F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	1
	ILLINOIS	CONTRACT NO. 61G69		

FOR INDEX OF SHEETS AND STANDARDS SEE SHEET NO. 2

DESIGN DESIGNATIONS:

FA ROUTE 2647 (BUTTERFIELD ROAD) 25,300(2019) MINOR ARTERIAL

POSTED /DESIGN SPEEDS:

40 MPH

11-06-2020 LETTING ITEM 109

MATTHEW J LETOURNEAU 062-055763 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

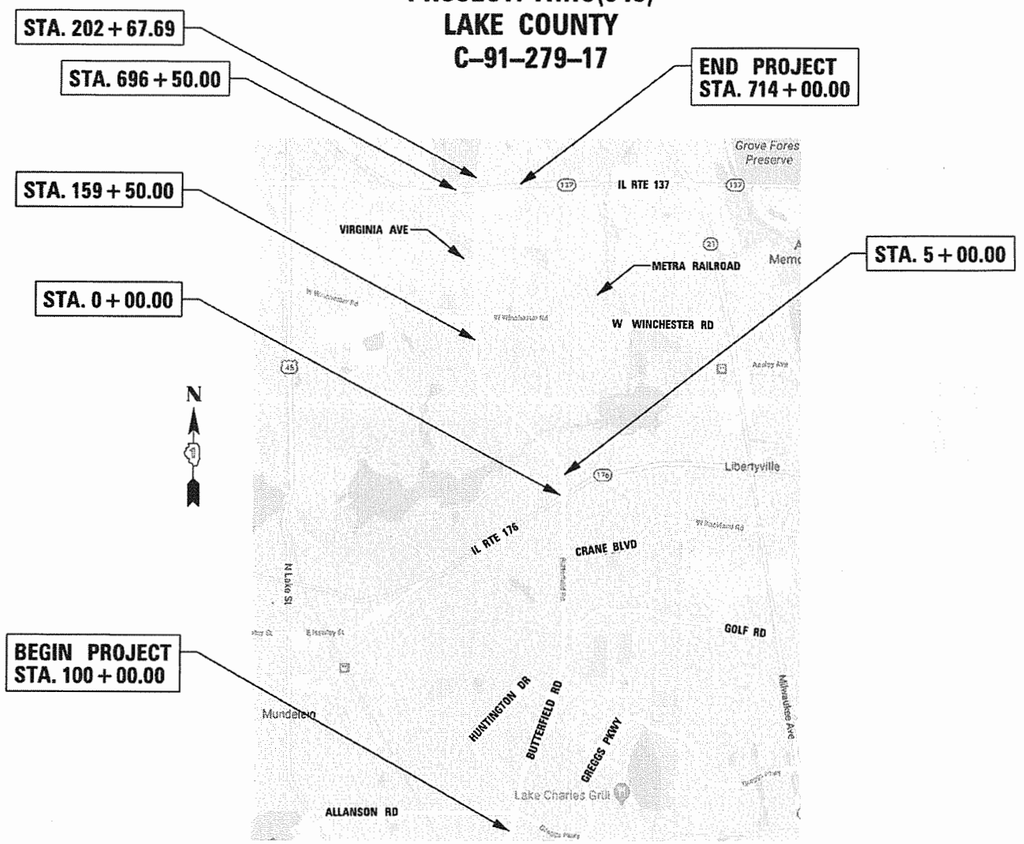
7/21/2020
MATTHEW J. LETOURNEAU, P.E. DATE
LICENSE EXPIRES 11/30/2021

FEDERAL AID PROGRAM ENGINEER: CARMEN E. RAMOS, P.E., SCHAUMBURG, IL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

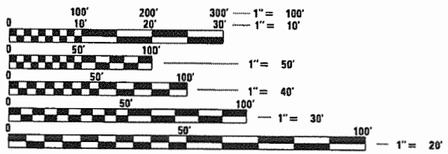
FAU ROUTE 2647 (CH 57 (BUTTERFIELD ROAD))
ALLANSON ROAD/GREGGS PARKWAY TO
FAP 352 (IL ROUTE 137 (BUCKLEY ROAD))
TRAFFIC SIGNAL MODERNIZATION
SECTION 16-00142-08-TL
PROJECT: THHC(943)
LAKE COUNTY
C-91-279-17



LOCATION MAP
NOT TO SCALE
GROSS LENGTH = 19,800 FT (3.750 MILES)
NET LENGTH = 19,800 FT (3.750 MILES)

LOCATION OF SECTION INDICATED THUS: –

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700
FAX: (312) 373-6800



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

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
DIAL 811

PROJECT MANAGER: _____

CONTRACT NO. 61G69

AGENCY RESPONSIBLE FOR LETTING

APPROVED _____
Lake County, County Engineer
Local Agency, Position

PASSED AUG 18, 2020
District # Engineer of Local Roads & Streets

Releasing for Bid Based on Limited Review August 18, 2020
Regional Engineer

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PLOT DATE: 7/21/2020

INDEX OF SHEETS

LCDOT HIGHWAY STANDARDS

LC4202	CONCRETE WASHOUT FACILITIES
LC7000	TWO LANE, TWO WAY, OFF-ROAD OPERATIONS, DAY OPERATIONS ONLY
LC7003	URBAN LANE CLOSURE, MULTILANE INTERSECTION
LC7004	TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS, INTERSECTIONS, AND DRIVEWAYS
LC7005	TYPICAL LANE CLOSURE, THREE LANE ROAD SECTION
LC7200	DIRECTION INDICATOR BARRICADES
LC8900	CAMERA MOUNTING DETAILS

HIGHWAY STANDARDS

701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24' (600 m) FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24' (600 m) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701301-04	LANE CLOSURE, 2L, 2W, DAY ONLY, SHORT TIME OPERATIONS
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER, OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877011-10	STEEL COMB. MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877012-07	STEEL COMB. MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
878001-10	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

DISTRICT 1 STANDARDS

TS-02	DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS
TS-05	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

GENERAL NOTES

1. GENERAL

   a. ALL CONSTRUCTION SHALL BE DONE ACCORDING TO THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JAN. 1, 2020; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THESE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

   b. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR FOR ARTERIALS AT: KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

   c. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING WORK AND SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH THE ENGINEER.

   d. THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH ANY ADJACENT PROJECTS THAT ARE OR MAY BE UNDER CONSTRUCTION.

   e. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. WHERE NEW WORK IS PROPOSED TO MEET EXISTING FEATURES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD CHECK ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.

   f. THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION, EXCEPT FOR BRIEF PERIODS OF INTERRUPTION. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER NO LESS THAN 24 HOURS IN ADVANCE OF THE INTERRUPTION OF ACCESS AND/OR SERVICES. THE NOTIFICATION WILL INCLUDE THE TIME AND DURATION OF THE INTERRUPTION.

2. SURVEY

   a. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE THE MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

3. REMOVAL

   a. ALL EXCESS MATERIAL SHALL BE DISPOSED OF OFFSITE ON THE DAY IT IS EXCAVATED OR REMOVED.

   b. THE CONTRACTOR IS PROHIBITED FROM BURNING ANY MATERIAL WITHIN OR ADJACENT TO THE PROJECT LIMITS. ALL EXCESS OR WASTE MATERIAL SHALL BE HAULED AWAY FROM THE PROJECT SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF OUTSIDE THE RIGHT-OF-WAY.

   c. ALL EXISTING DRAINAGE FACILITIES, HEADWALLS AND FENCES NO LONGER REQUIRED, IN THE OPINION OF THE ENGINEER, SHALL BE REMOVED.

   d. REMOVED ITEMS DESIGNATED FOR SALVAGE - ITEMS DESIGNATED FOR SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT THE LOCATION AND IN THE MANNER DESIGNATED BY ENGINEER.

4. DRAINAGE

   a. UNLESS OTHERWISE NOTED ON THE PLANS, THE EXISTING DRAINAGE FACILITIES SHALL REMAIN IN USE DURING THE PERIOD OF CONSTRUCTION. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING, OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER.

   b. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, CULVERTS, SEWERS OR CATCH BASINS. THE CONTRACTOR SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET. THE CONTRACTOR SHALL BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWER ARE BUILT AND IN SERVICE.

   c. HOT-MIX ASPHALT OR CONCRETE PAVEMENT CROSSINGS SHALL NOT BE LEFT IN GRAVEL OVERNIGHT. THIS WILL INCLUDE THE MAIN ROAD, SIDE STREETS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES AND PARKING AREAS. TEMPORARY HOT-MIX ASPHALT PATCHING OR STEEL PLATES MAY BE USED IN LIEU OF IMMEDIATE PAVEMENT REPLACEMENT.

   d. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER OR EXTENDED TO OUTLET INTO A PROPOSED DRAINAGE WAY. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH NEW PIPE OF SIMILAR SIZE AND MATERIAL TO THE ORIGINAL LINE AND PUT IN ACCEPTABLE OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR ON-SITE DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER UPON COMPLETION OF THE PROJECT.

   e. COUPLINGS USED FOR CONNECTIONS OF NEW PIPE TO EXISTING PIPE AND WHERE DISSIMILAR PIPE AND JOINT MATERIALS ARE ENCOUNTERED SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. NO STAINLESS STEEL SHEAR RINGS WILL BE ALLOWED.

5. LANDSCAPING: PHOSPHORUS FERTILIZER NUTRIENT SHALL NOT BE USED ON LAKE COUNTY HIGHWAYS.

6. SIGNS

   a. THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE SIGNS WHICH INTERFERE WITH HIS\HER CONSTRUCTION OPERATIONS, AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS ACCORDING TO ARTICLE 107.25 OF THE "STANDARD SPECIFICATIONS".

      * ALL UNUSED SIGNS SHALL BE RETURNED TO THE COUNTY.

      * LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS.

7. UTILITIES

   a. LOCATION INFORMATION FOR THE UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS (UTILITY LINEWORK SHOWN ON PLAN SHEETS AS SOLID LINES) AND/OR INCLUDED IN THE CONTRACT SPECIFICATIONS REPRESENTS THE BEST INFORMATION PROVIDED TO LCDOT, AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. LCDOT ASSUMES NO RESPONSIBILITY FOR THE SUFFICIENCY OR THE ACCURACY OF THE LOCATION INFORMATION PROVIDED.

   b. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, GAS, WATER, SEWER, CABLE, ETC., UTILITY LINES (MINIMUM 48-HOUR NOTIFICATION IS REQUIRED).

   c. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR DESTRUCTION OF PUBLIC OR PRIVATE PROPERTY ACCORDING TO THE SPECIAL PROVISIONS AND ARTICLE 107.20 OF THE "STANDARD SPECIFICATIONS". THE CONTRACTOR SHALL RESTORE SUCH PROPERTY AT HIS/HER OWN EXPENSE. THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES REQUIRED TO MAINTAIN EXISTING UTILITIES, SEWERS, AND APPURTENANCES THAT MUST BE KEPT IN OPERATION. IN PARTICULAR, THE CONTRACTOR WILL TAKE ADEQUATE MEASURES TO PREVENT THE UNDERMINING OF UTILITIES AND SEWERS WHICH ARE STILL IN SERVICE.

8. MISCELLANEOUS

   a. GENERALLY, 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN ON THE PLANS.

   b. ALL REFERENCES IN THE HIGHWAY STANDARDS AND STANDARD SPECIFICATIONS FOR REINFORCEMENT, DOWEL BARS AND TIE BARS IN PAVEMENT, SHOULDERS, CURB, GUTTER, COMBINATION CURB & GUTTER AND MEDIAN, AND CHAIR SUPPORTS FOR CONTINUOUSLY REINFORCED CONCRETE PAVEMENT, SHALL BE EPOXY COATED, UNLESS NOTED ON THE PLANS.

   c. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT SOME QUANTITIES ARE GIVEN IN BOTH SUMMARY FORM AND ON THE PLAN SHEETS. CARE SHOULD BE TAKEN TO AVOID DUPLICATION OF QUANTITIES.

9. PROJECT SPECIFIC NOTES

   a. ITEMS TO BE SALVAGED ARE LISTED ON THE INDIVIDUAL TEMPORARY TRAFFIC SIGNAL PLAN SHEETS.

10. COMMITMENTS

   a. N/A

FILE NAME: IndexAndGenNotes.01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6617
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/16/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS

SCALE: N.T.S. | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	2
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES (CONTINUED)

11. POINTS OF CONTACT

a. LAKE COUNTY DIVISION OF TRANSPORTAITON
JON NELSON, PE
ENGINEER OF TRAFFIC
600 W. WINCHESTER ROAD
LIBERTYVILLE, IL 60048-1381
PH: 847.377.7473

b. ILLINOIS DEPARTMENT OF TRANSPORTATION
DARYLE DREW, PE
TRAFFIC SIGNAL ENGINEER
201 W. CENTER COURT
SCHAUMBURG, IL 60196
PH: 847.705.4424

c. LAKE COUNTY PUBLIC WORKS

AUSTIN L. MCFARLANE
INTERIM DIRECTOR
650 W. WINCHESTER ROAD
LIBERTYVILLE, IL 60048
PH: 847.377.7500

JOEL SENSENIG
ASSISTANT DIRECTOR
650 W. WINCHESTER ROAD
LIBERTYVILLE, IL 60048
PH: 847.377.7500

12. UTILITY POINTS OF CONTACT (LEGAL MANDATE - CONTACT FOR QUESTIONS ON UTILITY PLANS & PERMITS)

HECTOR GARCIA
AT&T
1000 COMMERCE DRIVE, FLOOR 1
OAK BROOK, IL. 60523
PHONE: (630) 573-5465

ROBERT SCHULTER
MANAGER
COMCAST
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
PHONE: (224) 229-5861

TERRI J. BLECK
MANAGER, PUBLIC RELOCATION GROUP
COMED
1500 FRANKLIN BLVD.
LIBERTYVILLE, IL 60048
PHONE: (847) 816-5239

KEVIN P. MCNAMARA
OSP MANAGER
ADESTA / G4S TECHNOLOGY LLC
565 WILLOWBROOK CENTRE PARKWAY
WILLOWBROOK, IL 60527
PHONE: (630) 739-0546

BILL SOUCIE
OPERATIONS DIRECTOR
CENTRAL LAKE COUNTY JOINT
ACTION WATER AGENCY ("JAWA")
200 ROCKLAND RD.
LAKE BLUFF, IL 60044
PHONE: (847) 295-7788

AUSTIN L. MCFARLANE
LAKE COUNTY PUBLIC WORKS
650 W. WINCHESTER RD.
LIBERTYVILLE, IL 60048
PHONE: (847) 377-7500

LINDA CARLSON
PROJECT ENGINEER
VILLAGE OF LIBERTYVILLE
PUBLIC WORKS DEPARTMENT
600 NORTH AVE.
LIBERTYVILLE, IL 60048
PHONE: (847) 918-2100

ADAM BOECHE
VILLAGE OF MUNDELEIN
PUBLIC WORKS DEPARTMENT
440 E CRYSTAL ST.
MUNDELEIN, IL 60060
PHONE: (847) 949-3270

BEN KAPLAN
ENGINEERING SUPERVISOR
NORTH SHORE GAS CO.
3001 GRAND AVE.
WAUKEGAN, IL 60085
PHONE: (847) 263-4603

MATTHEW SCHULTE
NETWORK SPECIALIST-OSP ENGINEERING
TDS METROCOM
16924 W VICTOR ROAD
NEW BERLIN, WI 53151
PHONE: (262) 754-3063

TOM BUHER
OSP CONST. MANAGER
VERIZON
7719 W. 60TH PLACE
SUMMIT, IL 60501
PHONE: (708) 458-6410

13. UTILITY POINTS OF CONTACT (DAMAGE PREVENTION - CONTACT FOR PROBLEMS WITH JULIE LOCATES AND/OR UTILITY EMERGENCIES)

a. SEE CONTACT LIST UNDER ITEM 12.

14. AGENCY/COMMUNITY PARTICIPATION

a. N/A

15. THE FOLLOWING OUTSIDE AGENCY PERMIT(S) ARE REQUIRED ON THIS CONTRACT:

- N/A

TRAFFIC CONTROL AND PROTECTION GENERAL NOTES

1. NO WORK SHALL BEGIN UNTIL THE TRAFFIC CONTROL MEASURES ARE IN PLACE. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE TRAFFIC PROTECTION BY THE APPLICATION OF TRAFFIC CONTROL DEVICES ACCORDING TO THE "STANDARD SPECIFICATIONS" AND AS SHOWN ON THE PLANS.

2. THE PERMANENT TRAFFIC CONTROL SHOWN ON THE PLANS IS THE MINIMUM REQUIREMENT. ADDITIONAL TRAFFIC CONTROL DEVICES AS SPECIFIED BY THE ABOVE HIGHWAY STANDARDS AND THE SPECIAL PROVISIONS SHALL BE PLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

3. ALL TRAFFIC CONTROL WARNING SIGNS AND ASSOCIATED SIGNING MOUNTED WITH THE WARNING SIGNS SHALL HAVE BLACK LEGENDS AND BORDERS ON FLUORESCENT ORANGE REFLECTIVE SHEETING.

4. ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC IMMEDIATELY WHEN THEY ARE NO LONGER NECESSARY. WHEN A SIGN IS COVERED, ITS POST SHALL HAVE A REFLECTIVE 3 INCH X 6 INCH DELINEATOR INSTALLED.

5. THE SIGN SPACING FOR THE ABOVE HIGHWAY STANDARDS SHALL BE ACCORDING TO THE SIGN SPACING TABLE SHOWN ON THIS TRAFFIC CONTROL PLAN.

6. ROAD NAME PLATES SHALL BE INSTALLED ON THE "ROAD WORK AHEAD" SIGNS AT THE INTERSECTIONS SHOWN ON THIS TRAFFIC CONTROL PLAN. THE ROAD NAME PLATES SHALL BE 9 INCH BLANKS WITH 6 INCH UPPERCASE AND 5 INCH LOWERCASE LETTERING. THE ROAD NAME PLATES SHALL BE FURNISHED BY THE CONTRACTOR.

7. "ROAD WORK AHEAD" SIGNS SHALL BE EQUIPPED WITH MONO-DIRECTIONAL TYPE A AMBER FLASHING LIGHTS.

FILE NAME IndexAndGenNotes_02

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES (CONTINUED)

SCALE: N.T.S. | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	3
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

	LOCATION OF WORK				BUTTERFIELD ROAD								IL ROUTE 137 & BUTTEFIELD SQUARE DRIVE	INTERCONNECT	CONSTRUCTION CODE	
	SUMMARY OF QUANTITIES														TRAFFIC SIGNALS	TRAINEES
															80% FED	80% FED
															20% LOCAL	20% LOCAL
	CODE NO.	ITEM	UNIT	TOTAL	ALLANSON ROAD/GREGG'S PARKWAY	HUNTINGTON ROAD	GOLF ROAD	CRANE BOULEVARD	IL ROUTE 176/PARK DRIVE	WINCHESTER ROAD	VIRGINIA AVENUE/ST WILLIAM DRIVE	IL ROUTE 137/BUCKLEY ROAD/PETERSON RD			0021	0042
															URBAN	URBAN
X	20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	4			1	3							4	
X	31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	131	6	8		9	76	3	29				131	
X	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,153	50	67		77	683	21	255				1,153	
X	44000600	SIDEWALK REMOVAL	SQ FT	1,153	50	67		77	683	21	255				1,153	
X	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	210	30	30	30	30	40	30	20				210	
X	66900530	SOIL DISPOSAL ANALYSIS	EACH	8	1	1	1	1	2	1	1				8	
X	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1											1	
X	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1											1	
X	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	60											60	
	67100100	MOBILIZATION	L SUM	1											1	
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	60											60	
X	72000100	SIGN PANEL - TYPE 1	SQ FT	318	50	50	50	25	68	50	25				318	
X	72000200	SIGN PANEL - TYPE 2	SQ FT	25					25						25	
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	216	5	27	17	11	138	14	4				216	
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	73					73						73	
	81028230	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	488	50	45	60	154		79	100				488	
	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	17					17						17	

X DENOTES SPECIALTY ITEM

FILE NAME S001-01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-4161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 '/ in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 1 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	4
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

LOCATION OF WORK				BUTTERFIELD ROAD								IL ROUTE 137 & BUTTEFIELD SQUARE DRIVE	INTERCONNECT	CONSTRUCTION CODE	
SUMMARY OF QUANTITIES														TRAFFIC SIGNALS	TRAINEES
														80% FED	80% FED
														20% LOCAL	20% LOCAL
CODE NO.	ITEM	UNIT	TOTAL	ALLANSON ROAD/GREGG'S PARKWAY	HUNTINGTON ROAD	GOLF ROAD	CRANE BOULEVARD	IL ROUTE 176/PARK DRIVE	WINCHESTER ROAD	VIRGINIA AVENUE/ST WILLIAM DRIVE	IL ROUTE 137/BUCKLEY ROAD/PETERSON RD			0021	0042
														URBAN	URBAN
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	9,072	1,844	1,554	1,564	1,448		1,800	862				9,072	
82110007	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G	EACH	14	4	4				4	2				14	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2								1	1		2	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	5,909	1,031	517	752	1,074	1,540	704	291				5,909	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	13,146	2,550	1,497	1,725	1,956	2,011	2,319	1,088				13,146	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	10,632	1,358	1,494	1,520	1,620	2,073	1,746	821				10,632	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	9,903	2,716	1,022	1,161	660	2,634	1,263	447				9,903	
87301732	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	328						226	102				328	
87301800	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4 2 C	FOOT	495					495						495	
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1,594	97	138	116	248	707	141	147				1,594	
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2					2						2	
87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1					1						1	
87702950	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1					1						1	
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	32			4	16	4		8				32	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	378	60	60	60	60	48	60	30				378	
87900200	DRILL EXISTING HANDHOLE	EACH	46	5	7	6	9	8	6	5				46	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	48	6	8	8	8	6	8	4				48	

X DENOTES SPECIALTY ITEM

FILE NAME SQ01-01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-5610
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 2 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	5
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

LOCATION OF WORK				BUTTERFIELD ROAD								IL ROUTE 137 & BUTTEFIELD SQUARE DRIVE	INTERCONNECT	CONSTRUCTION CODE	
SUMMARY OF QUANTITIES														TRAFFIC SIGNALS	TRAINEES
														80% FED	80% FED
														20% LOCAL	20% LOCAL
CODE NO.	ITEM	UNIT	TOTAL	ALLANSON ROAD/GREGG'S PARKWAY	HUNTINGTON ROAD	GOLF ROAD	CRANE BOULEVARD	IL ROUTE 176/PARK DRIVE	WINCHESTER ROAD	VIRGINIA AVENUE/ST WILLIAM DRIVE	IL ROUTE 137/BUCKLEY ROAD/PETERSON RD			0021	0042
														URBAN	URBAN
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4				2	2						4	
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	24	4	4	4	2	4	4	2				24	
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	25	5	4	4	2	4	4	2				25	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	7	4				2	1					7	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	7	4				2	1					7	
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	52	8	8	6	8	6	8	8				52	
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	80	15	12	12	10	12	13	6				80	
88700200	LIGHT DETECTOR	EACH	9	1	2	2	1		2	1				9	
88700300	LIGHT DETECTOR AMPLIFIER	EACH	5		1	1	1		1	1				5	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	52	8	8	6	8	6	8	8				52	
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	7	1	1	1	1	1	1	1				7	
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	5	2			1	2						5	
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	2	1				1						2	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	36,638	6,213	4,673	3,750	3,892	9,643	4,427	1,998	2,042			36,638	
89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	379	156	127	96								379	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	9	1	1	1	1	1	1	1	1	1		9	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	26	4	4	4	4	4	4	2				26	

X DENOTES SPECIALTY ITEM

FILE NAME S100-01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-681
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 3 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	6
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

LOCATION OF WORK				BUTTERFIELD ROAD								IL ROUTE 137 & BUTTEFIELD SQUARE DRIVE	INTERCONNECT	CONSTRUCTION CODE	
SUMMARY OF QUANTITIES														TRAFFIC SIGNALS	TRAINEES
														80% FED	80% FED
														20% LOCAL	20% LOCAL
CODE NO.	ITEM	UNIT	TOTAL	ALLANSON ROAD/GREGG'S PARKWAY	HUNTINGTON ROAD	GOLF ROAD	CRANE BOULEVARD	IL ROUTE 176/PARK DRIVE	WINCHESTER ROAD	VIRGINIA AVENUE/ST WILLIAM DRIVE	IL ROUTE 137/BUCKLEY ROAD/PETERSON RD			0021	0042
														URBAN	URBAN
X0320021	MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1					1						1	
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	2,750	670	277	264	220	445	569	305				2,750	
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	3,889	437	310	420	286	1,012	462	185	464	313		3,889	
X0326309	RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	8	1		1	1	1	2	2				8	
X0327211	RELOCATE SWITCH	EACH	7	1	1	1	1	1	1	1				7	
X0327406	RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	8	1		1	1	1	2	2				8	
X0327698	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	16	4	4	4	4							16	
X1400081	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1					1						1	
X1400102	OUTDOOR RATED NETWORK CABLE	FOOT	831	341	73	75	77	265						831	
X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1					1						1	
X1400201	RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR	EACH	3					2				1		3	
X1400216	LAYER II (DATALINK) SWITCH	EACH	8	1	1	1	1	1	1	1		1		8	
X1400217	TERMINATE FIBER IN CABINET	EACH	16										16	16	
X1400319	TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	3			1				2				3	
X1400320	TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	11	4	2	1	4							11	
X1400373	RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	8					2			4	2		8	
X1400378	PEDESTRIAN SIGNAL POST, 5 FT.	EACH	3					3						3	

X DENOTES SPECIALTY ITEM

FILE NAME
S00-01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6661
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	7
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

LOCATION OF WORK				BUTTERFIELD ROAD								IL ROUTE 137 & BUTTEFIELD SQUARE DRIVE	INTERCONNECT	CONSTRUCTION CODE	
SUMMARY OF QUANTITIES														TRAFFIC SIGNALS	TRAINEES
														80% FED	80% FED
														20% LOCAL	20% LOCAL
CODE NO.	ITEM	UNIT	TOTAL	ALLANSON ROAD/GREGG'S PARKWAY	HUNTINGTON ROAD	GOLF ROAD	CRANE BOULEVARD	IL ROUTE 176/PARK DRIVE	WINCHESTER ROAD	VIRGINIA AVENUE/ST WILLIAM DRIVE	IL ROUTE 137/BUCKLEY ROAD/PETERSON RD			0021	0042
														URBAN	URBAN
X6700405	ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED)	CAL MO	5										5	5	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1											1	
X8100863	INTERCEPT EXISTING CONDUIT	EACH	1					1						1	
X8440102	RELOCATE EXISTING LUMINAIRE	EACH	8			4	4							8	
X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	4						1	1	1	1		4	
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	4	1	1	1	1							4	
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	5	1	1	1	1	1						5	
X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	328						226	102				328	
X8770126	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)	EACH	1				1							1	
X8770135	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT. (SPECIAL)	EACH	1						1					1	
X8770137	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	2		1		1							2	
X8770139	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)	EACH	4		1	1	1			1				4	
X8770140	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	2						1	1				2	
X8770141	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	2			1			1					2	
X8770142	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT. (SPECIAL)	EACH	2			2								2	
X8770152	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 52 FT. (SPECIAL)	EACH	2	1	1									2	
X8770154	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT. (SPECIAL)	EACH	5	3	1				1					5	

X DENOTES SPECIALTY ITEM

FILE NAME
SOQ-01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 5 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	8
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

SCHEDULE OF QUANTITIES

LOCATION OF WORK				BUTTERFIELD ROAD								IL ROUTE 137 & BUTTEFIELD SQUARE DRIVE	INTERCONNECT	CONSTRUCTION CODE	
SUMMARY OF QUANTITIES				ALLANSON ROAD/GREGG'S PARKWAY	HUNTINGTON ROAD	GOLF ROAD	CRANE BOULEVARD	IL ROUTE 176/PARK DRIVE	WINCHESTER ROAD	VIRGINIA AVENUE/ST WILLIAM DRIVE	IL ROUTE 137/BUCKLEY ROAD/PETERSON RD			TRAFFIC SIGNALS	TRAINEES
														80% FED	80% FED
														20% LOCAL	20% LOCAL
CODE NO.	ITEM	UNIT	TOTAL											0021	0042
														URBAN	URBAN
X8772860	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1				1							1	
X8780010	CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	24		8			12	4					24	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1											1	
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	7	1	1	1	1	1	1	1				7	
Z0076600	TRAINEES	HOUR	1,000												1,000
Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1,000												1,000
XX005723	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	6	1	1	1	1		1	1				6	
XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	5	1	1	1	1	1						5	
XX006927	RELOCATE INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	6						4	2				6	
XX006938	OPTIMIZE TRAFFIC SIGNAL SYSTEM (SPECIAL)	EACH	1										1	1	
XX008169	PEDESTRIAN PUSH-BUTTON POST, SPECIAL	EACH	3		2				1					3	
XX009241	ADAPTIVE TRAFFIC CONTROL SYSTEM	L SUM	1										1	1	
XX009427	VALIDATION STUDY	L SUM	1										1	1	
XX009428	RELOCATE SIGNAL LENS COVER	EACH	46	10	8	8	8		8	4				46	

X DENOTES SPECIALTY ITEM

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jorden	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

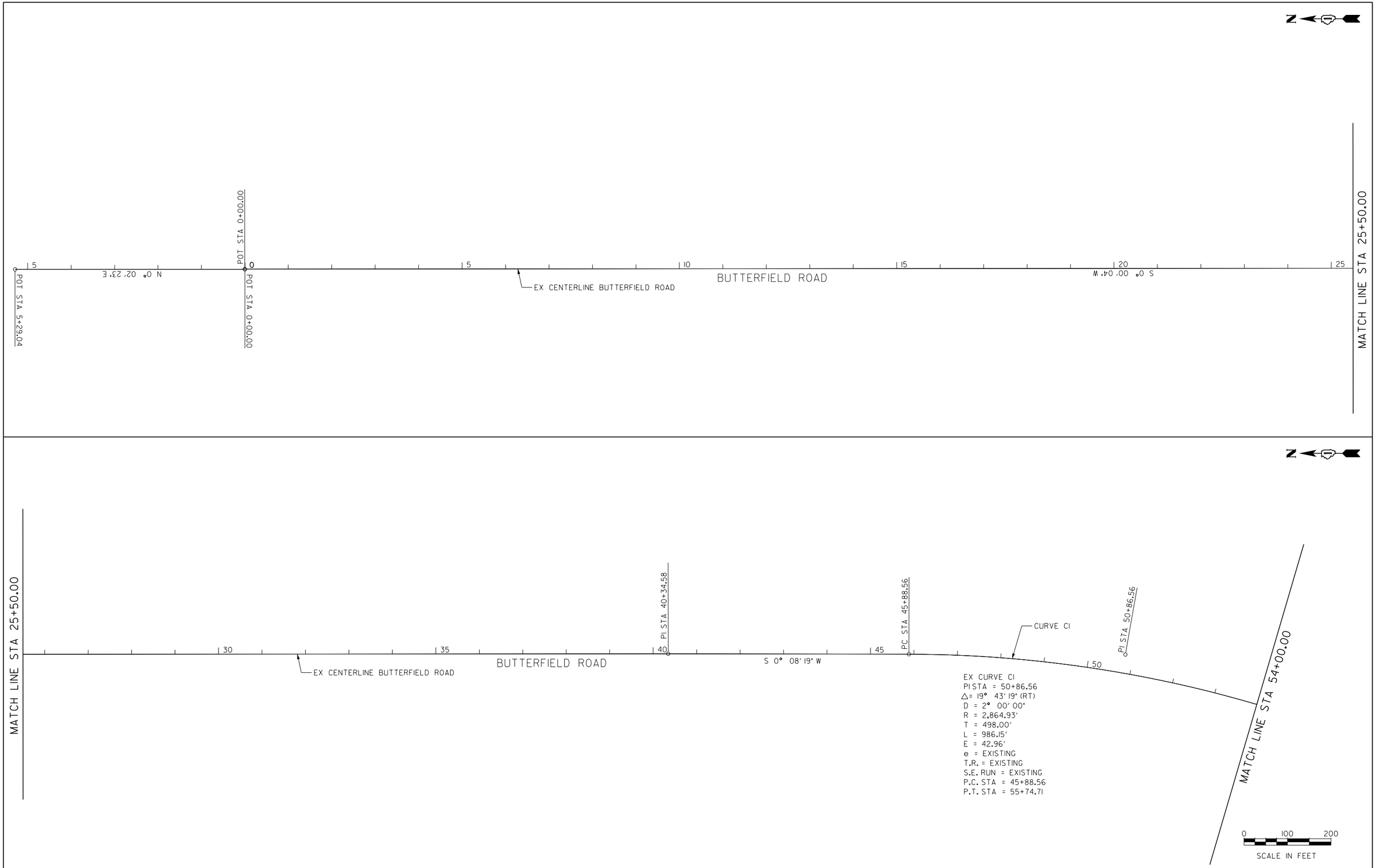
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 6 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	9
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

FILE NAME
SDD-01



FILE NAME
ATB-01

AECOM

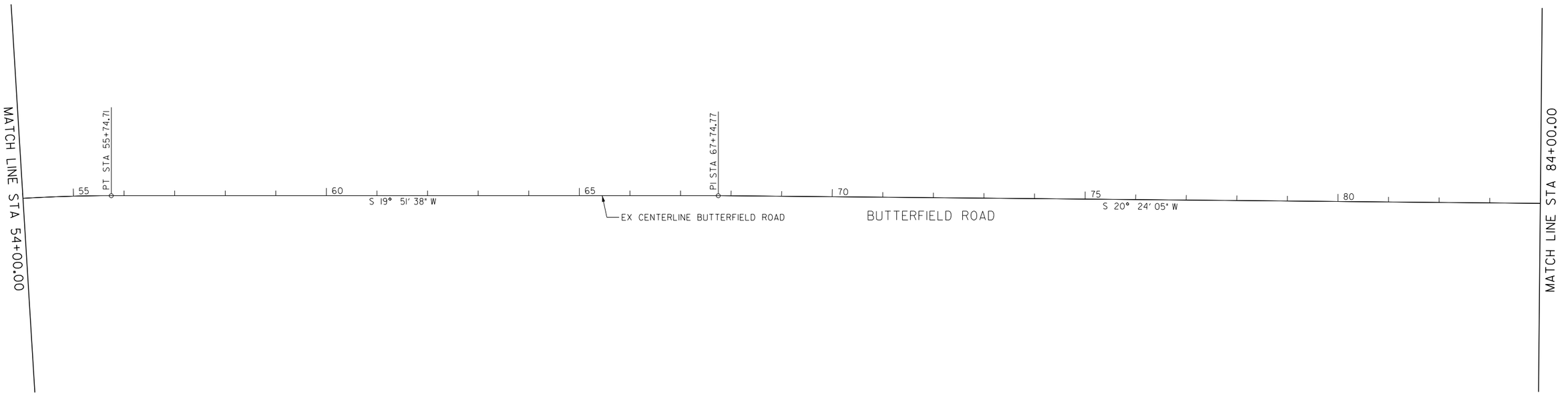
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 200.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

