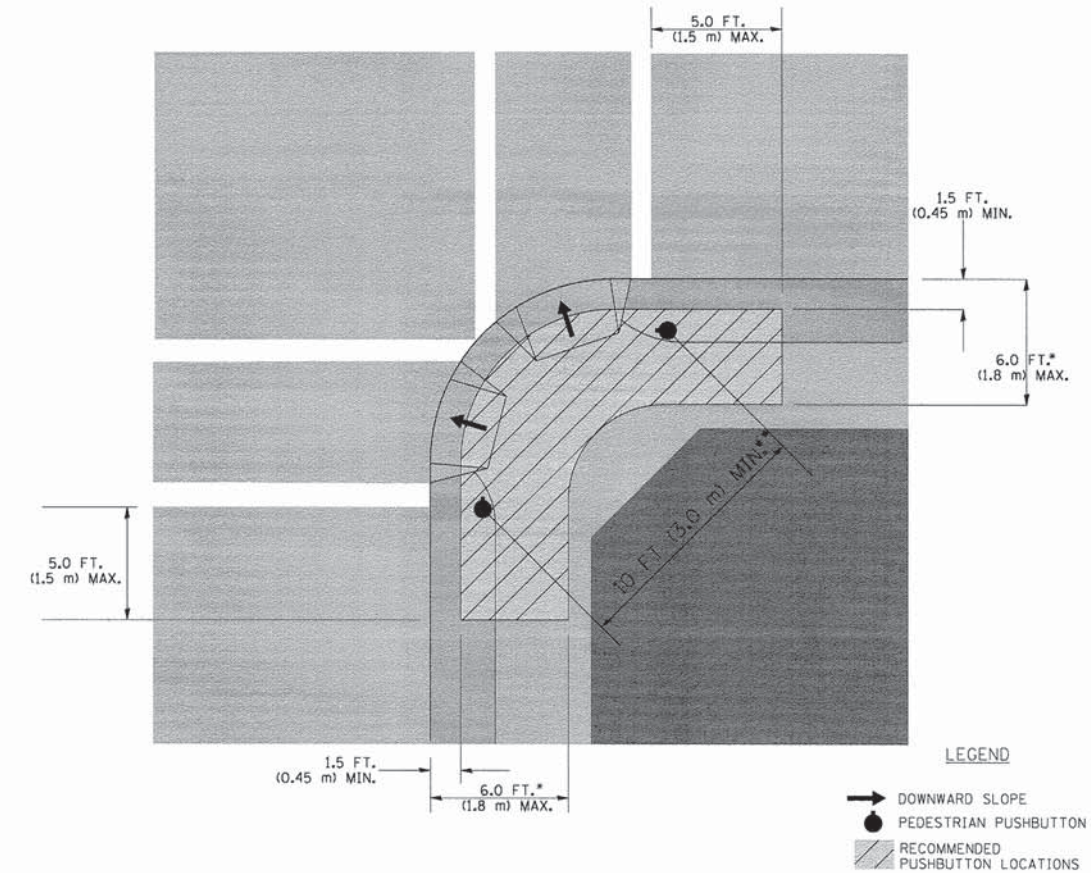
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

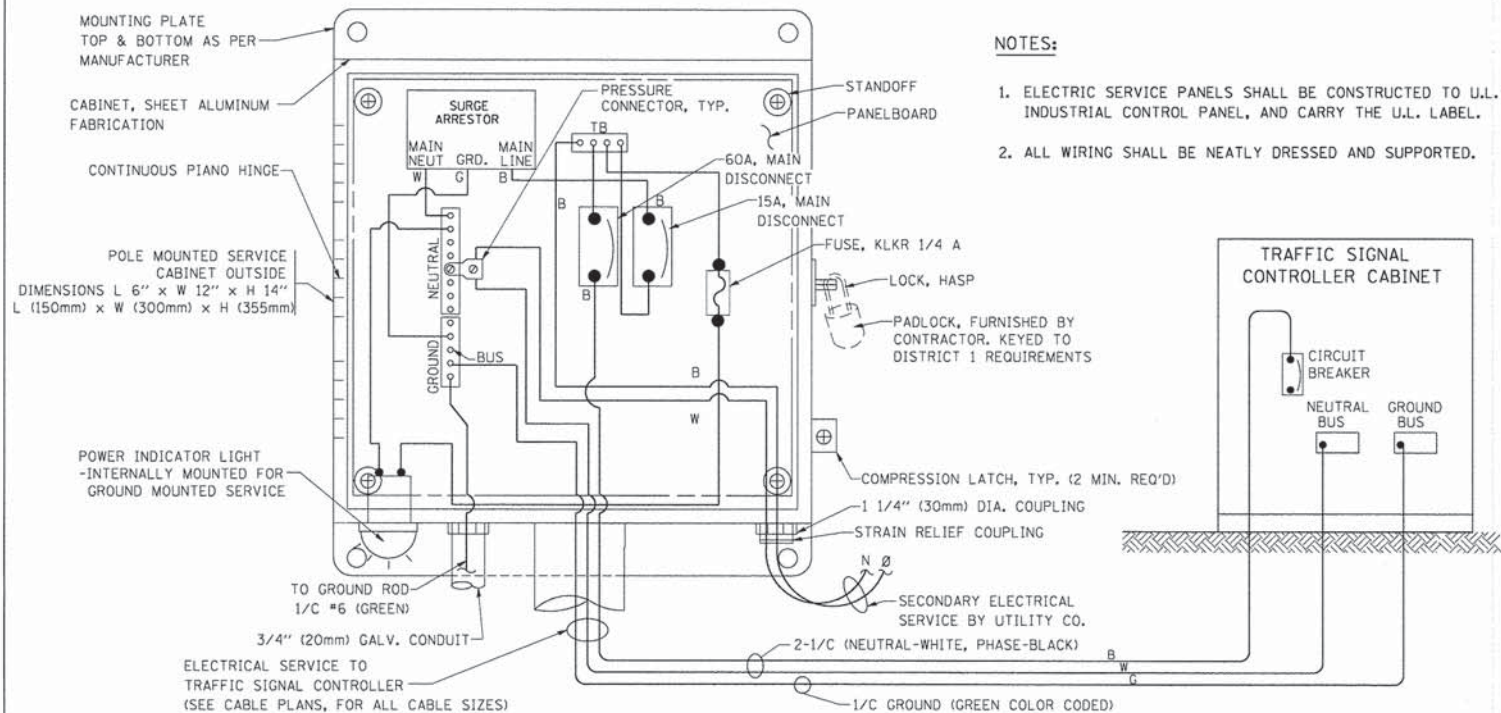
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PLOT DATE = 11/4/2009		DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

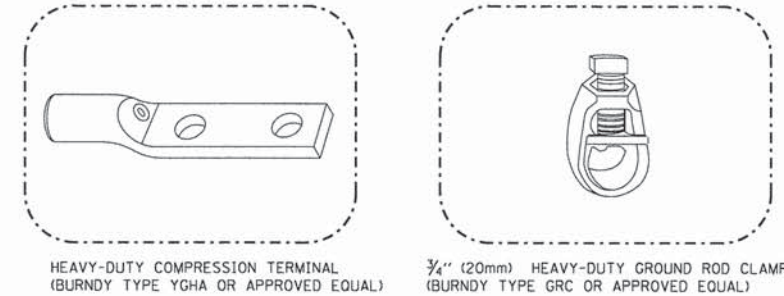
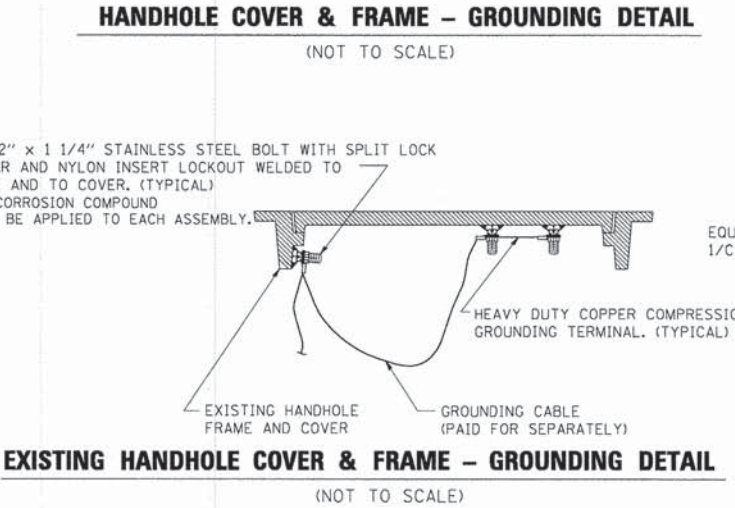
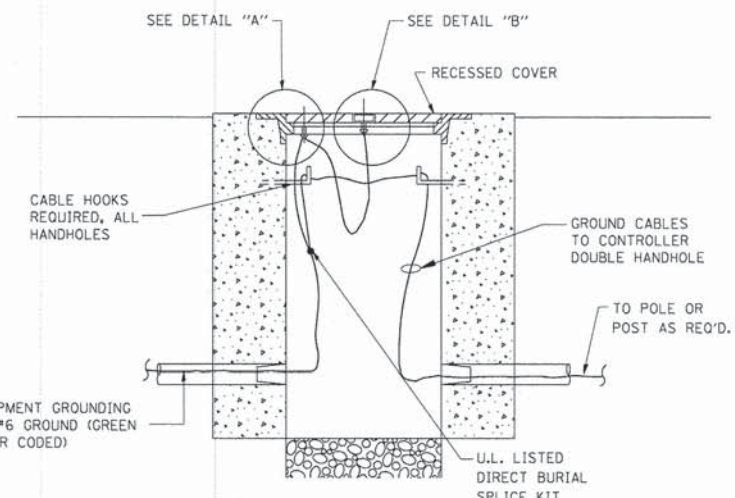
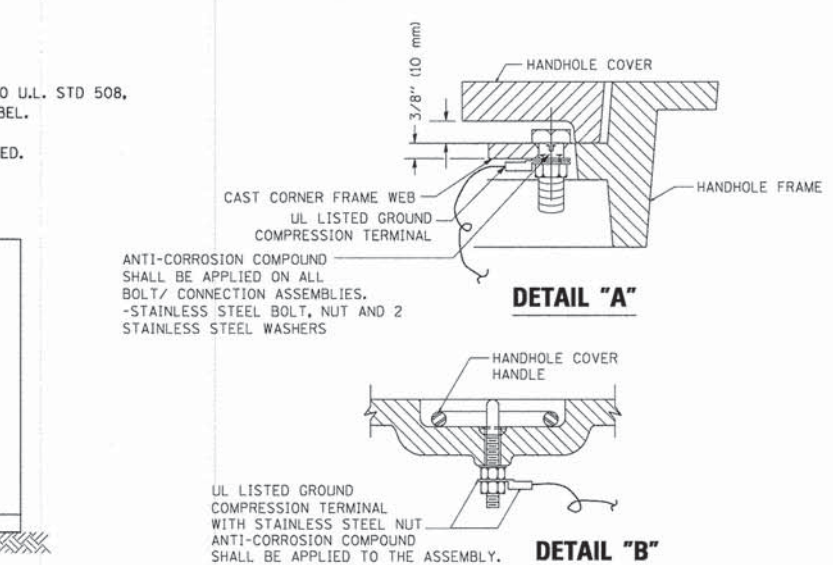
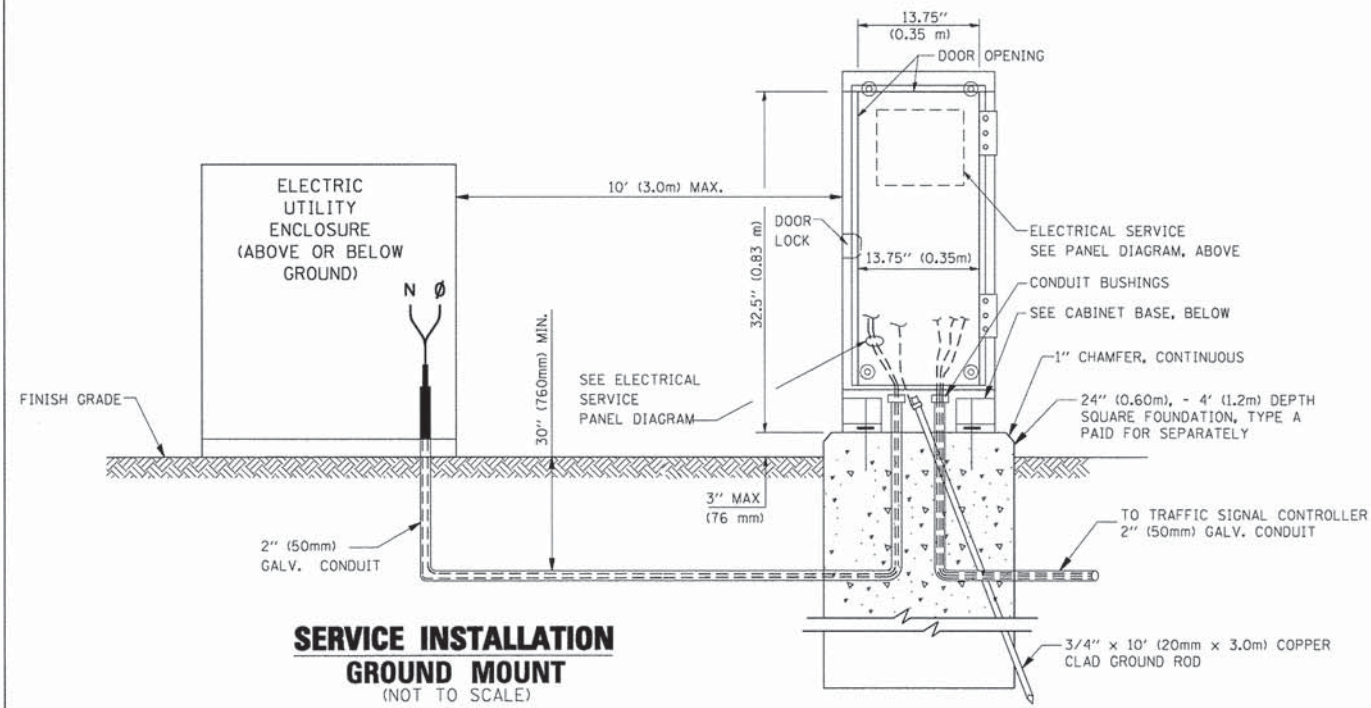
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 2 OF 6 SHEETS STA. TO STA.

