

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-TS	VARIOUS	49	1
		ILLINOIS	CONTRACT NO. 62M62	

PROPOSED HIGHWAY PLANS

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

FOR INDEX OF SHEETS, SEE SHEET NO. 2

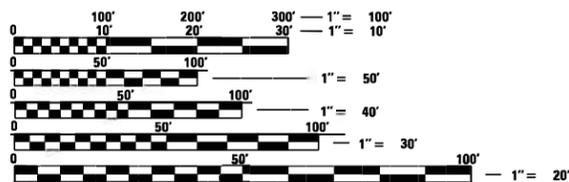
DESIGN DESTINATIONS **POSTED SPEEDS**

LOCATION C	
IL-25 FROM ST CHARLES STREET TO LIBERTY STREET 13,200 (2017 ADT)	30 MPH
LOCATION I	
IL-176 FROM IL-31 TO SMITH ROAD 15,700 (2017 ADT)	40 MPH
LOCATION J	
IL-176 FROM MIDLOTHIAN ROAD TO 4TH STREET 14,800 (2017 ADT)	30 MPH



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, INC.
EDDIE E. CHOI
062-069424
EXP. DATE: 11/30/2021

Eddie Choi

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS
230 WEST MONROE ST
SUITE 1400
CHICAGO, IL 60606
NO. 184.001139-0002

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Oct. 14* 20 *20*

Anthony J. Ramirez
DEPUTY DIRECTOR OF HIGHWAYS, REGIONAL ENGINEER
December 4, 2020

Sae E. Choi
ENGINEER OF DESIGN AND ENVIRONMENT
December 4, 2020

James J. ...
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

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15	13230	CABLE PLAN - IL 25 AT LIBERTY
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28	14020	CABLE PLAN - IL 176 AT BUTTERFIELD
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HIGHWAY STANDARDS

STD. NO.	TITLE
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-08	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
814001-03	HANDHOLES
814006-03	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
878001-11	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 REQUIRED.

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 RESPONSIBILITY 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.

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

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5		49	2
			CONTRACT NO. 62M62	
		ILLINOIS	FED. AID PROJECT	

REV-SEP

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				80% FED 20% IDOT	80% FED 20% IDOT	80% FED 20% IDOT
				KANE COUNTY	MCHENRY COUNTY	LAKE COUNTY
				0021 URBAN	0021 URBAN	0021 URBAN
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	60	5	10	45
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	5	1	1	3
* 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1	0.33	0.33	0.33
* 66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1	0.33	0.33	0.33
* 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
81400200	HEAVY-DUTY HANDHOLE	EACH	11		3	8
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	11	2	2	7

REV-SEP

* SPECIALTY ITEM

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	DATE - 10/15/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	4
			CONTRACT NO. 62M62	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				80% FED 20% IDOT	80% FED 20% IDOT	80% FED 20% IDOT
				KANE COUNTY	MCHENRY COUNTY	LAKE COUNTY
				0021 URBAN	0021 URBAN	0021 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	FOOT	16,767	360	3,810	12,597
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1,146			1,146
87900200	DRILL EXISTING HANDHOLE	EACH	12	2		10
88500100	INDUCTIVE LOOP DETECTOR	EACH	55			55
88600100	DETECTOR LOOP, TYPE I	FOOT	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	FOOT	868		868	
X1400216	LAYER II (DATALINK) SWITCH	EACH	6			6

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	5
			CONTRACT NO. 62M62	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				80% FED 20% IDOT	80% FED 20% IDOT	80% FED 20% IDOT
				KANE COUNTY	MCHENRY COUNTY	LAKE COUNTY
				0021 URBAN	0021 URBAN	0021 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

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	6
			CONTRACT NO. 62M62	
ILLINOIS FED. AID PROJECT				

REV-SEP

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
CONTROLLER CABINET			HANDHOLE -SQUARE -ROUND	 	 	SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD		
COMMUNICATION CABINET			HEAVY DUTY HANDHOLE -SQUARE -ROUND	 	 	SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		
MASTER CONTROLLER			DOUBLE HANDHOLE			PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
MASTER MASTER CONTROLLER			JUNCTION BOX			PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
UNINTERRUPTABLE POWER SUPPLY			RAILROAD CANTILEVER MAST ARM			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
SERVICE INSTALLATION -(P) POLE MOUNTED			RAILROAD FLASHING SIGNAL			NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED		
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	 	 	RAILROAD CROSSING GATE			GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)		
TELEPHONE CONNECTION			RAILROAD CROSSBUCK			ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
STEEL MAST ARM ASSEMBLY AND POLE			RAILROAD CONTROLLER CABINET			COAXIAL CABLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL			VENDOR CABLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		 	SYSTEM ITEM			FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		
WOOD POLE			INTERSECTION ITEM			GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE		
GUY WIRE			REMOVE ITEM					
SIGNAL HEAD			RELOCATE ITEM					
SIGNAL HEAD WITH BACKPLATE			ABANDON ITEM					
SIGNAL HEAD OPTICALLY PROGRAMMED			CONTROLLER CABINET AND FOUNDATION TO BE REMOVED					
FLASHER INSTALLATION -(FS) SOLAR POWERED	 	 	MAST ARM POLE AND FOUNDATION TO BE REMOVED					
PEDESTRIAN SIGNAL HEAD			SIGNAL POST AND FOUNDATION TO BE REMOVED					
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			DETECTOR LOOP, TYPE I					
RADAR DETECTION SENSOR			PREFORMED DETECTOR LOOP					
VIDEO DETECTION CAMERA			SAMPLING (SYSTEM) DETECTOR					
RADAR/VIDEO DETECTION ZONE			INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
PAN, TILT, ZOOM (PTZ) CAMERA			QUEUE AND SAMPLING (SYSTEM) DETECTOR					
EMERGENCY VEHICLE LIGHT DETECTOR			WIRELESS DETECTOR SENSOR					
CONFIRMATION BEACON			WIRELESS ACCESS POINT					
WIRELESS INTERCONNECT								
WIRELESS INTERCONNECT RADIO REPEATER								

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

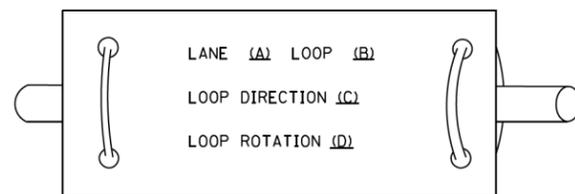
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET 1	OF 7 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2020-188-T5		49	7
TS-05		CONTRACT NO. 62M62		
ILLINOIS FED. AID PROJECT				

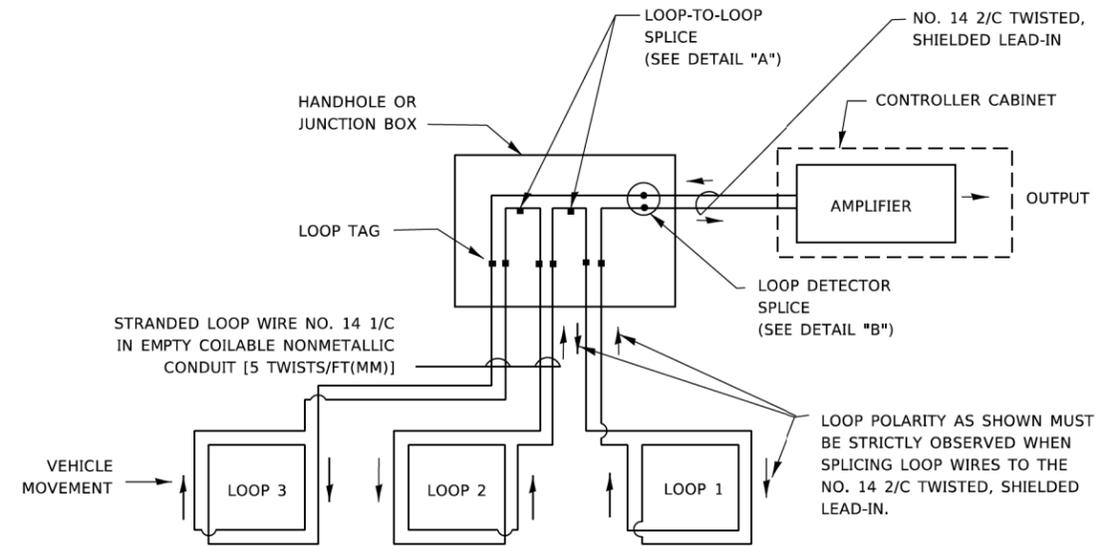
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

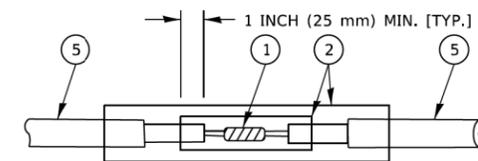


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

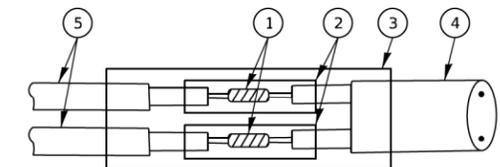


DETECTOR LOOP WIRING SCHEMATIC

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

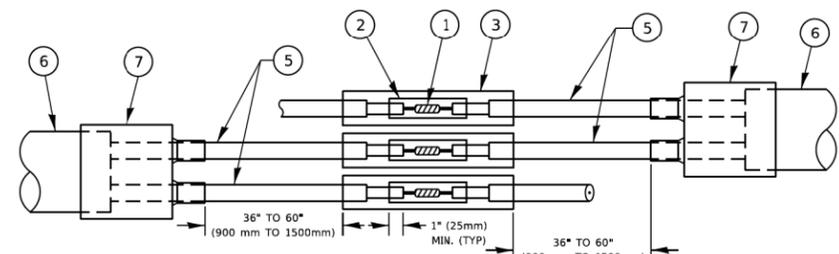


DETAIL "A"
LOOP-TO-LOOP SPLICE

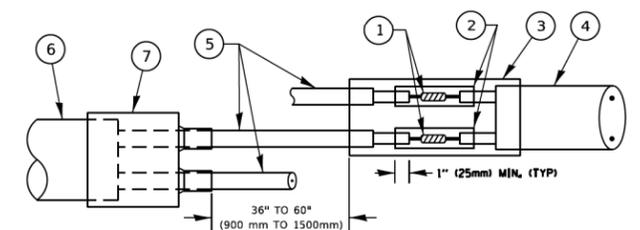


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PREFORMED LOOP

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 LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PREFORMED LOOP
- 6 XL POLYOLEFIN 2 CONDUCTOR
- 7 BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

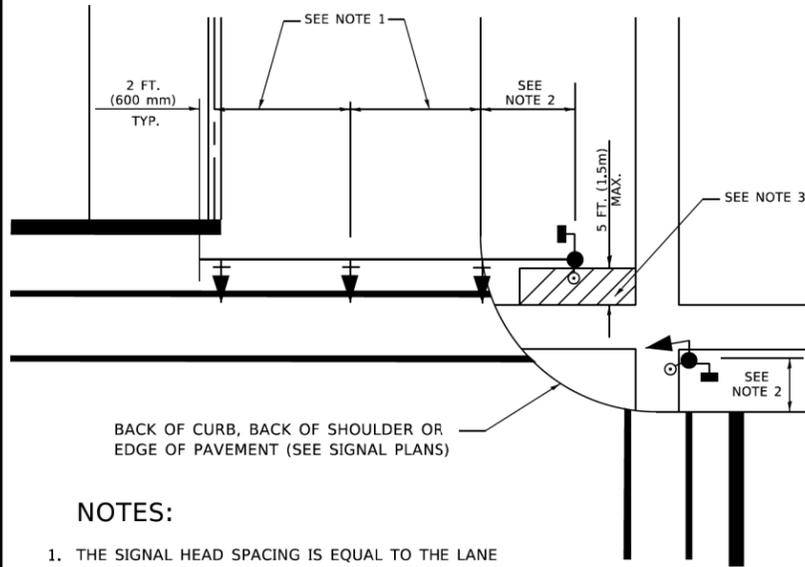
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2020-188-T5		49	8
TS-05			CONTRACT NO. 62M62	
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

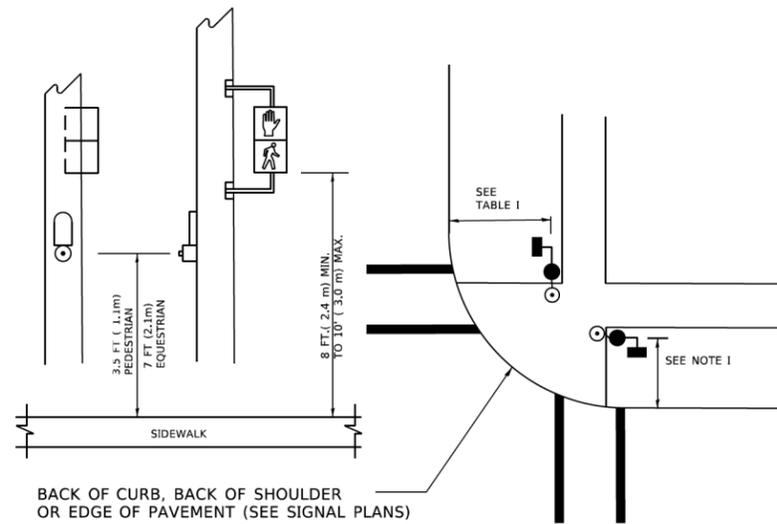
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

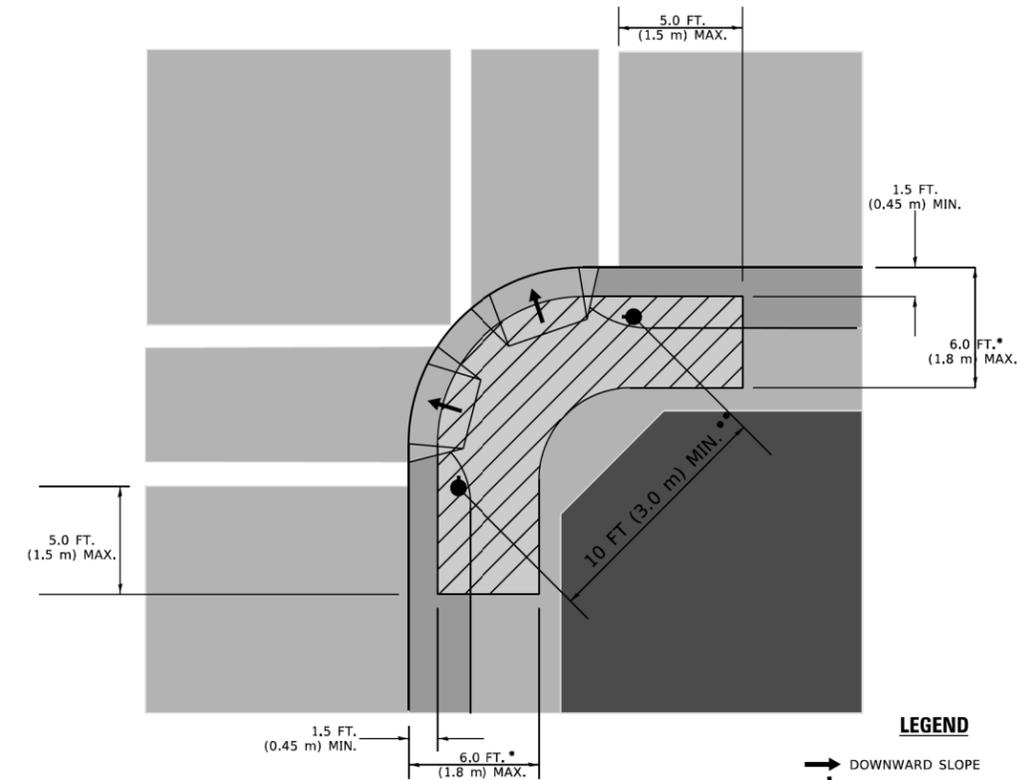
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

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

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

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

NOTES:

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

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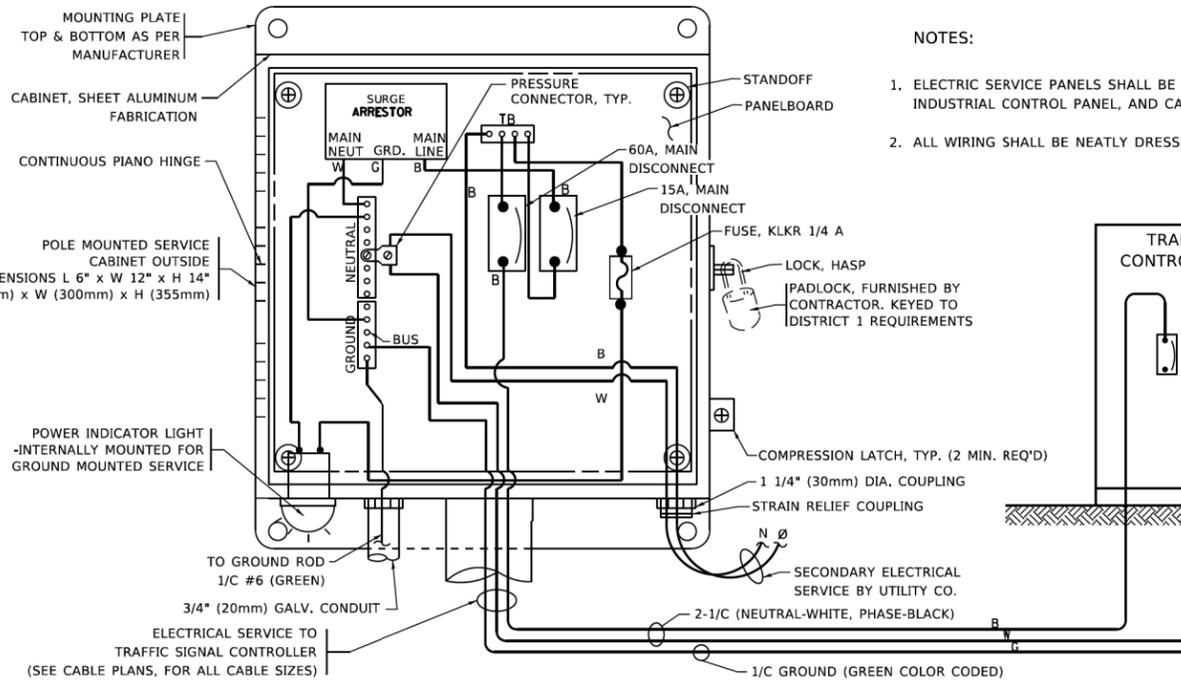
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

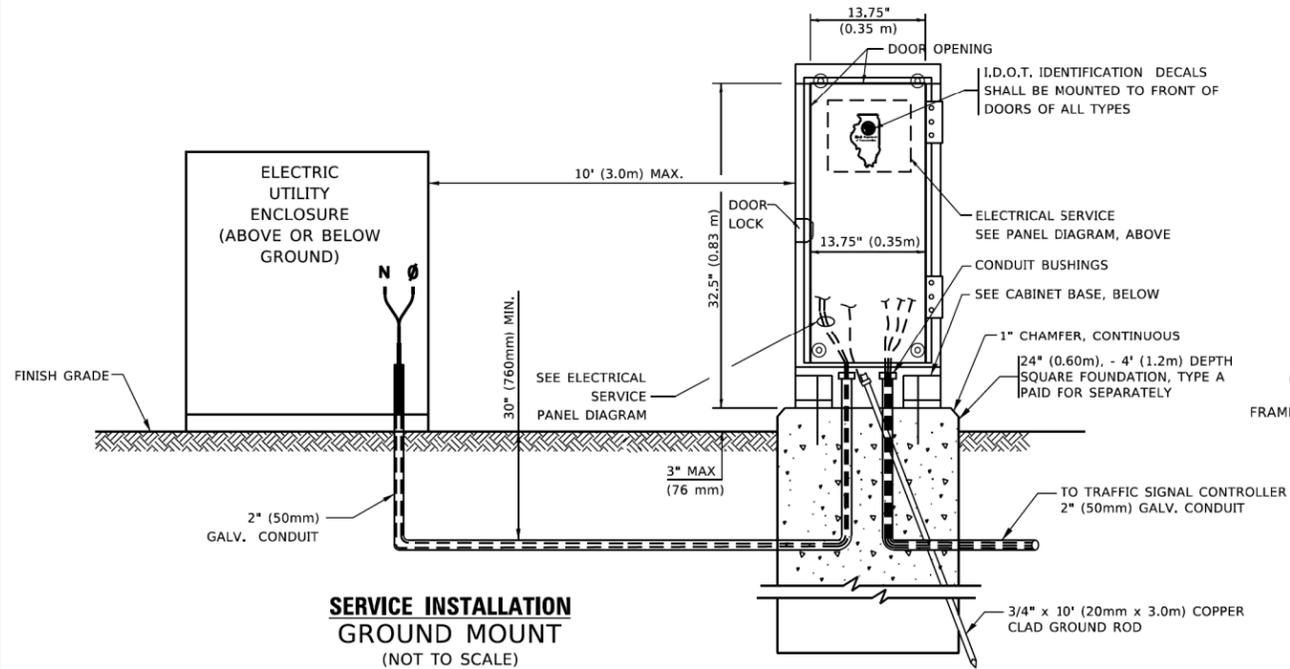
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET 3 OF 7 SHEETS STA. TO STA.

