STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESTINATIONS POSTED SPEEDS

LOCATION C

IL-25 FROM ST CHARLES STREET TO LIBERTY STREET 30 MPH 13,200 (2017 ADT)

LOCATION

IL-176 FROM IL-31 TO SMITH ROAD 40 MPH 15,700 (2017 ADT)

LOCATION .

IL-176 FROM MIDLOTHIAN ROAD TO 4TH STREET 30 MPH

14,800 (2017 ADT)

IL-25 /IL-176
CMAQ INTERCONNECT SYSTEMS
SECTION: 2020-188-TS
PROJECT: CMAQ IE7A (445)
VARIOUS ROUTES
C-91-387-20

FOR LOCATION MAPS SEE SHEET NO. 3

VARIOUS TOWNSHIPS

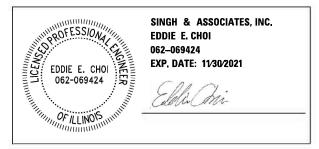
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E

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

PROJECT MANAGER: LUKASZ POCHIECHA, P.E. (847) 705–4420 PROJECT ENGINEER: KAMIL A. KOBYLKA (847) 705–4734

CONTRACT NO. 62M62

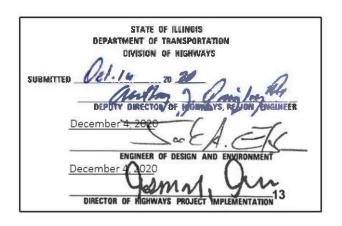


SINGH + ASSOCIATES, IN CONSULTING ENGINEE

230 WEST MONROE ST SUITE 1400 CHICAGO, IL 60606 NO. 184.001139-0002

D-91-587-20





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REV-SEP

INDEX OF SHEETS

SHT NO.		DESCRIPTION
1 2 3 4-6 7-14		COVER INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES LOCATION MAP SUMMARY OF QUANTITIES DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
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15	13230	CABLE PLAN - IL 25 AT LIBERTY
16	13295	CABLE PLAN - IL 25 AT ST CHARLES
17		PROPOSED INTERCONNECT PLAN - LOCATION C
18 19	7295	PROPOSED INTERCONNECT SCHEMATICS - LOCATION C CABLE PLAN - IL 176 AT IL 31
20	7295 7298	CABLE PLAN - IL 176 AT IL 31 CABLE PLAN - IL 176 AT SMITH
20 21-22	7290	PROPOSED INTERCONNECT PLAN - LOCATION I
23		PROPOSED INTERCONNECT FLAN - LOCATION I
24	7145	
25	6625	CABLE PLAN - IL 176 AT US 45
26	6625	SEQUENCE OF OPERATION - IL 176 AT US 45
27	6916	CABLE PLAN - IL 176 AT HAWLEY
28	14020	CABLE PLAN - IL 176 AT BUTTERFIELD
29	14030	CABLE PLAN - IL 176 AT DAWES
30	14025	CABLE PLAN - IL 176 AT GARFIELD
31	6715	CABLE PLAN - IL 176 AT IL 21
32	14035	CABLE PLAN - IL 176 AT 4TH
33-40		PROPOSED INTERCONNECT PLAN - LOCATION J
41-43		PROPOSED INTERCONNECT SCHEMATICS - LOCATION J
44-47		LCDOT FIBER SCHEMATICS
48		DISTRICT ONE STANDARD - TRAFFIC CONTROL AND PROTECTION FOR
		SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
49		DISTRICT ONE STANDARD - ARTERIAL ROAD INFORMATION SIGN

HIGHWAY STANDARDS

STD. NO.	TITLE
STD. NO. 000001-08 001001-02 001006 701001-02 701006-05 701101-05 701106-02 701606-10 701701-08 701801-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS AREAS OF REINFORCEMENT BARS DECIMAL OF AN INCH AND OF A FOOT OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE OFF-RD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN URBAN LANE CLOSURE, MULTILANE INTERSECTION SIDEWALK, CORNER OR CROSSWALK CLOSURE TRAFFIC CONTROL DEVICES
701901-08 814001-03	HANDHOLES
814006-03 857001-01 862001-01 873001-02 878001-11	DOUBLE HANDHOLES STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES UNINTERRUPTABLE POWER SUPPLY (UPS) TRAFFIC SIGNAL GROUNDING AND BONDING CONCRETE FOUNDATION DETAILS

DISTRICT 1 STANDARD DETAIL

SHT NO.	TITLE
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-22	ARTERIAL ROAD INFORMATION SIGN
TS-02	MAST ARM MOUNTED STREET NAME SIGNS
TS-05	STANDARD TRAFFIC SIGNAL DESIGN DETAILS

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800)-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS. 48 HOUR NOTIFICATION IS

THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN.HOSADURGA@ILLINOIS.GOV 72 HOURS IN ADVANCE OF BEGINNING WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

ALL EXISTING R.O.W. SHOWN IS APPROXIMATE AND MAY NEED TO BE VERIFIED IN THE FIELD. ANY R.O.W. CONFLICTS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL "JULIE" AT (800 892-0123 OR 811, IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).

IF THIS CONTRACT REQUIRES THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK. IF THIS CONTRACT DOES NOT REQUIRE THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR MAY REQUEST ONE FREE LOCATE FOR EXISTING IDOT ELECTRICAL FACILITIES FROM THE DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR PRIOR TO THE START OF ANY WORK, ADDITIONAL REQUESTS MAY BE AT THE EXPENSE OF THE CONTRACTOR. THE LOCATION OF UNDERGROUND TRAFFIC FACILITIES DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILTIY TO REPAIR ANY FACILITIES DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR UNDERGROUND AND OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE AREA ENGINEER, THE RESIDENT ENGINEER, AND ANY IMPACTED UTILITY COMPANY OF THE CONFLICT, AND SHALL COORDINATE AND RESOLVE THE ISSUE PRIOR TO ORDERING MATERIALS, AND PRIOR TO POURING FOUNDATIONS.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES, AND IDOT.

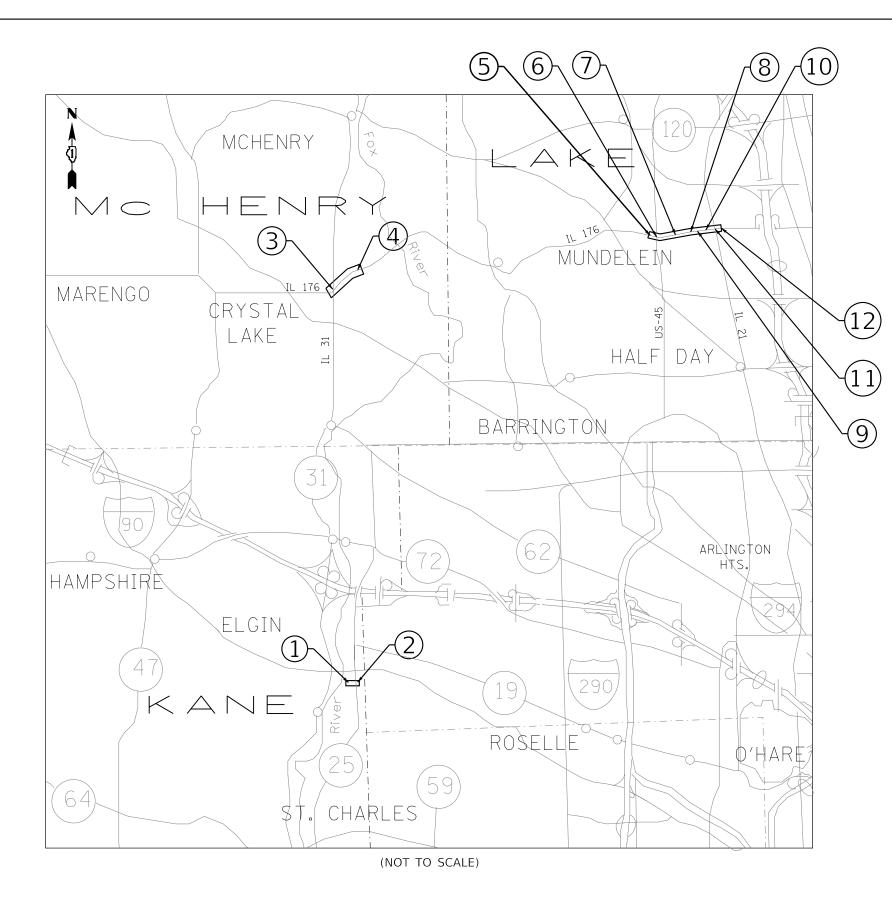
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALK, PAVEMENT, ETC., SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

USER NAME = echoi	DESIGNED		EEC	REVISED	
USER NAME = ECHOI	DESIGNED	-	EEC	KEVISED	-
	DRAWN	-	GS	REVISED	-
PLOT SCALE = 2.0000 ' / in.	CHECKED	-	MG	REVISED	-
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED	-

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

		REV	-SEP					
	COUNTY	TOTAL SHEETS	SHEET NO.					
	VARIOUS	49	2					
	CONTRACT	NO. 62	2M62					
FED. AID PROJECT								

SECTION INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES 2020-188-TS SCALE: NTS | SHEET 1 OF 1 SHEETS STA. ILLINOIS | F



LOC. NO.	TS NO.	INTERSECTION NAME	MUNICIPALITY	COUNTY
1	13230	IL 25 AT LIBERTY STREET	ELGIN	KANE
2	13295	IL 25 AT ST CHARLES STREET	ELGIN	KANE
3	7295	IL 176 AT IL 31	CRYSTAL LAKE	MCHENRY
4	7298	IL 176 AT SMITH ROAD	CRYSTAL LAKE	MCHENRY
5	7145	IL 176 AT MIDLOTHIAN ROAD	MUNDELEIN	LAKE
6	6625	IL 176 AT US 45	MUNDELEIN	LAKE
7	6916	IL 176 AT HAWLEY STREET	MUNDELEIN	LAKE
8	14020	IL 176 AT BUTTERFIELD ROAD	LIBERTYVILLE	LAKE
9	14030	IL 176 AT DAWES STREET	LIBERTYVILLE	LAKE
10	14025	IL 176 AT GARFIELD AVENUE / BRAINERD AVENUE	LIBERTYVILLE	LAKE
11	6715	IL 176 AT IL 21	LIBERTYVILLE	LAKE
12	14035	IL 176 AT 4TH AVENUE	LIBERTYVILLE	LAKE

SINGH SINGH ASSOCIATES INC. CONSULTING ENGINEERS

T	USER NAME = echoi	DESIGNED -	EEC	REVISED -
Γ		DRAWN -	GS	REVISED -
Γ	PLOT SCALE = 2.0000 ' / in.	CHECKED -	MG	REVISED -
Γ	PLOT DATE = 10/15/2020	DATE -	10/15/2020	REVISED -

LOCATION MAD							F.A.P. SECTION			COUNTY	TOTAL SHEETS	SHEET NO.		
							Ŋ	VARIES 2020-188-TS		VARIOUS	49	3		
												CONTRACT	NO. 62	2M62
SCALE: NTS	SHEET	1	OF	1	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT						

						ONSTRUCTION CC	
					80% FED 20% IDOT	80% FED 20% IDOT	80% FED 20% IDOT
					KANE COUNTY	MCHENRY COUNTY	LAKE COUNT
	CODE			TOTAL	0021	0021	0021
	NO.	ITEM	UNIT	QUANTITY	URBAN	URBAN	URBAN
						51121111	21,21,11
k (66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	60	5	10	45
k	66900530	SOIL DISPOSAL ANALYSIS	EACH	5	1	1	3
*	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1	0.33	0.33	0.33
k (66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1	0.33	0.33	0.33
k (66901006	REGULATED SUBSTANCES MONITORING	CAL DA	3	1	1	1
(67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	2	2	2
(67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.33
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.33	0.33	0.33
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.33	0.33	0.33
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	11,192	247	1,793	9,152
	81400100	HANDHOLE	EACH	15			15
- 8	81400200	HEAVY-DUTY HANDHOLE	EACH	11		3	8
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	11	2	2	7

REV-SEP

USER NAME = echoi	DESIGNED	-	EEC	REVISED -
	DRAWN	-	GS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED	-	MG	REVISED -
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED -

CONSTRUCTION CODE

				80% FED 20% IDOT	80% FED 20% IDOT	80% FED 20% IDOT
				KANE COUNTY		LAKE COUNTY
CODE NO.	ITEM		TOTAL QUANTITY	0021	0021	0021
NO.			OANTIT	URBAN	URBAN	URBAN
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	5	1		4
85700300	FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1	1		
86000100	MASTER CONTROLLER	EACH	1	1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	9	2		7
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	тоот	16,767	360	3,810	12,597
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	тоот	1,146			1,146
07000000	DRILL EVISTING HANDHOLE	- 1	12	2		10
87900200	DRILL EXISTING HANDHOLE	EACH	12	2		10
88500100	INDUCTIVE LOOP DETECTOR	EACH	55			55
00300100	INDOCTIVE EGGT BETTECTOR					
88600100	DETECTOR LOOP, TYPE I	тоот	54			54
89501250	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	5			5
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	7	2		5
X0324599	ROD AND CLEAN EXISTING CONDUIT	тоот	868		868	
X1400216	LAYER II (DATALINK) SWITCH	EACH	6			6
X1400210	Liter II (Drinewing Switch	-, (С11	J			J.

S		N	G	H
	SIP	NGH + A	SSOCIA	TES, INC.

USER NAME = echoi	DESIGNED -	EEC	REVISED -
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PLOT DATE = 10/16/2020	DATE -	10/15/2020	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

						F.A.P. RTE	SI
		SUMMAR	Y OF QU	ANTITIES		VARIES	202
SCALE: NTS	SHEET	OF	SHEETS	STA.	TO STA.		

CONSTRUCTION CODE

COUNTY TOTAL SHEET NO.

VARIOUS 49 5 SECTION 020-188-TS CONTRACT NO. 62M62

				80% FED 20% IDOT	80% FED 20% IDOT	80% FED 20% IDOT
				KANE COUNTY	MCHENRY COUNTY	LAKE COUNTY
CODE	ITEM	UNIT	TOTAL	0021	0021	0021
NO.	II LM	OWIT	QUANTITY	URBAN	URBAN	URBAN
X1400217	TERMINATE FIBER IN CABINET	EACH	12			12
X1400220	VIDEO ENCODER	EACH	2			2
X1400388	VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	8	8		
X8100105	CONDUIT SPLICE	EACH	2		2	
X8100863	INTERCEPT EXISTING CONDUIT	EACH	1			1
X8571315	RAILROAD FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1			1
X8600105	MASTER CONTROLLER (SPECIAL)	EACH	1			1
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	5	2		3
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	17,202	402	3,860	12,940
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	154.2	51.4	51.4	51.4
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	3	1	1	1
						_

USER NAME = echoi DESIGNED - EEC REVISED DRAWN - GS REVISED PLOT SCALE = 2.0000 ' / in. CHECKED - MG REVISED -PLOT DATE = 10/16/2020 DATE - 10/15/2020 REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES SCALE: NTS SHEET OF SHEETS STA. TO STA.

CONSTRUCTION CODE

SECTION 2020-188-TS CONTRACT NO. 62M62

TRAFFIC SIGNAL LEGEND

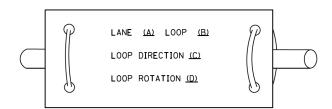
(NOT TO SCALE)

				(NOT TO SCALL)				
ITEM	<u>existing</u>	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	<u>EXISTING</u>	PROPOSED
CONTROLLER CABINET	\boxtimes	×	HANDHOLE -SQUARE			SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	RR	R R Y
COMMUNICATION CABINET	ECC	CC	-ROUND			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
MASTER CONTROLLER	EMC	MC	HEAVY DUTY HANDHOLE -SQUARE -ROUND	H (10000000000000	⊞ ⊕			G G 4Y 4Y 4G 4G
MASTER MASTER CONTROLLER	EMMC	ммс	DOUBLE HANDHOLE			CICNAL HEAD WITH PACKED ATE		
UNINTERRUPTABLE POWER SUPPLY	4	3	JUNCTION BOX		•	SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		R
SERVICE INSTALLATION -(P) POLE MOUNTED	-D- ^P	- ■ -P	RAILROAD CANTILEVER MAST ARM	X OX X X	X eX X			4Y 4G 4G 4G
SERVICE INSTALLATION			RAILROAD FLASHING SIGNAL	∑⊙ ∑	X⊕X		P RB	P RB
-(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	$\boxtimes^{G}\boxtimes^{GM}$	⊠ ^G ⊠ ^{GM}	RAILROAD CROSSING GATE	∑0∑ >	101	PEDESTRIAN SIGNAL HEAD		•
TELEPHONE CONNECTION	ET	T	RAILROAD CROSSBUCK	**	*	AT RAILROAD INTERSECTIONS		<u>*</u>
STEEL MAST ARM ASSEMBLY AND POLE	O——	•——	RAILROAD CONTROLLER CABINET		≯ ∢	PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	(₽ C
ALUMINUM MAST ARM ASSEMBLY AND POLE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	Φ	• ×	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY	0	● BM	SYSTEM ITEM	S	SP	NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE.		
WOOD POLE	\otimes	•	INTERSECTION ITEM	I	IP	ALL DETECTOR LOOP CABLE TO BE SHIELDED GROUND CABLE IN CONDUIT,		
GUY WIRE	>-	>-	REMOVE ITEM RELOCATE ITEM		К RL	NO. 6 SOLID COPPER (GREEN)	1#6	1#6
SIGNAL HEAD	>		ABANDON ITEM		Δ	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
SIGNAL HEAD WITH BACKPLATE	#>	+►	CONTROLLER CABINET AND		nor.	COAXIAL CABLE	— <u> </u>	<u> </u>
SIGNAL HEAD OPTICALLY PROGRAMMED	-⊳ ^P +⊳ ^P	- ▶ P + ▶ P	FOUNDATION TO BE REMOVED		RCF			
FLASHER INSTALLATION	op F op FS	•► FS	MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF	VENDOR CABLE		
-(FS) SOLAR POWERED	op⊳ ^F op⊳ ^{FS}	FF FS	SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF	COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED		(6#18)
PEDESTRIAN SIGNAL HEAD	-0	4	DETECTOR LOOP, TYPE I			FIBER OPTIC CABLE -NO. 62.5/125, MM12F	12F	
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			PREFORMED DETECTOR LOOP	PP	РР	-NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		
RADAR DETECTION SENSOR	R	R	SAMPLING (SYSTEM) DETECTOR	s s	5 5			
VIDEO DETECTION CAMERA	[V]	V	INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS (IS)	IS (IS)			
RADAR/VIDEO DETECTION ZONE			QUEUE AND SAMPLING (SYSTEM) DETECTOR	os os	QS QS	GROUND ROD -(C) CONTROLLER -(M) MAST ARM	<u>i</u> C <u>i</u> M <u>i</u> P <u>i</u> S	$\dot{\underline{\dot{\pm}}}^{C} \dot{\underline{\dot{\pm}}}^{M} \dot{\underline{\dot{\pm}}}^{P} \dot{\underline{\dot{\pm}}}^{S}$
PAN, TILT, ZOOM (PTZ) CAMERA	PIZI	PTZ■	WIRELESS DETECTOR SENSOR	<u> </u>		-(P) POST -(S) SERVICE		
EMERGENCY VEHICLE LIGHT DETECTOR	\bowtie	~	WIRELESS ACCESS POINT		—			
CONFIMATION BEACON	○ —①	н						
WIRELESS INTERCONNECT	⊶ ∰	••• 						
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR						
USER NAME = kobylkaka	DESIGNED -					DISTRICT ONE	F.A.P. SECTION	ON COUNTY TOTAL SHEETS
PLOT SCALE = 100,0000 ' /	DRAWN - in. CHECKED -			TATE OF ILLINOIS ENT OF TRANSPORTATION	ST	ANDARD TRAFFIC SIGNAL DESIGN DETAILS	VAR 2020-18 TS-05	
PLOT DATE = 10/3/2019		9/29/2016 REVISED			SCALE: NONE	SHEET 1 OF 7 SHEETS STA. TO STA.		LLINOIS FED. AID PROJECT

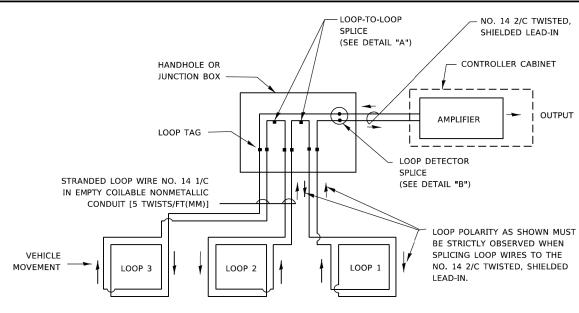
LOOP DETECTOR NOTES

- 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.
- 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.
- 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

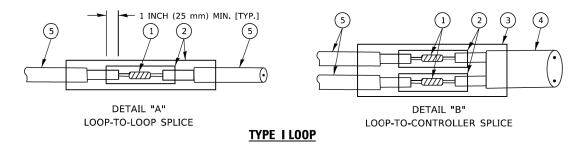


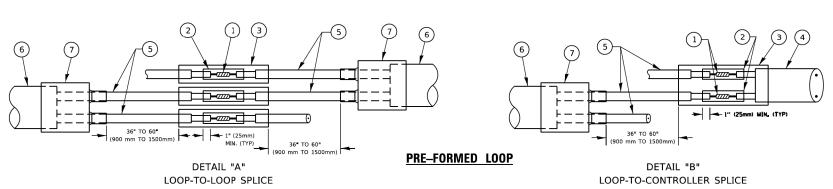
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



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

- 1 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.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.

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

CONTRACT NO. 62M62

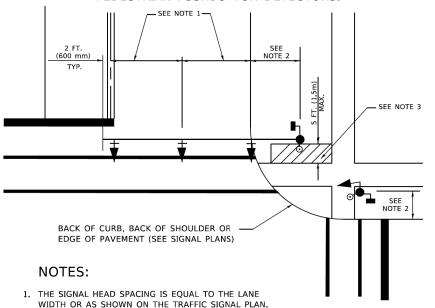
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PLOT DATE = 10/3/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

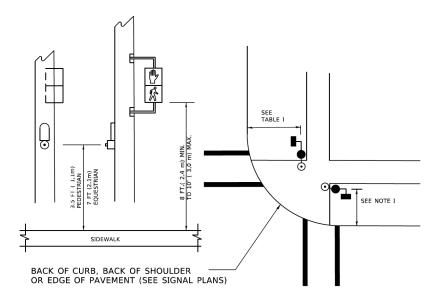
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND

PEDESTRIAN PUSHBUTTON DETECTORS.



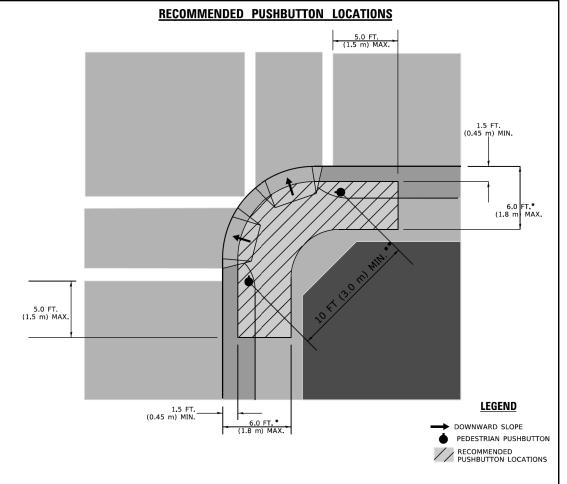
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE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

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.

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.
- 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.

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.