F.A.U. RTE. 2588 & 5873	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 5
TS-05		CONTRACT NO. 63867		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

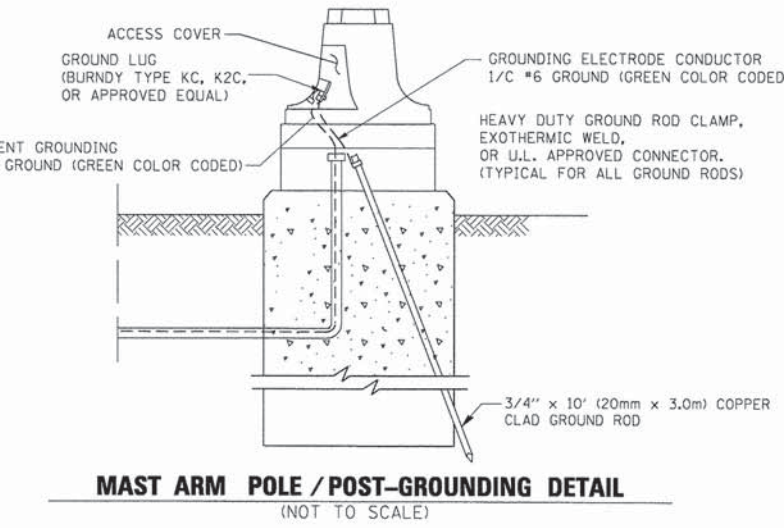


ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



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.



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.

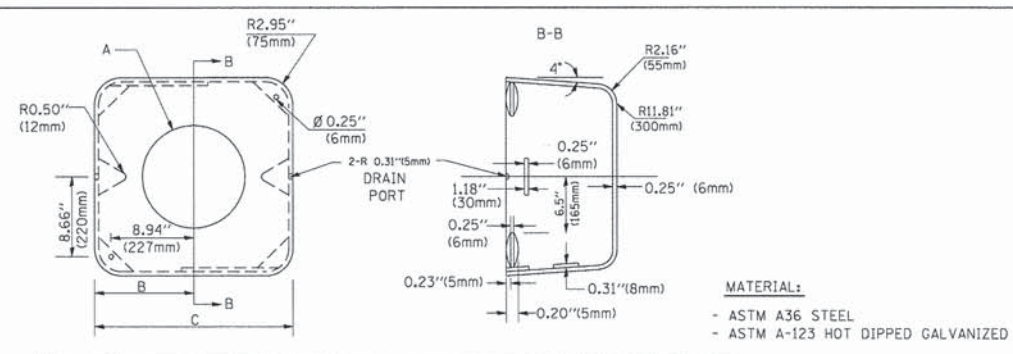
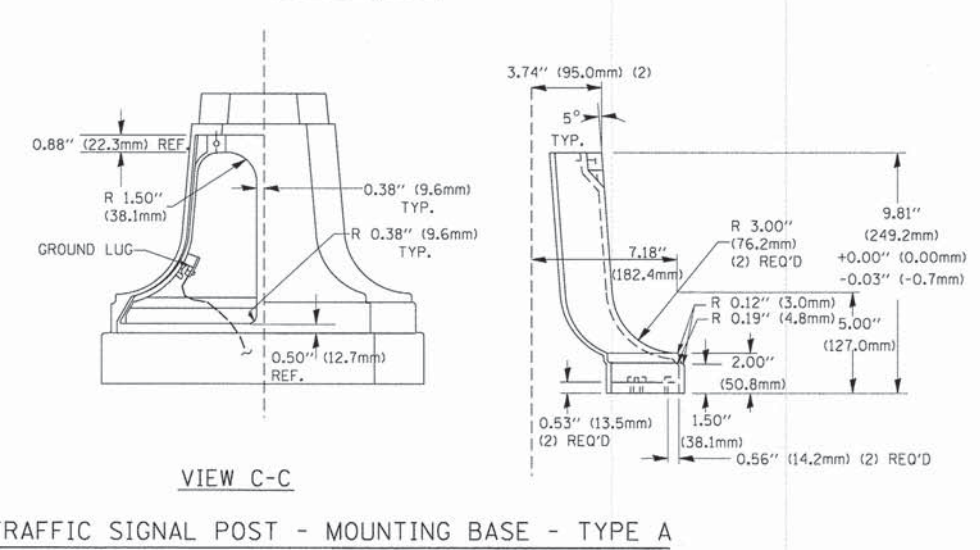
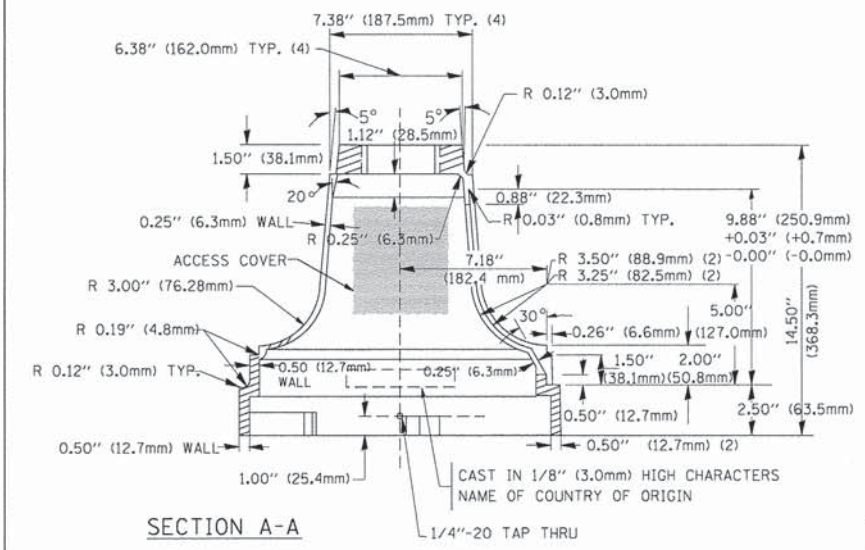
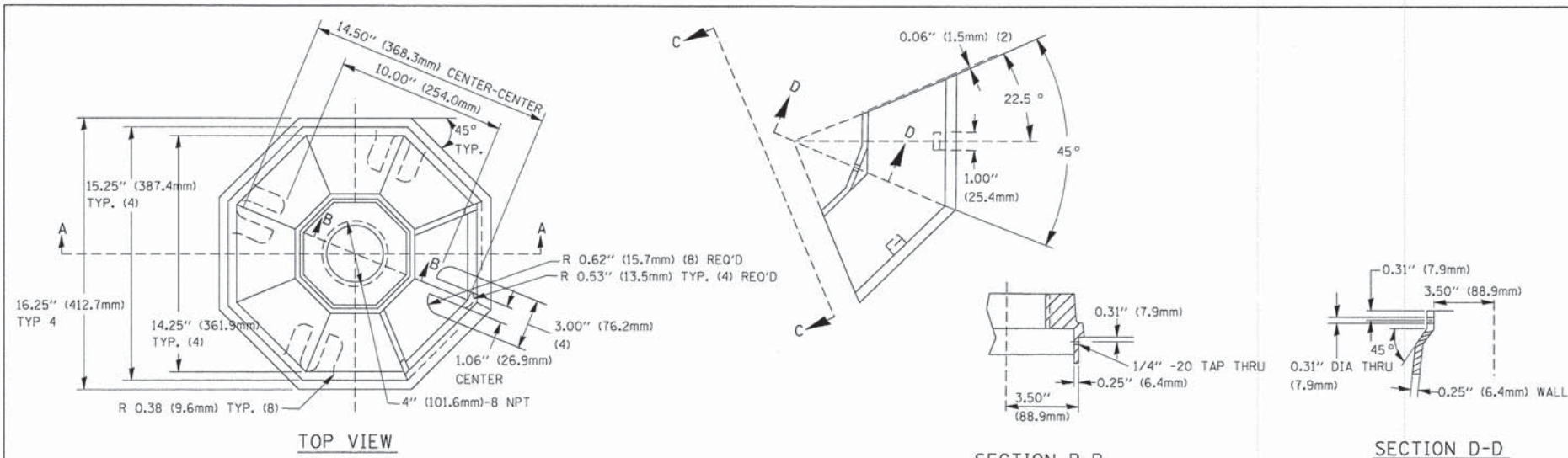
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

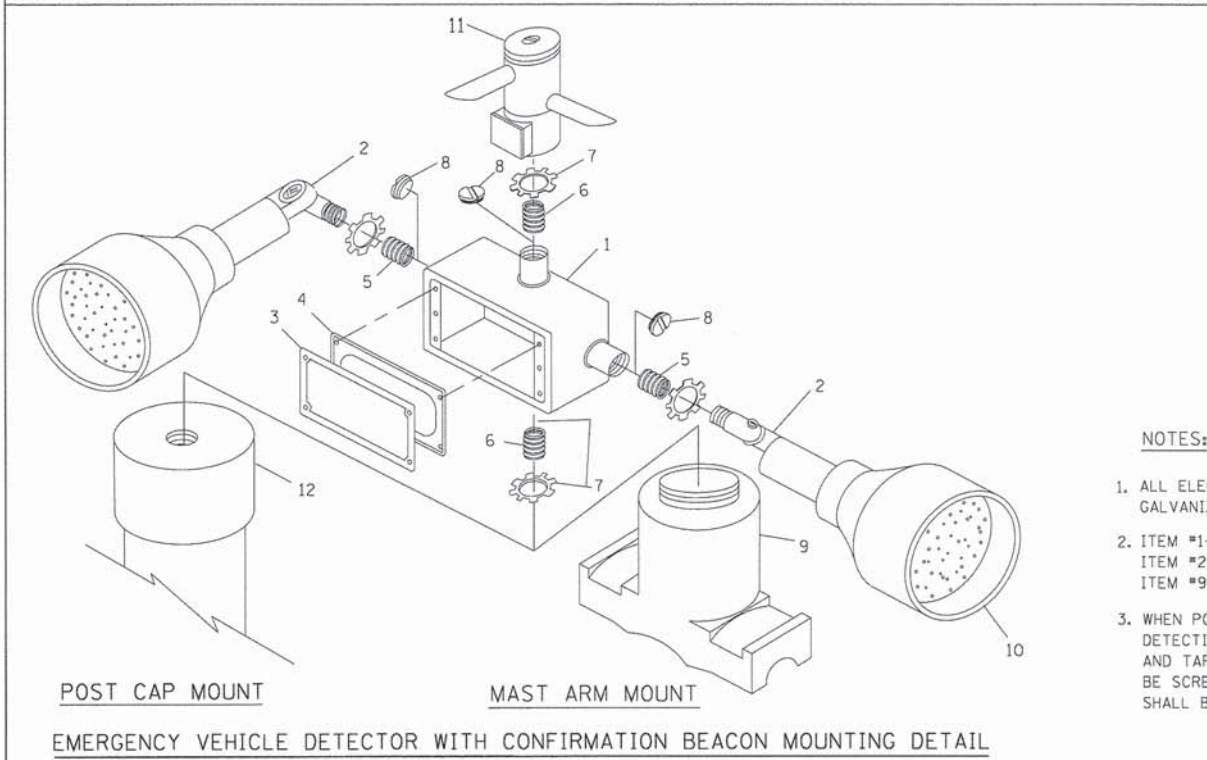
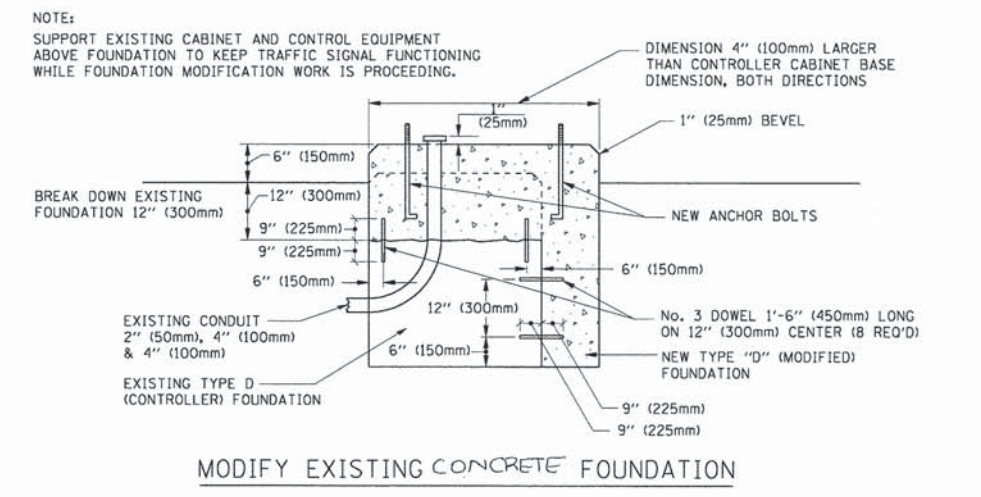
SCALE: NONE SHEET NO. 3 OF 6 SHEETS STA. TO STA.

F.A.J. RTE. 2588 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 6
TS-05			CONTRACT NO. 63867	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



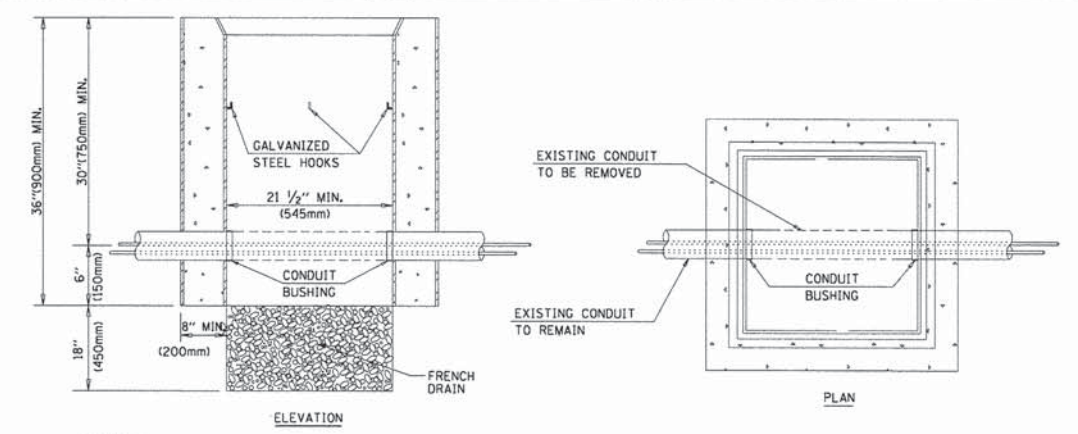
A	B	C	HEIGHT	WEIGHT
VARIES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126 lbs (57 kg)

- NOTES:**
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
 - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
 - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



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	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