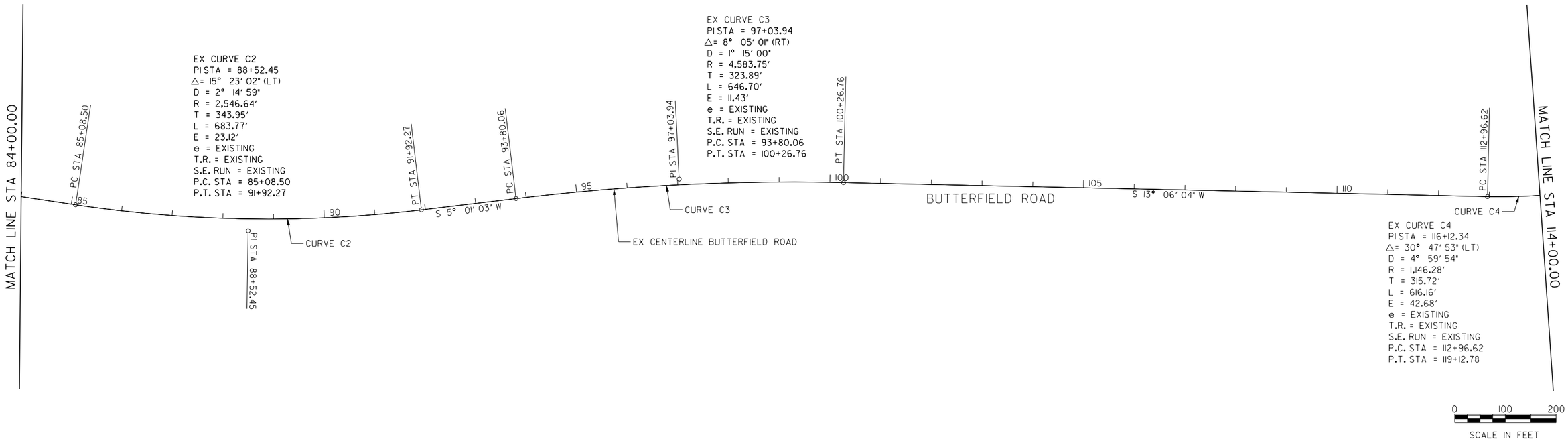
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1"=100' | SHEET OF SHEETS | STA. TO STA.54+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	10
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	





FILE NAME
ATB-02

AECOM

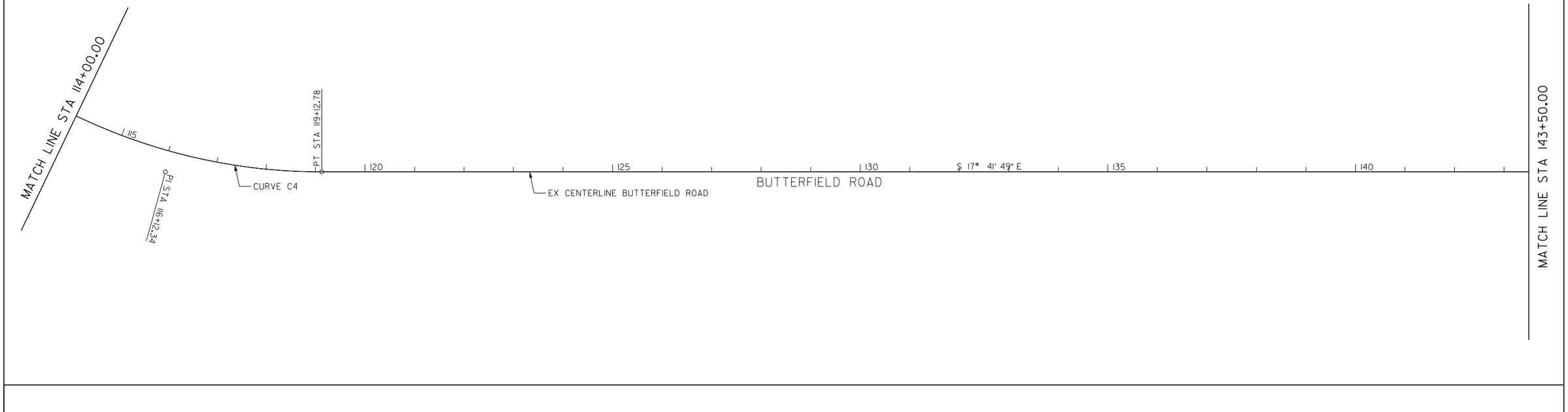
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 200.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

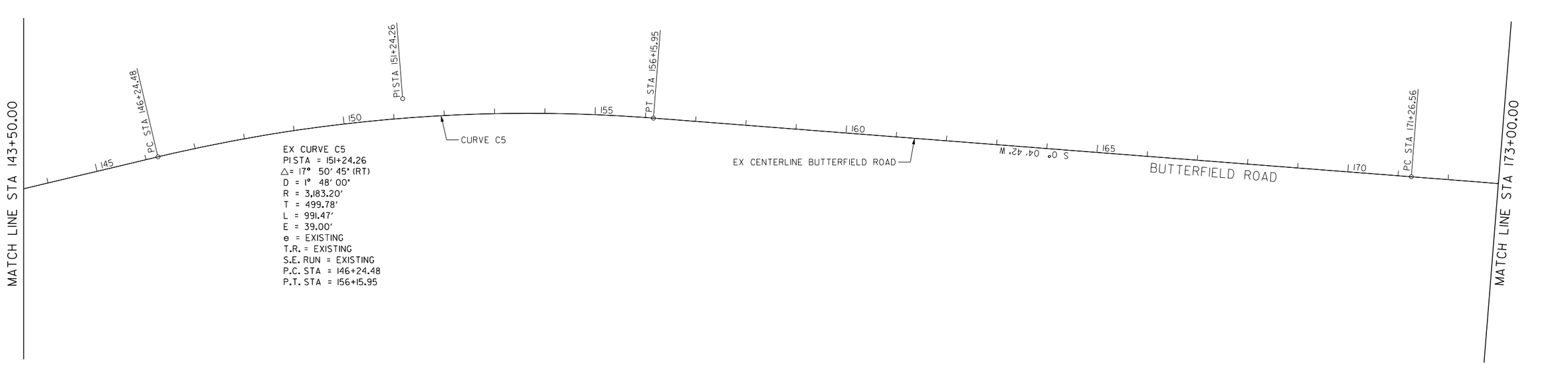
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1"=100' | SHEET OF SHEETS | STA. 54+00.00 | TO STA. 114+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	11
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		





0 100 200

SCALE IN FEET

FILE NAME ATB-03

AECOM

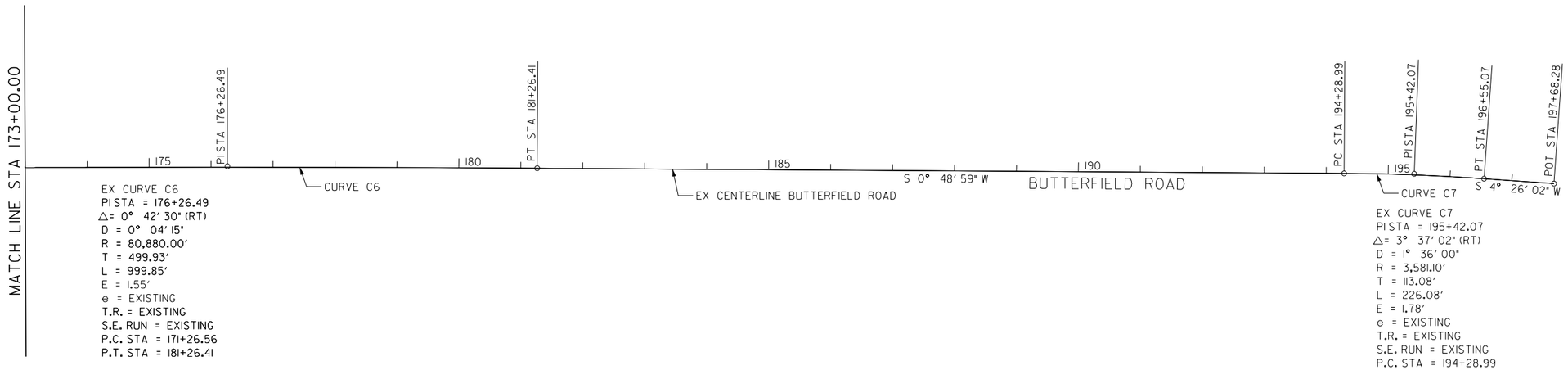
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 200.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1"=100' | SHEET OF SHEETS | STA. 114+00.00 TO STA. 173+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	12
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		



N

0 100 200

SCALE IN FEET

BENCHMARKS

BENCHMARKS		
MONUMENT	ELEVATION	DESCRIPTION
BM1	745.68	MUELLER BOLT ON HYDRANT @ SE CORNER, VIRGINIA AVE. @ BUTTERFIELD RD.
BM2	742.18	NE CORNER CONTROLLER CABINET @ SW CORNER, VIRGINIA AVE. @ BUTTERFIELD RD.
BM3	734.13	MUELLER BOLT ON HYDRANT @ NW CORNER, WINCHESTER RD. @ BUTTERFIELD RD.
BM4	730.045	NW CORNER TRAF. CONTROL BOX @ NE CORNER, WINCHESTER RD. @ BUTTERFIELD RD.
BM5	718.04	EAST CORNER OF HANDHOLE FRAME @ SW CORNER, ROUTE 176 @ BUTTERFIELD RD.
BM6	720.22	MUELLER BOLT ON HYDRANT @ SE CORNER, ROUTE 176 @ BUTTERFIELD RD.
BM7	724.33	NORTH CORNER OF DBL HANDHOLE FRAME @ SW CORNER, CRANE BLVD. @ BUTTERFIELD RD.
BM8	726.34	MUELLER BOLT ON HYDRANT @ NW CORNER, CRANE BLVD. @ BUTTERFIELD RD.
BM9	716.36	NW CORNER DBL HANDHOLE FRAME @ SW CORNER, GOLF RD. @ BUTTERFIELD RD.
BM10	720.395	MUELLER BOLT ON HYDRANT @ NW CORNER, GOLF RD. @ BUTTERFIELD RD.
BM11	713.99	SOUTH CORNER TRAF. CONTROL BOX @ NE CORNER, HUNTINGTON DR. N. @ BUTTERFIELD RD.
BM12	714.31	NW CORNER HANDHOLE @ NW CORNER, HUNTINGTON DR. N. @ BUTTERFIELD RD.
BM13	740.28	MUELLER BOLT ON HYDRANT@ NW CORNER, ALLANSON RD. @ BUTTERFIELD RD.
BM14	739.84	SOUTH CORNER TRAF. CONTROL BOX @ NE CORNER, GREGG'S PARKWAY @ BUTTERFIELD RD.

COORDINATE TABLE

EX BUTTERFIELD ROAD				
POINT	DESCRIPTION	STATION	NORTHING	EASTING
POT		0+00.00	2,045,093.0233	1,081,506.3897
POT		5+29.04	2,045,622.0632	1,081,506.7553
EX BUTTERFIELD ROAD				
POINT	DESCRIPTION	STATION	NORTHING	EASTING
POT		0+00.00	2,045,093.4839	1,081,507.1396
PI		40+34.58	2,041,058.9060	1,081,507.0710
PC	CURVE C1	45+88.56	2,040,504.9240	1,081,505.7298
PI	CURVE C1	50+86.56	2,040,006.9258	1,081,504.5241
PT	CURVE C1	55+74.71	2,039,538.5464	1,081,335.3368
PI		67+74.77	2,038,409.8617	1,080,927.6349
PC	CURVE C2	85+08.50	2,036,784.8856	1,080,323.2669
PI	CURVE C2	88+52.45	2,036,462.5070	1,080,203.3665
PT	CURVE C2	91+92.27	2,036,119.8715	1,080,173.2840
PC	CURVE C3	93+80.06	2,035,932.7977	1,080,156.8594
PI	CURVE C3	97+03.94	2,035,610.1533	1,080,128.5321
PT	CURVE C3	100+26.76	2,035,294.6980	1,080,055.1170
PC	CURVE C4	112+96.62	2,034,057.8821	1,079,767.2760
PI	CURVE C4	116+12.34	2,033,750.3833	1,079,695.7126
PT	CURVE C4	119+12.78	2,033,449.6073	1,079,791.6844
PC	CURVE C5	146+24.48	2,030,866.2334	1,080,615.9894
PI	CURVE C5	151+24.26	2,030,390.2162	1,080,768.2714
PT	CURVE C5	156+15.95	2,029,890.4350	1,080,767.3470
PC	CURVE C6	171+26.56	2,028,379.8200	1,080,765.2843
PI	CURVE C6	176+26.49	2,027,879.8914	1,080,764.4661
PT	CURVE C6	181+26.41	2,027,380.0111	1,080,757.4679

EX BUTTERFIELD ROAD				
PC	CURVE C7	194+28.99	2,026,077.5590	1,080,738.9100
PI	CURVE C7	195+42.07	2,025,964.4951	1,080,737.2994
PT	CURVE C7	196+55.07	2,025,851.7580	1,080,728.5590
POT		197+68.28	2,025,738.8868	1,080,719.8070
EX BUTTERFIELD ROAD				
POINT	DESCRIPTION	STATION	NORTHING	EASTING
POT		149+56.99	2,049,015.5320	1,078,849.5980
POT		176+17.66	2,051,676.1765	1,078,860.9075
POT		202+67.69	2,054,326.2010	1,078,854.6100
EX WINCHESTER ROAD				
POINT	DESCRIPTION	STATION	NORTHING	EASTING
POT		52+28.16	2,050,354.7460	1,077,698.5860
POT		88+38.78	2,050,348.2590	1,081,309.2050

FILE NAME ATB-04

AECOM

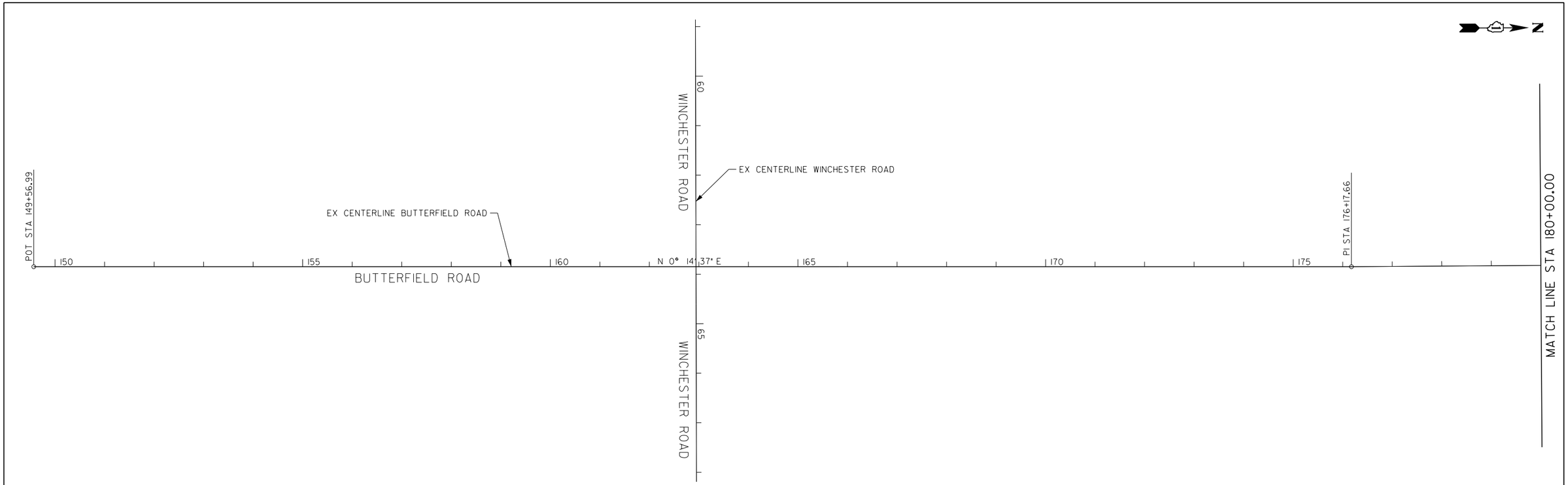
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 200.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

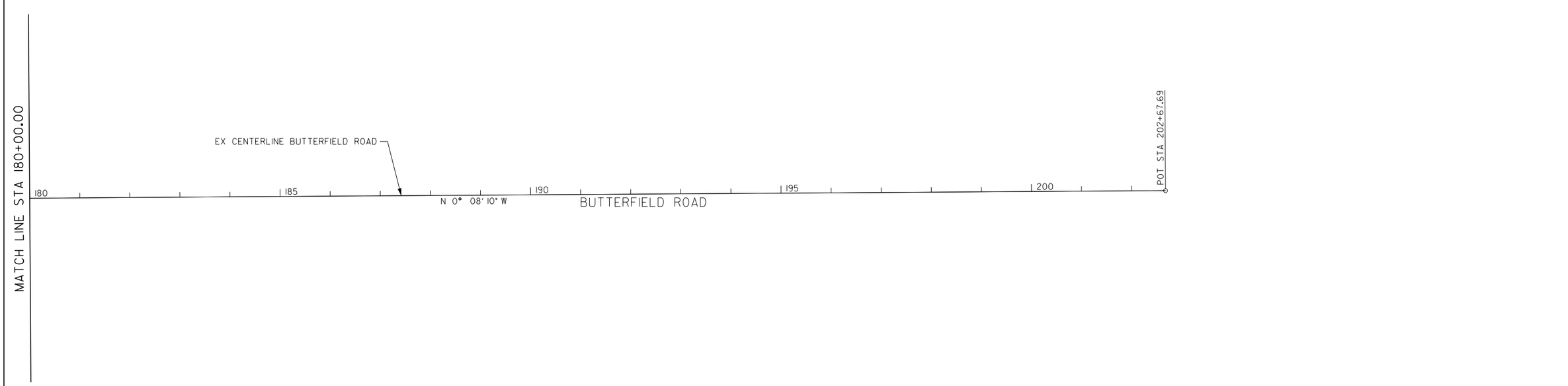
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1"=100' | SHEET OF SHEETS | STA. 173+00.00 TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	13
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			





0 100 200

SCALE IN FEET

FILE NAME ATB-05

AECOM

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 200.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

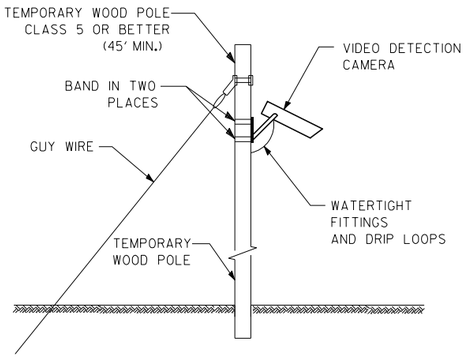
ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1"=100' | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	14
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

SIGN Ⓐ

R10-5
30" x 36"
2-REQUIRED
INCLUDED IN THE COST
OF PAY ITEM 89000100,
TEMPORARY TRAFFIC SIGNAL
INSTALLATION



TEMPORARY VIDEO DETECTION
MOUNTING DETAIL
(NOT TO SCALE)

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTIONS: THE EXISTING PTZ CAMERA, ENCODER, AND LAYER II SWITCH SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY-APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY-ACTUATED NEMA MICROPROCESSOR-BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED, AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN A CENTRACS SYSTEM SHALL BE NTCIP COMPATIBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
7. REMOVE AND SAFELY STORE EXISTING COUNTY ROUTE SIGN PANELS FROM MAST ARM POLES FOR REINSTALLATION ON NEW MAST ARM POLES (SEE TRAFFIC SIGNAL MODIFICATION PLAN).

N

0 20 40

SCALE: 1"=20'

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT: EACH 1
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COUNTY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

1	EACH	CONTROLLER
1	EACH	UPS INVERTER
1	EACH	VIDEO DETECTION EQUIPMENT
1	EACH	PTZ CAMERA (SEE NOTE 1)
1	EACH	ENCODER (SEE NOTE 1)
1	EACH	LAYER II SWITCH (SEE NOTE 1)
1	EACH	MALFUNCTION MANAGEMENT UNIT
1	EACH	CONFIRMATION BEACON
1	EACH	LIGHT DETECTOR

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

1	EACH	CABINET (COMPLETE)
4	EACH	STEEL COMBINATION MAST ARM AND POLE WITH LUMINAIRE
4	EACH	TRAFFIC SIGNAL POST
6	EACH	3-SECTION SIGNAL HEAD
12	EACH	5-SECTION SIGNAL HEAD
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH BUTTON
10	EACH	TRAFFIC SIGNAL BACKPLATE
1	EACH	ILLUMINATED STREET NAME SIGN

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

2	EACH	CONFIRMATION BEACON
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
10	EACH	SIGNAL LENS COVER

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, 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.

CONSTRUCTION NOTES:

(1) THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.

(2) THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE NEW CABINET.

FILE NAME = SHT_05_Allanson

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

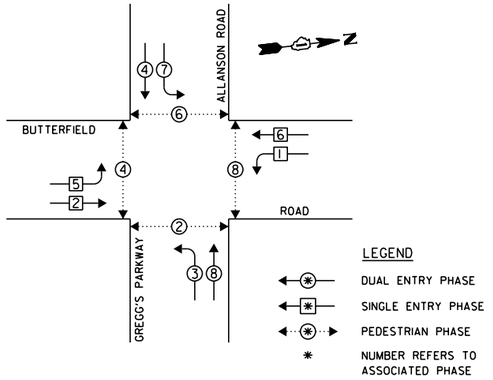
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
BUTTERFIELD ROAD AND ALLANSON ROAD / GREGG'S PARKWAY

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

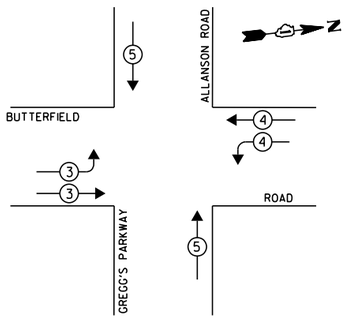
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	15
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

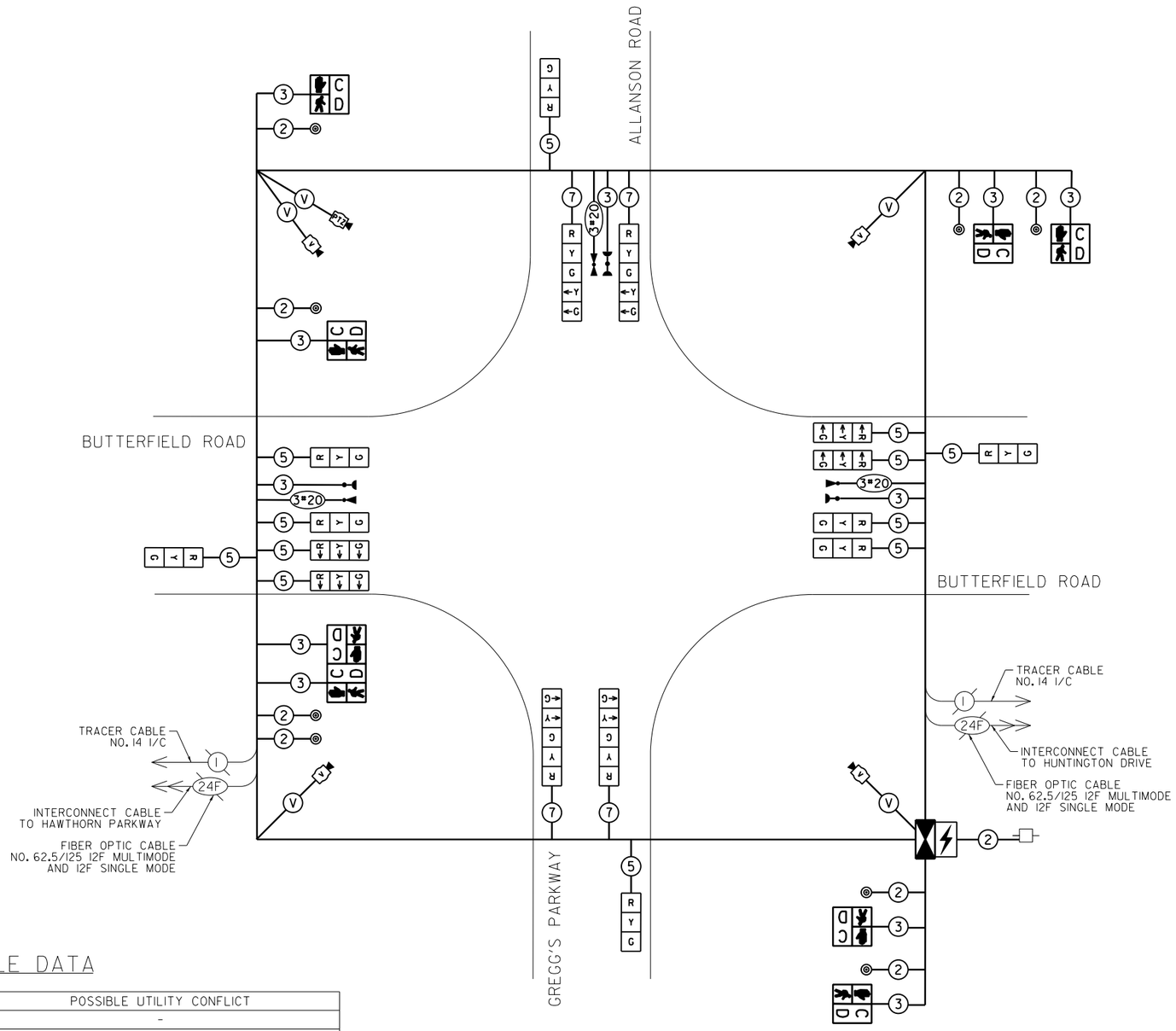
L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	16		17	0.50	136.0
(YELLOW)	16		25	0.25	100.0
(GREEN)	16		15	0.25	60.0
ARROW	8		12	0.10	9.6
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	980.6

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



TEMPORARY WOOD POLE DATA

CORNER	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
NW	94+96.51	61.14' RT	-
NE	95+05.13	70.90' LT	COMED (UG)
SE	96+32.82	80.35' LT	AT&T
SW	96+15.49	51.84' RT	AT&T, ADESTA/G4S TECHNOLOGY, VERIZON

FILE NAME = SHT_06_Allanson

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND ALLANSON ROAD

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	16
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

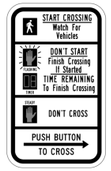
TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	95+08.61	50.21' RT	MUNDELEIN PUBLIC WORKS DEPT.
MA-2	94+90.20	65.03' LT	COMED
MA-3	96+27.16	91.06' LT	NORTH SHORE GAS, AT&T, COMCAST
MA-4	96+32.24	37.56' RT	ADESTA/G4S TECHNOLOGY, JAWA, MUNDELEIN PUBLIC WORKS DEPT., VERIZON
P-1	*(EXISTING FOUNDATION)*		-
P-2	*(EXISTING FOUNDATION)*		-
P-3	*(EXISTING FOUNDATION)*		-
P-4	*(EXISTING FOUNDATION)*		-

SIGN (A)

R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST
OF PAY ITEM 88800100,
PEDESTRIAN PUSH-BUTTON

SIGN (B)



R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST
OF PAY ITEM 88800100,
PEDESTRIAN PUSH-BUTTON

SIGN (C)

ILLINOIS STANDARD
R10-1109
30" x 30"
SIGN PANEL TYPE 1
8-REQUIRED

SIGN (D) "Butterfield Rd" INTERNALLY ILLUMINATED LED

SIGN (E) "Allanson Rd" INTERNALLY ILLUMINATED LED

SIGN (F) "Gregg's Pkwy" INTERNALLY ILLUMINATED LED

N

0 20 40

SCALE: 1"=20'

CONSTRUCTION NOTES:

(1) REMOVE EXISTING CONTROLLER AND CABINET AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN TYPE IV CABINET ON EXISTING FOUNDATION. REINSTALL EXISTING TRANSCEIVER-FIBER OPTIC AND EXISTING LIGHT DETECTOR AMPLIFIER. INSTALL NEW LAYER II SWITCH AND NEW VIDEO DETECTION SYSTEM IN NEW CABINET.

(2) REMOVE AND RE-INSTALL EXISTING SIGN PANELS ON NEW MAST ARM POLE(INCLUDED IN COST):
-"NORTH LAKE WII COUNTY BUTTERFIELD RD"

(3) THE CONTRACTOR SHALL REMOVE EXISTING R10-5 SIGN PANELS AND DISPOSE OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE.

(4) PROPOSED TRAFFIC SIGNAL POSTS, P-1, P-2, P-3 AND P-4, SHALL BE INSTALLED ON EXISTING FOUNDATIONS.

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE NTCIP (LATEST VERSION)

FILE NAME
SHT. 07 Allanson

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

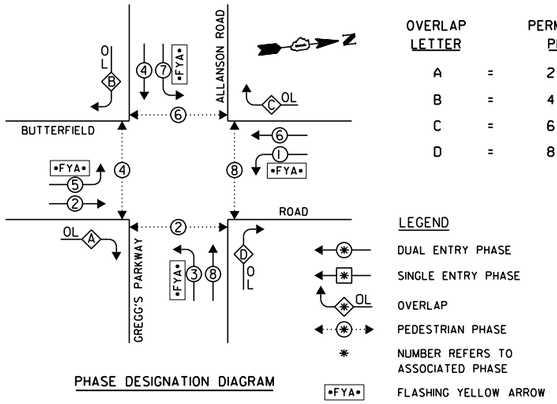
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND ALLANSON ROAD / GREGG'S PARKWAY

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	17
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

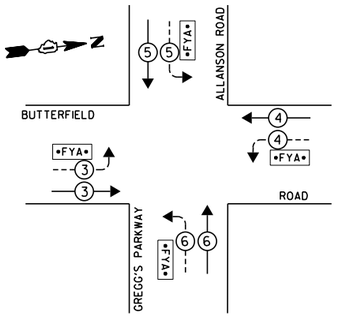
RIGHT TURN OVERLAP PHASE DESIGNATION

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

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- •FYA• FLASHING YELLOW ARROW

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	•FYA•	•FYA•	•FYA•	•FYA•

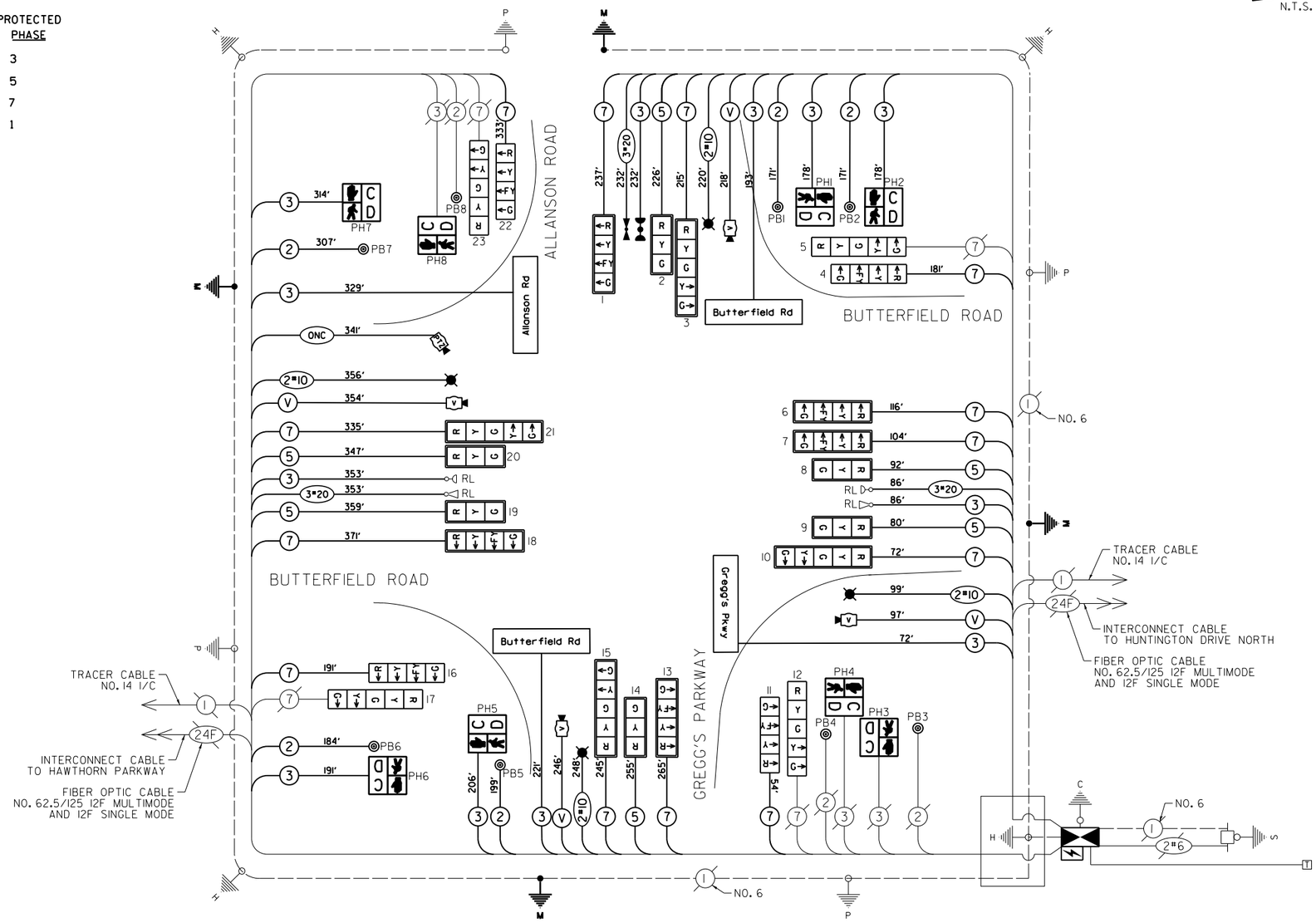
L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	× % OPERATION	
SIGNAL (RED)	14		17	0.50	119.0
(YELLOW)	14		25	0.25	87.5
(GREEN)	14		15	0.25	52.5
ARROW	43		12	0.10	51.6
ARROW (FYA)	9		12	0.30	32.4
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
LUMINAIRE	4		250	0.5	500.0
UPS	1		25	1.00	25.0
ST. NAME SIGN	4		120	0.5	240.0
ENERGY COSTS TO:				TOTAL =	1758.0

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



AECOM 345 EAST ASH AVENUE, SUITE B DECATUR, IL 62526-6161 PHONE: (217) 875-4800 FAX: (217) 875-3577	USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
		DRAWN - CAM	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
	PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND ALLANSON ROAD / GREGG'S PARKWAY

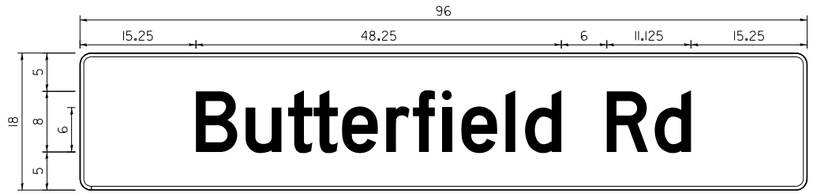
SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	18
		CONTRACT NO. 61G69		
		ILLINOIS FED. AID PROJECT		

FILE NAME
SHT.08.Allanson

SIGN PANEL – INTERNALLY ILLUMINATED LED & TYPE 1

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	12	LED	ZZ	2

DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	9	LED	ZZ	1

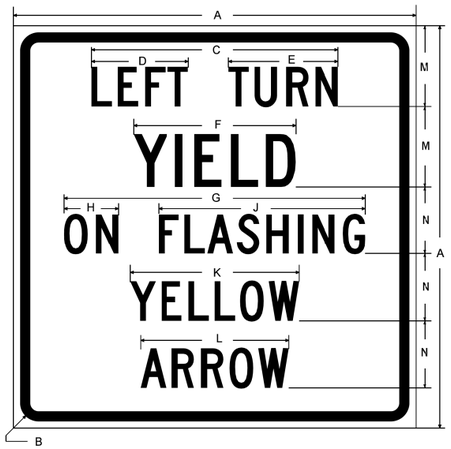
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	12	LED	ZZ	1

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.
2. INTERNALLY ILLUMINATED SIGNS ARE TO BE DOUBLE SIDED.

