03-06-2015 LETTING ITEM 221

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA:

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

PROJECT LOCATED IN VILLAGE OF WOODRIDGE

705-4021

Д.

PROGRAM ENGINEER: FAWAD AQUEEL,

FEDERAL AID

0 100' 200' 300'—1"= 100' 0 50' 100' ——1"= 50' 0 50' 100' ——1"= 40' 0 50' ——1"= 30' ——1"= 20'

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

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

CONTRACT NO. 63867

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

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(484)
VILLAGE OF WOODRIDGE
DUPAGE COUNTY

C-91-553-12

PROJECT ENDS
STA 11+00.00

RI1E

RI1E

Srd PM.

RI1

SCALE: NTS

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

F.A.U. SECTION COUNTY TOTAL SHEET NO. 588.8 12-00067-00-TL DUPAGE 24 1 ILLINOIS CONTRACT NO. 63867



	_
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
APPROVED: December 10th 2014 Village of Woodridge, Director of Public Works	
PASSED: DECEMBER 23 2014 CHRISTOPHER HOLT District 1 Engineer of Local Roads & Streets	
Releasing for Bid ased on Limited Review Secondary 23 2014 The Fortman as Deputy Director of Highways, Region Fengineer	
PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS	
JAMES J. BENES & ASSOCIATES, INC.	
JAMES J. BENES & ASSOCIATES CONSULTING ENGINEERS 950 WARRENVILLE RODS SUITE 101 PROFESSIONAL PROFESSIONAL	5.00

DATE: NOVEMBER 30, 2015 FIELD: JAMES J. BENES AND ASSOCIATES, INC.

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

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SHEET NO.	TITLE
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19	CABLE PLAN JANES AVENUE AT 71st STREET/DANBURY DRIVE
20	SIDEWALK AND PAVEMENT MARKING PLAN JANES AVENUE AT 71st STREET/DANBURY DRIVE
21	INTERCONNECT PLAN
22	INTERCONNECT SCHEMATIC
23-24	DISTRICT ONE DETAILS

SUGGESTED SEQUENCE TO MINIMIZE SIGNAL SHUT-DOWN TIME

- 1 INSTALL NEW FOUNDATIONS AND CONDUITS FOR POSTS AND MAST ARMS.
- 2 INSTALL NEW FOUNDATIONS FOR NEW SERVICE BOXES. COORDINATE NEW SERVICES WITH COMED.
- 3 MODIFY CONTROLLER FOUNDATIONS.
- 4 INSTALL NEW POSTS AND MAST ARMS.
- 5 INSTALL NEW SIGNAL HEADS AND CABLES (BAG AS NECESSARY).
- 6 INSTALL INTERCONNECT CONDUITS AND CABLES.
- 7 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.
- 2. 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)
- 3. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTING BOLT PATTERN ON EXISTING FOUNDATIONS THAT ARE SPECIFIED TO BE RE-USED.
- 5. 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.
- 6. 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.
- 8. 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.
- 9. 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.)
- 10. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ALL UTILITY COMPANIES AND THE VILLAGE OF
- 11. 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
- 12. 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, 2015: 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.
- 13. 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

		IST OF STATE STATEMENT
00	0001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
42	4001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
42	4011-02	CORNER PARALLEL CURB
42	4021-03	DEPRESSED CORNER FOR SIDEWALK
60	6001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
70	01601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
70	01701-09	URBAN LANE CLOSURE MULTI-LANE INTERSECTION
70	1801-05	SIDEWALK CORNER OR CROSSWALK CLOSURE
70	1901-04	TRAFFIC CONTROL DEVICES
80	05001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
81	14001-03	HANDHOLES
81	14006-02	DOUBLE HANDHOLES
85	57001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
87	73001-02	TRAFFIC SIGNAL GROUNDING & BONDING
87	76001-03	PEDESTRIAN PUSH BUTTON POST
87	77001-05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
87	78001-10	CONCRETE FOUNDATION DETAILS
88	8000601	TRAFFIC SIGNAL MOUNTING DETAILS
88	86001-01	DETECTOR LOOP INSTALLATIONS
88	86006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

LIST OF DISTRICT ONE DETAILS

TC-10	TRAFFIC	CONTROL	AND	PROTECTION	N PLAN	FO
10 10				TIONS AND		

TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS

TS-05 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

COUNTY TOTAL SHEET NO.

DuPAGE 24 2 12-00067-00-TL CONTRACT NO. 63867 TILLINGIS FED. AID PROJECT

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, INDEX OF SHEETS AND LIST OF STATE STANDARDS SHEET NO. OF SHEETS STA. TO STA.

FILE NAME = USER NAME =	USER NAME =	DESIGNED — SJG	REVISED —
		DRAWN - SMP	REVISED —
	PLOT SCALE =	CHECKED — SJG	REVISED
	21.00 2.00	DATE 11_25_2014	PEVISED -

CODE NO	SUMMARY OF QUANTITIES . ITEM	UNIT	TOTAL QUANTITY	TRAFFIC SIGNALS CENTER @ PLAZA 75% FED 25% VILLAGE 0021	TRAFFIC SIGNALS CENTER @ JANES 75% FED 25% VILLAGE 0021	TRUCTION TYPE TRAFFIC SIGNALS JANES @ 71ST 75% FED 25% VILLAGE 0021	TRAFFIC SIGNAL INTERCONNECT 75% FED 25% VILLAGE 0021	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CUYD	26			26		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	44			44		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	715			715		
42400800	DETECTABLE WARNINGS	SQ FT	118			118		(T.V.)
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		7317
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	
	TRAFFIC CONTROL AND PROTECTION - STANDARD 701801	L SUM	1	0.25	0.25	0.25	0.25	77 - 51
	CHANGEABLE MESSAGE SIGN	CAL MO	6	2	2	2		
78000400		FOOT	108			108		
78000600		FOOT	420			420		
78000650	THERMOPLASTIC PAVEMENT MARKINGS-LINE 24"	FOOT	121			121		
80500010		EACH	3	1	1	1		
81028200		FOOT	1,147	29	115		960	
81028210		FOOT	399	139		43	960	
81028220			THE TAX		165	95		
		FOOT	53	0	12	41		
81028240		FOOT	21	7	7	7		
	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1" DIA.	FOOT	200	22	100	78		
	HANDHOLE	EACH	4	1	1	0	2	
	DOUBLE HANDHOLE	EACH	1	0	0	1		
85000200		EACH	3	1	1	1		_
86400100		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	_
	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	21	8	6	7		
	ELECTRIC CABLE IN CONDUIT , TRACER NO. 14 1C	FOOT	1,618	0	0	0	1,618	
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	3,436	1,338	673	1,425		
	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	1,787	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 10	FOOT	1,707	662	541	504		
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4	2	1	11		-
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		
87602000	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				
	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1			1		

	SUMMARY OF QUANTITIES			STRUCTION TYPE	CODE			
			TOTAL	TRAFFIC SIGNALS CENTER @ PLAZA 75% FED 25% VILLAGE	TRAFFIC SIGNALS CENTER @ JANES 75% FED 25% VILLAGE	TRAFFIC SIGNALS JANES @ 71ST 75% FED 25% VILLAGE	TRAFFIC SIGNAL INTERCONNECT 75% FED 25% VILLAGE	
CODE NO.	ITEM	UNIT	QUANTITY	0021	0021	0021	0021	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	60	24	20	16		
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 TIMES	EACH	14	8	2	4		
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMES	EACH	3	0	1	2	<u> </u>	
88200100	TRAFIC 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		
89502220	MODIFY EXISTING CONCRETE FOUNDATION	EACH	3	1	1	1		
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		
	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	
	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2	1		1	V.V.	
	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1		1			
300	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			
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.

<u>LEGEND</u>

*-DENOTES SPECIALTY ITEM

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

-	USER NAME =	DESIGNED — SJG REVISED —	
		DRAWN — SMP REVISED —	
	PLOT SCALE =	CHECKED — SJG REVISED —	
	PLOT DATE =	DATE - 11-25-2014 REVISED -	