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



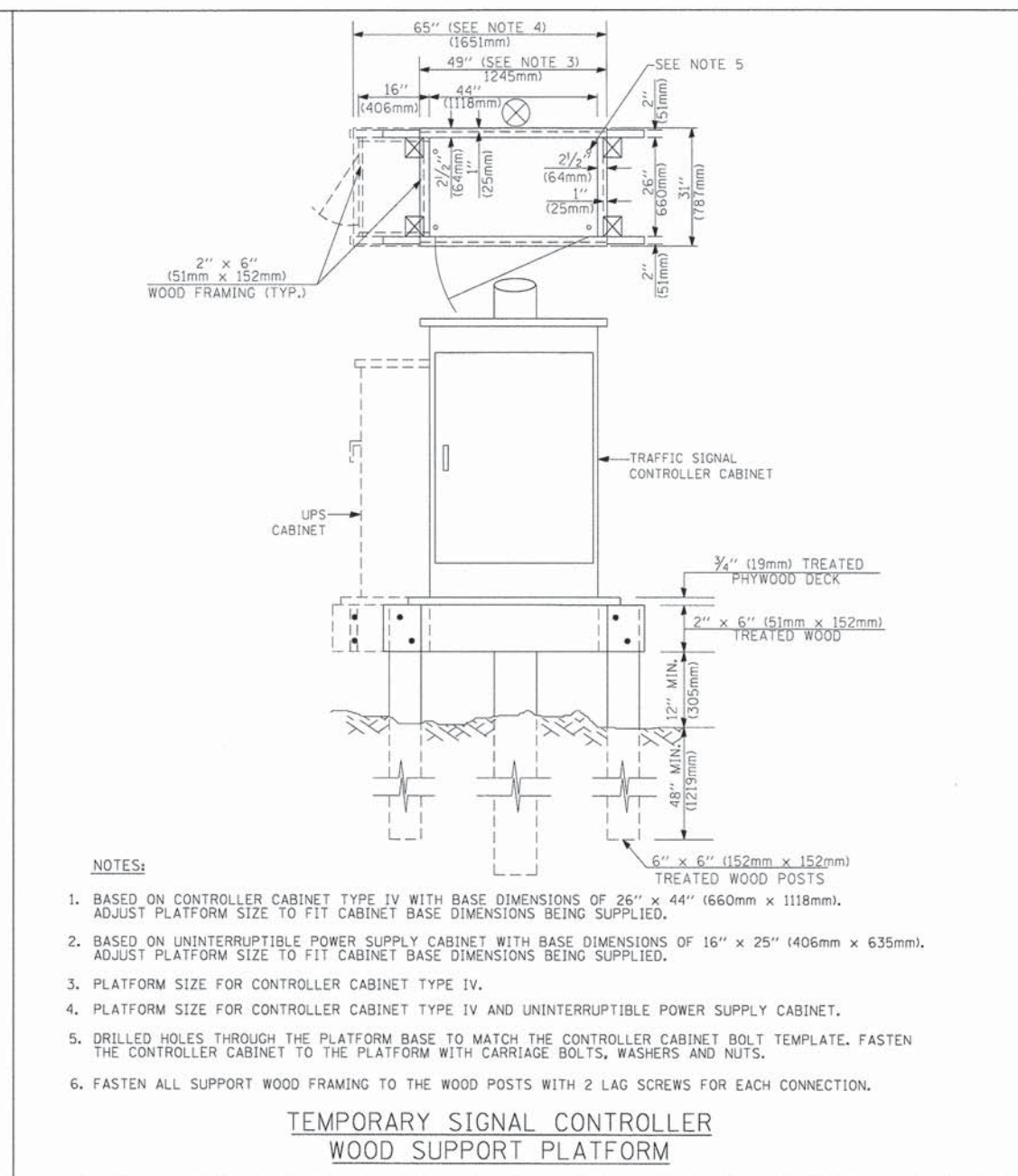
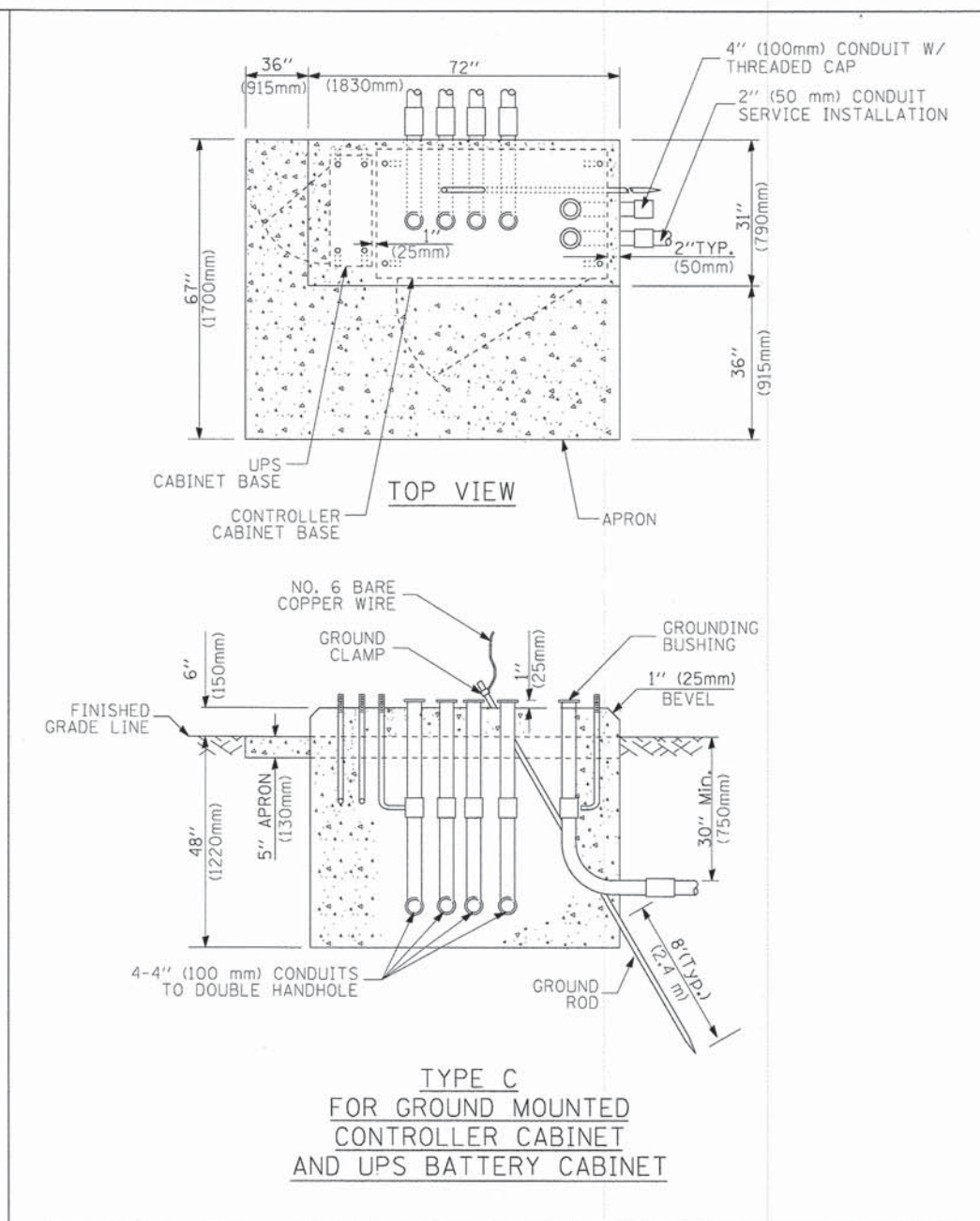
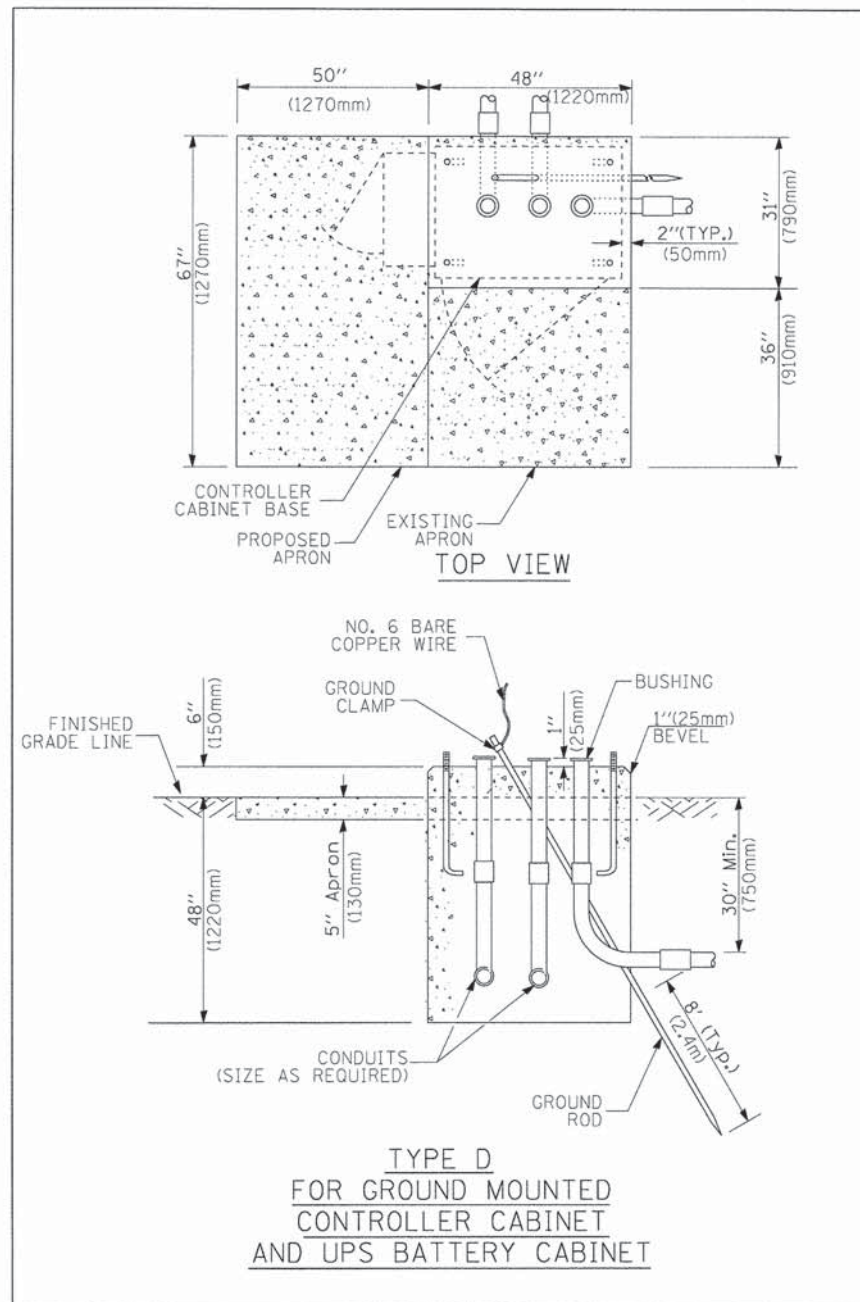
- NOTES:**
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
 - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

F.A.U. RTE. 2588 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 7
TS-05		CONTRACT NO. 63867		



- NOTES:**
- BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 - BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
 - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
 - DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
 - FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 56' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:**
- These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
 - Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
 - Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
 - For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

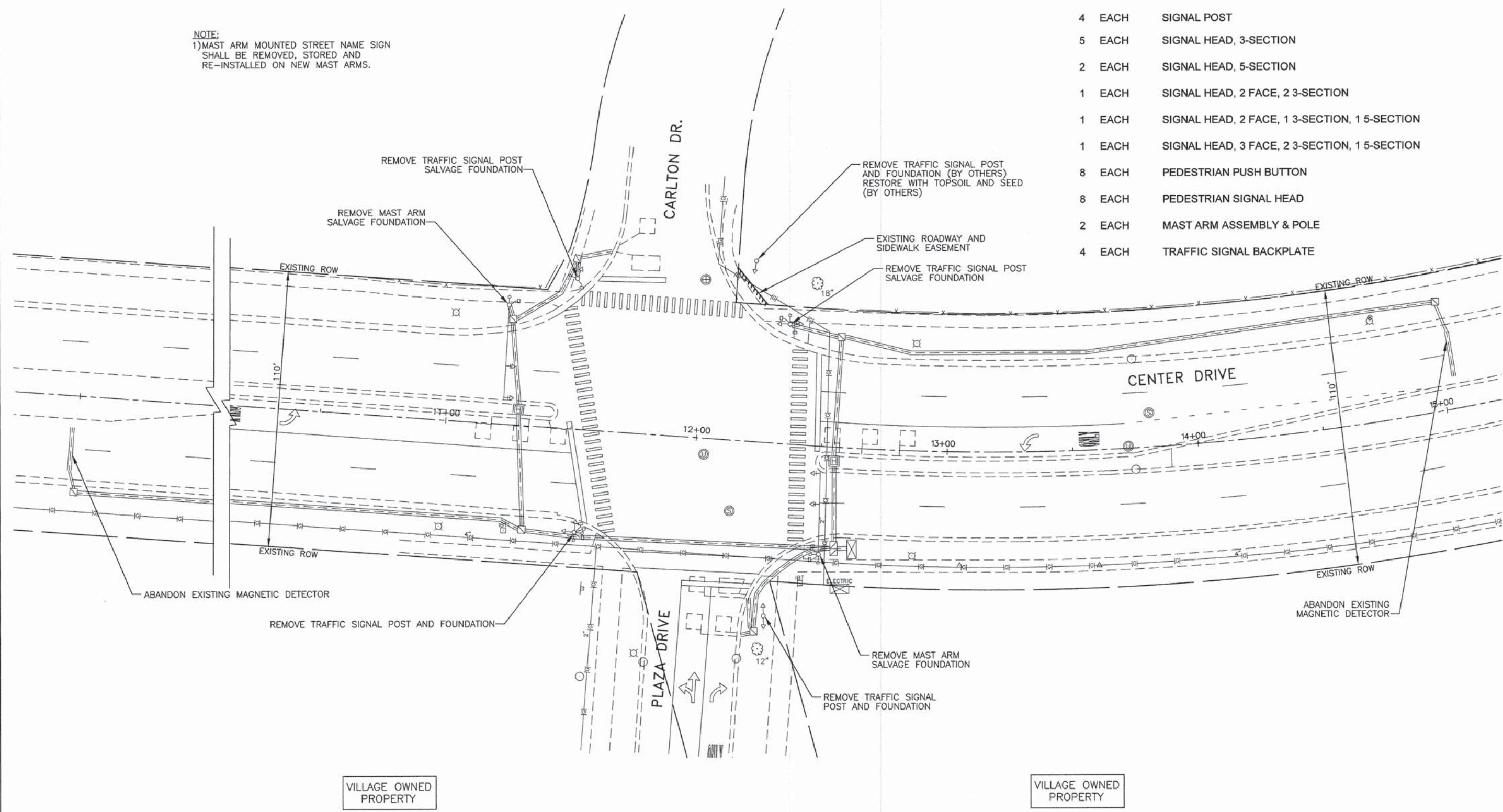
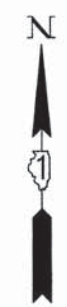
TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				RAILROAD SYMBOLS			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				EXISTING		PROPOSED	
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				RAILROAD CONTROL CABINET			
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT				RAILROAD CANTILEVER MAST ARM			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER				FLASHING SIGNAL			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED				CROSSING GATE			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)				CROSSBUCK			
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

NOTE:
 1) MAST ARM MOUNTED STREET NAME SIGN SHALL BE REMOVED, STORED AND RE-INSTALLED ON NEW MAST ARMS.