ILLINOIS STANDARD

R10-I109



COLOR — LEGEND AND BORDER: BLACK, NON-REFLECTORIZED; BACKGROUND: WHITE, REFLECTORIZED

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
30 x 30	30.00	1.88	18.40	7.20	8.20	12.20	22.40	4.00	15.40	12.60	11.00	6.00	5.00

SIGN SIZE	SERIES BY LINE					MARGIN	BORDER
	1	2	3	4	5		
30 x 30	3C	4C	3C	3C	3C	0.500	0.750

All dimensions in inches. Sign not to scale.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	6
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	50
SIDEWALK REMOVAL	SQ FT	50
NON-SPECIAL WASTE DISPOSAL	CU YD	30
SOIL DISPOSAL ANALYSIS	EACH	1
SIGN PANEL - TYPE 1	SQ FT	50
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	5
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	50
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,844
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,031
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2,550
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,358
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,716
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	97
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	15
LIGHT DETECTOR	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6,213
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	156
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	670
ROD AND CLEAN EXISTING CONDUIT	FOOT	437
RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	1
RELOCATE SWITCH	EACH	1
RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
OUTDOOR RATED NETWORK CABLE	FOOT	341
LAYER II (DATALINK) SWITCH	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 52 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT. (SPECIAL)	EACH	3
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
RELOCATE SIGNAL LENS COVER	EACH	10

FILE NAME SHT_07_Allanson

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

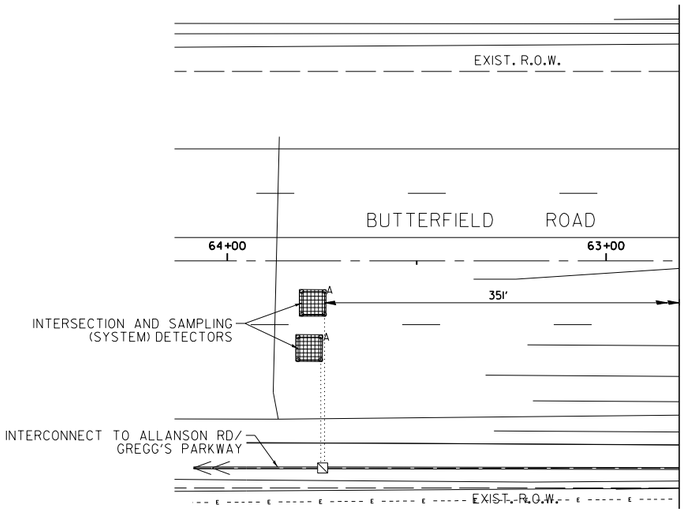
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

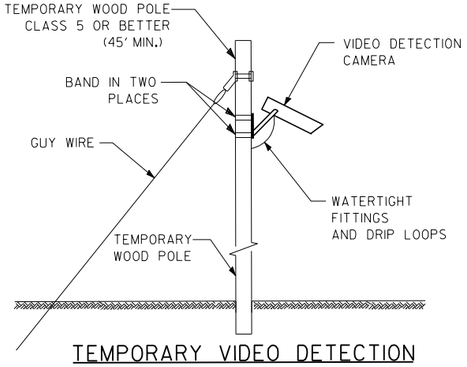
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
BUTTERFIELD ROAD AND ALLANSON ROAD

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

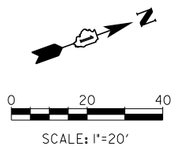
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	19
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

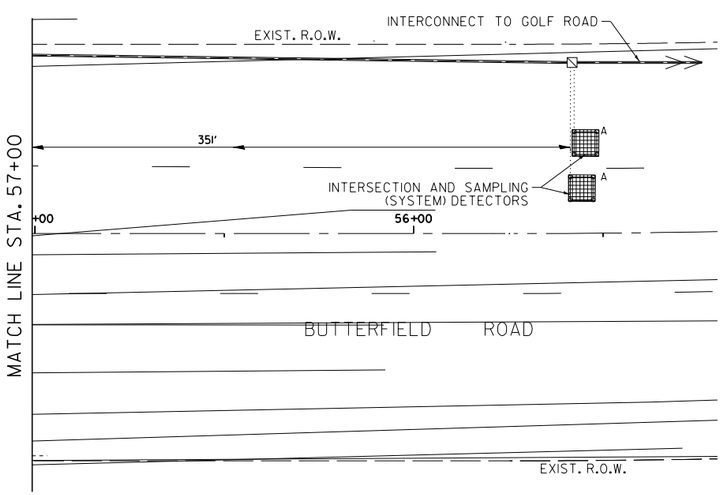


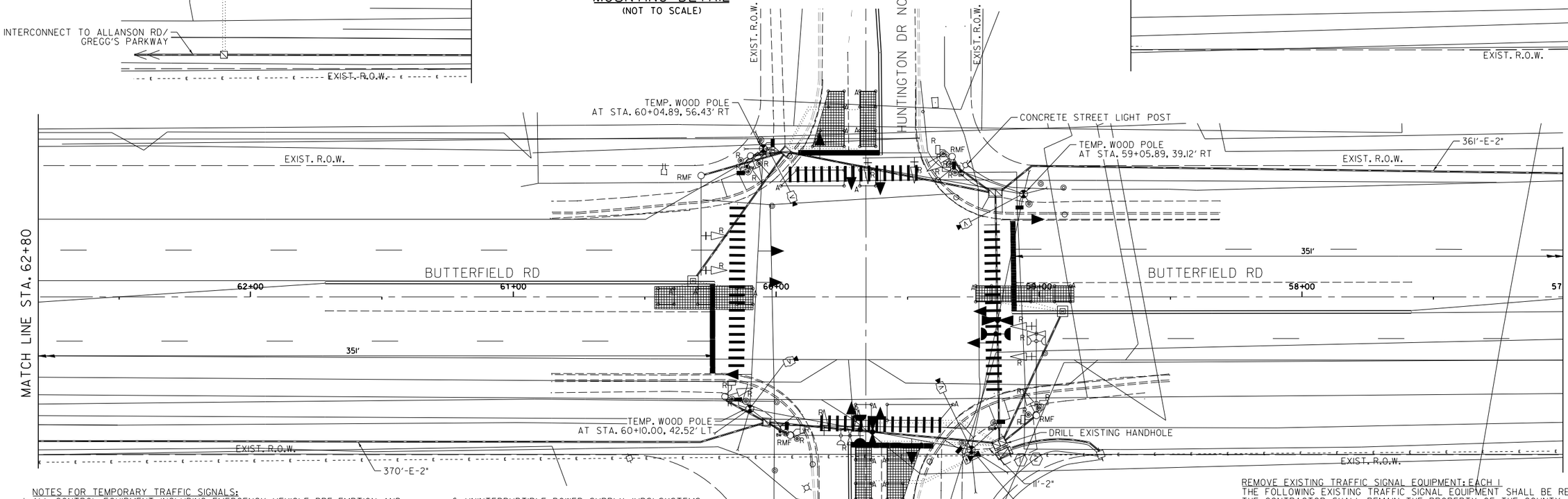


TEMPORARY VIDEO DETECTION MOUNTING DETAIL

(NOT TO SCALE)







NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTION: THE EXISTING LAYER II SWITCH SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY-APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY-ACTUATED NEMA ICROPROCESSOR-BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY INSTALLED IN A NEMA TSIOR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED, AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN A CENTRACS SYSTEM SHALL BE NTCIP COMPATIBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, 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.

CONSTRUCTION NOTES:

(1) THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.

(2) THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE NEW CABINET.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT; EACH I

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COUNTY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

I	EACH	CONTROLLER
I	EACH	LAYER II SWITCH (SEE NOTE I)
2	EACH	CONFIRMATION BEACON
2	EACH	LIGHT DETECTOR
I	EACH	LIGHT DETECTOR AMPLIFIER

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

I	EACH	CABINET (COMPLETE)
4	EACH	STEEL MAST ARM ASSEMBLY AND POST
2	EACH	TRAFFIC SIGNAL POST
4	EACH	3-SECTION SIGNAL HEAD
8	EACH	5-SECTION SIGNAL HEAD
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH BUTTON
8	EACH	TRAFFIC SIGNAL BACKPLATE

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

8	EACH	SIGNAL LENS COVER

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6661
PHONE: (217) 875-4800 FAX: (217) 875-3577

FILE NAME = SHT_I0_Huntington.dgn

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

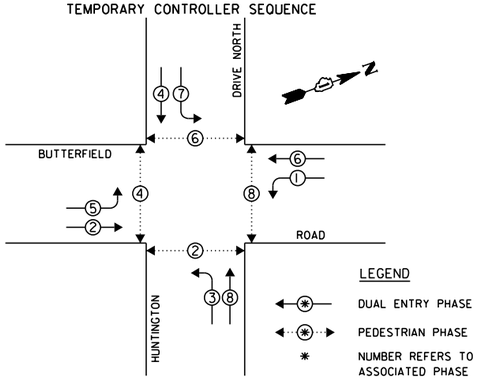
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALALTION
BUTTERFIELD ROAD AND HUNTINGTON DRIVE

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

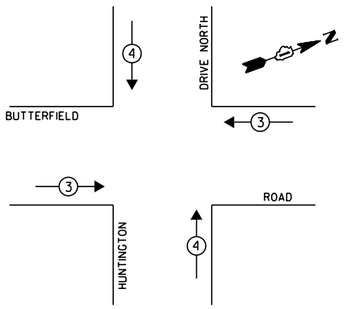
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	20
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

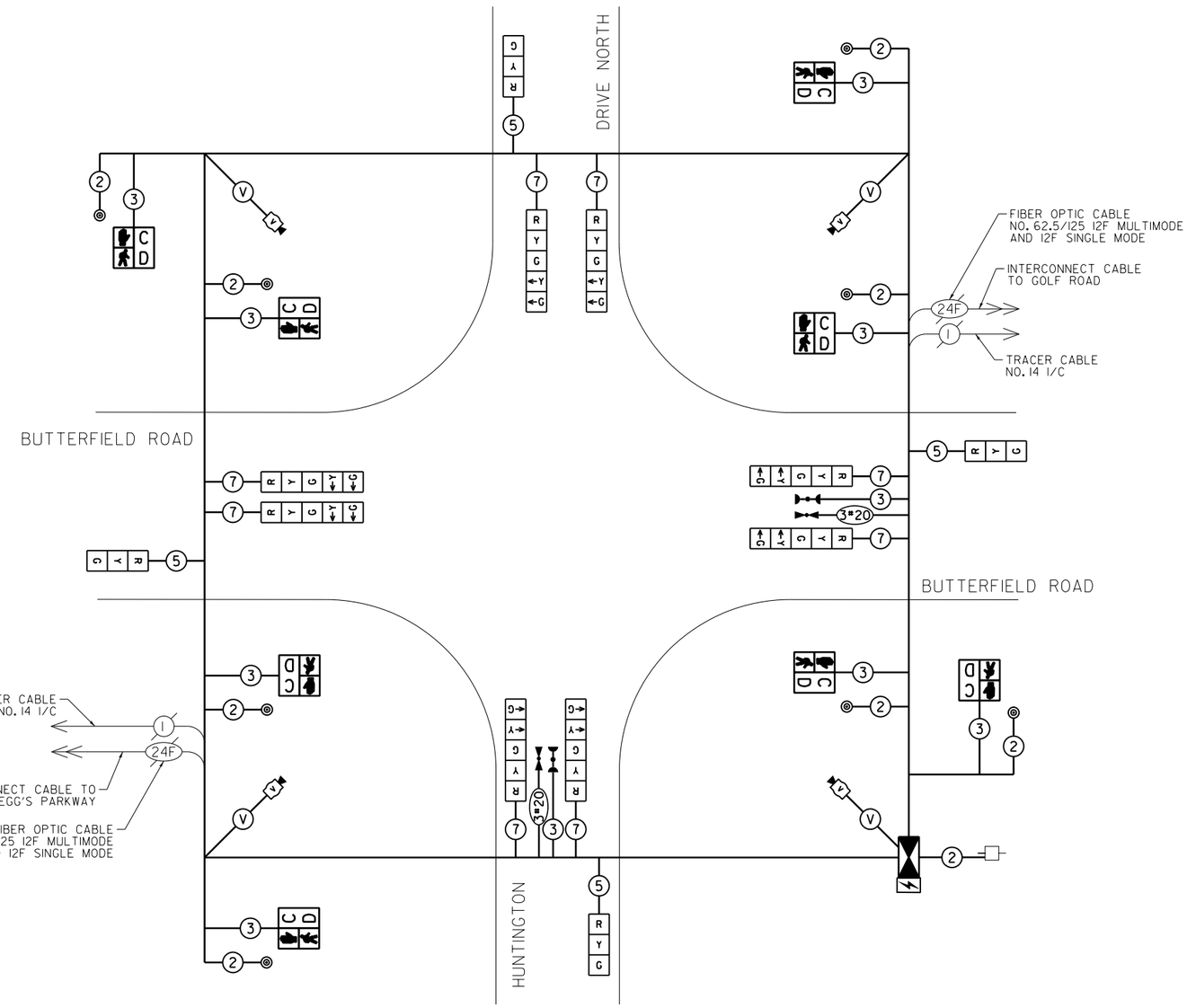
L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE × INCAND.	LED	× % OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	16		12	0.10	19.2
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	916.2

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



TEMPORARY WOOD POLE DATA

CORNER	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
NW	59+05.89	39.12' RT	UNKNOWN ELECTRIC, MUNDELEIN PUBLIC WORKS DEPT., NORTH SHORE GAS
NE	59+25.82	58.15' LT	COMED (OH), MUNDELEIN PUBLIC WORKS DEPT.
SE	60+10.00	42.52' LT	MUNDELEIN PUBLIC WORKS DEPT., AT&T
SW	60+04.89	56.43' RT	NORTH SHORE GAS, AT&T, UNKNOWN ELECTRIC, MUNDELEIN PUBLIC WORKS DEPT.

FILE NAME: SHT_ILHuntington

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

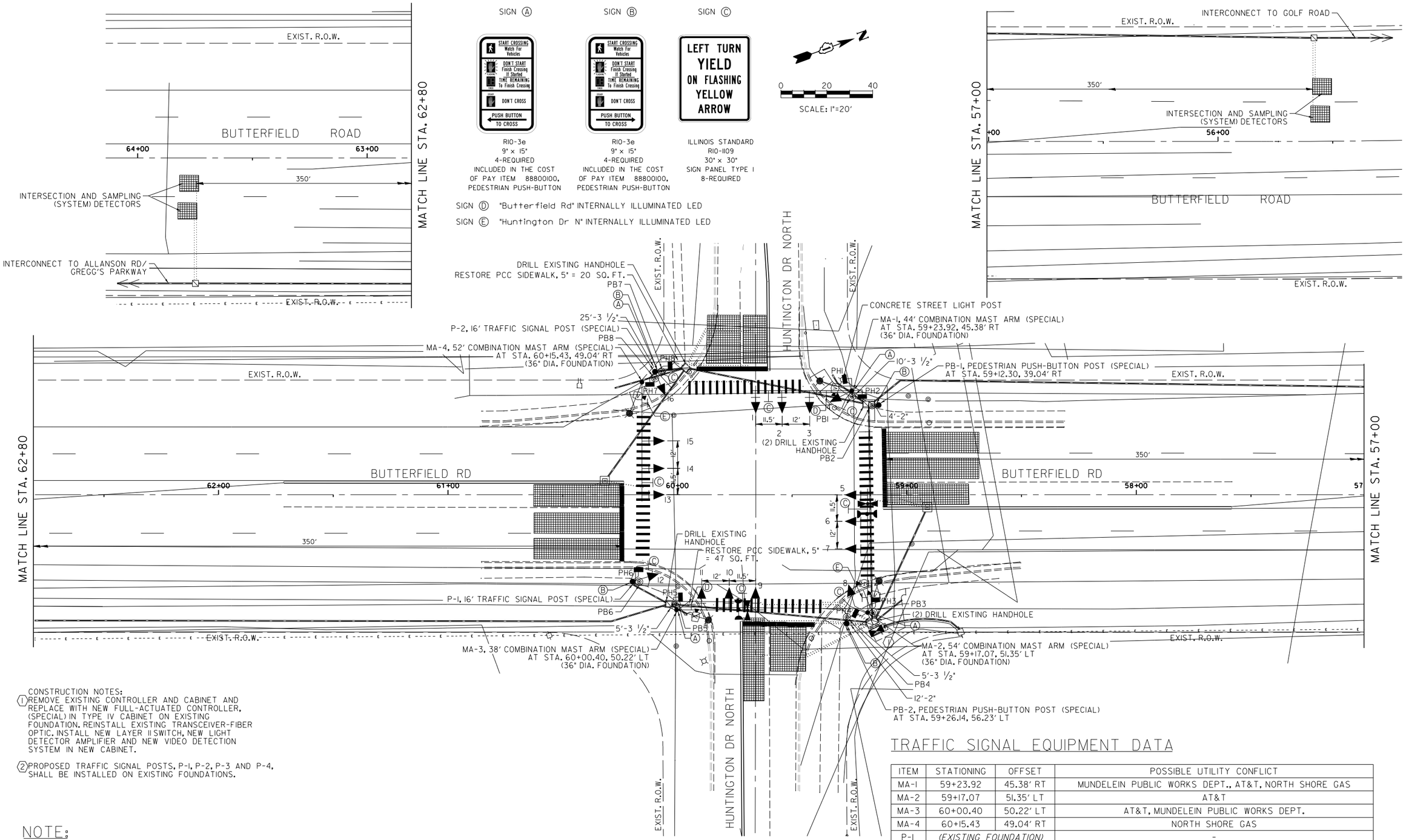
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND HUNTINGTON DRIVE

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	21
		CONTRACT NO. 61G69		
		ILLINOIS FED. AID PROJECT		



CONSTRUCTION NOTES:

(1) REMOVE EXISTING CONTROLLER AND CABINET AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN TYPE IV CABINET ON EXISTING FOUNDATION. REINSTALL EXISTING TRANSCEIVER-FIBER OPTIC. INSTALL NEW LAYER II SWITCH, NEW LIGHT DETECTOR AMPLIFIER AND NEW VIDEO DETECTION SYSTEM IN NEW CABINET.

(2) PROPOSED TRAFFIC SIGNAL POSTS, P-1, P-2, P-3 AND P-4, SHALL BE INSTALLED ON EXISTING FOUNDATIONS.

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE NTCIP (LATEST VERSION)

TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	59+23.92	45.38' RT	MUNDELEIN PUBLIC WORKS DEPT., AT&T, NORTH SHORE GAS
MA-2	59+17.07	51.35' LT	AT&T
MA-3	60+00.40	50.22' LT	AT&T, MUNDELEIN PUBLIC WORKS DEPT.
MA-4	60+15.43	49.04' RT	NORTH SHORE GAS
P-1	*(EXISTING FOUNDATION)*		-
P-2	*(EXISTING FOUNDATION)*		-
PB-1	59+12.30	39.04' RT	NORTH SHORE GAS, UNKNOWN ELECTRIC
PB-2	59+26.14	56.23' LT	MUNDELEIN PUBLIC WORKS DEPT.

FILE NAME = SHT-12-Huntington.dgn

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6067
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

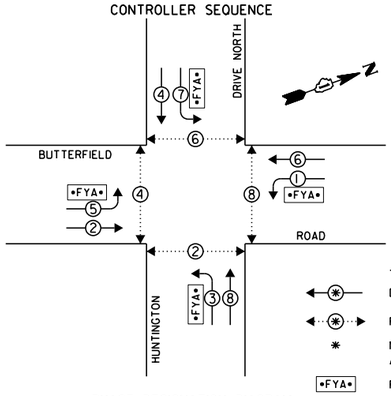
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND HUNTINGTON DRIVE

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	22
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

CONTROLLER SEQUENCE

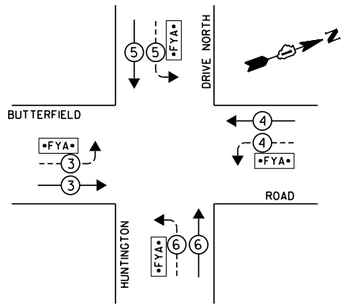


LEGEND

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- •FYA• FLASHING YELLOW ARROW

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	•FYA•	•FYA•	•FYA•	•FYA•

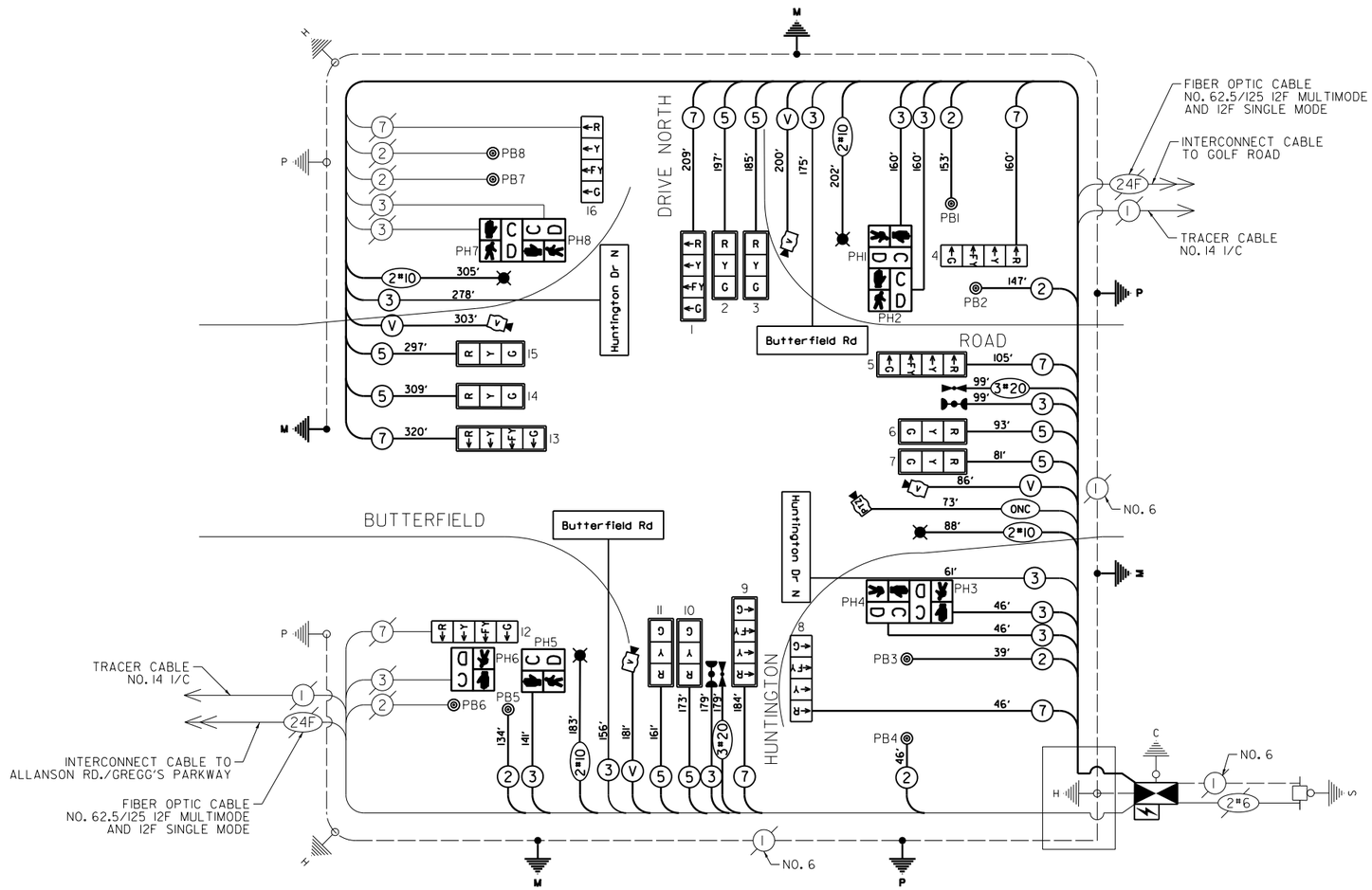
L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	LED	x % OPERATION	
SIGNAL (RED)	8		17	0.50	68.0
(YELLOW)	8		25	0.25	50.0
(GREEN)	8		15	0.25	30.0
ARROW	24		12	0.10	28.8
ARROW (FYA)	8		12	0.30	28.8
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
LUMINAIRE	4		250	0.5	500.0
UPS	1		25	1.00	25.0
ST. NAME SIGN	4		120	0.5	240.0
ENERGY COSTS TO:				TOTAL =	1620.6

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



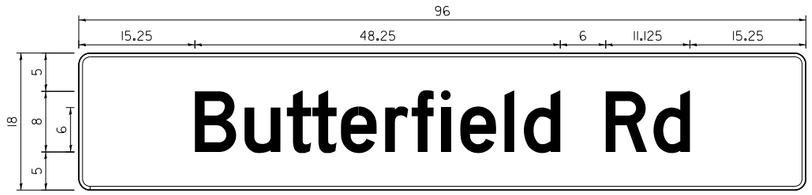
AECOM 345 EAST ASH AVENUE, SUITE B DECATUR, IL 62526-6161 PHONE: (217) 875-4800 FAX: (217) 875-3577	USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CABLE PLAN AND PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND HUNTINGTON DRIVE
		DRAWN - CAM	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -		SCALE: N.T.S. SHEET 4 OF 5 SHEETS STA. TO STA.
	PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	23
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

FILE NAME SHT.13.Huntington

SIGN PANEL – INTERNALLY ILLUMINATED LED & TYPE 1

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	12	LED	ZZ	2

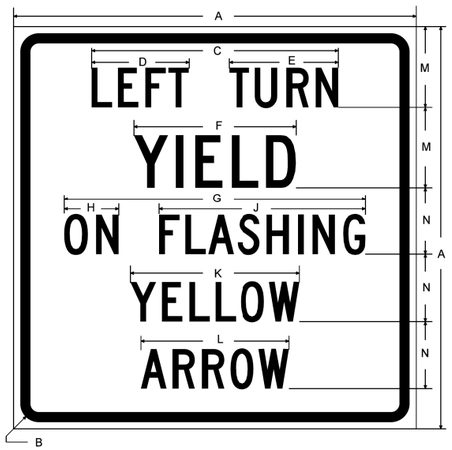
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	12	LED	ZZ	2

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.
2. INTERNALLY ILLUMINATED SIGNS ARE TO BE DOUBLE SIDED.

ILLINOIS STANDARD

R10-I109



COLOR — LEGEND AND BORDER: BLACK (NON-REFLECTORIZED); BACKGROUND: WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
30 x 30	30.00	1.88	18.40	7.20	8.20	12.20	22.40	4.00	15.40	12.60	11.00	6.00	5.00

SIGN SIZE	SERIES BY LINE					MARGIN	BORDER
	1	2	3	4	5		
30 x 30	3C	4C	3C	3C	3C	0.500	0.750

All dimensions in inches. Sign not to scale.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	8
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	67
SIDEWALK REMOVAL	SQ FT	67
NON-SPECIAL WASTE DISPOSAL	CU YD	30
SOIL DISPOSAL ANALYSIS	EACH	1
SIGN PANEL - TYPE 1	SQ FT	50
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	27
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	45
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,554
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	517
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,497
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,494
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,022
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	138
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	12
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4,673
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	127
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	277
ROD AND CLEAN EXISTING CONDUIT	FOOT	310
RELOCATE SWITCH	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
OUTDOOR RATED NETWORK CABLE	FOOT	73
LAYER II (DATALINK) SWITCH	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	2
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 52 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT. (SPECIAL)	EACH	1
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	8
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
PEDESTRIAN PUSH-BUTTON POST, SPECIAL	EACH	2
RELOCATE SIGNAL LENS COVER	EACH	8

FILE NAME SHT_14_Huntington

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-5161
PHONE: (217) 875-4800 FAX: (217) 875-3577

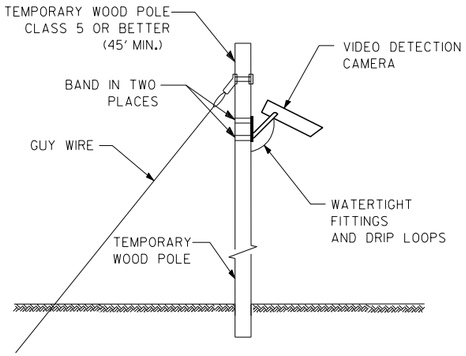
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
BUTTERFIELD ROAD AND HUNTINGTON DRIVE

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	24
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		



TEMPORARY VIDEO DETECTION MOUNTING DETAIL

(NOT TO SCALE)

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT: EACH 1
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COUNTY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

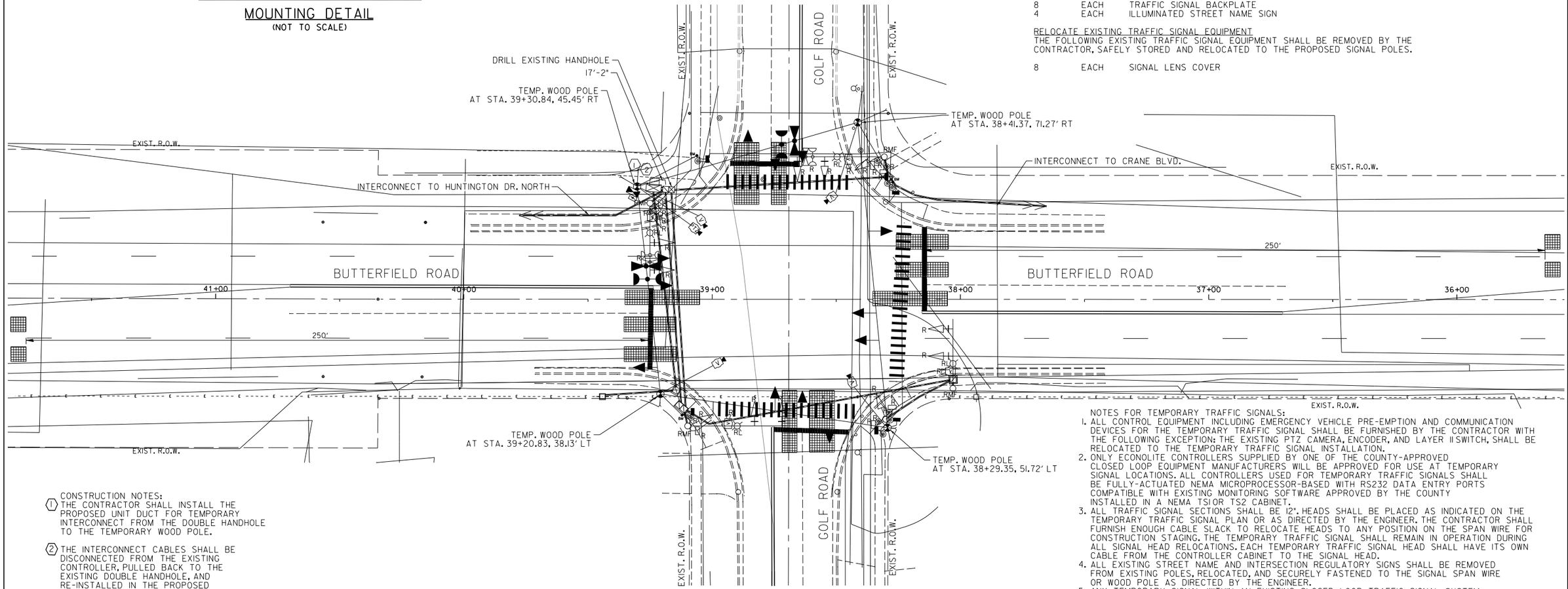
1	EACH	CONTROLLER
1	EACH	UPS INVERTER
1	EACH	VIDEO DETECTION EQUIPMENT
1	EACH	PTZ CAMERA (SEE NOTE 1)
1	EACH	ENCODER (SEE NOTE 1)
1	EACH	LAYER II SWITCH (SEE NOTE 1)
2	EACH	CONFIRMATION BEACON
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

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

1	EACH	CABINET (COMPLETE)
4	EACH	STEEL COMBINATION MAST ARM AND POLE WITH LUMINAIRE
1	EACH	TRAFFIC SIGNAL POST
4	EACH	3-SECTION SIGNAL HEAD
8	EACH	5-SECTION SIGNAL HEAD
6	EACH	PEDESTRIAN SIGNAL HEAD
6	EACH	PEDESTRIAN PUSH BUTTON
8	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	ILLUMINATED STREET NAME SIGN

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

8	EACH	SIGNAL LENS COVER



CONSTRUCTION NOTES:
1. THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.
2. THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE NEW CABINET.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, 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.