FILE NAME

STATE OF ILLINOIS							
DEPARTMENT	0F	TRANSPORTATION					

ALU. SECTION COUNTY SHEETS NO. 18.73 12-00067-00-TL DuPAGE 24 3 CONTRACT NO. 63867 ILLINOIS FED. AID PROJECT

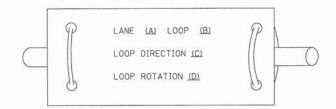
TRAFFIC SIGNAL LEGEND

2 Marie 100 - 100											
ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		\blacksquare	EMERGENCY VEHICLE LIGHT DETECTOR	R _≪	⊗	4	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET		₽ P		CONFIRMATION BEACON	R_{o-0}	0-0	-4	A STATE OF THE STA		~	
COMMUNICATIONS CABINET	CCR	E C C	CC	HANDHOLE	R			COAXIAL CABLE			—©—
MASTER CONTROLLER		EMC	MC		R	H		VENDOR CABLE FOR CAMERA			
MASTER MASTER CONTROLLER	R	[EMMC]	MMC	HEAVY DUTY HANDHOLE	-		⊞	COPPER INTERCONNECT CABLE.		,0	— <u>v</u> —
UNINTERRUPTABLE POWER SUPPLY	UPS	EUPS .	UPS	DOUBLE HANDHOLE JUNCTION BOX	R D			NO. 18 3 PAIR TWISTED, SHIELDED		- Ø-	-6-
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	-□ ^R	-D-P	- ■ P	UNDERGROUND CONDUIT.				FIBER OPTIC CABLE NO. 62.5/125, MM12F		-J2F	
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R	P	PŢ	GALVANIZED STEEL (UC) TEMPORARY SPAN WIRE, TETHER WIRE,	P	MONONPHONO		FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		<u></u>	-(24F)-
STEEL MAST ARM ASSEMBLY AND POLE	R	0	•	AND CABLE	_N	***************************************		NO. 02.37123, MINIZE SIMIZE			
ALUMINUM MAST ARM ASSEMBLY AND POLE	R	0		COMMON TRENCH			СТ	FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F		-36F	—36F)—
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	RO-X	0-¤	• ×	COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC	GROUND ROD AT (C) CONTROLLER,			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PIZI	Q———	PīZ	SYSTEM ITEM INTERSECTION ITEM		S	S IP	(H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		c 11	c _{ill} -
SIGNAL POST		0	•	REMOVE ITEM	R			CONTROLLER CABINET AND	RCF		
TEMPORARY WOOD POLE (CLASS 5 OR	R _O R⊗	⊗	∞	RELOCATE ITEM	RL			FOUNDATION TO BE REMOVED			
BETTER) 45 FOOT (13.7m) MINIMUM GUY WIRE	× R	>	>	ABANDON ITEM 12" (300mm) TRAFFIC SIGNAL SECTION	A	R	R	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	ORMF.		
	R.	>	-	12 GOODING TRAFFIC STORAL SECTION			[K]	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL HEAD SIGNAL HEAD CONSTRUCTION STAGES	-⊳.	~	→ ²	12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		(R)		STEEL COMBINATION MAST ARM ASSEMBLY			
(NUMBERS INDICATE THE CONSTRUCTION STAGE) SIGNAL HEAD WITH BACKPLATE	+R	+>	+>			R	R	AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF O-X		
SIGNAL HEAD OPTICALLY PROGRAMMED	R	-\>''p''	→"P"	SIGNAL FACE			Y	SIGNAL POST AND FOUNDATION	RPF		
FLASHER INSTALLATION	-D''P''			SIGNAL FACE		•	∢ Y	TO BE REMOVED	0		
(S DENOTES SOLAR POWER)	O-⊠"F"	O-D"F"	• - "F"			€6	∢ G	INTERSECTION & SAMPLING (SYSTEM) DETECTOR		[IS]	IS
PEDESTRIAN SIGNAL HEAD	-D	-D	-1			R	R	SAMPLING (SYSTEM) DETECTOR		[5]	S
PEDESTRIAN PUSHBUTTON DETECTOR	R	(6)	©	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD			G	QUEUE DETECTOR		[0]	0
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	⊚APS	APS	"RB" INDICATES REFLECTIVE BACKPLATE		(*)	← Y ← G	PREFORMED QUEUE DETECTOR		[PO]	
ILLUMINATED SIGN "NO LEFT TURN"	R	9	(5)	104 (700-1) 0505570111 510111 11510		"P"	"P"				РО
ILLUMINATED SIGN	R			12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		(OW) (W)		PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
"NO RIGHT TURN"	8	(3)	®	12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED		(L)		PREFORMED SAMPLING (SYSTEM) DETECTOR		[PS]	PS
DETECTOR LOOP, TYPE I				**************************************							
PREFORMED DETECTOR LOOP		[P]	Р	12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID		Ŕ	₽	RAILROAD	SYMBO	LS	
MICROWAVE VEHICLE SENSOR	R M	MI	M	PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		(€ C (x) D	₽ C ★ D			EXISTING	PROPOSED
VIDEO DETECTION CAMERA	R	I ∑¤	(V)	RADIO INTERCONNECT	 R O			RAILROAD CONTROL CABINET			
VIDEO DETECTION ZONE				RADIO REPEATER	R ERR	ERR	RR	RAILROAD CANTILEVER MAST ARM	Σ	KOX X X	X+X X
PAN. TILT. ZOOM CAMERA	R PTZ	PIZD	PZ)	DENOTES NUMBER OF CONDUCTORS, ELECTRIC	Lat MV	List		FLASHING SIGNAL		Zo Z	X OX
WIRELESS DETECTOR SENSOR	R(W)	(W)	(W)	CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		_5	_5_	CROSSING GATE		X0X>	X0X-
WIRELESS ACCESS POINT	R			GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		0	(1)	CROSSBUCK		≥	*
FILE NAME = USER NAME = Footemj	DE	ESIGNED - DAG/BCK	REVISED -	- DAG 1-1-14		-		DISTRICT ONE	F.A.U. RTE.	SECTION	COUNTY TOTAL SHEE
c:\pw_work\pwidot\footemj\d8188315\te85.dgn PLOT SCALE = 50.0000 '/		RAWN - BCK HECKED - DAD	REVISED -	STATE DEPARTMENT	OF ILLINOIS OF TRANSPO			STANDARD TRAFFIC SIGNAL DESIGN DETAILS	2588 & 3573	12-00067-00-TL TS-05	DUPAGE 24 4 CONTRACT NO. 63867
PLOT DATE = 1/13/2014	Di	ATE - 10-28-09	REVISED -			ರ್ಯಾಗ ಮರ್ಮನ್ ನಿನ್ನಾನೆ ನಿನ್ನಿ	SCALE: NO	NE SHEET NO. 1 OF 7 SHEETS STA. TO STA	FED. ROAL	D DIST. NO. 1 ILLINOIS FED	

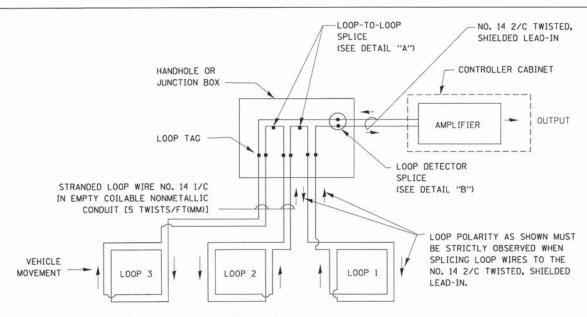
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

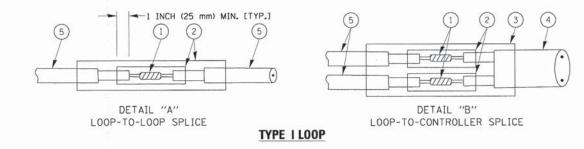


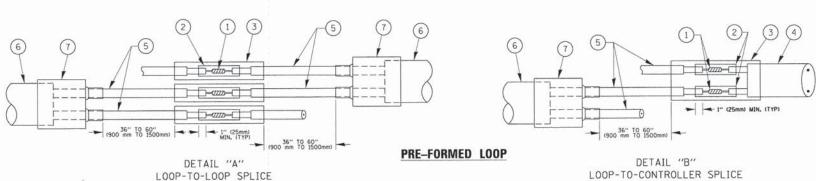
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



DETECTOR LOOP WIRING SCHEMATIC

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





LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

SCALE: NONE

4) NO. 14 2/C TWISTED, SHIELDED CABLE.

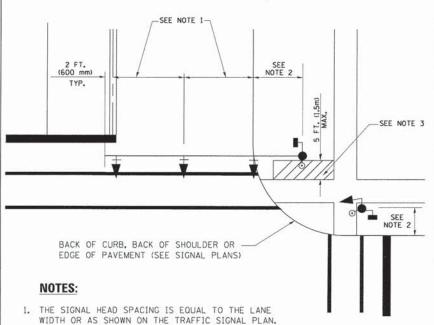
- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- (6) PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = footemj	DESIGNED -	DAD	REVISED - DAG 1-1-14
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	PLOT SCALE = 50.0000 ' / 10.	CHECKED -	DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE -	10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A.U. RTE.	SECTION
	•	2588 & 3573	12-00067-0
STANDARD TRAFFIC SIGNAL DESIGN DETAIL	3		TS-05
CUEET NO O OF 7 CHEETE STA	TO STA	EED DOLD	DICT 110 1 1111

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALKBICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.

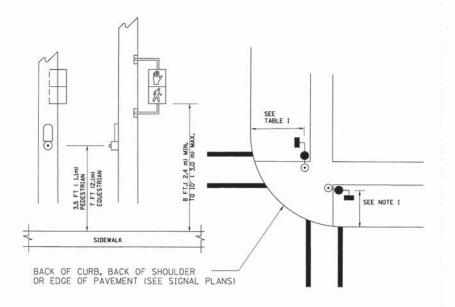


- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE 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."

NOTES:

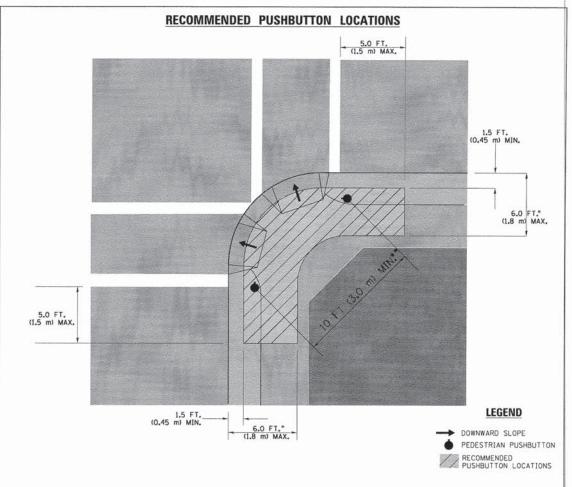
- PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
- 2. THE BOTTOM 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.
- 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.

PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

- 1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 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.
- 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."



- 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.

TRAFFIC SIGNAL EQUIPMENT OFFSET

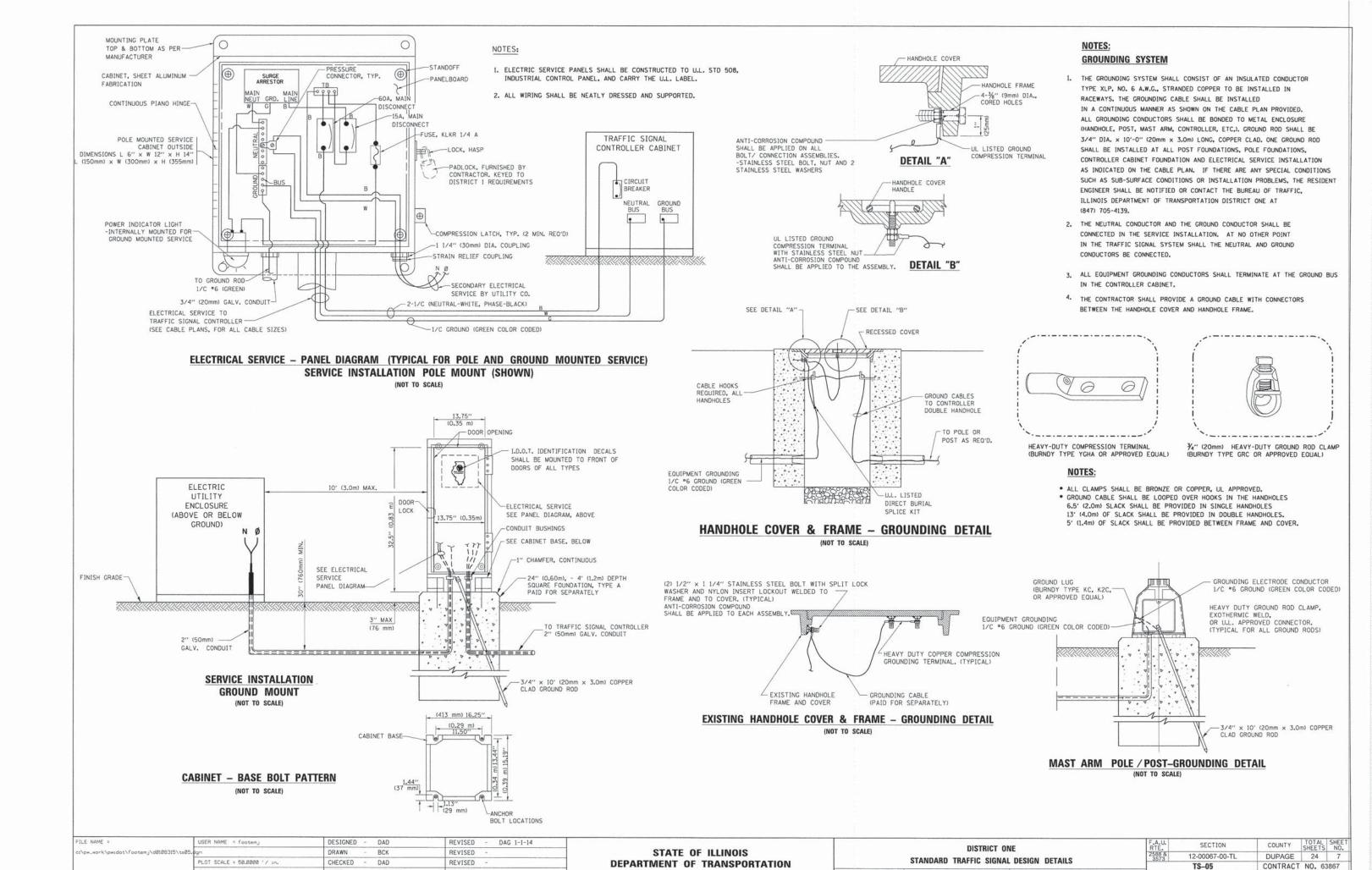
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1,8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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 TOTHE 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 LINDER THE DETAILS ON THIS SHEET.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE	I R I E . I	COUNTY TOTAL SHEET NO.
STANDARD TRAFFIC SIGNAL DESIGN DETAILS	2588 & 12-00067-00-TL E	DUPAGE 24 6
STANDARD TRAFFIC SIGNAL DESIGN DETAILS	TS-05 C	ONTRACT NO. 63867
SCALE: NONE SHEET NO. 3 OF 7 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PF	ROJECT