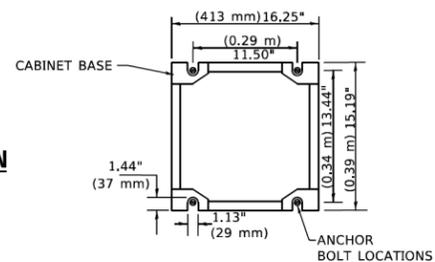
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VAR	2020-188-T5		49	9
TS-05		CONTRACT NO. 62M62		
ILLINOIS FED. AID PROJECT				



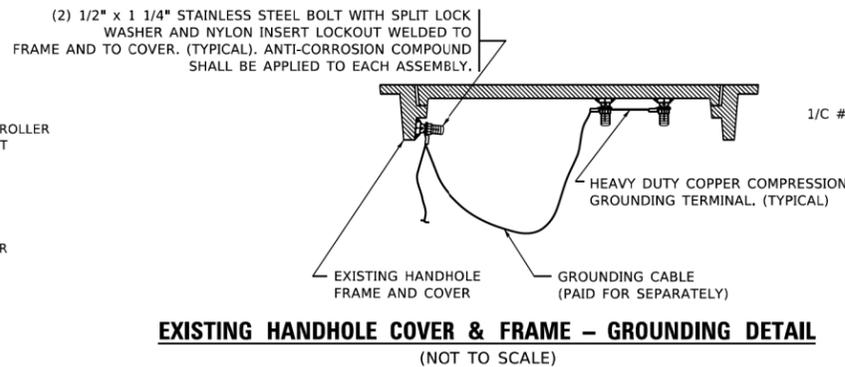
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



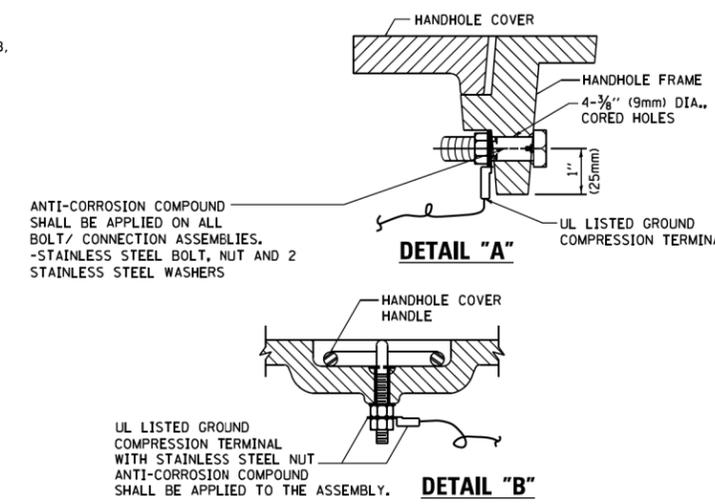
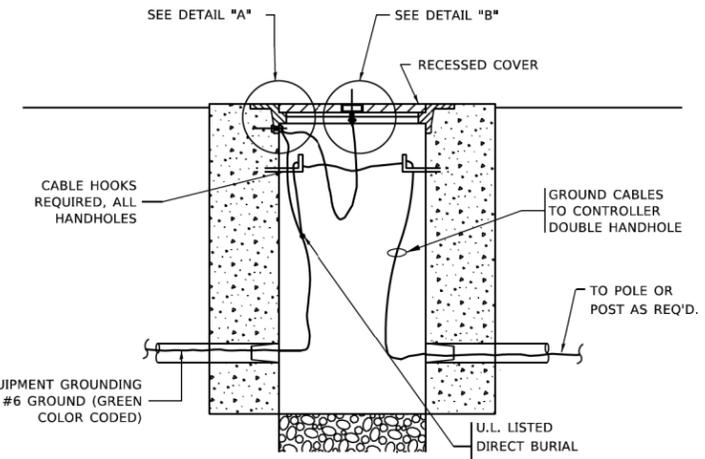
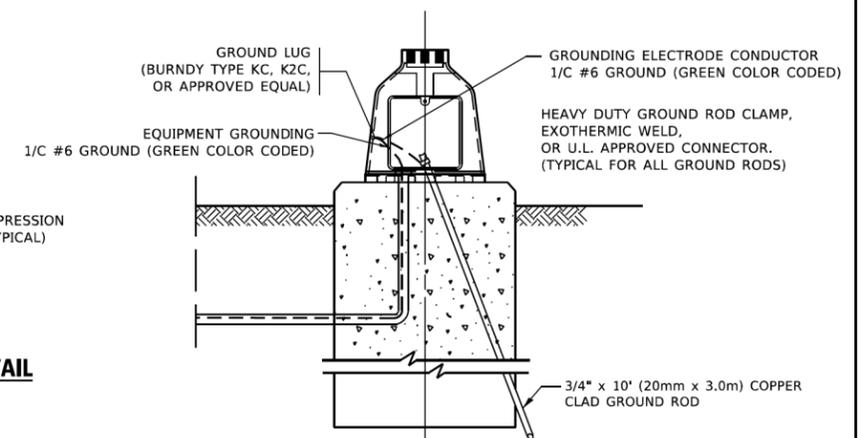
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

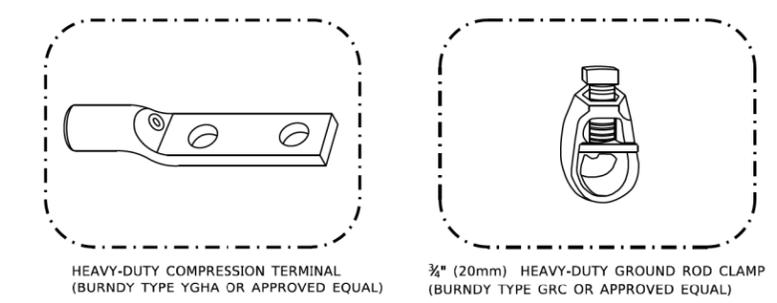


MAST ARM POLE /POST-GROUNDING DETAIL
 (NOT TO SCALE)



NOTES:
GROUNDING SYSTEM

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



NOTES:

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

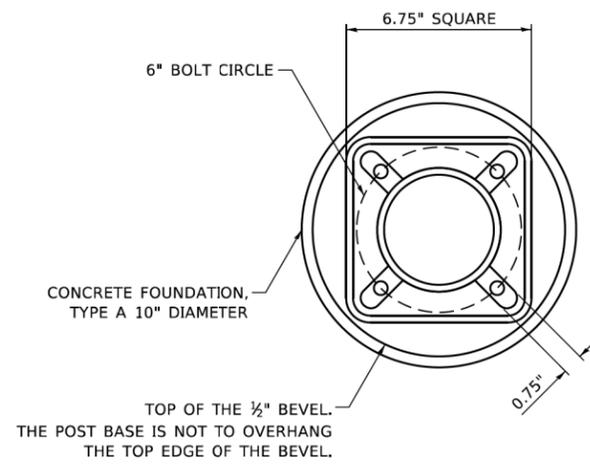
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	DRAWN -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

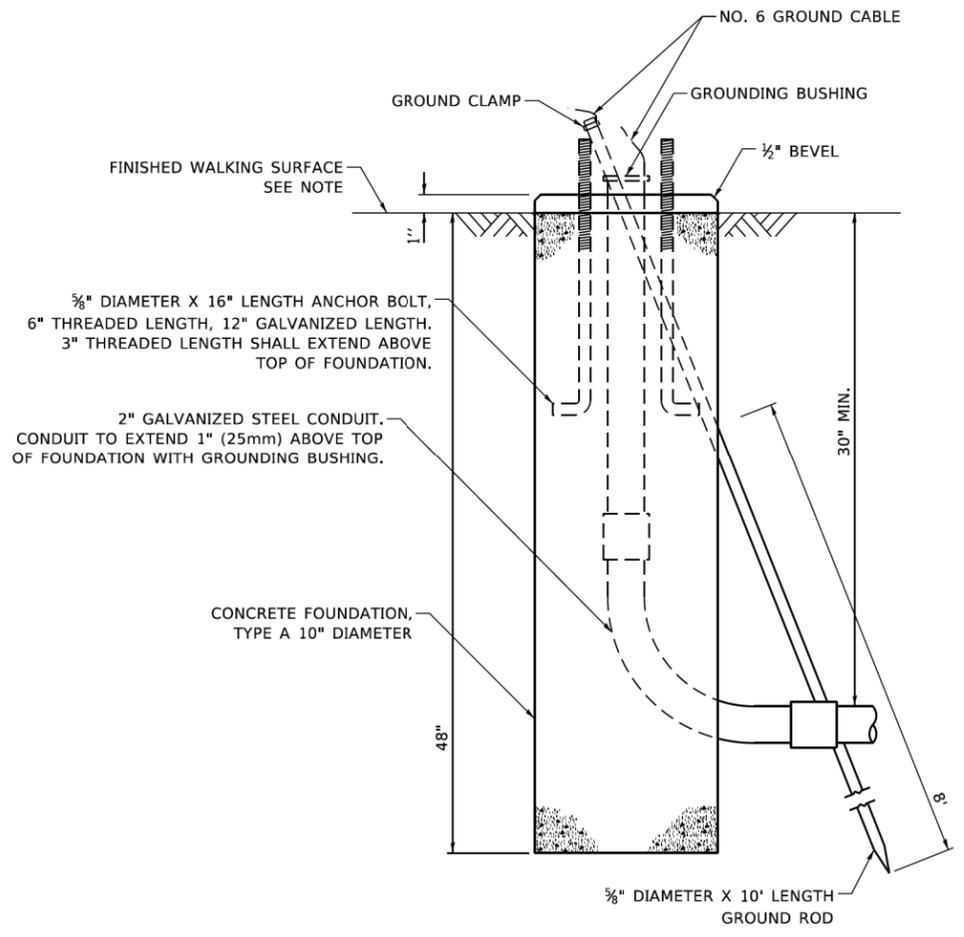
DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET 4	OF 7 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2020-188-T5		49	10
TS-05		CONTRACT NO. 62M62		
ILLINOIS FED. AID PROJECT				

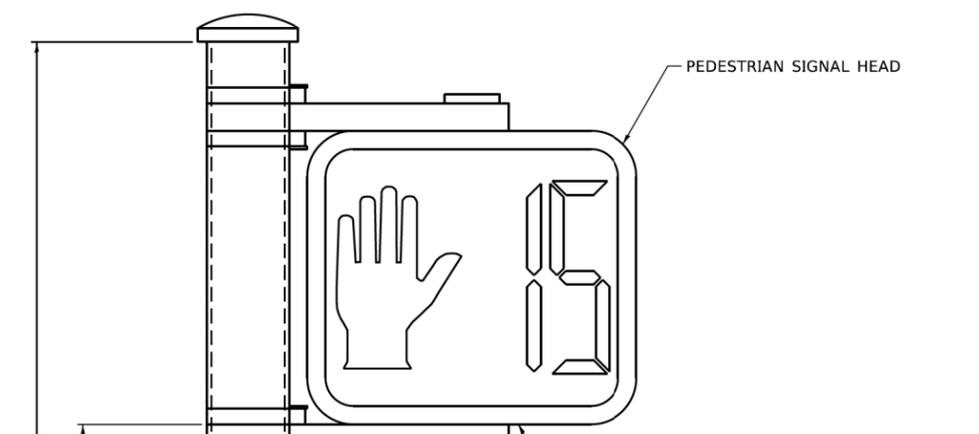


BOLT PATTERN

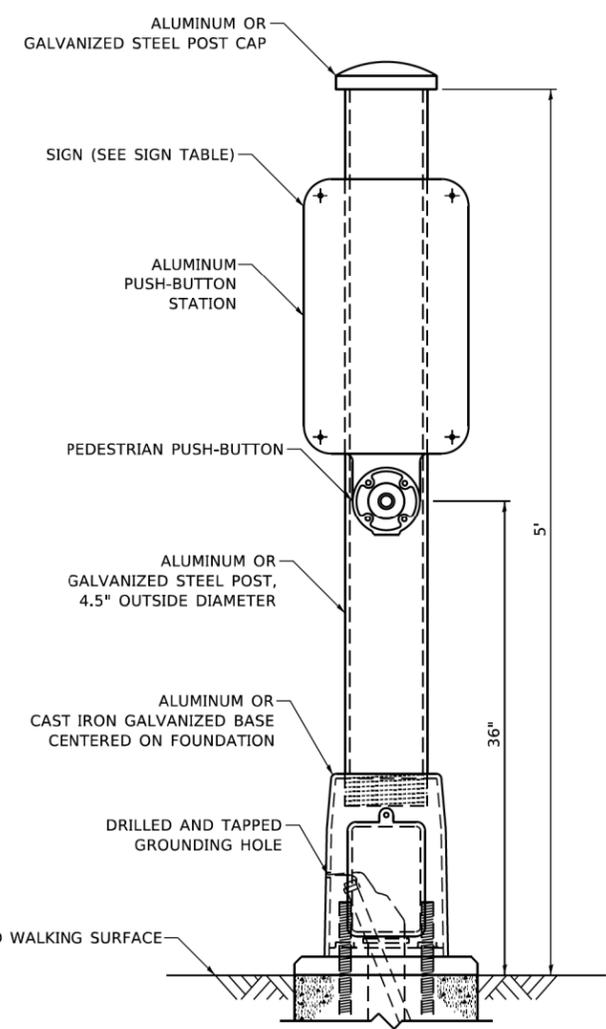
NOTE:
 1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



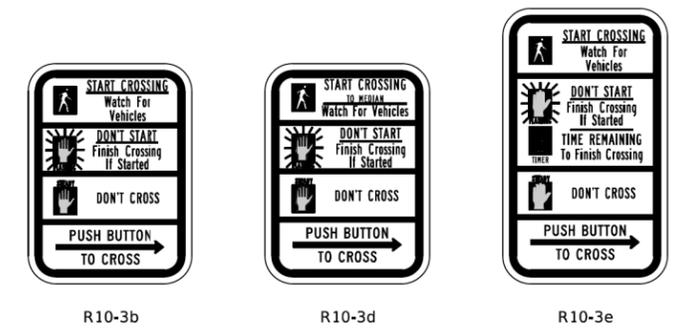
**CONCRETE FOUNDATION,
 TYPE A 10-INCH DIAMETER**



PEDESTRIAN SIGNAL POST, 10 FT.



PEDESTRIAN SIGNAL POST, 5 FT.