NOTES FOR TEMPORARY TRAFFIC SIGNALS:
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTION: THE EXISTING PTZ CAMERA, ENCODER, AND LAYER II SWITCH, SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY-APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY-ACTUATED NEMA MICROPROCESSOR-BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED, AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN A CENTRACS SYSTEM SHALL BE NTCIP COMPATIBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

FILE NAME
SHT_15.dgf

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DECATUR, IL 62526-6161
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USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

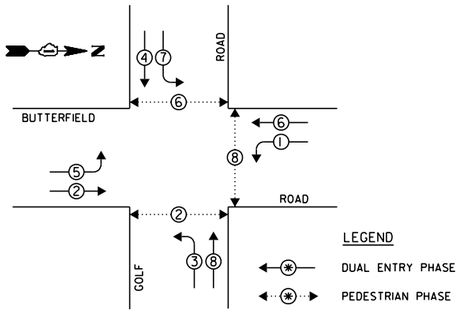
TEMPORARY TRAFFIC SIGNAL INSTALLATION
BUTTERFIELD ROAD AND GOLF ROAD

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	25
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

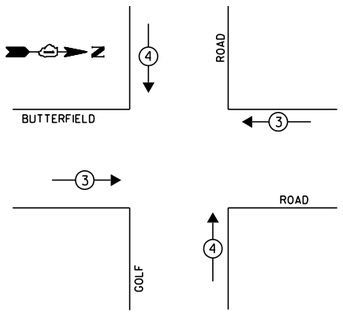
N.T.S.

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



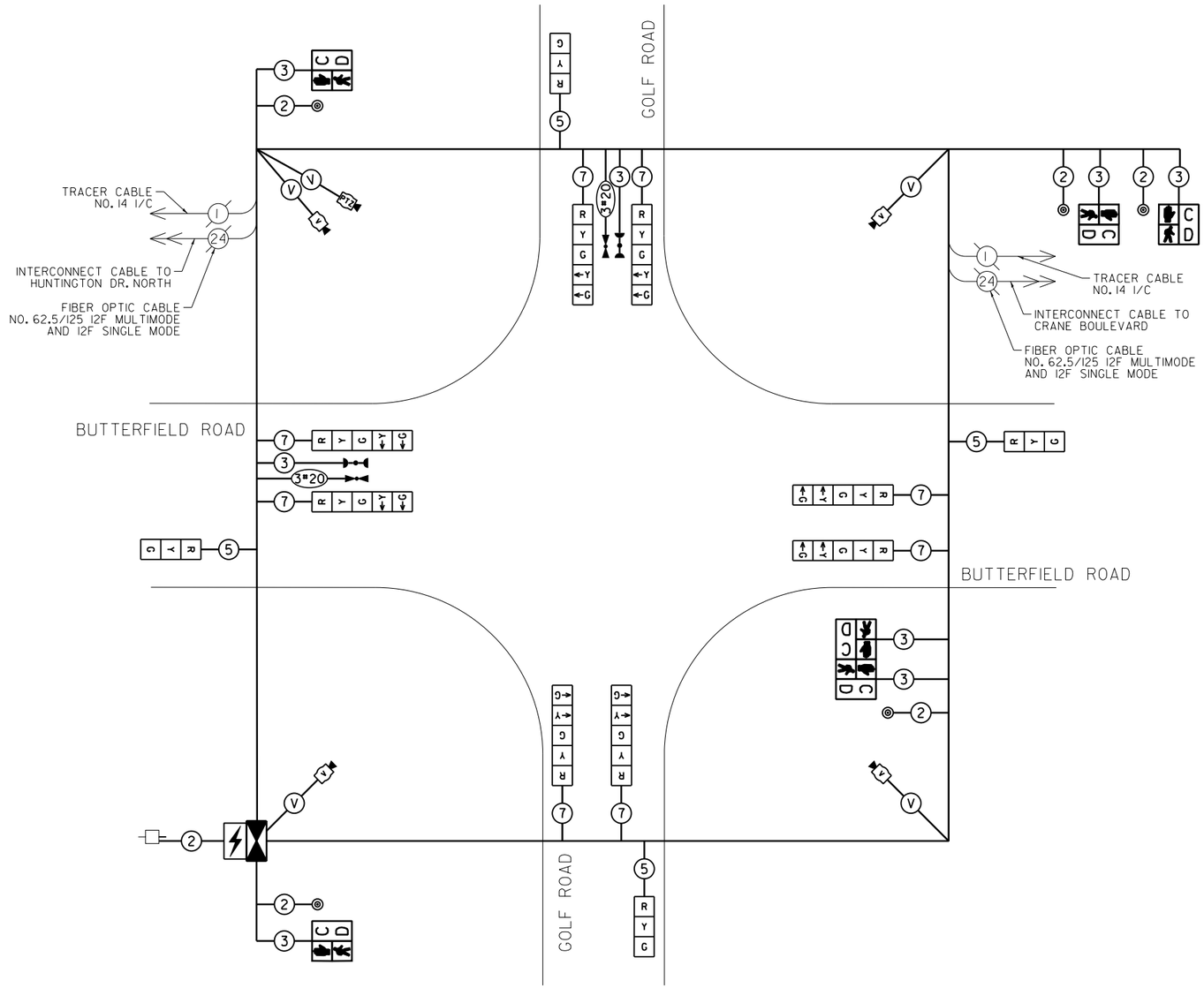
TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	× % OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	16		12	0.10	19.2
PED. SIGNAL	6		25	1.00	150.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	866.2

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED



TEMPORARY WOOD POLE DATA

CORNER	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
NW	38+41.37	71.27' RT	LIBERTYVILLE PUBLIC WORKS DEPT., COMED (UG), NORTH SHORE GAS, AT&T
NE	38+29.35	51.72' LT	NORTH SHORE GAS
SE	39+20.83	38.13' LT	COMED (OH), AT&T
SW	39+30.84	45.45' RT	LIBERTYVILLE PUBLIC WORKS DEPT

FILE NAME = SHT_16_Golf

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345 EAST ASH AVENUE, SUITE B
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USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND GOLF ROAD

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	26
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

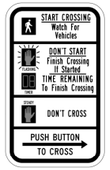
TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	38+24.91	46.89' RT	LAKE COUNTY DOT, NORTH SHORE GAS
MA-2	38+15.88	40.57' LT	LAKE COUNTY DOT, NORTH SHORE GAS, COMED (OH), UNKNOWN WATER
MA-3	39+15.81	40.81' LT	COMED (OH)
MA-4	39+10.90	46.66' RT	NORTH SHORE GAS, AT&T, UNKNOWN ELECTRIC
P-1	38+15.45	39.98' RT	NORTH SHORE GAS, LIBERTYVILLE PUBLIC WORKS DEPT.
P-2	*(EXISTING FOUNDATION)*		-

SIGN (A)

R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (B)



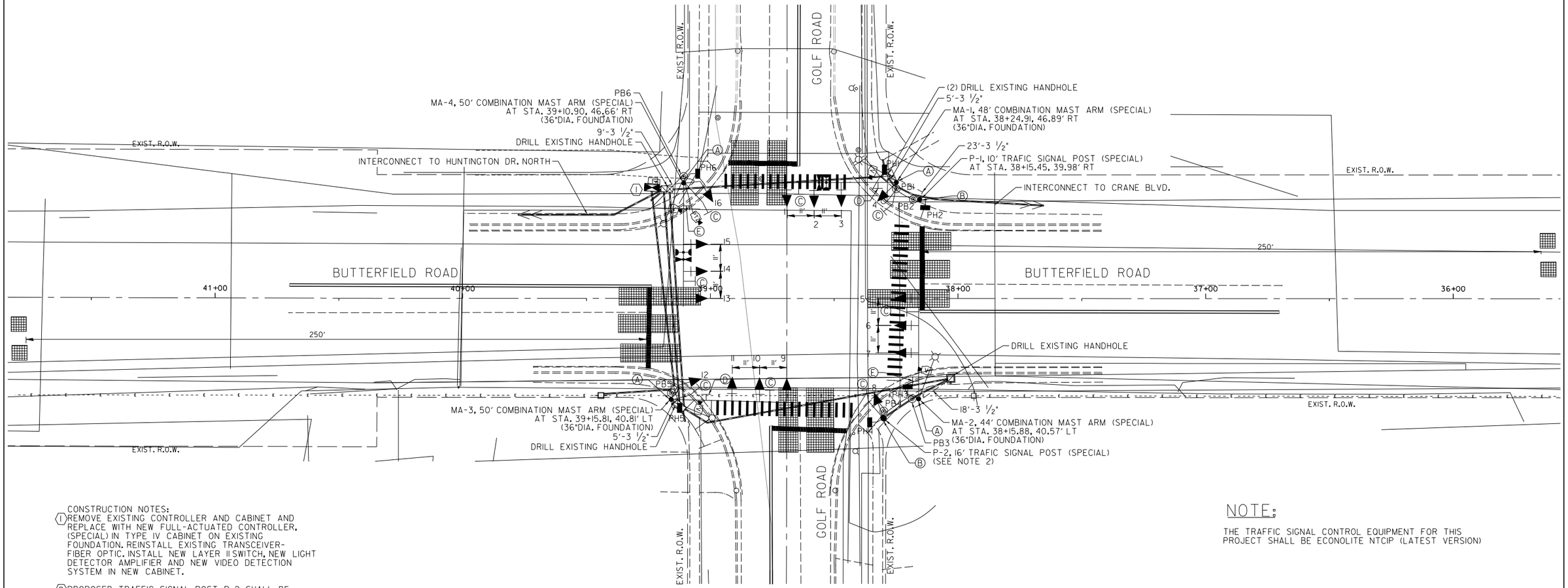
R10-3e
9" x 15"
2-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (C)

ILLINOIS STANDARD
R10-1109
30" x 30"
SIGN PANEL TYPE I
8-REQUIRED

SIGN (D) "Butterfield Rd" INTERNALLY ILLUMINATED LED

SIGN (E) "Golf Rd" INTERNALLY ILLUMINATED LED



CONSTRUCTION NOTES:

(1) REMOVE EXISTING CONTROLLER AND CABINET AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN TYPE IV CABINET ON EXISTING FOUNDATION. REINSTALL EXISTING TRANSCEIVER-FIBER OPTIC. INSTALL NEW LAYER II SWITCH, NEW LIGHT DETECTOR AMPLIFIER AND NEW VIDEO DETECTION SYSTEM IN NEW CABINET.

(2) PROPOSED TRAFFIC SIGNAL POST, P-2, SHALL BE INSTALLED ON EXISTING FOUNDATIONS.

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE NTCIP (LATEST VERSION)

FILE NAME SHT_17_Golf

AECOM
345 EAST ASH AVENUE, SUITE B
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USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

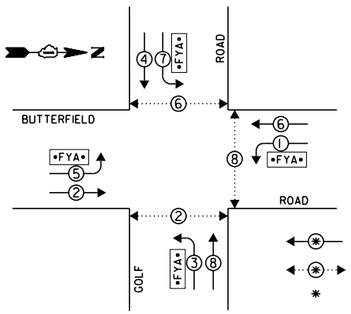
TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND GOLF ROAD

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	27
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

N.T.S.

CONTROLLER SEQUENCE

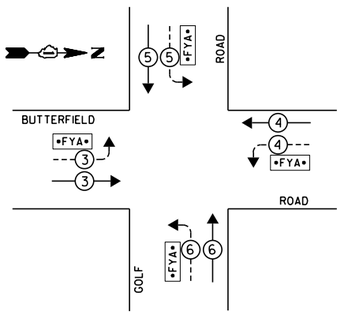


LEGEND

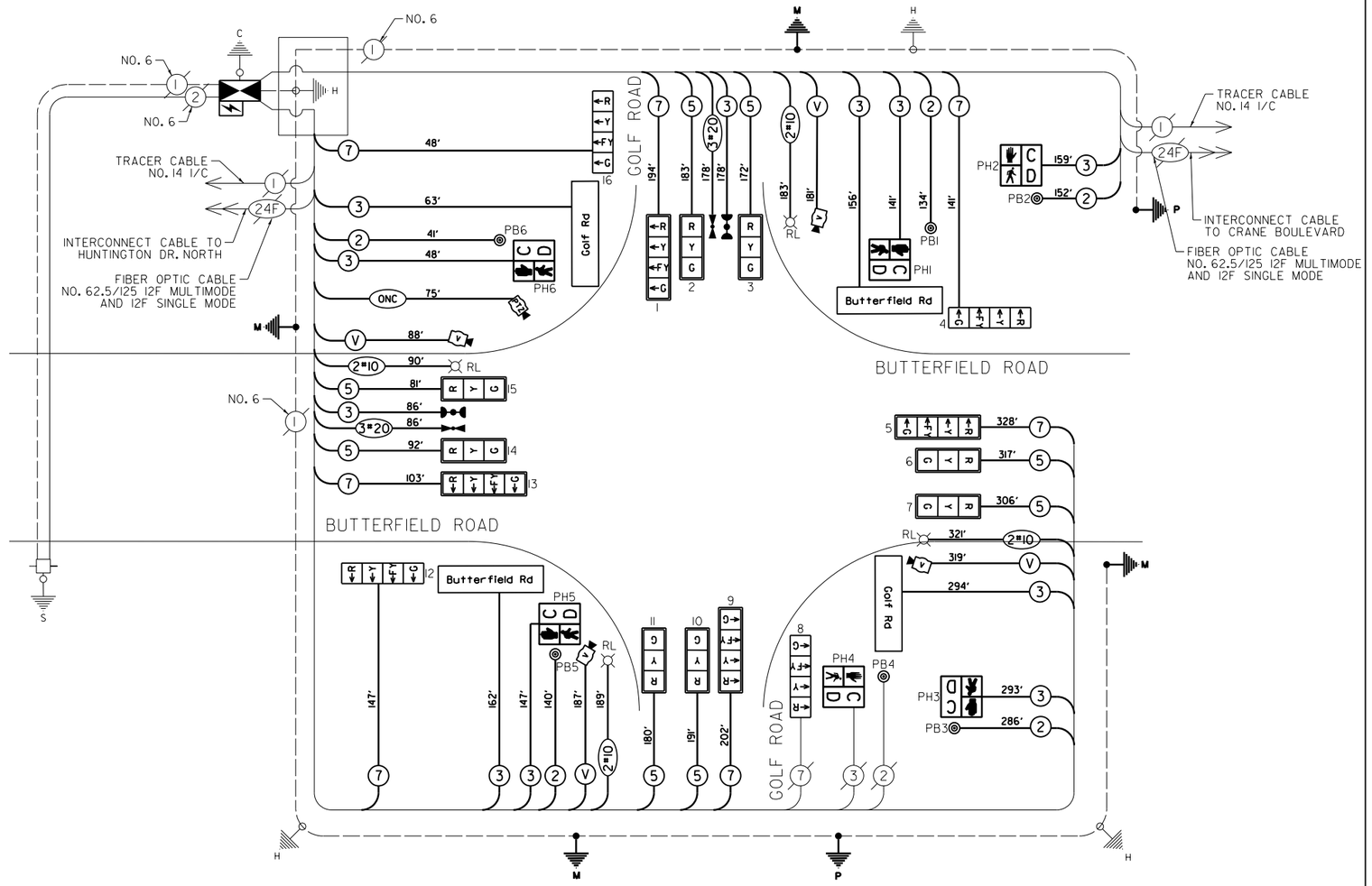
- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- *FYA* FLASHING YELLOW ARROW

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	*FYA*	*FYA*	*FYA*	*FYA*



L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	8		17	0.50	68.0
(YELLOW)	8		25	0.25	50.0
(GREEN)	8		15	0.25	30.0
ARROW	24		12	0.10	28.8
ARROW (FYA)	8		12	0.30	28.8
PED. SIGNAL	6		25	1.00	150.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
LUMINAIRE	4		250	0.5	500.0
UPS	1		25	1.00	25.0
ST. NAME SIGN	4		120	0.5	240.0
ENERGY COSTS TO:				TOTAL =	1570.6

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

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FILE NAME = SHT_18.Golf

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

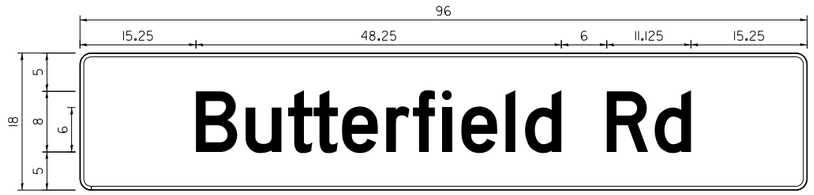
CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND GOLF ROAD

SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

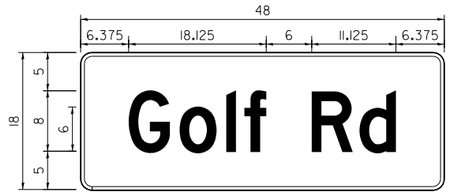
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	28
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 & INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	12	TYPE 1	ZZ	2	SEE NOTE 3
D	12	LED	ZZ	2	SEE NOTE 2



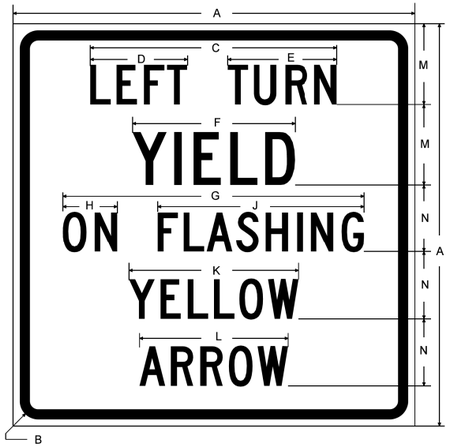
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	6	TYPE 1	ZZ	2	SEE NOTE 3
D	6	LED	ZZ	2	SEE NOTE 2

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.
2. INTERNALLY ILLUMINATED SIGNS ARE TO BE DOUBLE SIDED.
3. TEMPORARY STREET NAME SIGNS ARE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" PAY ITEM.

ILLINOIS STANDARD

R10-I109



COLOR — LEGEND AND BORDER: BLACK, NON-REFLECTORIZED; BACKGROUND: WHITE, REFLECTORIZED

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
30 x 30	30.00	1.38	18.40	7.20	8.20	12.20	22.40	4.00	15.40	12.60	11.00	6.00	5.00

SIGN SIZE	SERIES BY LINE					MARGIN	BORDER
	1	2	3	4	5		
30 x 30	3C	4C	3C	3C	3C	0.500	0.750

All dimensions in inches. Sign not to scale.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	1
NON-SPECIAL WASTE DISPOSAL	CU YD	30
SOIL DISPOSAL ANALYSIS	EACH	1
SIGN PANEL - TYPE 1	SQ FT	50
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	17
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	60
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,564
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	752
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,725
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,520
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,161
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	116
CONCRETE FOUNDATION, TYPE A	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	12
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	6
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3,750
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	96
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	264
ROD AND CLEAN EXISTING CONDUIT	FOOT	420
RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	1
RELOCATE SWITCH	EACH	1
RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
OUTDOOR RATED NETWORK CABLE	FOOT	75
LAYER II (DATALINK) SWITCH	EACH	1
TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	1
RELOCATE EXISTING LUMINAIRE	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT. (SPECIAL)	EACH	2
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
RELOCATE SIGNAL LENS COVER	EACH	8

FILE NAME = SHT_19_Golf

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

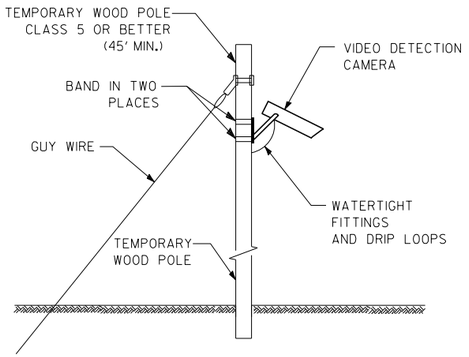
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
BUTTERFIELD ROAD AND GOLF ROAD

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	29
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

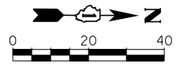


TEMPORARY VIDEO DETECTION MOUNTING DETAIL

(NOT TO SCALE)

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTION: THE EXISTING PTZ CAMERA, ENCODER, AND LAYER II SWITCH SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY-APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY-ACTUATED NEMA MICROPROCESSOR-BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY INSTALLED IN A NEMA TSIOR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH NOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED, AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN A CENTRACS SYSTEM SHALL BE NTCIP COMPATIBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.



SCALE: 1"=20'

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT: EACH I

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COUNTY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

1	EACH	CONTROLLER
1	EACH	UPS INVERTER
1	EACH	VIDEO DETECTION EQUIPMENT
1	EACH	PTZ CAMERA (SEE NOTE 1)
1	EACH	ENCODER (SEE NOTE 1)
1	EACH	LAYER II SWITCH (SEE NOTE 1)
1	EACH	MALFUNCTION MANAGEMENT UNIT
1	EACH	CONFIRMATION BEACON
1	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

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

1	EACH	CABINET (COMPLETE)
4	EACH	STEEL COMBINATION MAST ARM AND POLE WITH LUMINAIRE
8	EACH	3-SECTION SIGNAL HEAD
4	EACH	5-SECTION SIGNAL HEAD
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH BUTTON
8	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	ILLUMINATED STREET NAME SIGN

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

1	EACH	CONFIRMATION BEACON
1	EACH	LIGHT DETECTOR
8	EACH	SIGNAL LENS COVER

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, 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.

CONSTRUCTION NOTES:

(1) THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.

(2) THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE NEW CABINET.

FILE NAME = SHT_20_Crane

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.00 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

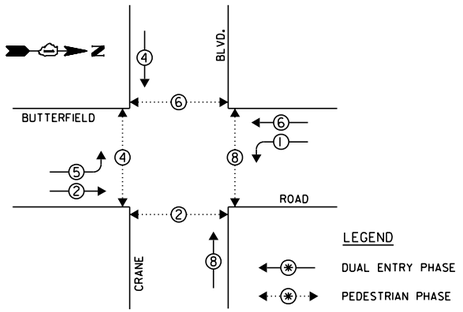
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
BUTTERFIELD ROAD AND CRANE BOULEVARD

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

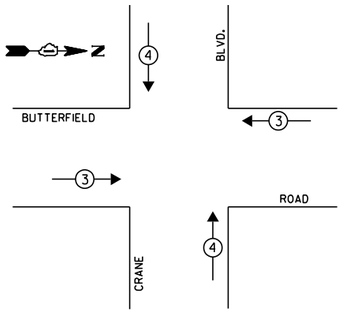
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	30
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



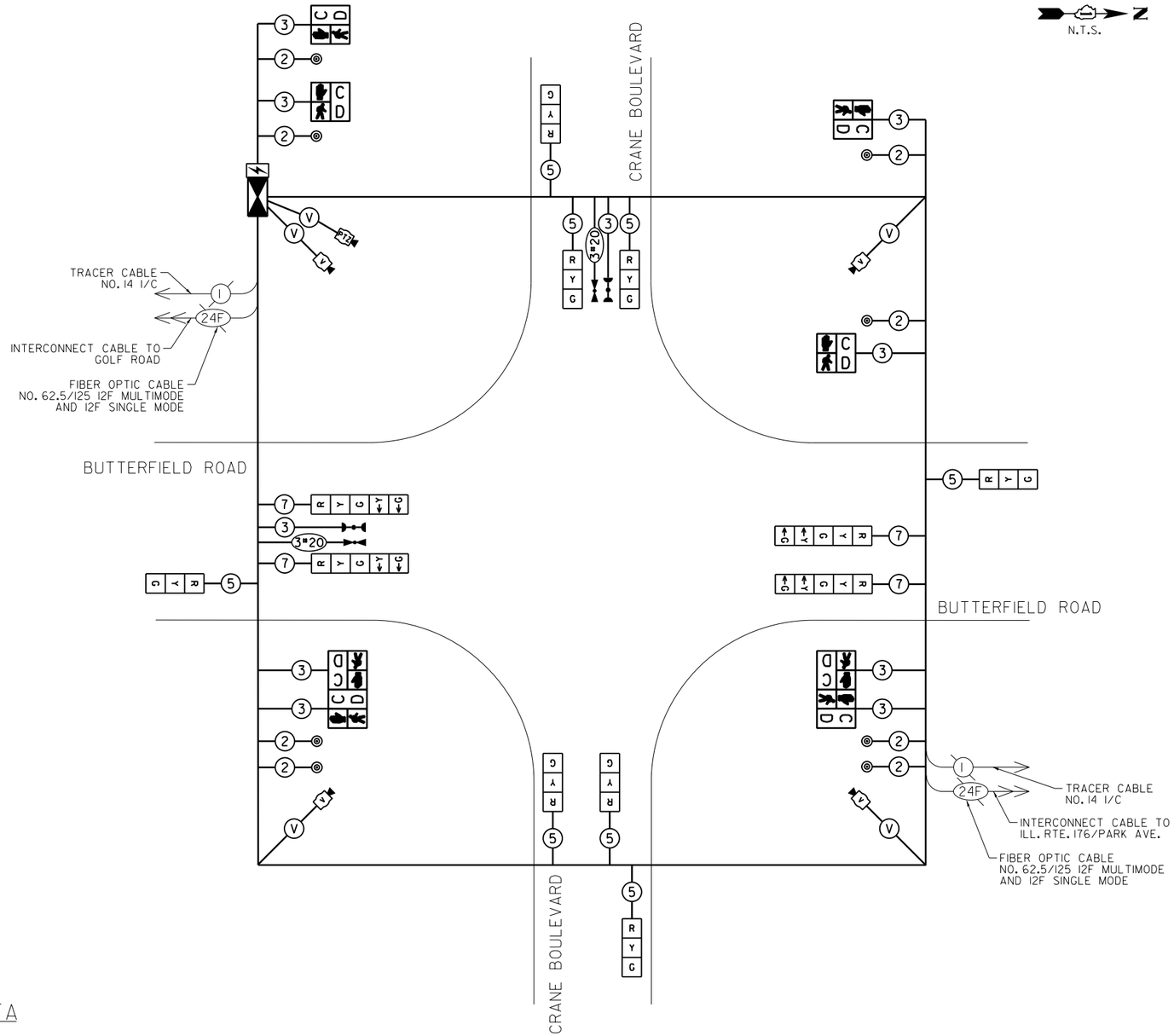
TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE × INCAND.	WATTAGE LED	× % OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	8		12	0.10	9.6
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	906.6

LAKE COUNTY DIVISION OF TRANSPORTATION

600 WEST WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMMONWEALTH EDISON



TEMPORARY WOOD POLE DATA

CORNER	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
NW	15+89.91	38.74' RT	LIBERTYVILLE PUBLIC WORKS DEPT., COMED (OH)
NE	15+98.86	42.02' LT	-
SE	16+65.16	44.69' LT	-
SW	16+68.70	53.36' RT	LIBERTYVILLE PUBLIC WORKS DEPT.

FILE NAME SHT_21_Crane

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND CRANE BOULEVARD

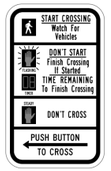
SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	31
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	16+08.54	46.63' RT	LIBERTYVILLE PUBLIC WORKS DEPT.
MA-2	15+84.53	35.42' LT	COMED (OH), LIBERTYVILLE PUBLIC WORKS DEPT.
MA-3	16+64.06	43.81' LT	-
MA-4	16+76.13	40.60' RT	LIBERTYVILLE PUBLIC WORKS DEPT.
P-1	15+90.51	38.37' RT	UNKNOWN WATER
P-2	16+03.80	44.05' LT	-
P-3	16+61.30	53.00' LT	COMED (OH)
P-4	16+57.71	50.78' RT	LIBERTYVILLE PUBLIC WORKS DEPT., NORTH SHORE GAS

SIGN (A)



R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (B)

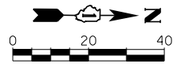
R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (C)

ILLINOIS STANDARD
R10-1109
30" x 30"
SIGN PANEL TYPE I
4-REQUIRED

SIGN (D) "Butterfield Rd" INTERNALLY ILLUMINATED LED

SIGN (E) "Crane Blvd" INTERNALLY ILLUMINATED LED



CONSTRUCTION NOTES:
(1) REMOVE EXISTING CONTROLLER AND CABINET AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN TYPE IV CABINET ON EXISTING FOUNDATION. REINSTALL EXISTING TRANSCEIVER-FIBER OPTIC AND EXISTING LIGHT DETECTOR AMPLIFIER. INSTALL NEW LAYER II SWITCH AND NEW VIDEO DETECTION SYSTEM IN NEW CABINET.

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE NTCIP (LATEST VERSION)

FILE NAME = SHT_22_Crane

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.00 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

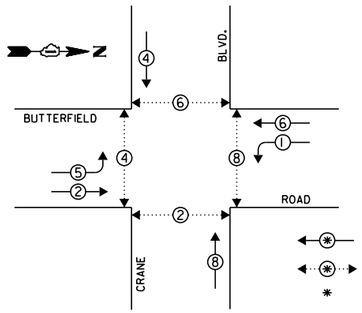
TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND CRANE BOULEVARD

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	32
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

N.T.S.

CONTROLLER SEQUENCE

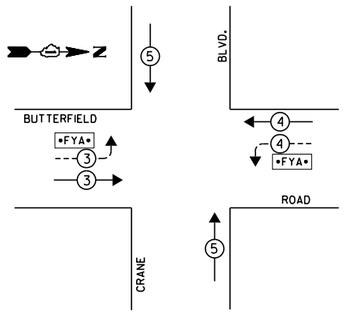


LEGEND

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- •FYA• FLASHING YELLOW ARROW

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



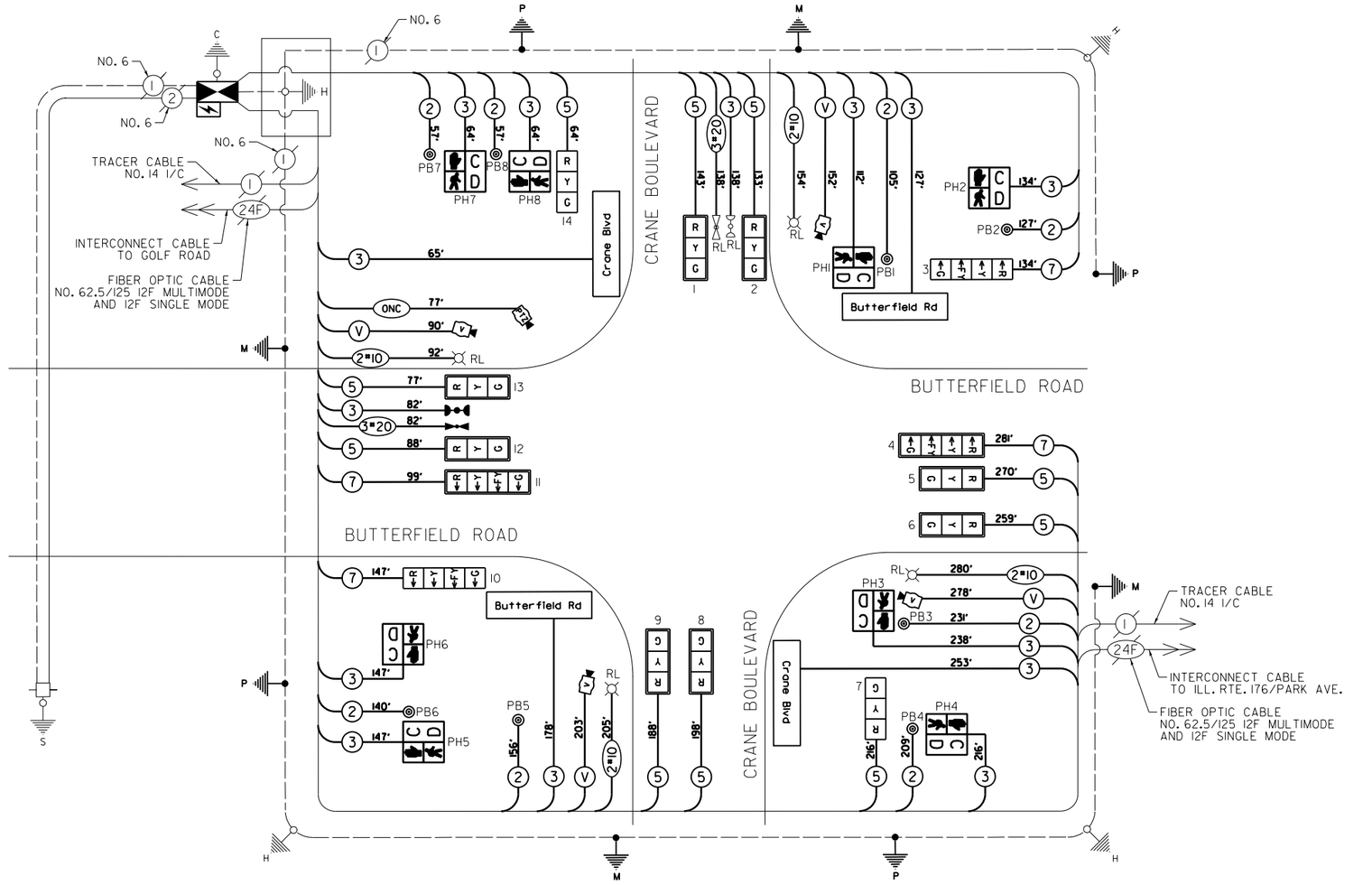
PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	•FYA•	•FYA•	

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	× % OPERATION	
SIGNAL (RED)	10		17	0.50	85.0
(YELLOW)	10		25	0.25	62.5
(GREEN)	10		15	0.25	37.5
ARROW	12		12	0.10	14.4
ARROW (FYA)	4		12	0.30	14.4
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
LUMINAIRE	4		250	0.5	500.0
UPS	1		25	1.00	25.0
ST. NAME SIGN	4		120	0.5	240.0
ENERGY COSTS TO:				TOTAL =	1628.8

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LEBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED



AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

FILE NAME: SHT_23_Crane

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

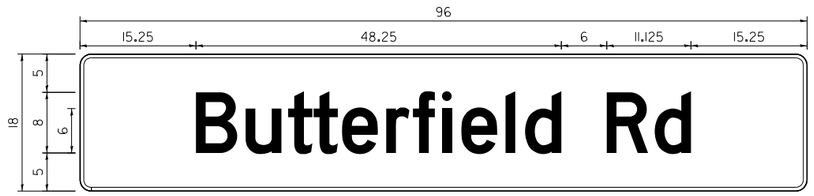
CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND CRANE BOULEVARD

SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	33
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 & INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	12	TYPE 1	ZZ	2	SEE NOTE 3
D	12	LED	ZZ	2	SEE NOTE 2

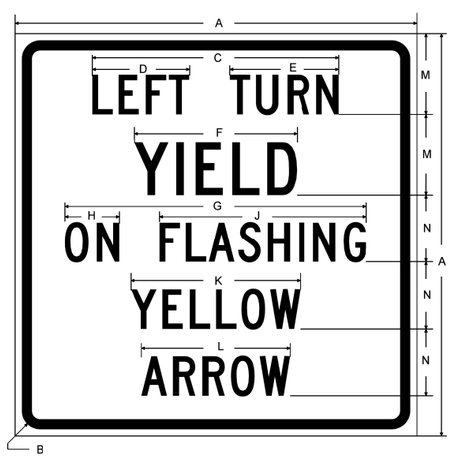
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	9	TYPE 1	ZZ	2	SEE NOTE 3
D	9	LED	ZZ	2	SEE NOTE 2

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.
2. INTERNALLY ILLUMINATED SIGNS ARE TO BE DOUBLE SIDED.
3. TEMPORARY STREET NAME SIGNS ARE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" PAY ITEM.