SCALE: NONE

SHEET NO. 4 OF 7 SHEETS STA.

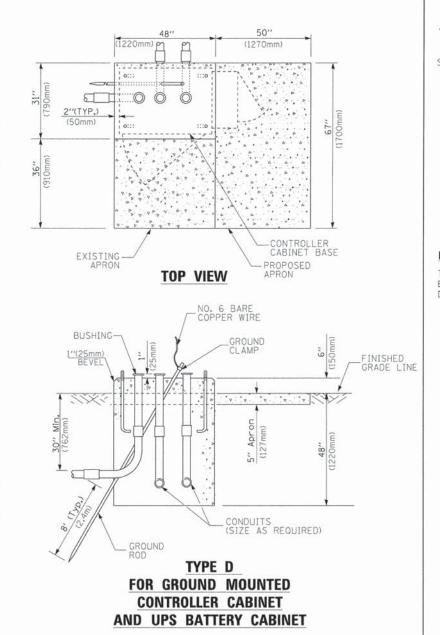
TO STA.

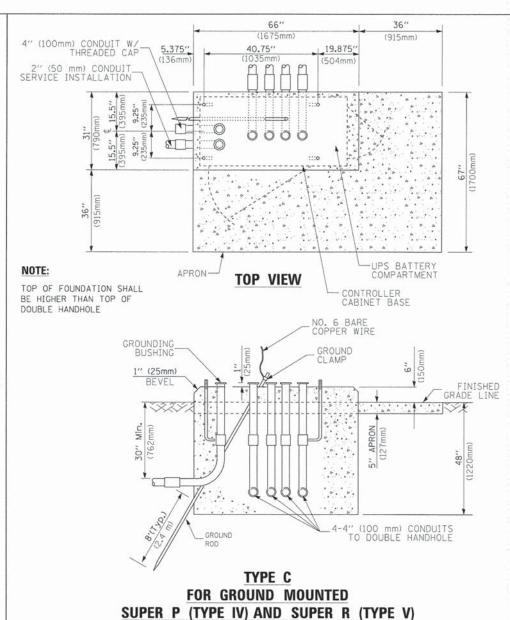
PLOT DATE = 1/13/2014

DATE

10-28-09

REVISED





CONTROLLER CABINETS

SEE NOTE 5 (1245mm)
(1245mm) 44" 16"
1118mm) (406mm)
21/2"
21/2" (G4mm) (G4mm) (G1/2) (G1
100 100 TIT(25mm)
(51mm × 152mm) WOOD FRAMING (TYP.)
alicental and the account of the contraction of the
TRAFFIC SIGNAL —
CONTROLLER CABINET
I— UPS
CABINET
7/4" (19mm) TREATED PHYWOOD DECK
2" × 6" (51mm × 152mm) • • •
(305mm)
NB Comments
(1219mm) (1219mm) (1219mm)
6" × 6" (152mm × 152mm)
NOTES: TREATED WOOD POSTS
 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.

65" (SEE NOTE 4)

- ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- 5. 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.
- 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
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

VERTICAL CABLE LENGTH		
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

CABLE SLACK

FOUNDATION TYPE A - Signal Post	DEPTH 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

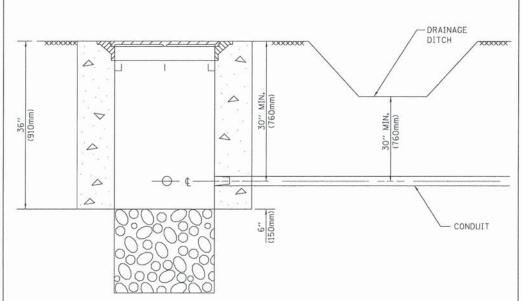
Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up 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.
- 2. Combination most arm assembles under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 3. Combination most arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
- 4. For most arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

FILE NAME =	USER NAME = footemj	DESIGNED -	- DAG	REVISED - DAG 1-1-14	PIGTIGT ONE FAUL SE		DISTRICT ONE		SECTION	COUNTY	TOTAL SHEET
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	PLOT SCALE = 50.0000 ' / in.	CHECKED -	- DAD	REVISED -	DEPARTMENT OF TRANSPORTATION		STANDARD TRAFFIC SIGNAL DESIGN DETAILS	35/3	TS-05	CONTRACT	NO. 63867
	PLOT DATE = 1/13/2014	DATE -	- 10-28-09	REVISED -		SCALE: NONE	SHEET NO. 5 OF 7 SHEETS STA. TO STA.	FED. ROA		AID PROJECT	1101 00007

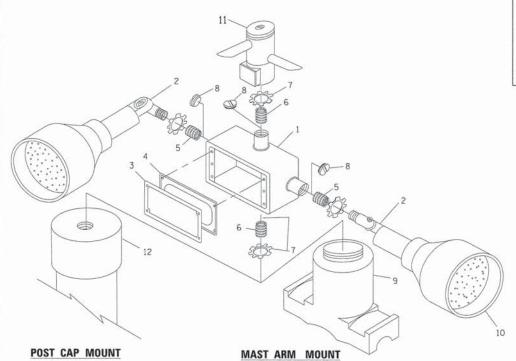


NOTES:

FILE NAME #

- CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
- 2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
- 3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

HANDHOLE WITH MINIMUM CONDUIT DEPTH



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

PLOT SCALE = 50.0000 ' / 10

DESIGNED

CHECKED

DAD

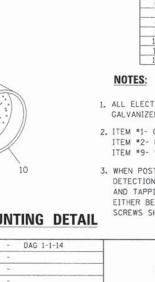
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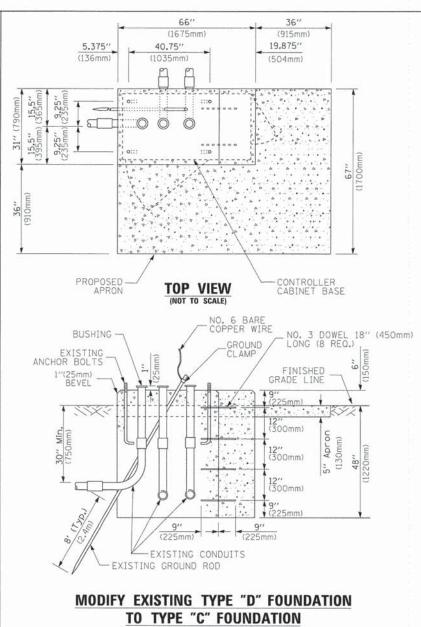
10-28-09

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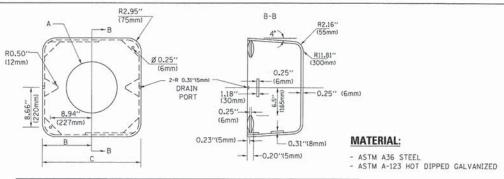




(NOT TO SCALE)

ITEM NO. IDENTIFICATION 1 OUTLET BOX- GALV, 21 CU,IN, (0.000344 CU-M) 2 LAMP HOLDER AND COVER 3 OUTLET BOX COVER 4 RUBBER COVER GASKET 5 REDUCING BUSHING 6 ¼''(19 mm) CLOSE NIPPLE 7 ¾''(19 mm) LOCKNUT 8 ¼''(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.]

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

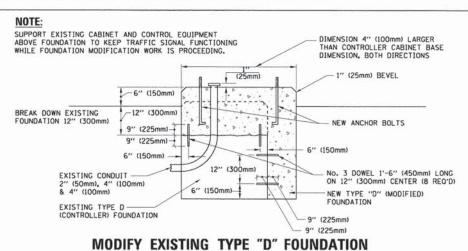


Α	В	С	HEIGHT	WEIGHT		
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)		
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)		
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)		
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126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

SHROUD

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.
- 2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- 3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



CALVANIZED STEEL HOOKS 21 1/2" MIN. (545mm) CONDUIT BUSHING EXISTING CONDUIT TO BE REMOVED CONDUIT TO REMAIN FRENCH DRAIN PLAN