THE FOLLOWING EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR OUTSIDE THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

- 4 EACH SIGNAL POST
- 5 EACH SIGNAL HEAD, 3-SECTION
- 2 EACH SIGNAL HEAD, 5-SECTION
- 1 EACH SIGNAL HEAD, 2 FACE, 2 3-SECTION
- 1 EACH SIGNAL HEAD, 2 FACE, 1 3-SECTION, 1 5-SECTION
- 1 EACH SIGNAL HEAD, 3 FACE, 2 3-SECTION, 1 5-SECTION
- 8 EACH PEDESTRIAN PUSH BUTTON
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH MAST ARM ASSEMBLY & POLE
- 4 EACH TRAFFIC SIGNAL BACKPLATE



FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --
		DRAWN -- SMP	REVISED --
		CHECKED -- SJG	REVISED --
		DATE --	REVISED --

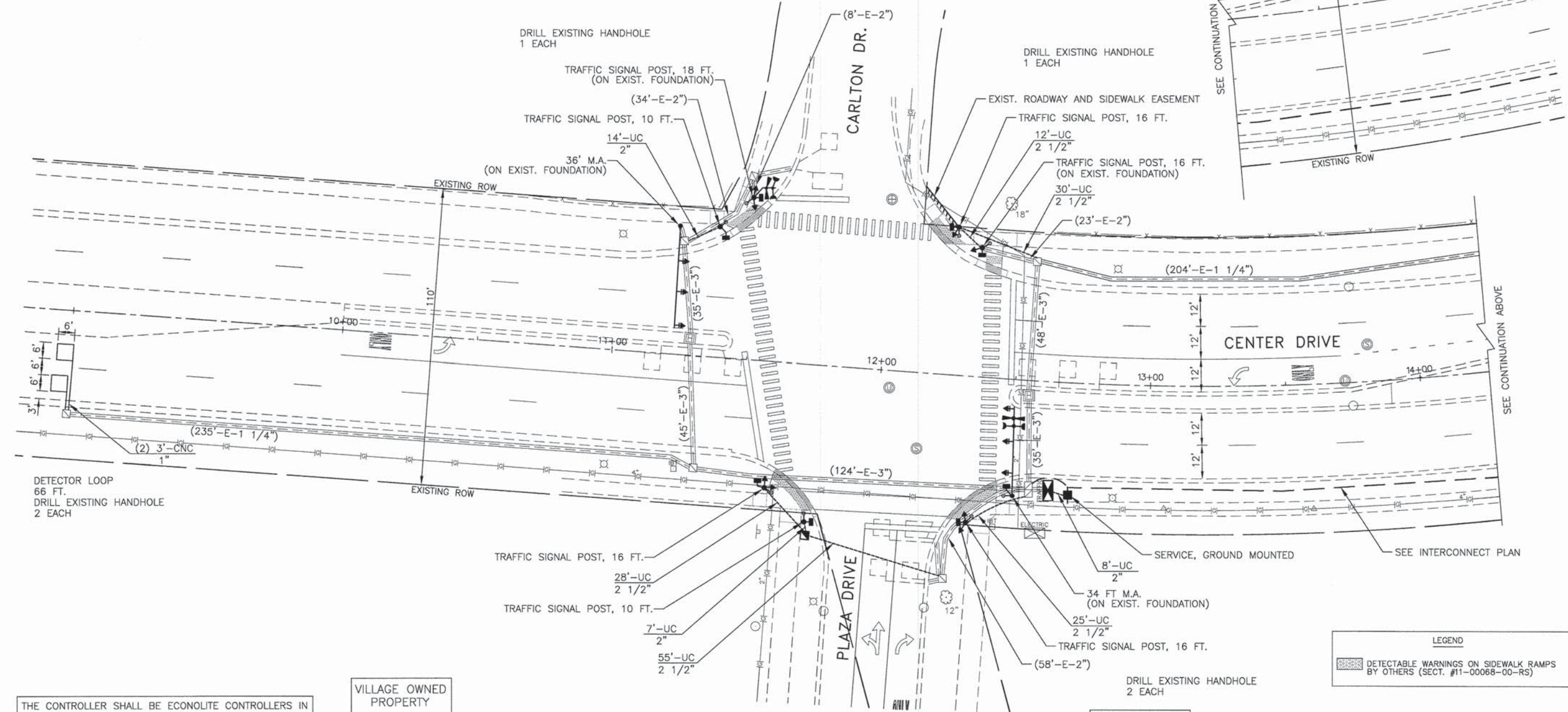
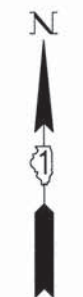
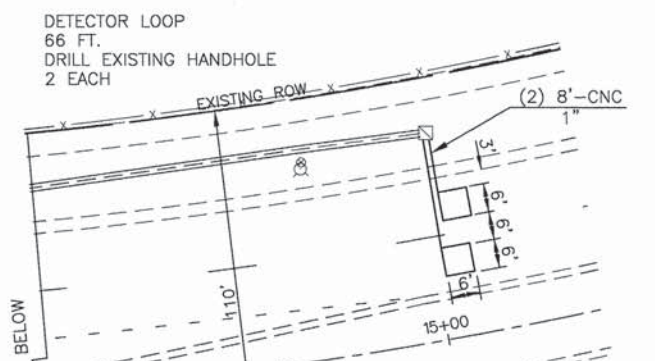
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN
 PLAZA DRIVE AT CENTER DRIVE**

SCALE: 1"=20' SHEET NO. 10 OF 23 SHEETS STA. TO STA.

JJB	JAMES J. BENES & ASSOCIATES, INC.			
	950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589			
F.A.U. RTE. 2588 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 10
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				

- NOTES:**
- 1) CURB AND SIDEWALK IMPROVEMENTS WILL BE BY OTHERS (SECT. #11-00068-00-RS)
 - 2) EXISTING CROSSWALKS AND STOP BARS TO BE RE-STRIPED BY OTHERS (SECT. #11-00068-00-RS)



LEGEND

DETECTABLE WARNINGS ON SIDEWALK RAMPS BY OTHERS (SECT. #11-00068-00-RS)

THE CONTROLLER SHALL BE ECONOLITE CONTROLLERS IN ORDER TO BE COMPATIBLE WITH THE VILLAGE OF WOODRIDGE EXISTING SYSTEM. NO OTHER CONTROLLERS SHALL BE ACCEPTED. THE CONTROLLERS AND CABINETS SHALL BE PURCHASED NO MORE THAN FOUR MONTHS PRIOR TO INSTALLATION TO ENSURE THE LATEST TECHNOLOGY IS USED.

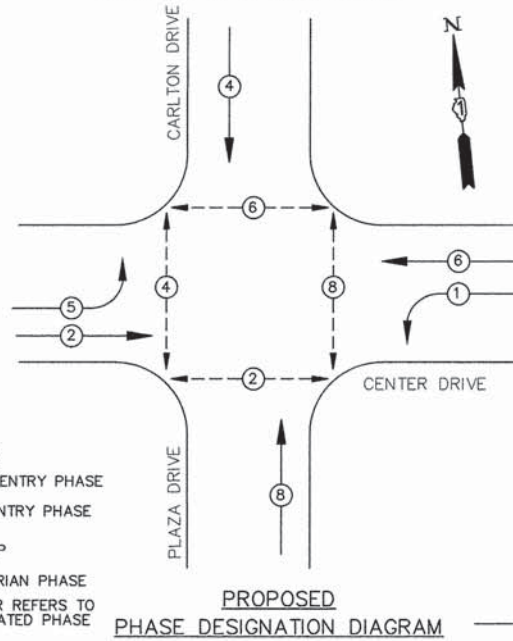
CONTROLLERS AND CABINETS SHALL BE SUPPLIED TO ACCOMMODATE FUTURE INSTALLATION OF UNINTERRUPTIBLE POWER SUPPLY.

VILLAGE OWNED PROPERTY

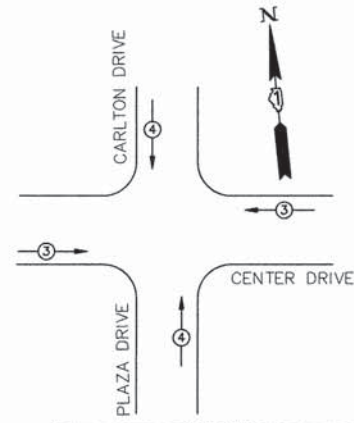
VILLAGE OWNED PROPERTY

FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION/GEOMETRICS PLAN PLAZA DRIVE AT CENTER DRIVE				JJB JAMES J. BENES & ASSOCIATES, INC. 950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589	
	PLOT SCALE =	DRAWN -- SMP	REVISED --		F.A.U. RTE. 2588.4 357.3	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23		SHEET NO. 11
	PLOT DATE =	CHECKED -- SJG	REVISED --		SCALE: 1"=20'	SHEET NO. 11 OF 23 SHEETS	STA. TO STA.	CONTRACT NO. 63867		
		DATE --	REVISED --		ILLINOIS FED. AID PROJECT					

CONTROLLER SEQUENCE



PROPOSED PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTORS	3	4
MOVEMENT	→	↑

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED) (YELLOW) (GREEN)	14	135	17	0.50	119
	14	135	25	0.25	88
	14	135	15	0.25	53
ARROW	8	135	12	0.10	10
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	-	100	100	1.00	100
MASTER CONTROLLER	-	100	100	1.00	-
ILLUM. SIGN	-	252		0.05	-
TOTAL =					570

FOUNDATION (DEPTH)	FT.	CABLE SLACK	FT.	VERTICAL	FT.
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3
D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20
E - M. ARM POLE		SIGNAL POST	0	BRACKET MOUNTED	13
24" (600mm)	10	CONTROLLER CAB.	0	PED. BUTTON	6
30" (750mm)	15	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
		ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE	1	POST MOUNTED	13

FILE NAME =	USER NAME =	DESIGNED - SJG	REVISED -
		DRAWN - SMP	REVISED -
		CHECKED - SJG	REVISED -
		DATE - -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN
PLAZA DRIVE AT CENTER DRIVE

SCALE: NTS SHEET NO. 12 OF 23 SHEETS STA. TO STA.

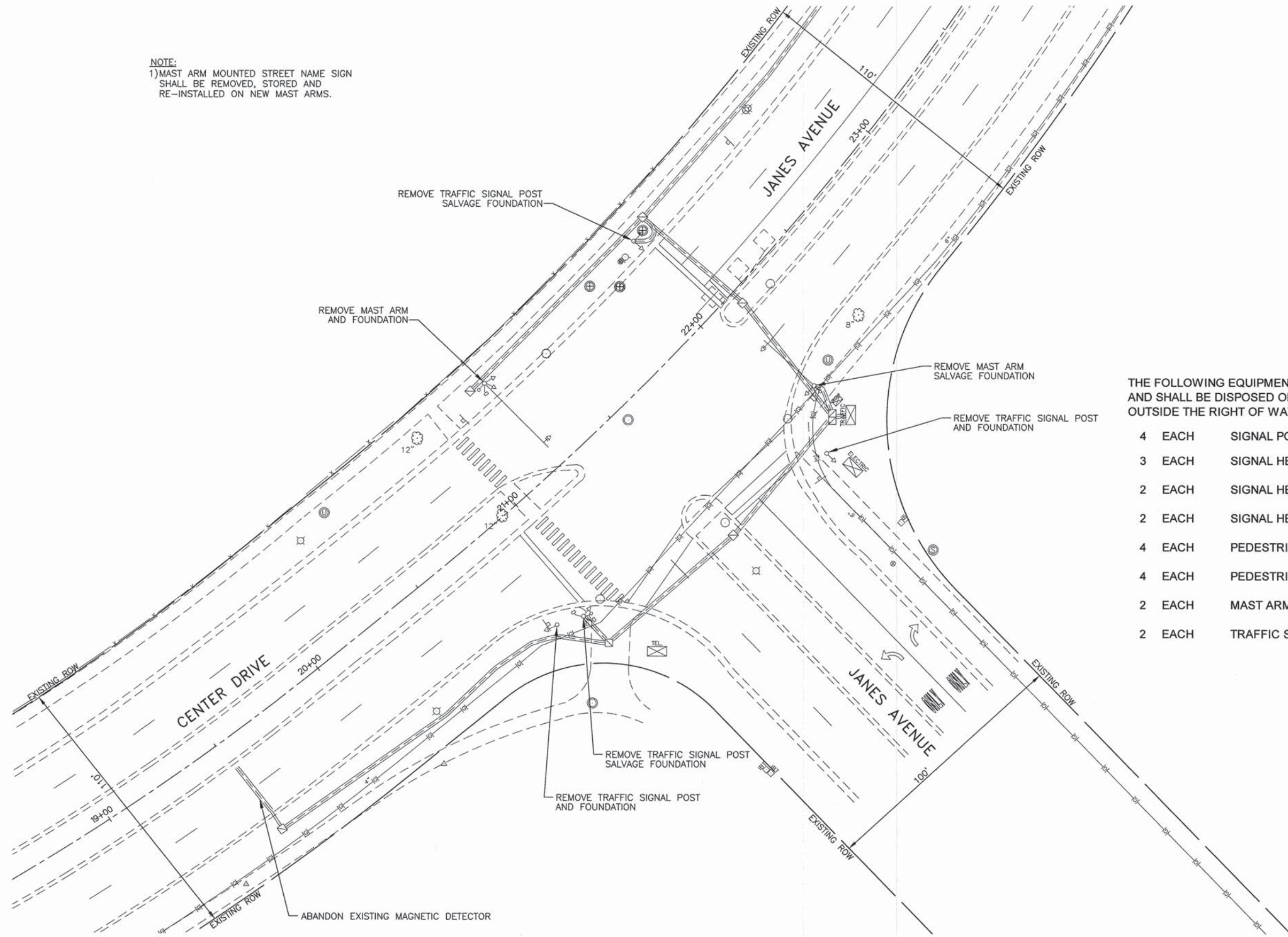
SCHEDULE OF QUANTITIES

CODE NO	PAY ITEM	UNIT	PLAZA
70102635	TRAFFIC CONTROL AND PROTECTION - STANDARD 701701	L SUM	0.25
70102640	TRAFFIC CONTROL AND PROTECTION - STANDARD 701801	L SUM	0.25
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
80500010	SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	29
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	139
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	7
81028720	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1" DIA.	FOOT	22
81400100	HANDHOLE	EACH	1
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
86400100	TRANSCIVER-FIBER OPTIC	EACH	1
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	8
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1338
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1805
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1852
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	474
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2162
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	30
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	662
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	24
87800205	MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1
87900200	DRILL EXISTING HANDHOLE	EACH	8
88030020	SIGNAL HEAD, LED, 1-FACE, 3-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	2
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	6
88500100	INDUCTIVE LOOP DETECTOR	EACH	9
88600100	DETECTOR LOOP, TYPE 1	FOOT	132
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5855
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	3
X2501020	SEEDING, CLASS 2A (SPECIAL)	ACRE	0.10
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	402

JJB JAMES J. BENES & ASSOCIATES, INC.
950 Warrenville Road, Suite 101, Lisle, Illinois 60532
Tel. (630) 719-7570 - Fax (630) 719-7589

F.A.U. RT# 2588.4 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 12
CONTRACT NO. 63867			ILLINOIS FED. AID PROJECT	

NOTE:
 1) MAST ARM MOUNTED STREET NAME SIGN SHALL BE REMOVED, STORED AND RE-INSTALLED ON NEW MAST ARMS.