ILLINOIS STANDARD

R10-I109



COLOR	LEGEND AND BORDER	BLACK	NON-REFLECTORIZED
	BACKGROUND	WHITE	REFLECTORIZED

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
30 x 30	30.00	1.88	18.40	7.20	8.20	12.20	22.40	4.00	15.40	12.60	11.00	6.00	5.00

SIGN SIZE	SERIES BY LINE					MARGIN	BORDER
	1	2	3	4	5		
30 x 30	3C	4C	3C	3C	3C	0.500	0.750

All dimensions in inches. Sign not to scale.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	3
SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	9
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	77
SIDEWALK REMOVAL	SQ FT	77
NON-SPECIAL WASTE DISPOSAL	CU YD	30
SOIL DISPOSAL ANALYSIS	EACH	1
SIGN PANEL - TYPE 1	SQ FT	25
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	11
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	154
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,448
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,074
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,956
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,620
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	660
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	248
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	9
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
LIGHT DETECTOR	EACH	1
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3,892
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	220
ROD AND CLEAN EXISTING CONDUIT	FOOT	286
RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	1
RELOCATE SWITCH	EACH	1
RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
OUTDOOR RATED NETWORK CABLE	FOOT	77
LAYER II (DATALINK) SWITCH	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
RELOCATE EXISTING LUMINAIRE	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
RELOCATE SIGNAL LENS COVER	EACH	8

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

FILE NAME = patrick.jordan
SHT. 24.Crane

PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
BUTTERFIELD ROAD AND CRANE BOULEVARD

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	34
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT:
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE AGENCY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE AGENCY TRAFFIC ENGINEER.

IDOT:	1	EACH	PTZ CAMERA (SEE NOTE 1)
LAKE COUNTY:	1	EACH	ENCODER (SEE NOTE 1)
	1	EACH	LAYER II SWITCH (SEE NOTE 1)
	1	EACH	MALFUNCTION MANAGEMENT UNIT

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

1	EACH	CONTROLLER AND CABINET (COMPLETE)
4	EACH	STEEL MAST ARM ASSEMBLY AND POST
2	EACH	3-SECTION SIGNAL HEAD
12	EACH	5-SECTION SIGNAL HEAD
6	EACH	PEDESTRIAN SIGNAL HEAD
3	EACH	PEDESTRIAN PUSH BUTTON
8	EACH	TRAFFIC SIGNAL BACKPLATE

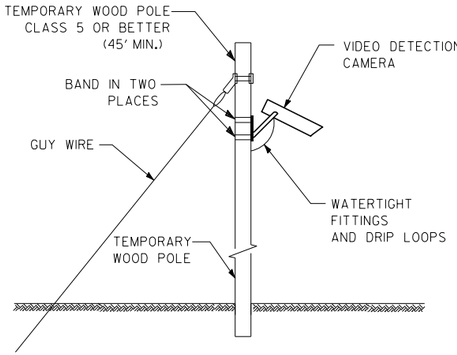
RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

2	EACH	CONFIRMATION BEACON
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

CONSTRUCTION NOTES:
(1) THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.

(2) THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE NEW CABINET.

NOTES FOR TEMPORARY TRAFFIC SIGNALS:
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTION: THE EXISTING PTZ CAMERA, ENCODER, AND LAYER II SWITCH SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.



TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)

TS#14020

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DECATUR, IL 62526-6161
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USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

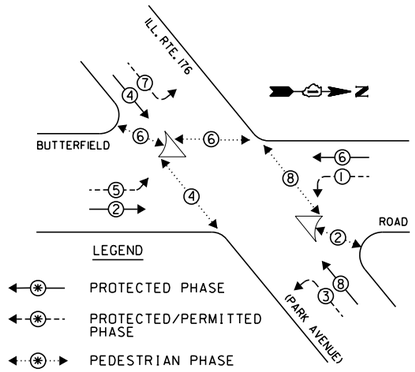
TEMPORARY TRAFFIC SIGNAL INSTALLATION
BUTTERFIELD ROAD AND IL RTE 176 / PARK AVENUE

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

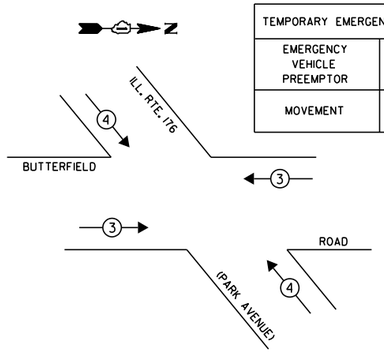
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	35
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

FILE NAME
SHT_25_RT176

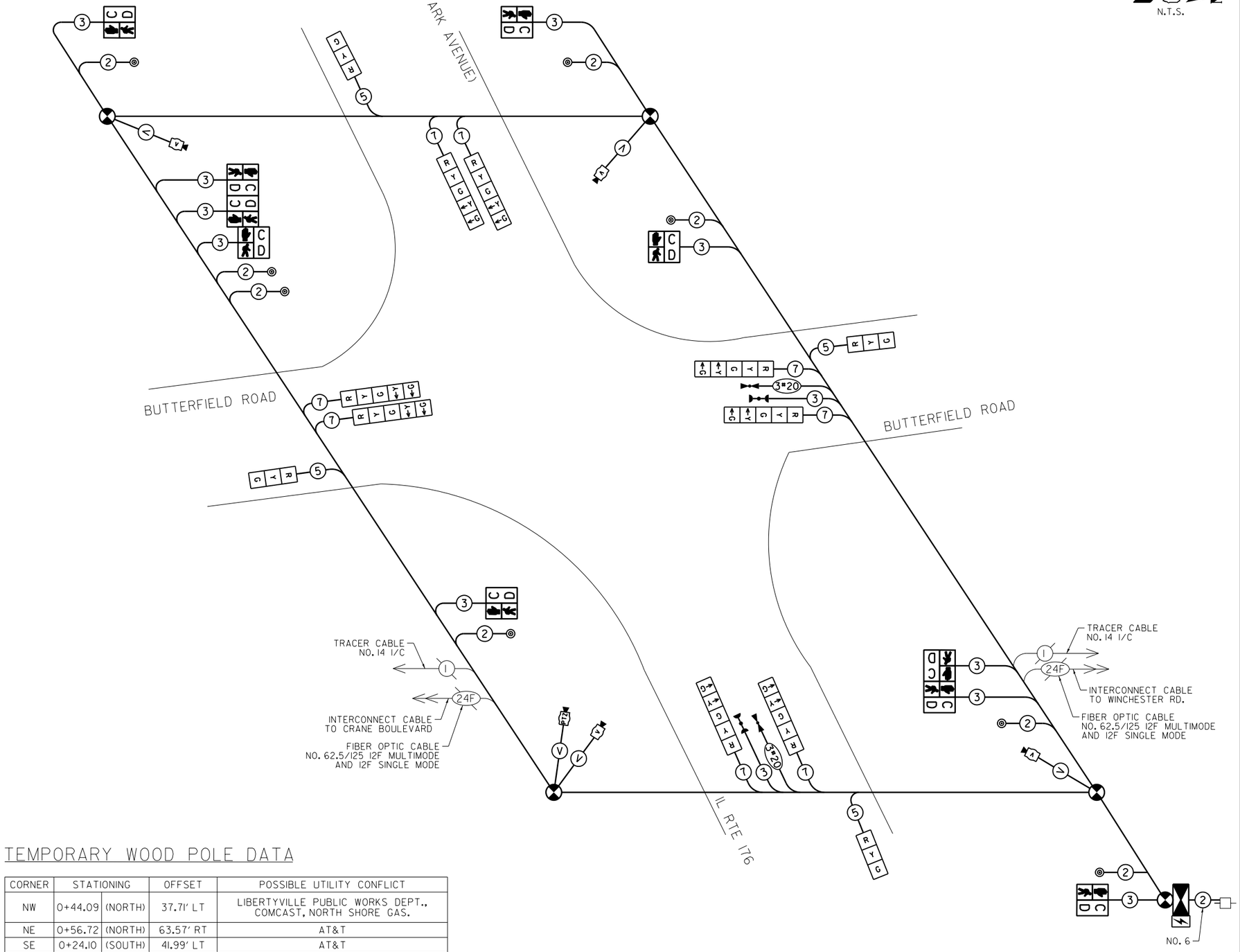
TEMPORARY CONTROLLER SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



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



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	12		11	0.50	66.0
(YELLOW)	12		20	0.25	60.0
(GREEN)	12		12	0.25	36.0
ARROW	16		10	0.10	16.0
PED. SIGNAL	10		20	1.00	200.0
CONTROLLER	1		100	1.00	100.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	653.0

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

TEMPORARY WOOD POLE DATA

CORNER	STATIONING		OFFSET	POSSIBLE UTILITY CONFLICT
NW	0+44.09	(NORTH)	37.71' LT	LIBERTYVILLE PUBLIC WORKS DEPT., COMCAST, NORTH SHORE GAS.
NE	0+56.72	(NORTH)	63.57' RT	AT&T
SE	0+24.10	(SOUTH)	41.99' LT	AT&T
SW	0+63.95	(SOUTH)	36.20' RT	AT&T, LIBERTYVILLE PUBLIC WORKS DEPT.

TS#14020

FILE NAME = SHT_26.RT176

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

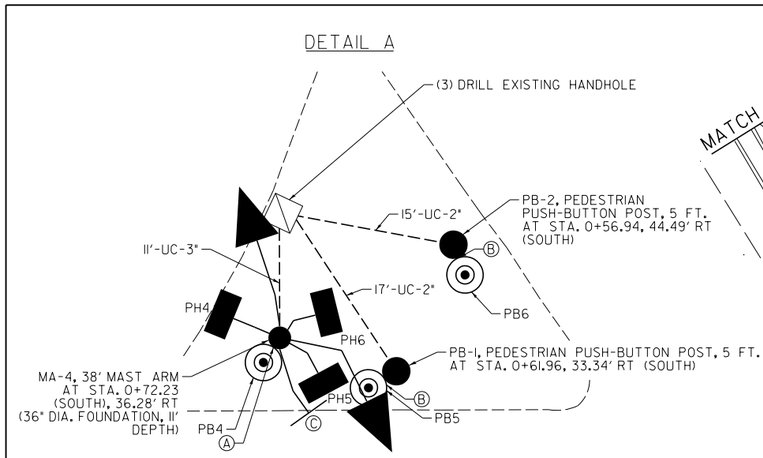
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

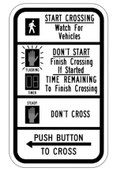
TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND IL RTE 176

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	36
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			



SIGN (A)



R10-3e
9" x 15"
3-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (B)

R10'-3e
9" x 15"
3-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (C)

ILLINOIS STANDARD
R10-1109
30" x 30"
SIGN PANEL TYPE I
8-REQUIRED

CONSTRUCTION NOTES:

(1) REMOVE EXISTING CONTROLLER AND CABINET AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN TYPE IV CABINET ON EXISTING FOUNDATION. REINSTALL EXISTING TRANSCEIVER-FIBER OPTIC AND EXISTING LIGHT DETECTOR AMPLIFIER. INSTALL NEW LAYER II SWITCH AND NEW VIDEO DETECTION SYSTEM IN NEW CABINET.

(2) REMOVE EXISTING LEFT-TURN SIGNAL HEAD ON SIGNAL POST AND INSTALL A NEW SIGNAL HEAD, 4-SECTION, BRACKET-MOUNTED. REUSE EXISTING ELECTRICAL CABLES.

(3) REMOVE AND RE-INSTALL EXISTING SIGN PANELS ON NEW MAST ARM POLE (INCLUDED IN COST):
-"LAKE COUNTY Wll"/ BUTTERFIELD ROAD

(4) INSTALL REMOTE-CONTROLLED VIDEO SYSTEM CAMERA ON COMBINATION MAST ARM POLE.

TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	0+07.88 (NORTH)	54.59' LT	LIBERTYVILLE PUBLIC WORKS DEPT., NORTH SHORE GAS, LAKE COUNTY DOT
MA-2	0+71.69 (NORTH)	37.80' RT	AT&T
MA-3	0+20.90 (SOUTH)	43.70' LT	AT&T
MA-4	0+72.23 (SOUTH)	36.28' RT	AT&T, LIBERTYVILLE PUBLIC WORKS DEPT.
PB-1	0+61.96 (SOUTH)	33.34' RT	AT&T
PB-2	0+56.94 (SOUTH)	44.49' RT	AT&T, LIBERTYVILLE PUBLIC WORKS DEPT.
PB-3	0+68.47 (NORTH)	33.33' RT	AT&T, COMCAST
S-1	1+76.77 (NORTH)	38.91' RT	-

TS#14020

FILE NAME = SHT_27_R1176

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DECATUR, IL 62526-6161
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USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

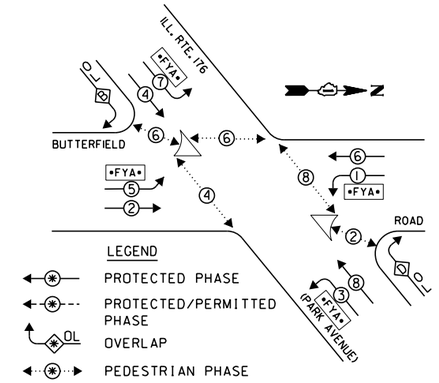
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND IL RTE 176 / PARK AVENUE

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	37
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

CONTROLLER SEQUENCE



LEGEND

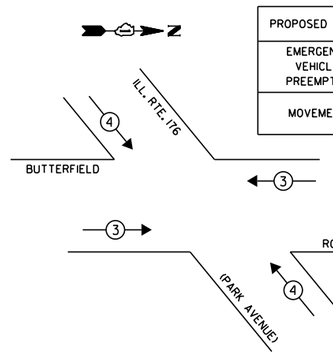
- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- OVERLAP
- PEDESTRIAN PHASE
- •FYA• FLASHING YELLOW ARROW

PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP PHASE DESIGNATION

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

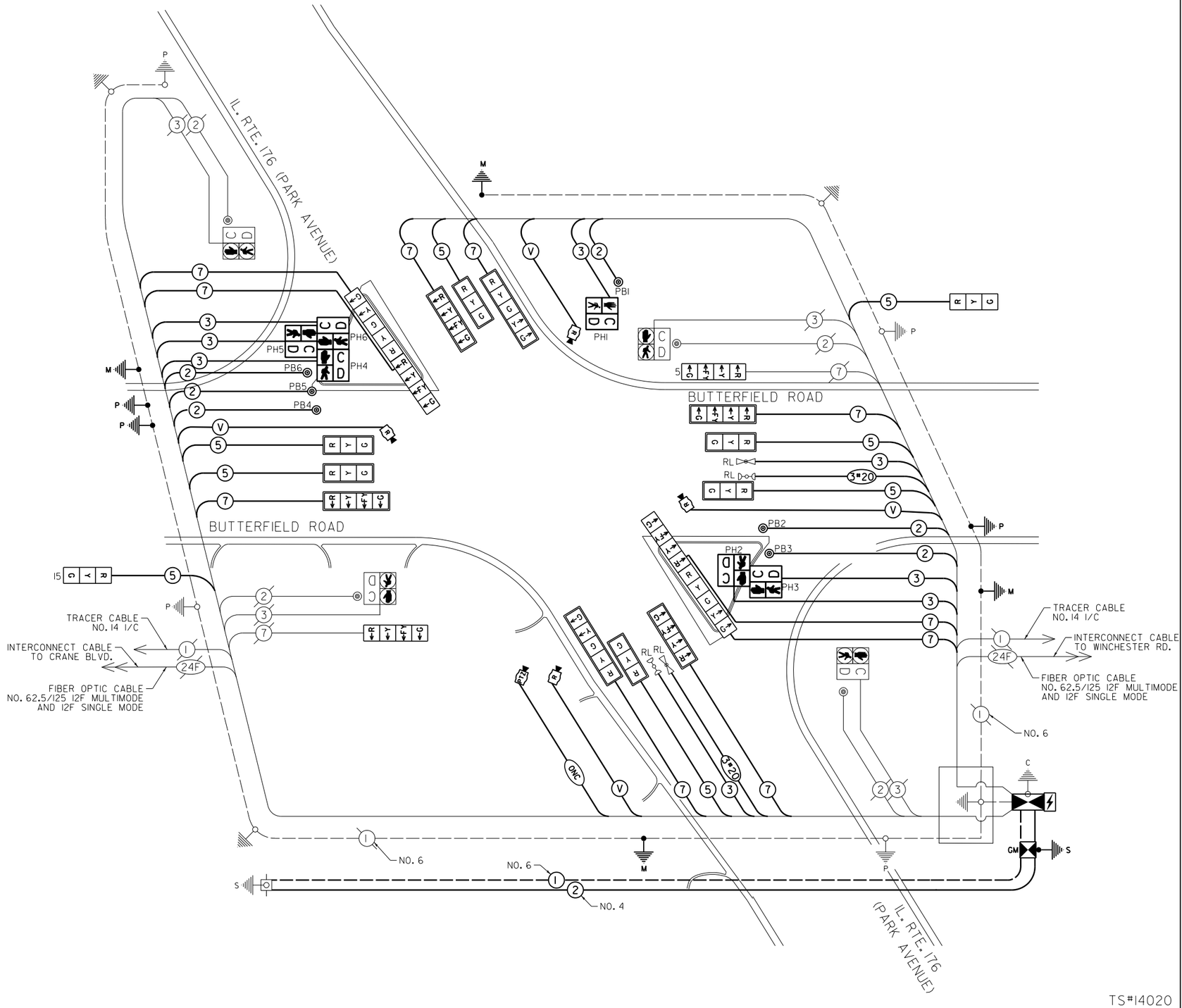
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE × INCAND.	WATTAGE LED	× % OPERATION	
SIGNAL (RED)	10		11	0.50	66.0
(YELLOW)	10		20	0.05	12.0
(GREEN)	10		12	0.45	64.8
ARROW	32		10	0.10	40.0
ARROW (FYA)	8		10	0.30	24.0
PED. SIGNAL	10		20	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
ENERGY COSTS TO:				TOTAL =	681.8

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAY/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



TS#14020

FILE NAME	SHT_28_RT176

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6067
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND IL RTE 176

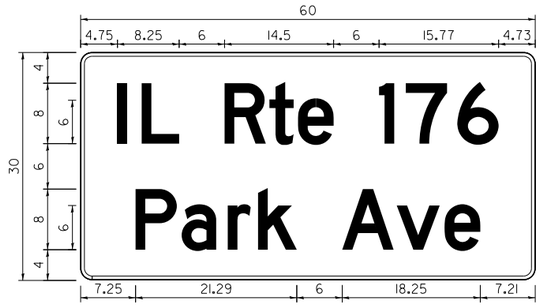
SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	38
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 & TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE

DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	9	TYPE 1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	12.5	TYPE 2	ZZ	2

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.

SCHEDULE OF QUANTITIES

	ITEM DESCRIPTION	UNITS	TOTAL QTY.
	SIGN PANEL - TYPE 1	SQ FT	68
	SIGN PANEL - TYPE 2	SQ FT	25
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	138
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	73
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	17
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,540
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2,011
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2,073
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2,634
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 4 2 C	FOOT	495
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 IC	FOOT	707
	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2
	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	FOOT	4
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	48
	DRILL EXISTING HANDHOLE	EACH	8
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	4
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	12
	PEDESTRIAN PUSH-BUTTON	EACH	6
	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
•	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
•	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	9,643
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
	MODIFY EXISTING TYPE "D" FOUNDATION	EACH	1
•	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	445
	ROD AND CLEAN EXISTING CONDUIT	FOOT	1,012
	RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	1
	RELOCATE SWITCH	EACH	1
	RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	1
	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
	OUTDOOR RATED NETWORK CABLE	FOOT	265
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR	EACH	2
	LAYER II (DATALINK) SWITCH	EACH	1
	RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	2
	PEDESTRIAN SIGNAL POST, 5 FT.	EACH	3
	INTERCEPT EXISTING CONDUIT	EACH	1
	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
	CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	12
	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1

• 100% COST TO THE VILLAGE OF LIBERTYVILLE.

TS#14020

FILE NAME SHT_29_R1176

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6067
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
BUTTERFIELD ROAD AND IL RTE 176

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	39
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

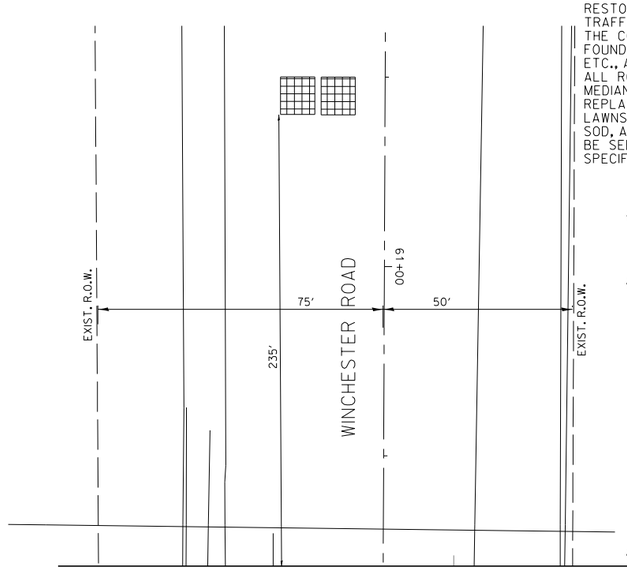
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, 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.

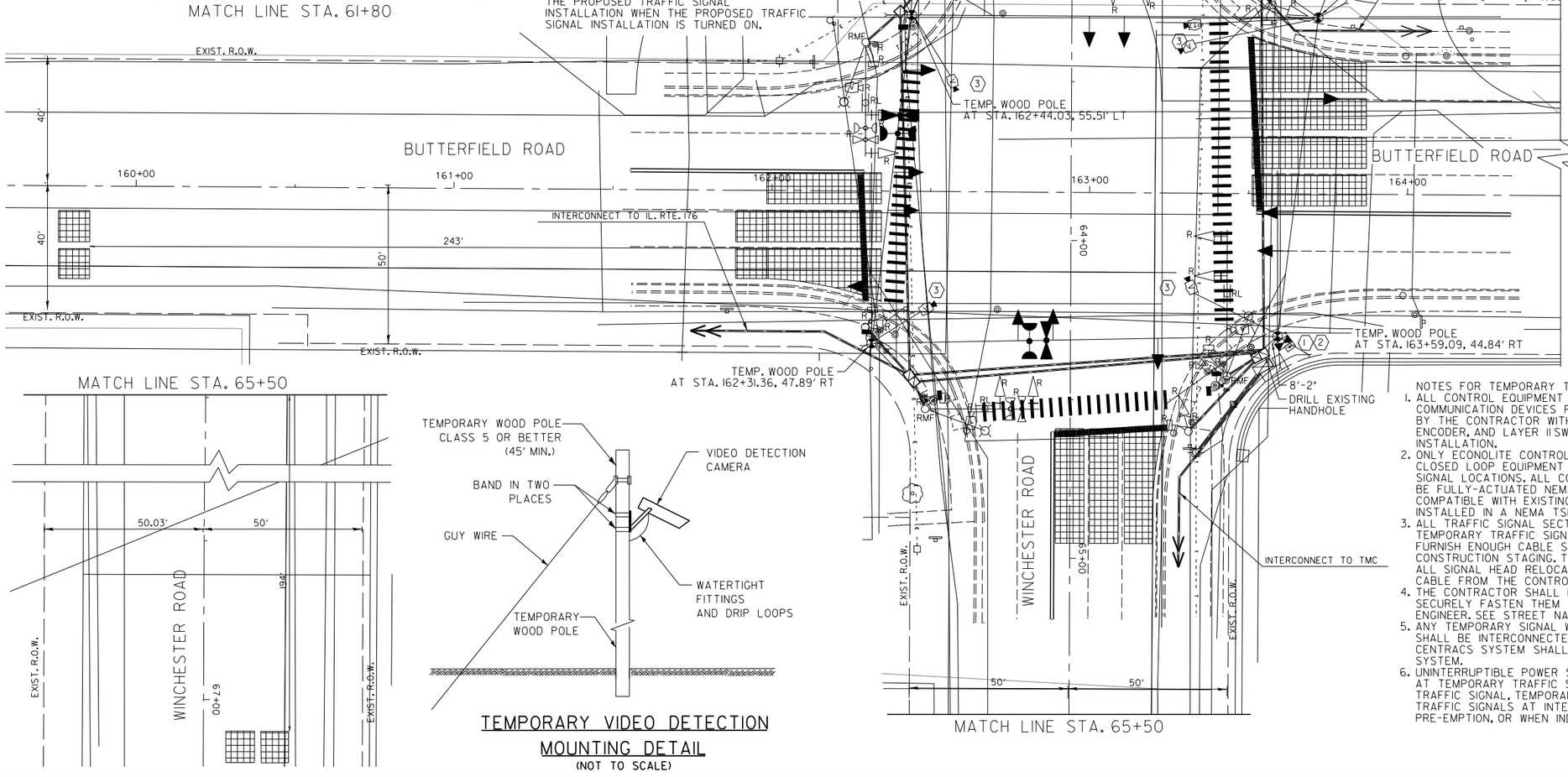
CONSTRUCTION NOTES:

(1) THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.

(2) THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE EXISTING CABINET.

(3) THE REMOTE-CONTROLLED VIDEO SYSTEM AND ENCODER SHALL BE RELOCATED TO THE PROPOSED TRAFFIC SIGNAL INSTALLATION WHEN THE PROPOSED TRAFFIC SIGNAL INSTALLATION IS TURNED ON.





TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)

MATCH LINE STA. 65+50

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT: EACH 1
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COUNTY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

1	EACH	CONTROLLER
1	EACH	VIDEO DETECTION SYSTEM
1	EACH	LAYER II SWITCH (SEE NOTE 1)
2	EACH	CONFIRMATION BEACON
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

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

4	EACH	STEEL COMBINATION MAST ARM AND POST WITH LUMINAIRE
3	EACH	3-SECTION SIGNAL HEAD
10	EACH	5-SECTION SIGNAL HEAD
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH BUTTON
8	EACH	TRAFFIC SIGNAL BACKPLATE

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

4	EACH	ILLUMINATED STREET NAME SIGN
1	EACH	PTZ CAMERA (SEE NOTE 1 AND CONSTRUCTION NOTE 3)
1	EACH	ENCODER (SEE NOTE 1 AND CONSTRUCTION NOTE 3)
8	EACH	SIGNAL LENS COVER

0 20 40
SCALE: 1" = 20'

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTIONS: THE EXISTING PTZ CAMERA, ENCODER, AND LAYER II SWITCH SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY-APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY-ACTUATED NEMA MICROPROCESSOR-BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. THE CONTRACTOR SHALL PROVIDE ALUMINIUM STREET NAME SIGNS FOR EACH APPROACH AND SECURELY FASTEN THEM TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER. SEE STREET NAME SIGN DETAILS.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN A CENTRACS SYSTEM SHALL BE NTCIP COMPATIBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

FILE NAME
SHT_30_Winchester

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

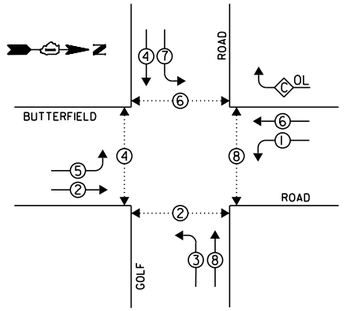
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
BUTTERFIELD ROAD AND WINCHESTER ROAD / COUNTY A34

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	40
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

TEMPORARY CONTROLLER SEQUENCE



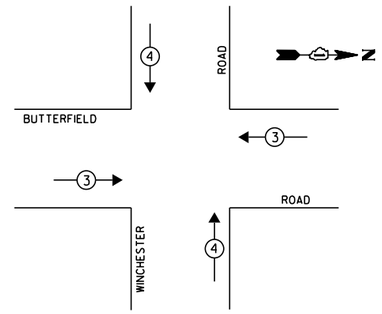
LEGEND

- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	7

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

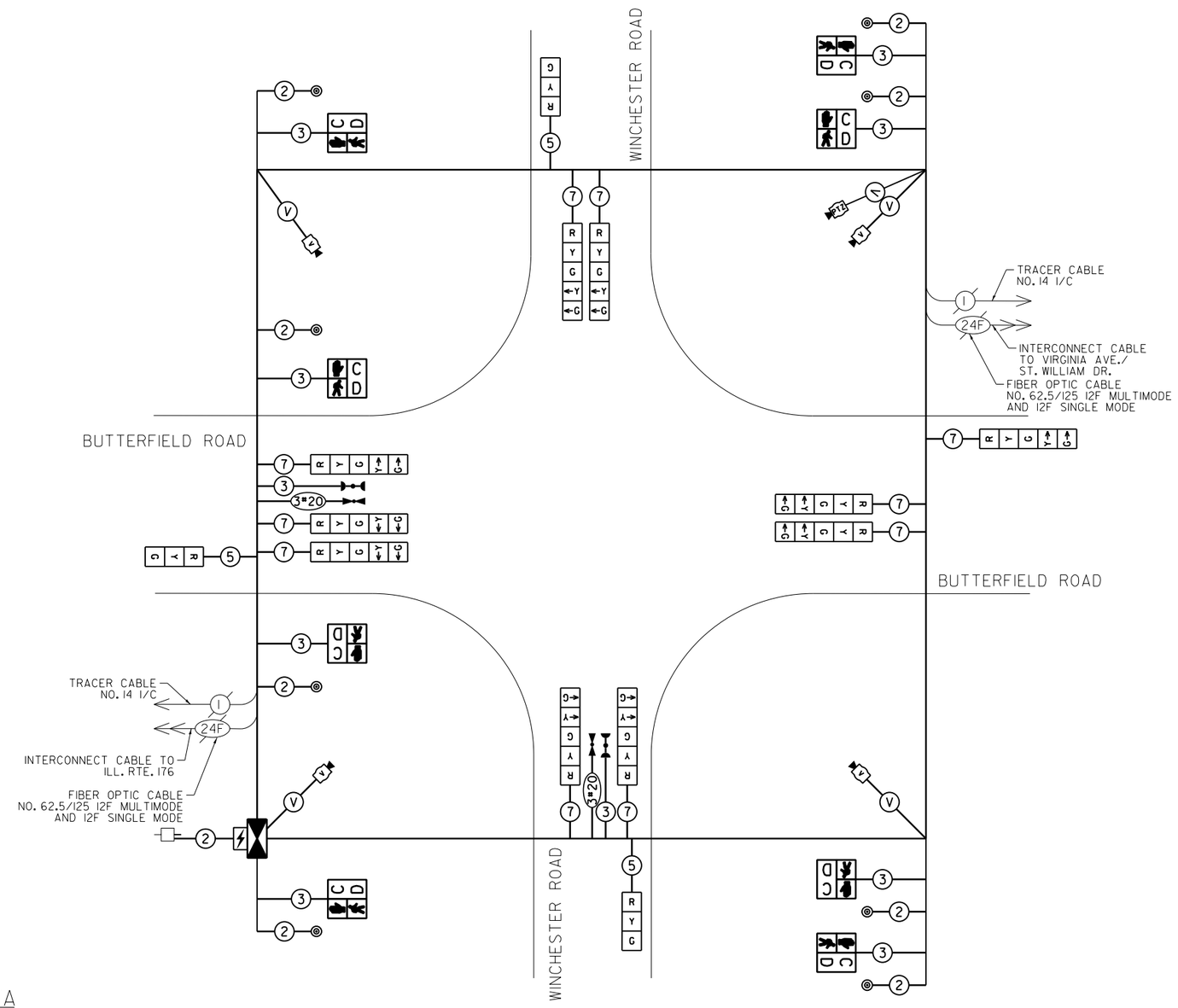
L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	13		17	0.50	110.5
(YELLOW)	13		25	0.25	81.3
(GREEN)	13		15	0.25	48.8
ARROW	20		12	0.10	24.0
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	939.5

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



TEMPORARY WOOD POLE DATA

CORNER	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
NW	163+65.55	55.49' LT	AT&T, JAWA
NE	163+59.09	44.84' RT	NORTH SHORE GAS, LIBERTYVILLE PUBLIC WORKS DEPT.
SE	162+31.36	47.89' RT	NORTH SHORE GAS, LIBERTYVILLE PUBLIC WORKS DEPT.
SW	162+44.03	55.51' LT	AT&T, COMED (OH), COMED (UG), JAWA

FILE NAME SHT_31_Winchester

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

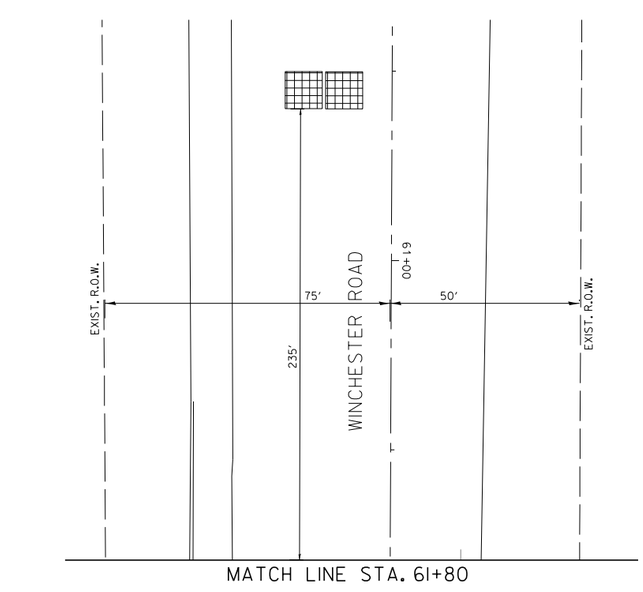
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND WINCHESTER ROAD

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	41
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			



SIGN (A)

R10-3e
9" x 15"
5-REQUIRED
INCLUDED IN THE COST
OF PAY ITEM 88800100,
PEDESTRIAN PUSH-BUTTON

SIGN (B)

R10-3e
9" x 15"
3-REQUIRED
INCLUDED IN THE COST
OF PAY ITEM 88800100,
PEDESTRIAN PUSH-BUTTON

SIGN (C)

ILLINOIS STANDARD
R10-1109
30" x 30"
SIGN PANEL TYPE I
8-REQUIRED

SCALE: 1" = 20'

TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	163+32.99	87.78' LT	LIBERTYVILLE PUBLIC WORKS DEPT.
MA-2	163+48.30	53.01' RT	-
MA-3	162+51.65	76.92' RT	COMED (OH)
MA-4	162+25.27	45.87' LT	JAWA
PB-1	162+37.69	50.44' LT	-

CONSTRUCTION NOTES:

(1) REMOVE EXISTING CONTROLLER AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER (SPECIAL) IN EXISTING CABINET ON EXISTING FOUNDATION. INSTALL NEW LAYER II SWITCH IN EXISTING CABINET.