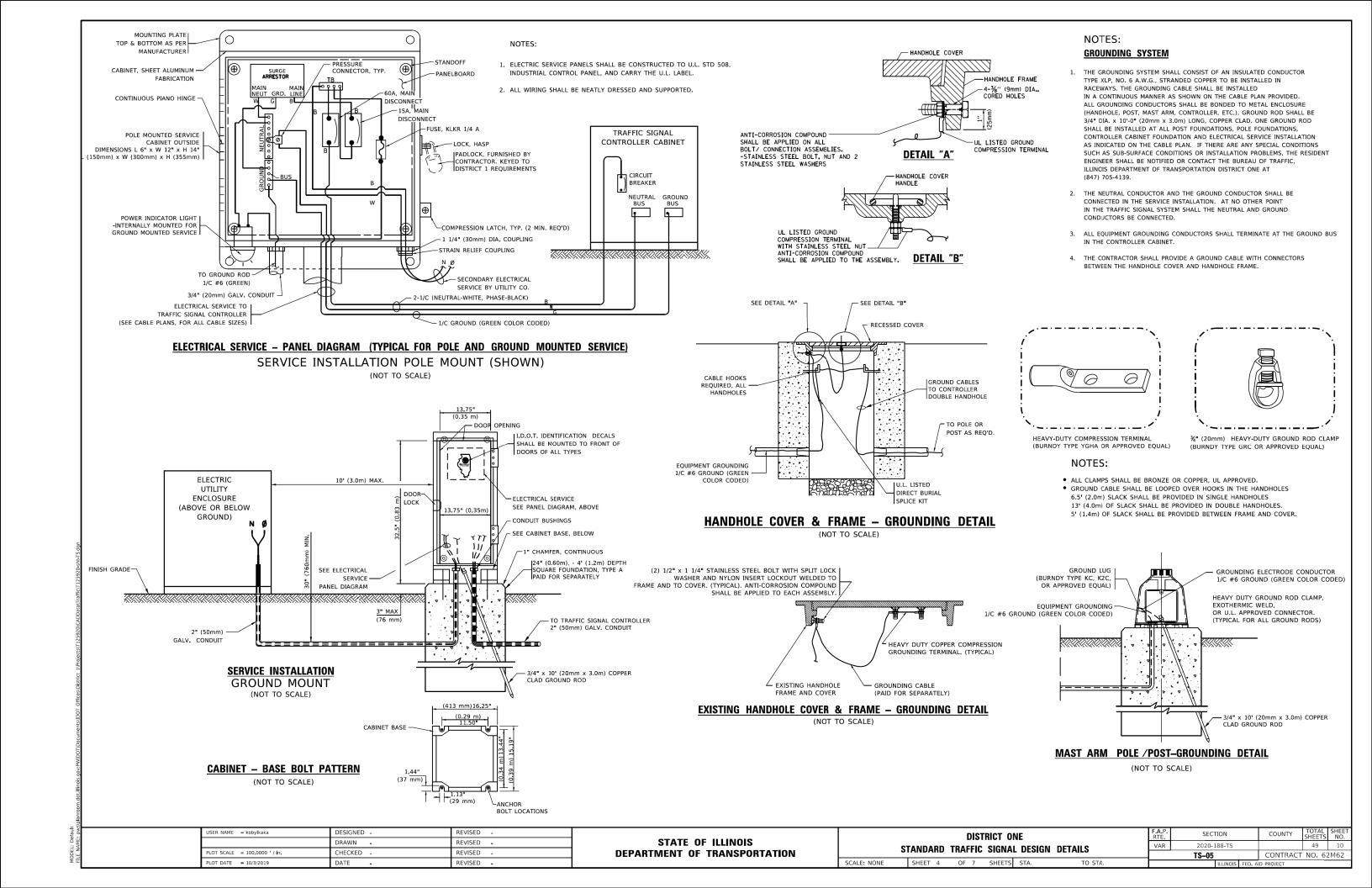
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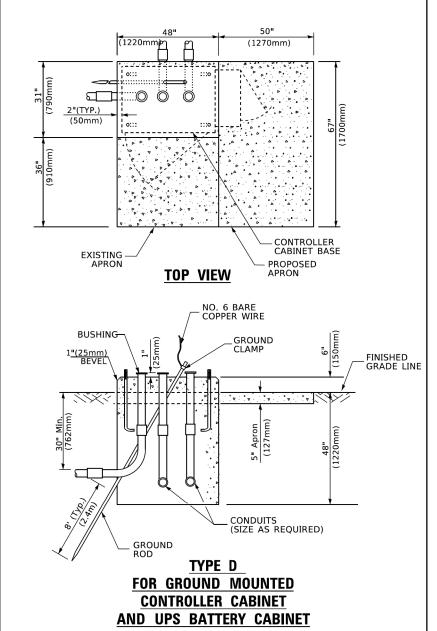
- 1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 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 UNDER THE DETAILS ON THIS SHEET.

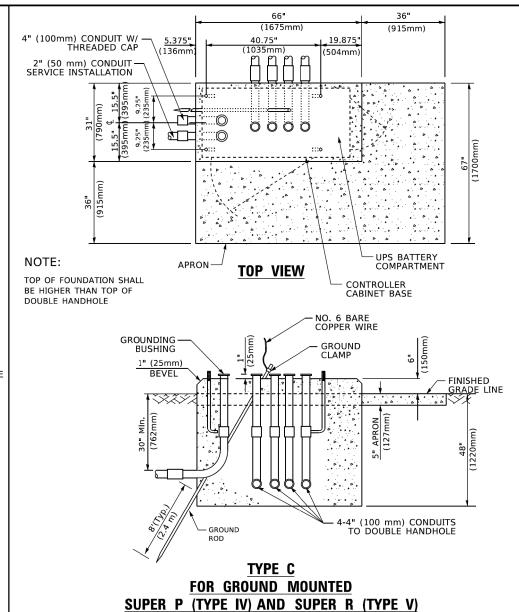
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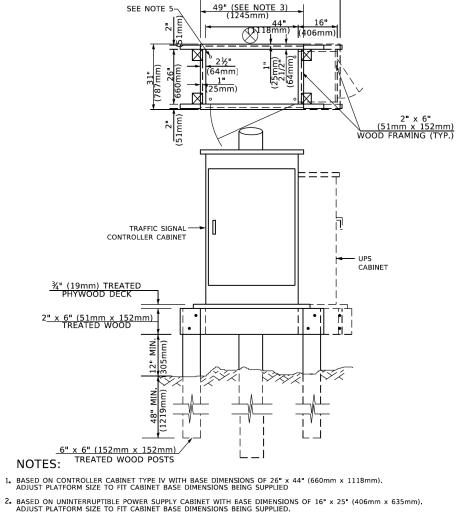
DISTRICT ONE	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STANDARD TRAFFIC SIGNAL DESIGN DETAILS	VAR	2020-188-TS		49	9
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		TS-05 CONTRACT NO. 62M62			
SHEET 3 OF 7 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			







CONTROLLER CABINETS



65" (SEE NOTE 4) (1651mm)

- $\mathbf{3}_{\bullet}$ platform size for controller cabinet type iv.
- $\mathbf{4}_{ullet}$ platform size for controller cabinet type IV and uninterruptible power supply cabinet
- 5_{\bullet} 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
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	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

CABLE SLACK

ETER	FOUNDATION
	TYPE A - Signal Post
0+L	TYPE C - CONTROLLER
4.0	TYPE D - CONTROLLER
2.0	SERVICE INSTALLATION
4.1	GROUND MOUNT,
4.1	TYPE A - SQUARE
2.0	
1.0	

DEPTH OF FOUNDATION

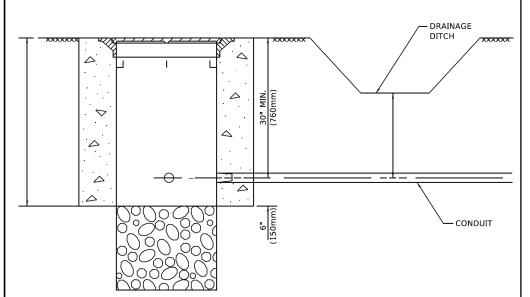
Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30′ (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4 _• 1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0'' (3,4 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)
13 (22:3 11)					

4'-0" (1.2m 4'-0" (1.2m) 4'-0" (1.2m)

- 1. 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 (Ou) > 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 mast arm assemblies under 55 feet (16.8 m) shall use $36^{\prime\prime}$ (900 mm) diameter foundations.
- 3. Combination mast 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

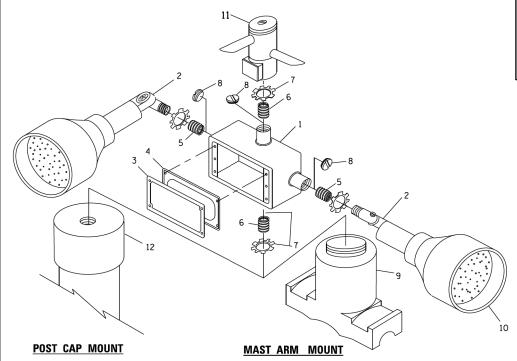
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	DRAWN -	REVISED -	STATE OF ILLINOIS	١ .			TAUO	VAR	2020-188-TS		49	11
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	3	TANDARD TRAFFIC SIGNA	L DESIGN DI	ETAILS	1	S-05	CONTRACT N	NO. 62M	62
PLOT DATE = 10/3/2019	DATE -	REVISED -		SCALE: NONE	SHEET 5 OF 7 SHEETS	STA.	TO STA.		ILLINOIS	FED. AID PROJECT		



NOTES:

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

HANDHOLE WITH MINIMUM CONDUIT DEPTH (NOT TO SCALE)



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION
BEACON MOUNTING DETAIL

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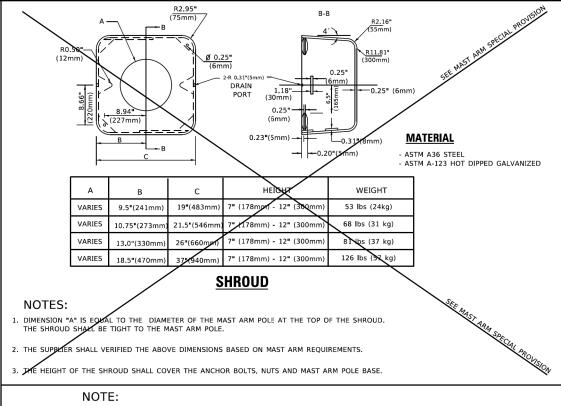
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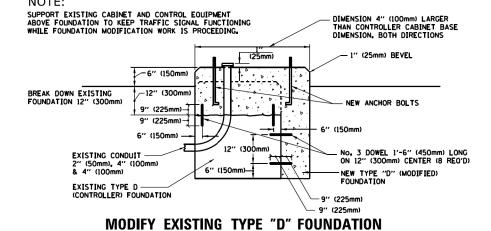
(915mm) 40.75" (1035mm) CONTROLLER CABINET BASE PROPOSED-**TOP VIEW** APRON -NO. 3 DOWEL 18" (450mm NO. 6 BARE COPPER WIRE LONG (8 REQ.) **BUSHING-**GROUND CLAMP EXISTING-ANCHOR BOLTS **FINISHED** GRADE LINE BEVEL (225mm) -EXISTING CONDUITS EXISTING GROUND ROD MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION (NOT TO SCALE)

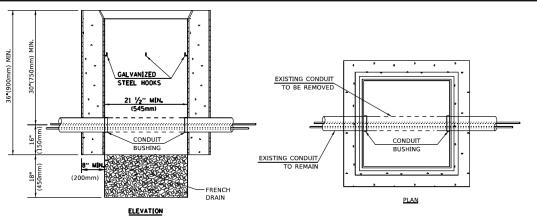
ITEM NO. IDENTIFICATION 1 OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M) 2 LAMP HOLDER AND COVER 3 OUTLET BOX COVER 4 RUBBER COVER GASKET 5 REDUCING BUSHING 6 ¾"(19 mm) CLOSE NIPPLE 7 ¾"(19 mm) LOCKNUT 8 ¾"(19 mm) HOLE PLUG 9 SADDLE BRACKET - GALV. 10 6 WATT PAR 38 LED FLOOD LAMP 11 DETECTOR UNIT 12 POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

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



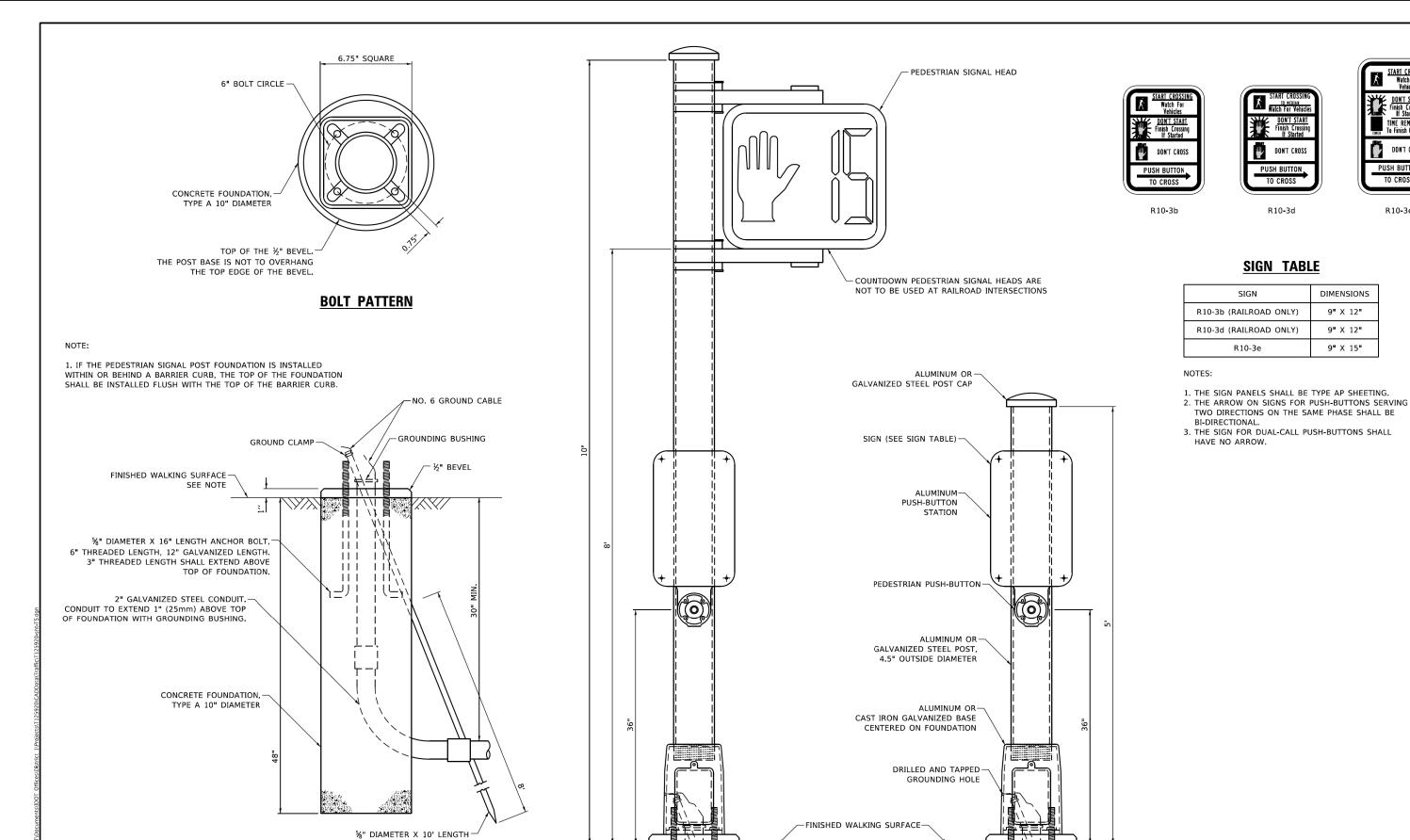




NOTES:

- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- 2. 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



GROUND ROD

CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER

PEDESTRIAN SIGNAL POST, 10 FT.

PEDESTRIAN SIGNAL POST, 5 FT.

DON'T START
Finish Crossing
If Started TIME REMAINING To Finish Crossing

DON'T CROSS

PUSH BUTTON

TO CROSS

R10-3e

DON'T CROSS

TO CROSS

R10-3d

SIGN TABLE

TWO DIRECTIONS ON THE SAME PHASE SHALL BE

SIGN

R10-3b (RAILROAD ONLY)

R10-3d (RAILROAD ONLY)

BI-DIRECTIONAL.

HAVE NO ARROW.

DIMENSIONS

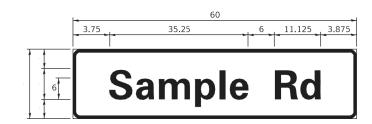
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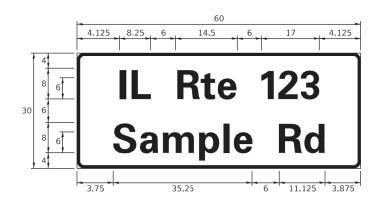
9" X 12"

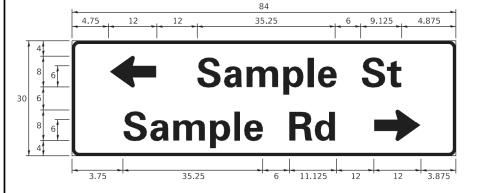
9" X 15"

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	DRAWN - IP	REVISED -	STATE OF ILLINOIS				VAR	2020-188-TS	VARIOUS 49 13
PLOT SCALE = 100,0000 ' / in.	CHECKED - LP	REVISED -	DEPARTMENT OF TRANSPORTATION	ა	STANDARD TRAFFIC SIGNA	L DESIGN DETAILS		TS-05	CONTRACT NO. 62M62
PLOT DATE = 10/3/2019	DATE - 10/15/2018	REVISED -		SCALE: NTS	SHEET NO. 7 OF 7 SHEETS	STA. TO STA.		ILLINOIS FED.	AID PROJECT

SIGN PANEL - TYPE 1 OR TYPE 2







DESIGN	AREA	SIGN PANEL	SHEETING	QTY.
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D OR C	-	1 OR 2	ZZ	

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVATION	WIDTH	(INCH)
NAME	ADDREVALION	SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8. 250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	ΙL	7. 000	8. 250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	PΙ	7. 125	7. 750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8. 000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7. 750	9.125
UNITED STATES	US	10.375	12.250

GENERAL NOTES

- 1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- 2. ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
- 3. THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- 4. A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8"-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8"-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
- LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- 6. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS: PARTS LISTING:

 J.O. HERBERT COMPANY, INC MIDLOTHIAN, VA

- WESTERN REMAC, INC.

WOODRIDGE, IL

SIGN CHANNEL SIGN SCREWS BRACKETS PART #HPN053 (MED. CHANNEL) 1/4" x 14 x 1" H.W.H. #3

SELF TAPPING WITH NEOPRENE WASHER PART #HPN034 (UNIVERSAL)

PART #HPN034 (UNIVERSAL)

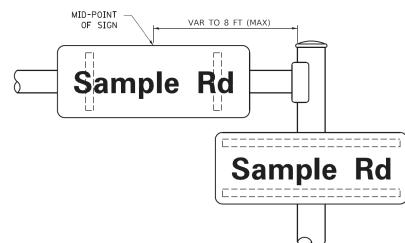
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

SCALE: NTS

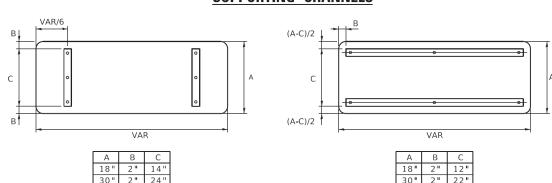
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION

ARM OR POLE MOUNTED



SUPPORTING CHANNELS

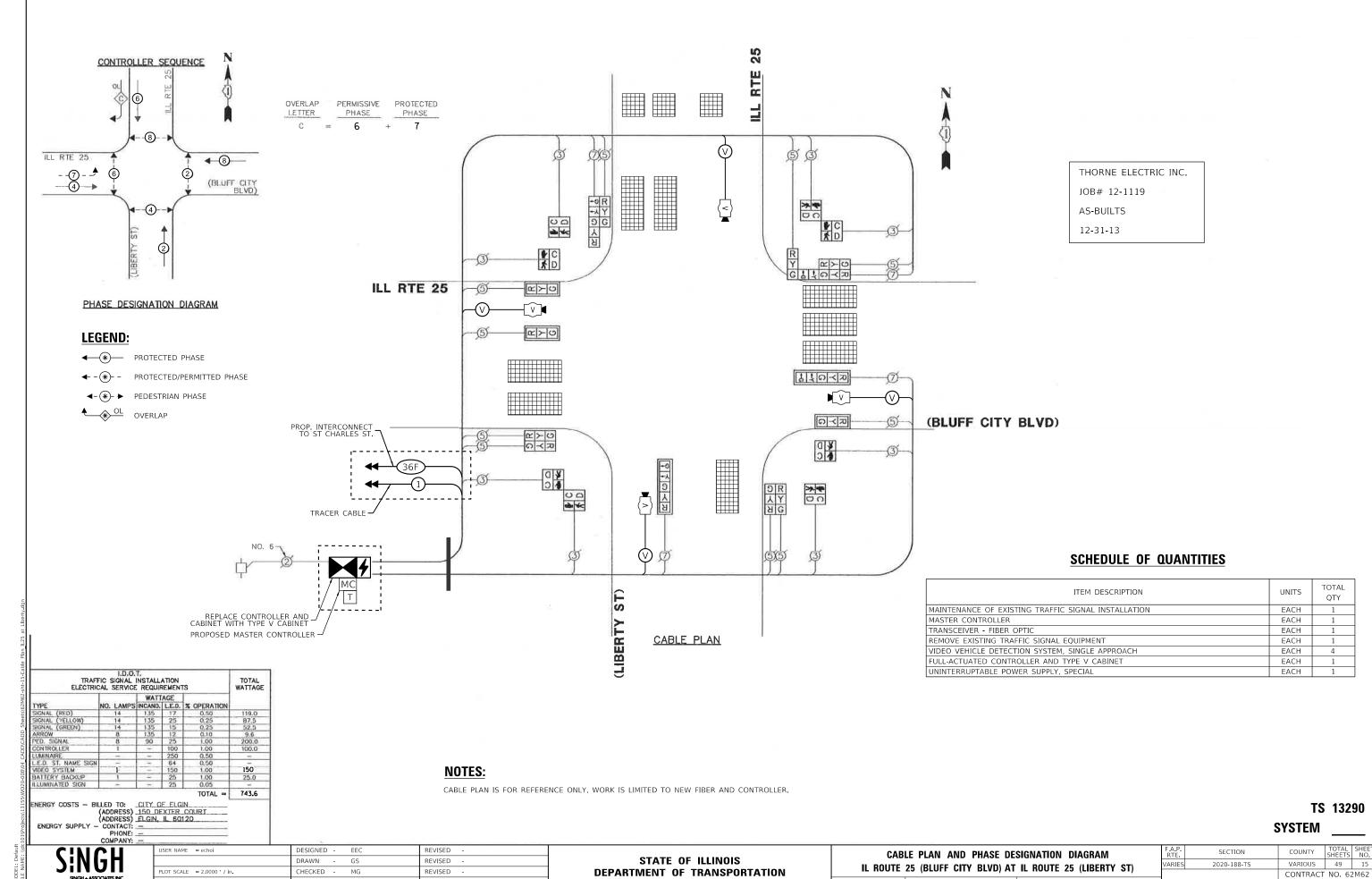


STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

	FHWA SE	RIES "C"		FHWA SERIES "D"					
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)		
Α		E 122				C 904	0, 240		
A B	0.240 0.880	5. 122 4. 482	0.240 0.480	A B	0.240 0.960	6.804 5.446	0. 400		
С	0.720	4, 482	0.720	С	0.800	5. 446	0.800		
D	0.880	4. 482	0.720	D	0.960	5. 446	0.800		
E	0.880	4.082	0.480	E	0.960	4. 962	0.400		
F	0.880	4.082	0.240	F	0.960	4.962	0.240		
G	0.720	4.482	0.720	G	0.800	5.446	0.800		
H	0.880	4.482	0.880	Н	0.960	5.446	0.960		
I	0.880	1.120	0.880	I	0.960	1.280	0.960		
J	0.240	4.082	0.880	J	0.240	5.122	0.960		
K	0.880	4.482	0.480	K	0.960	5.604	0.400		
L	0.880	4.082	0.240	L	0.960	4. 962	0.240		
M	0.880	5. 284	0.880	M	0.960	6. 244	0.960		
N	0.880	4.482	0.880	N	0.960	5.446	0.960		
0 P	0.720 0.880	4. 722 4. 482	0.720 0.720	O P	0.800 0.960	5. 684 5. 446	0.800 0.240		
Q	0.880	4. 482	0.720	Q	0. 960	5. 684	0. 800		
R	0. 120	4. 482	0. 120	R	0.960	5. 446	0.400		
S	0.480	4. 482	0.480	S	0.400	5. 446	0.400		
T	0.240	4. 082	0.240	T	0. 240	4. 962	0.240		
U	0.880	4. 482	0.880	U	0.960	5. 446	0.960		
٧	0.240	4.962	0.240	V	0.240	6.084	0.240		
W	0.240	6.084	0.240	W	0.240	7.124	0.240		
Х	0.240	4.722	0.240	Х	0.400	5.446	0.400		
Y	0.240	5.122	0.240	Υ	0.240	6.884	0.240		
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400		
а	0.320	3.842	0.640	a	0.400	4.562	0.720		
b	0.720	4.082	0.480	b	0.800	4.802	0.480		
С	0.480	4.002	0.240	C	0.480	4.722	0.240		
d	0.480	4.082	0.720	d	0.480	4.802	0.800		
e f	0.480 0.320	4. 082 2. 480	0.320	e f	0.480	4. 722 2. 882	0.320 0.160		
g	0. 320	4. 082	0.720	g	0.480	4. 802	0. 800		
h	0.720	4. 082	0.640	h	0.800	4. 722	0.720		
i	0.720	1. 120	0.720	i	0.800	1. 280	0.800		
j	0.000	2. 320	0.720	j	0.000	2.642	0.800		
k	0.720	4. 322	0.160	k	0.800	5.122	0.160		
I	0.720	1.120	0.720	ı	0.800	1.280	0.800		
m	0.720	6.724	0.640	m	0.800	7.926	0.720		
n	0.720	4.082	0.640	n	0.800	4.722	0.720		
0	0.480	4.082	0.480	0	0.480	4.882	0.480		
р	0.720	4.082	0.480	р	0.800	4.802	0.480		
P	0.480	4.082	0.720	q	0.480	4. 802	0.800		
r	0.720	2.642	0.160	r	0.800	3.042	0.160		
s †	0.320 0.080	3. 362 2. 882	0.240	s t	0.320 0.080	3. 762 3. 202	0.240		
u u	0.080	4.082	0.720	u	0. 720	4. 722	0.800		
v v	0.160	4. 722	0.120	v v	0.160	5. 684	0.160		
w	0.160	7. 524	0.160	w	0.160	9. 046	0.160		
×	0.000	5. 202	0.000	X	0.000	6. 244	0.000		
У	0.160	4. 962	0.160	у	0.160	6.004	0.160		
Z	0.240	3. 362	0.240	Z	0.240	4.002	0.240		
1	0.720	1.680	0.880	1	0.800	2.000	0.960		
2	0.480	4.482	0.480	2	0.800	5.446	0.800		
3	0.480	4.482	0.480	3	1.440	5.446	0.800		
4	0.240	4.962	0.720	4	0.160	6.004	0.960		
5	0.480	4.482	0.480	5	0.800	5.446	0.800		
6	0.720	4.482	0.720	6	0.800	5.446	0.800		
7	0. 240	4. 482	0.720	7	0.560	5.446	0.560		
8	0.480	4.482	0.480	8	0.800	5.446	0.800		
9	0.480 0.720	4. 482 4. 722	0.480 0.720	9	0.800	5. 446 5. 684	0.800		
-	0. 720	2. 802	0.720	-	0. 240	2. 802	0.240		
	0.270	L. 002	0.270	_	0.270	2.002	J 0. 270		

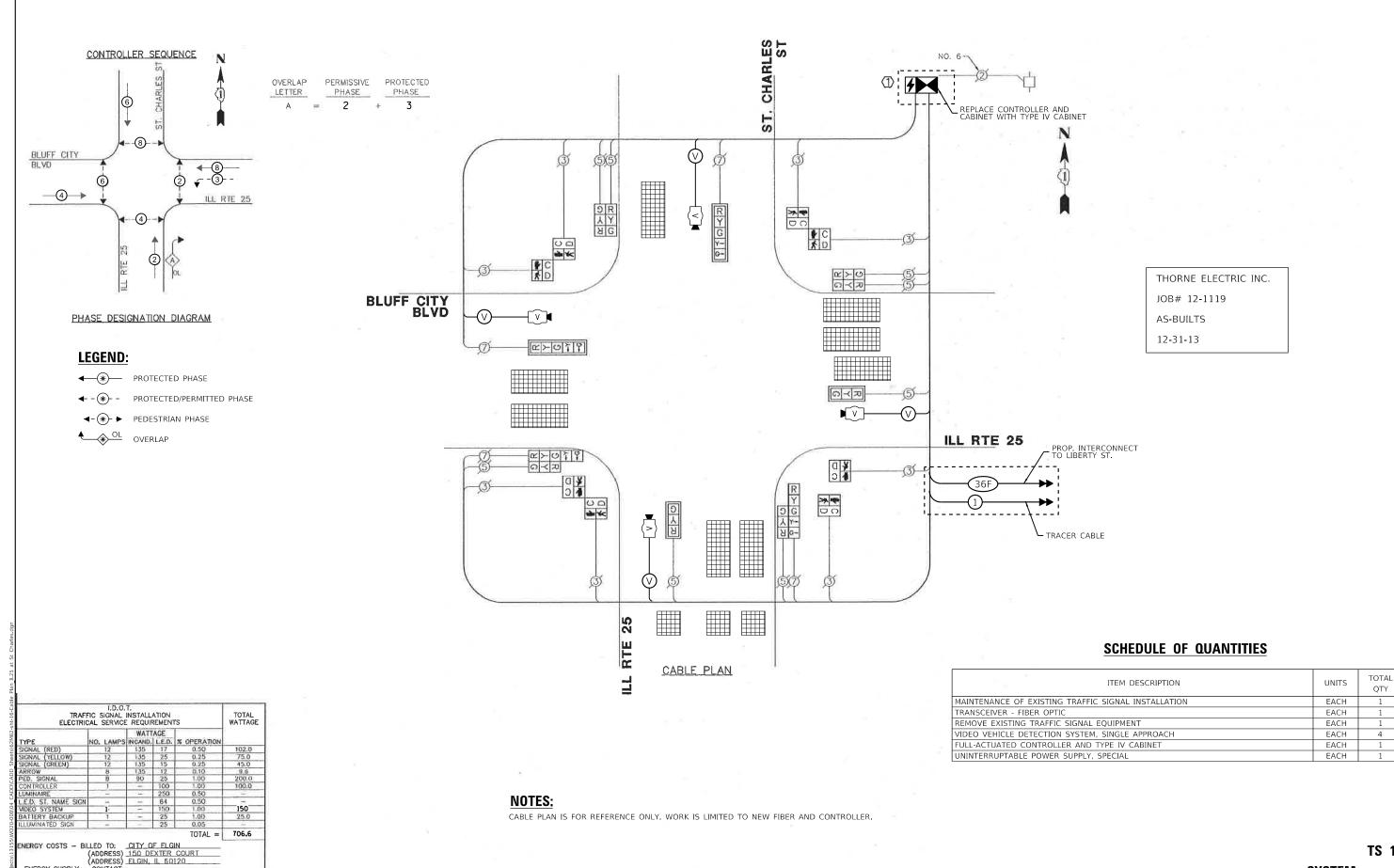
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SHEET 1 OF 1 SHEETS STA.

PLOT DATE = 10/16/2020

10/15/2020



TS 13295

4

SYSTEM

ENERGY SUPPLY - CONTACT: -

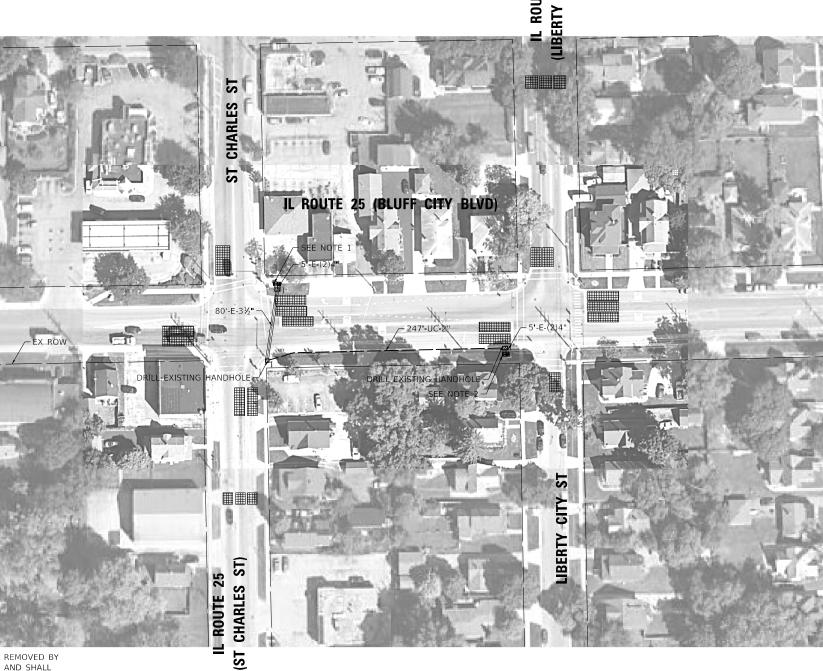
PHONE:

DESIGNED -EEC REVISED DRAWN -GS REVISED LOT SCALE = 2.0000 / in. MG REVISED PLOT DATE = 10/16/2020

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

CABLE PLAN AND PHASE DESIGNATION DIAGRAM IL ROUTE 25 (BLUFF CITY BLVD) AT IL ROUTE 25 (ST CHARLES ST) SHEET 1 OF 1 SHEETS STA.

SECTION 2020-188-TS VARIOUS 49 16 CONTRACT NO. 62M62



NOTES:

- THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.
 - 1 EACH CONTROLLER AND CABINET (COMPLETE)
- THE FOLLOWING ITEM SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR BID PRICE.
 - CONTROLLER AND CABINET (COMPLETE) EACH
 - UNINTERRUPTIBLE POWER SUPPLY EACH
- MOUNTING LOCATIONS OF THE VIDEO DETECTORS WILL BE DETERMINED PER MANUFACTURER RECOMMENDATIONS.

0	50	100	150
SCALE	IN EEET		

SYSTEM

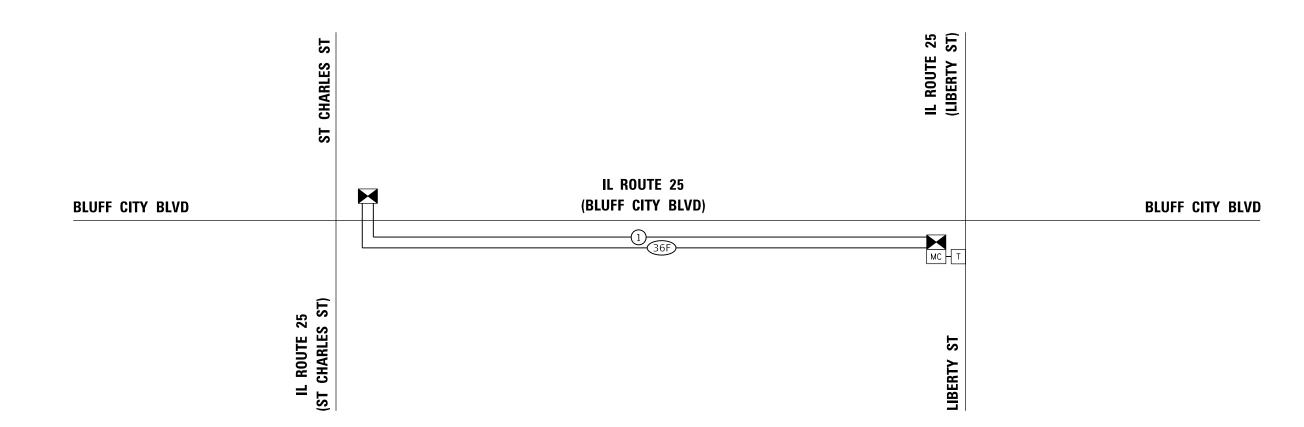


USER NAME = echoi	DESIGNED -	-	EEC	REVISED	-
	DRAWN	-	GS	REVISED	-
PLOT SCALE = 100.0000 / in.	CHECKED	-	MG	REVISED	-
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED	-

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PROPOSED INTERCONNECT PLAN							
IL ROU	IL ROUTE 25 - FROM ST CHARLES ST TO LIBERTY ST						
SCALE: 1"=50"	SHEET	1	OF	1	SHEETS	STA.	TO STA.

SECTION VARIOUS 2020-188-TS 49 17 CONTRACT NO. 62M62



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	247
ELECTRICAL CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	360
DRILL EXISTING HANDHOLE	EACH	2
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F	FOOT	402
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

SYSTEM



USER NAME = echoi	DESIGNED - EEC	REVISED -
	DRAWN - GS	REVISED -
PLOT SCALE = 2.0000 / in.	CHECKED - MG	REVISED -
PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT SCHEMATIC

IL ROUTE 25 - FROM ST CHARLES ST TO LIBERTY ST

IS SHEET 1 OF 1 SHEETS STA. TO STA.

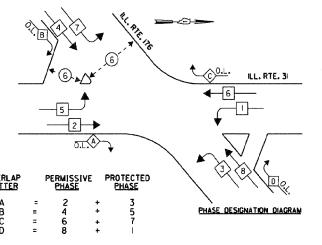
A.P. SECTION COUNTY TOTAL SHEET NO.

ARIES 2020-188-TS VARIOUS 49 18

CONTRACT NO. 62M62

| ILLINOIS | FED. AID PROJECT





LEGEND

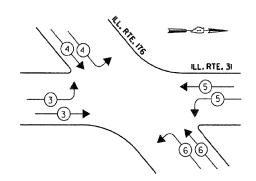
◆ O DUAL ENTRY PHASE SINGLE ENTRY PHASE
OVERLAP

◆ · · · · PEDESTRIAN PHASE NUMBER REFERS TO ASSOCIATED PHASE

SCHEDULE OF QUANTITIES

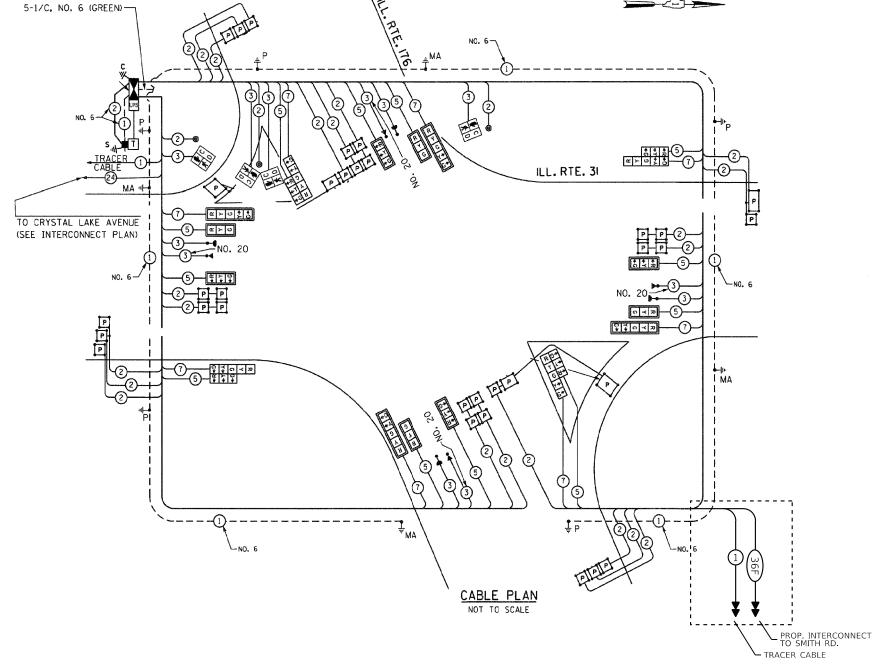
ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



	PROPOSED EMERGENCY VEHICLE PREEMPTORS					
EMERGENCY VEHICLE 3 4 5 6						
MOVEMENT	⇉	7/2	11	47		

% \ .	_
NO. 6-11-11-11-11-11-11-11-11-11-11-11-11-11	
s.,	
CABLE	1
MA ·III	+
TO CRYSTAL LAKE AVENUE (SEE INTERCONNECT PLAN)	
, ,	}
NO. 6 — /	
1	L
	İ
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0	Ŧ



SCALE: NTS

TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS WATTAGE FLASHER ENERGY COSTS TO: TOT ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096

NOTES:

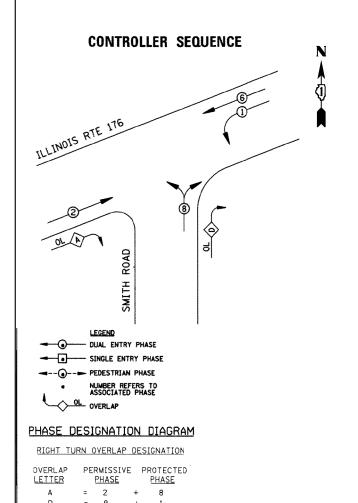
CABLE PLAN IS FOR REFERENCE ONLY. WORK IS LIMITED TO NEW FIBER.

TS 7295 **ECON 159**

ENERGY SUPPLY CONTACT: LISA COOK (815) 477-5204

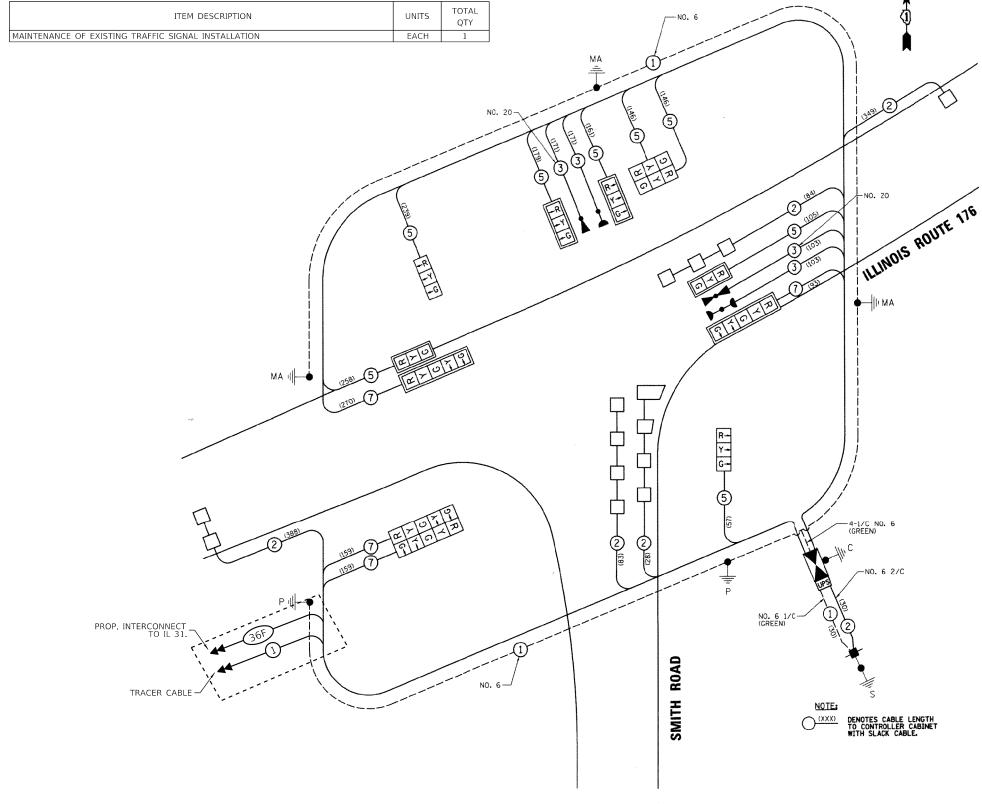
USER NAME = echoi	DESIGNED	-	EEC	REVISED -	
	DRAWN	-	GS	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED	-	MG	REVISED -	
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED -	

CABLE PLAN AND PHASE DESIGNATION DIAGRAM	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL ROUTE 31 AT IL ROUTE 176	VARIES	2020-188-TS	VARIOUS	49	19
IE HOOTE STAT IE HOOTE 170			CONTRACT	NO. 62	2M62
SHEET 1 OF 1 SHEETS STA. TO STA.		TILLINOIS EED A	D DROIECT		



TRAFI ELECTRI	TOTAL					
TYPE	NO. LAMPS	INCAND.	TAGE	%OPERATION	WATTAGE	
SIGNAL (RED)	12	135	17	0.50	102	
(YELLOW)	12	135	25	0.25	75	
(GREEN)	12	135	15	0.25	45	
ARROW	8	135	12	0.10	9.6	
PED. SIGNAL	-	90	25	1.00	-	
CONTROLLER	1	100	100	1.00	100	
ILLUM. SIGN		84		0.05		
FLASHER				0,50		
ENERGY COSTS	TOTAL =	331.6				
	DEPARTMENT NTER COUR NG. IL 6019	T	RANSPO			

SCHEDULE OF QUANTITIES



NOTES:

CABLE PLAN IS FOR REFERENCE ONLY. WORK IS LIMITED TO NEW FIBER.