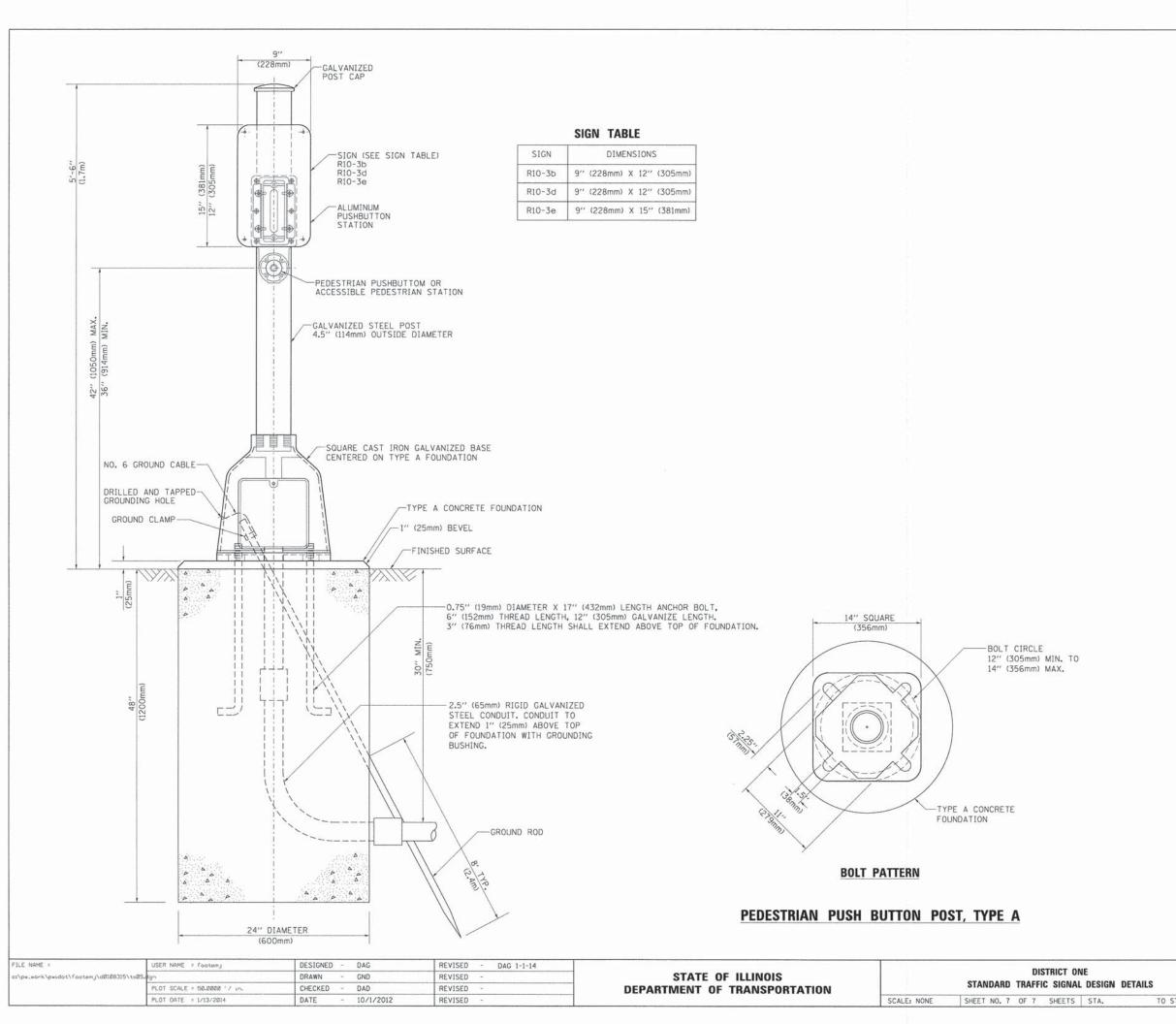
NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.

ELEVATION

REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION
OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT



COUNTY TOTAL SHEET NO.

DUPAGE 24 10

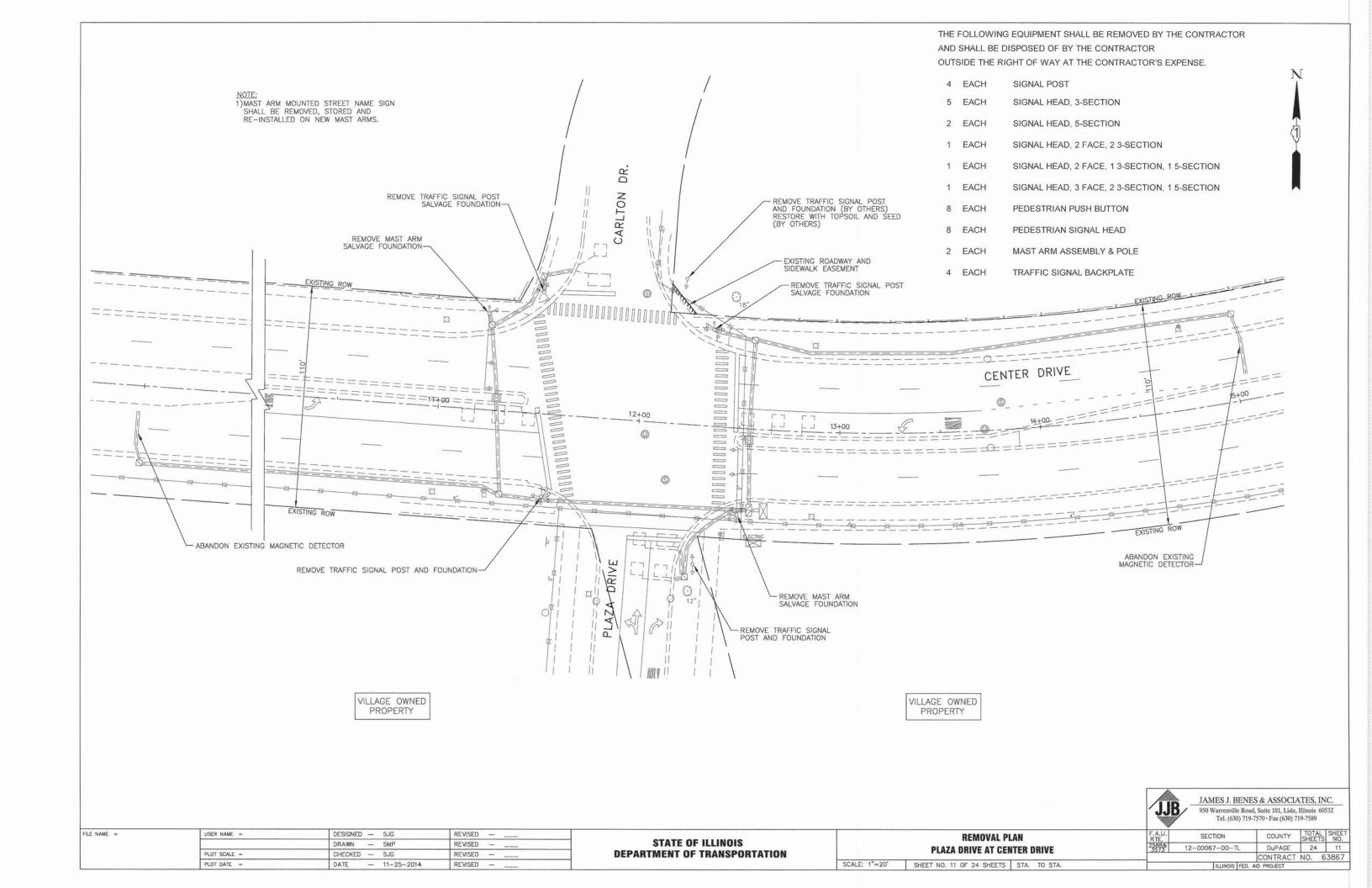