THE FOLLOWING EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR OUTSIDE THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

- 4 EACH SIGNAL POST
- 3 EACH SIGNAL HEAD, 3-SECTION
- 2 EACH SIGNAL HEAD, 5-SECTION
- 2 EACH SIGNAL HEAD, 2 FACE, 1 3-SECTION, 1 5-SECTION
- 4 EACH PEDESTRIAN PUSH BUTTON
- 4 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH MAST ARM ASSEMBLY & POLE
- 2 EACH TRAFFIC SIGNAL BACKPLATE

FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --
		DRAWN -- SMP	REVISED --
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		DATE --	REVISED --

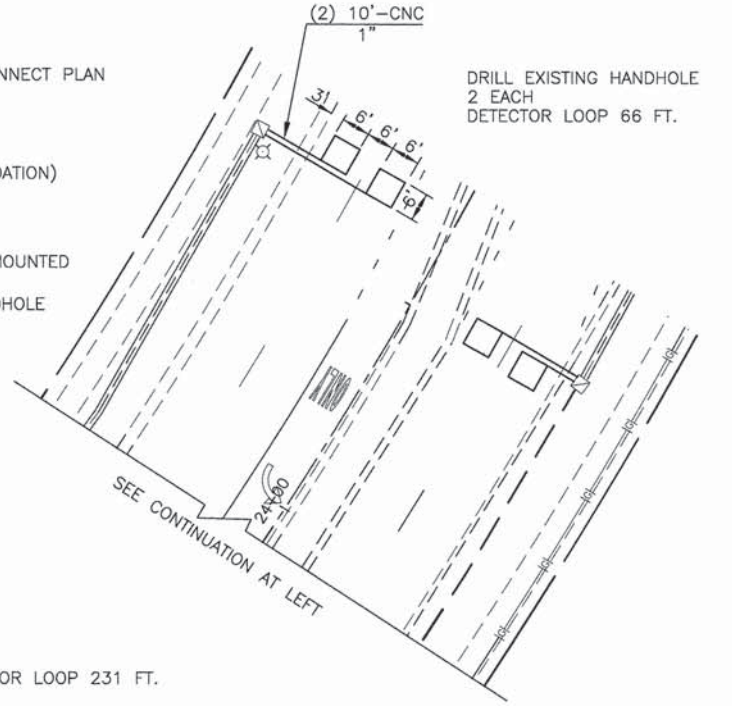
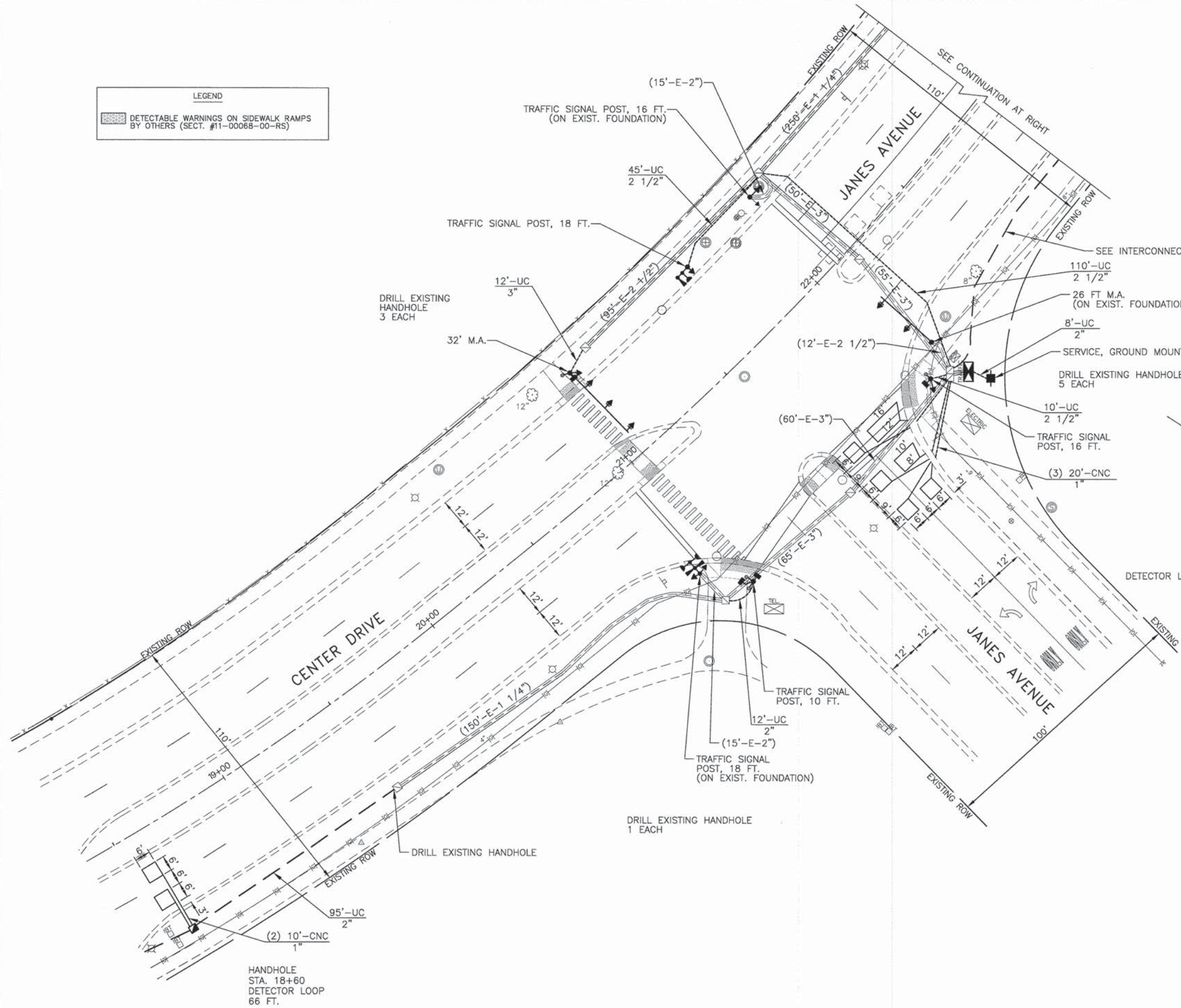
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN
 JANES AVENUE AT CENTER DRIVE**
 SCALE: 1"=20' SHEET NO. 13 OF 23 SHEETS STA. TO STA.

JJB	JAMES J. BENES & ASSOCIATES, INC.			
	950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589			
F.A.U. RTE. 2588 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 13
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				

LEGEND
 DETECTABLE WARNINGS ON SIDEWALK RAMPS
 BY OTHERS (SECT. #11-00068-00-RS)

NOTES:
 1) CURB AND SIDEWALK IMPROVEMENTS
 WILL BE BY OTHERS
 (SECT. #11-00068-00-RS)
 2) EXISTING CROSSWALKS AND STOP BARS
 TO BE RE-STRIPED BY OTHERS
 (SECT. #11-00068-00-RS)



THE CONTROLLER SHALL BE ECONOLITE CONTROLLERS IN ORDER TO BE COMPATIBLE WITH THE VILLAGE OF WOODRIDGE EXISTING SYSTEM. NO OTHER CONTROLLERS SHALL BE ACCEPTED. THE CONTROLLERS AND CABINETS SHALL BE PURCHASED NO MORE THAN FOUR MONTHS PRIOR TO INSTALLATION TO ENSURE THE LATEST TECHNOLOGY IS USED.

CONTROLLERS AND CABINETS SHALL BE SUPPLIED TO ACCOMMODATE FUTURE INSTALLATION OF UNINTERRUPTIBLE POWER SUPPLY.

FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --
		DRAWN -- SMP	REVISED --
		CHECKED -- SJG	REVISED --
		DATE --	REVISED --

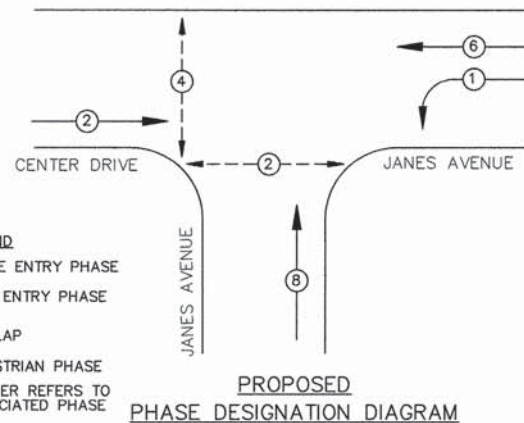
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION/GEOMETRICS PLAN
 JANES AVENUE AT CENTER DRIVE**

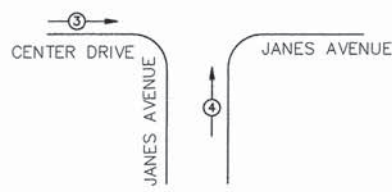
SCALE: 1"=20' SHEET NO. 14 OF 23 SHEETS STA. TO STA.

JJB	JAMES J. BENES & ASSOCIATES, INC.			
	950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589			
F.A.U. RTE. 2589.4 357.3	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 14
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				

CONTROLLER SEQUENCE

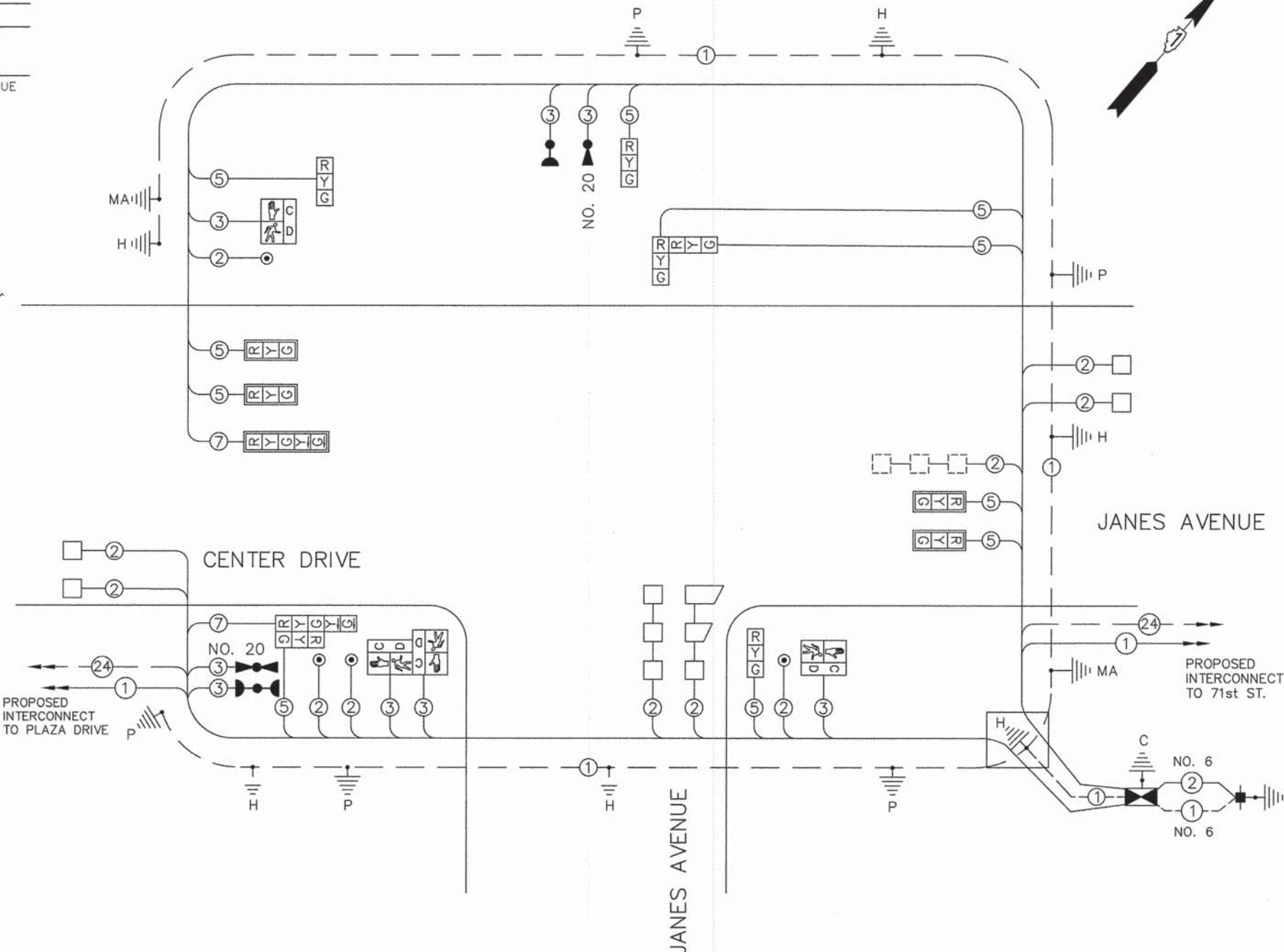


PROPOSED PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTIONS	
EMERGENCY VEHICLE PREEMPTIONS	3 4
MOVEMENT	← → ↑



SCHEDULE OF QUANTITIES

CODE NO	PAY ITEM	UNIT	JANES
70102635	TRAFFIC CONTROL AND PROTECTION - STANDARD 701701	L.SUM	0.25
70102640	TRAFFIC CONTROL AND PROTECTION - STANDARD 701801	L.SUM	0.25
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
80500010	SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	115
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	185
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	12
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	7
81028720	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1" DIA.	FOOT	100
81400100	HANDHOLE	EACH	1
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
86400100	TRANSCIVER-FIBER OPTIC	EACH	1
87100020	FIBER OPTIC CABLE IN CONDUIT, NO. 82.5/125, MM12F SM12F	FOOT	1681
87300925	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	1618
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	6
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	673
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1101
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1787
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	497
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1771
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	30
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	541
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	2
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	20
87800205	MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	13.5
87900200	DRILL EXISTING HANDHOLE	EACH	12
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
88030240	SIGNAL HEAD, LED, 2-FACE, 1 3-SECTION, 1 5-SECTION, BRACKET MOUNTED	EACH	1
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	5
88500100	INDUCTIVE LOOP DETECTOR	EACH	7
88600100	DETECTOR LOOP, TYPE 1	FOOT	383
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4139
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	3
X2501020	SEEDING, CLASS 2A (SPECIAL)	ACRE	0.10
X8570231	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1
X8600105	MASTER CONTROLLER (SPECIAL)	EACH	1
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3C, TWISTED, SHIELDED	FOOT	400

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE		% OPERATION		
SIGNAL (RED)	14	135	17	0.50	119	
	(YELLOW)	14	135	25	0.25	88
	(GREEN)	14	135	15	0.25	53
ARROW	8	135	12	0.10	10	
PED. SIGNAL	8	90	25	1.00	200	
CONTROLLER	-	100	100	1.00	100	
MASTER CONTROLLER	-	100	100	1.00	-	
ILLUM. SIGN	-	252		0.05	-	
FLASHER						
ENERGY COSTS TO: 100% TO VILLAGE OF WOODRIDGE					TOTAL = 570	
ONE PLAZA DRIVE						
WOODRIDGE, IL 60517						
ENERGY SUPPLY CONTACT: DEBBIE RANKIN						
PHONE: 630-691-4379						
COMPANY: COMMONWEALTH EDISON						

FOUNDATION (DEPTH)	FT.	CABLE SLACK	FT.	VERTICAL	FT.
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3
D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20
E - M. ARM POLE		SIGNAL POST	0	BRACKET MOUNTED	13
24" (600mm)	10	CONTROLLER CAB.	0	PED. BUTTON	6
30" (750mm)	15	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
		ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE	1	POST MOUNTED	13

FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --
		DRAWN -- SMP	REVISED --
		CHECKED -- SJG	REVISED --
		DATE --	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN
JANES AVENUE AT CENTER DRIVE
SCALE: NTS SHEET NO. 15 OF 23 SHEETS STA. TO STA.