TS 7298 ECON 159

ENERGY SUPPLY CONTACT: PHONE: COMPANY: COMED

 USER NAME
 echoi
 DESIGNED
 EEC
 REVISED

 DRAWN
 GS
 REVISED

 PLOT SCALE
 = 2.0000 ' / in.
 CHECKED
 MG
 REVISED

 PLOT DATE
 = 10/15/2020
 DATE
 10/15/2020
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM

IL ROUTE 31 AT SMITH RD

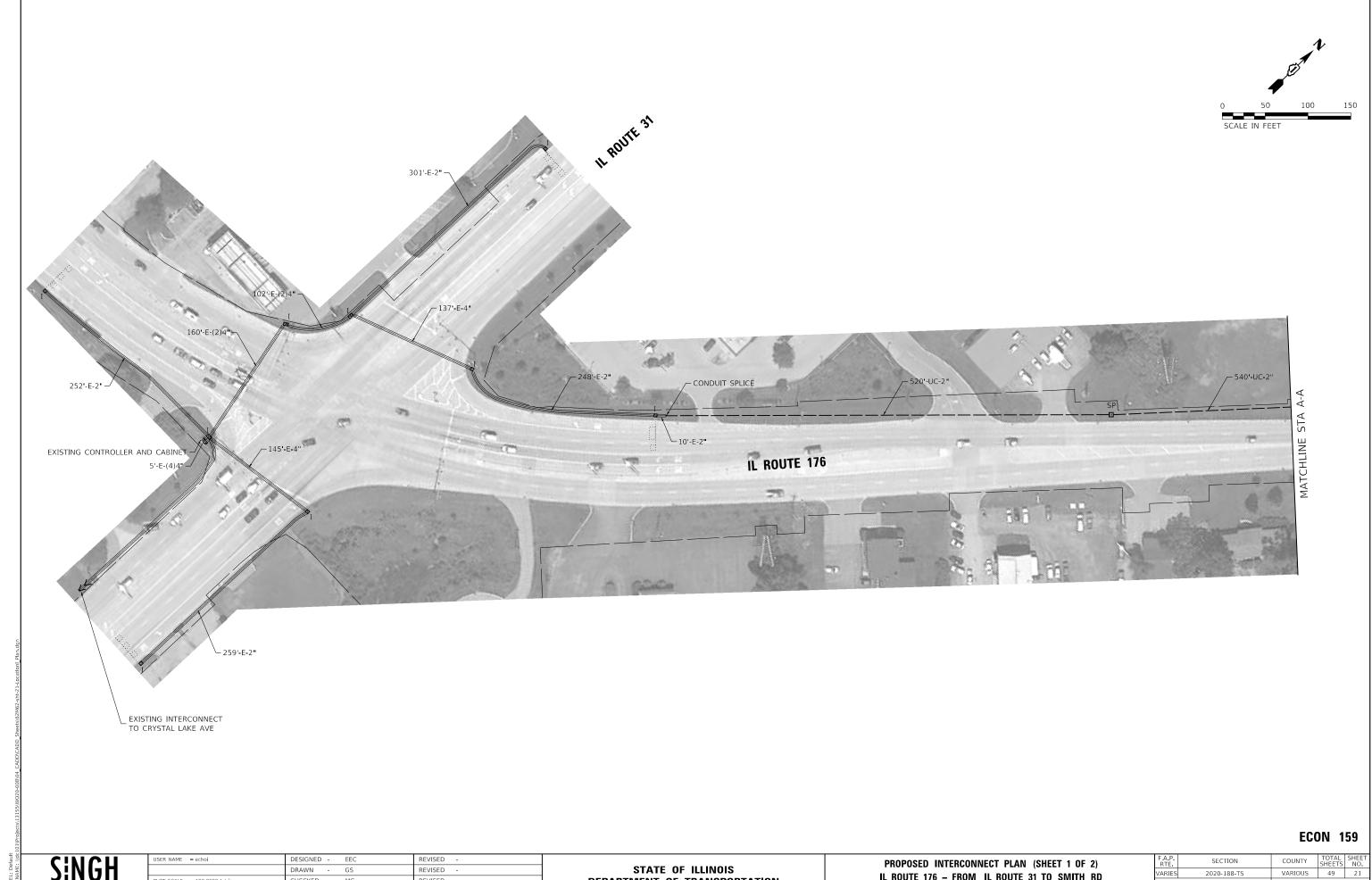
SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. SECTION COUNTY STAEL SHEETS NO.

VARIES 2020-188-TS VARIOUS 49 20

CONTRACT NO. 62M62



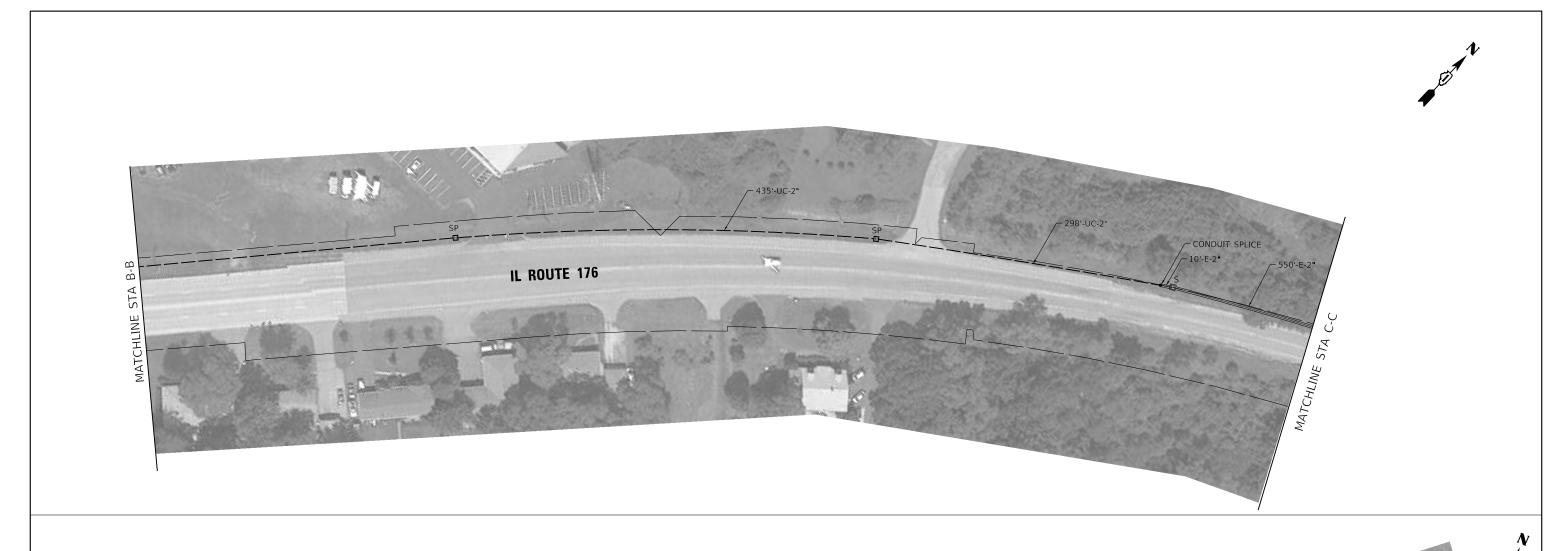
SINGH - ASSOCIATES, INC. CONSULTING ENGINEERS

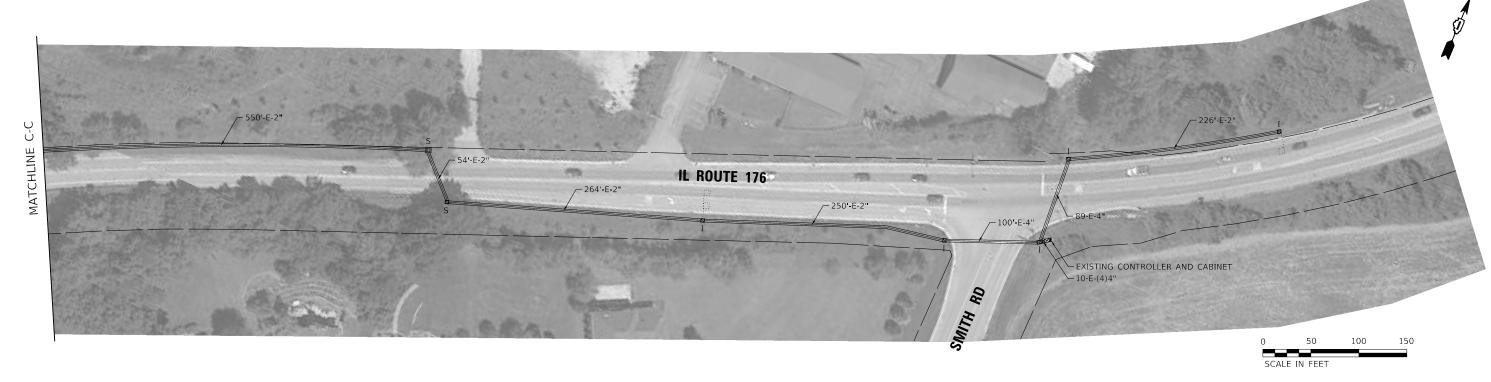
LOT SCALE = 100.0000 ' / in. CHECKED -REVISED PLOT DATE = 10/15/2020 10/15/2020 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176 - FROM IL ROUTE 31 TO SMITH RD SCALE: 1"=50' SHEET 1 OF 2 SHEETS STA.

2020-188-TS CONTRACT NO. 62M62





ECON 159

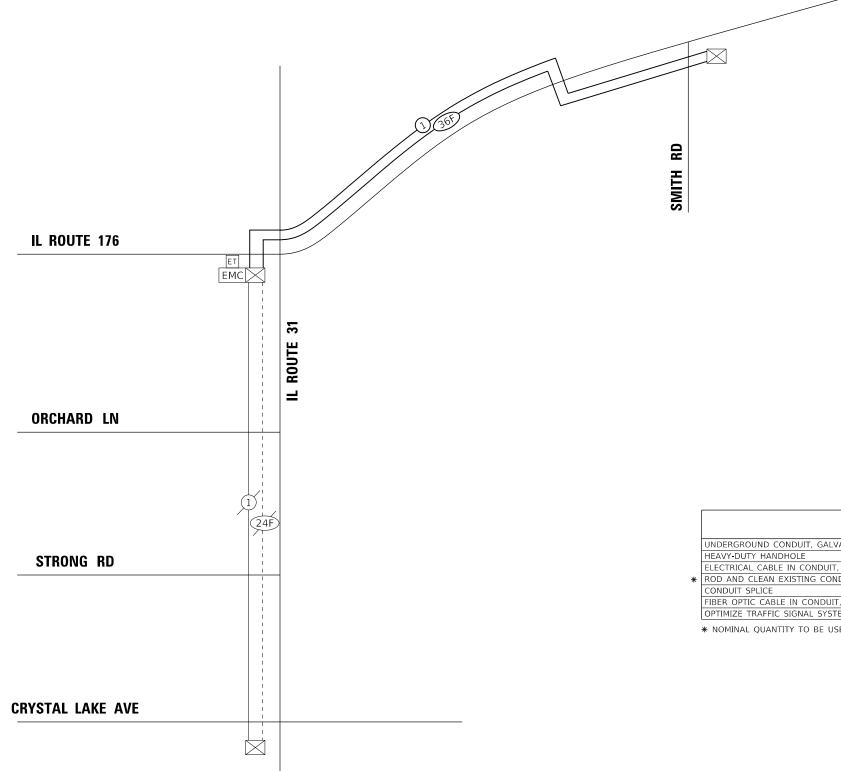
SINGH

USER NAME = echoi	DESIGNED	=	EEC	REVISED -	
	DRAWN	-	GS	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED	-	MG	REVISED -	
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED -	

PROPOSED INTERCONNECT PLAN (SHEET 2 OF 2)								
IL R	OUTE 1	76 -	- FRC	M	IL ROU	TE 31 TO	SMITH RD	
SCALE: 1"=50"	SHEET	2	OF	2	SHEETS	STA.	TO STA.	

A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
ARIES	2020-188-TS	VARIOUS	49	22	
			CONTRACT	NO. 62	2M62
	ILLINOIS	FED. AI	ID PROJECT		





SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1,793
HEAVY-DUTY HANDHOLE	EACH	3
ELECTRICAL CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	3,810
ROD AND CLEAN EXISTING CONDUIT	FOOT	868
CONDUIT SPLICE	EACH	2
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F	FOOT	3,860
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

 $oldsymbol{*}$ Nominal quantity to be used as needed and as approved by the engineer

SINGH+ASSOCIATES, INC

USER NAME = echoi	DESIGNED -	EEC	REVISED -
	DRAWN -	GS	REVISED -
PLOT SCALE = 2.0000 / in	CHECKED -	MG	REVISED -
PLOT DATE = 10/15/2020	DATE -	10/15/2020	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

L R							HEMATIC To smith	RD
	SHEET	1	OF	1	SHEETS	STA.	TO	O STA.

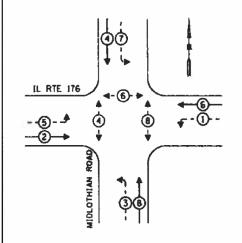
A.P. SECTION COUNTY TOTAL SHEETS NO.

KRIES 2020-188-TS VARIOUS 49 23

CONTRACT NO. 62 M62

ECON 159

EXISTING CONTROLLER SEQUENCE



LEGEND:

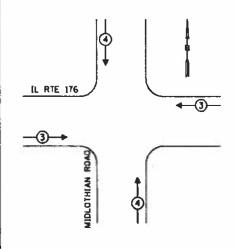
PROTECTED PHASE

←-(*)- - PROTECTED/PERMITTED PHASE

→ PEDESTRIAN PHASE

OL OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL								
ELECTRICA	L SERI	ICE RE	QUIREME	NTS				
	NO. OF	LED	7.	TOTAL				
TYPE	LAMPS	WATTAGE	OPERATION	WATTAGE				
SIGNAL (RED)	14	11	50	77.0				
(YELLOW)	14	20	5	14.0				
(GREEN)	14	12	45	75.6				
PERMISSIVE ARROW	16	10	10	16,0				
PED. SIGNAL	6	20	100	120.0				
CONTROLLER	· ·	100	100	100.0				
UPS	1	25	100	25.0				
VIDEO SYSTEM	1	150	100	150.0				
BLANK-OUT SIGN		25	5					
FLASHER	•	-	50	-				
STREET NAME SIGN	-	120	- 50	•				
LUMINAIRE	-	į. -	-	-				
			TOTAL =	577.6				

ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT

SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: ALICE TAYLOR

PHONE: (847) B16-5458 COMPANY COMMONWEALTH EDISON

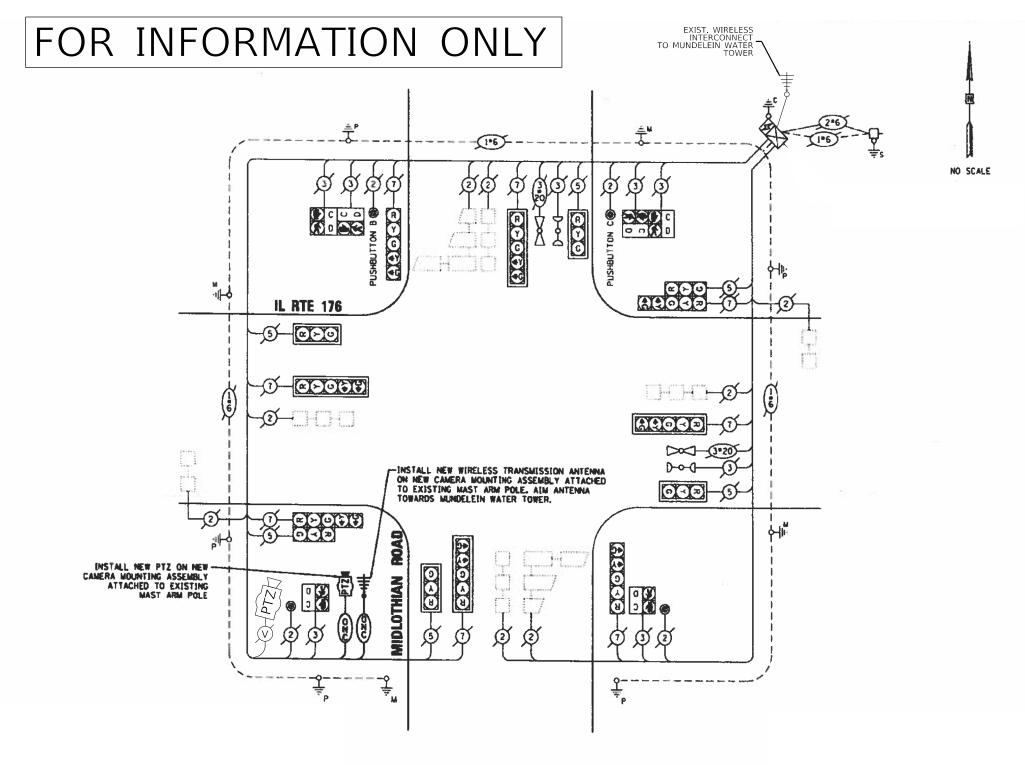
DESIGNED -REVISED DRAWN -GS REVISED REVISED PLOT DATE = 10/15/2020

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** CABLE PLAN AND PHASE DESIGNATION DIAGRAM IL ROUTE 176 AT MIDLOTHIAN RD SHEET 1 OF 1 SHEETS STA.

SECTION 2020-188-TS VARIOUS 49 24 CONTRACT NO. 62M62

TS 7145

LCDOT CENTRACS



CABLE PLAN (NOT TO SCALE)

PUSHBUTTON NOTES

- 1. PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES THEADING!
- 2. PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES_6.AND:8.

NOTES:

CABLE PLAN IS FOR REFERENCE ONLY.

ENERGY COSTS TO:

ACCOUNT NUMBERS

RELOCATION NOTE:

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND RELOCATED TO THE PROPOSED TRAFFIC SIGNAL CONTROLLER AND CABINET. THIS WORK SHALL BE PAID FOR UNDER "RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT".

LIGHT DETECTOR AMPLIFIER 1 EACH

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MASTER CONTROLLER (SPECIAL)	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	12
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
LAYER II (DATA LINK) SWITCH	EACH	1
VIDEO ENCODER	EACH	1
RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1

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

TYPE	NO. LAMPS	WAT	TAGE	% OPERATIONS	TOTAL
		INCAND.	LED		WATTAGE
SIGNAL (RED)	14	1 35	17	0.50	119
(YELLOW)	14	1 35	25	0. 25	88
(GREEN)	14	1 35	15	0. 25	53
ARROW	24	1 35	12	0.10	29
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	1 00	100	1.00	100
ILLUM. SIGN		252	25	0. 05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					

ENERGY COSTS-

BILLED TO: IDOT DISTRICT 1

201 WEST CENTER COURT SCHAUMBURG, IL 60196-1096

TOTAL =

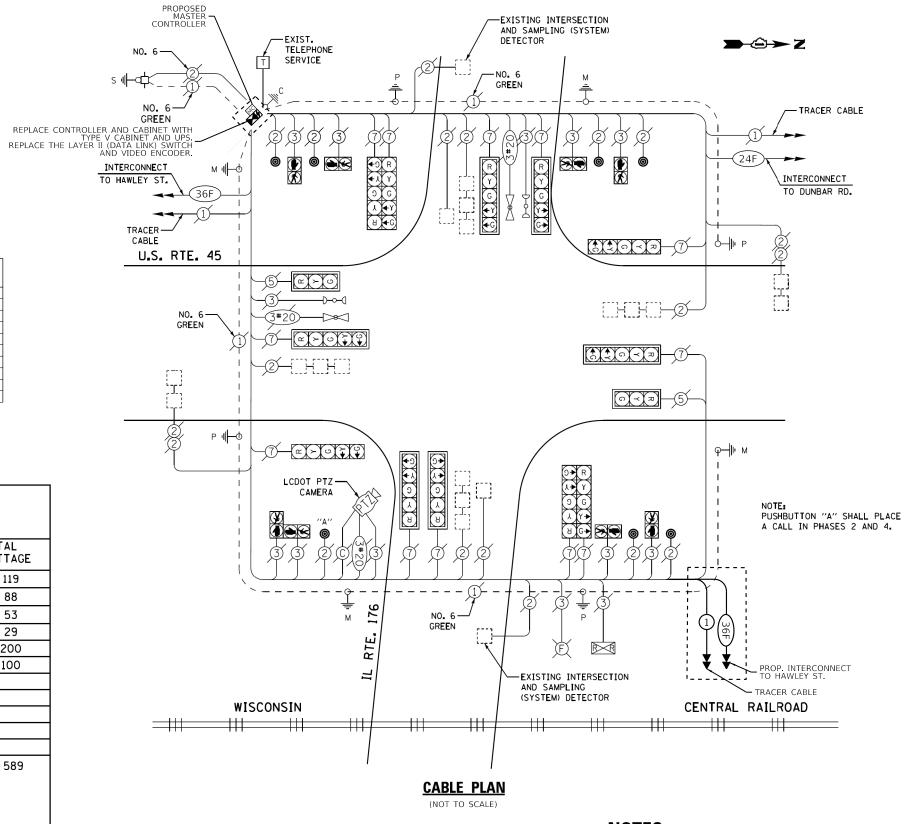
589

ENERGY SUPPLY -

CONTACT TERRI BLECK PHONE

COMMONWEALTH EDISON

847-816-5239



NOTES:

CABLE PLAN IS FOR REFERENCE ONLY. WORK IS LIMITED TO NEW FIBER AND CONTROLLER.

TS 6625 **LCDOT CENTRACS EAGLE 1J**



USER NAME = echoi	DESIGNED -	-	EEC	REVISED	-	11/06/2020 EEC
	DRAWN -	-	GS	REVISED	-	
PLOT SCALE = 2.0000 ' / in.	CHECKED -	-	MG	REVISED	-	
PLOT DATE = 11/6/2020	DATE -	-	10/15/2020	REVISED	-	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

	ON DIAGRAM							
SCALE: NTS		SHEET	1	OF	1	SHEETS	STA.	TO STA.

SECTION 2020-188-TS VARIOUS 49 25 CONTRACT NO. 62M62

SEQUENCE OF OPERATION

MOVEMENT	5	OL.	1	_1 _1		100	- 6 - 1		5	Line	2	-	-6			7.		7			1 11	7 × 3 × 8			+ +	† = =	-			*	, ,	8 1	F
PHASE		1	+5		Г	1+6				2+5		2+	6	1			3+7	- 40				3-	+3			4+7			\exists		4+8	1	A
INTERVAL	1	2	3	4	5	6	7	8	9	10	11	12	13A11	3B	14	5	16 17	7 18	BA18E	1.9	20	21	22A	228	23	24	25	26A	26B	27 2	8 2	93 29	8 5
CHANGE TO	1	1+6	2+5	2+6	9	0/	2+6	9	7	2+6	/	1	1:1	1	/3	+8 4	+74+	B 14	+5,Z+5 +6.2+6	0	9	4+8		.2+5	7	7	4+8	1+5.2			1	13	1
U.S. RTE. 45 END MAST ARM & FAR LEFT SIGNALS	B R _G	Ry	₽ _G	R	R	R	R	G	G	G	G	G	Y	R	R	R	R R	F	R	R	P	P	P	R	R	R	R	P	В	R	R	R R	P
U.S. RTE. 45 FAR RIGHT SIGNAL	B R	R	R	R	R	R	R	00	G	G,	G	G	Y	R	P	R	P P	F	R	R	P	R	R	P	R	R	R	R	R	R	R	RR	P
U.S. RTE, 45 END MAST ARM & FAR LEFT SIGNALS	3 P	PG	Ry	P _y	GC	G	G,		R		G	G	Y	P	R	R	P R	F	R	R	R	R	R	R	R	R	R	P	В	R	R	R P	R
U.S. RTE. 45 FAR PIGHT SIGNAL	R	R	R	R	G	0	G	R	R	R	G	G	Y	R	R	P	P R	B	R	R	R	P	R	R	R	R	R	R	R	R	R	RF	R
ILL RTE. 176 END MAST ARM & FAR LEFT SIGNALS	BR	P	R	P	R	8	R	R	R	R	R	R	R	R .	P _G	Ϋ.	Ro R	F	Ų R	R	8	R	R	R	G _C	C _G	Gy	Y	R	G	G	Y P	R
ILL RTE, 176 FAR RIGHT & NEAR RIGHT SIGNALS	B GR	R	g,	Υ ^R	R	R	R	ď.	g.	Å.	R	R	RF	1	R	R	R R	F	R	R	R	Р	R	R	0	G	G	4	R	G	0	Y R	R
ILL RTE, 176 END MAST ARM & FAR LEFT SIGNALS W/	ВР	R	R	8	R	R	R	P	R	R	R	R	RF	1	P _Q	6	R	R	y B	G _G	G	Gy	Y	R	R	R	R	R	R	G	G.	Y R	R
ILL RTE, 176 FAR RIGHT & NEAR RIGHT SIGNALS	B GR	gR.	P	Ÿ,	o'c	g.	_P R	R	R	R	R	R	RF	1	R	P	P P	-	R	G	G	G	Y	R	R	Я	R	R	R	6	5	Y R	R
PEDESTRIAN SIGNALS X-ING U.S. RTE. 45 ON N. SIDE OF ILL RTE 176.	н	Н	н	Н	н	н	н	Н	н	н	Н	н	н	1	н	4	н	H	н	•p	ř.	н	н	н	H	н	н		н	•p	H	н	Da R
PEDESTRIAN SIGNALS X-ING U.S. RTE, 14 ON S. SIDE OF ILL RTE 176.	90	Н	н	Н	н	н	н	н	н	н	н	H	н		+ +		. н	н	н	н	н	н	н	н	•p	řĤ	н	н	н	•p F	A I	нн	12
PEDESTRIAN SIGNALS X-ING ILL. PTE. 176 ON W. SIDE OF U.S. RTE. 45	н	н	н	н	•p	řн	н	Н	н	н	• p	řΉ	н		+	4	н н	,	4 14	н	н	Н	н	н	н	н	н	н	н	н	H .	нн	O _A
PEDESTRIAN SIGNALS X-ING ILL. PTE. 176 DN E. SIDE OF U.S. PTE. 45	н	H	н	Н	H	н	н	• p	řΉ	н	•p	FH	н	1	н	н	н	+	н	Н	н	Н	н	н	н	н	н	н	н	H 1		нн	04.0
ILL RTE. 176 YELLOW FLASHER EAST OF TRACKS	FL	FLY	FL	FL	FLY	FL	FL	FL	FL	FL	FL	TL I	FL F	-	FL F	L 1	L FL	F	L FL	D	D	D	FL	FL	FL.	FL	FL	F.	FL	2		FL FL	D _A

PHASES 2+6 SHALL BE PLACED ON FECALL

- TO APPEAR ONLY UPON PUSHBUTTON ACTUATION

 FLASHING IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL DESAPANCE.