(2) REMOVE EXISTING LEFT-TURN SIGNAL HEAD ON SIGNAL POST AND INSTALL A NEW SIGNAL HEAD, 4-SECTION, BRACKET-MOUNTED. REUSE EXISTING ELECTRICAL CABLES.

(3) REMOVE AND RE-INSTALL EXISTING ILLUMINATED STREET NAME SIGNS.

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE NTCIP (LATEST VERSION)

FILE NAME = SHT_32_Winchester

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

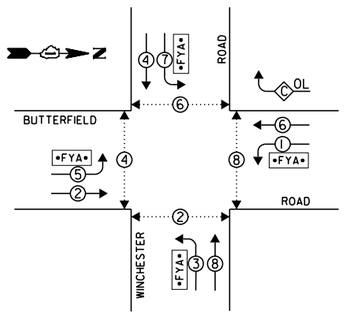
TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND WINCHESTER ROAD / COUNTY A34

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	42
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

N.T.S.

CONTROLLER SEQUENCE



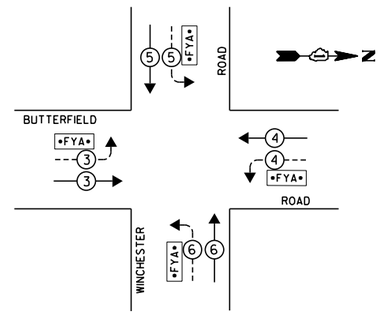
LEGEND

- DUAL ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- •FYA• FLASHING YELLOW ARROW

PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	7

EMERGENCY VEHICLE PREEMPTION SEQUENCE



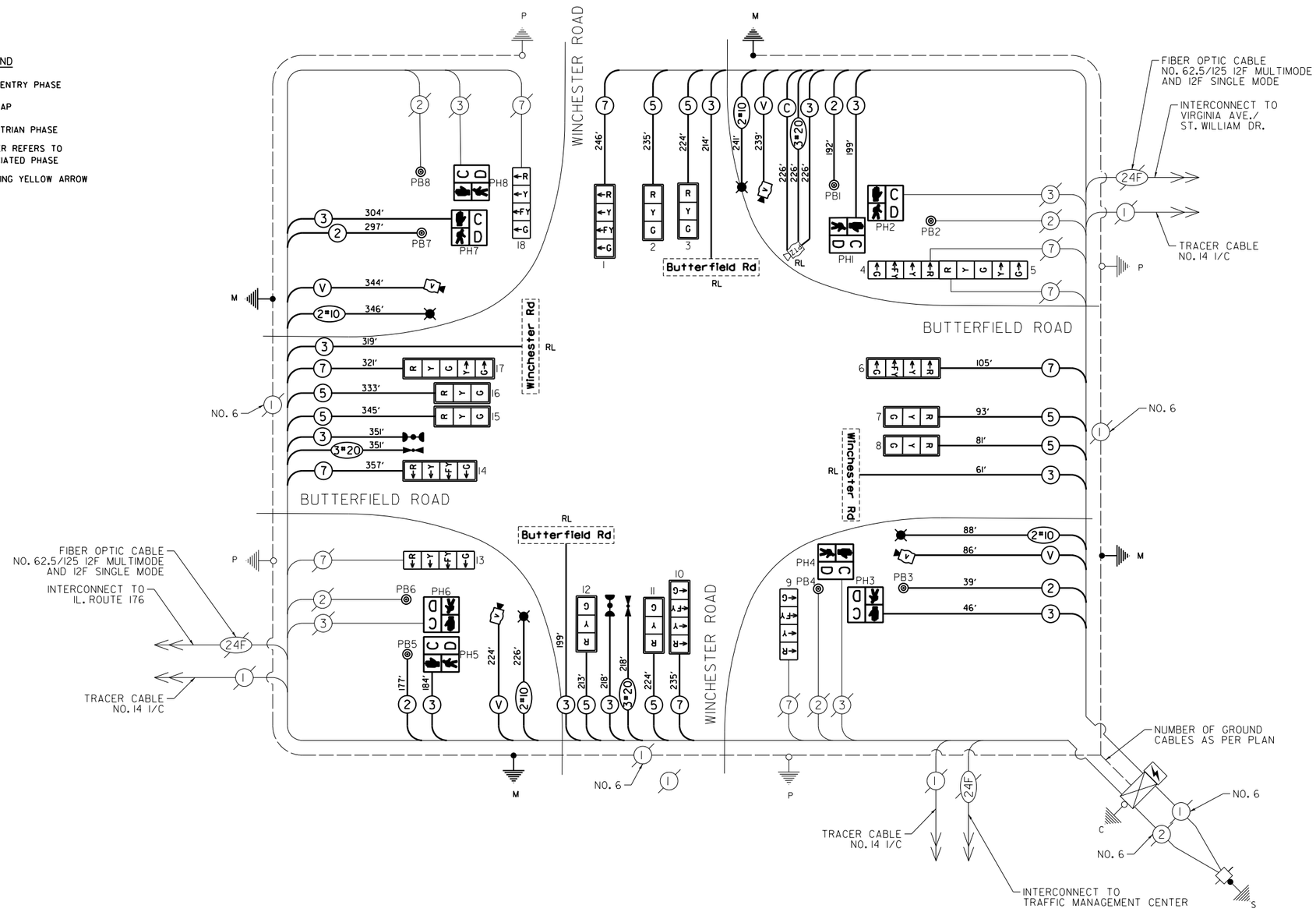
PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	•FYA•	•FYA•	•FYA•	•FYA•

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	10		17	0.50	85.0
(YELLOW)	10		25	0.25	62.5
(GREEN)	10		15	0.25	37.5
ARROW	28		12	0.10	33.6
ARROW (FYA)	8		12	0.10	28.8
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
LUMINAIRE	4		250	0.5	500.0
ST. NAME SIGN	4		120	0.5	240.0
ENERGY COSTS TO:				TOTAL =	1637.4

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LEBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED



AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

FILE NAME = SHT_33_Winchester

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
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PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND WINCHESTER ROAD / COUNTY A34

SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	43
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

SIGN PANEL – TYPE 1 & TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE

DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	9	TYPE 1	ZZ	2	SEE NOTE 2

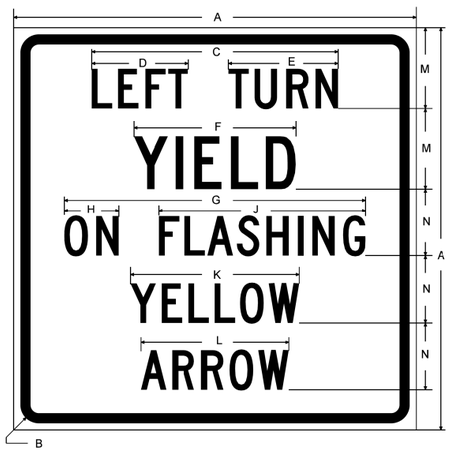
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	12	TYPE 2	ZZ	2	SEE NOTE 2

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.
2. TEMPORARY STREET NAME SIGNS ARE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" PAY ITEM.

ILLINOIS STANDARD

R10-I109



COLOR — LEGEND AND BORDER: BLACK — NON-REFLECTORIZED; BACKGROUND: WHITE — REFLECTORIZED

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
30 x 30	30.00	1.88	18.40	7.20	8.20	12.20	22.40	4.00	15.40	12.60	11.00	6.00	5.00

SIGN SIZE	SERIES BY LINE					MARGIN	BORDER
	1	2	3	4	5		
30 x 30	3C	4C	3C	3C	3C	0.500	0.750

All dimensions in inches. Sign not to scale.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	3
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	21
SIDEWALK REMOVAL	SQ FT	21
NON-SPECIAL WASTE DISPOSAL	CU YD	30
SOIL DISPOSAL ANALYSIS	EACH	1
SIGN PANEL - TYPE 1	SQ FT	50
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	14
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	79
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,800
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	704
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2,319
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,746
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,263
ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	226
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 IC	FOOT	141
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	13
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4,427
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	569
ROD AND CLEAN EXISTING CONDUIT	FOOT	462
RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	2
RELOCATE SWITCH	EACH	1
RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	2
LAYER II (DATALINK) SWITCH	EACH	1
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	226
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT. (SPECIAL)	EACH	1
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	4
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
RELOCATE INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
PEDESTRIAN PUSH-BUTTON POST, SPECIAL	EACH	1
RELOCATE SIGNAL LENS COVER	EACH	8

FILE NAME SHT_34_Winchester

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

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	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

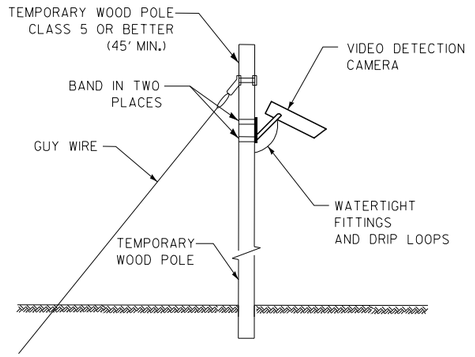
MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES BUTTERFIELD ROAD AND WINCHESTER ROAD

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

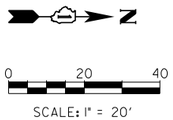
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	44
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY VEHICLE PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL SHALL BE FURNISHED BY THE CONTRACTOR WITH THE FOLLOWING EXCEPTIONS: THE EXISTING PTZ CAMERA, ENCODER, AND LAYER II SWITCH SHALL BE RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY-APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY-ACTUATED NEMA MICROPROCESSOR-BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. THE CONTRACTOR SHALL PROVIDE ALUMINIUM STREET NAME SIGNS FOR EACH APPROACH AND SECURELY FASTEN THEM TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER. SEE STREET NAME SIGN DETAILS.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN A CENTRACS SYSTEM SHALL BE NTCIP COMPATIBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.



TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)



REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT: EACH 1
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COUNTY AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

1	EACH	CONTROLLER
1	EACH	VIDEO DETECTION SYSTEM
1	EACH	LAYER II SWITCH (SEE NOTE 1)
1	EACH	MALFUNCTION MANAGEMENT UNIT
1	EACH	CONFIRMATION BEACON
1	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

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

2	EACH	STEEL COMBINATION MAST ARM AND POLE WITH LUMINAIRE
2	EACH	3-SECTION SIGNAL HEAD
4	EACH	5-SECTION SIGNAL HEAD
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH BUTTON
4	EACH	TRAFFIC SIGNAL BACKPLATE

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED SIGNAL POLES.

2	EACH	ILLUMINATED STREET NAME SIGN
1	EACH	PTZ CAMERA (SEE NOTE 1 AND CONSTRUCTION NOTE 3)
1	EACH	ENCODER (SEE NOTE 1 AND CONSTRUCTION NOTE 3)
4	EACH	SIGNAL LENS COVER

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, 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.

CONSTRUCTION NOTES:

(1) THE CONTRACTOR SHALL INSTALL THE PROPOSED UNIT DUCT FOR TEMPORARY INTERCONNECT FROM THE DOUBLE HANDHOLE TO THE TEMPORARY WOOD POLE.

(2) THE INTERCONNECT CABLES SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER, PULLED BACK TO THE EXISTING DOUBLE HANDHOLE, AND RE-INSTALLED IN THE PROPOSED UNIT DUCT TO THE TEMPORARY CONTROLLER. THE CONTRACTOR MAY SPLICE TEMPORARY INTERCONNECT CABLES TO THE EXISTING INTERCONNECT CABLES IF SUFFICIENT SLACK IS UNAVAILABLE. MAINTAINING THE INTERCONNECT DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL RECONNECT THE INTERCONNECT CABLES TO THE EXISTING CABINET.

(3) THE REMOTE-CONTROLLED VIDEO SYSTEM AND ENCODER SHALL BE RELOCATED TO THE PROPOSED TRAFFIC SIGNAL INSTALLATION WHEN THE PROPOSED TRAFFIC SIGNAL INSTALLATION IS TURNED ON.

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

FILE NAME = SHT_35_Virginia

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

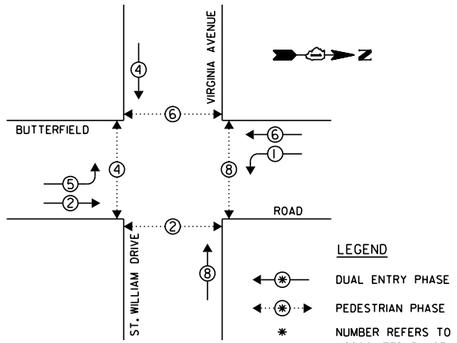
TEMPORARY TRAFFIC SIGNAL INSTALLATION
BUTTERFIELD ROAD AND VIRGINIA AVENUE / ST. WILLIAM DRIVE

SCALE: 1"=20' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	45
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

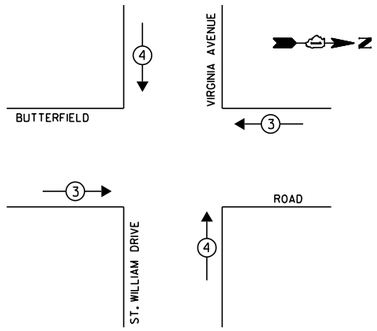
N.T.S.

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



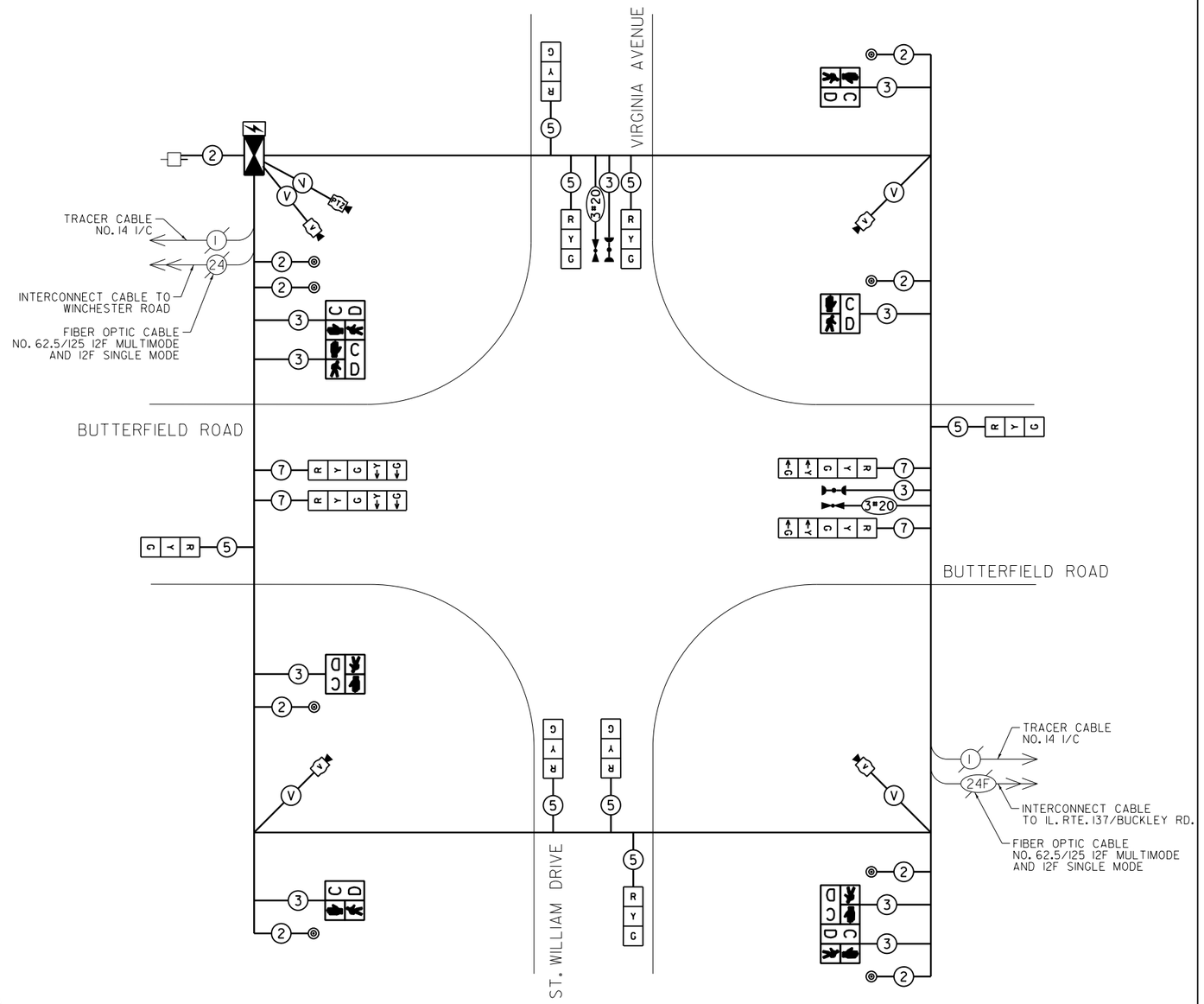
TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	8		12	0.10	9.6
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
UPS	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	906.6

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED



TEMPORARY WOOD POLE DATA

CORNER	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
NW	180+07.06	45.59' LT	COMED (OH), LIBERTYVILLE PUBLIC WORKS DEPT.
NE	180+25.47	41.62' RT	NORTH SHORE GAS, LIBERTYVILLE PUBLIC WORKS DEPT.
SE	179+10.00	49.00' RT	NORTH SHORE GAS, LIBERTYVILLE PUBLIC WORKS DEPT.
SW	179+11.89	54.03' LT	AT&T, JAWA

FILE NAME SHT_36_Virginia

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM BUTTERFIELD ROAD AND VIRGINIA AVENUE

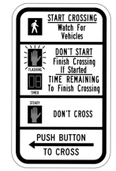
SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	46
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL EQUIPMENT DATA

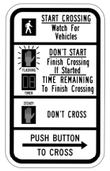
ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
MA-1	180+20.40	42.15' RT	NORTH SHORE GAS
MA-2	178+78.57	39.97' LT	LIBERTYVILLE PUBLIC WORKS DEPT., COMED (OH)
P-1	179+87.48	61.60' RT	NORTH SHORE GAS
P-2	178+98.09	38.96' LT	LIBERTYVILLE PUBLIC WORKS DEPT., AT&T, COMED (OH)

SIGN (A)



R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (B)



R10-3e
9" x 15"
4-REQUIRED
INCLUDED IN THE COST OF PAY ITEM 88800100, PEDESTRIAN PUSH-BUTTON

SIGN (C)

ILLINOIS STANDARD
R10-1109
30" x 30"
SIGN PANEL TYPE I
4-REQUIRED

N

0 20 40

SCALE: 1" = 20'

CONSTRUCTION NOTES:

(1) REMOVE EXISTING CONTROLLER AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN EXISTING CABINET ON EXISTING FOUNDATION. INSTALL NEW LAYER II SWITCH IN EXISTING CABINET.

(2) REMOVE EXISTING LEFT-TURN SIGNAL HEAD ON SIGNAL POST AND INSTALL A NEW SIGNAL HEAD, 4-SECTION, BRACKET-MOUNTED. REUSE EXISTING ELECTRICAL CABLES.

(3) REMOVE AND RE-INSTALL EXISTING ILLUMINATED STREET NAME SIGNS ON NEW MAST ARMS

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE NTCIP (LATEST VERSION)

FILE NAME = SHT_3_Virginia

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

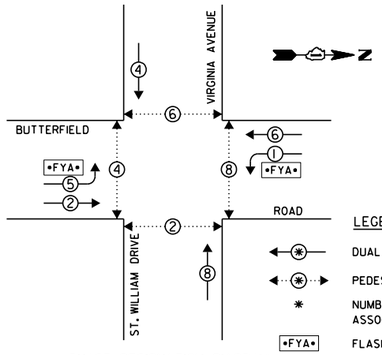
TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND VIRGINIA AVENUE / ST. WILLIAM DRIVE

SCALE: 1"=20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	47
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

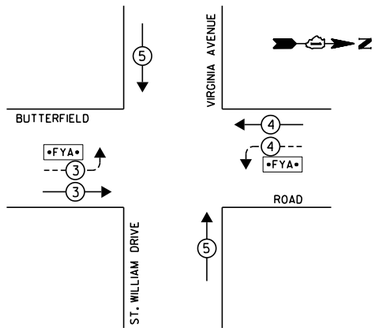
N.T.S.

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



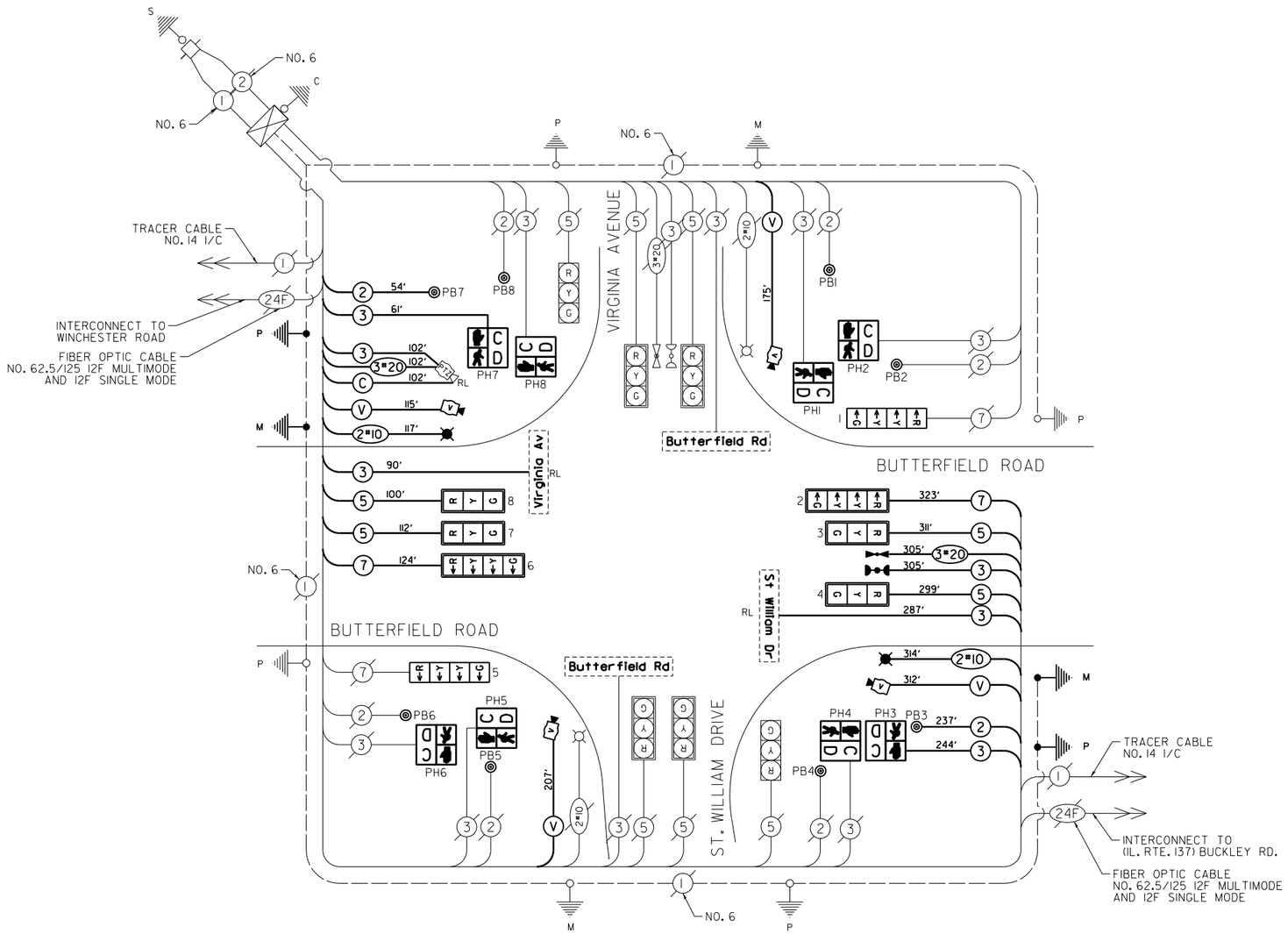
PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	*FYA*	*FYA*	

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	× % OPERATION	
SIGNAL (RED)	10		17	0.50	85.0
(YELLOW)	10		25	0.25	62.5
(GREEN)	10		15	0.25	37.5
ARROW	12		12	0.10	14.4
ARROW (FYA)	4		12	0.10	14.4
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		300	1.00	300.0
VIDEO SYSTEM	1	150	-	1.00	150.0
LUMINAIRE	4		250	0.50	500.0
UPS	1		25	1.00	25.0
ST. NAME SIGN	4		120	0.50	240.0
ENERGY COSTS TO:				TOTAL =	1628.8

LAKE COUNTY DIVISION OF TRANSPORTATION

600 W WINCHESTER ROAD, LIBERTYVILLE, ILLINOIS 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED



AECOM
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PHONE: (217) 875-4800 FAX: (217) 875-3577

FILE NAME SHT_38_Virginia

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND VIRGINIA AVENUE / ST WILLIAM DRIVE

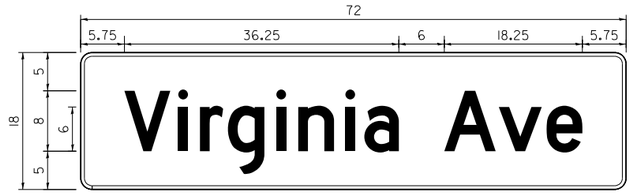
SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	48
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

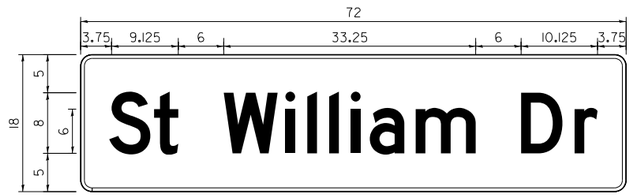
SIGN PANEL – TYPE 1

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE

DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	9	TYPE 1	ZZ	2	SEE NOTE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	9	TYPE 1	ZZ	2	SEE NOTE 2



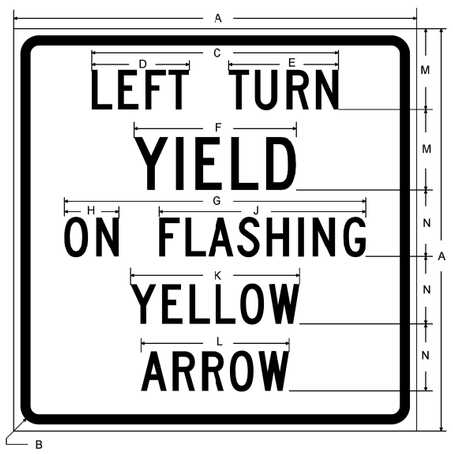
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED	NOTES
D	9	TYPE 1	ZZ	2	SEE NOTE 2

NOTES:

1. FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGN DETAIL.
2. TEMPORARY STREET NAME SIGNS ARE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" PAY ITEM.

ILLINOIS STANDARD

R10-I109



COLOR			
	LEGEND AND BORDER	BLACK	NON-REFLECTORIZED
	BACKGROUND	WHITE	REFLECTORIZED

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
30 x 30	30.00	1.88	18.40	7.20	8.20	12.20	22.40	4.00	15.40	12.60	11.00	6.00	5.00

SIGN SIZE	SERIES BY LINE					MARGIN	BORDER
	1	2	3	4	5		
30 x 30	3C	4C	3C	3C	3C	0.500	0.750

All dimensions in inches. Sign not to scale.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	29
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	255
SIDEWALK REMOVAL	SQ FT	255
NON-SPECIAL WASTE DISPOSAL	CU YD	20
SOIL DISPOSAL ANALYSIS	EACH	1
SIGN PANEL - TYPE 1	SQ FT	25
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	4
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	100
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	862
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G	EACH	2
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	291
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,088
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	821
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	447
ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	102
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	147
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	6
LIGHT DETECTOR	EACH	1
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1,998
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	305
ROD AND CLEAN EXISTING CONDUIT	FOOT	185
RELOCATE EXISTING REMOTE - CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	2
RELOCATE SWITCH	EACH	1
RELOCATE EXISTING VIDEO ENCODER, SPECIAL	EACH	2
LAYER II (DATALINK) SWITCH	EACH	1
TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	2
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	102
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
RELOCATE INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	2
RELOCATE SIGNAL LENS COVER	EACH	4

FILE NAME Sht_39_Virginia

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

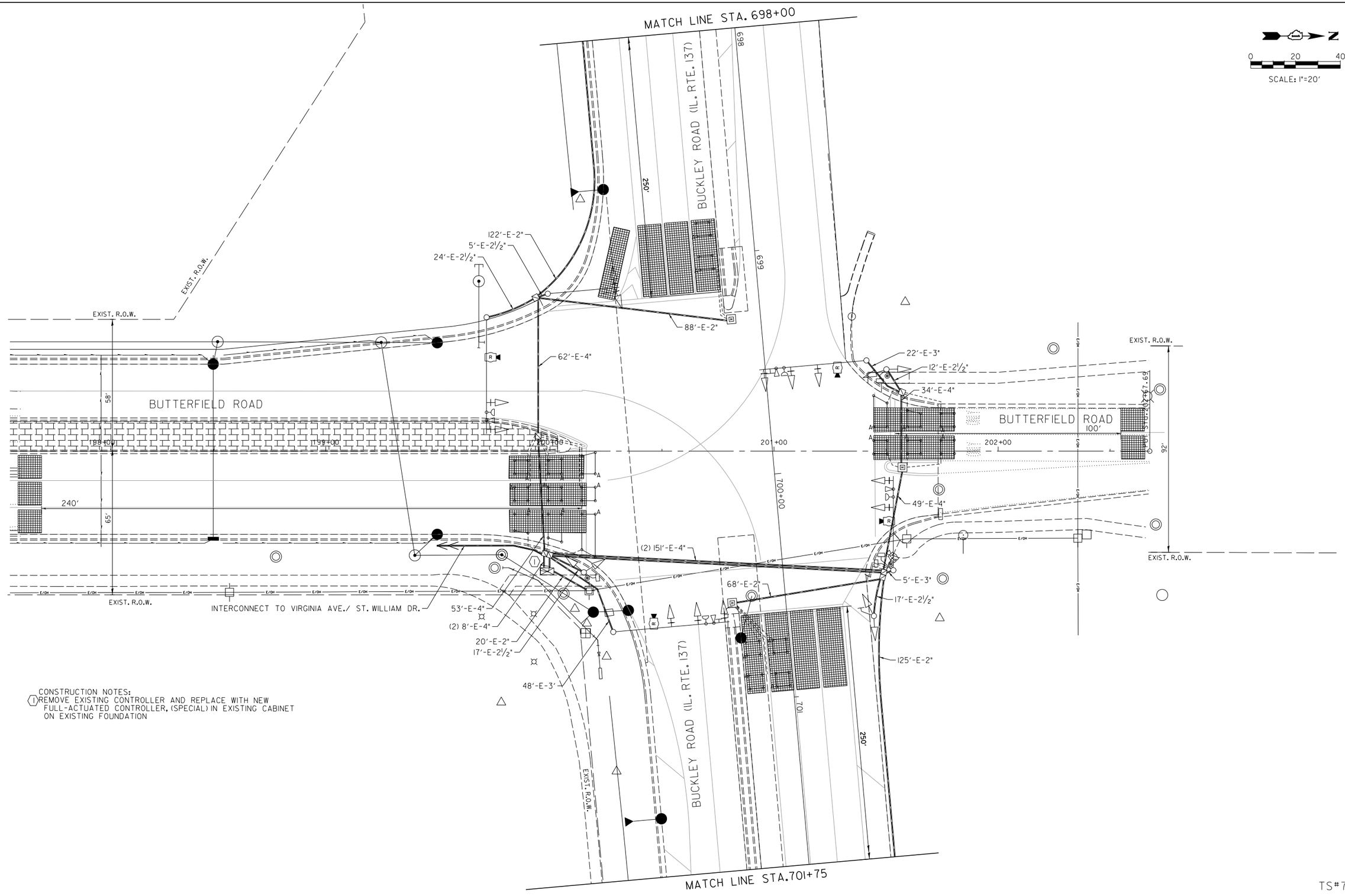
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/4/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
BUTTERFIELD ROAD AND VIRGINIA AVENUE

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	49
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION NOTES:
(1) REMOVE EXISTING CONTROLLER AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN EXISTING CABINET ON EXISTING FOUNDATION

TS#7095

FILE NAME
SHT.40.137

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-0161
PHONE: (217) 875-4800 FAX: (217) 875-3577