SIGN TABLE

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 15"

NOTES:
 1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
 2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
 3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

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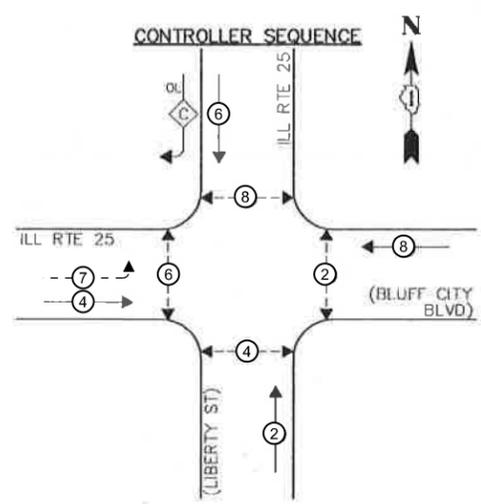
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NTS SHEET NO. 7 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2020-188-T5	VARIOUS	49	13
TS-05		CONTRACT NO. 62M62		
ILLINOIS		FED. AID PROJECT		

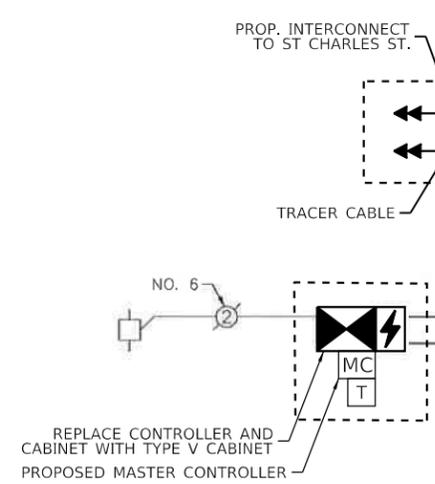


OVERLAP LETTER = C
 PERMISSIVE PHASE = 6
 PROTECTED PHASE = 7

PHASE DESIGNATION DIAGRAM

LEGEND:

- ← * → PROTECTED PHASE
- ← - * - → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← OL → OVERLAP



ILL RTE 25

ILL RTE 25

(LIBERTY ST)

(BLUFF CITY BLVD)

CABLE PLAN

THORNE ELECTRIC INC.
 JOB# 12-1119
 AS-BUILTS
 12-31-13

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MASTER CONTROLLER	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1

NOTES:

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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	LE.D.	% OPERATION	
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					743.6

ENERGY COSTS - BILLED TO: CITY OF ELGIN
 (ADDRESS) 150 DEXTER COURT
 (ADDRESS) ELGIN, IL 60120
 ENERGY SUPPLY - CONTACT: _____
 PHONE: _____
 COMPANY: _____

TS 13290
SYSTEM

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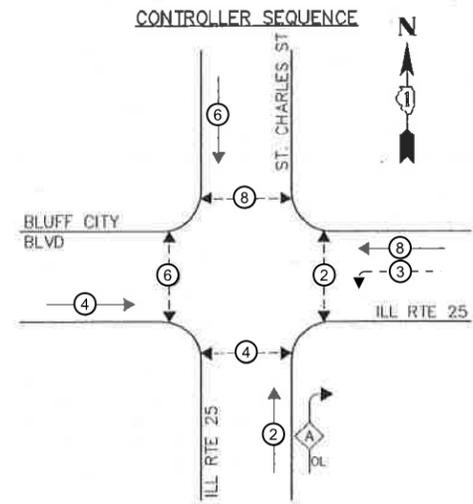
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 DATE - 10/15/2020

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 IL ROUTE 25 (BLUFF CITY BLVD) AT IL ROUTE 25 (LIBERTY ST)
 SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-TS	VARIOUS	49	15
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

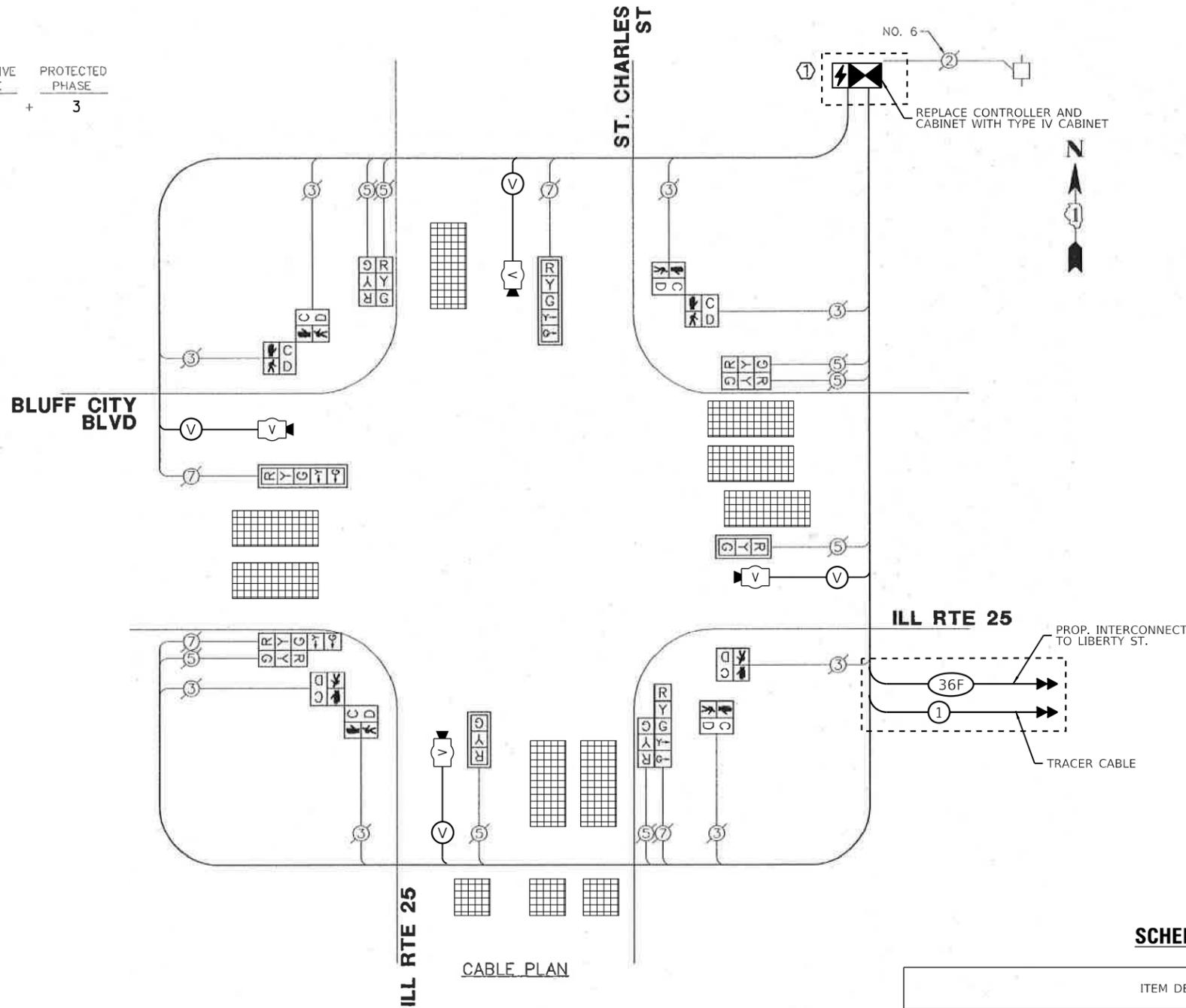


OVERLAP LETTER A = PERMISSIVE PHASE 2 + PROTECTED PHASE 3

PHASE DESIGNATION DIAGRAM

LEGEND:

- ← (⊙) ← PROTECTED PHASE
- ← - (⊙) ← PROTECTED/PERMITTED PHASE
- ← (⊙) → PEDESTRIAN PHASE
- ← (⊙) OL OVERLAP



THORNE ELECTRIC INC.
JOB# 12-1119
AS-BUILTS
12-31-13

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCIVER - FIBER OPTIC	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1

NOTES:

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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	75.0
SIGNAL (GREEN)	12	135	15	0.25	45.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					706.6

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(ADDRESS) 150 DEXTER COURT
(ADDRESS) ELGIN, IL 60120
ENERGY SUPPLY - CONTACT: _____
PHONE: _____
COMPANY: _____

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DESIGNED - EEC
DRAWN - GS
CHECKED - MG
DATE - 10/15/2020

REVISED -
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REVISED -
REVISED -

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)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	16
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

TS 13295
SYSTEM



NOTES:

1. 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)
2. 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.
 - 1 EACH CONTROLLER AND CABINET (COMPLETE)
 - 2 EACH UNINTERRUPTIBLE POWER SUPPLY
3. MOUNTING LOCATIONS OF THE VIDEO DETECTORS WILL BE DETERMINED PER MANUFACTURER RECOMMENDATIONS.



SYSTEM

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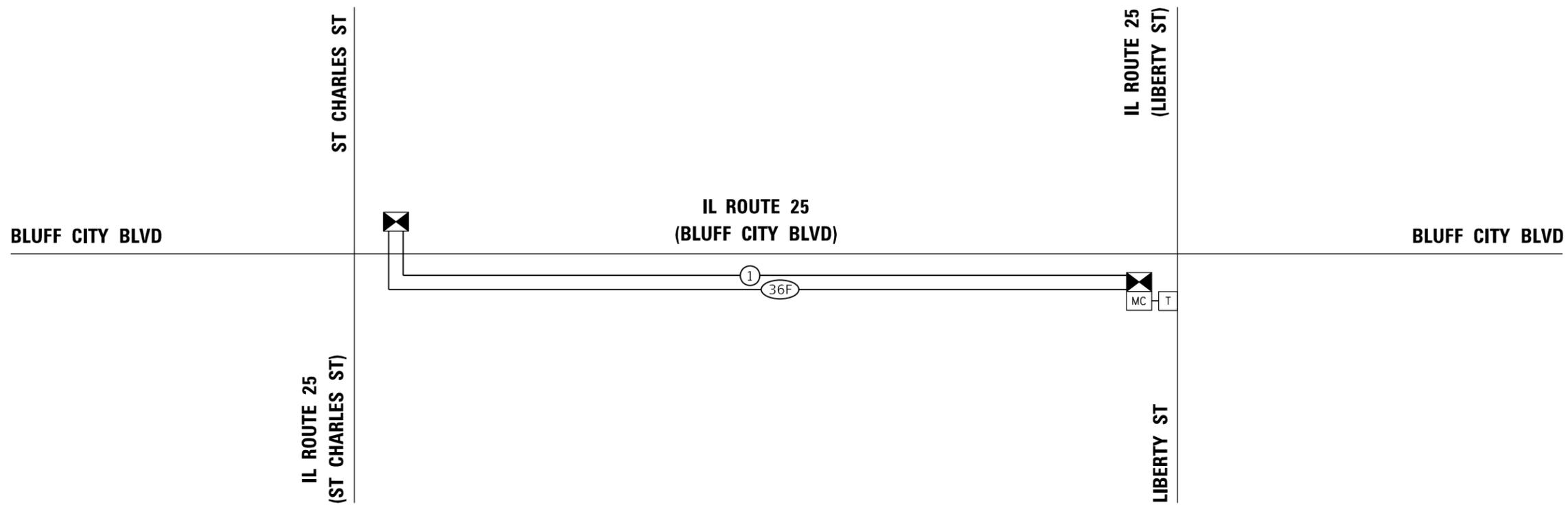
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PLOT SCALE = 100,0000' / in.	DRAWN - GS	REVISED -
PLOT DATE = 10/15/2020	CHECKED - MG	REVISED -
	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN
IL ROUTE 25 - FROM ST CHARLES ST TO LIBERTY ST**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5		49	17
			CONTRACT NO. 62M62	
		ILLINOIS	FED. AID PROJECT	



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

MODEL: Default
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USER NAME = etchoi	DESIGNED - EEC	REVISED -
	DRAWN - GS	REVISED -
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

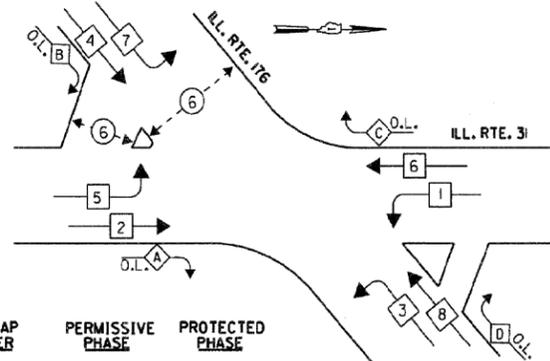
PROPOSED INTERCONNECT SCHEMATIC	
IL ROUTE 25 - FROM ST CHARLES ST TO LIBERTY ST	
SCALE: NTS	SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	18
			CONTRACT NO. 62M62	
		ILLINOIS	FED. AID PROJECT	

SCHEDULE OF QUANTITIES

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

CONTROLLER SEQUENCE

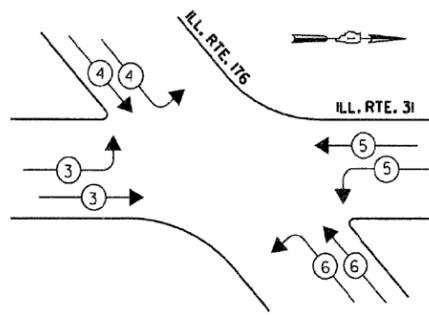


OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
B	= 4	+ 5
C	= 6	+ 7
D	= 8	+ 1

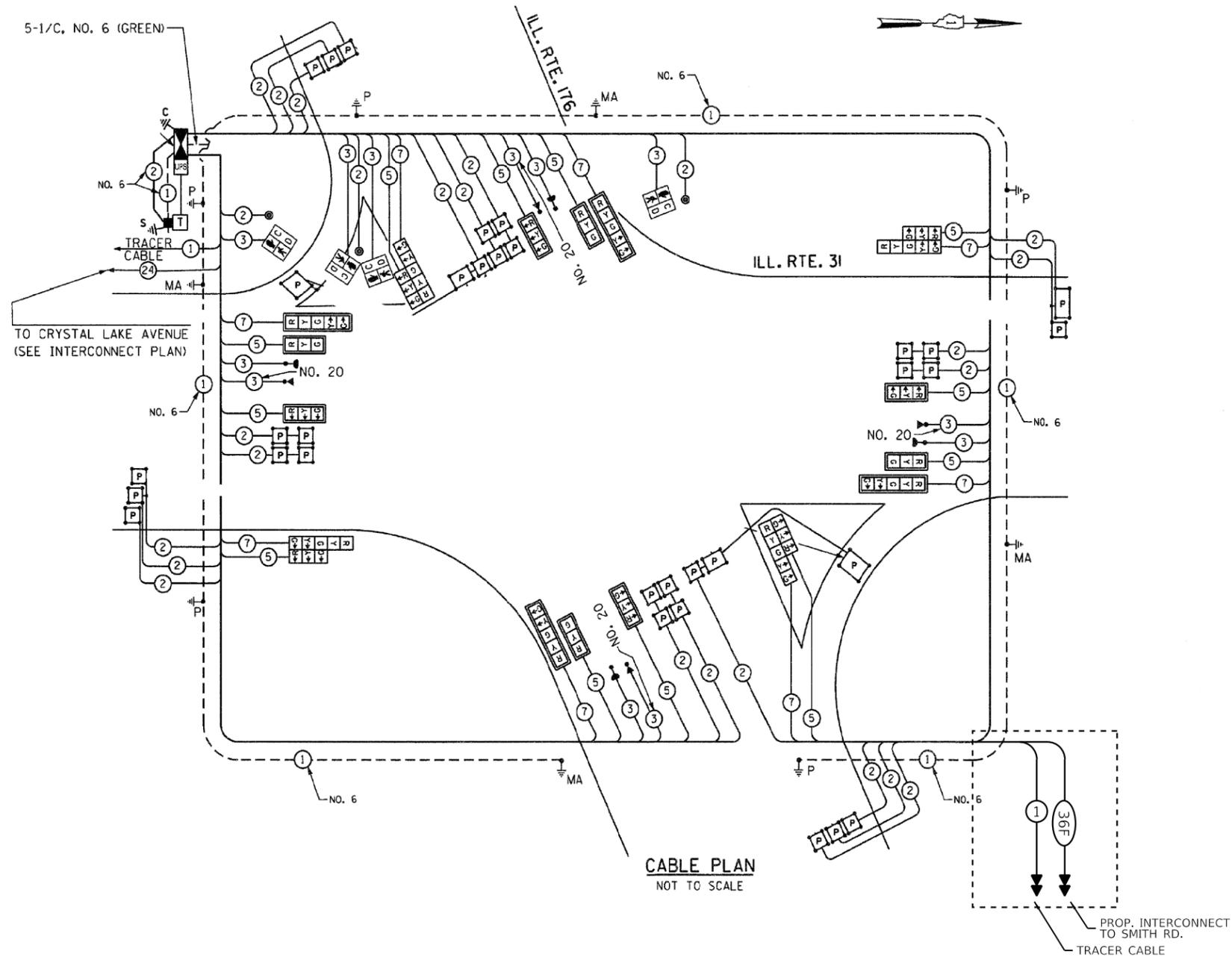
PHASE DESIGNATION DIAGRAM

- LEGEND**
- ⊕ DUAL ENTRY PHASE
 - ⊖ SINGLE ENTRY PHASE
 - ⊕ O.L. OVERLAP
 - ⊕ P PEDESTRIAN PHASE
 - NUMBER REFERS TO ASSOCIATED PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	→	↘	←	↗



CABLE PLAN
NOT TO SCALE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE	OPERATION		
		INCAND.	LED		
SIGNAL (RED)	20	135	17	0.50	170.0
(YELLOW)	20	135	25	0.25	125.0
(GREEN)	20	135	15	0.25	75.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	589.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

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

NOTES:

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
IL ROUTE 31 AT IL ROUTE 176

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	19
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

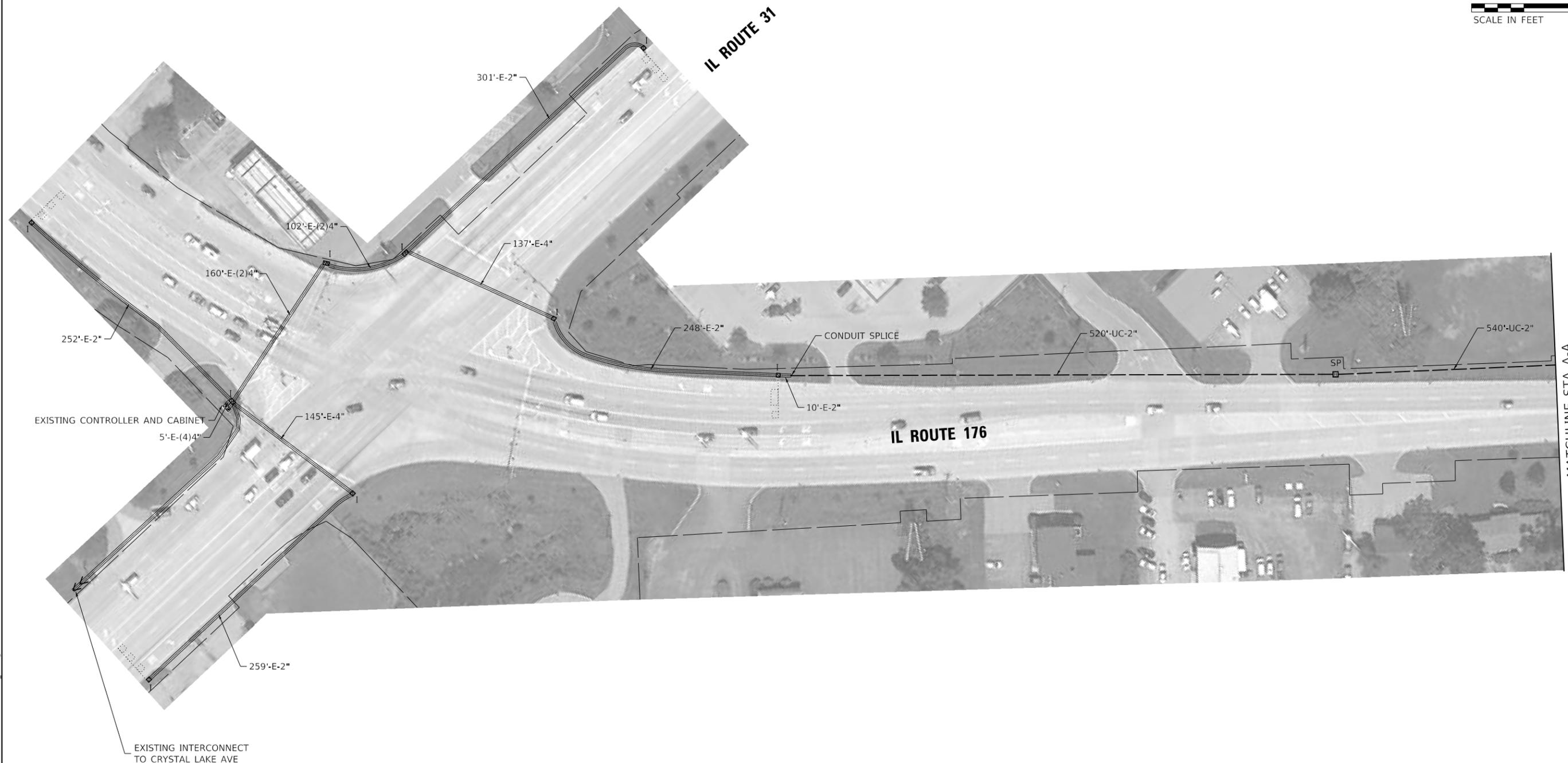
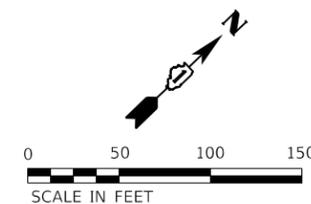
TS 7295
ECON 159