THIS OP FLASHING "INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT APPOW TIME IS NOT SUFFICIENT TO COMPLETE "OF FLASHING" INTERVALS. AND FLASHING TIMINGS TO BE SET ONLY ON PHASES WHERE

AND FLASHING ARE INDICATED IN THE SEQUENCE OF OPERATION.

F = ILLUMINATED PERSON = WALK

FH : ILLUMINATED FLASHING HAND = FLASHING DON'T WALK

+ = ILLUMINATED SOLID HAND = DON'T WALK

D = DAPK

FL = FLASHING YELLOW BEACON

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

																												ENTERNINE SCHOOL T	THE DARK TOP	L
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		T	5	Т	5	П	8	Т	В	\neg	11		11	1	4	19		1	9		23	Т	23	Т	27		27	THE REAL PROPERTY.		715
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	14	1B	10	10	IE.	1F	16 1	H 1J	18	11	1 M	IN	IP 1	0 1	R 15	17	11/	2 V	18	1X 1	Y 1	Z :	AA 1 E	3610	2101) IEE	(FF	2	3	120
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	0P	1	0 2	1 E	1F	3	H 2	1 K	16	3	2	1P	10	3 0	R 1	10	2	:w	3.	14	12	2 :	88 1	100	O IEE	2	3			١,
U.S. RTE. 45 EAST MAST ARM & FAR LEFT SIGNALS	BR	,	R	R	R	R	0 0	0	Y	P	0	G	YF	2	R R	P	R	8	F	0	R	R	P 1	R P	R	R	R	G	R	1
	BR		R	R	R		G _G G	9	Y	8	5	G	YF		R R	R	р	B	B	R	2	R	R 8	2 2	R	P	Р	6	P	
I.S. RTE, 45 S AST MAST ARM & FAR LEFT SIGNALS	B R,	0	G Gy	G	Y		RA		R	7	0	G	Y	R I	RR	р	ρ	D	F	P	p	Я	p ;	R	R	R	R	G	H	
J.S. RTE. 45 FAR RIGHT SIGNAL	6 8	3	G	G	Y	R	R P	R	R	9	5	G	Y 3	R.	RP	p	P	a.	Р	P	В	R		P	P	R	R	C	Я	
LL RTE. 176 ND MAST ARM & FAR LEFT SIGNALS	В	P	P	R	В	R	R P	ü	P	P	A.	8	RP	E	Y B	R	p	R	я	S _G	Y	R	0, 0	y o	Y	P	6	B	G	
LL RTE. 176 AP RIGHT & NEAR RIGHT SIGNALS	9 R	8	P	R	R	R	G. Y	GR GR	R	2	R	R	RR	1	R	R	R	R.	2	G	4	R	5 (g G	Y	R	G	P	G	
LL RTE. 176 ND MAST ARM & FAR LEFT SIGNALS	B 8	R	R	R	В	R	H F	R	P	2	R	R	RR		4 9	g Y	P	G	5,	R	R	R	- 1	8 8	Y	R	G	P	G	
LL RTE. 176 AP RIGHT & NEAR RIGHT SIGNALS	BR	gF	P	cR.	P	R	P P	R	P	5	0.	B	PF		9 0	Y	R	5	0	P	P	R	p	8 0	¥	R	0	P	G.	
EDESTRIAN SIGNALS X-ING U.S. RTE. 45 NN N. SIDE OF ILL RTE 176.	н	н	н	н	н	н	H +	н	H	*	ч	н	H H	1	4 F	+ +	н	FH	н	н	н	н	H .	F	н	н	FH	H	Н	1
EDESTRIAN SIGNALS X-ING U.S. PTE. 45 N S. SIDE OF ILL PTE 176.	н	-	н	н	н	н	н н	н	Н	н	н	н	H +	1	н	н	H	н	н	FH	н	н	н ,	FF	н. н	н	ΕH	н	н	
EDESTRIAN SIGNALS X-ING ILL. RTE. 176	н	F	н	FH	н	н	н	н	н	#	FH	FH	н		н	н	н	H	н	н	н	н	н н	н	н	н	н	н	н	
EDESTRIAN SIGNALS X-ING ILL. RTE. 175 NN E. SIDE OF U.S. RTE. 45	н	,	н	н:	н	н	FH H	F	н н	н	FH	FH	н	4	н н	н	н	H	н	н	н	н	н:	н	Н	н	н	н	н	
LL. RTE.176 YELLOW FLASHER EAST OF TRACK	5 81	F	FL	FL	FL	FL	FL FL	FL	FL	FL	FL	FL F	LF	LF	LE	FL	FL	87	F_	FL F	FL F		L F	F	- FL	. FL	FL	FL	FL	

- FH = ILLUMINATES FLASHING HAND = FLASHING DON * WALK
- H + ILLUMINATES SOLID HAND = DON T MALE
- D + DARK
- FL . FLASHER VEILON BEACON

RAILROAD PREEMPTION SEQUENCE OF OPERATION

														PREEN	e toe	HEE TONE	SET A	HAREEMFTOR				
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		5	8	3		•	14	19	2	3	2	7	機	能	馨	は記し					
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	整	意識		整		路線	類	100	福	影		数		2	2		3	LP				
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	14	18	10	10	1 E	1 F	1 G	1 H	1 J	1 K	1 L	1 M	1 N	ΙP	10	IR	15	2	3	4	5	CLEAR
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	10	2	1E	2	10	2	2	2	1 L	2	1 N	2	10	2	15	17	3	4	5	建	NORWAL SEQUEN
J.S. RTE, 45 N/B END MAST ARM & FAR LEFT SIGNALS	Ry	R	R	Y	R	Y	R	R	R	R	R	R	R	Y	R	R	8	R	R	R	G	Δ
J.S. RTE. 45 N/B FAR PIGHT SIGNAL	R	R	R	Y	R	Υ	R	R	R	R	R	R	Ŕ	Y	R	R	R	P	R	R	G	Δ
U.S. RTE. 45 S/B END MAST ARM & FAR LEFT SIGNALS	Ry	Y	R	R	R	Y	R	2	R	R	R	R	R	Y	R	P	В	P	R	R	G	Δ
J.S. RTE. 45 S/B FAR PICHT SIGNAL	R	Y	P	R	R	Y	R	R	R	R	R	R	R	Y	R	R	P	R	œ	R	O	Δ
ILL RTE. 176 E/B END MAST ARM & FAR LEFT SIGNALS	R	R	R	R	R	R	R	Ry	R	Y	R	Y	R	R	R	Y	R	R	R	R	R	Δ
ILL RTE. 176 E/B FAR PIGHT & NEAR RIGHT SIGNALS	Y.	R	R	P	R	R	R	30	R	Y	R	Y	P	R	R	γ	R	R	R	30	R	Δ
ILL RTE. 176 W/B END MAST ARM & FAR LEFT SIGNALS	R	R	R	R	R	R	R	ng.	GC	R	R	G	G	R	R	G	G	C.C.	Y	R	R	Δ
ILL RTE. 176 W/B FAR PIGHT & NEAR RIGHT SIGNALS	P	yP.	P	R	R	R	P	0	G	R	R	C	C	R	B	5	G	C	Y	R	R	Δ
PEDESTRIAN SIGNALS X-ING U.S. RTE. 45 ON N. SIDE OF ILL RTE 176.	н	н	н	н	Н	Н	н	H	FH	н	н	FH	н	н	Н	н	Н	Н	н	Н	н	Δ
PEDESTRIAN SIGNALS X-ING U.S. RTE. 45 ON S. SIDE OF ILL RTE 176.	Н	н	Н	Н	Н	н	н	н	н	FH	н	FH	н	н	н	н	н	н	н	Н	Н	Δ
PEDESTRIAN SIGNALS X-ING ILL. RTE. 176 DN W. SIDE OF U.S. RTE. 45	н	FH	Н	н	н	FH	н	н	н	Н	н	н	н	н	н	H	н	н	н	Н	н	Δ
PEDESTRIAN SIGNALS X-ING ILL. RTE. 176 ON E. SIDE OF U.S. RTE. 45	н	н	н	FH	н	FH	Н	н	н	н	H	н	н	н	Н	н	н	н	н	н	н	Δ
LL. PTE. 176 YELLOW FLASHER EAST OF TRACKS	FL	FL	FL	FL	FL Y	FL	FLY	FL	FL Y	FL	FL	FL	FLY	FLY	FLY	Δ						

FL = FLASHING YELLOW BEACON

P = ILLUMINATED PERSON = WALK

FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK

H . ILLUMINATED SOLID HAND . DON'T WALK

A RAILRGAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGING VEHICLE INTERVAL TIF APPLICABLE! AFTER RAILROAD INTERVAL 5 IS TERMINATED.

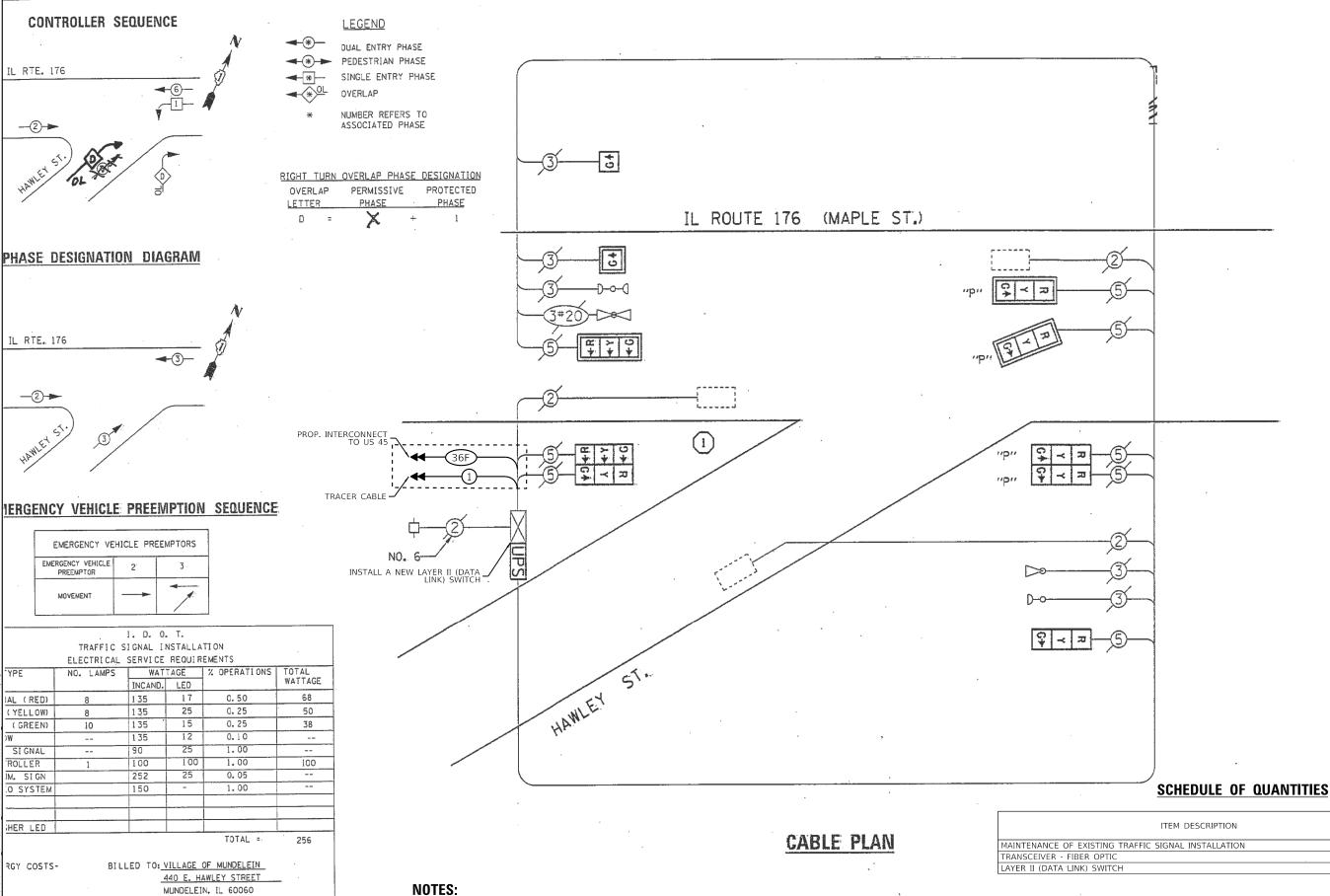
TS 6625 **LCDOT CENTRACS EAGLE 1J**



USER NAME = echoi	DESIGNED -	EEC	REVISED -
	DRAWN -	GS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED -	MG	REVISED -
PLOT DATE = 10/15/2020	DATE -	10/15/2020	REVISED -

SEQUENCE OF O OPERATION,	PERATI And R	AILF	IOAD	PR	ICY VEH EEMPTION	ON SEC	REEMPTION SEQUENEC QUENCE OF OPERATION	F.A RT VAR
			LIIU	, I L	1/0 /1	00 73		
SCALE: NTS	SHEET	1	OF	1	SHEETS	STA.	TO STA.	

A.P. RTE	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.		
ARIES	2020-1	88-TS		VARIOUS	49 26			
				CONTRACT	NO. 62	2M62		
		ILLINOIS	FED. A	ID PROJECT				



CABLE PLAN IS FOR REFERENCE ONLY. WORK IS LIMITED TO NEW FIBER AND CONTROLLER.

TS 6916 LCDOT CENTRACS

UNITS

EACH

EACH

EACH

TOTAL

QTY

SINGH

CONTACT TERRI BLECK

PHONE <u>847-816-5239</u>

COMMONWEALTH EDISON

RGY SUPPLY -

 USER NAME
 = echoi
 DESIGNED
 EEC
 REVISED

 DRAWN
 GS
 REVISED

 PLOT SCALE
 = 2,0000 ' / in.
 CHECKED
 MG
 REVISED

 PLOT DATE
 = 10/15/2020
 DATE
 10/15/2020
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NTS

CABLE PLAN AND PHASE DESIGNATION DIAGRAM

IL ROUTE 176 AT HAWLEY ST

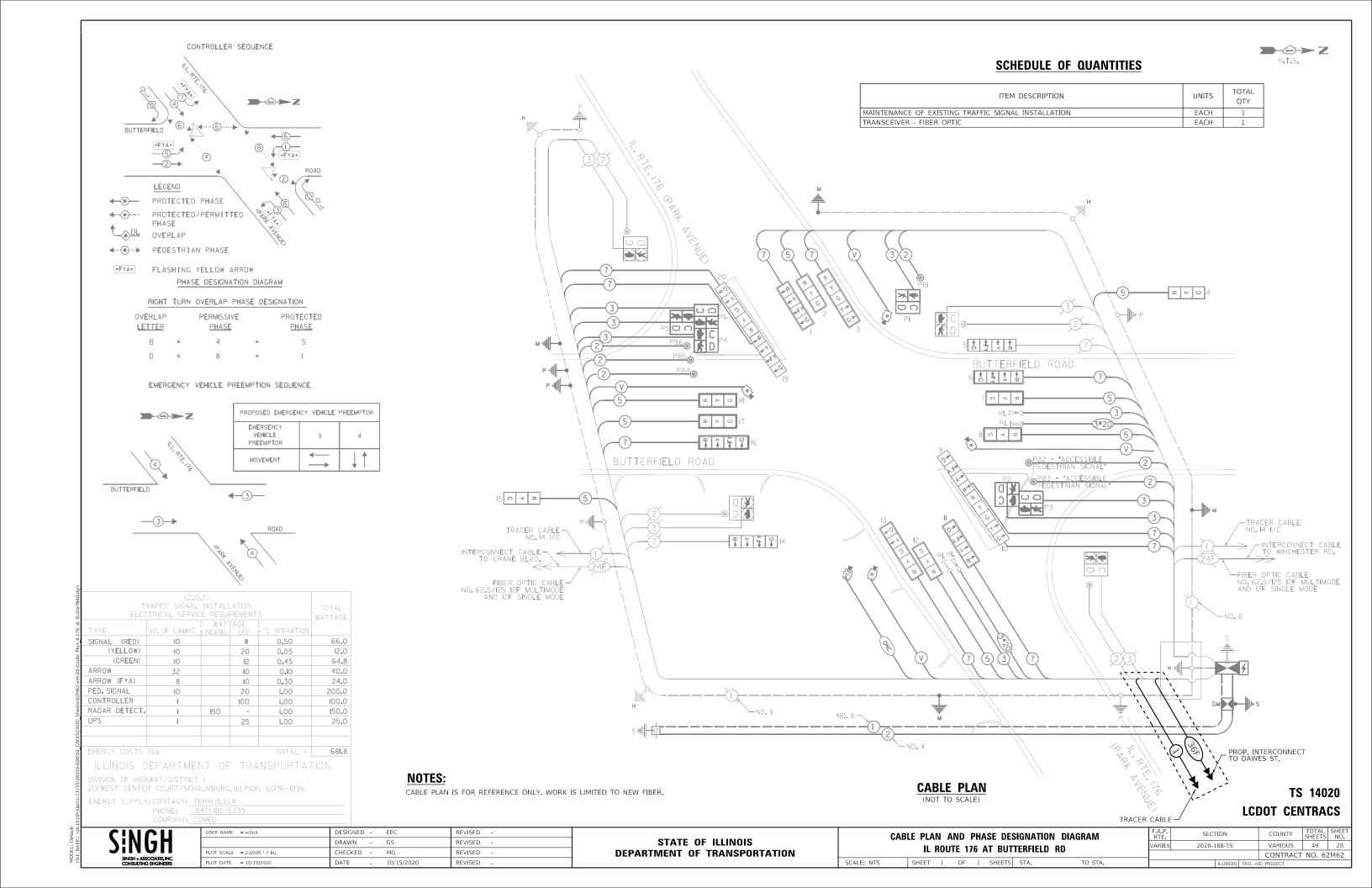
SHEET 1 OF 1 SHEETS STA. TO STA.

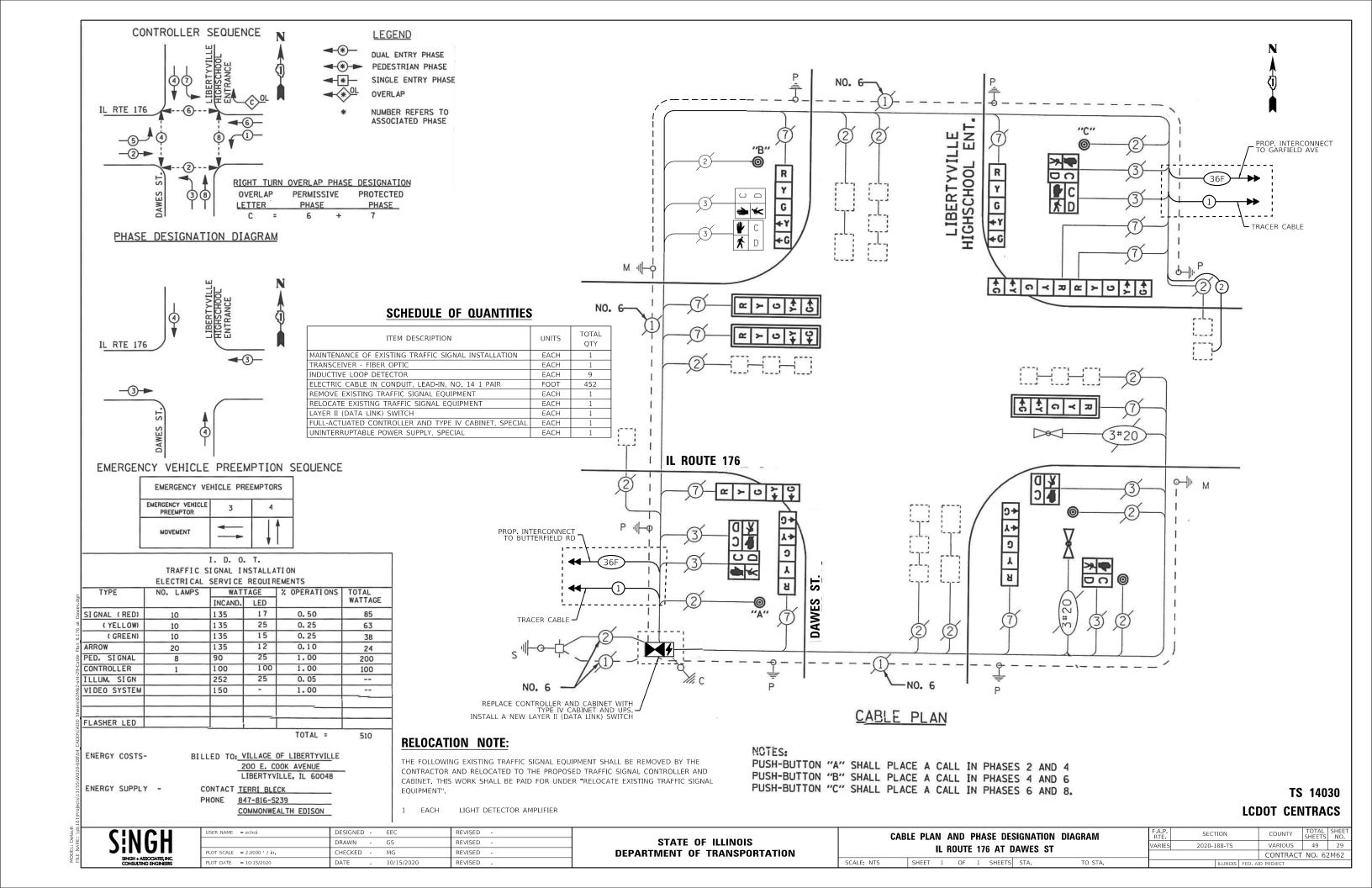
SHEET 1 OF 1 SHEETS STA. TO STA.