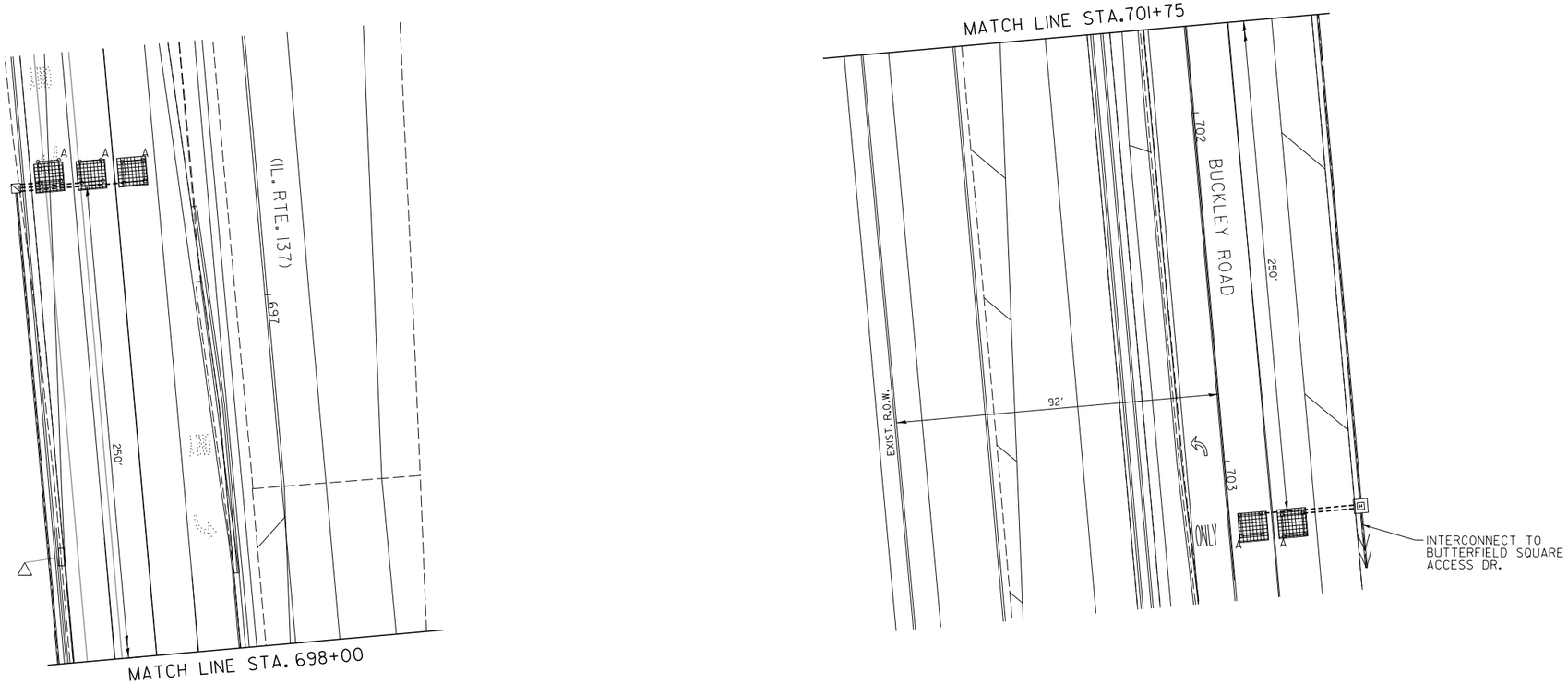
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND IL RTE 137/
BUCKLEY ROAD/PETERSON ROAD

SCALE: 1"=20' | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	50
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2,042
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ROD AND CLEAN EXISTING CONDUIT	FOOT	464
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	4
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1

TS#7095

FILE NAME
SHT_41.137

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

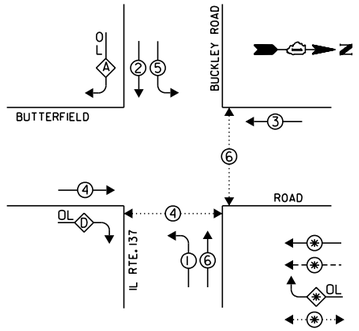
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
BUTTERFIELD ROAD AND IL RTE 137/
BUCKLEY ROAD/PETERSON ROAD

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	51
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

CONTROLLER SEQUENCE

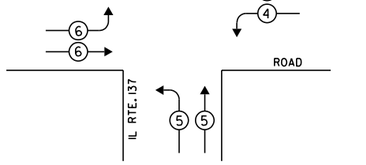


PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	4
D	=	4	+	1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

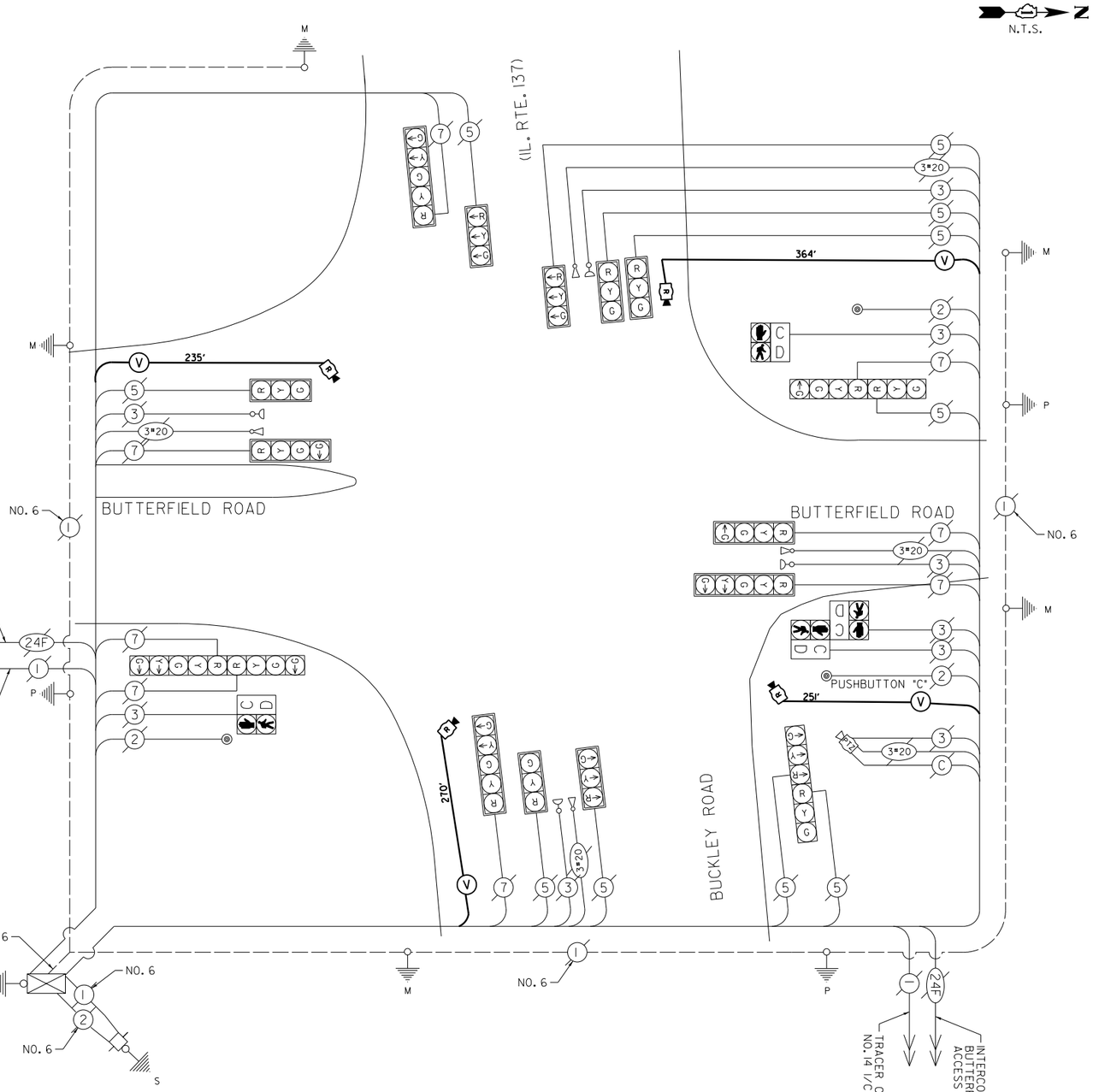
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE x INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	18		11	0.50	99.0
(YELLOW)	18		20	0.25	90.0
(GREEN)	18		12	0.25	540
ARROW	12		10	0.10	12.0
PED. SIGNAL	4		20	1.00	80.0
CONTROLLER	1		100	1.00	100.0
VIDEO SYSTEM	1	150	-	1.00	150.0
ENERGY COSTS TO:			TOTAL =		585.0

VILLAGE OF LIBERTYVILLE

200 E. COOK AVENUE
LIBERTYVILLE, IL 60048

ENERGY SUPPLY: CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COMED

N.T.S.



NOTE:

PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 4 AND 6.

TS#7095

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

FILE NAME = SHT_42.137

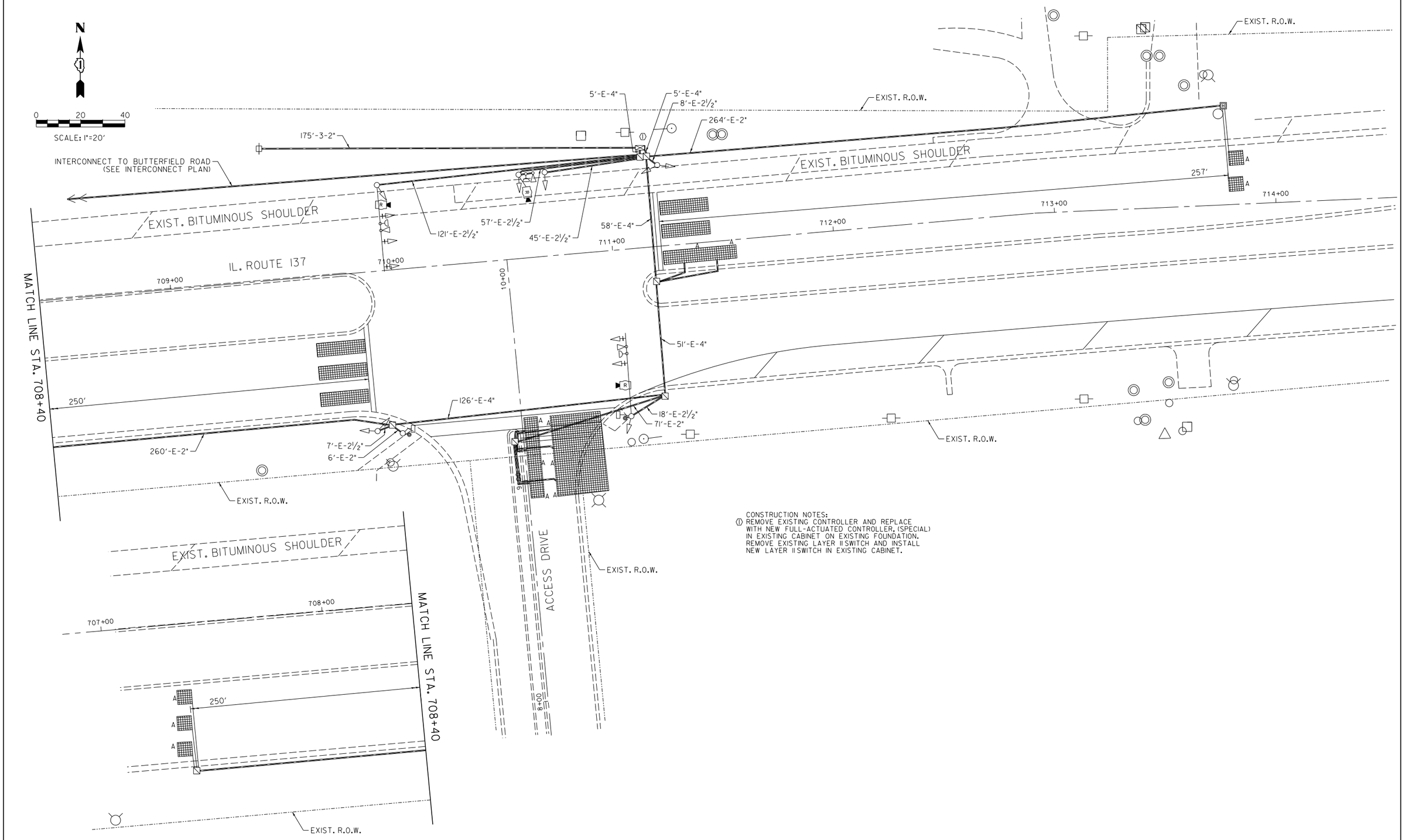
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
BUTTERFIELD ROAD AND IL RTE 137

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	52
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION NOTES:
(1) REMOVE EXISTING CONTROLLER AND REPLACE WITH NEW FULL-ACTUATED CONTROLLER, (SPECIAL) IN EXISTING CABINET ON EXISTING FOUNDATION. REMOVE EXISTING LAYER II SWITCH AND INSTALL NEW LAYER II SWITCH IN EXISTING CABINET.

TS#7094

FILE NAME
ButterfieldSquare_SignalPlan

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

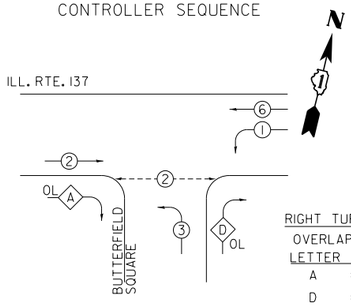
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
IL RTE 137/BUCKLEY ROAD/PETERSON ROAD
AND BUTTERFIELD SQUARE

SCALE: N.T.S. | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	53
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



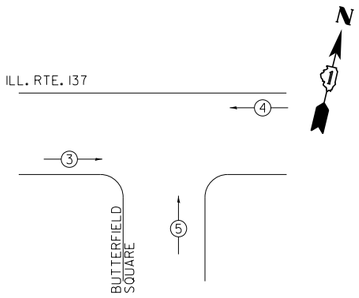
LEGEND

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL OVERLAP

RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3
D	=	3	+	1

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

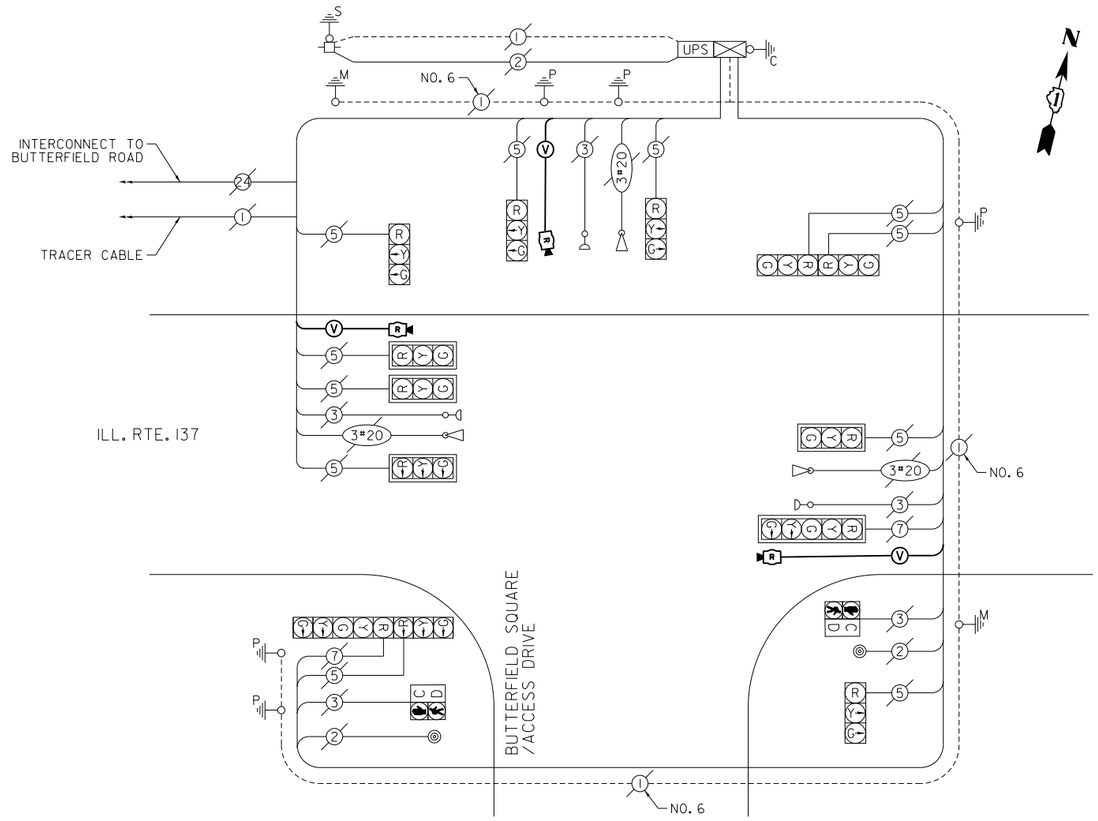
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↑

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

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	13	135	11	0.50	71.5
(YELLOW)	13	135	20	0.05	13.0
(GREEN)	13	135	12	0.45	70.2
ARROW	4	135	10	0.10	4.0
PED. SIGNAL	2	90	20	1.00	40.0
CONTROLLER	1	100	100	1.00	100.0
VIDEO SYSTEM	1	150	-	1.00	150.0
FLASHER LED					
				TOTAL =	448.7

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

ENERGY 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
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
ROD AND CLEAN EXISTING CONDUIT	FOOT	313
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR	EACH	1
LAYER II (DATALINK) SWITCH	EACH	1
RADAR VEHICLE DETECTION SYSTEM, SINGLE APPROACH, STOP BAR AND FAR BACK	EACH	2
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF IDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO IDOT YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS OR AS DIRECTED BY THE IDOT TRAFFIC ENGINEER.

1 EACH CONTROLLER

TS#7094

FILE NAME: ButterfieldSquare_CablePlan

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6617
PHONE: (217) 875-4800 FAX: (217) 875-3577

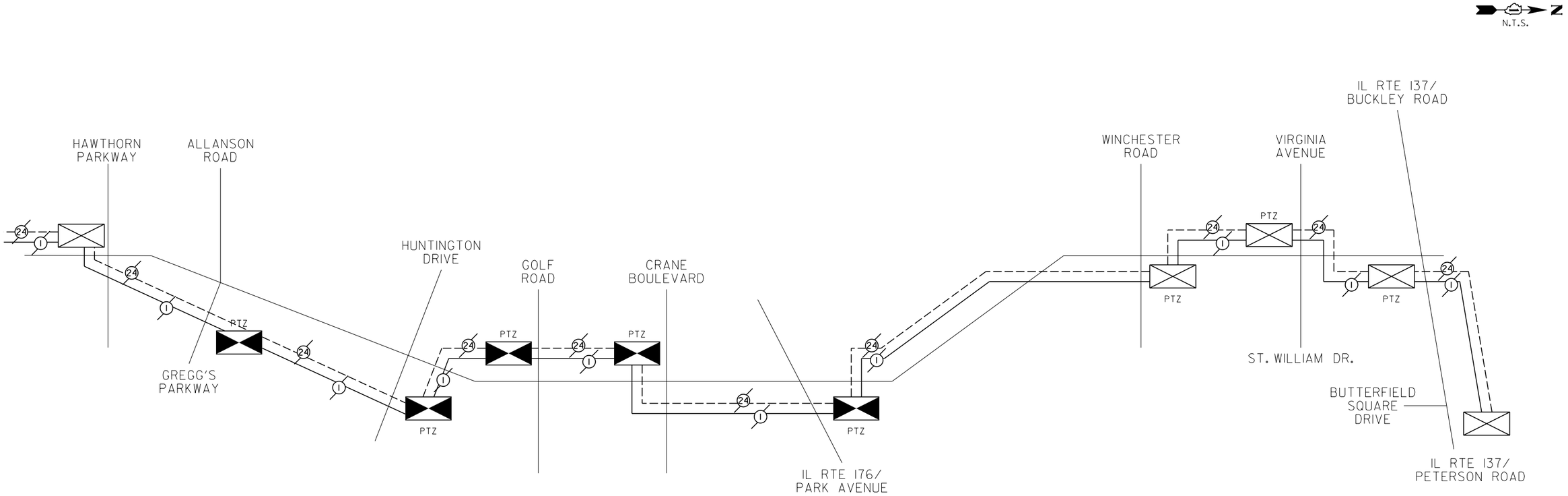
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM
IL RTE 137/BUCKLEY ROAD/PETERSON ROAD
AND BUTTERFIELD SQUARE ACCESS DRIVE

SCALE: N.T.S. | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	54
		CONTRACT NO. 61G69		
		ILLINOIS FED. AID PROJECT		



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
TERMINATE FIBER IN CABINET	EACH	16
ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED)	CAL MO	4
OPTIMIZE TRAFFIC SIGNAL SYSTEM (SPECIAL)	EACH	1
ADAPTIVE TRAFFIC CONTROL SYSTEM	L SUM	1
VALIDATION STUDY	L SUM	1

FILE NAME Interconnect_Schematic

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
BUTTERFIELD ROAD FROM ALLANSON ROAD/GREGGS PARKWAY TO IL RTE 137/BUCKLEY ROAD

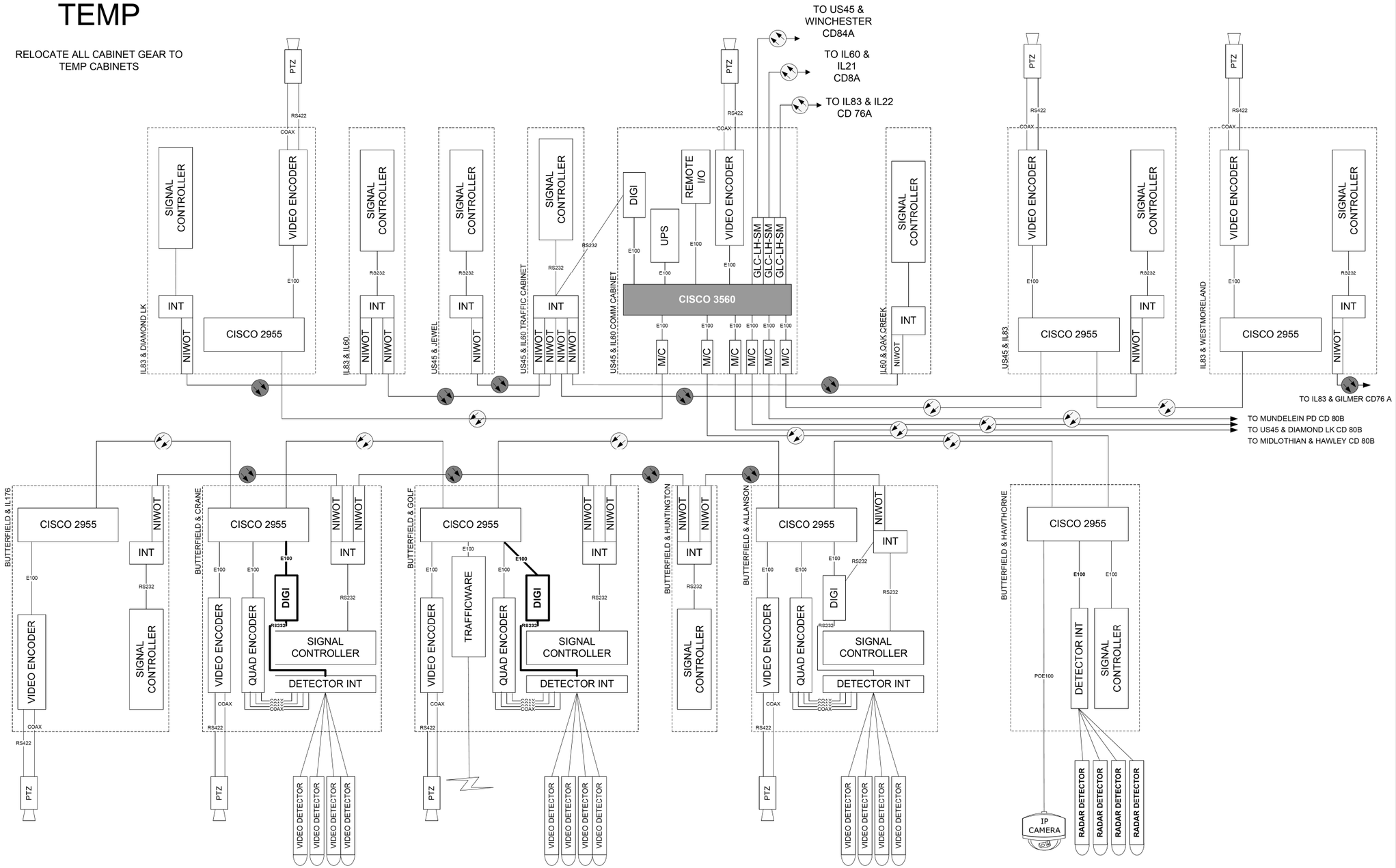
SCALE: N.T.S. | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	55
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

PARSONS

TEMP

RELOCATE ALL CABINET GEAR TO TEMP CABINETS



80A

DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION
DRAWN - YM	REVISED - 2016.06.22	BUTT/GOLF	
CHECKED - DG	REVISED -		
DATE 2020.04.30	REVISED -		

80A
US45 / IL60

SCALE N/A

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
		16-00142-08-TL		

FILE NAME = LCDOT_NET_1

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORATION
PASSAGE NETWORK DETAILS

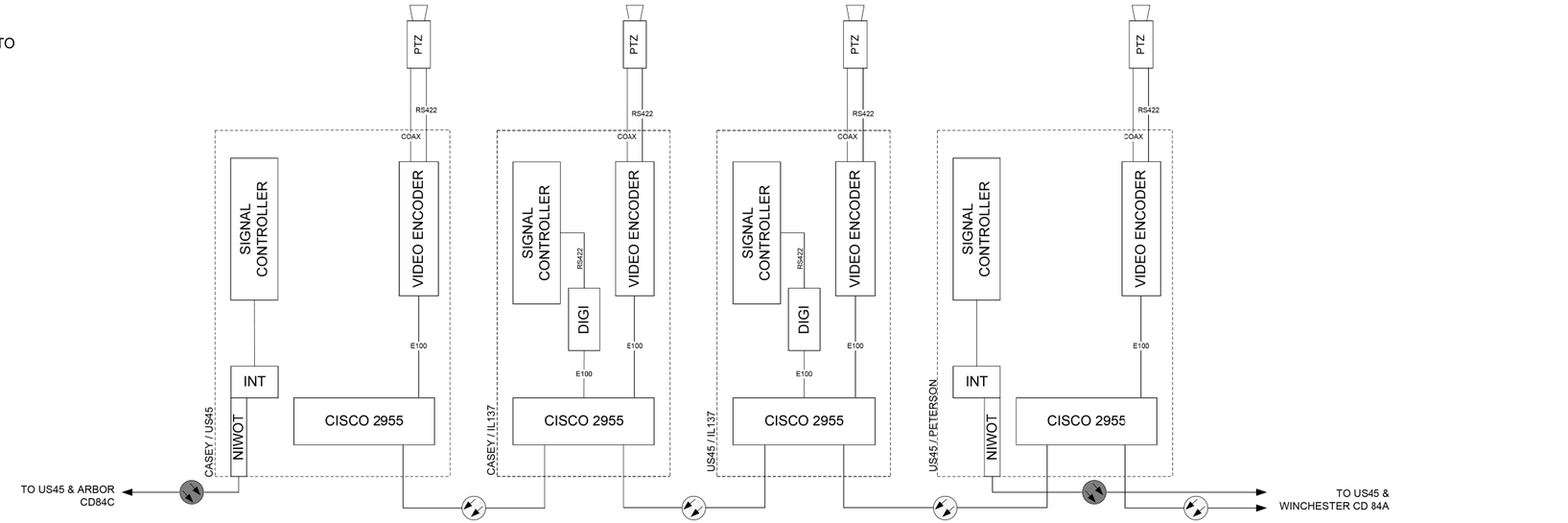
SCALE: N.T.S. | SHEET 1 OF 5 SHEETS | STA. | TO STA.

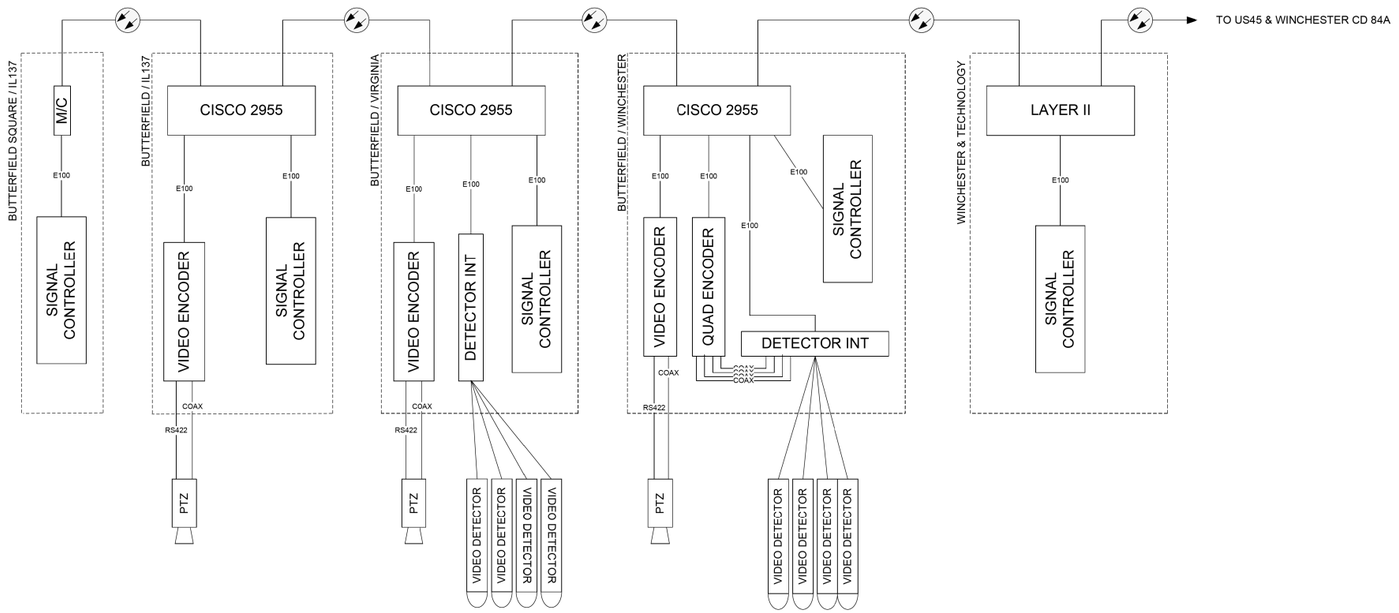
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	56
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

PARSONS

TEMP

RELOCATE ALL CABINET GEAR TO
TEMP CABINETS





	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	84B US45 / WINCHESTER	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -						16-00142-08-TL		84B
	CHECKED - DG	REVISED -								
	DATE 2020.04.30	REVISED -			SCALE N/A					

FILE NAME
LCDOT.NET.2

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

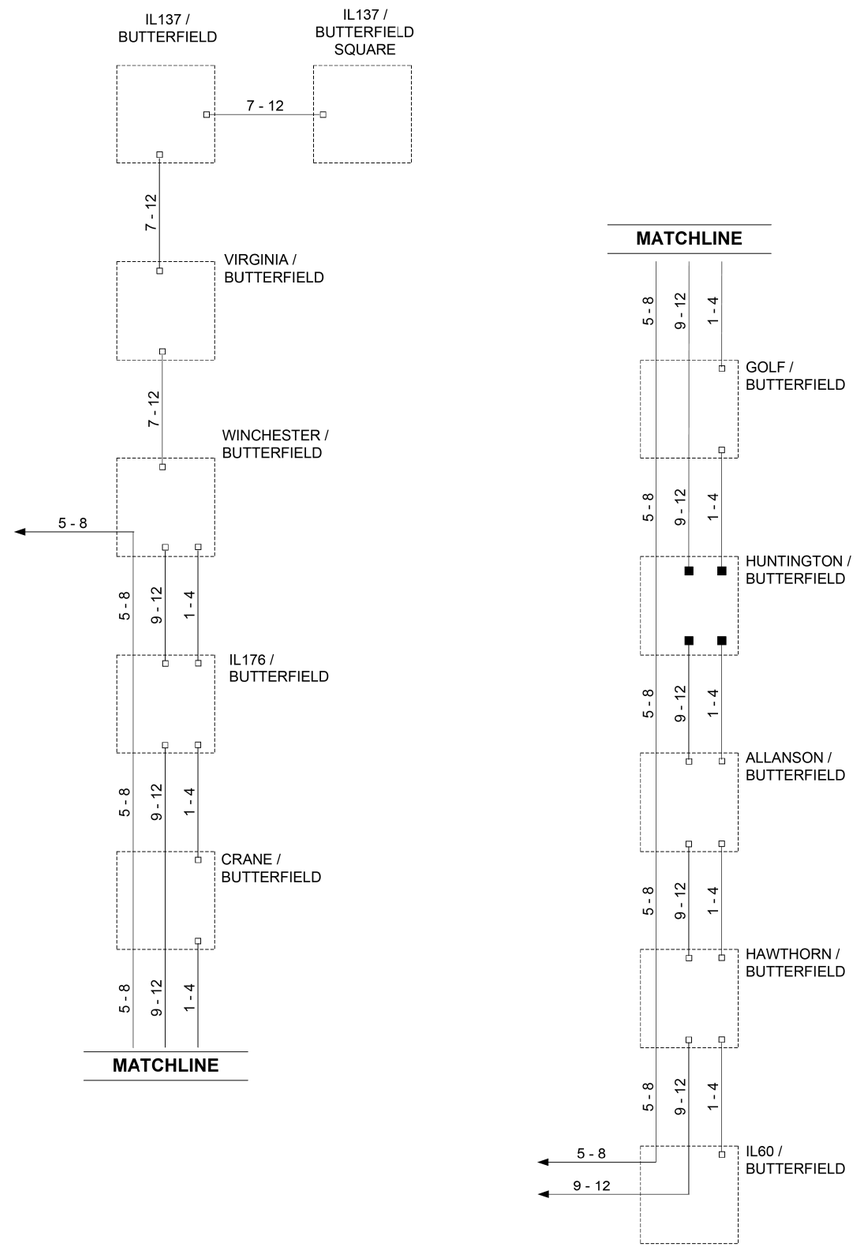
LAKE COUNTY DIVISION OF TRANSPORATION
PASSAGE NETWORK DETAILS

SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	57
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