MODEL: Default FILE NAME: \\c:\p1\proj\113155\113155\113155\020\008\04_CADD\CADD_Sheets\62M62.dwg Plot: IL176 at IL31.dwg



USER NAME = echoil
DESIGNED - EEC
DRAWN - GS
CHECKED - MG
DATE - 10/15/2020

REVISED -
REVISED -
REVISED -
REVISED -



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ECON 159



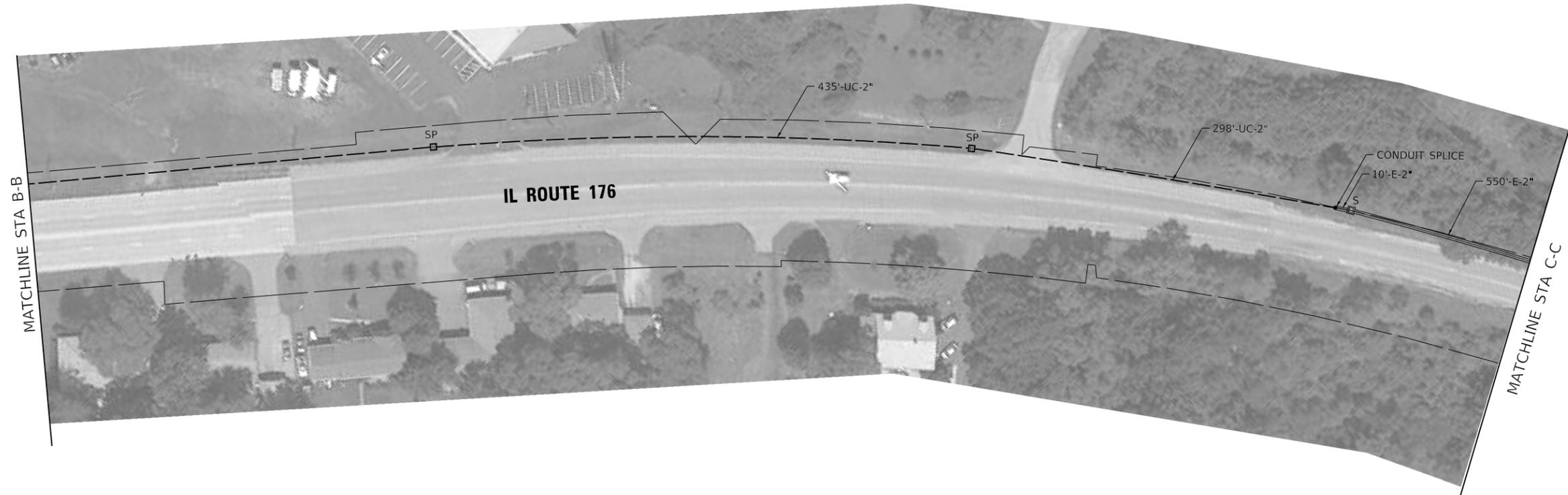
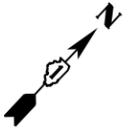
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PLOT DATE = 10/15/2020	CHECKED - MG	REVISED -
	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN (SHEET 1 OF 2)
IL ROUTE 176 - FROM IL ROUTE 31 TO SMITH RD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	21
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



MODEL: Default
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

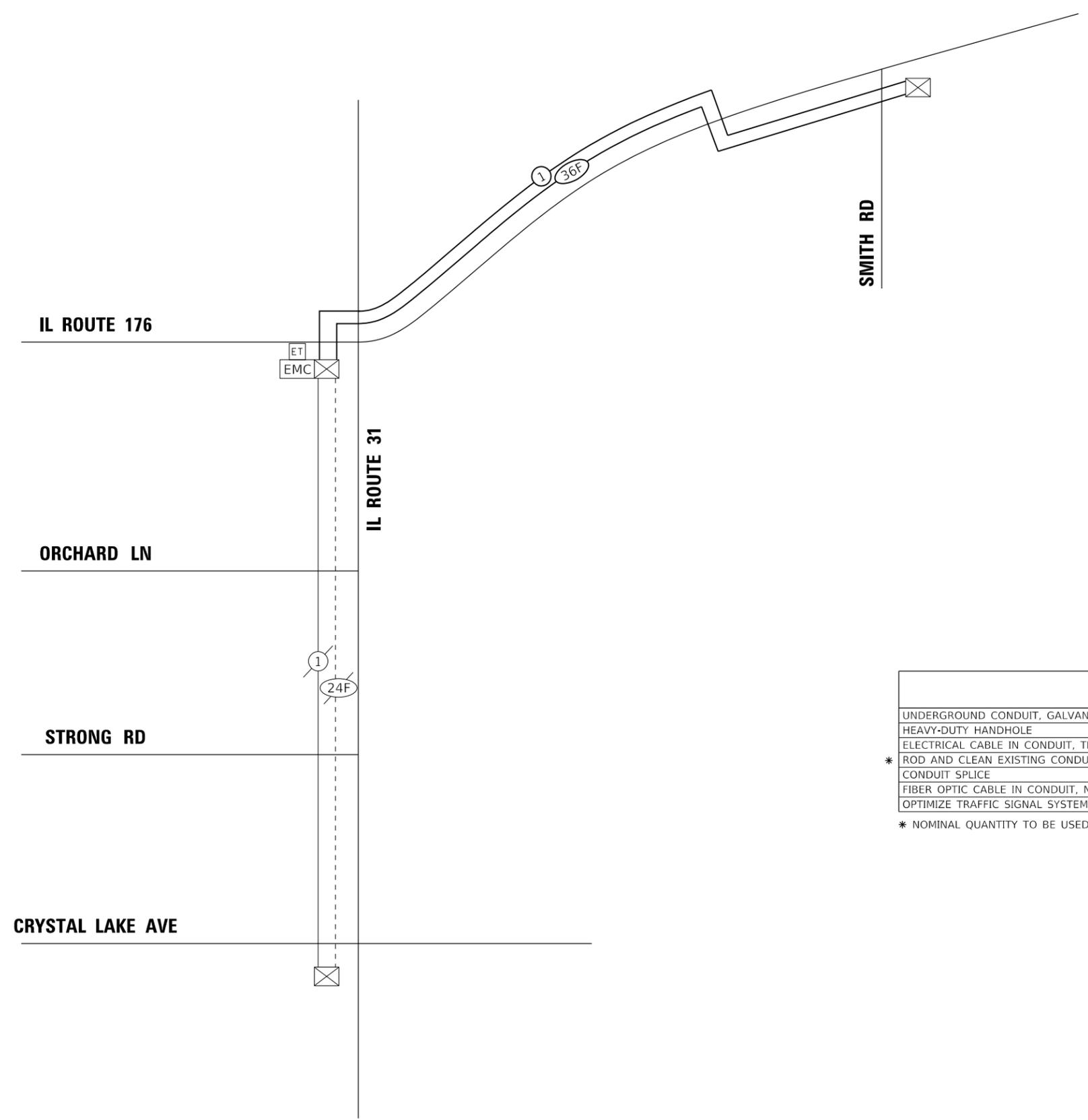
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN (SHEET 2 OF 2)
IL ROUTE 176 - FROM IL ROUTE 31 TO SMITH RD

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	22
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

ECON 159



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

* NOMINAL QUANTITY TO BE USED AS NEEDED AND AS APPROVED BY THE ENGINEER

MODEL: Default
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USER NAME = etchoi	DESIGNED - EEC	REVISED -
	DRAWN - GS	REVISED -
PLOT SCALE = 2,000' / in.	CHECKED - MG	REVISED -
PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

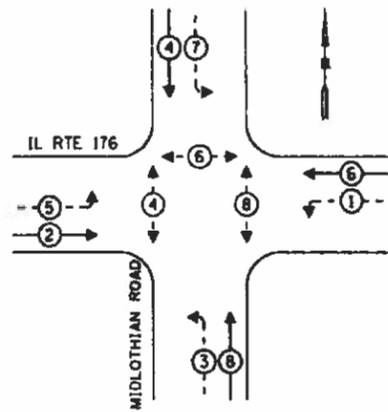
**PROPOSED INTERCONNECT SCHEMATIC
IL ROUTE 176 - FROM IL ROUTE 31 TO SMITH RD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	23
			CONTRACT NO. 62M62	
		ILLINOIS	FED. AID PROJECT	

ECON 159

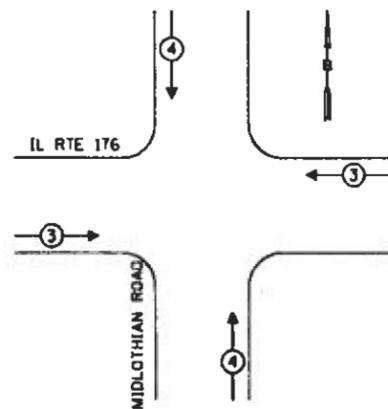
EXISTING CONTROLLER SEQUENCE



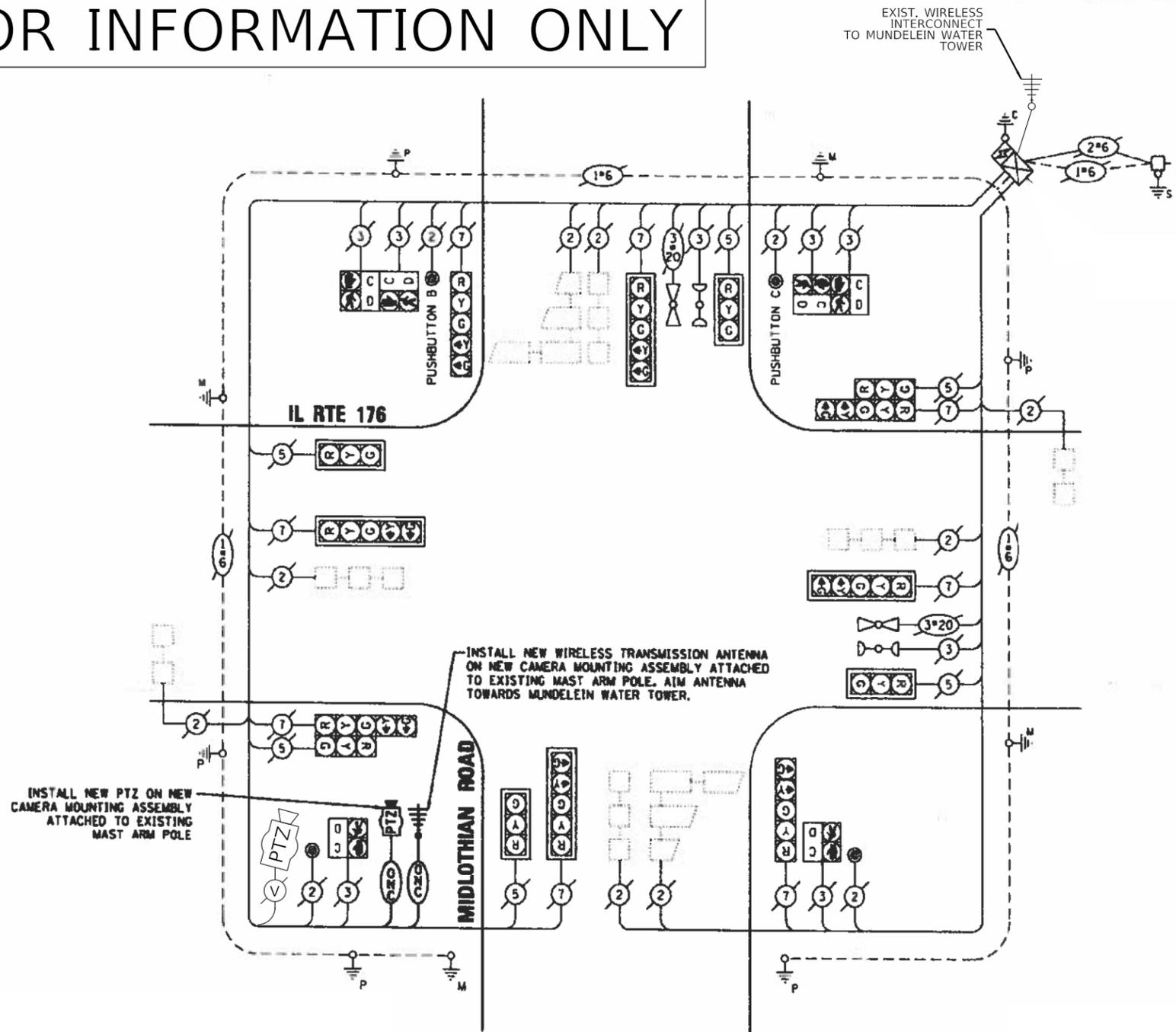
LEGEND:

- ⊙ PROTECTED PHASE
- ⊙- PROTECTED/PERMITTED PHASE
- ⊙- PEDESTRIAN PHASE
- ⊙ OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



FOR INFORMATION ONLY



EXIST. WIRELESS INTERCONNECT TO MUNDELEIN WATER TOWER



CABLE PLAN
(NOT TO SCALE)

- PUSHBUTTON NOTES**
- PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 7 AND 16.
 - PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL 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	1	100	100	100.0
LPS	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	-	-	-	-
TOTAL =				577.6

ENERGY COSTS TO:
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER COURT
 SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: ALICE TAYLOR
 PHONE: (847) 816-5458
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: ---

NOTES:
 CABLE PLAN IS FOR REFERENCE ONLY.

MODEL: Default
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PLOT DATE = 10/15/2020	CHECKED - MG	REVISED -
	DATE - 10/15/2020	REVISED -

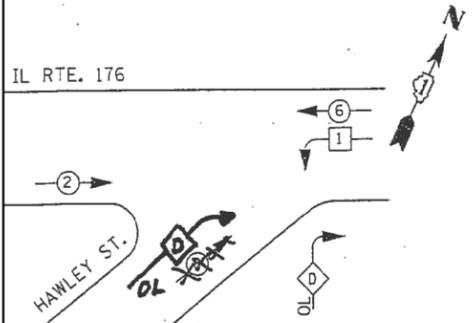
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 IL ROUTE 176 AT MIDLOTHIAN RD
 SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

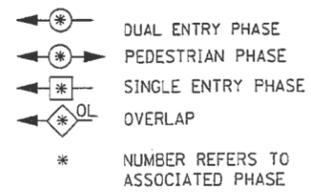
F.A.P. RTE. VARIES	SECTION 2020-188-T5	COUNTY VARIOUS	TOTAL SHEETS 49	SHEET NO. 24
CONTRACT NO. 62M62				ILLINOIS FED. AID PROJECT

TS 7145
LCDOT CENTRACS

CONTROLLER SEQUENCE



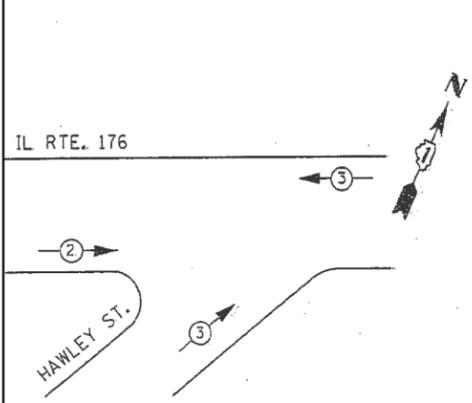
LEGEND



RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
D	X	+

PHASE DESIGNATION DIAGRAM



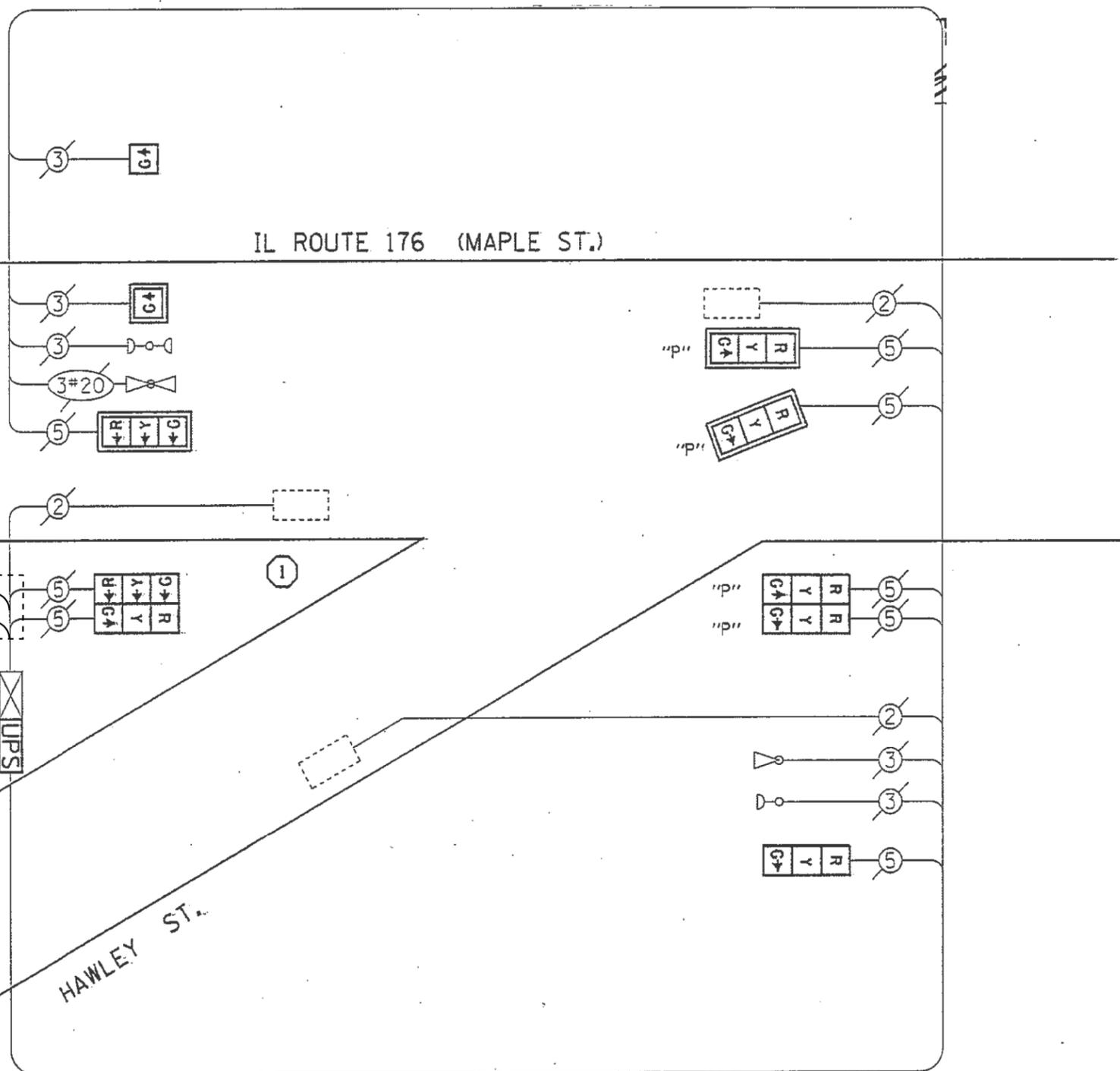
EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	2	3
MOVEMENT	→	↗