JJB JAMES J. BENES & ASSOCIATES, INC.
950 Warrenville Road, Suite 101, Lisle, Illinois 60532
Tel. (630) 719-7570 • Fax (630) 719-7589

F.A.U. R.T.E. NO. 2588 & 2587	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 15
			CONTRACT NO. 63867	

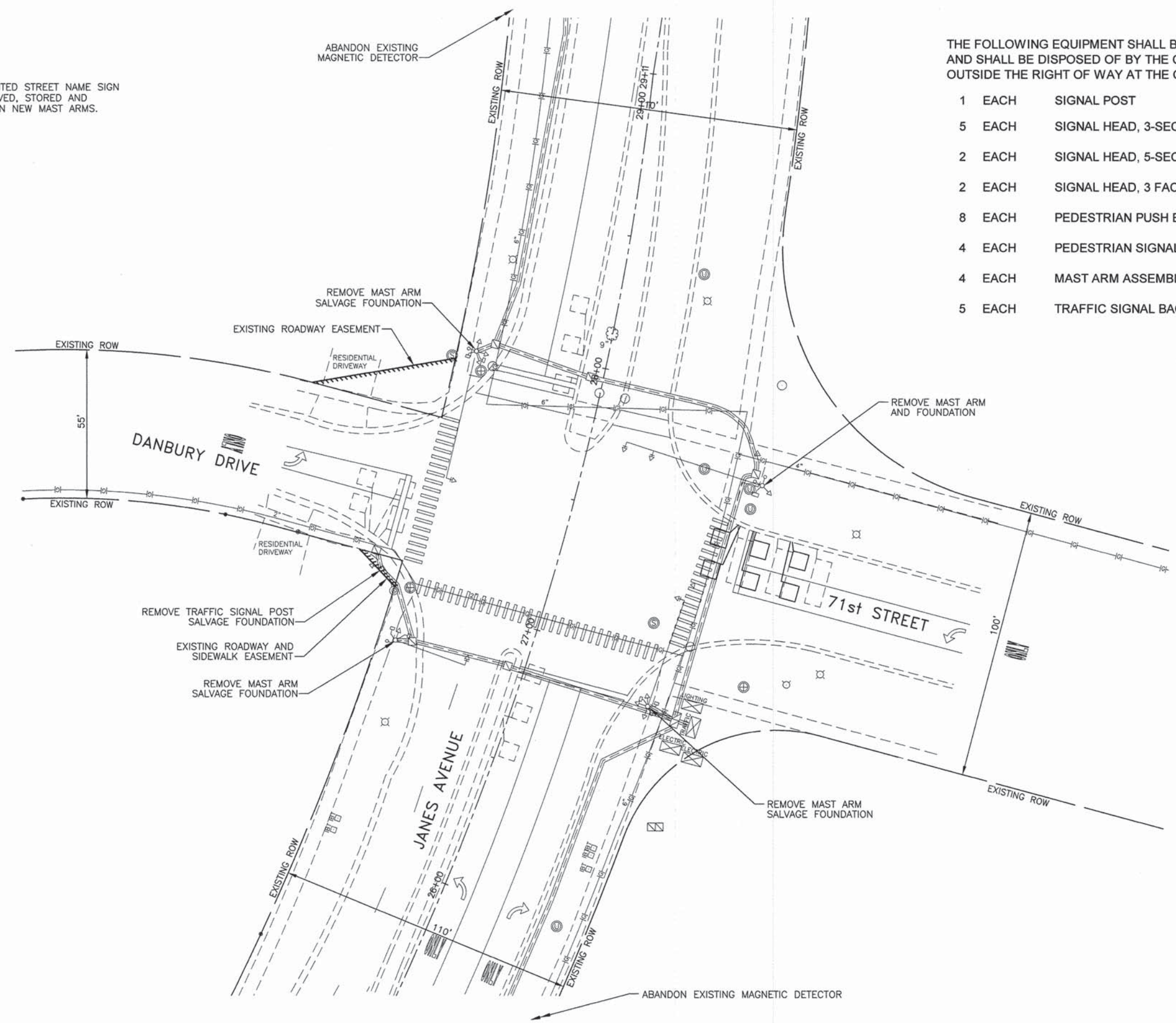
ILLINOIS FED. AID PROJECT



NOTE:
 1) MAST ARM MOUNTED STREET NAME SIGN SHALL BE REMOVED, STORED AND RE-INSTALLED ON NEW MAST ARMS.

THE FOLLOWING EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR OUTSIDE THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

- 1 EACH SIGNAL POST
- 5 EACH SIGNAL HEAD, 3-SECTION
- 2 EACH SIGNAL HEAD, 5-SECTION
- 2 EACH SIGNAL HEAD, 3 FACE, 2 3-SECTION, 1 5-SECTION
- 8 EACH PEDESTRIAN PUSH BUTTON
- 4 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 4 EACH MAST ARM ASSEMBLY & POLE
- 5 EACH TRAFFIC SIGNAL BACKPLATE



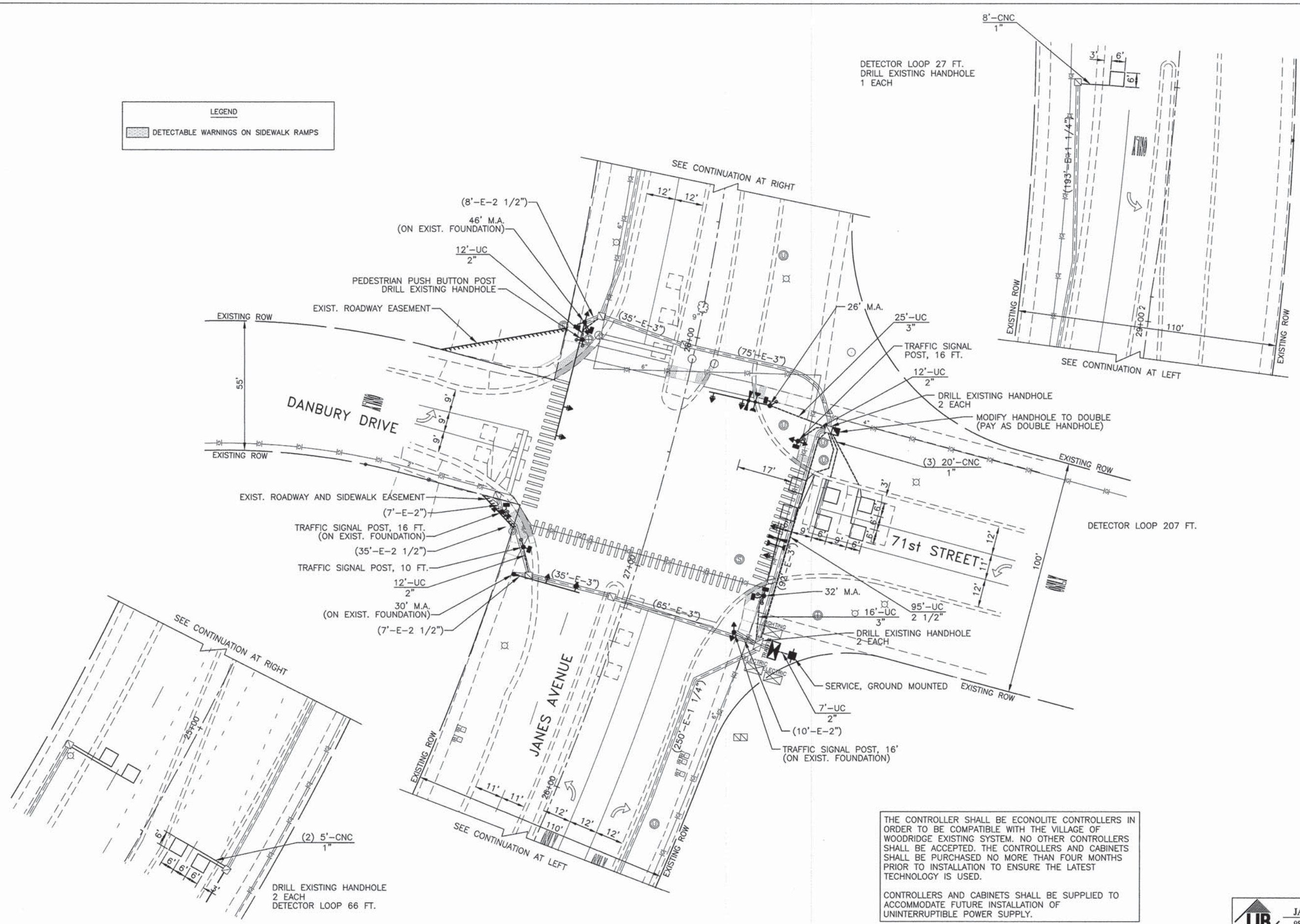
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		DRAWN -- SMP	REVISED --
		CHECKED -- SJG	REVISED --
		DATE --	REVISED --

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
 JAMES AVENUE AT 71st STREET/DANBURY DRIVE
 SCALE: 1"=20' SHEET NO. 16 OF 23 SHEETS STA. TO STA.

	JAMES J. BENES & ASSOCIATES, INC. 950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589			
	F.A.U. RTE. 2588 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23 SHEET NO. 16
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				

LEGEND	
	DETECTABLE WARNINGS ON SIDEWALK RAMP



THE CONTROLLER SHALL BE ECONOLITE CONTROLLERS IN ORDER TO BE COMPATIBLE WITH THE VILLAGE OF WOODRIDGE EXISTING SYSTEM. NO OTHER CONTROLLERS SHALL BE ACCEPTED. THE CONTROLLERS AND CABINETS SHALL BE PURCHASED NO MORE THAN FOUR MONTHS PRIOR TO INSTALLATION TO ENSURE THE LATEST TECHNOLOGY IS USED.

CONTROLLERS AND CABINETS SHALL BE SUPPLIED TO ACCOMMODATE FUTURE INSTALLATION OF UNINTERRUPTIBLE POWER SUPPLY.

FILE NAME =	
USER NAME =	
PLOT SCALE =	
PLOT DATE =	

DESIGNED -	SJG	REVISED -	
DRAWN -	SMP	REVISED -	
CHECKED -	SJG	REVISED -	
DATE -		REVISED -	

DESIGNED -	SJG	REVISED -	
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DATE -		REVISED -	

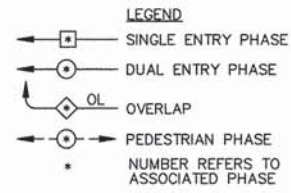
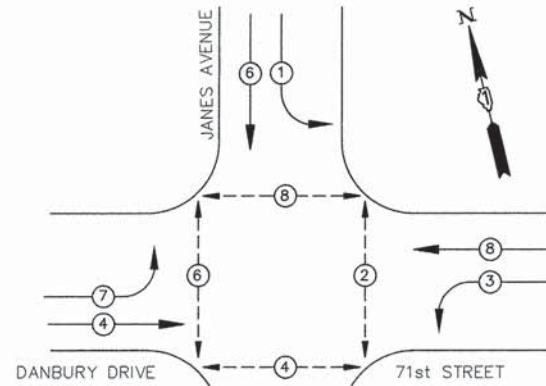
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION/GEOMETRICS PLAN
JANES AVENUE AT 71st STREET/DANBURY DRIVE**

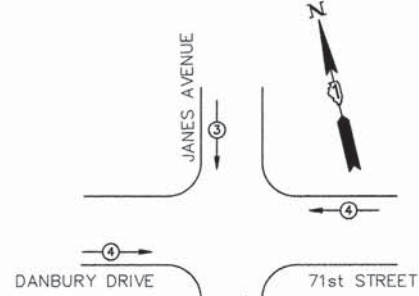
SCALE: 1"=20' SHEET NO. 17 OF 23 SHEETS STA. TO STA.

	JAMES J. BENES & ASSOCIATES, INC.			
	950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 • Fax (630) 719-7589			
F.A.U. RTE. 2588.4 357.3	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 17
CONTRACT NO. 63867				ILLINOIS FED. AID PROJECT

CONTROLLER SEQUENCE



PROPOSED PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

TYPE	NO. LAMPS	WATTAGE		% OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	10
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	-	100	100	1.00	100
MASTER CONTROLLER	-	100	100	1.00	-
ILLUM. SIGN	-	252		0.05	-

ENERGY COSTS TO: 100% TO VILLAGE OF WOODRIDGE
 ONE PLAZA DRIVE
 WOODRIDGE, IL 60517

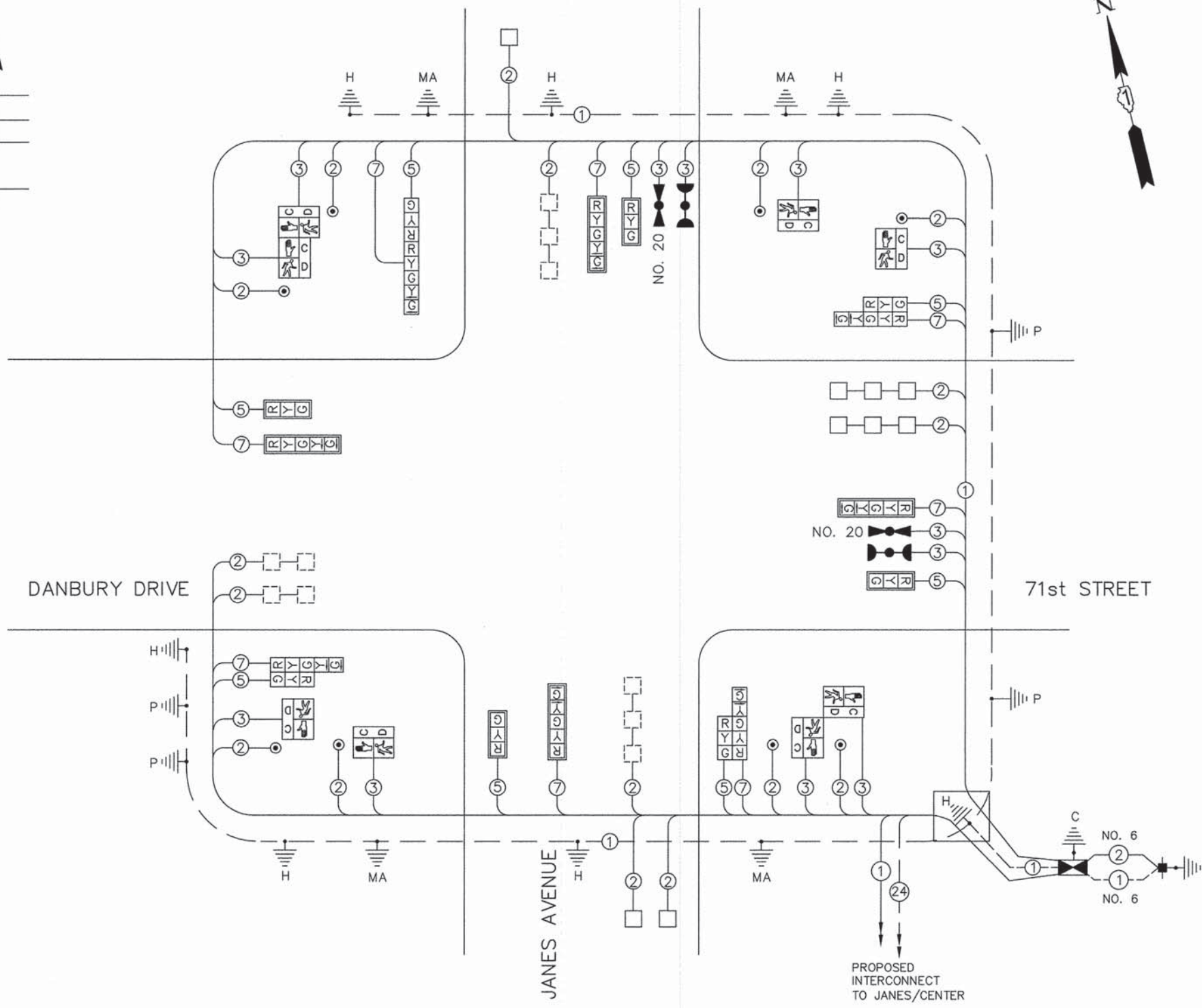
ENERGY SUPPLY CONTACT: DEBBIE RANKIN
 PHONE: 630-691-4379
 COMPANY: COMMONWEALTH EDISON