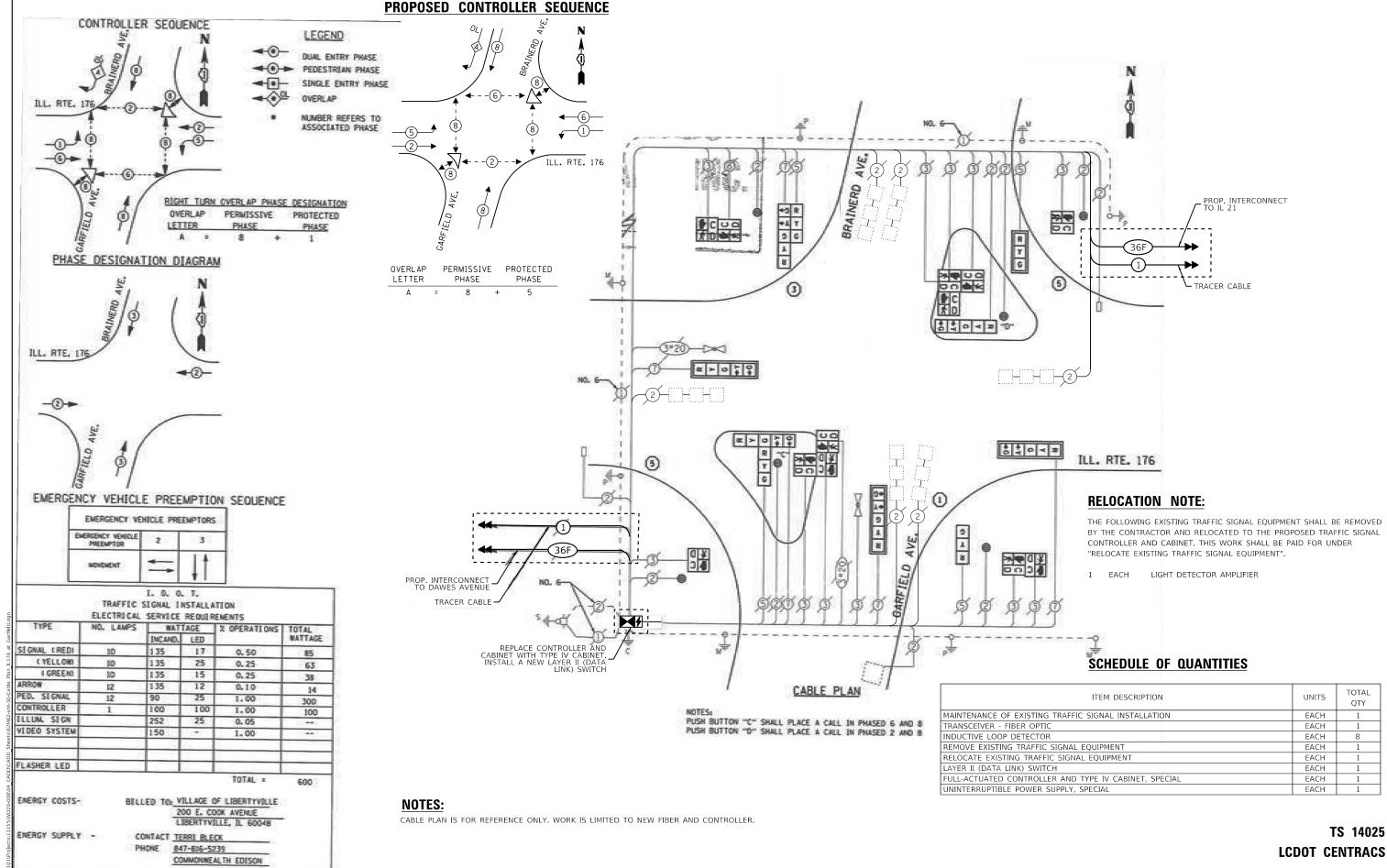
F.A.P. RTE. SECTION COUNTY TOTAL SHEETS NO.

VARIES 2020-188-TS VARIOUS 49 27

CONTRACT NO. 62M62







MODEL: Default

SINGH + ASSOCIATES, IN CONSULTING ENGINEER

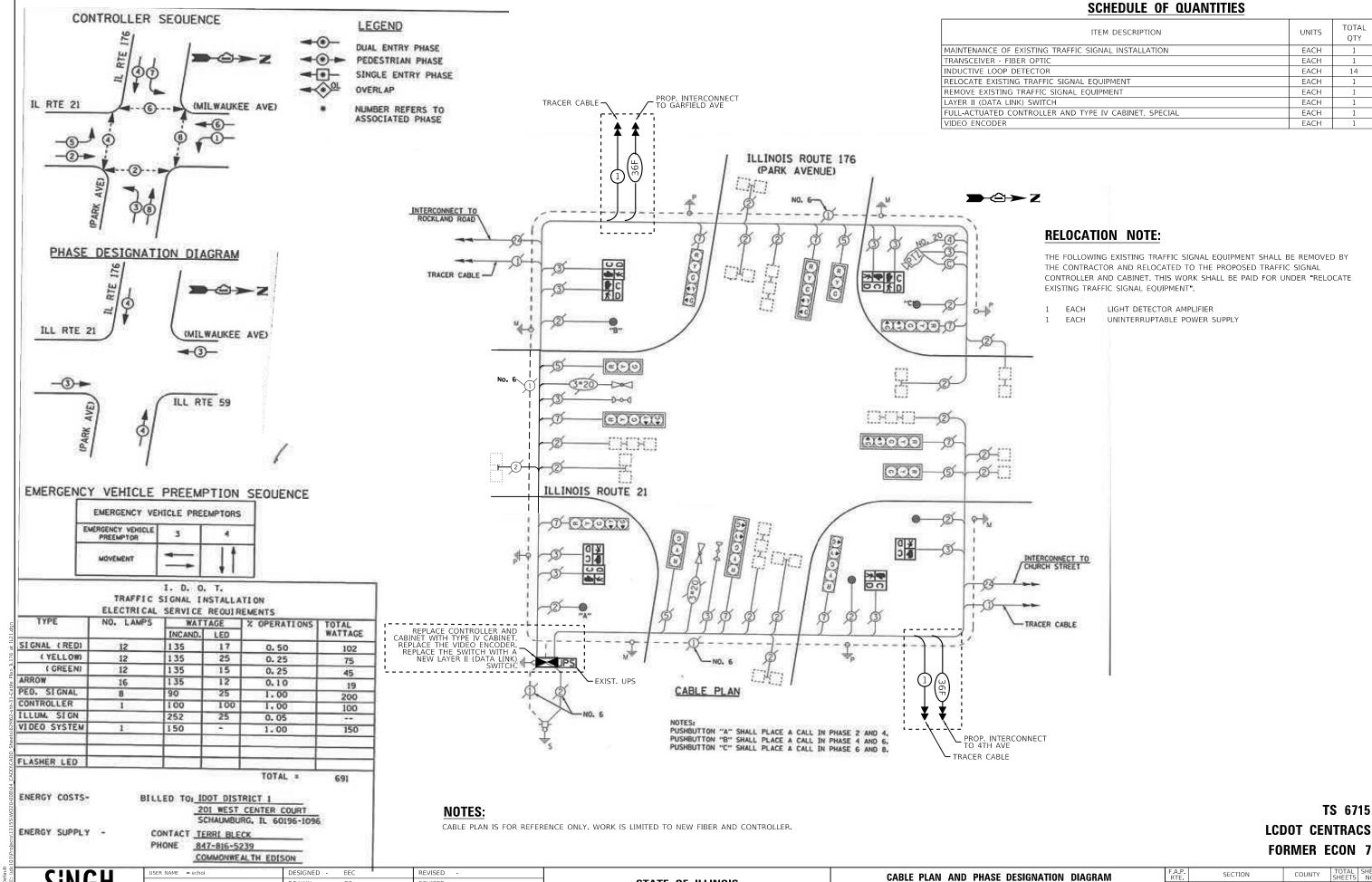
OSEK NAME = echol	DESIGNED -	EEC	KENIZED -
	DRAWN -	GS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED -	MG	REVISED -
PLOT DATE = 10/15/2020	DATE -	10/15/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NTS

CABLE PLAN AND PHASE DESIGNATION DIAGRAM	F.A.P. RTE.	SECTION	COUNTY	
IL ROUTE 176 AT GARFIELD AVE /BRAINERD AVE	VARIES	2020-188-TS	VARIOUS	Г
IL HOOTE 170 AT GAILTEED AVE / BILAINEHD AVE			CONTRACT	

49 30



STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

2020-188-TS

IL ROUTE 176 AT IL ROUTE 21 (MILWAUKEE AVE)

SHEET 1 OF 1 SHEETS STA.

VARIOUS

CONTRACT NO. 62M62

49 31

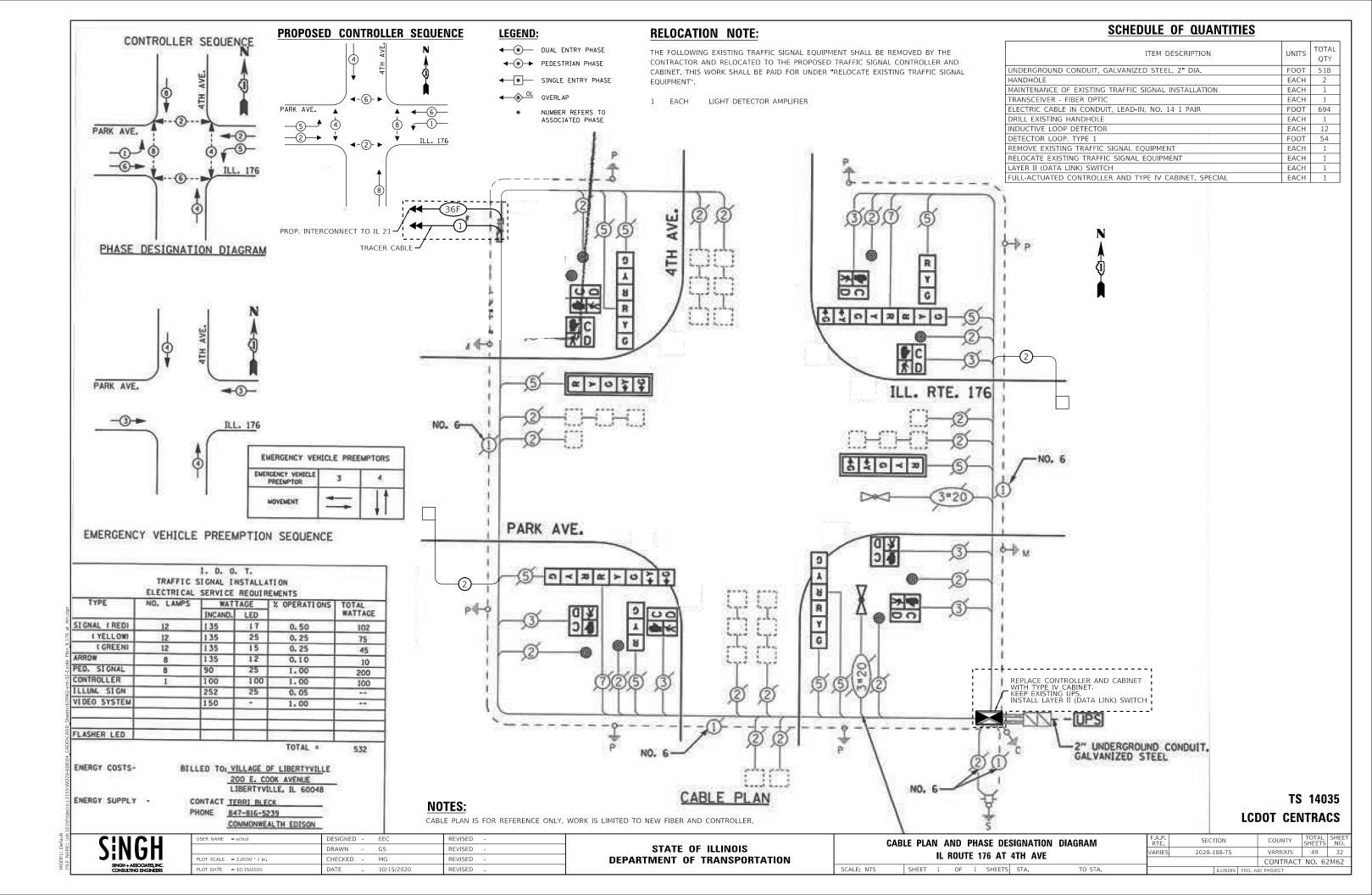
DRAWN

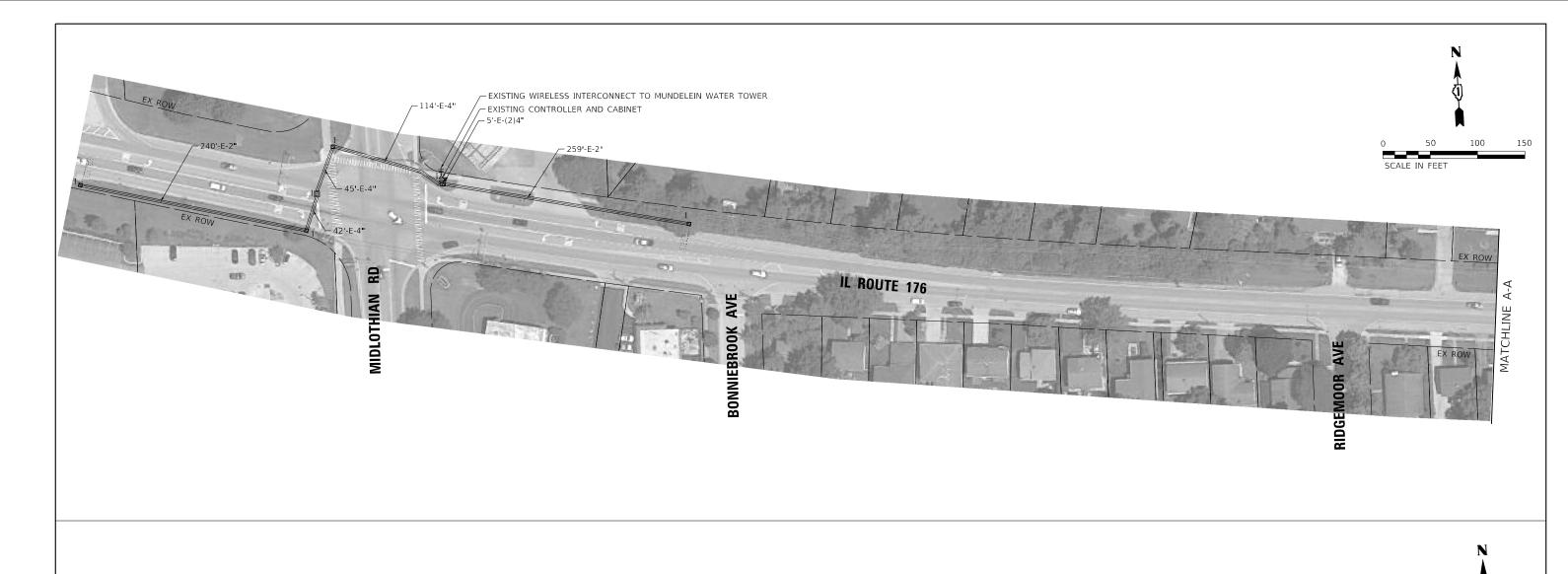
PLOT DATE = 10/15/2020

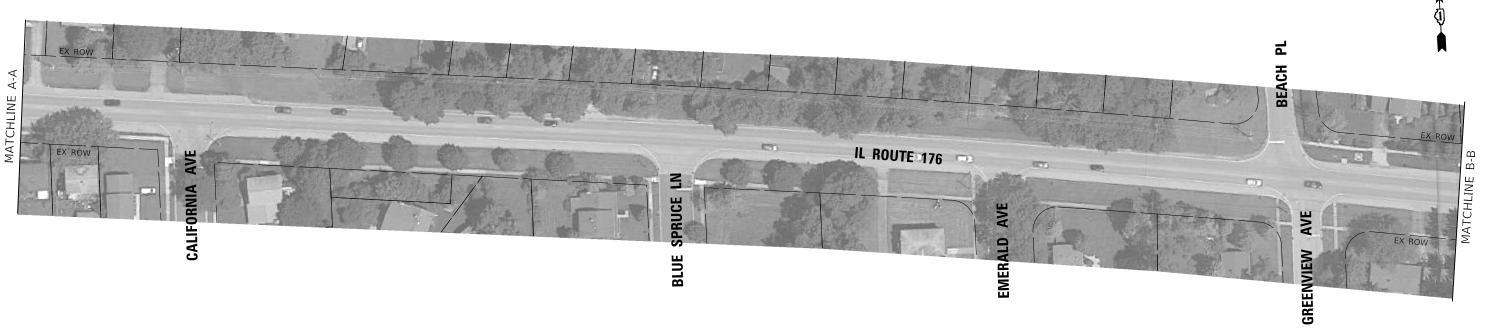
GS

REVISED

REVISED







LCDOT CENTRACS

SINGH

USER NAME = echoi	DESIGNED	-	EEC	REVISED -	
	DRAWN	-	GS	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED	-	MG	REVISED -	
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED -	

PROPOSED INTERCONNECT PLAN (SHEET 1 OF 8)										
IL ROUT	ΓE 176	- I	FROM	M	IDLOTH	IAN RD	T0	FOURTH ST		
SCALE: 1"=50'	SHEET	1	OF	8	SHEETS	STA.		TO STA.		

A.P. RTE	SECT	ΠΟΝ		COUNTY	TOTAL SHEETS	SHE
ARIES	2020-188-TS			VARIOUS	49	33
				CONTRACT	NO. 62	2M62
		ILLINOIS	FED. A	ID PROJECT		



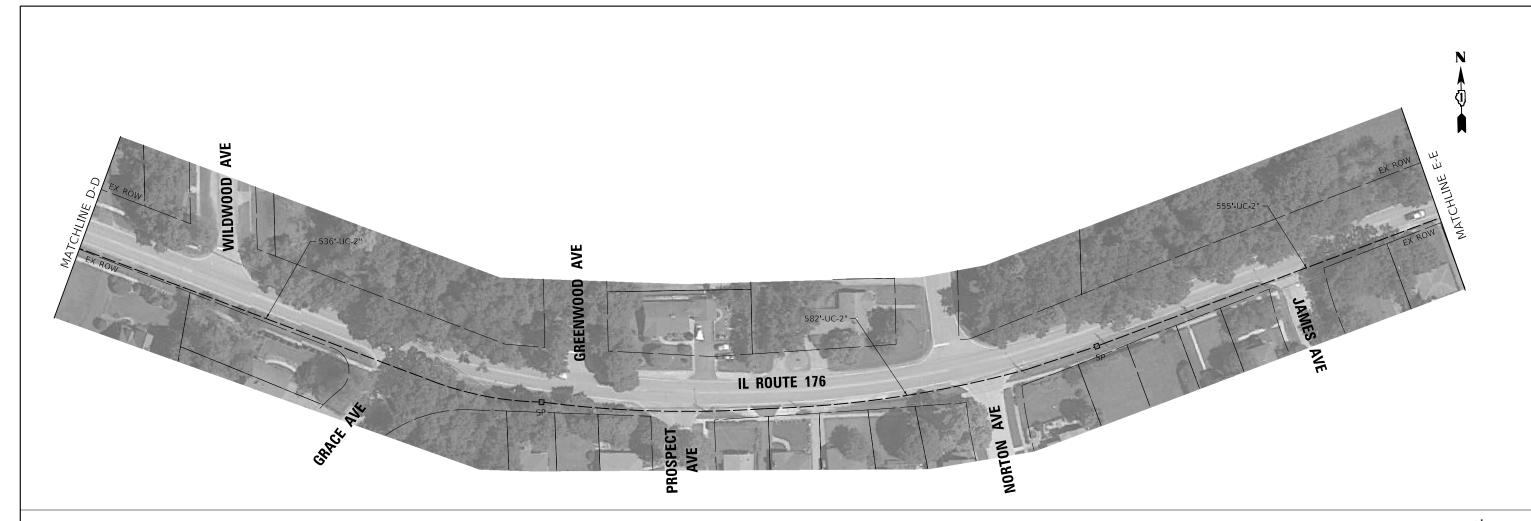
SINGH SINGH + ASSOCIATES, INC. CONSULTING ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN (SHEET 2 OF 8)

IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST

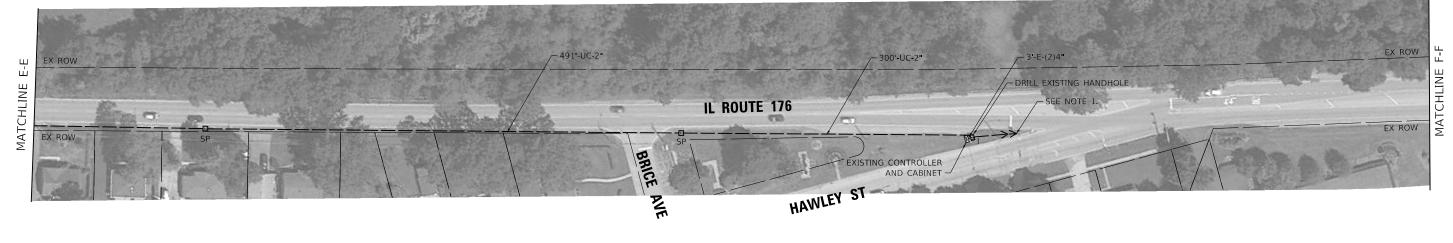
SCALE: 1"=50" SHEET 2 OF 8 SHEETS STA. TO STA.



NOTES:

 THE INTERCONNECT BETWEEN HAWLEY ST AND BUTTERFIELD RD IS NOT PART OF THIS PROJECT BUT WILL BE THROUGH LAKE COUNTY CENTRACS SYSTEM.





0 50 100 150 SCALE IN FEET

LCDOT CENTRACS

SINGH SINGH + ASSOCIATES, INC. CONSULTING ENGINEERS

USER NAME = echoi	DESIGNED -	-	EEC	REVISED -	
	DRAWN -	-	GS	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	-	MG	REVISED -	
PLOT DATE = 10/15/2020	DATE -	-	10/15/2020	REVISED -	

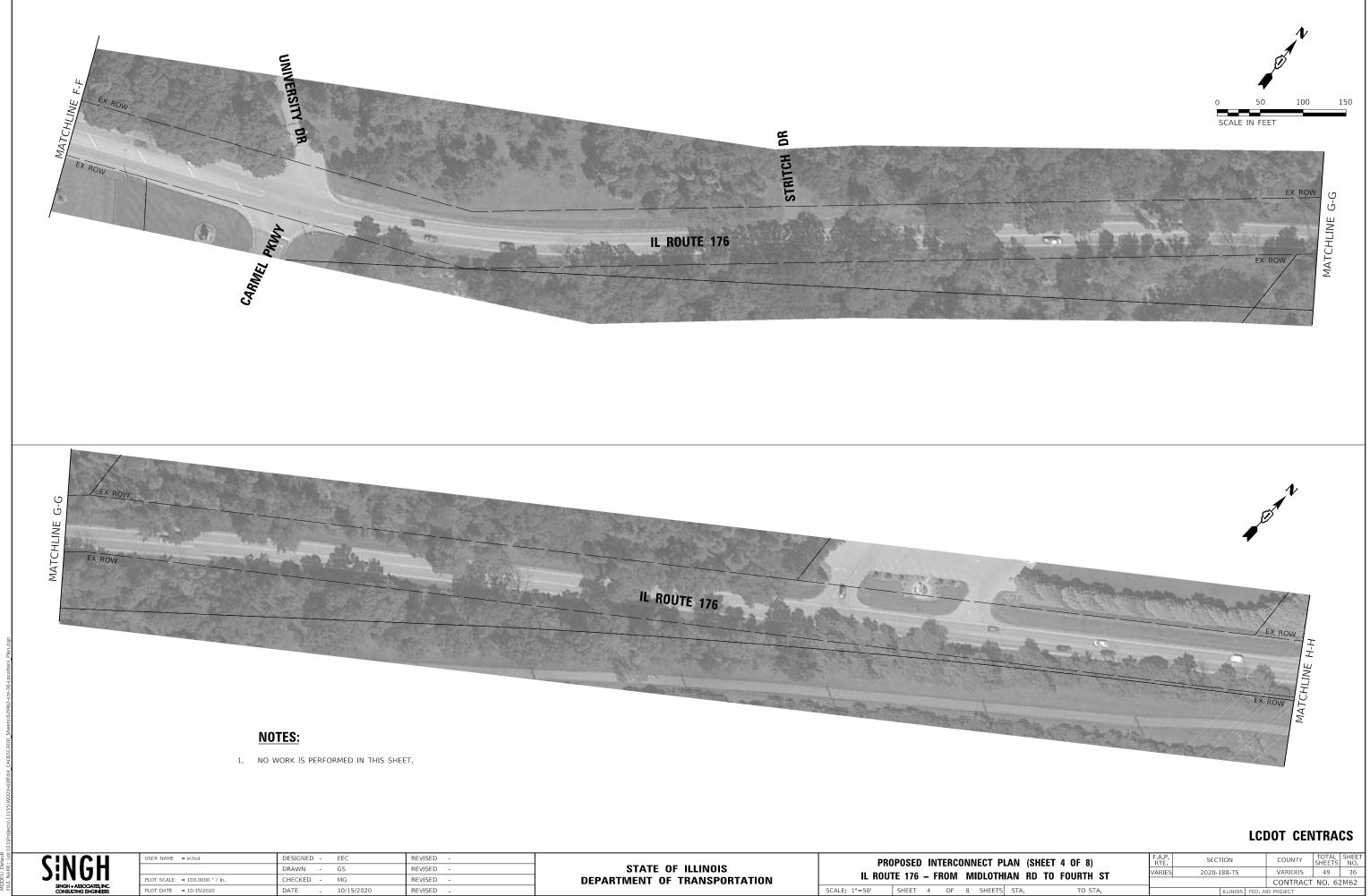
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN (SHEET 3 OF 8)										
IL ROU	ΓE 176	– FRC	M	МІ	DLOTH	IAN	RD T	O FOURT	TH ST	
SCALE: 1"=50'	SHEET	3 (OF	8	SHEETS	STA.		TO	STA.	