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

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
RED (RED)	8	135	17	0.50	68
(YELLOW)	8	135	25	0.25	50
(GREEN)	10	135	15	0.25	38
POWER	--	135	12	0.10	--
SIGNAL	--	90	25	1.00	--
ROLLER	1	100	100	1.00	100
IM. SIGN	--	252	25	0.05	--
VIDEO SYSTEM	--	150	--	1.00	--
TOTAL =					256

REGY COSTS- BILLED TO: VILLAGE OF MUNDELEIN
 440 E. HAWLEY STREET
 MUNDELEIN, IL 60060
 REGY SUPPLY - CONTACT TERRI BLECK
 PHONE 847-816-5239
 COMMONWEALTH EDISON



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
LAYER II (DATA LINK) SWITCH	EACH	1

NOTES:

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

TS 6916
LCDOT CENTRACS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
IL ROUTE 176 AT HAWLEY ST

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	27

CONTRACT NO. 62M62
 ILLINOIS FED. AID PROJECT

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



USER NAME = echol	DESIGNED - EEC	REVISED -
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PLOT DATE = 10/15/2020	CHECKED - MG	REVISED -
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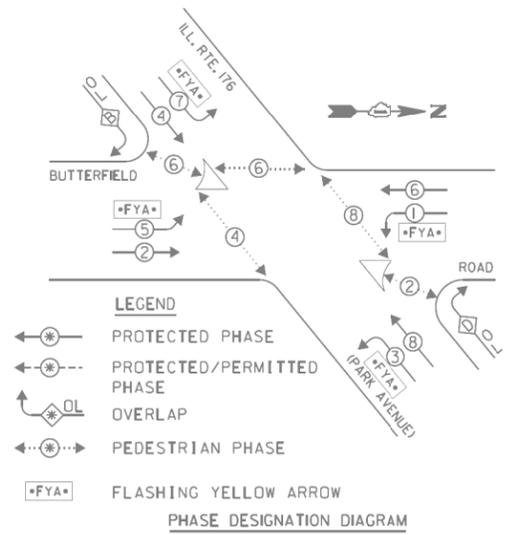
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 PLOT DATE: 10/15/2020



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1

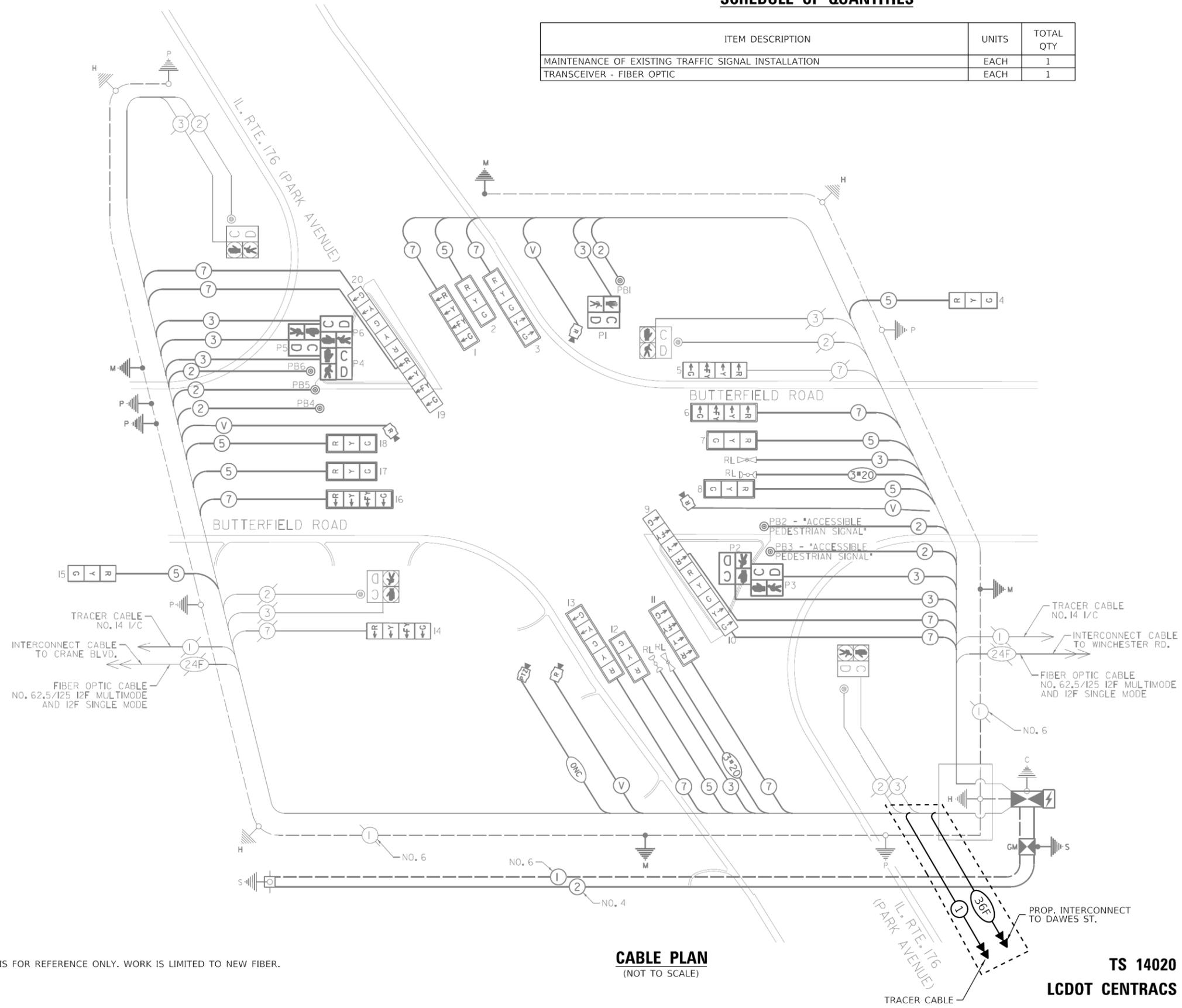
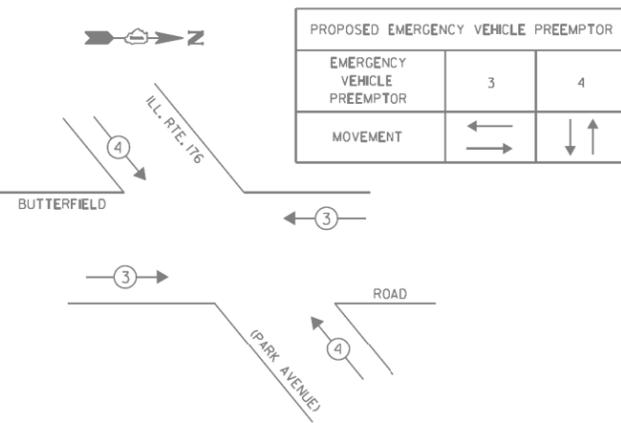
CONTROLLER SEQUENCE



RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B =	4	5
D =	8	1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE PLAN
(NOT TO SCALE)

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

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

TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10		11	0.50	66.0
(YELLOW)	10		20	0.05	12.0
(GREEN)	10		12	0.45	64.8
ARROW	32		10	0.10	40.0
ARROW (FYA)	8		10	0.30	24.0
PED. SIGNAL	10		20	1.00	200.0
CONTROLLER	1		100	1.00	100.0
RADAR DETECT.	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
TOTAL =					681.8

ENERGY COSTS TO: TOTAL = 681.8

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY/DISTRICT I
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

MODEL: Default FILE NAME: \\01011909\c3113551\02010804_CADD\CADD_Sheets\62M62-eh-28-Cable_Plan_IL176_at_Butterfield.dgn



USER NAME = echo1	DESIGNED - EEC	REVISED -
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	DATE - 10/15/2020	REVISED -

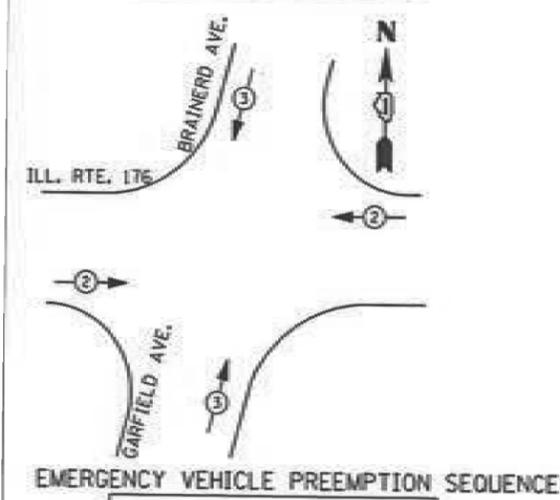
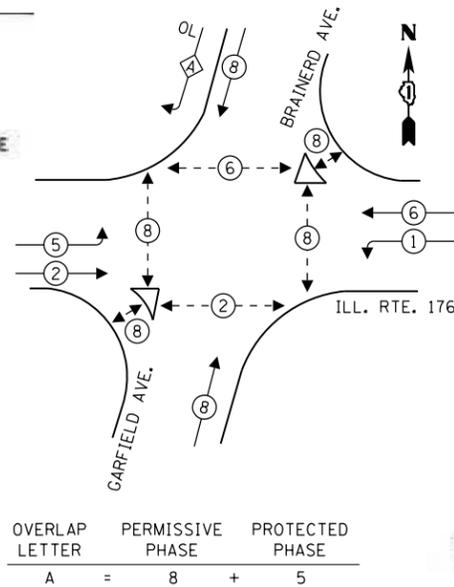
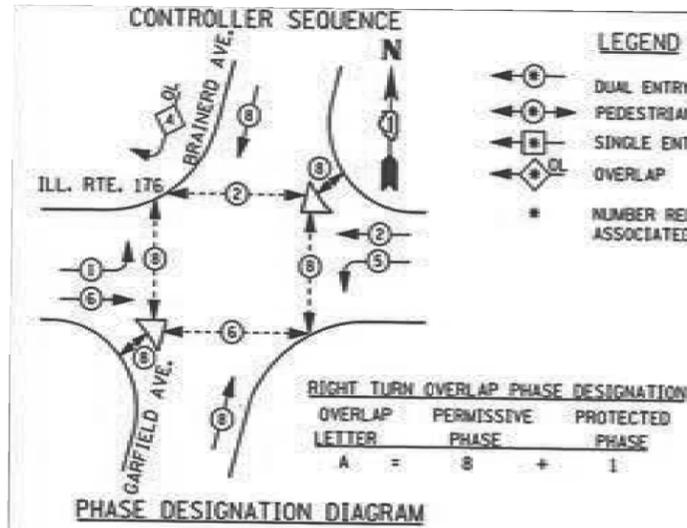
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
IL ROUTE 176 AT BUTTERFIELD RD
SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. VARIES	SECTION 2020-188-TS	COUNTY VARIOUS	TOTAL SHEETS 49	SHEET NO. 28
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

TS 14020
LCDOT CENTRACS

PROPOSED CONTROLLER SEQUENCE



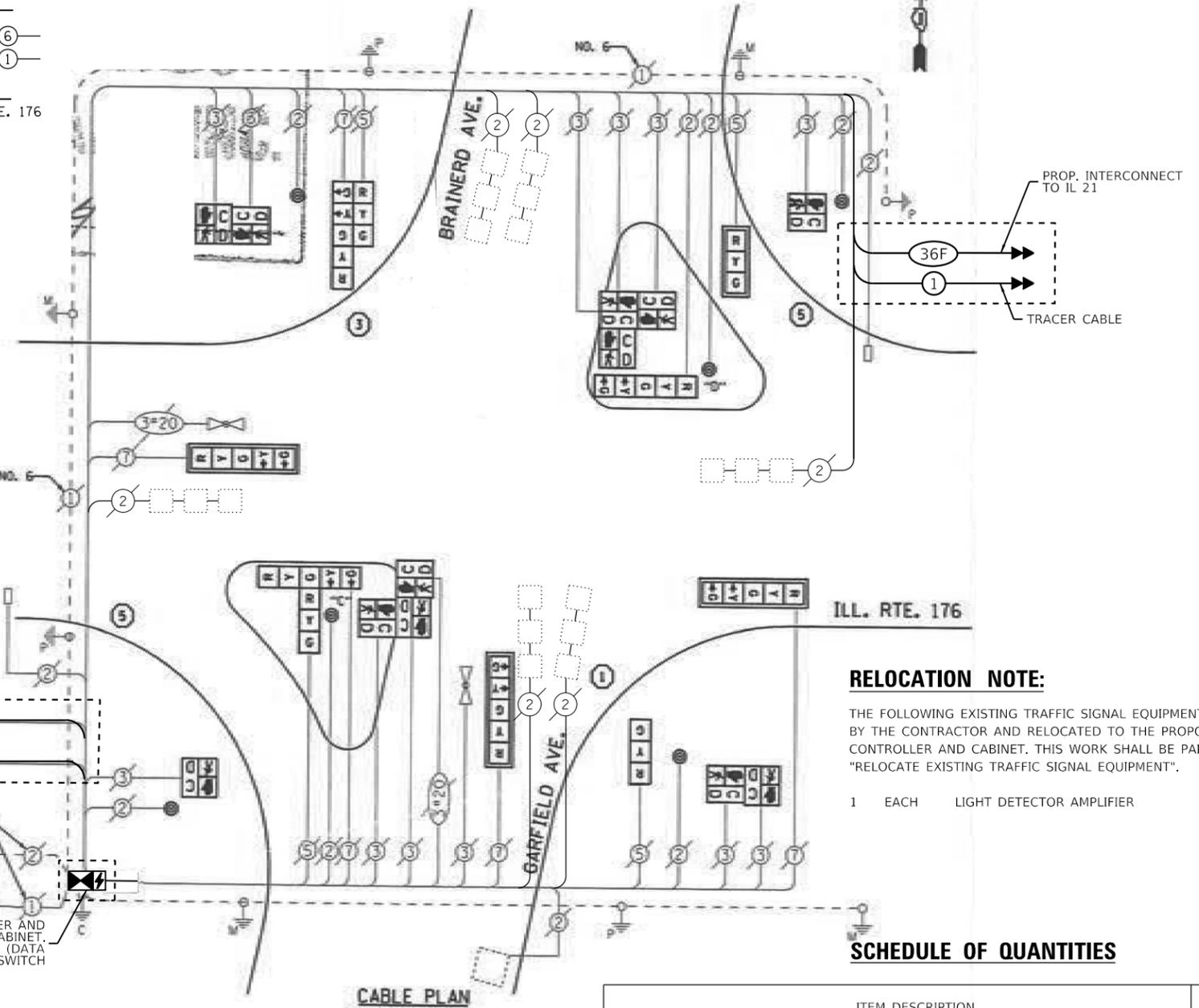
I. O. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	10	135	17	0.50	85
(YELLOW)	10	135	25	0.25	63
(GREEN)	10	135	15	0.25	38
ARROW	12	135	12	0.10	14
PED. SIGNAL	12	90	25	1.00	300
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM		150	-	1.00	--
FLASHER LED					
TOTAL =					600

ENERGY COSTS: BILLED TO: VILLAGE OF LIBERTYVILLE
200 E. COOK AVENUE
LIBERTYVILLE, IL 60048

ENERGY SUPPLY: CONTACT TERRI BLECK
PHONE 847-816-5235
COMMONWEALTH EDISON

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



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".

- 1 EACH LIGHT DETECTOR AMPLIFIER

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCIVER - FIBER OPTIC	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
LAYER II (DATA LINK) SWITCH	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
IL ROUTE 176 AT GARFIELD AVE / BRAINERD AVE

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

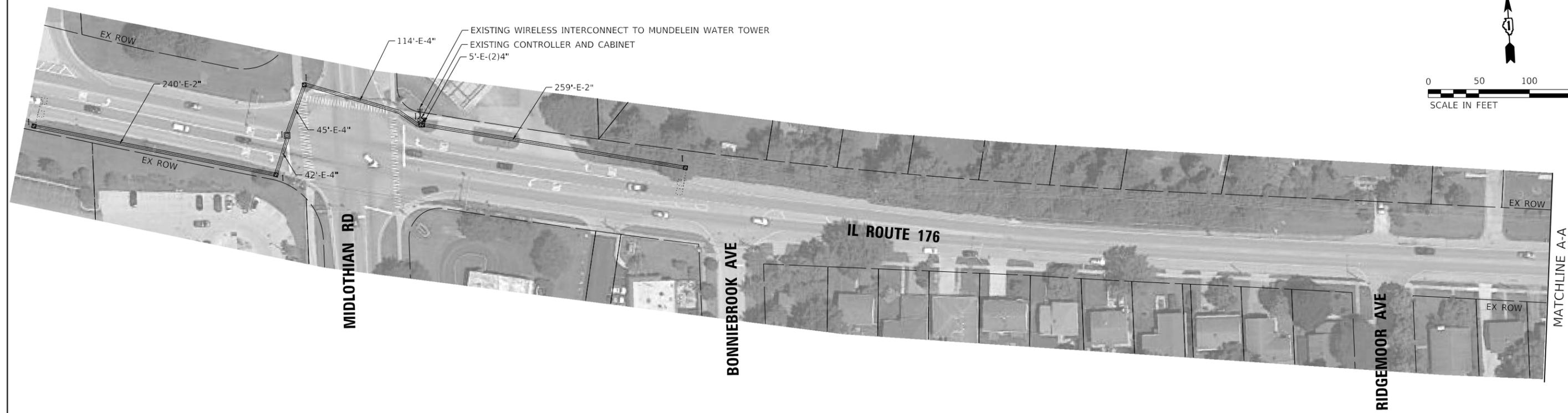
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	30
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

TS 14025
LCDOT CENTRACS

SINGH
SINGH & ASSOCIATES INC.
CONSULTING ENGINEERS

USER NAME = echol	DESIGNED - EEC	REVISED -
PLOT SCALE = 2,000' / in.	DRAWN - GS	REVISED -
PLOT DATE = 10/15/2020	CHECKED - MG	REVISED -
	DATE - 10/15/2020	REVISED -

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MATCHLINE A-A



MATCHLINE B-B

LCDOT CENTRACS

MODEL: Default
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	DRAWN - GS	REVISED -
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

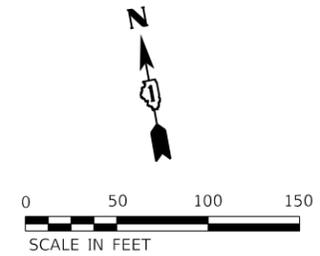
**PROPOSED INTERCONNECT PLAN (SHEET 1 OF 8)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	33
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

NOTES:

1. 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)
2. 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.
 - 1 EACH UNINTERRUPTABLE POWER SUPPLY
3. THE HANDHOLE TO INTERCEPT THE EXISTING CONDUIT HAS TO BE OUTSIDE OF RAILROAD RIGHT OF WAY, AND THE WORK HAS TO BE COMPLETED OUTSIDE OF THE RAILROAD RIGHT OF WAY.