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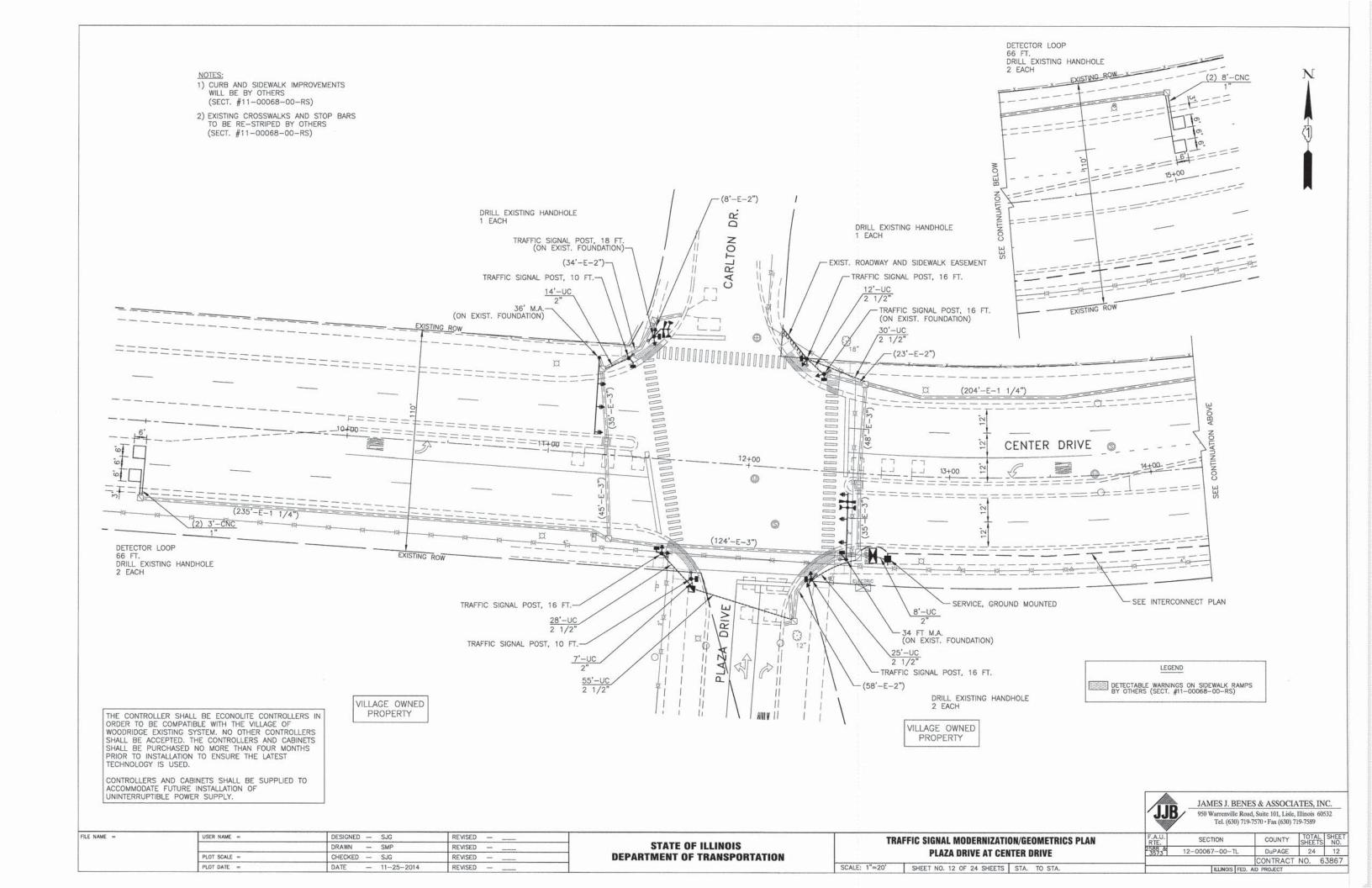
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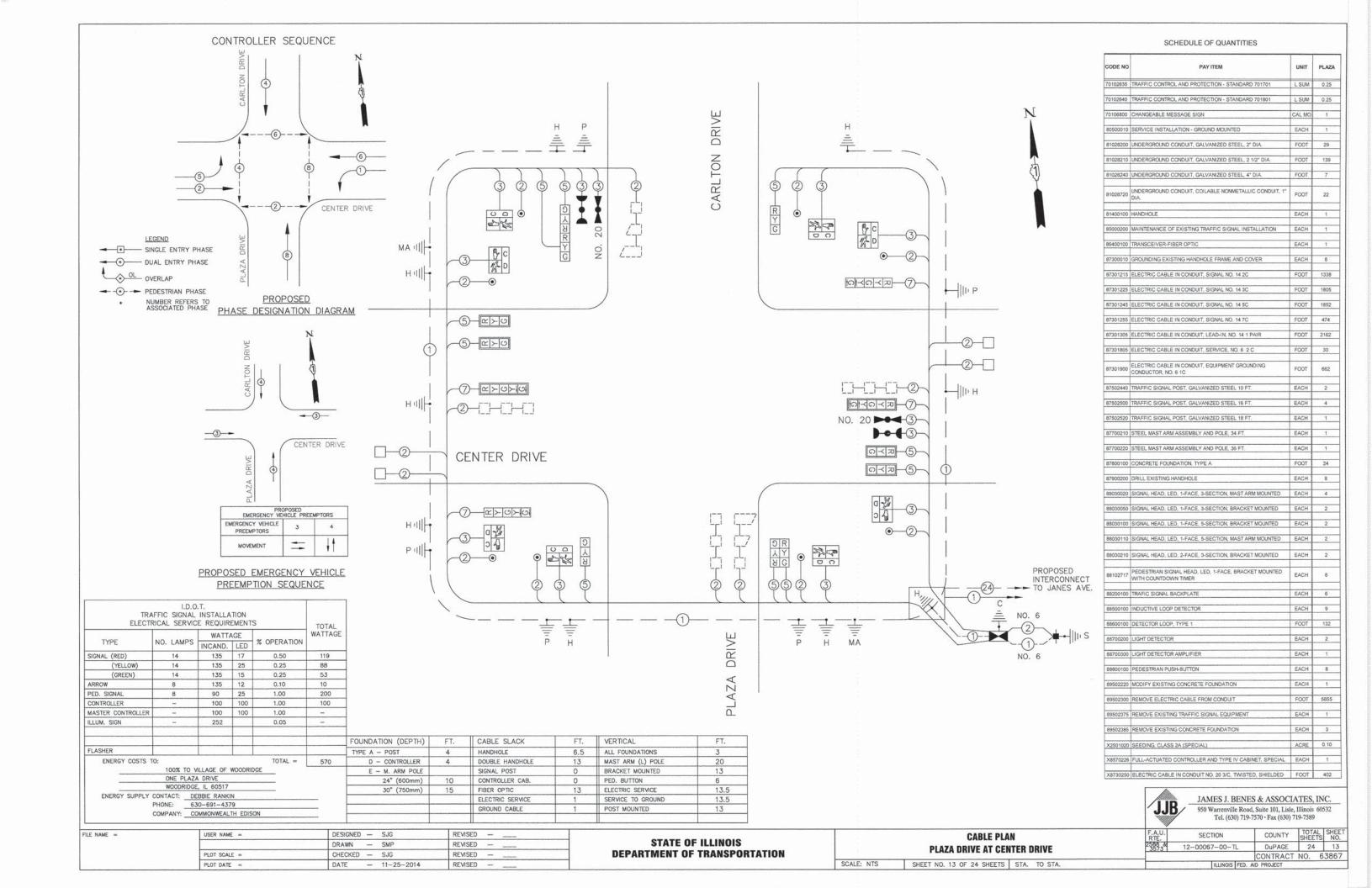
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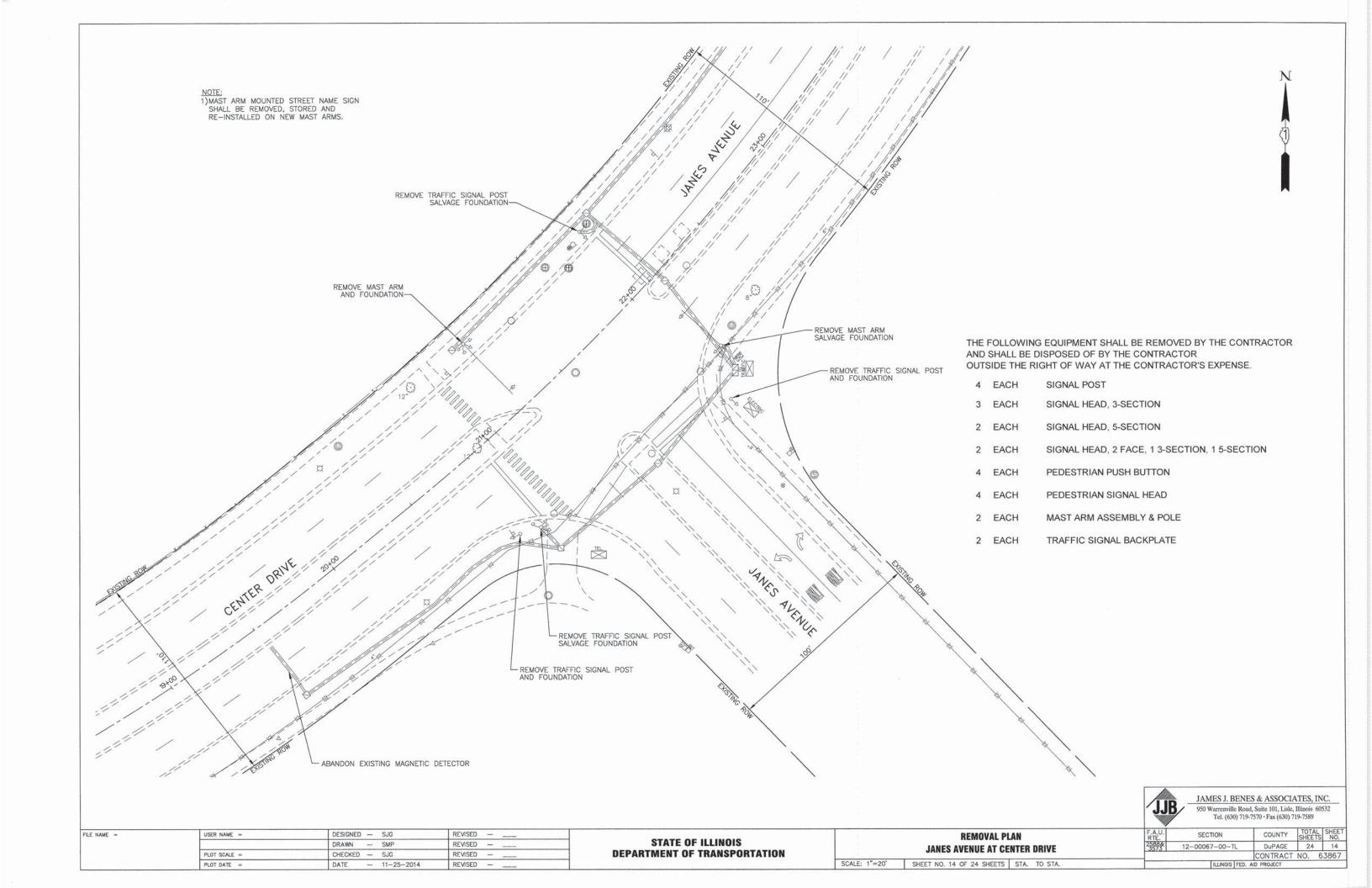
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