TOTAL = 570

FOUNDATION (DEPTH)	FT.	CABLE SLACK	FT.	VERTICAL	FT.
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3
D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20
E - M. ARM POLE		SIGNAL POST	0	BRACKET MOUNTED	13
24" (600mm)	10	CONTROLLER CAB.	0	PED. BUTTON	6
30" (750mm)	15	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
		ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE	1	POST MOUNTED	13

SCHEDULE OF QUANTITIES

CODE NO	PAY ITEM	UNIT	71ST
70102635	TRAFFIC CONTROL AND PROTECTION - STANDARD 701701	L SUM	0.25
70102640	TRAFFIC CONTROL AND PROTECTION - STANDARD 701801	L SUM	0.25
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
80500010	SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	43
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	95
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	41
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	7
81028720	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1" DIA.	FOOT	78
81400300	DOUBLE HANDHOLE	EACH	1
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
86400100	TRANSCIVER-FIBER OPTIC	EACH	1
87300010	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	7
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1425
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1784
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1334
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1382
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1943
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	30
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	504
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
87602000	PEDESTRIAN PUSH-BUTTON POST	EACH	1
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
87700270	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16
87800205	MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	23.5
87900200	DRILL EXISTING HANDHOLE	EACH	8
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
88030240	SIGNAL HEAD, LED, 2-FACE, 1 3-SECTION, 1 5-SECTION, BRACKET MOUNTED	EACH	4
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	8
88500100	INDUCTIVE LOOP DETECTOR	EACH	9
88600100	DETECTOR LOOP, TYPE 1	FOOT	300
88700200	LIGHT DETECTOR	EACH	2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6961
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	317



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

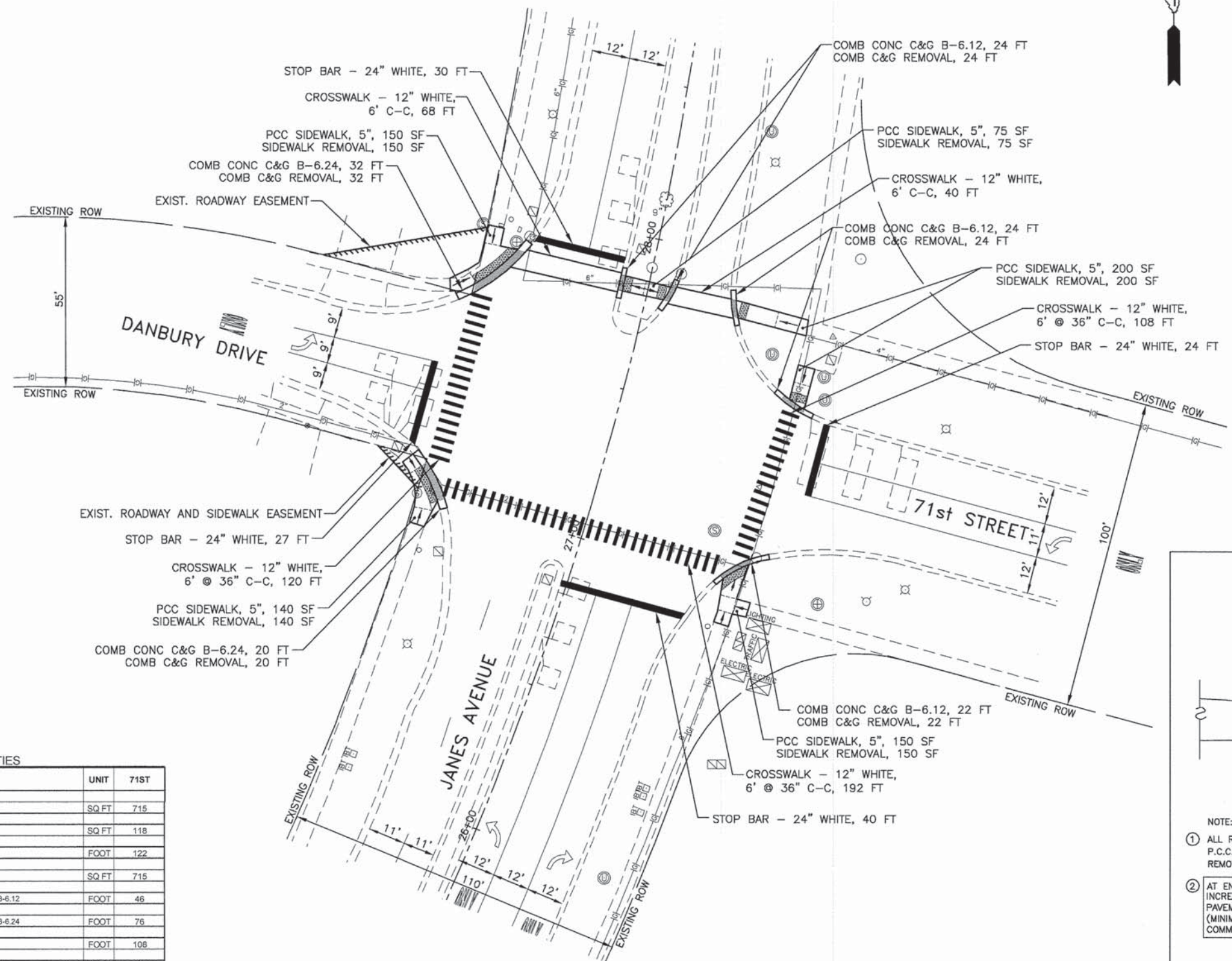
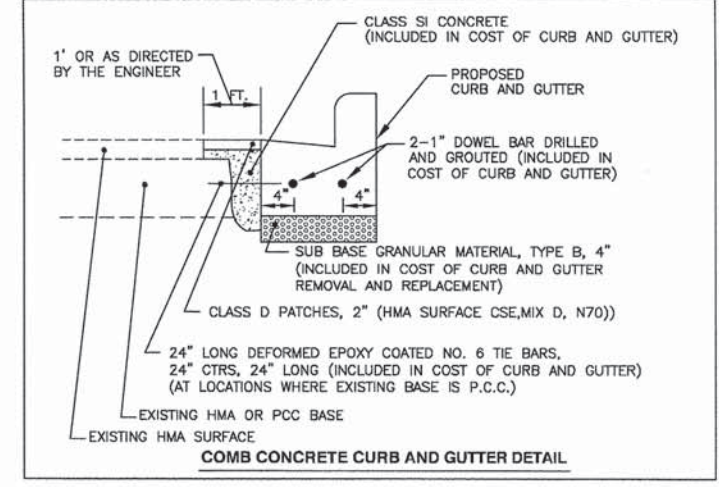
CABLE PLAN
JANES AVENUE AT 71st STREET/CENTER DRIVE

SCALE: NTS SHEET NO. 18 OF 23 SHEETS STA. TO STA.

JJB JAMES J. BENES & ASSOCIATES, INC.
 950 Warrenville Road, Suite 101, Lisle, Illinois 60532
 Tel. (630) 719-7570 - Fax (630) 719-7589

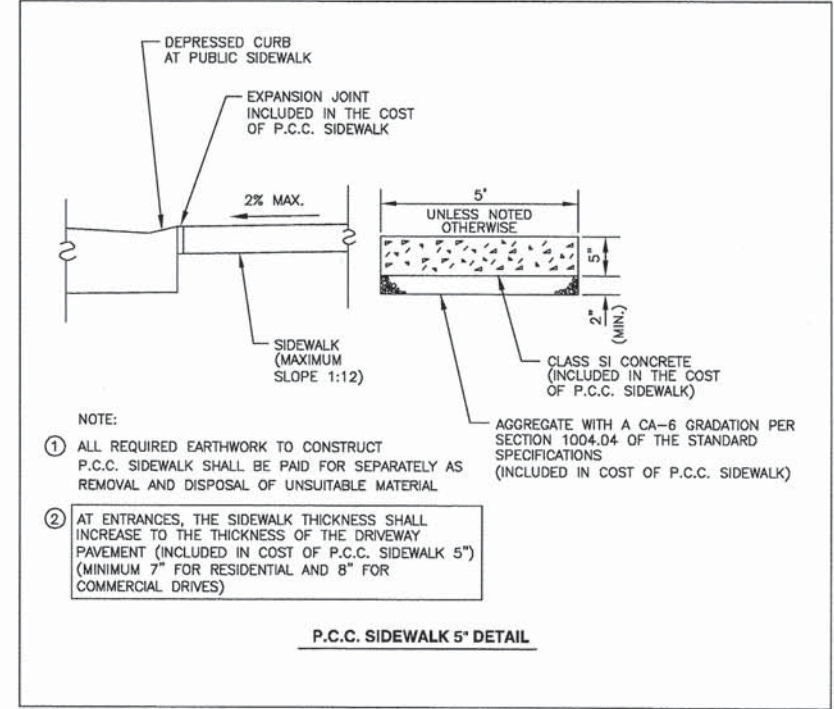
F.A.U. R.T.E. 2588.4 357.3	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 18
CONTRACT NO. 63867				ILLINOIS FED. AID PROJECT

LEGEND	
	DETECTABLE WARNINGS ON SIDEWALK RAMPS



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	71ST
PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ.FT	715
DETECTABLE WARNINGS	SQ.FT	118
COMBINATION CURB AND GUTTER REMOVAL	FOOT	122
SIDEWALK REMOVAL	SQ.FT	715
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	46
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	76
THERMOPLASTIC PAVEMENT MARKINGS-LINE 6"	FOOT	108
THERMOPLASTIC PAVEMENT MARKINGS-LINE 12"	FOOT	420
THERMOPLASTIC PAVEMENT MARKINGS-LINE 24"	FOOT	121



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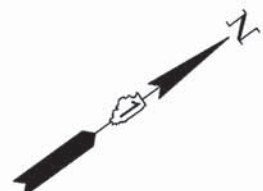
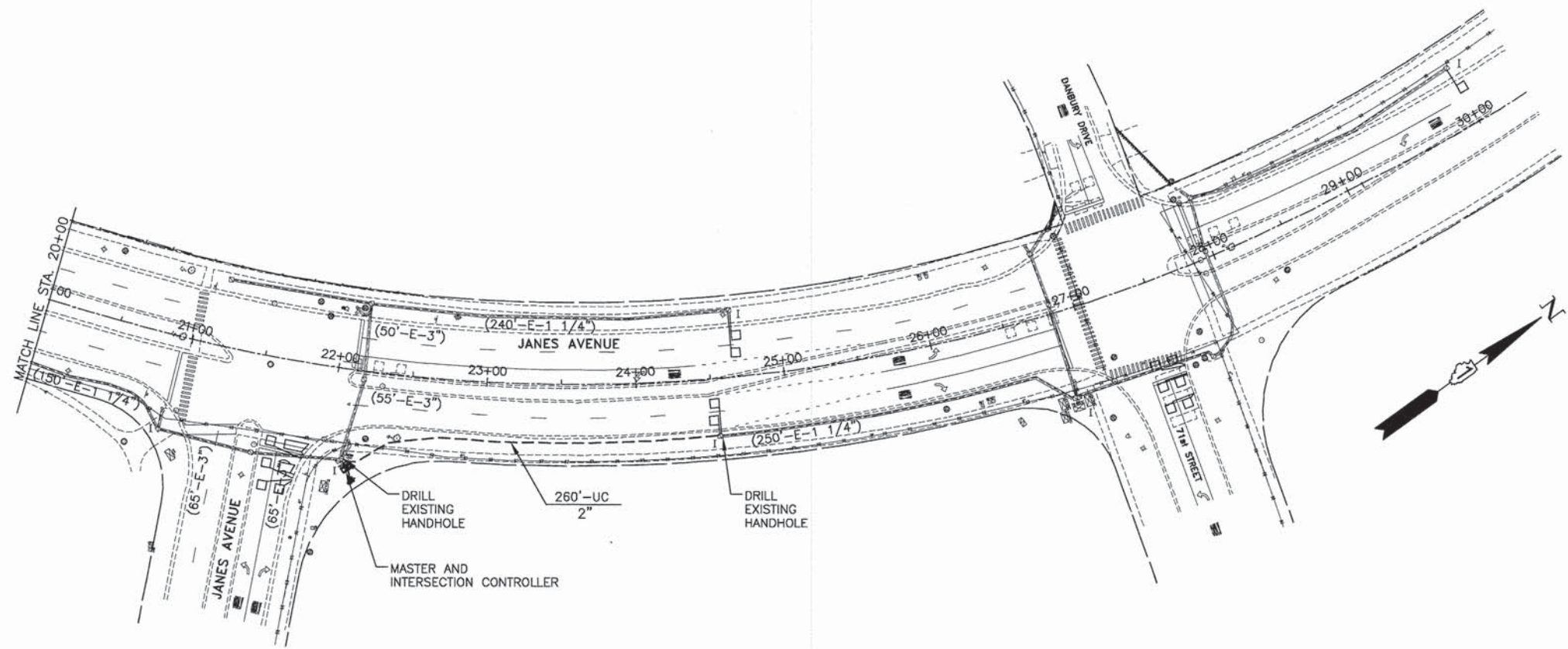
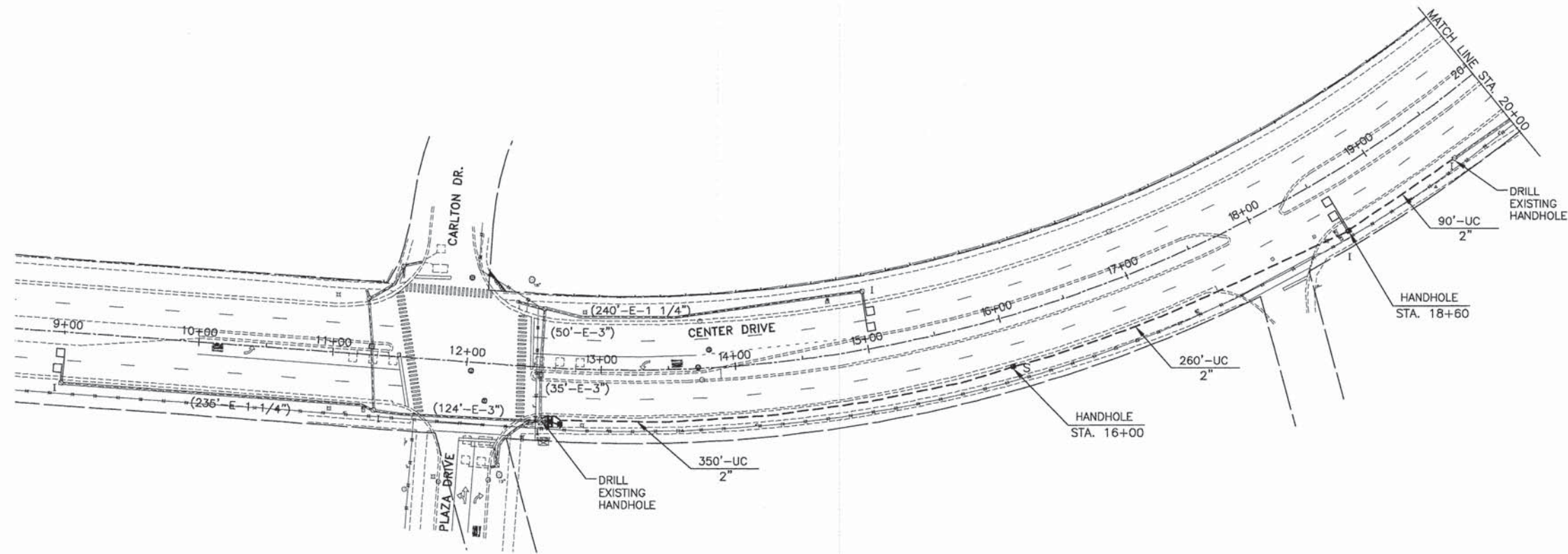
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		DRAWN -- SMP	REVISED --
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK AND PAVEMENT MARKING PLAN
JANES AVENUE AT 71st STREET/DANBURY DRIVE