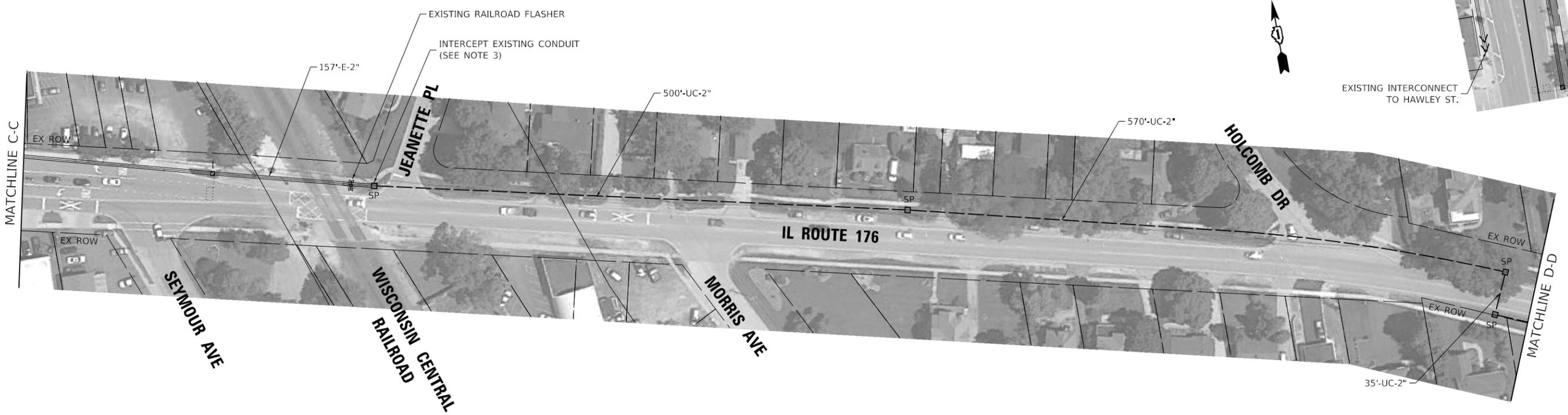


EXISTING INTERCONNECT TO DUNBAR RD. / UNIVERSITY DR.



SEE NOTES 1 AND 2

EXISTING INTERCONNECT TO HAWLEY ST.



LCDOT CENTRACS

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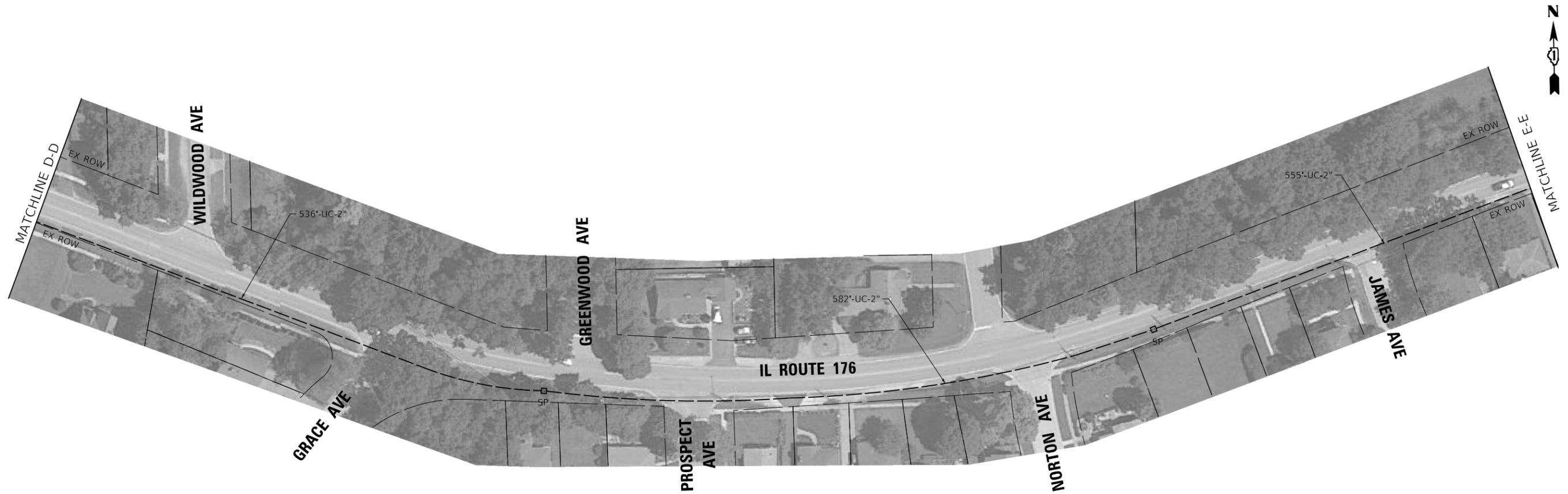
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**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.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	34
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



NOTES:

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



LCDOT CENTRACS

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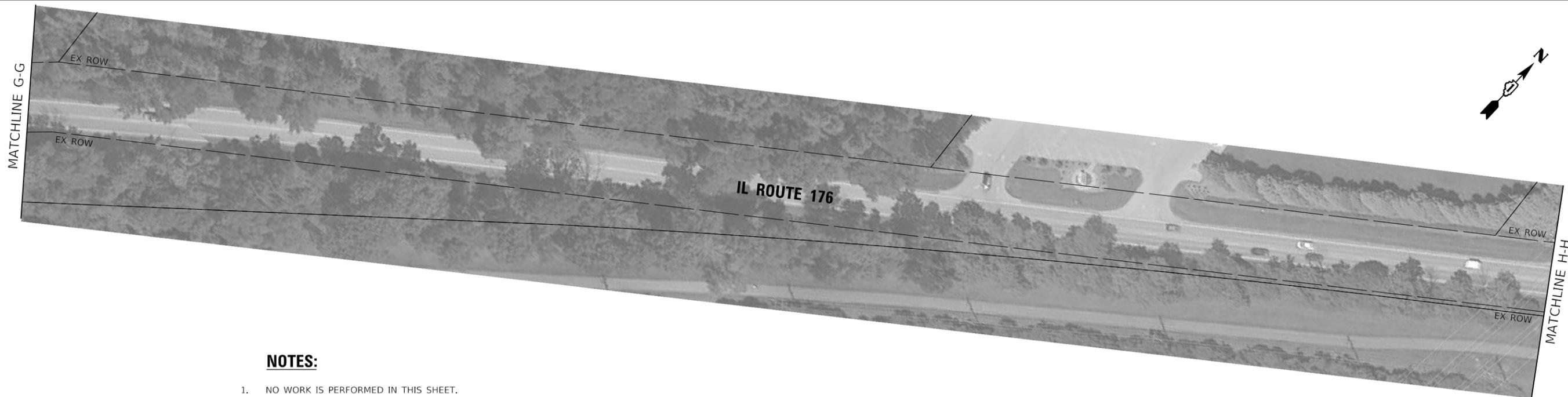
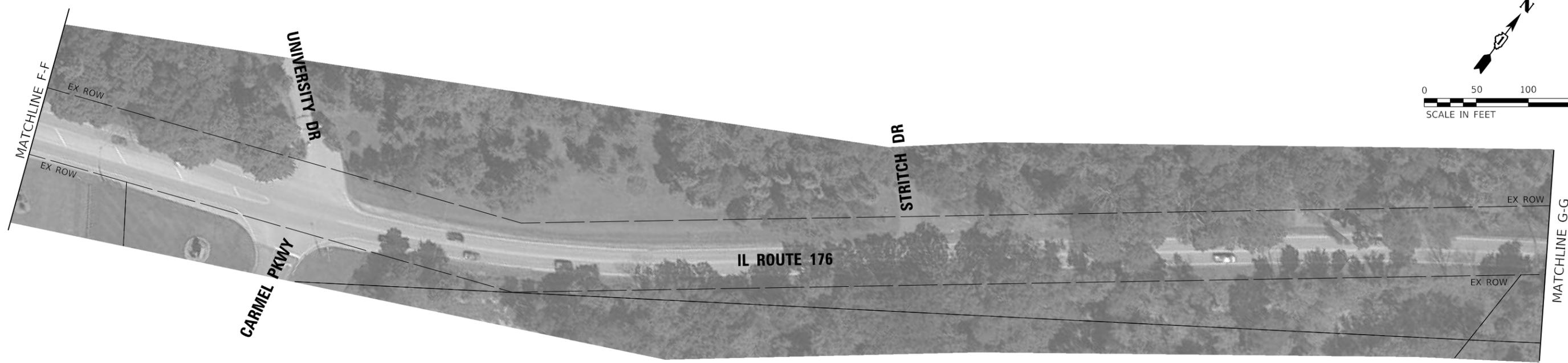
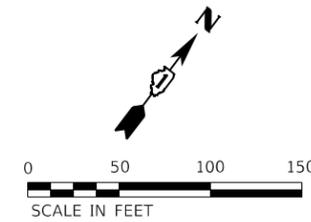
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN (SHEET 3 OF 8)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST**

SCALE: 1"=50' SHEET 3 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	35
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



NOTES:

1. NO WORK IS PERFORMED IN THIS SHEET.

LCDOT CENTRACS

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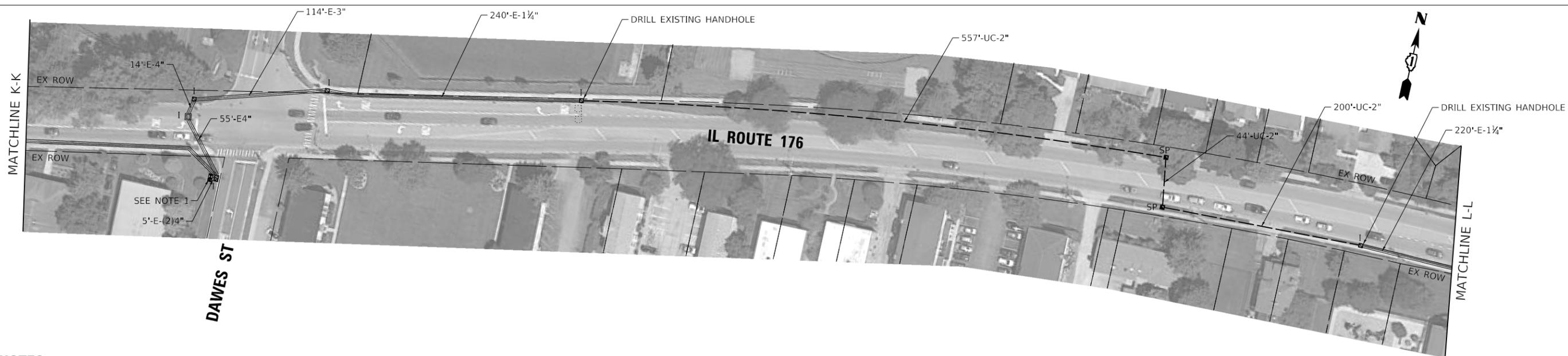
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN (SHEET 4 OF 8)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST**

SCALE: 1"=50' SHEET 4 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	36
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



NOTES:

1. 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



LCDOT CENTRACS

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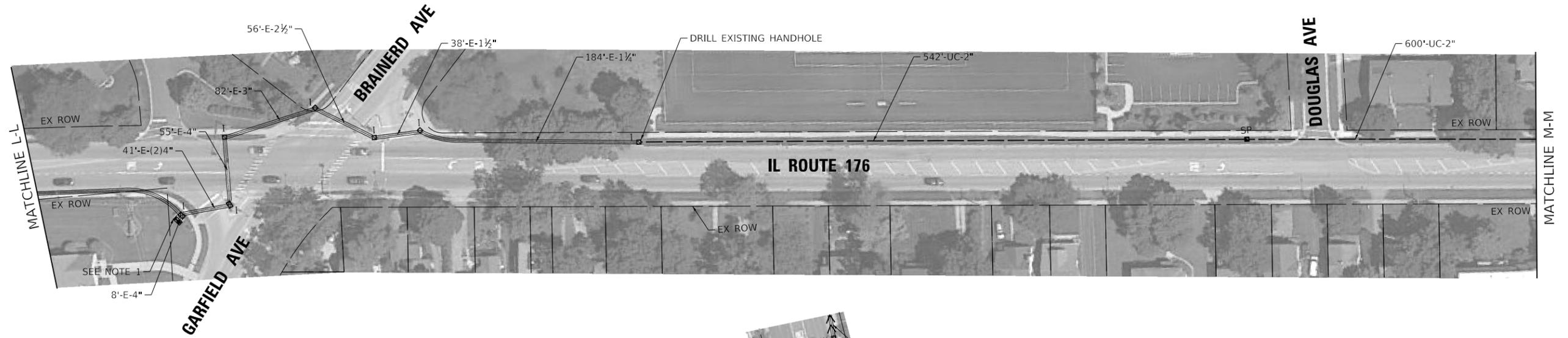
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN (SHEET 6 OF 8)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST**

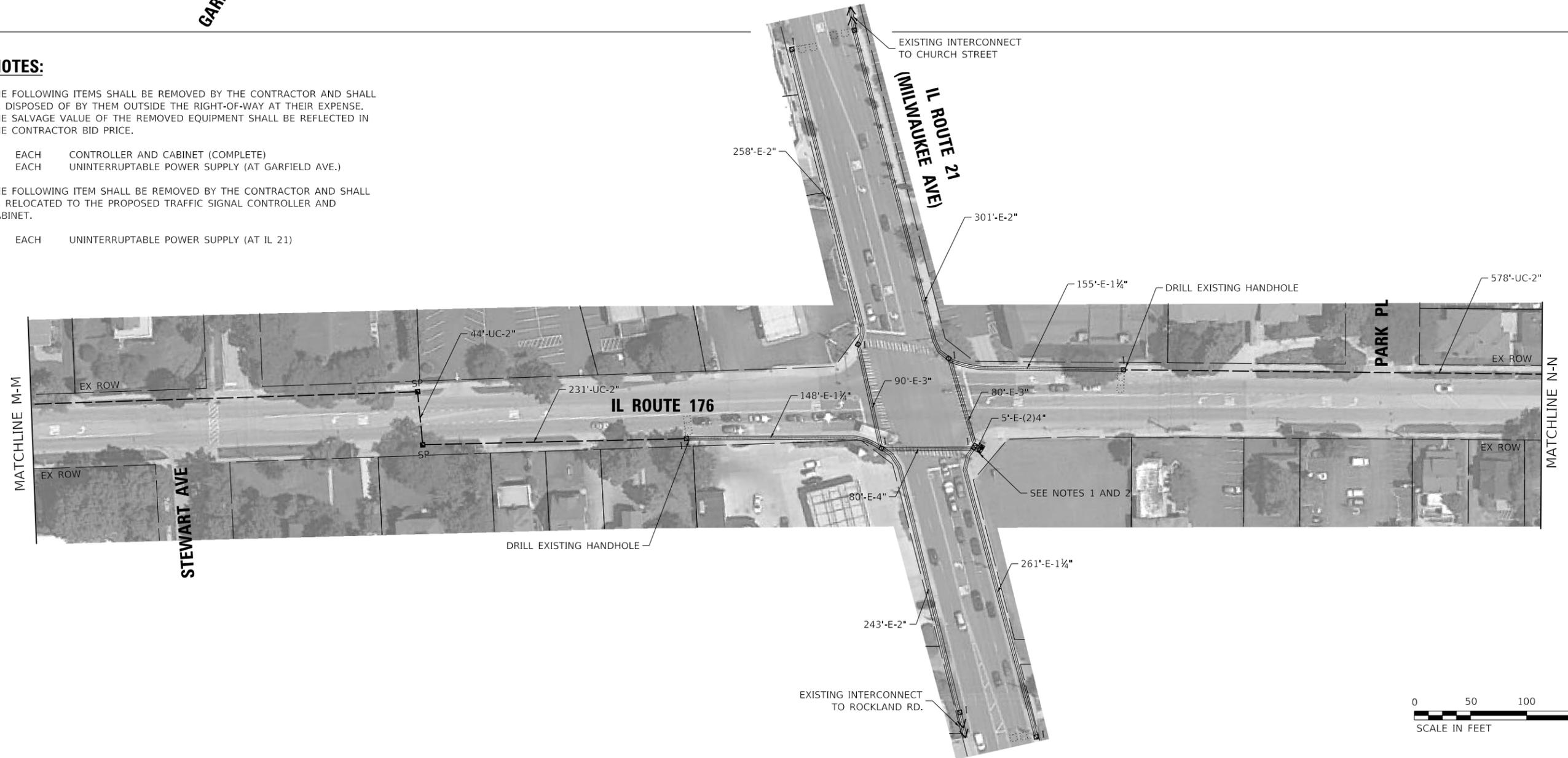
SCALE: 1"=50' SHEET 6 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	38
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



NOTES:

- 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.
 - 2 EACH CONTROLLER AND CABINET (COMPLETE)
 - 1 EACH UNINTERRUPTABLE POWER SUPPLY (AT GARFIELD AVE.)
- THE FOLLOWING ITEM SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RELOCATED TO THE PROPOSED TRAFFIC SIGNAL CONTROLLER AND CABINET.
 - 1 EACH UNINTERRUPTABLE POWER SUPPLY (AT IL 21)