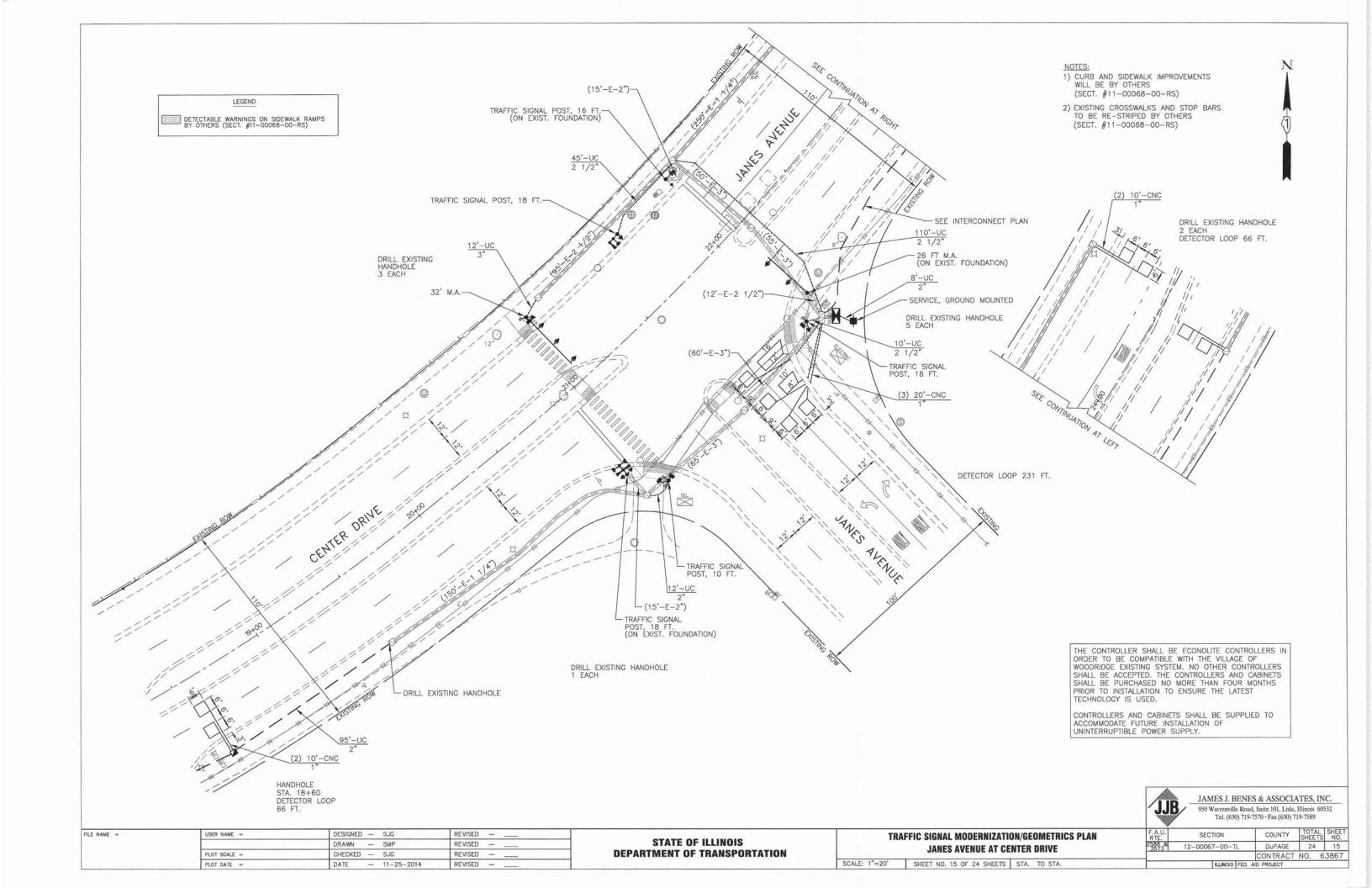
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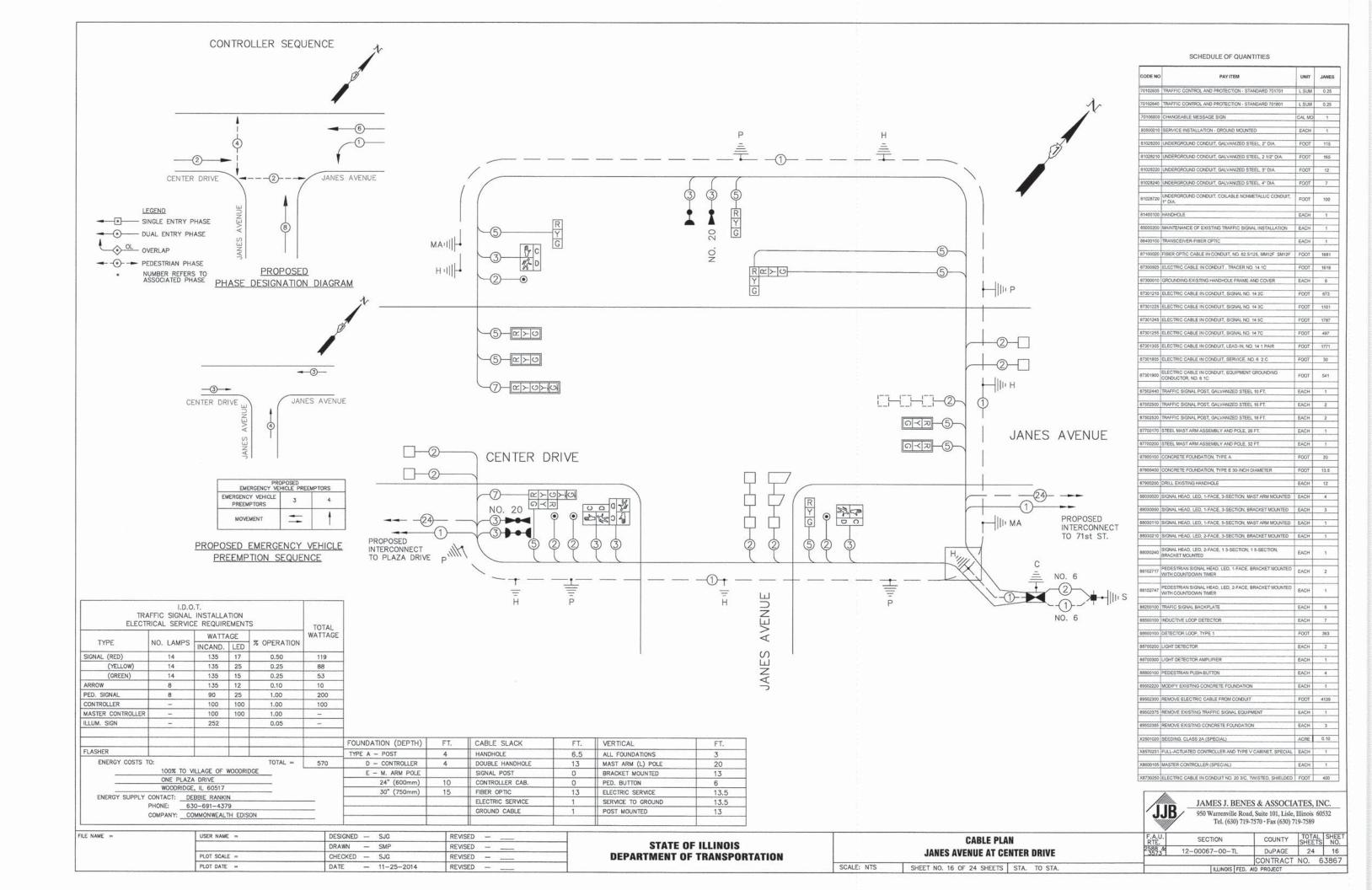