F.A.P. RTE	SECT	ION		COUNTY	TOTAL SHEETS	SHEE NO.
/ARIES	2020-188-TS			VARIOUS	49	35
				CONTRACT	NO. 6	2M62
		ILLINOIS	FED. A	ID PROJECT		

MODEL: Default

55\WO20-008\04_CADD\CADD_Sh

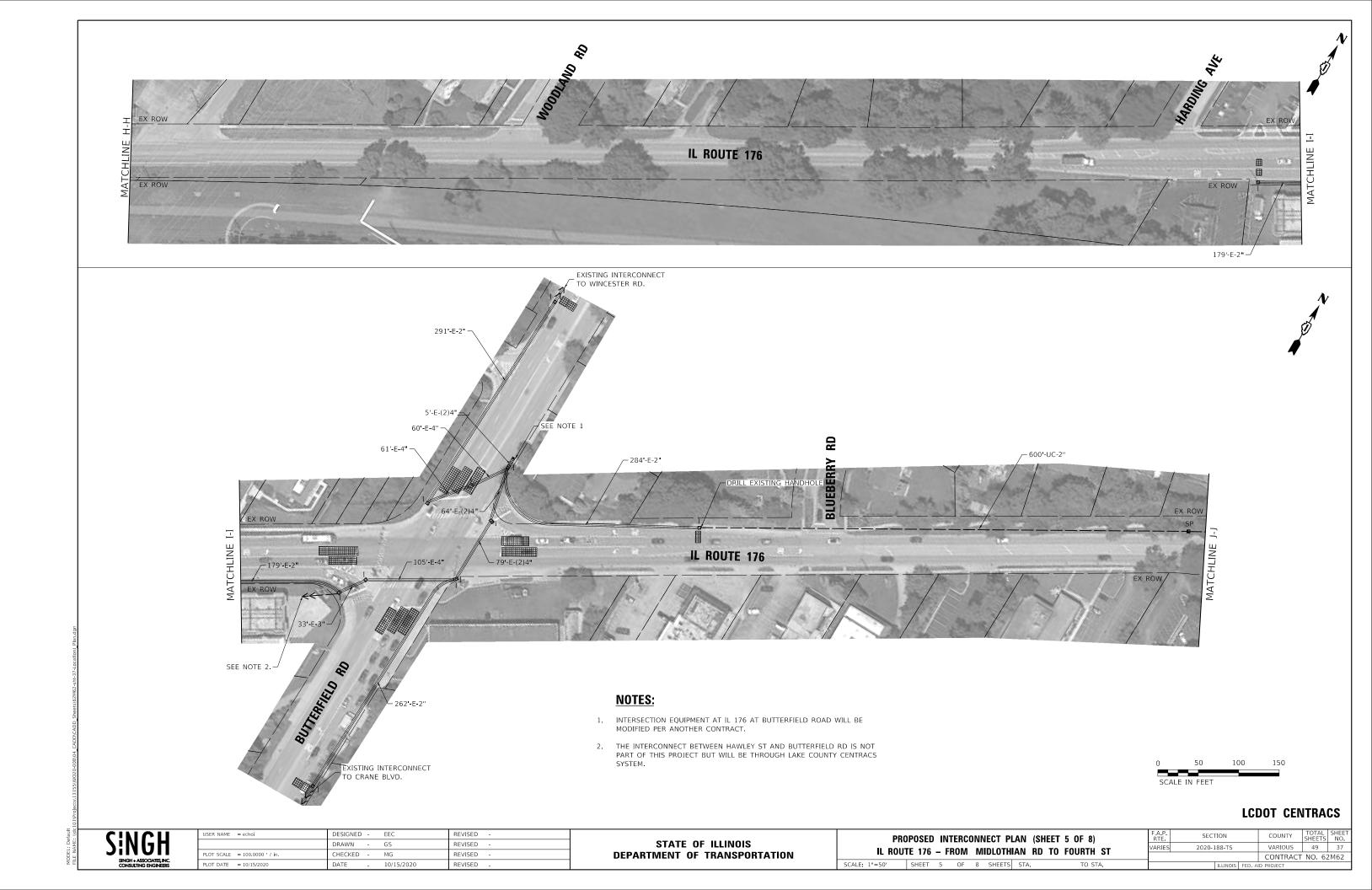


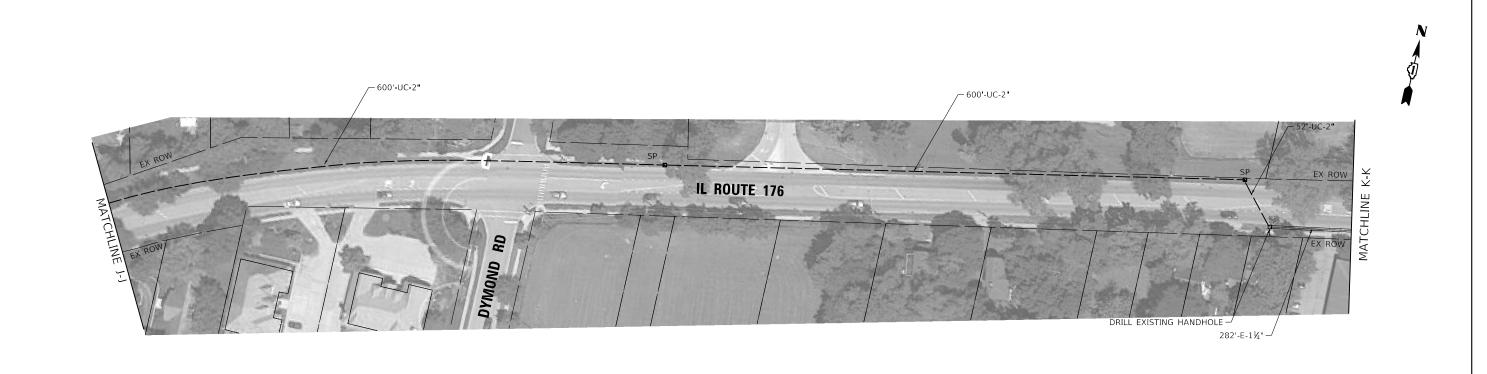
DRAWN -GS REVISED -LOT SCALE = 100.0000 / in. CHECKED -MG REVISED PLOT DATE = 10/15/2020

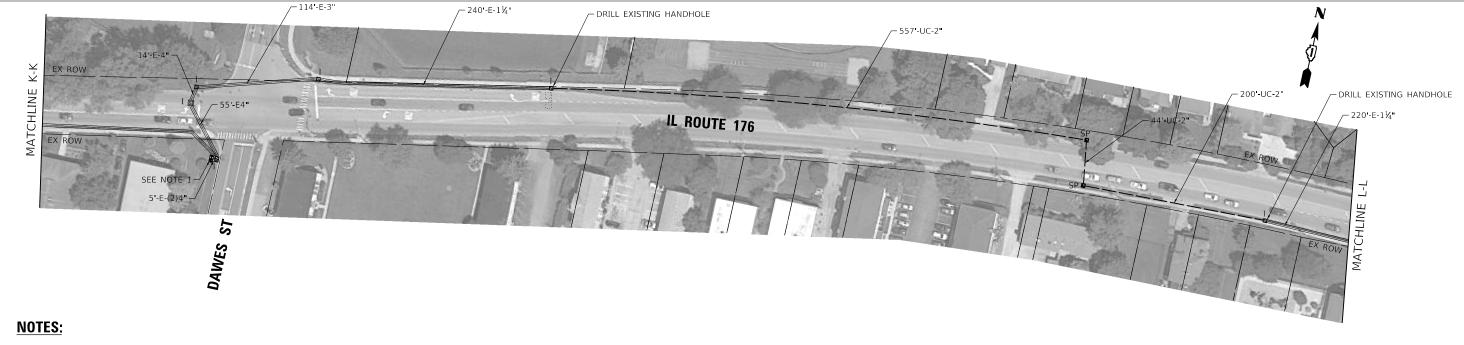
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST SCALE: 1"=50' SHEET 4 OF 8 SHEETS STA.

VARIOUS 49 36
CONTRACT NO. 62M62 2020-188-TS







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

1 EACH CONTROLLER AND CABINET (COMPLETE)
1 EACH UNINTERRUPTIBLE POWER SUPPLY

	50	100	150
CALE I	N FEET		



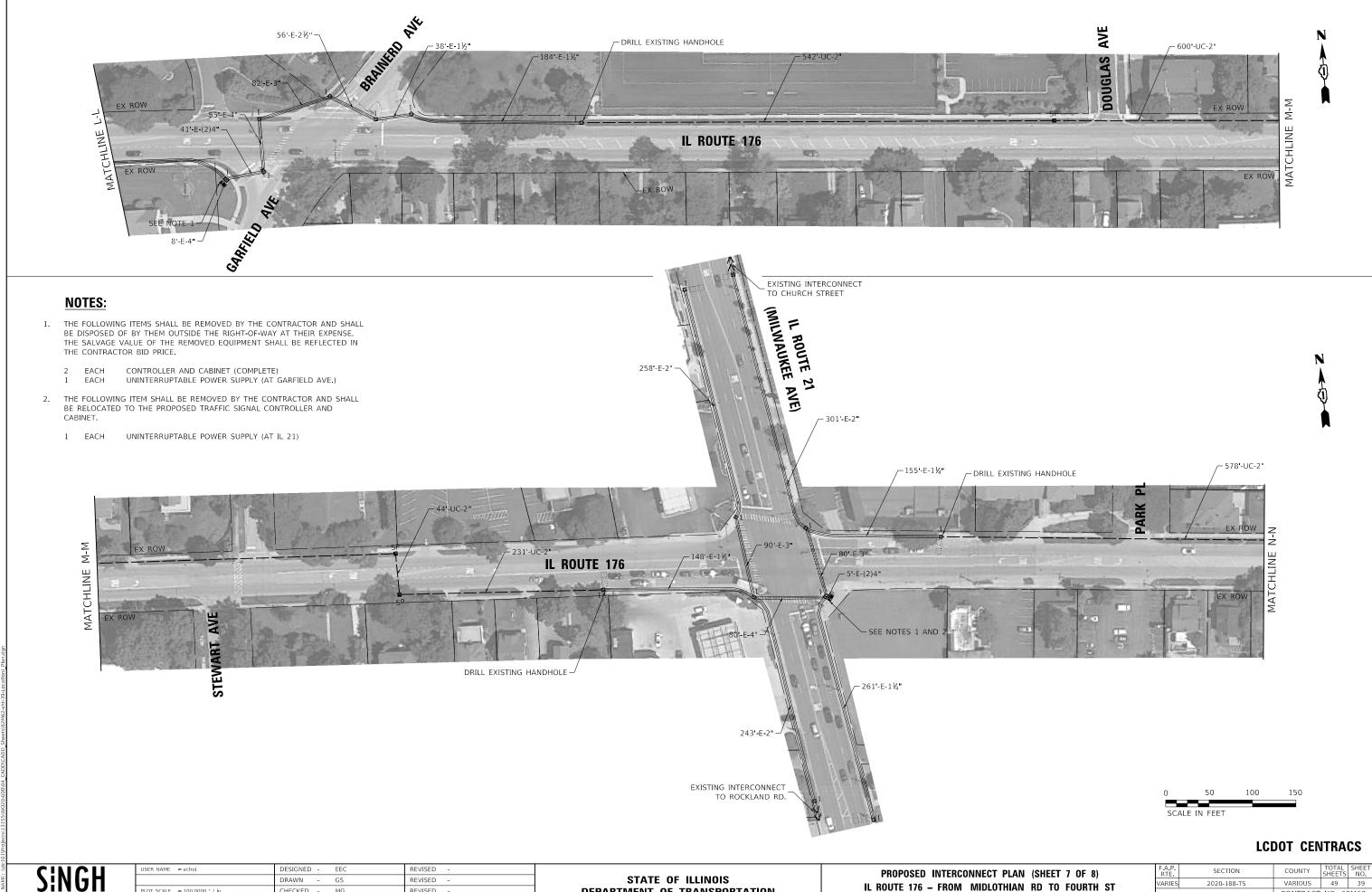


USER NAME = echoi	DESIGNED -	EEC	REVISED	-
	DRAWN -	GS	REVISED	=
PLOT SCALE = 100.0000 ' / in.	CHECKED -	MG	REVISED	=
PLOT DATE = 10/15/2020	DATE -	10/15/2020	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRO	POSED	IN	TERCO	NN	IECT PI	.AN	(SH	EET	6 OF 8)	
IL ROU	ΓE 176	– F	ROM	M	IDLOTH	AN	RD	T0	FOURTH S	ST
SCALE: 1"=50'	SHEET	6	OF	8	SHEETS	STA.			TO STA.	

λ.Ρ. ΓΕ	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
RIES	2020-188-TS		VARIOUS	49	38
		CONTRACT	NO. 62	2M62	
	ILLINOIS F	ED. AI	ID PROJECT		



SINGH

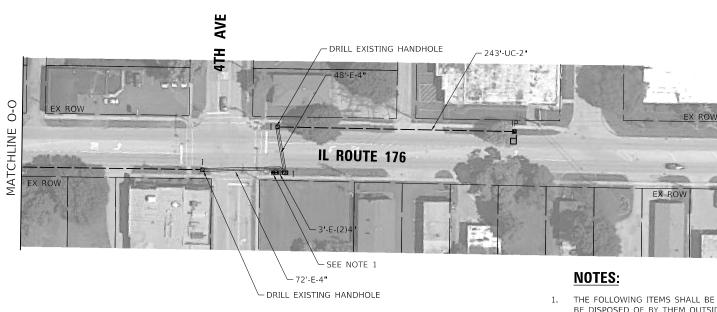
LOT SCALE = 100.0000 ' / in. HECKED -MG REVISED PLOT DATE = 10/15/2020 DATE REVISED 10/15/2020

DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN									7 OF 8)	
IL ROU	ΓE 176	– F	ROM	M	IDLOTHI	AN	RD	T0	FOURTH ST	
SCALE: 1"=50'	SHEET	7	OF	8	SHEETS	STA.			TO STA.	

CONTRACT NO. 62M62





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

1 EACH CONTROLLER AND CABINET (COMPLETE)

THE EXISTING UNINTERRUPTIBLE POWER SUPPLY IS TO REMAIN.

0	50	100	150
SCALE	IN FEET		

LCDOT CENTRACS

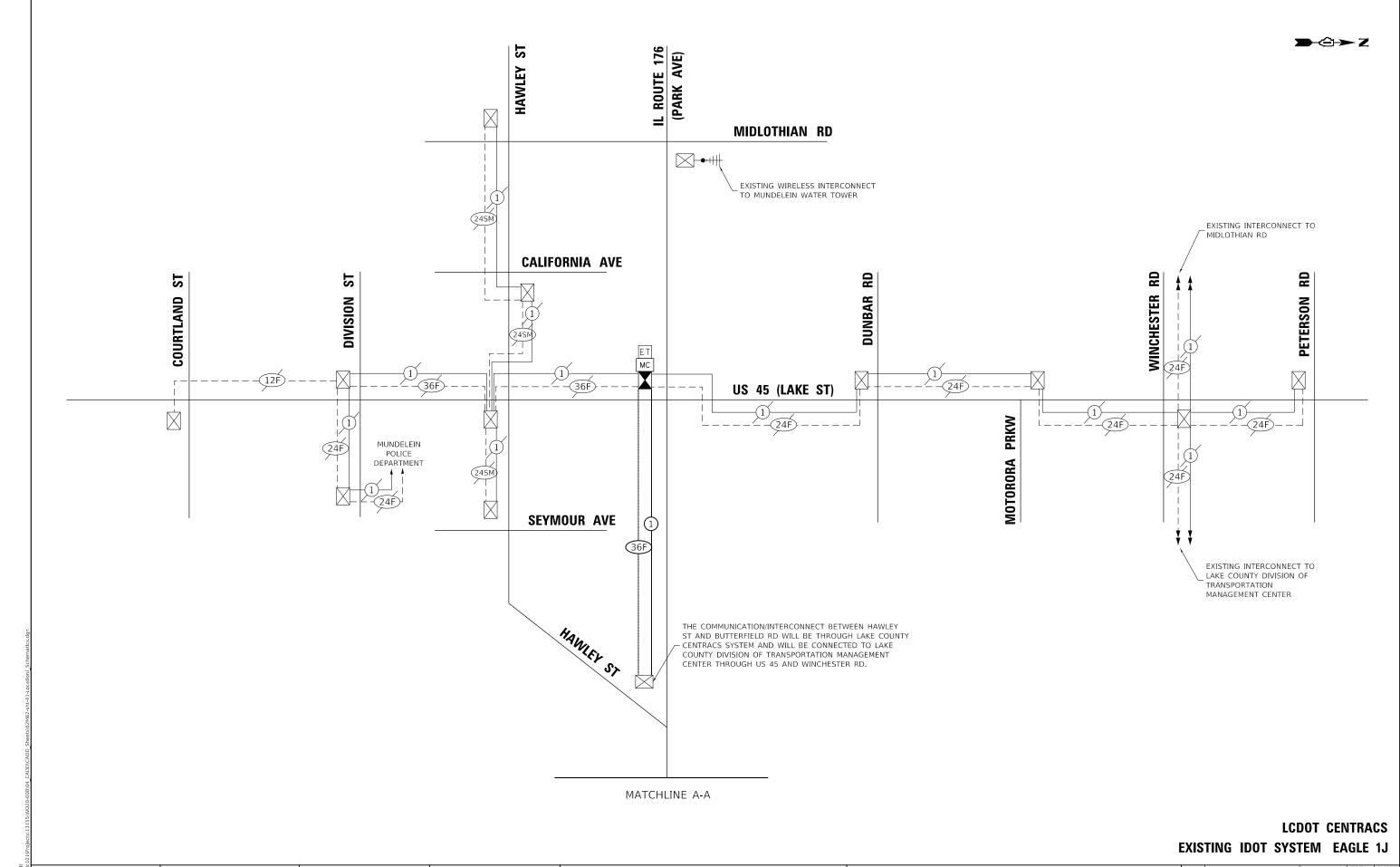


USER NAME = echoi	DESIGNED	-	EEC	REVISED -	
	DRAWN	-	GS	REVISED -	
PLOT SCALE = 100.0000 / in.	CHECKED	-	MG	REVISED -	
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED -	
					_

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

						•	IEET 8 OF 8) To fourth st
SCALE: 1"=50"	SHEET	8	OF	8	SHEETS	STA.	TO STA.

F.A.P. RTE	SECT	ΠΟN		COUNTY	TOTAL SHEETS	SHEE NO.	
/ARIES	2020-1	188-TS		VARIOUS	49	40	
			CONTRACT	NO. 62	2M62		
		ID PROJECT					





STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT SCHEMATIC (SHEET 1 OF 3)

IL ROUTE 176 - FROM MIDLOTHIAN RD TO 4TH AVE

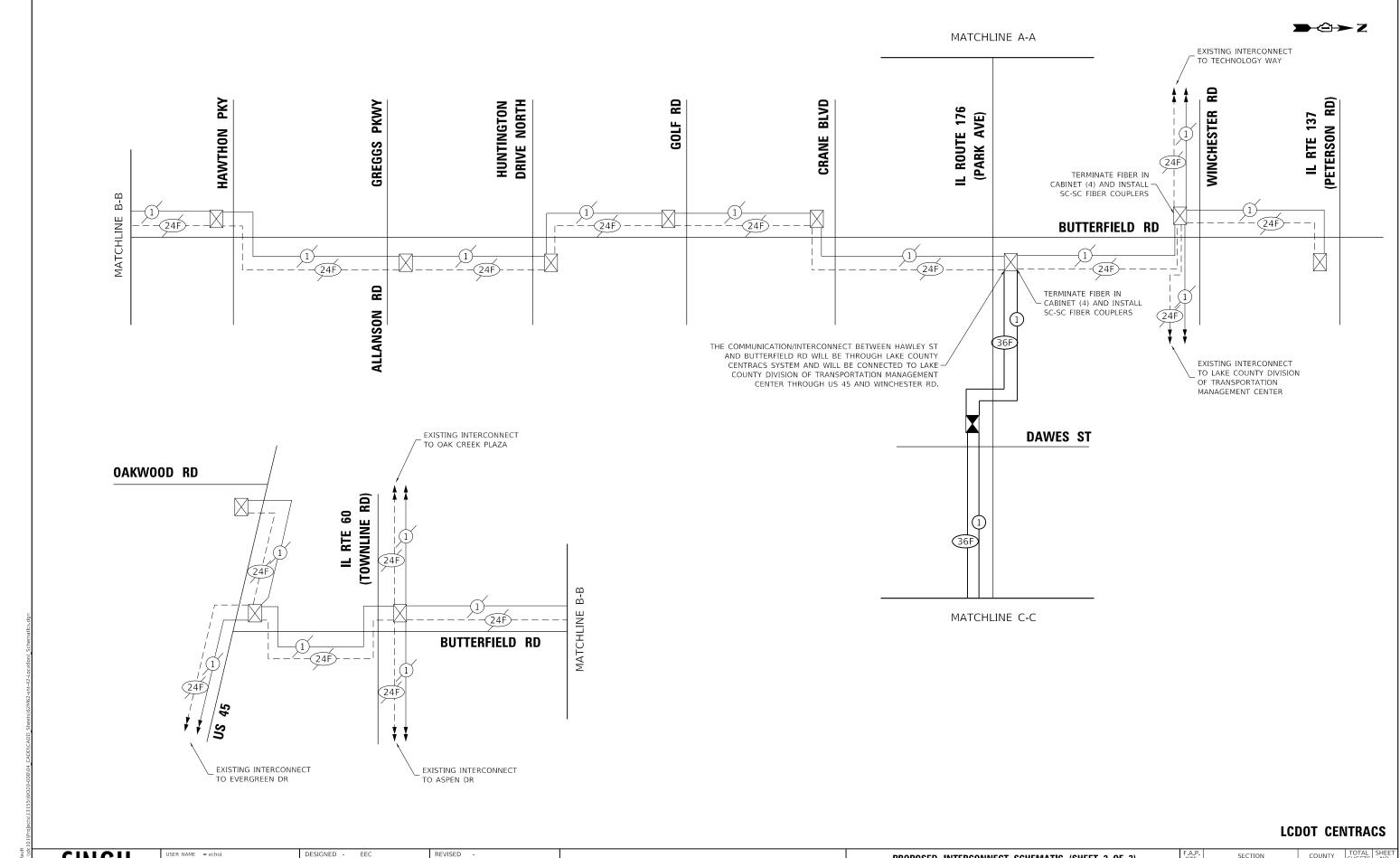
SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.P. SECTION COUNTY TOTAL SHEETS NO.