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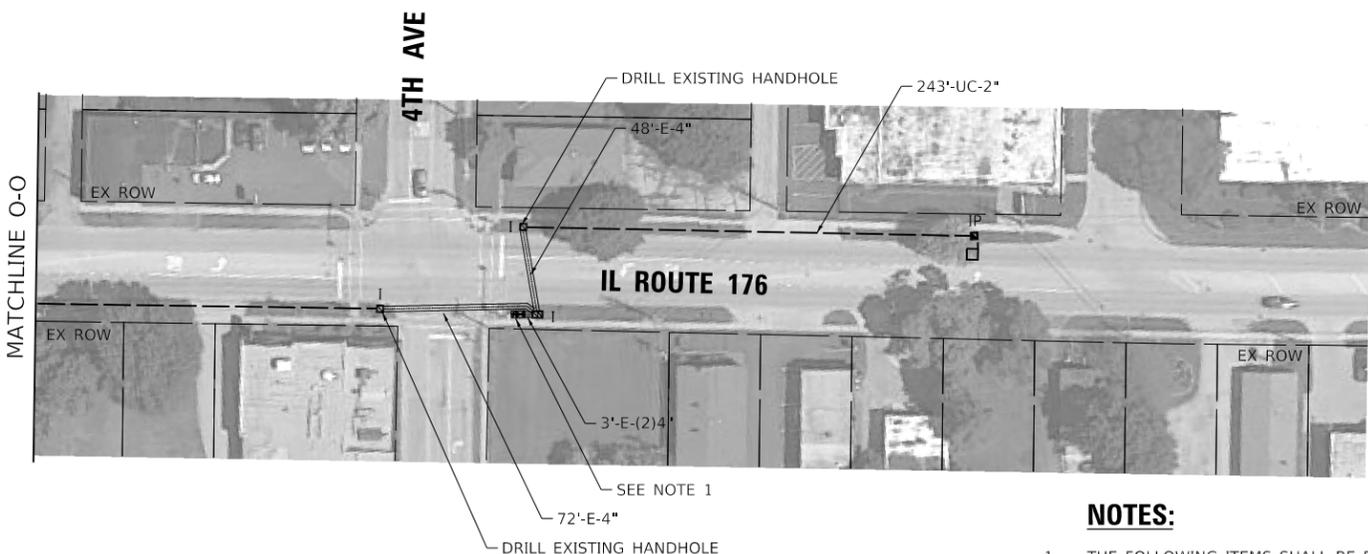
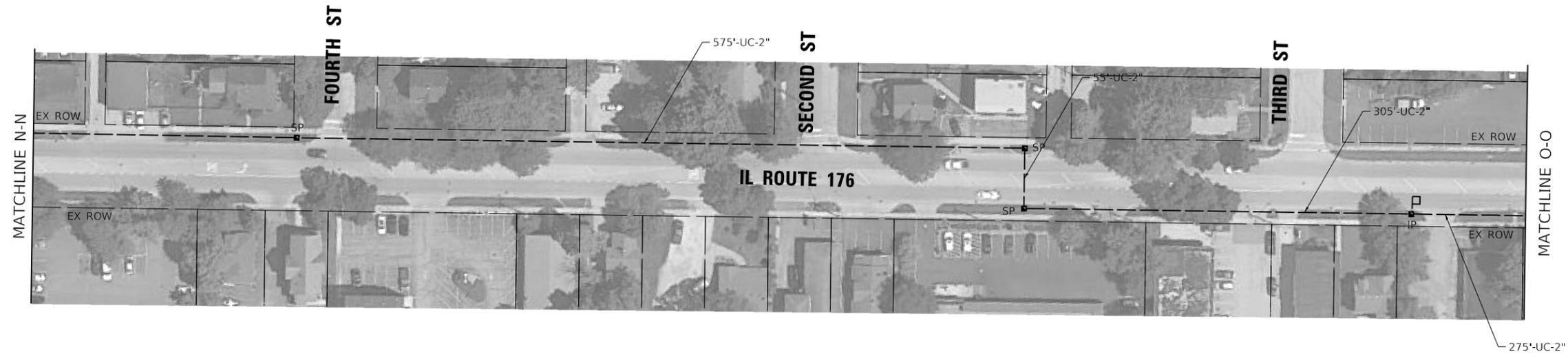
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN (SHEET 7 OF 8)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST
SCALE: 1"=50' SHEET 7 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	39
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

LCDOT CENTRACS



NOTES:

1. 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.



LCDOT CENTRACS

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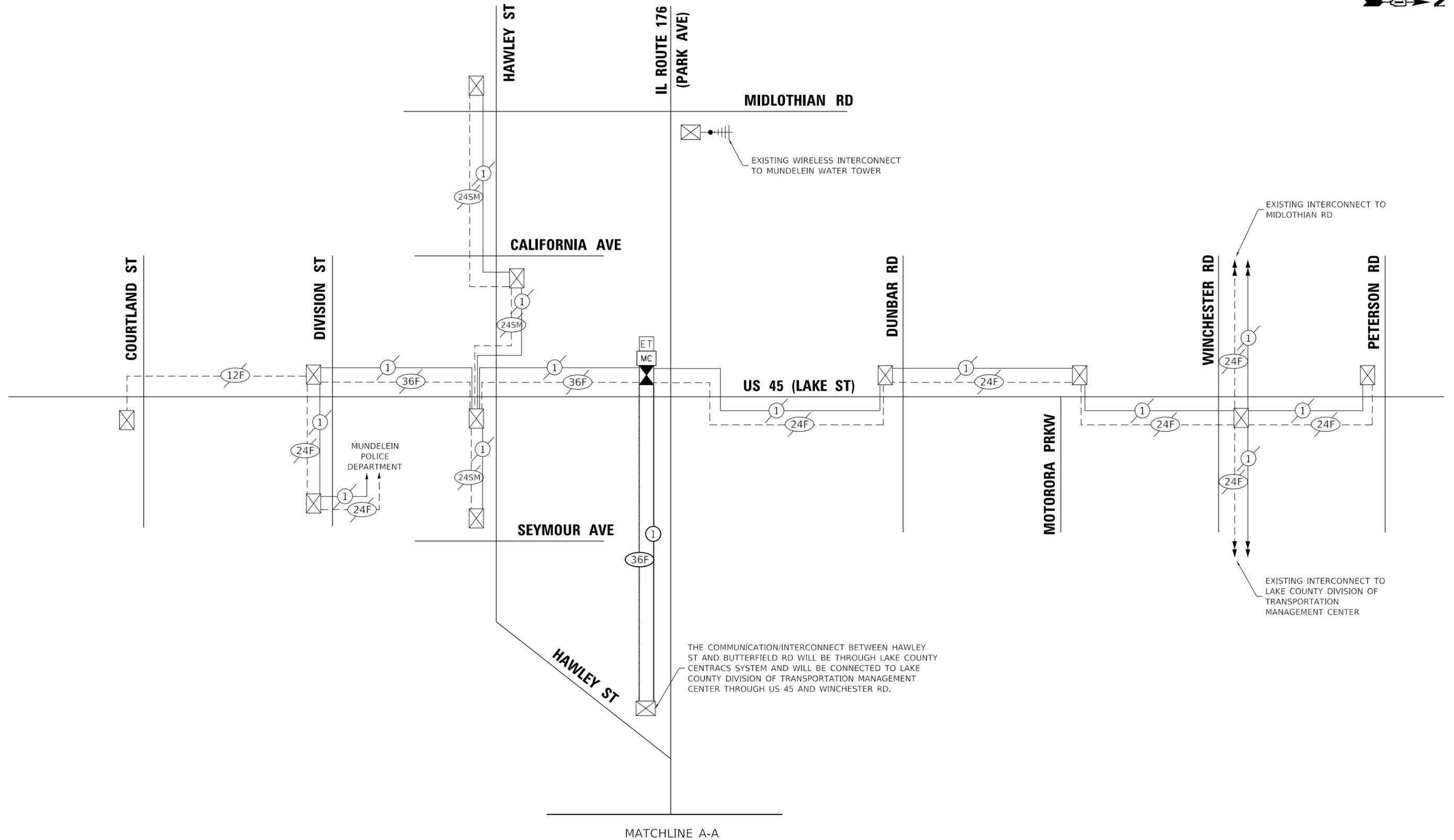
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT PLAN (SHEET 8 OF 8)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO FOURTH ST**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	40
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



MATCHLINE A-A

**LCDOT CENTRACS
EXISTING IDOT SYSTEM EAGLE 1J**

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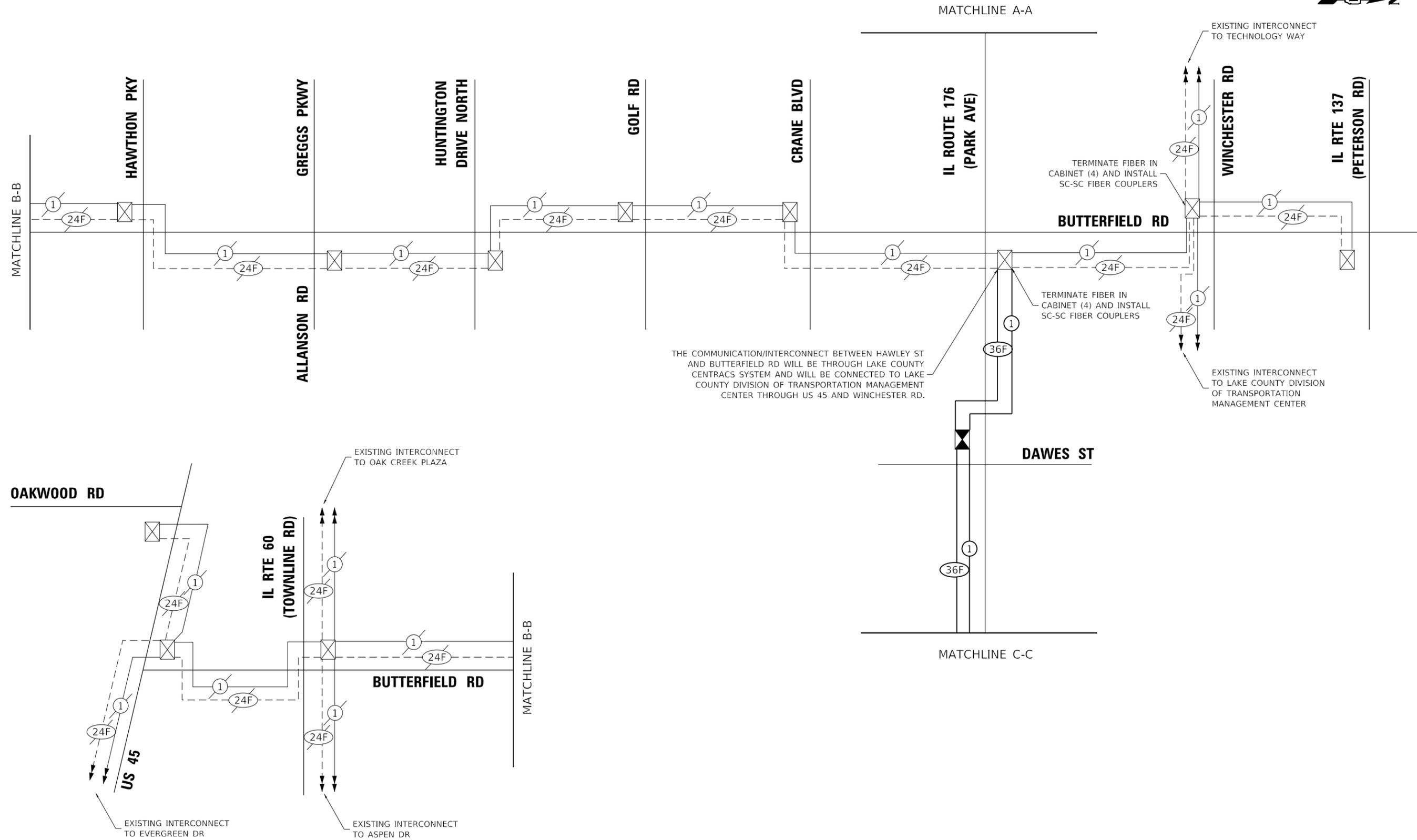
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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT SCHEMATIC (SHEET 1 OF 3)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO 4TH AVE**

SCALE: NTS SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	41
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



THE COMMUNICATION/INTERCONNECT BETWEEN HAWLEY ST AND BUTTERFIELD RD WILL BE THROUGH LAKE COUNTY CENTRACS SYSTEM AND WILL BE CONNECTED TO LAKE COUNTY DIVISION OF TRANSPORTATION MANAGEMENT CENTER THROUGH US 45 AND WINCHESTER RD.

TERMINATE FIBER IN CABINET (4) AND INSTALL SC-SC FIBER COUPLERS

TERMINATE FIBER IN CABINET (4) AND INSTALL SC-SC FIBER COUPLERS

EXISTING INTERCONNECT TO TECHNOLOGY WAY

EXISTING INTERCONNECT TO LAKE COUNTY DIVISION OF TRANSPORTATION MANAGEMENT CENTER

EXISTING INTERCONNECT TO OAK CREEK PLAZA

EXISTING INTERCONNECT TO EVERGREEN DR

EXISTING INTERCONNECT TO ASPEN DR

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	DATE - 10/15/2020	REVISED -

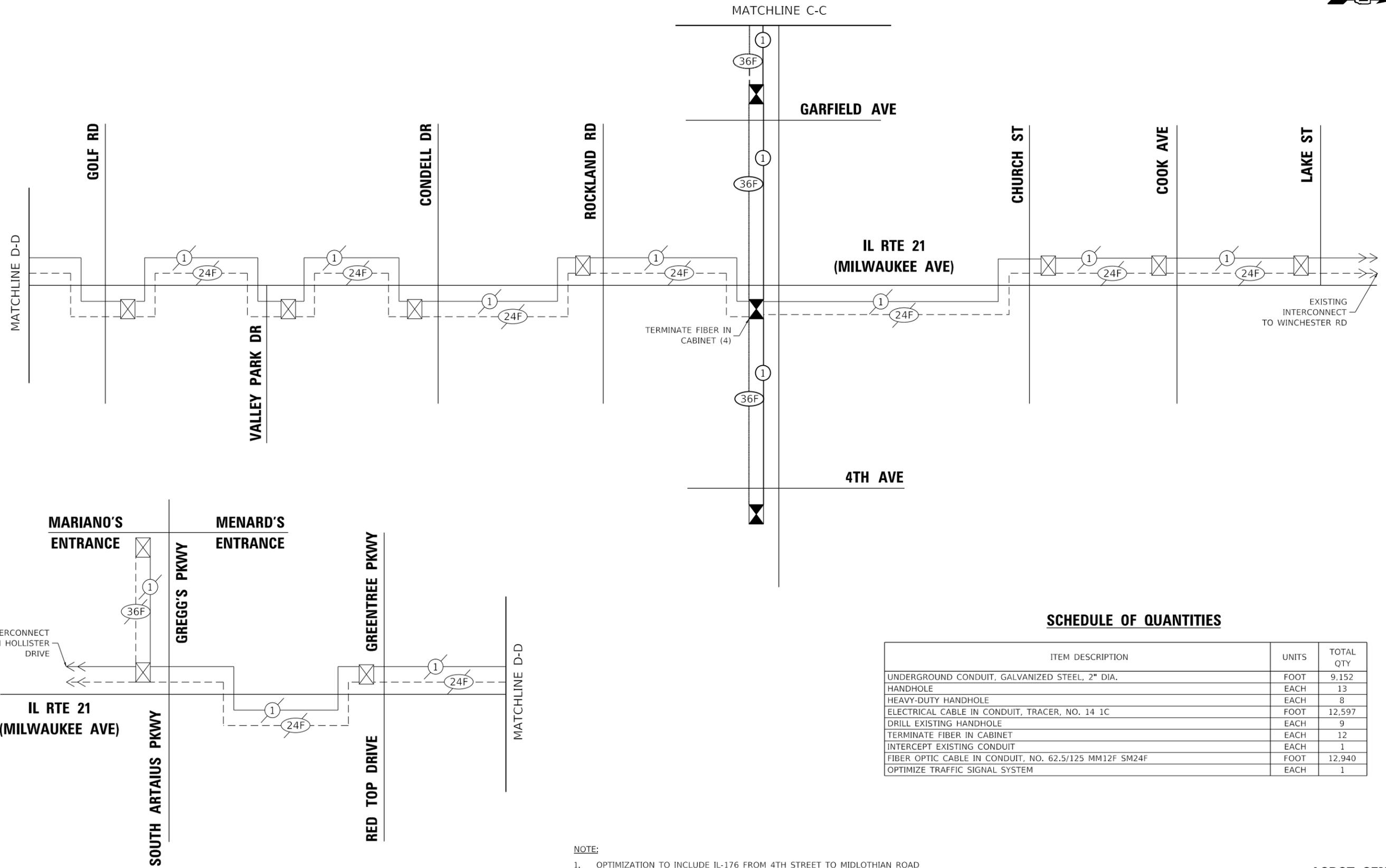
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT SCHEMATIC (SHEET 2 OF 3)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO 4TH AVE**

SCALE: NTS SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	42
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

LCDOT CENTRACS



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	9,152
HANDHOLE	EACH	13
HEAVY-DUTY HANDHOLE	EACH	8
ELECTRICAL CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	12,597
DRILL EXISTING HANDHOLE	EACH	9
TERMINATE FIBER IN CABINET	EACH	12
INTERCEPT EXISTING CONDUIT	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F	FOOT	12,940
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

- NOTE:**
1. OPTIMIZATION TO INCLUDE IL-176 FROM 4TH STREET TO MIDLOTHIAN ROAD
 2. INSTALL FIBER OPTIC SC TO SC COUPLER AS SPECIFIED ON THE PLANS AND SHALL BE PART OF TERMINATE FIBER IN CABINET PAY ITEM.