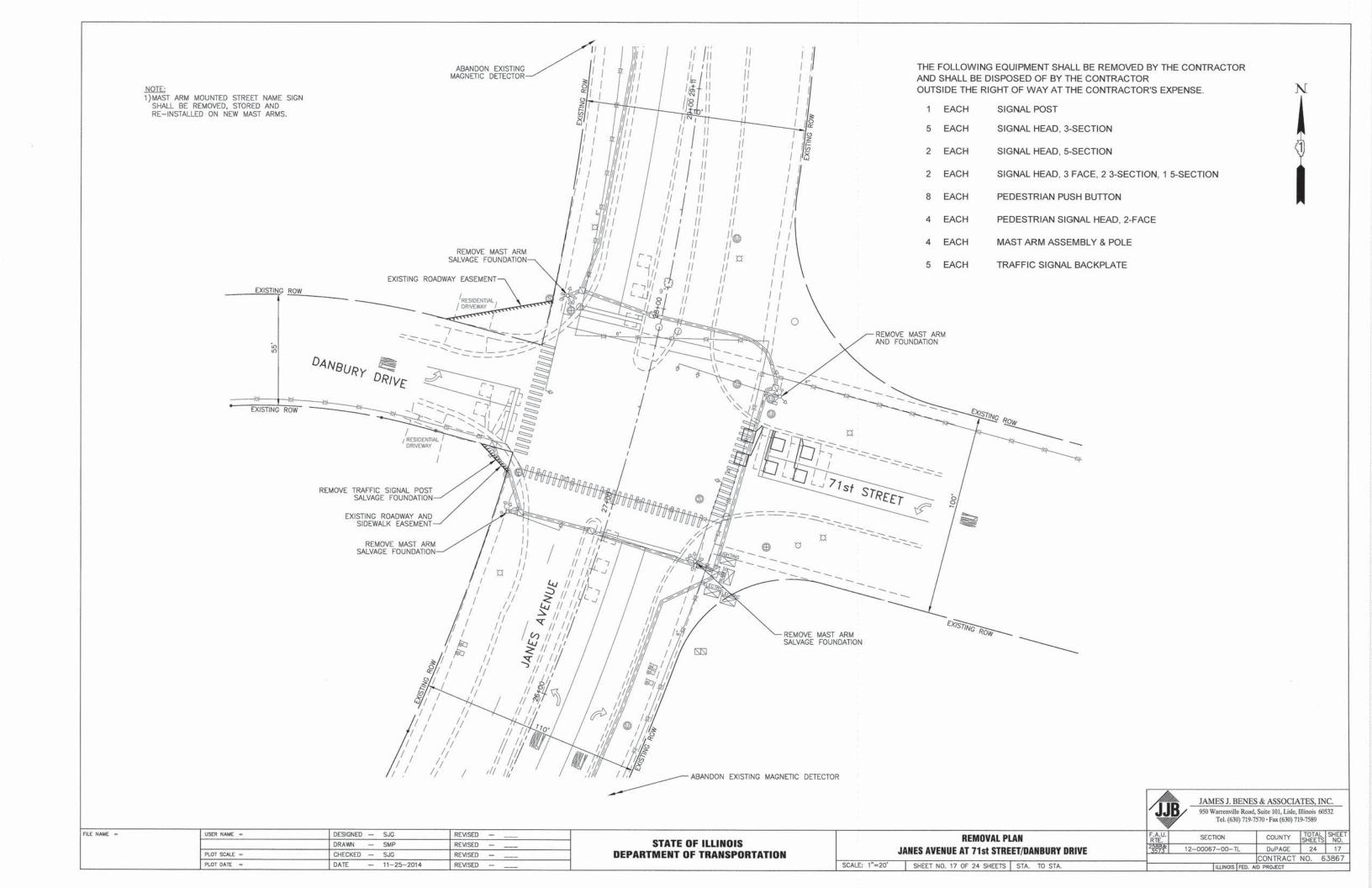


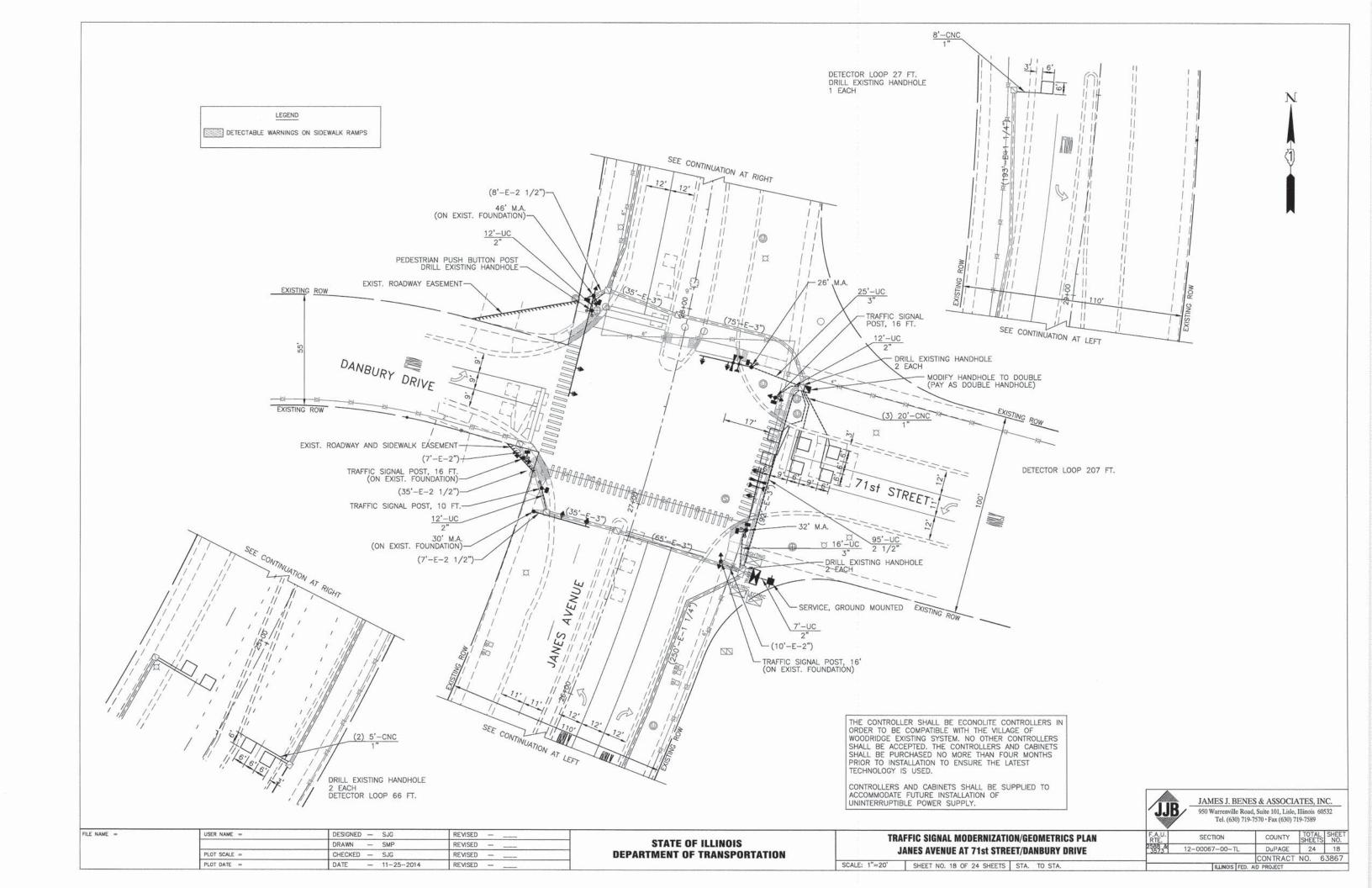


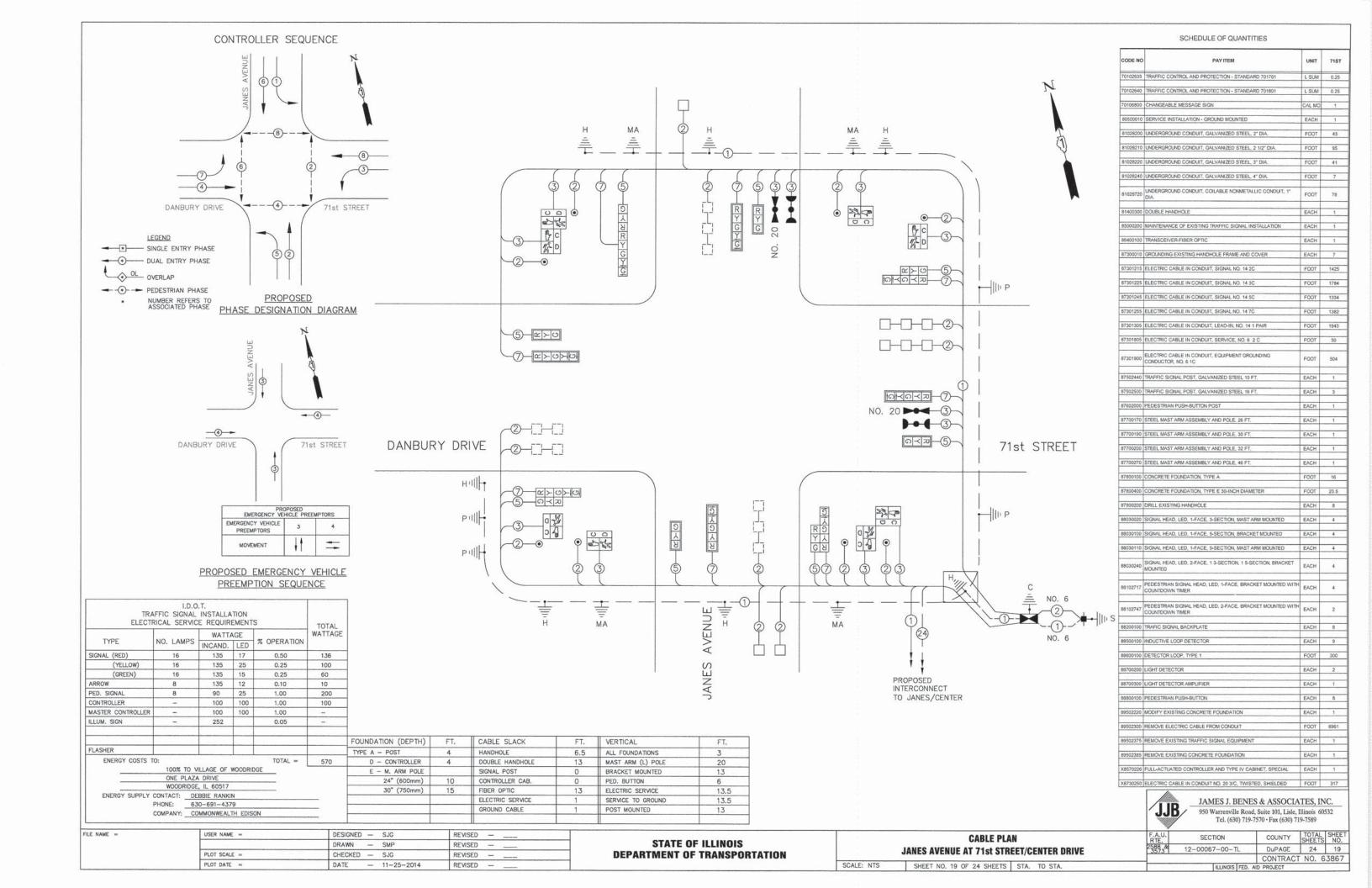


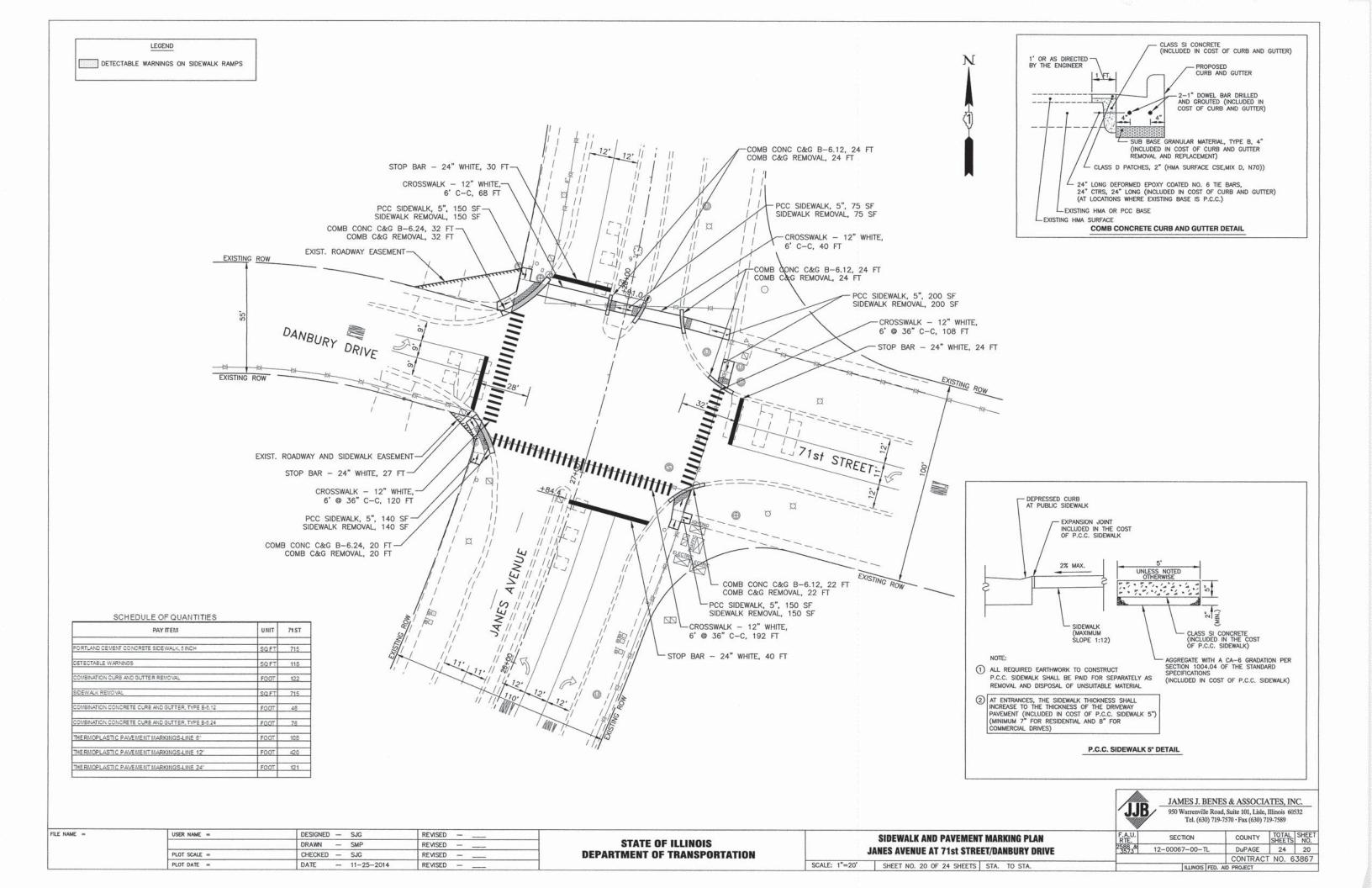


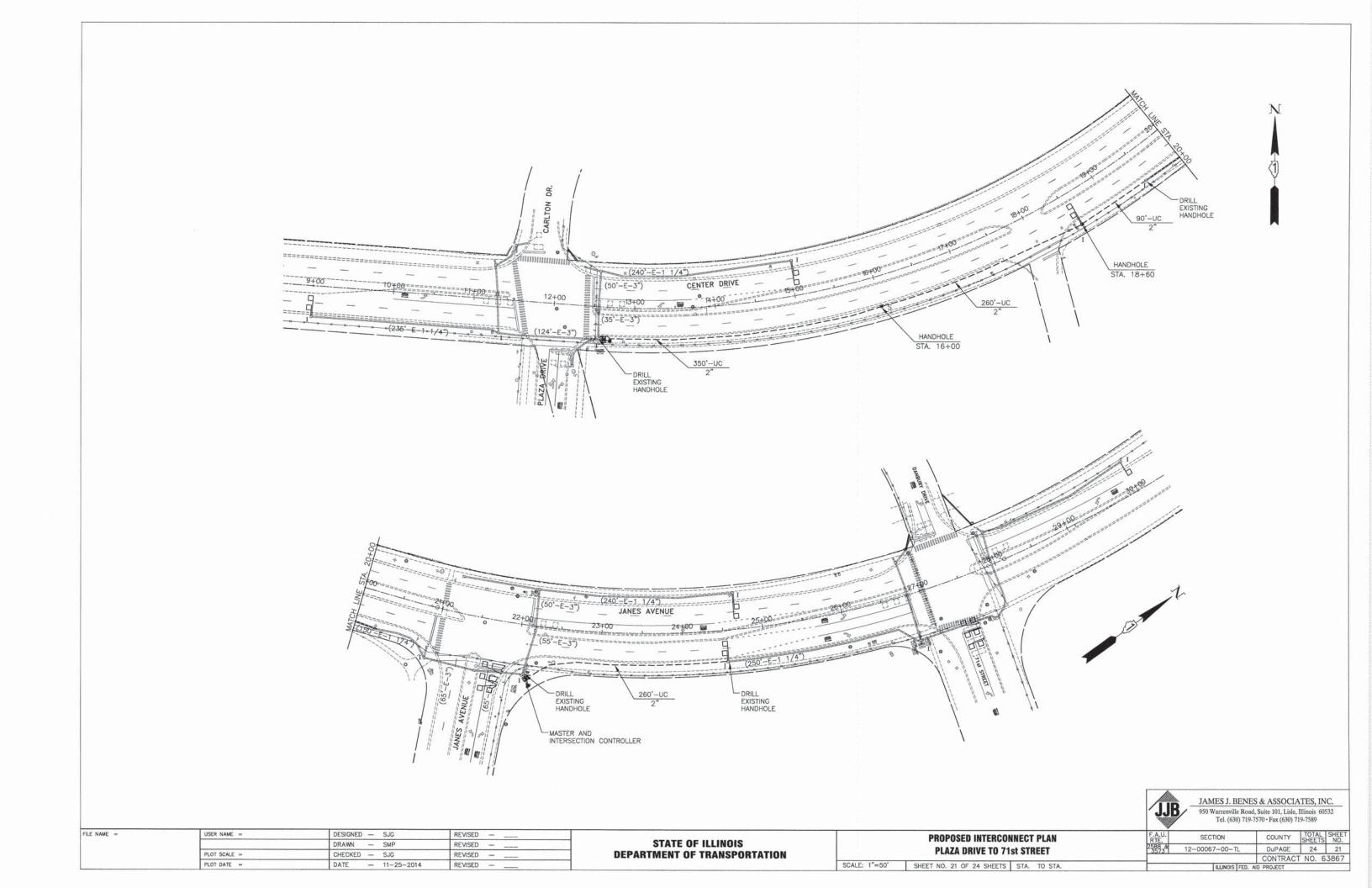


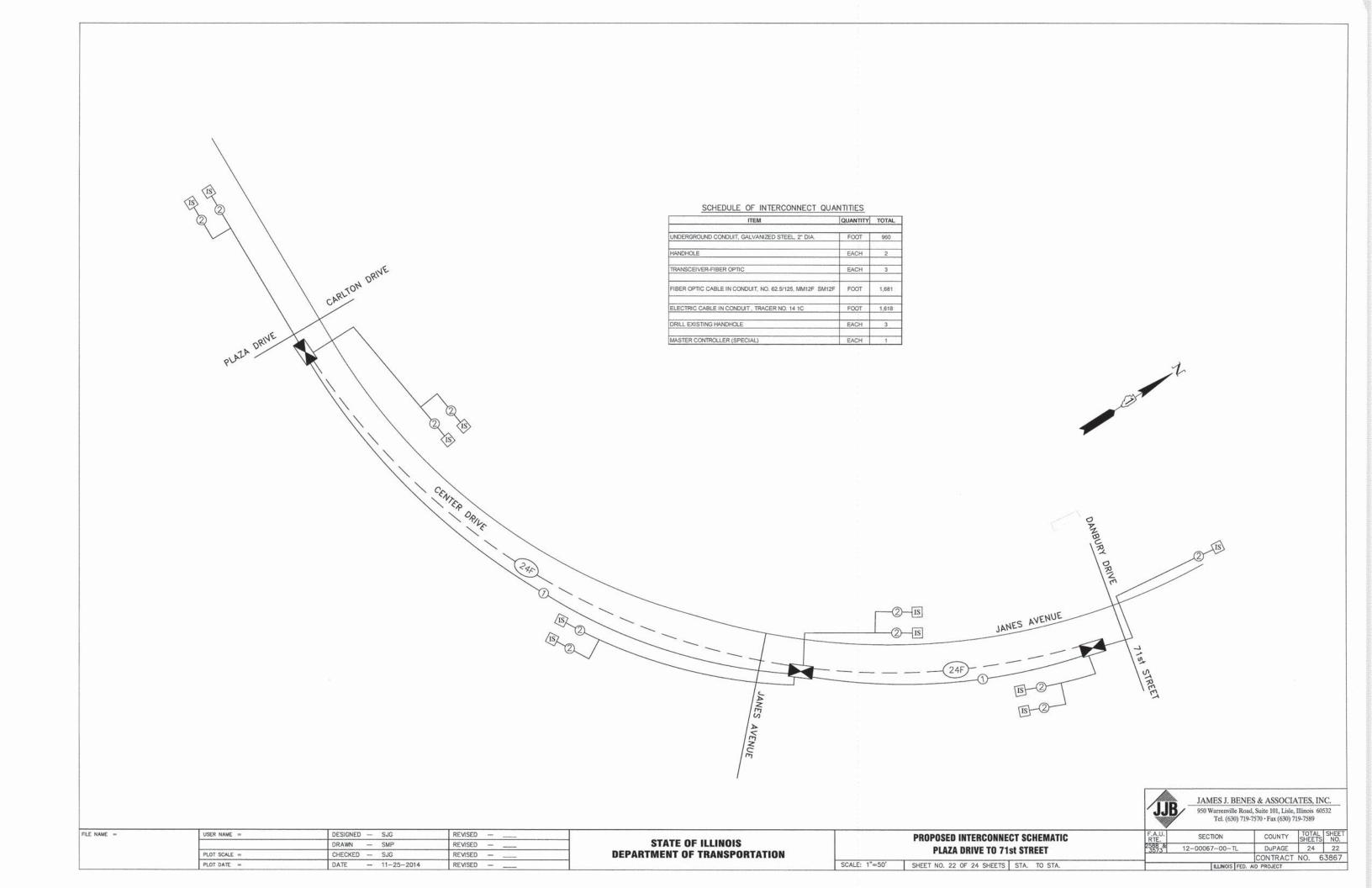


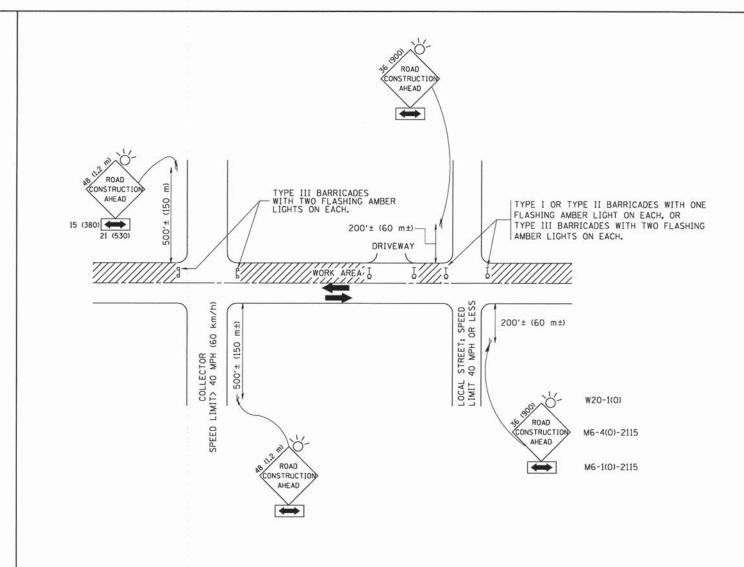












TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- d) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN POLITE
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- O) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

SCALE: NONE

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

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

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

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

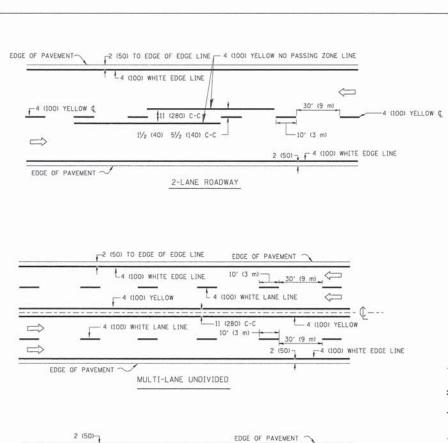
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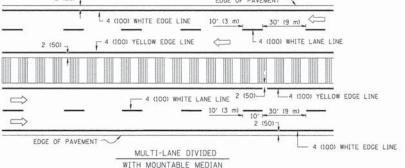
DRAWN - REVISED - A. HOUSEH 03-06-96
PLOT SCALE = 50.000 '/ IN. CHECKED - REVISED - A. HOUSEH 10-15-96
PLOT DATE = 1/4/2008 DATE - 06-89 REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

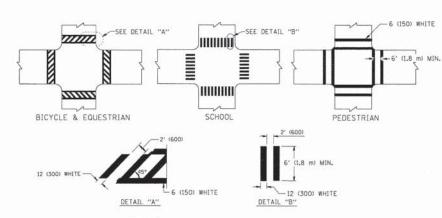
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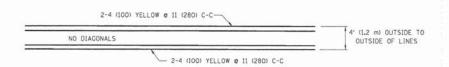


TYPICAL LANE AND EDGE LINE MARKING

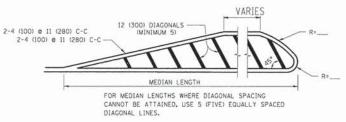
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE



TYPICAL CROSSWALK MARKING

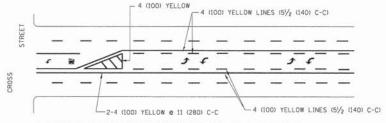


4' (1.2 m) WIDE MEDIANS ONLY



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

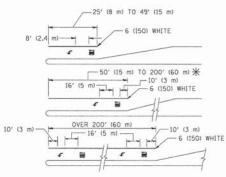


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

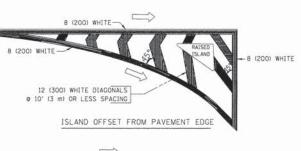


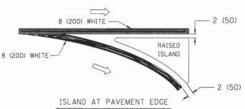
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. \P AREA = 15.6 SO. FT. (1.5 m²) \P AREA = 20.8 SO. FT. (1.9 m²)

* 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	5/2 (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	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	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	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (500) APART 2' (500) APART 5EE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSMALK, IF PRESENT. OTHERMISE, 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 SO. FT. (0.33 m²) EACH "X":54.0 SO. FT. (5.0 m²)
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
c:\pw_work\pwidot\drivakosgn\d0108315\to	13,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					RIE.		TION	COUNTY	TOTAL	SHEET NO.
					2588 & 3573	2588 & 12-00067-00-TL			24	24
					TC-13			CONTRACT NO. 63867		
CALE: NONE	SHEET NO. 1 OF	SHEETS	STA.	TO STA.	FED. ROAD	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				