SCALE: 1"=20' SHEET NO. 19 OF 23 SHEETS STA. TO STA.

F.A.U. RTE. 2588 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 19
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				



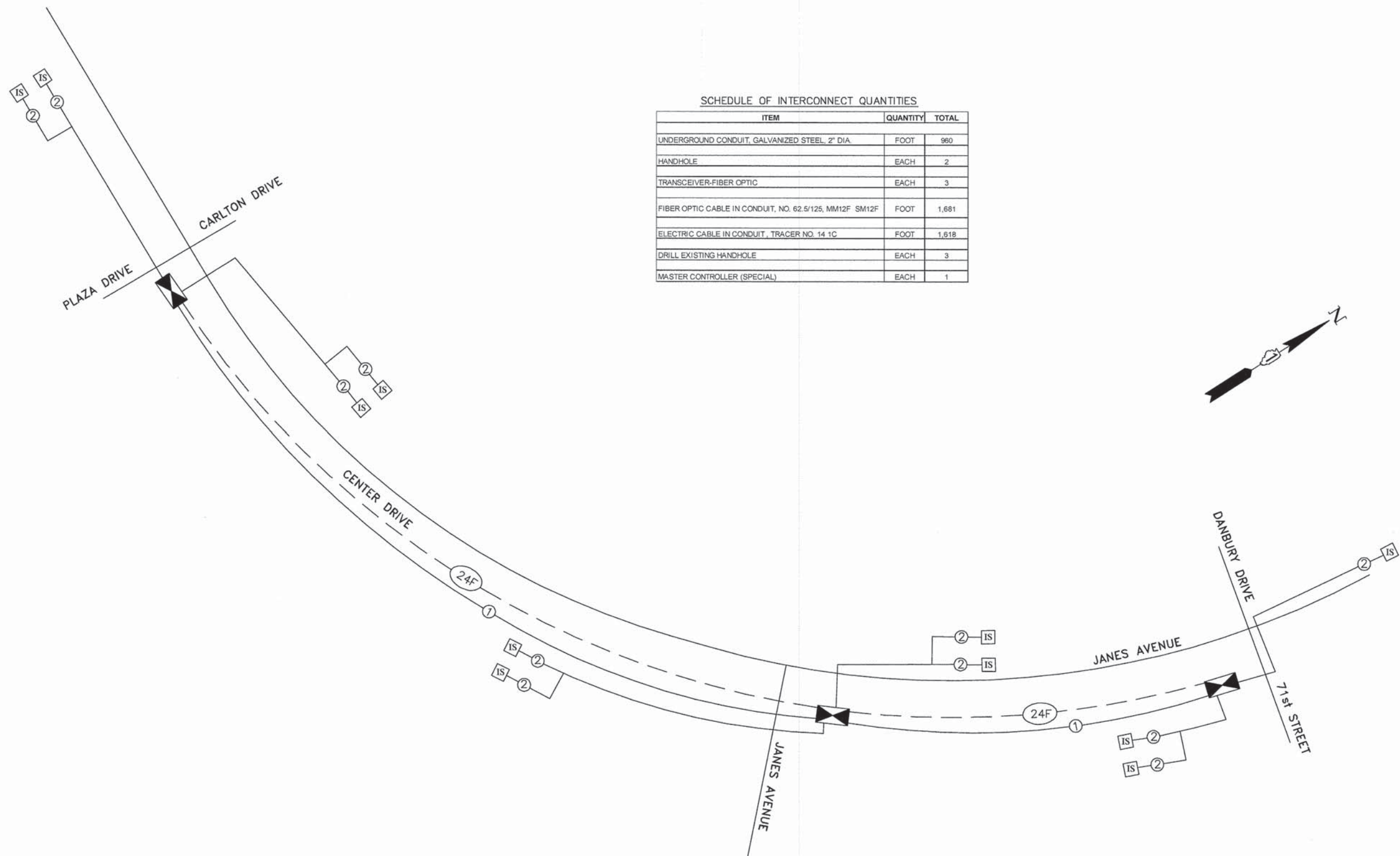
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	PLOT SCALE =	CHECKED -- SJG	REVISED --
	PLOT DATE =	DATE --	REVISED --

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN
PLAZA DRIVE TO 71st STREET**

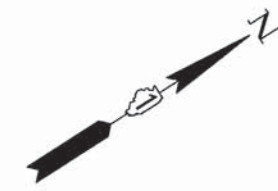
SCALE: 1"=50' SHEET NO. 20 OF 23 SHEETS STA. TO STA.

JJB	JAMES J. BENES & ASSOCIATES, INC.			
	950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 · Fax (630) 719-7589			
F.A.U. RTE. 2588 & 3273	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 20
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				



SCHEDULE OF INTERCONNECT QUANTITIES

ITEM	QUANTITY	TOTAL
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	960
HANDHOLE	EACH	2
TRANSCIEVER-FIBER OPTIC	EACH	3
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1,681
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	1,618
DRILL EXISTING HANDHOLE	EACH	3
MASTER CONTROLLER (SPECIAL)	EACH	1

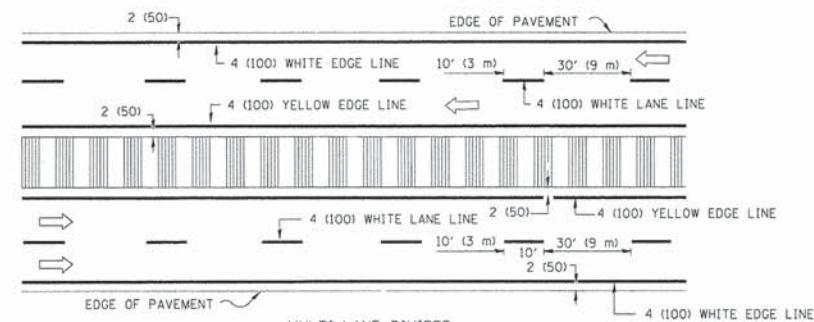
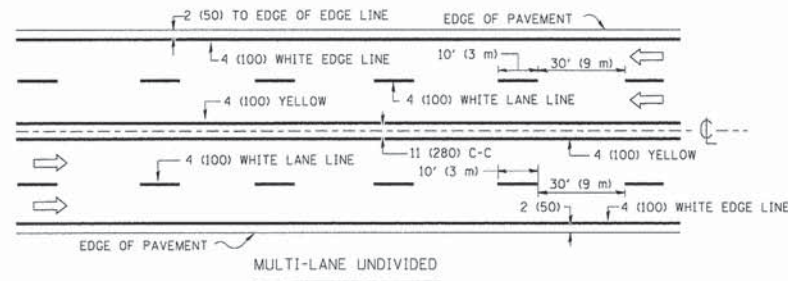
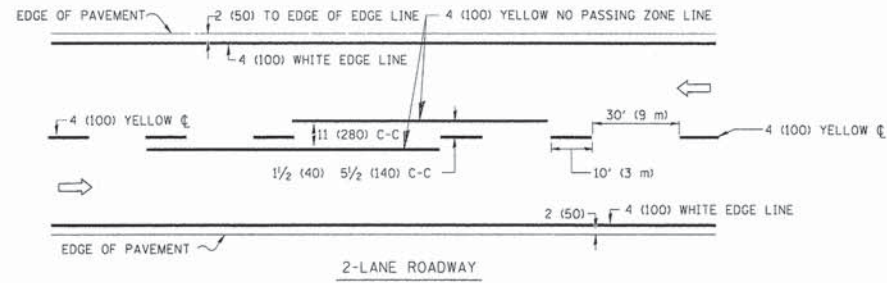


FILE NAME =	USER NAME =	DESIGNED -- SJG	REVISED --
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		CHECKED -- SJG	REVISED --
		DATE --	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

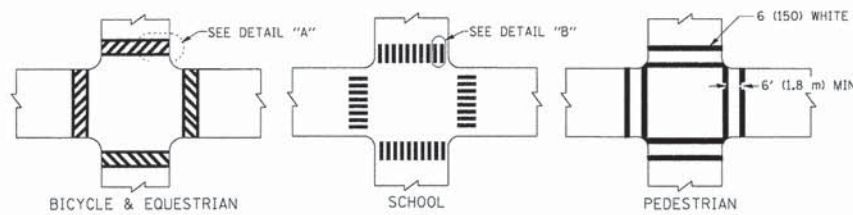
PROPOSED INTERCONNECT SCHEMATIC
PLAZA DRIVE TO 71st STREET
SCALE: 1"=50'
SHEET NO. 21 OF 23 SHEETS
STA. TO STA.

	JAMES J. BENES & ASSOCIATES, INC. 950 Warrenville Road, Suite 101, Lisle, Illinois 60532 Tel. (630) 719-7570 · Fax (630) 719-7589			
	F.A.U. RTE. 2589 & 3573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23
			CONTRACT NO. 63867	
ILLINOIS FED. AID PROJECT				

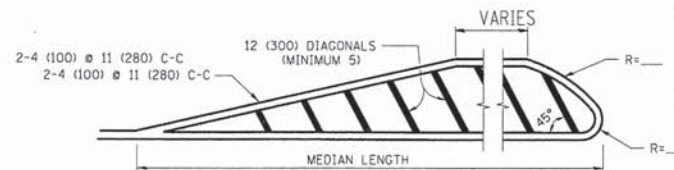
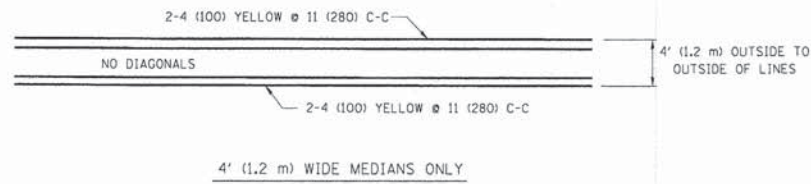


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

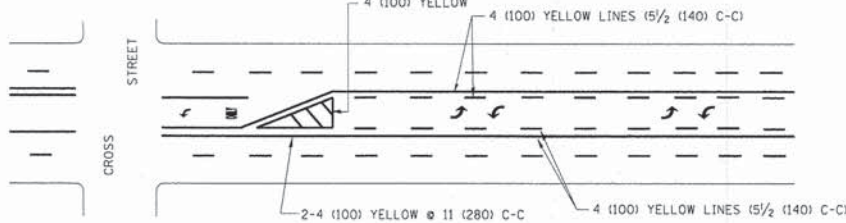


TYPICAL CROSSWALK MARKING

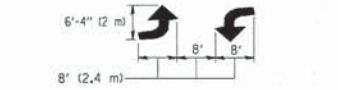


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

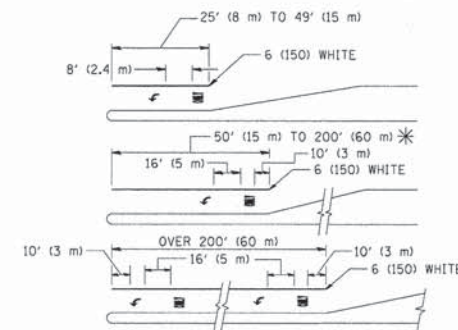


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

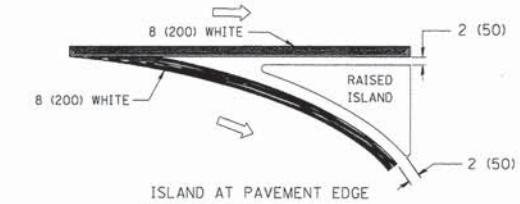
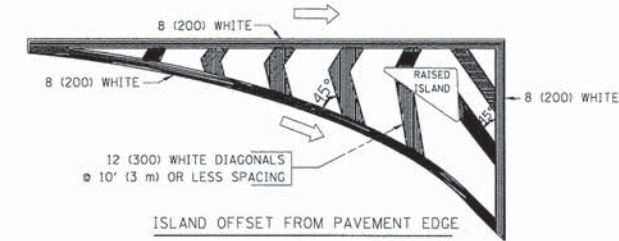


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2' (140) C-C FROM SKIP-DASH CENTERLINE. 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2' (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = drivakosgn	DESIGNED - EVERS	REVISED - T. RAMMACHER 10-27-94
at:\p_w\work\p\dot\drivakosgn\d8188315\to3\dgn		DRAWN -	REVISED - C. JUCIUS 09-09-09
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 2589 & 5573	SECTION 12-00067-00-TL	COUNTY DuPAGE	TOTAL SHEETS 23	SHEET NO. 23
TC-13			CONTRACT NO. 63867	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				