**LCDOT CENTRACS
FORMER ECON 7**

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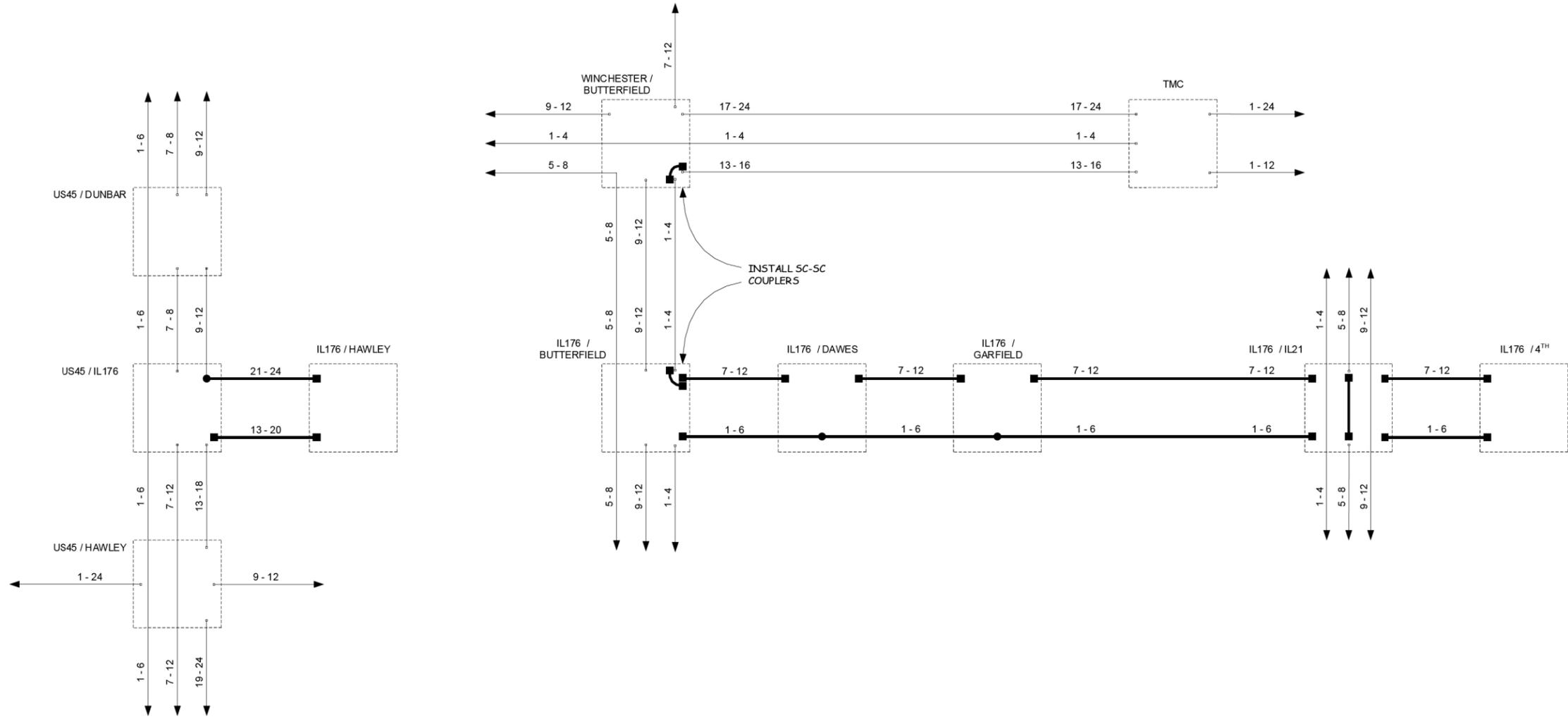
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERCONNECT SCHEMATIC (SHEET 3 OF 3)
IL ROUTE 176 - FROM MIDLOTHIAN RD TO 4TH AVE**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	43
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				

-  EXISTING CONNECTOR / EXISTING FIBER
-  NEW CONNECTOR / EXISTING FIBER
-  EXISTING FUSION SPLICE / EXISTING FIBER
-  NEW FUSION SPLICE / EXISTING FIBER
-  NEW CONNECTOR / NEW FIBER
-  NEW FUSION SPLICE / NEW FIBER



PROPOSED

	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			SCALE N/A					
	CHECKED - DG	REVISED -								
	DATE 2020.10.12	REVISED -								

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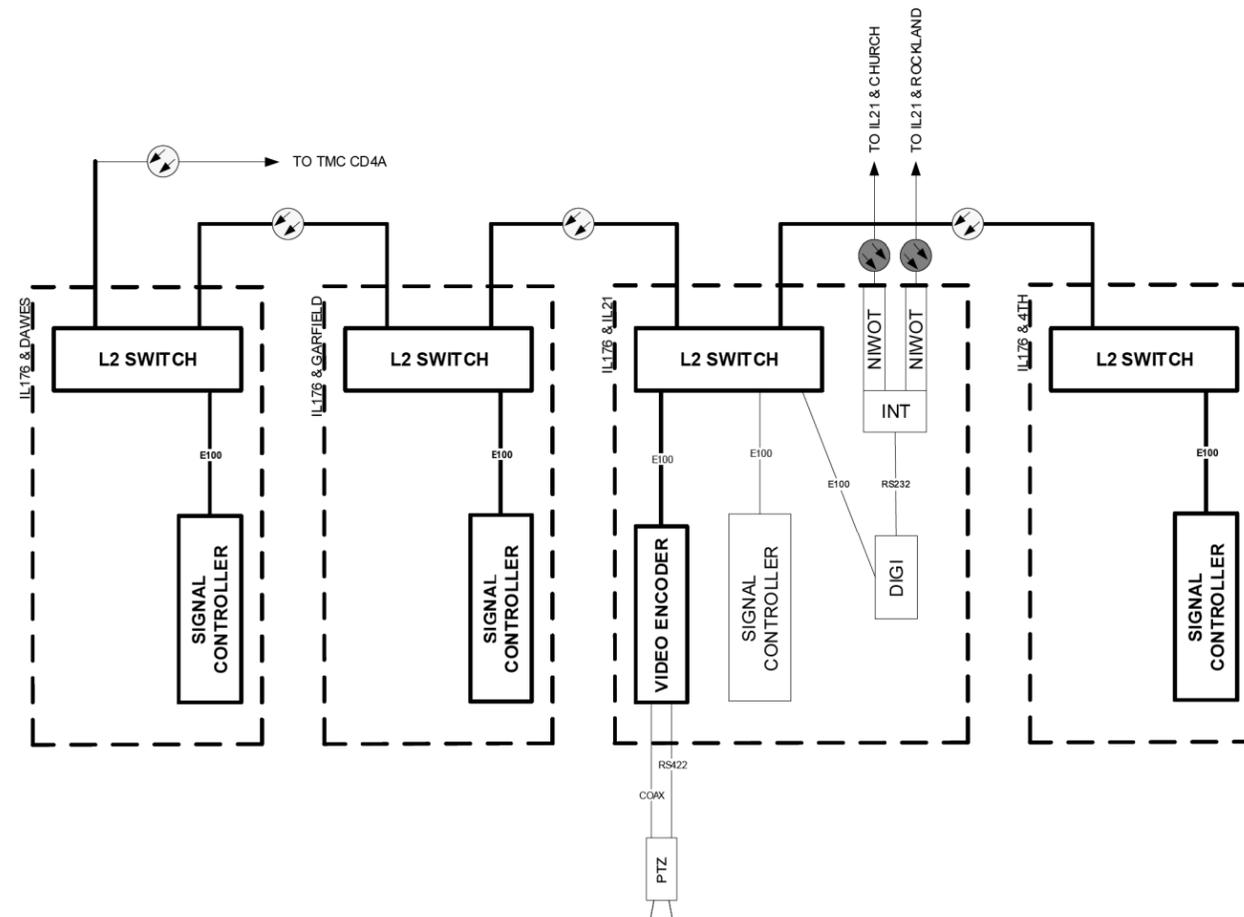


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PLOT DATE = 10/15/2020	DATE - 10/15/2020	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LAKE COUNTY DEPARTMENT OF TRANSPORTATION PROPOSED FIBER SPLICING DIAGRAM			
SCALE: NTS	SHEET 1 OF 4 SHEETS	STA. TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	44
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



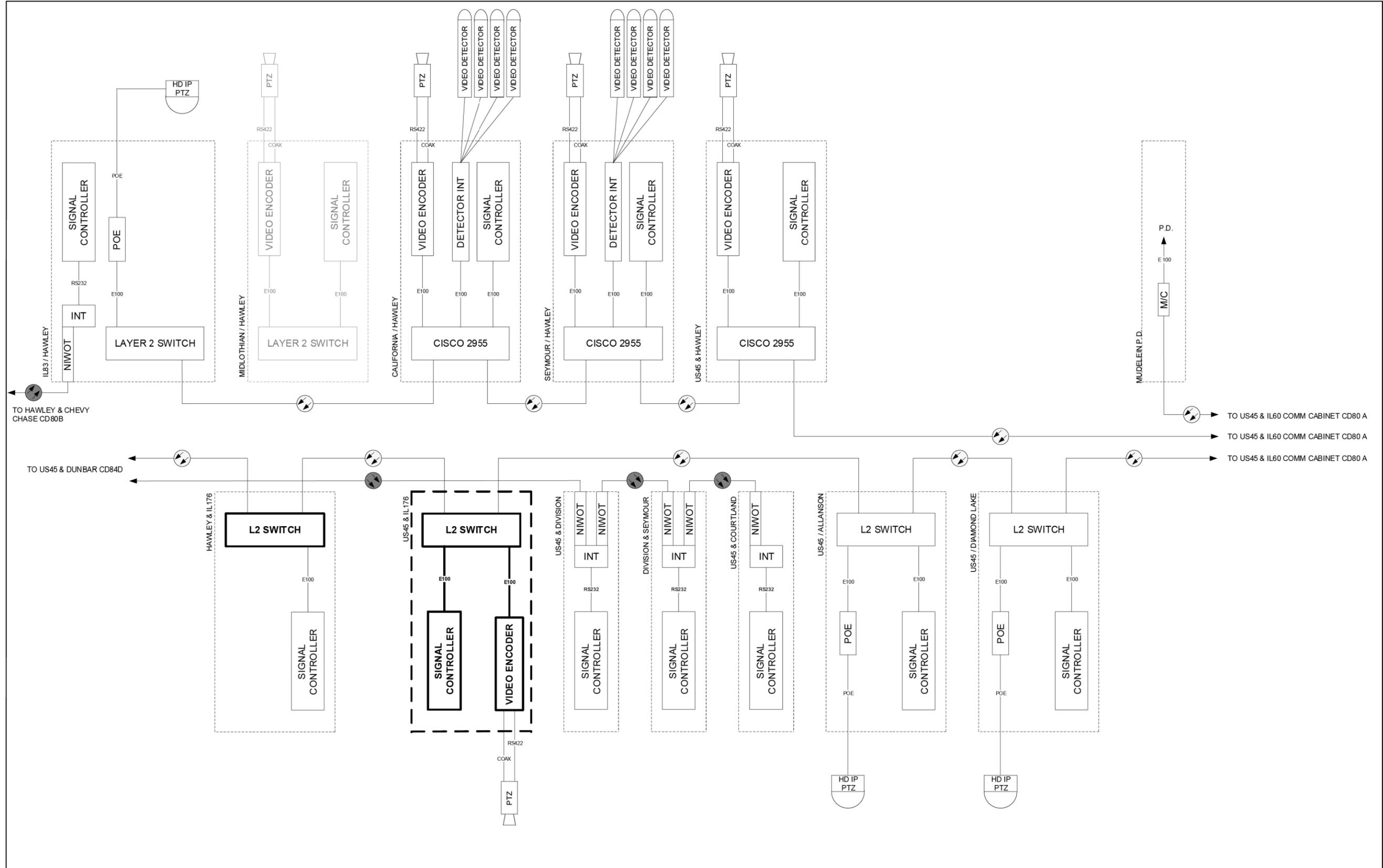
PROPOSED

DESIGNED - DG	REVISIED -	LAKE COUNTY DIVISION OF TRANSPORTATION	4B		ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
DRAWN - YM	REVISIED -		IL176 from DAWES to 4TH					4B	
CHECKED - DG	REVISIED -		SCALE N/A						
DATE 2020.10.12	REVISIED -								

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	46
CONTRACT NO. 62M62			ILLINOIS FED. AID PROJECT	

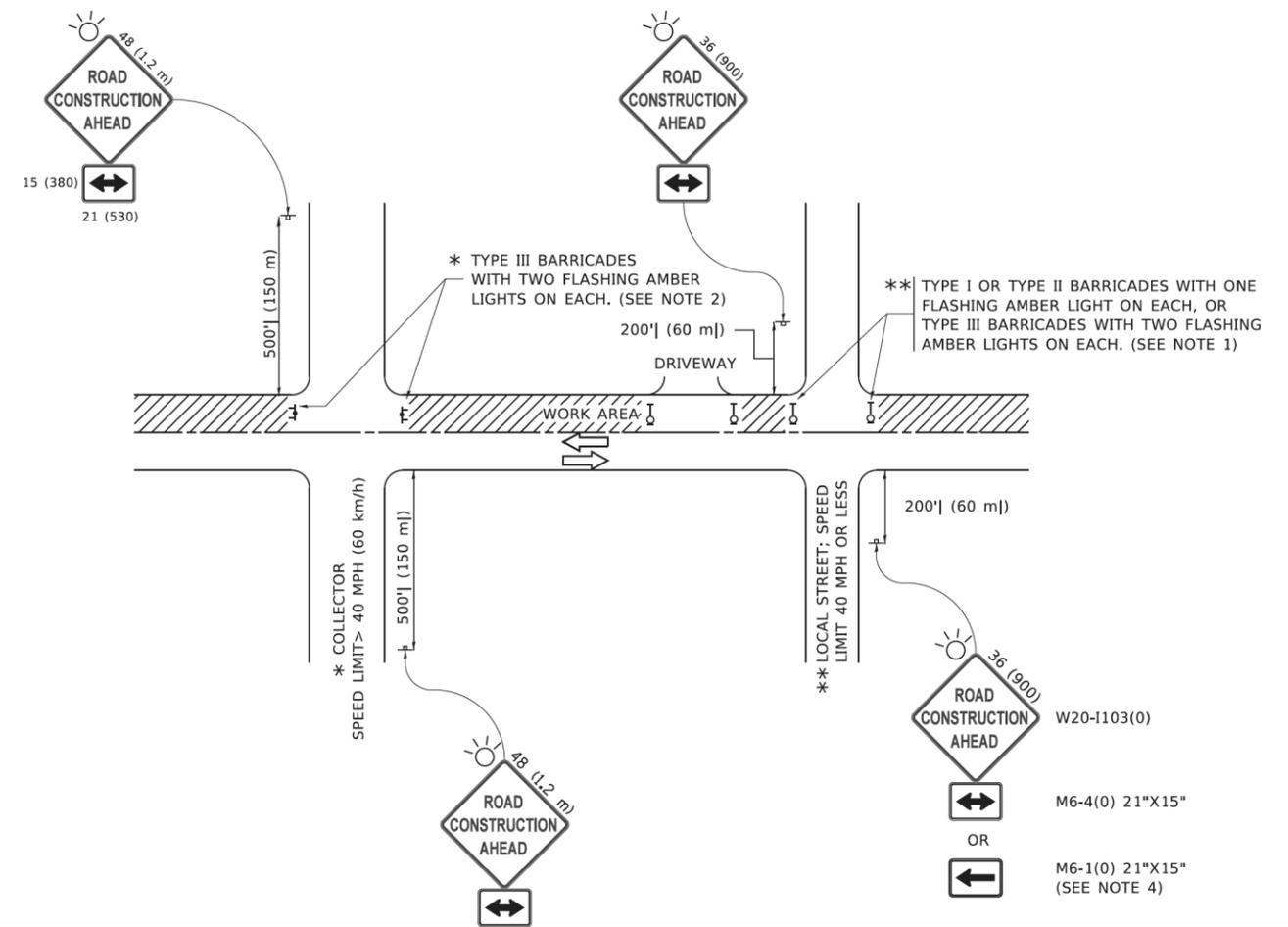


DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	CD80C - US45 / HAWLEY	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
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CHECKED - DG	REVISED -							
DATE 2020.10.12	REVISED -							

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIES	2020-188-T5	VARIOUS	49	47
CONTRACT NO. 62M62				
ILLINOIS FED. AID PROJECT				



NOTES:

- 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:
 - 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.
 - 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:
 - 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 BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 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 AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- 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.
- 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.

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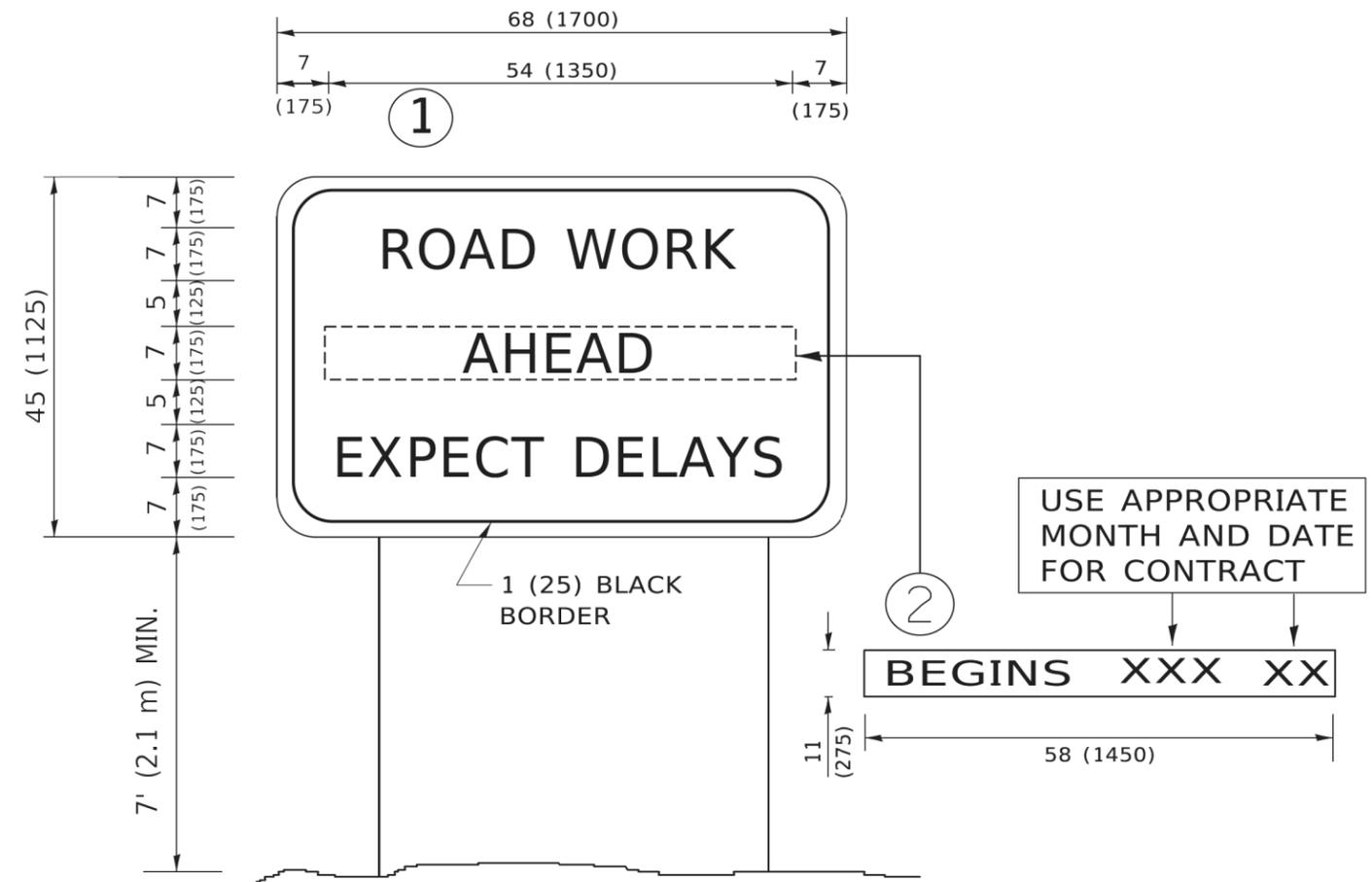
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PLOT SCALE = 50,0000' / ft.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
PLOT DATE = 3/4/2019	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2020-188-T5		49	48
TC-10			CONTRACT NO. 62M62	
ILLINOIS FED. AID PROJECT				



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.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

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PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2020-188-T5		49	49
TC-22		CONTRACT NO. 62M62		
ILLINOIS FED. AID PROJECT				