VARIES 2020-188-TS VARIOUS 49 41

CONTRACT NO. 62 M62

| ILLINOIS | FED. AID PROJECT



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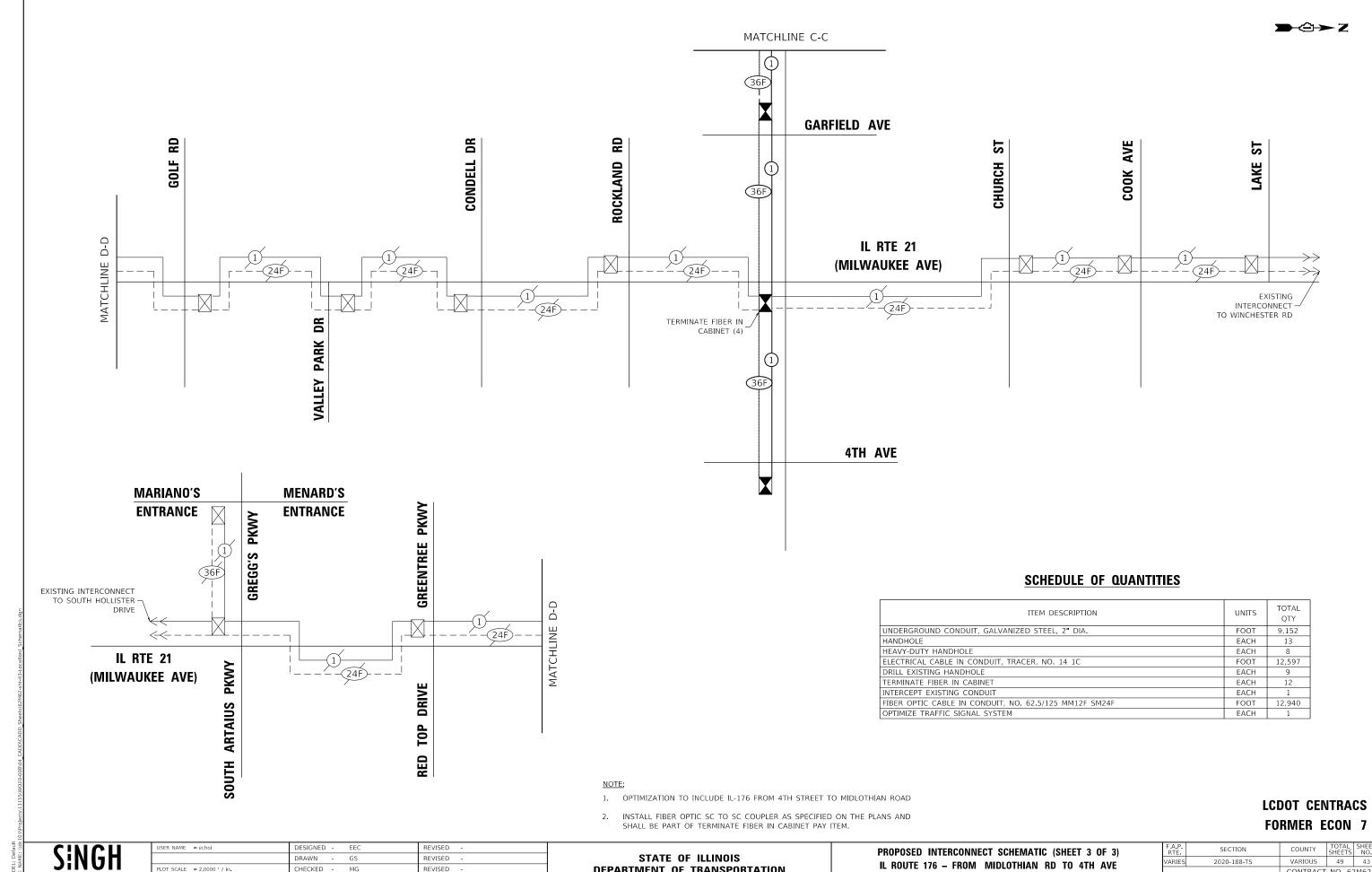
SINGH - ASSOCIATES, INC. CONSULTING ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT SCHEMATIC (SHEET 2 OF 3)

IL ROUTE 176 – FROM MIDLOTHIAN RD TO 4TH AVE

S SHEET 2 OF 3 SHEETS STA. TO STA.



DEPARTMENT OF TRANSPORTATION

VARIOUS 49 43

CONTRACT NO. 62M62

2020-188-TS

IL ROUTE 176 - FROM MIDLOTHIAN RD TO 4TH AVE

SHEET 3 OF 3 SHEETS STA.

DRAWN

DATE

LOT SCALE = 2.0000 / in.

PLOT DATE = 10/15/2020

GS

10/15/2020

REVISED

REVISED

REVISED



EXISTING CONNECTOR /
EXISTING FIBER

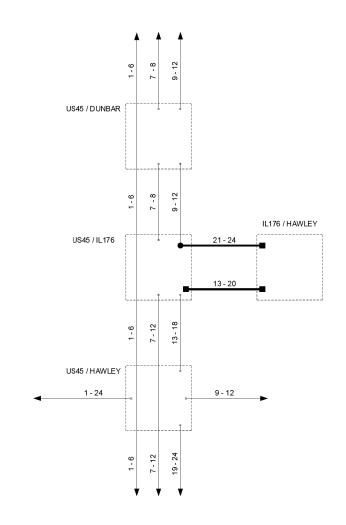
NEW CONNECTOR /
EXISTING FIBER

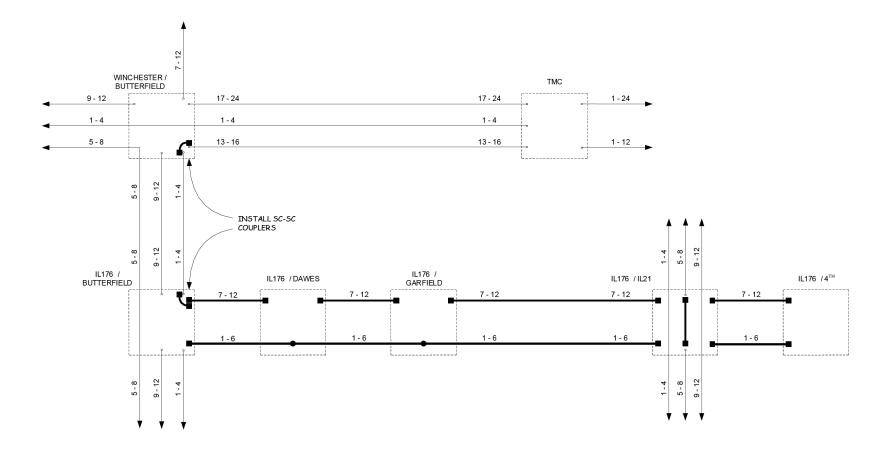
EXISTING F USION SPLICE /
EXISTING FIBER

NEW FUSION SPLICE /
EXISTING FIBER

NEW CONNECTOR /
NEW FIBER

NEW FUSION SPLICE /
NEW FIBER





SCALE: NTS

PROPOSED

DESIGNED - DG	REVISED -					ROUTE	SECTION	ROUTE SECTION	T SHEETS
DRAWN - YM	REVISED -	LAKE COUNTY		FIBER SPLICING DIAGRAM		·	T^{-1}		
CHECKED - DG	REVISED -	DIVISION OF TRANSPORTATION					'		
DATE 2020.10.12	REVISED -		SCALE N/A						

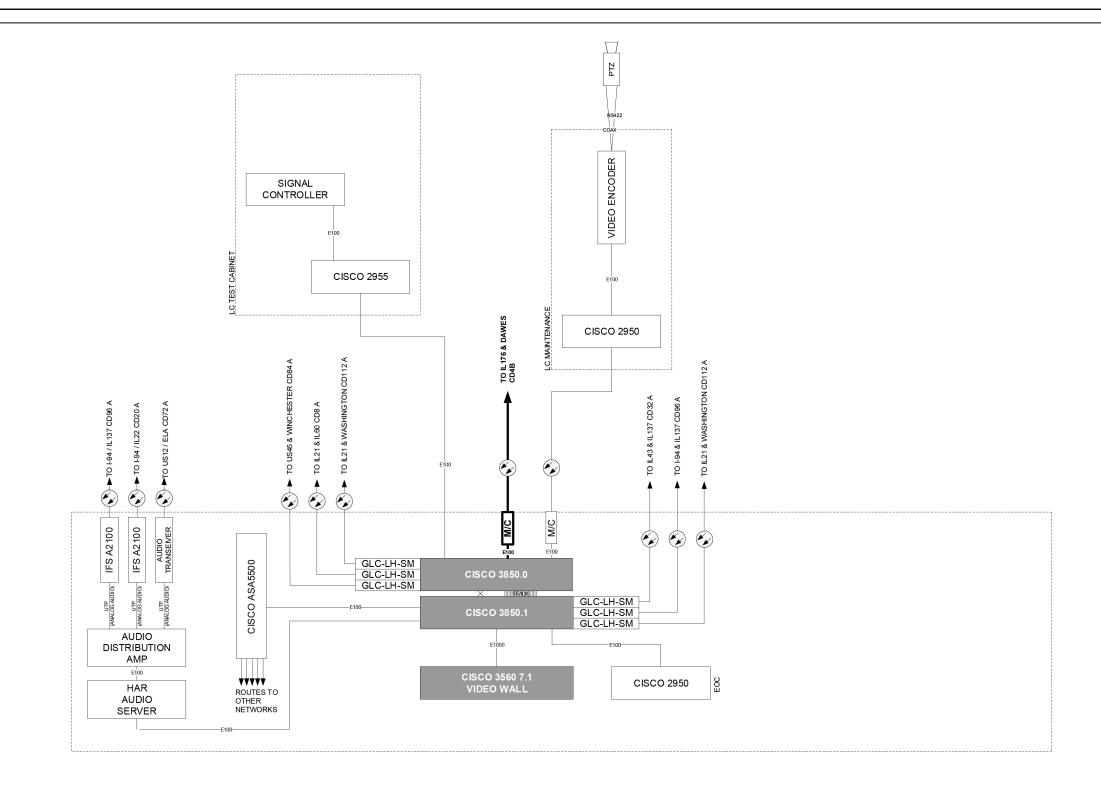
SINGH + ASSOCIATES, INC.

USER NAME = echoi	DESIGNED -	EEC	REVISED -	
	DRAWN -	GS	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED -	MG	REVISED -	
PLOT DATE = 10/15/2020	DATE -	10/15/2020	REVISED -	

STATI	E OF	- ILLINOIS	
DEPARTMENT	0F	TRANSPORTATION	

LAKE COUNTY DEPARTMENT OF TRANSPORTATION	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PROPOSED FIBER SPLICING DIAGRAM		2020-188-TS	VARIOUS	49	44
THOI OSED TIDEN SI EIGING DIAGNAM			CONTRACT	NO. 62	2M62
SHEET 1 OF 4 SHEETS STA TO STA		TILLINOIS FED AT	D DDOIECT		

SARSONS



PROPOSED

DESIGNED - DG	REVISED -			40		ROUTE	SECTIO	N ROUTE SECTION	SHEET	SHEETS	
DRAWN - YM	REVISED -	LAKE COUNTY		TMC			T 4A				
CHECKED - DG	REVISED -	DIVISION OF TRANSPORTATION	TIVIC					44			
DATE 2020.10.12	REVISED -		SCALE N/A								

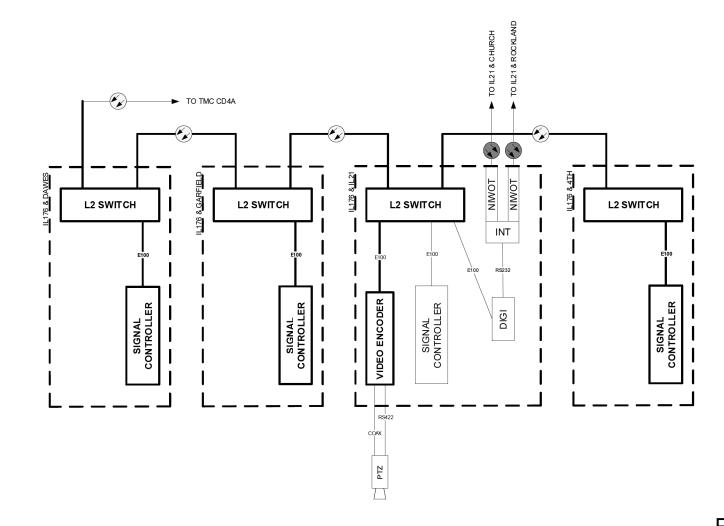
SCALE: NTS



USER NAME = echoi	DESIGNED	-	EEC	REVISED -
	DRAWN	-	GS	REVISED -
PLOT SCALE = 2.0000 / in.	CHECKED	-	MG	REVISED -
PLOT DATE = 10/15/2020	DATE	-	10/15/2020	REVISED -

STATI	E OF	: ILLINOIS
DEPARTMENT	OF	TRANSPORTATION

LAKE COUNTY DEPARTMENT OF TRANSPORTATION	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PROPOSED FIBER OPTIC SCHEMATIC		2020-188-TS	VARIOUS	49	45
PROPUSED FIDER OFFIC SCHEWARD			CONTRACT	NO. 62	2M62
SHEET 2 OF 4 SHEETS STA. TO STA.		TILLINOIS FED AT	ID PROJECT		-



PROPOSED

DESIGNED - DG	REVISED -			AR.		ROUTE	SECTION	ROUTE SECTION	SHEET	
DRAWN - YM	REVISED -	LAKE COUNTY		IL176 from DAWES to 4TH					10	
CHECKED - DG	REVISED -	DIVISION OF TRANSPORTATION		IL 176 IIOM DAWES to	4111				40	
DATE 2020.10.12	REVISED -		SCALE N/A							

SINGH - ASSOCIATES, INC. CONSULTING ENGINEERS

 USER NAME
 = echoi
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 EEC
 REVISED

 DRAWN
 GS
 REVISED

 PLOT SCALE
 = 2,0000 ' / in.
 CHECKED
 MG
 REVISED

 PLOT DATE
 = 10/15/2020
 DATE
 10/15/2020
 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

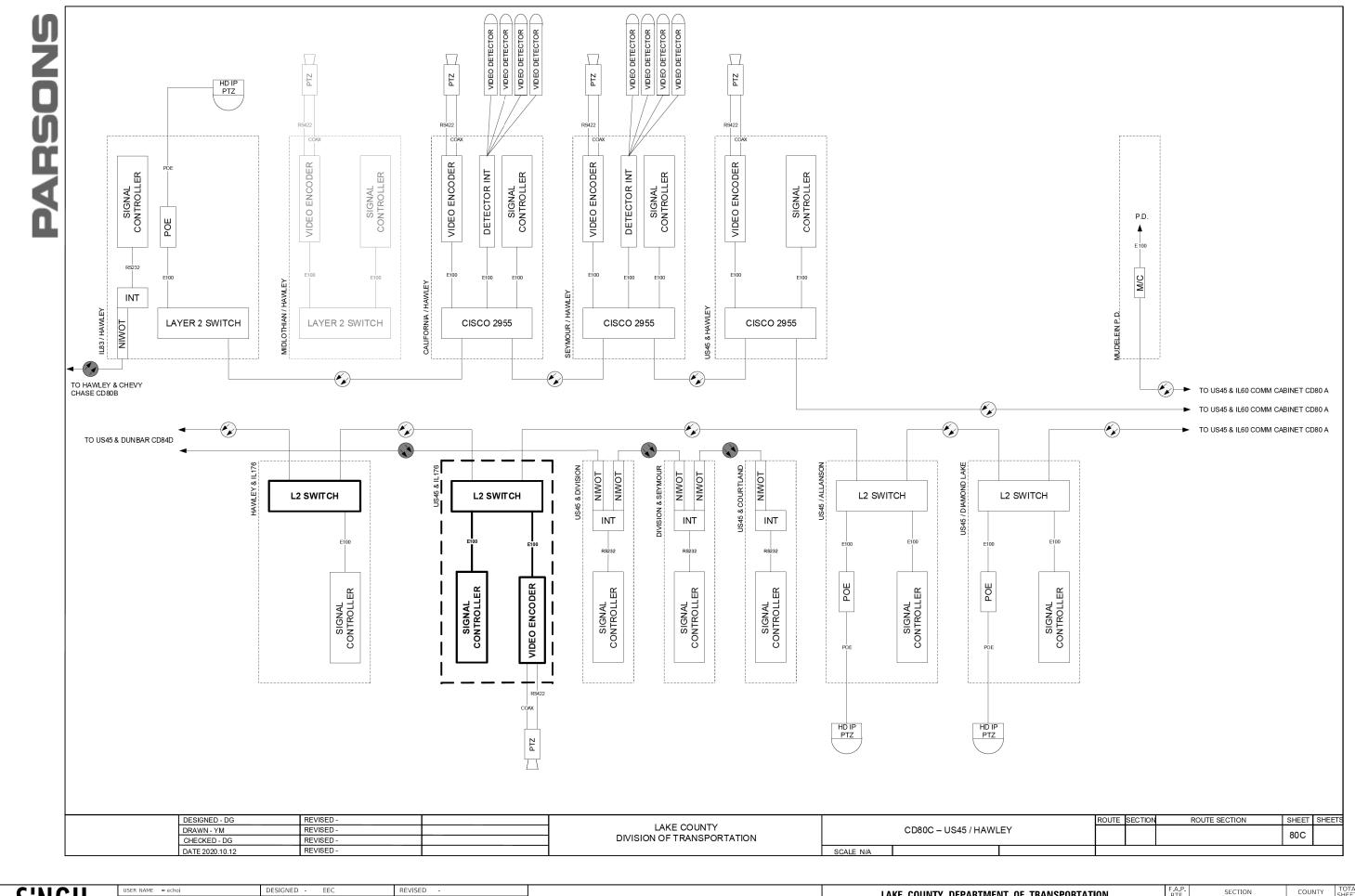
LAKE COUNTY DEPARTMENT OF TRANSPORTATION PROPOSED FIBER OPTIC SCHEMATIC

SCALE: NTS SHEET 3 OF 4 SHEETS STA. TO STA.

 F.A.P. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS NO.

 VARIES
 2020-188-TS
 VARIOUS
 49
 46

 CONTRACT NO.
 62M62

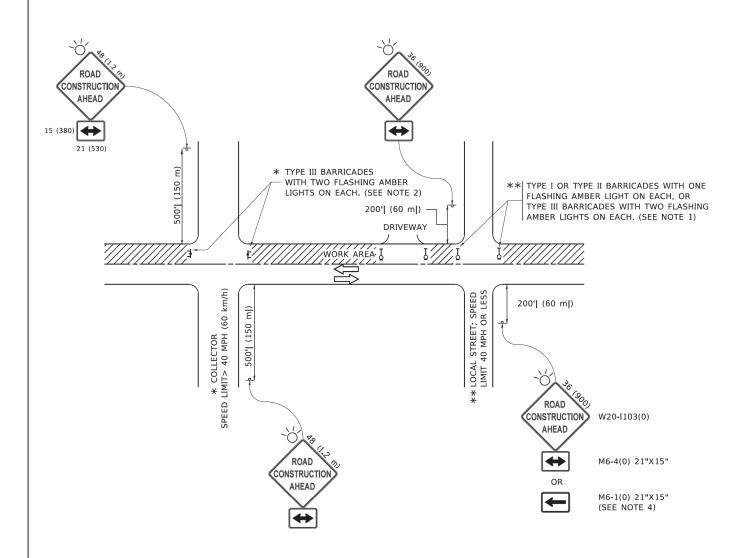


SINGH SINGH+ASSOCIATES, INC. CONSULTING ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DEPARTMENT OF TRANSPORTATION
PROPOSED FIBER OPTIC SCHEMATIC

SCALE: NTS SHEET 4 OF 4 SHEETS STA. TO STA.



NOTES:

- 1. 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:
- a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- a) 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.
- THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY
 b) BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION
 OF THE CLOSED PORTION.
- 3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710)
 IN HEIGHT
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE
 4. SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL
 BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

- 5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- 6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

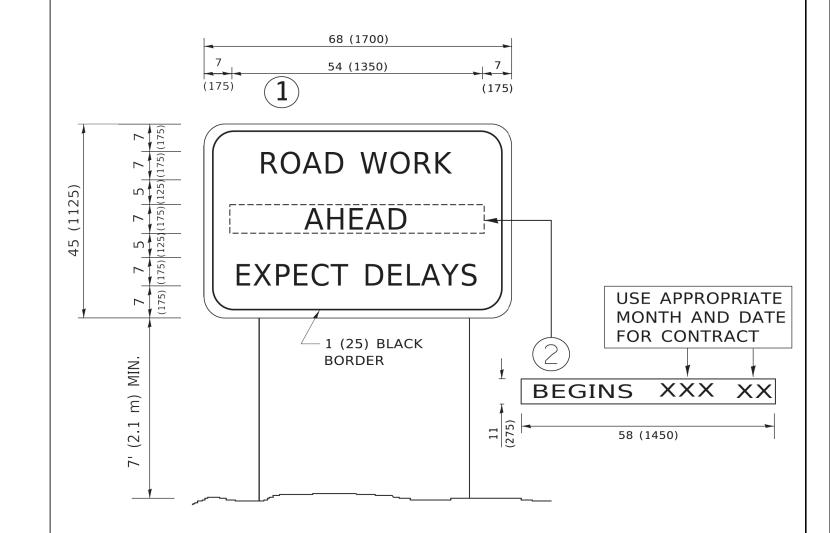
All dimensions are in inches (millimeters) unless otherwise shown.

USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
	DRAWN -	REVISED - T. RAMMACHER 01-06-00
PLOT SCALE = 50,0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
PLOT DATE = 3/4/2019	DATE - 06-89	REVISED _ A. SCHUETZE 09-15-16

STATE	OF ILLINOIS
DEPARTMENT O	F TRANSPORTATION

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	SHEET	1	OF	1	SHEETS	STA.	TO STA.	

		ILLINOIS	FED. A	ID PROJECT		
TC-10			CONTRACT	NO. 62	2M6	
2020-188-TS				49	48	
RTE. SECTION			COUNTY	TOTAL SHEETS	SHE	



NOTES:

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

SHEET

6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)

SCALE: NONE

7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

USER NAME = footemj	DESIGNED -	REVISED	- R. MIRS 09-15-97
	DRAWN -	REVISED	- R. MIRS 12-11-97
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED	-T. RAMMACHER 02-02-99
PLOT DATE = 3/4/2019	DATE -	REVISED	- C. JUCIUS 01-31-07

STATI	E OF	- ILLINOIS
DEPARTMENT	0F	TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN				F.A.P. RTE.	SECTION
					2020-188-TS
					TC-22
1	OF 1	SHEETS STA.	TO STA.		ILLINOIS FED.