PARSONS

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



DESIGNED - DG	REVISED -		
DRAWN - YM	REVISED -		
CHECKED - DG	REVISED -		
DATE 2020.04.30	REVISED -		

LAKE COUNTY
DIVISION OF TRANSPORTATION

BUTTERFIELD / HUNTINGTON
FIBER SPLICING DIAGRAM

SCALE N/A

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
		16-00142-08-TL	FSD 128	

FILE NAME = LCDOT.MET.3

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

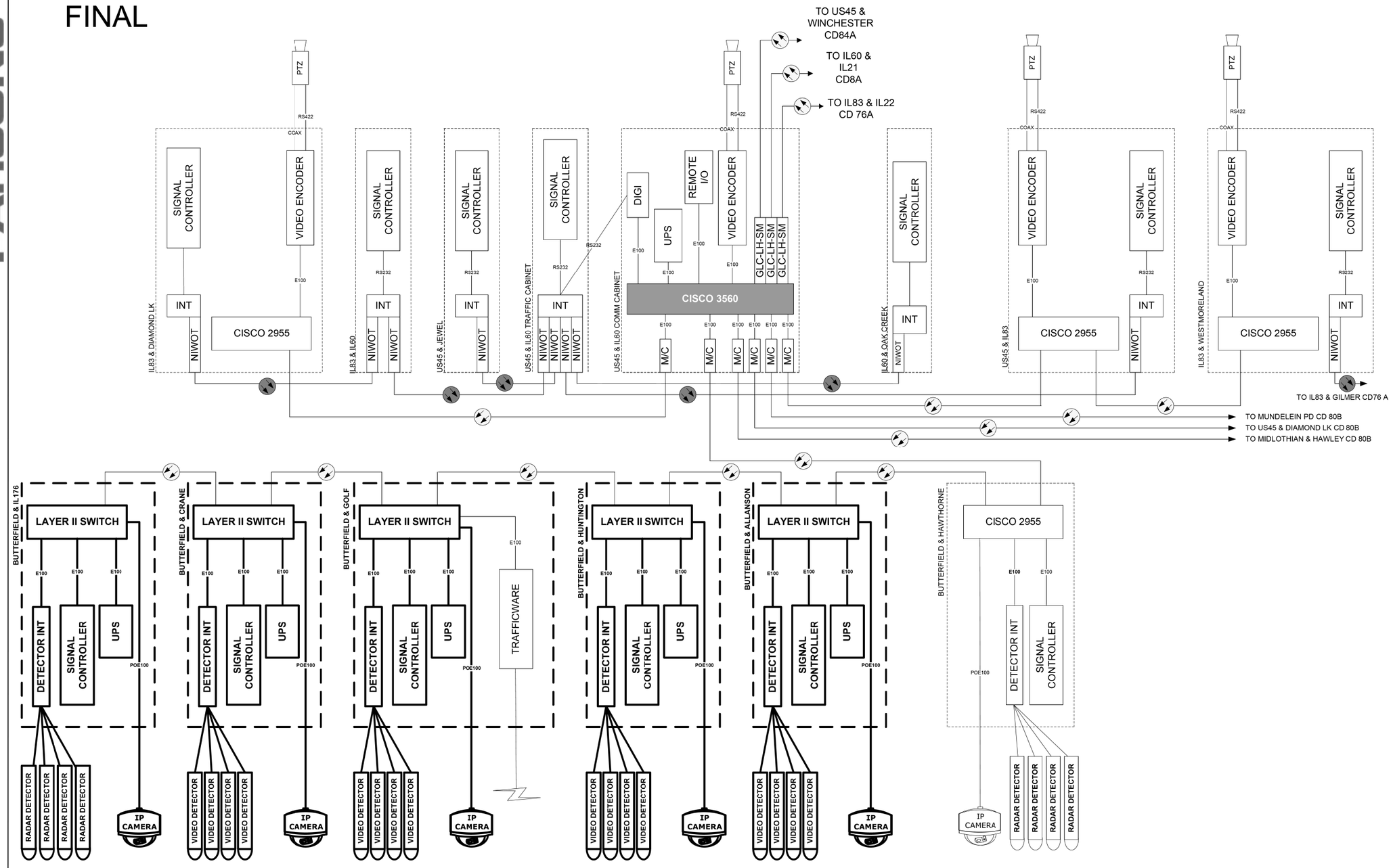
LAKE COUNTY DIVISION OF TRANSPORATION
PASSAGE NETWORK DETAILS

SCALE: N.T.S. | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	58
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

PARSONS

FINAL



	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	80A US45 / IL60	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -						16-00142-08-TL		80A
	CHECKED - DG	REVISED -								
	DATE 2020.04.30	REVISED -			SCALE N/A					

FILE NAME L:\DOT_NET_4

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

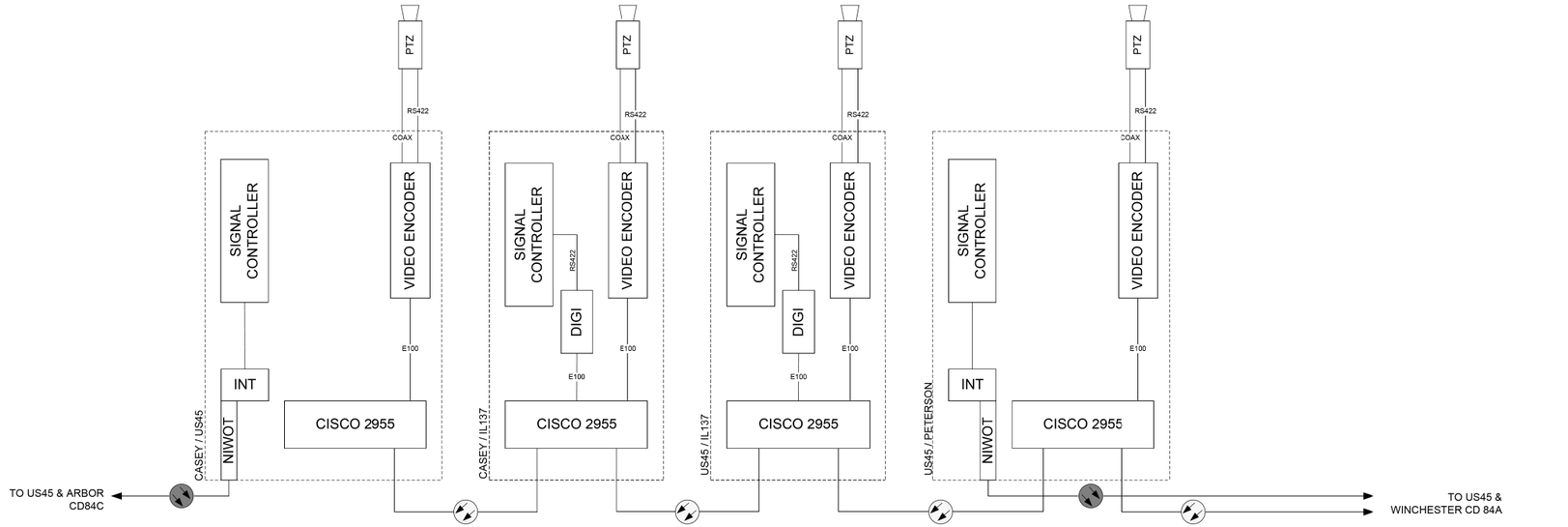
LAKE COUNTY DIVISION OF TRANSPORATION
PASSAGE NETWORK DETAILS

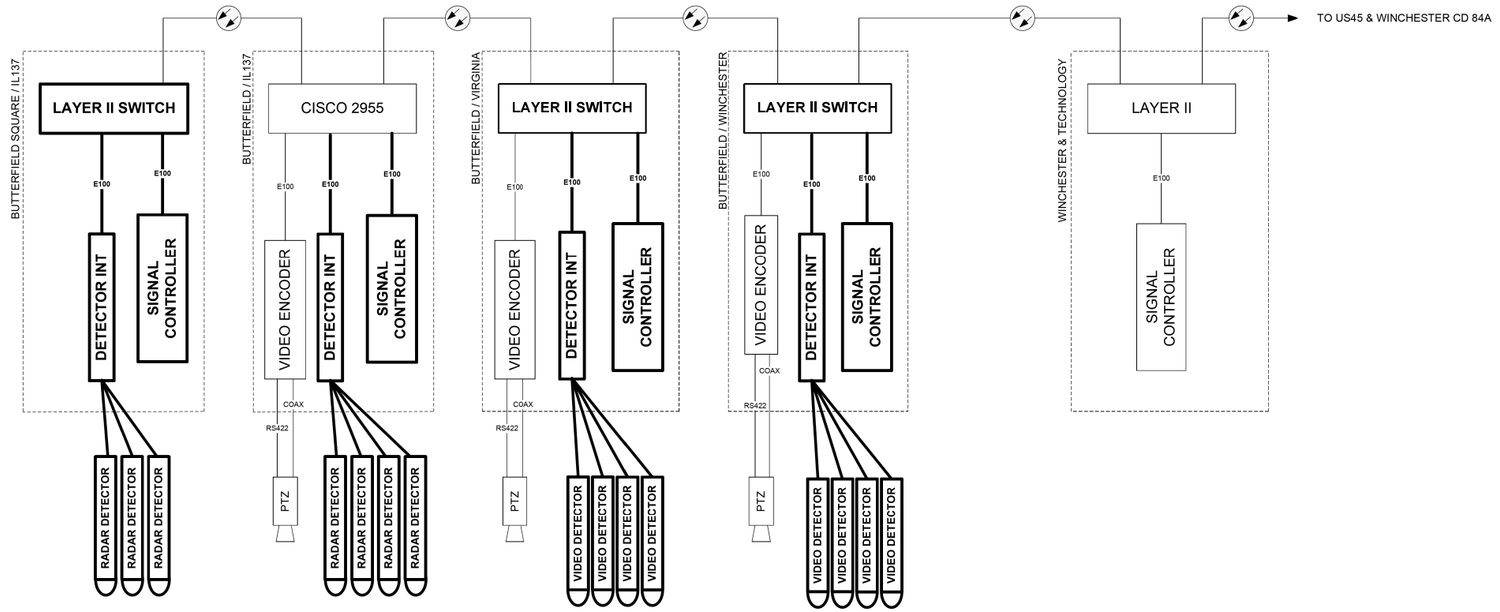
SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	59
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

PARSONS

FINAL





	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	84B US45 / WINCHESTER	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -						16-00142-08-TL		84B
	CHECKED - DG	REVISED -								
	DATE 2020.04.30	REVISED -			SCALE N/A					

FILE NAME
LCDOT.NET.5

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

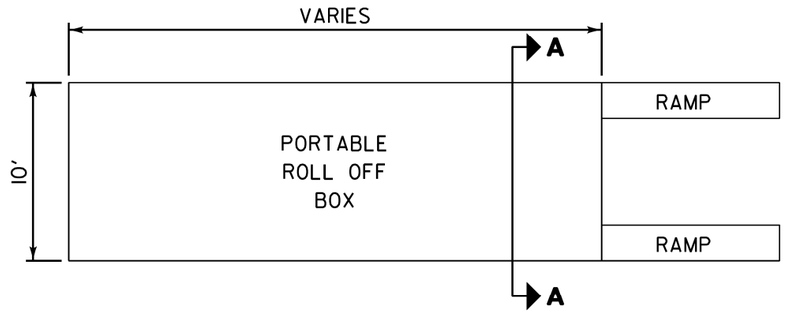
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

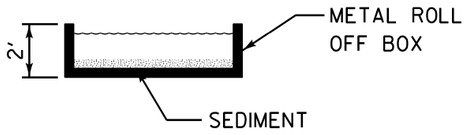
LAKE COUNTY DIVISION OF TRANSPORATION
PASSAGE NETWORK DETAILS

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	60
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

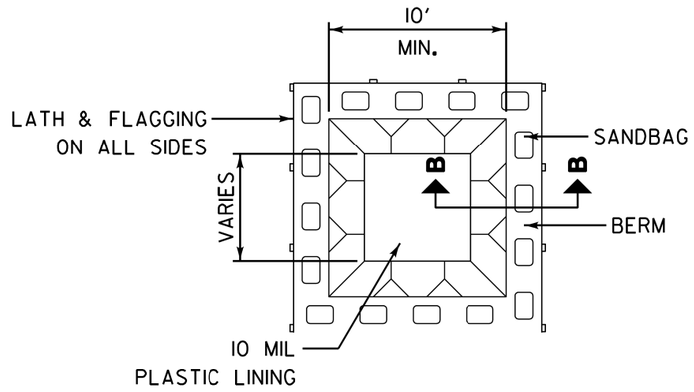


PLAN VIEW

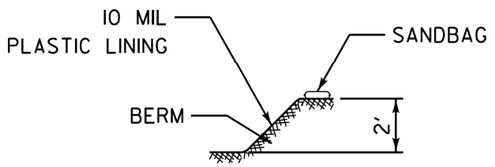


SECTION A-A

PREFAB PORTABLE WASHOUT



PLAN VIEW



SECTION B-B

BELOW GRADE

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOT TO SCALE

REVISIONS	DATE

LakeCounty
Division of Transportation

APPROVED BY: MGZ
DATE: March 17, 2008

CONCRETE WASHOUT FACILITIES

SHEET 1 OF 2

LC4202

FILE NAME = LCDOT_LC4202.01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

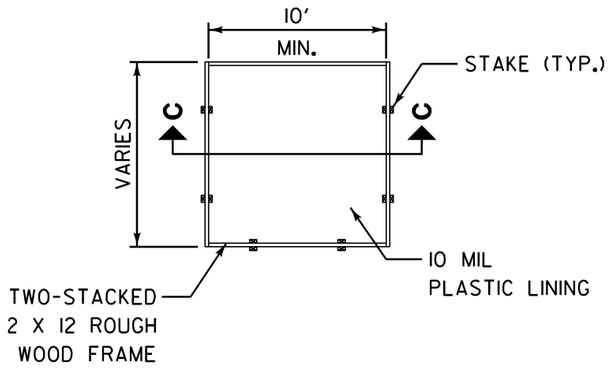
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

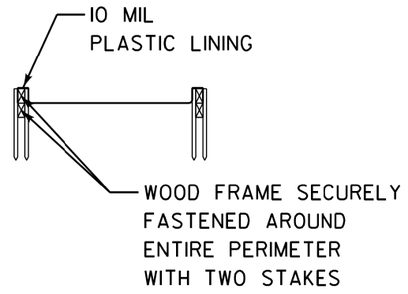
LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	61
		CONTRACT NO. 61G69		
	ILLINOIS	FED. AID PROJECT		

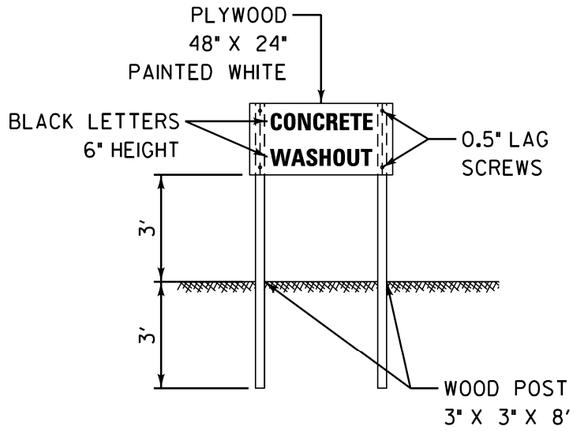


PLAN VIEW



SECTION C-C

ABOVE GRADE

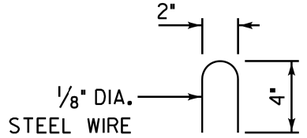


CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

PLAN VIEW

SECTION D-D

ABOVE GRADE WITH STRAW BALES



STAPLE DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOT TO SCALE

REVISIONS	DATE

LakeCounty
Division of Transportation

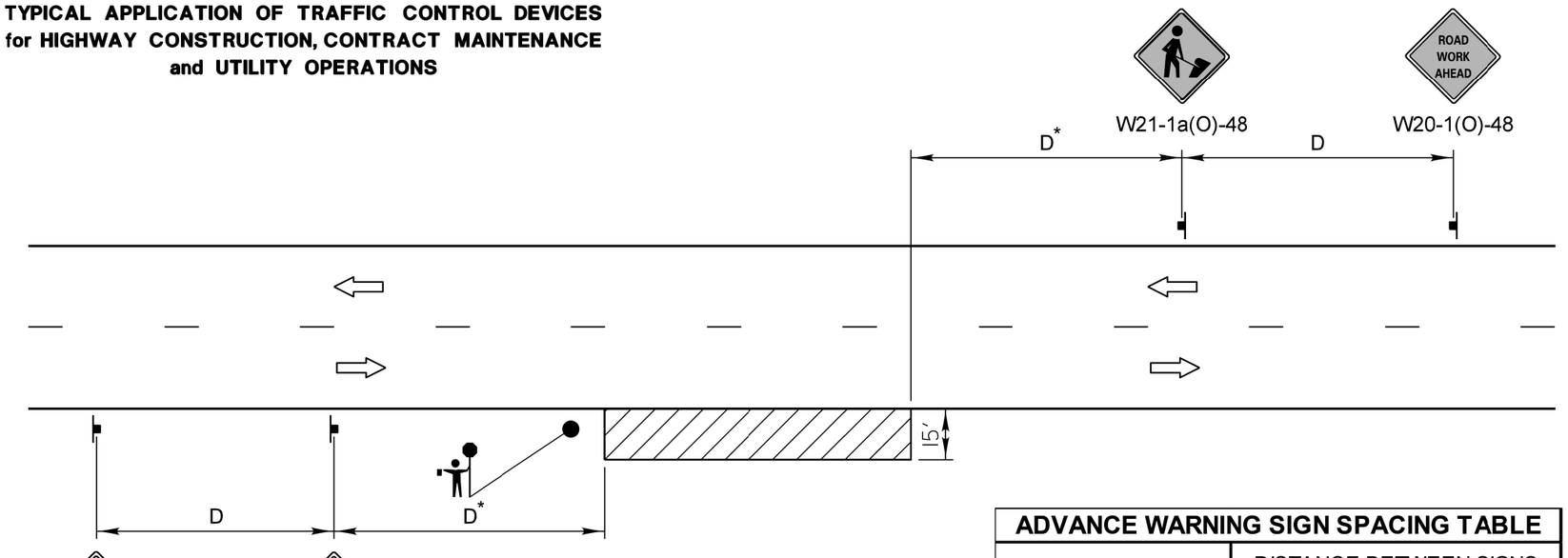
APPROVED BY: MGZ
DATE: March 17, 2008

CONCRETE WASHOUT FACILITIES

SHEET 2 OF 2

LC4202

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE
and UTILITY OPERATIONS



ADVANCE WARNING SIGN SPACING TABLE	
POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

GENERAL NOTES:

This special detail is used at any time, any vehicle, equipment, workers or their activities require a stationary, intermittent or continuous moving operation within 15 feet of the traffic lane, where the average speed is 1 mph or less.

* Minimum distance "D" is shown in the Advance Warning Sign Spacing Table. If the work is a moving operation, the maximum distance "D" may be extended to ½ the length required for one normal working day's operation or 4 miles, whichever is less.

If the work operation does not exceed 60 minutes, traffic control may be according to I.D.O.T. Highway Standard 701301.

SYMBOLS

WORK AREA

SIGN ON PORTABLE OR PERMANENT SUPPORT

FLAGGER WITH TRAFFIC CONTROL SIGN WHEN REQUIRED

NOT TO SCALE

MODIFIED IDOT STANDARD 701011-04

REVISIONS	DATE
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10
Updated IDOT Standard Version #	3/29/16

LakeCounty
Division of Transportation

APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

TWO LANE, TWO WAY,
OFF-ROAD OPERATIONS
DAY OPERATIONS ONLY

LC7000

FILE NAME = LCDOT-LC7000

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

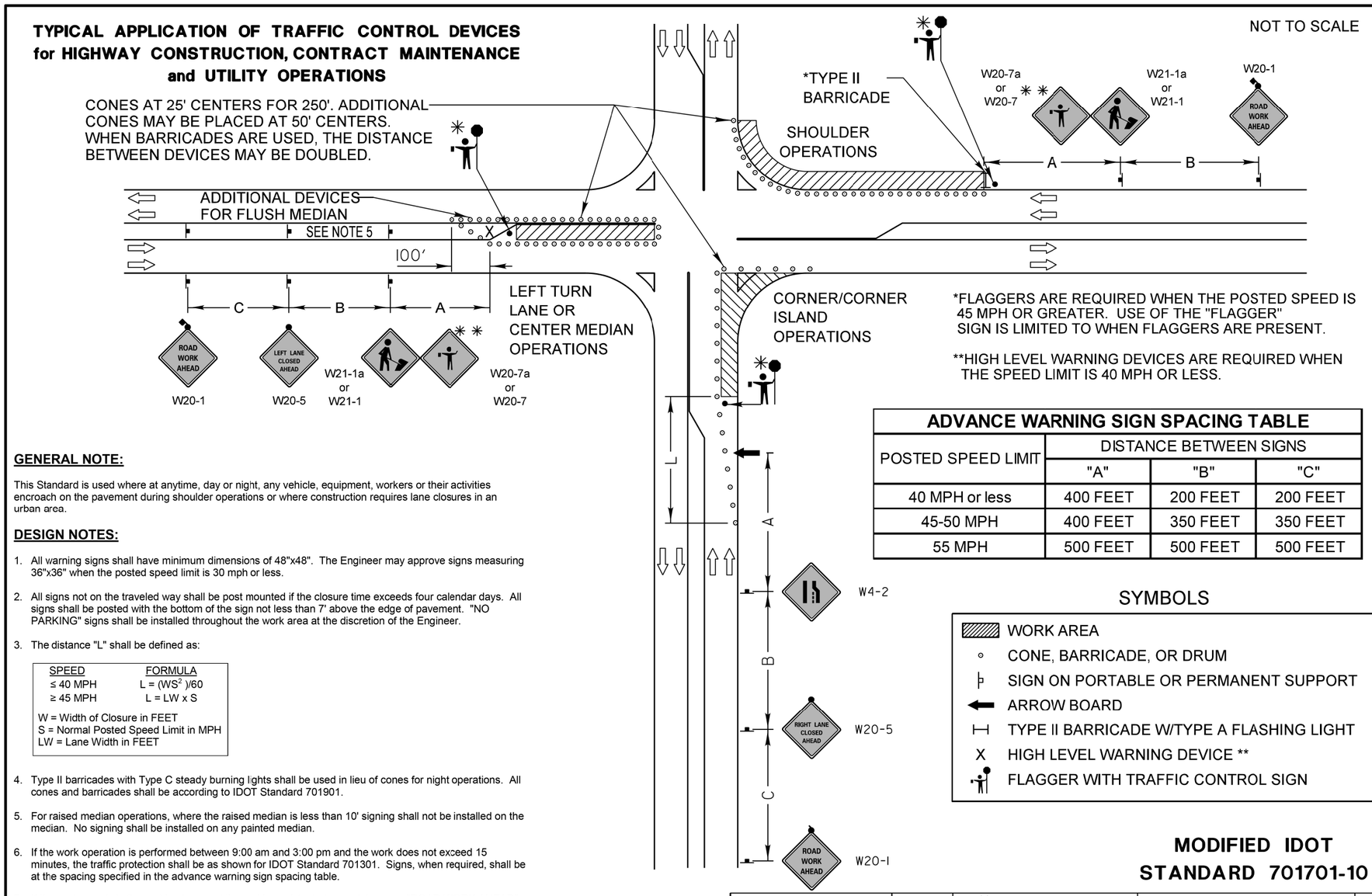
LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	63
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE and UTILITY OPERATIONS

NOT TO SCALE



*FLAGGERS ARE REQUIRED WHEN THE POSTED SPEED IS 45 MPH OR GREATER. USE OF THE "FLAGGER" SIGN IS LIMITED TO WHEN FLAGGERS ARE PRESENT.

**HIGH LEVEL WARNING DEVICES ARE REQUIRED WHEN THE SPEED LIMIT IS 40 MPH OR LESS.

ADVANCE WARNING SIGN SPACING TABLE

POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS		
	"A"	"B"	"C"
40 MPH or less	400 FEET	200 FEET	200 FEET
45-50 MPH	400 FEET	350 FEET	350 FEET
55 MPH	500 FEET	500 FEET	500 FEET

SYMBOLS

- WORK AREA
- CONE, BARRICADE, OR DRUM
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- ARROW BOARD
- TYPE II BARRICADE W/TYPE A FLASHING LIGHT
- X HIGH LEVEL WARNING DEVICE **
- FLAGGER WITH TRAFFIC CONTROL SIGN

GENERAL NOTE:

This Standard is used where at anytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closures in an urban area.

DESIGN NOTES:

1. All warning signs shall have minimum dimensions of 48"x48". The Engineer may approve signs measuring 36"x36" when the posted speed limit is 30 mph or less.
2. All signs not on the traveled way shall be post mounted if the closure time exceeds four calendar days. All signs shall be posted with the bottom of the sign not less than 7' above the edge of pavement. "NO PARKING" signs shall be installed throughout the work area at the discretion of the Engineer.
3. The distance "L" shall be defined as:

SPEED	FORMULA
≤ 40 MPH	$L = (WS^2)/60$
≥ 45 MPH	$L = LW \times S$

W = Width of Closure in FEET
S = Normal Posted Speed Limit in MPH
LW = Lane Width in FEET

4. Type II barricades with Type C steady burning lights shall be used in lieu of cones for night operations. All cones and barricades shall be according to IDOT Standard 701901.
5. For raised median operations, where the raised median is less than 10' signing shall not be installed on the median. No signing shall be installed on any painted median.
6. If the work operation is performed between 9:00 am and 3:00 pm and the work does not exceed 15 minutes, the traffic protection shall be as shown for IDOT Standard 701301. Signs, when required, shall be at the spacing specified in the advance warning sign spacing table.
7. If the work area is in the parking lane and the parking exists during work hours, a "ROAD WORK AHEAD" sign shall be installed in advance of work area at the spacing specified in the Advance Warning Sign Spacing Table and the area protected with cones or barricades.
8. Type A flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two sign in each series and the high level warning devices.
9. Longitudinal dimensions may be adjusted to fit field conditions.
10. Form BT 725 is required.

REVISIONS	DATE
Revised IDOT Refererce	2/1/08
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10
Removed "Worker" & "Flagger" signs	6/26/12
Updated IDOT Standard Version #	3/29/16

LakeCounty
Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

MODIFIED IDOT STANDARD 701701-10

URBAN LANE CLOSURE MULTILANE INTERSECTION

LC7003

FILE NAME: LCDOT-LC7003

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

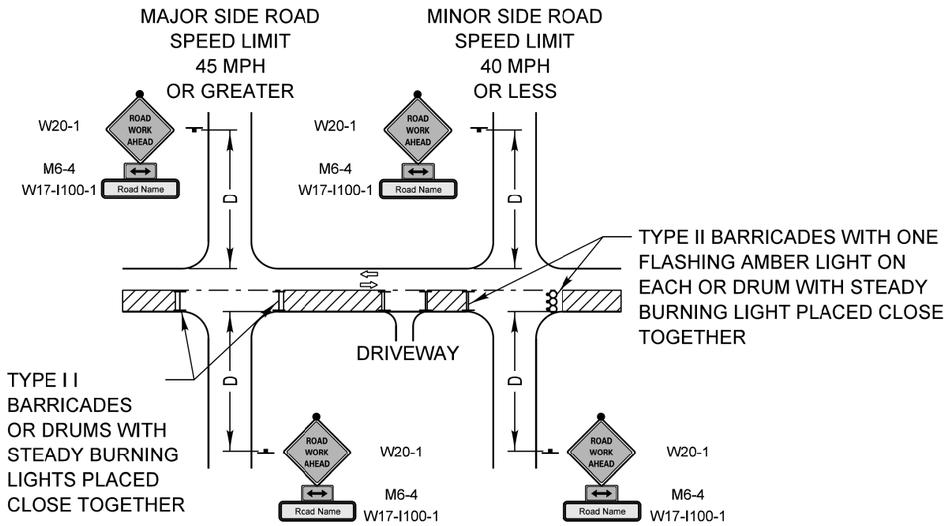
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

SCALE: N.T.S. | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	64
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE and UTILITY OPERATIONS



SYMBOLS

- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE W/TYPE A FLASHING LIGHT
- DRUM WITH STEADY BURNING LIGHT

ADVANCE WARNING SIGN SPACING TABLE	
POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

NOT TO SCALE

GENERAL NOTE:

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement or where construction requires lane closures.

DESIGN NOTES:

1. For a side road with a speed limit of 40 mph or less, the closed portion of the main route shall be protected by blocking with Type II barricades or drums, 1/3 of the cross section of the closed portion of the roadway.
2. For a side road with a speed limit of 45 mph or greater, the closed portion of the main route shall be protected by blocking with Type II barricades or drums, 1/2 of the cross section of the closed portion of the roadway.
3. All W20-1 "ROAD WORK AHEAD" signs shall be 48"x48" with fluorescent orange reflective sheeting with an amber Type A flashing light mounted on the sign.
4. When the side road lies between the beginning of the mainline signing and the work zone, a M6-1 Single Headed Arrow shall be used in lieu of the M6-4 Double Headed Arrow.
5. For a lane closure on a side road, use the applicable portions of the appropriate Highway Standard or Traffic Control Detail. The spacing of the signs and barricades or drums shall be adjusted for field conditions as directed by the engineer. The directional arrow shall be covered or removed when no longer consistent with the side road closure.
6. Advance warning signs shall be omitted on driveways unless otherwise noted.
7. The traffic control and protection for side roads and intersections shall be included in the contract lump sum price for "TRAFFIC CONTROL AND PROTECTION, SPECIAL."

MODIFIED IDOT DISTRICT ONE SIDE ROAD DETAIL

REVISIONS	DATE
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10
Use of Drums in lieu Type III Barricade	4/22/14

LakeCounty Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

TRAFFIC CONTROL and PROTECTION for SIDEROADS, INTERSECTIONS and DRIVEWAYS

LC7004

FILE NAME LCDOT-LC7004

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

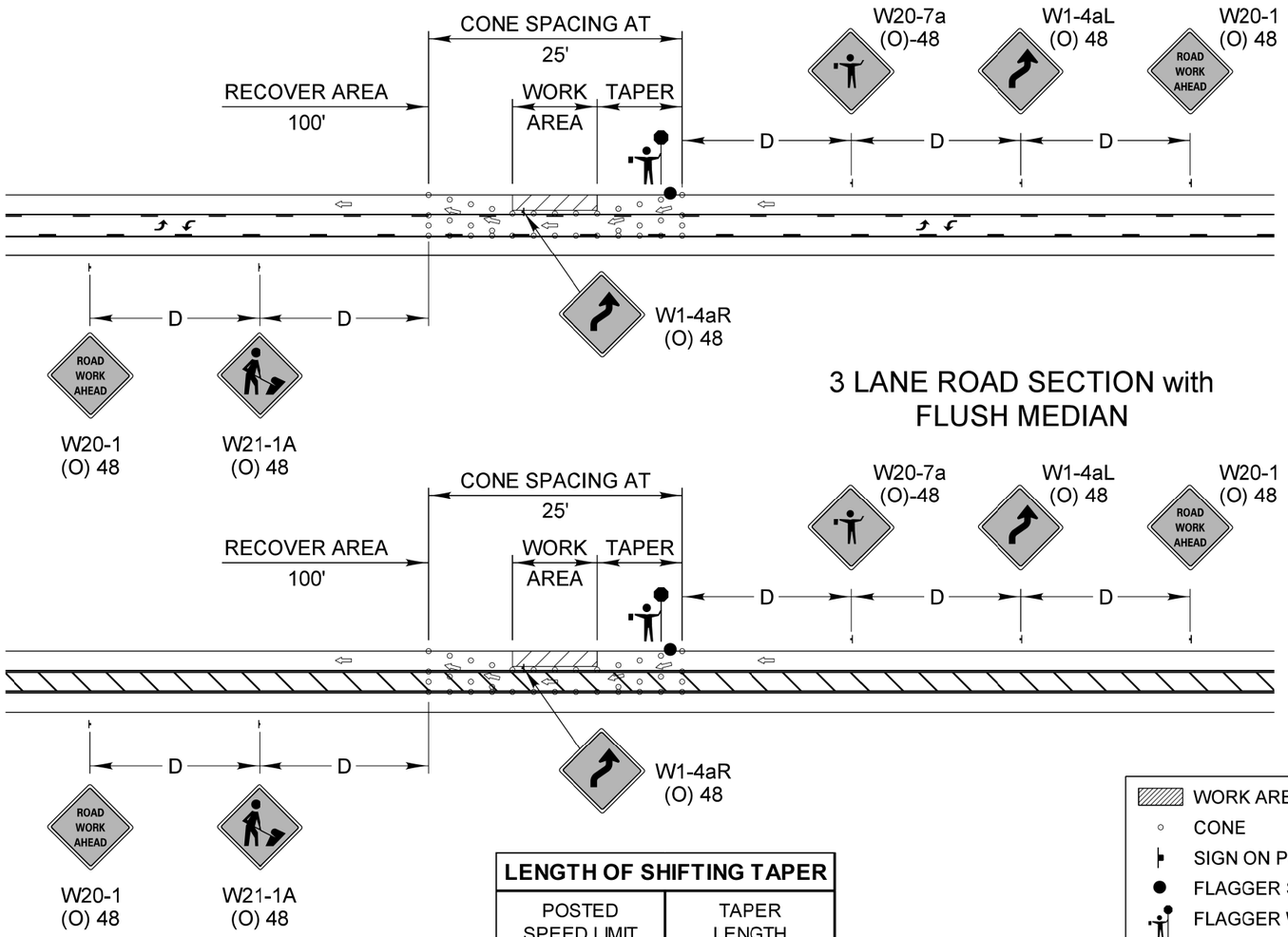
SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	65
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE and UTILITY OPERATIONS

3 LANE ROAD SECTION with 2-WAY LEFT TURN LANE

NOT TO SCALE



3 LANE ROAD SECTION with FLUSH MEDIAN

GENERAL NOTE:

This Standard is used where during the day only, any vehicle, equipment, workers or their activities encroach on a 3 lane, two way pavement requiring the closure of one traffic lane.

SYMBOLS

- WORK AREA
- CONE
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER STATION
- FLAGGER WITH SLOW PADDLE

ADVANCE WARNING SIGN SPACING TABLE

POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

LENGTH OF SHIFTING TAPER

POSTED SPEED LIMIT	TAPER LENGTH
30 MPH	100'
35 MPH	125'
40 MPH	150'
45 MPH	275'
50 MPH	300'
55 MPH	325'

REVISIONS	DATE
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10

LakeCounty
Division of Transportation

APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

TYPICAL LANE CLOSURE 3 LANE ROAD SECTION

LC7005

FILE NAME = LCDOT_LC7005

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

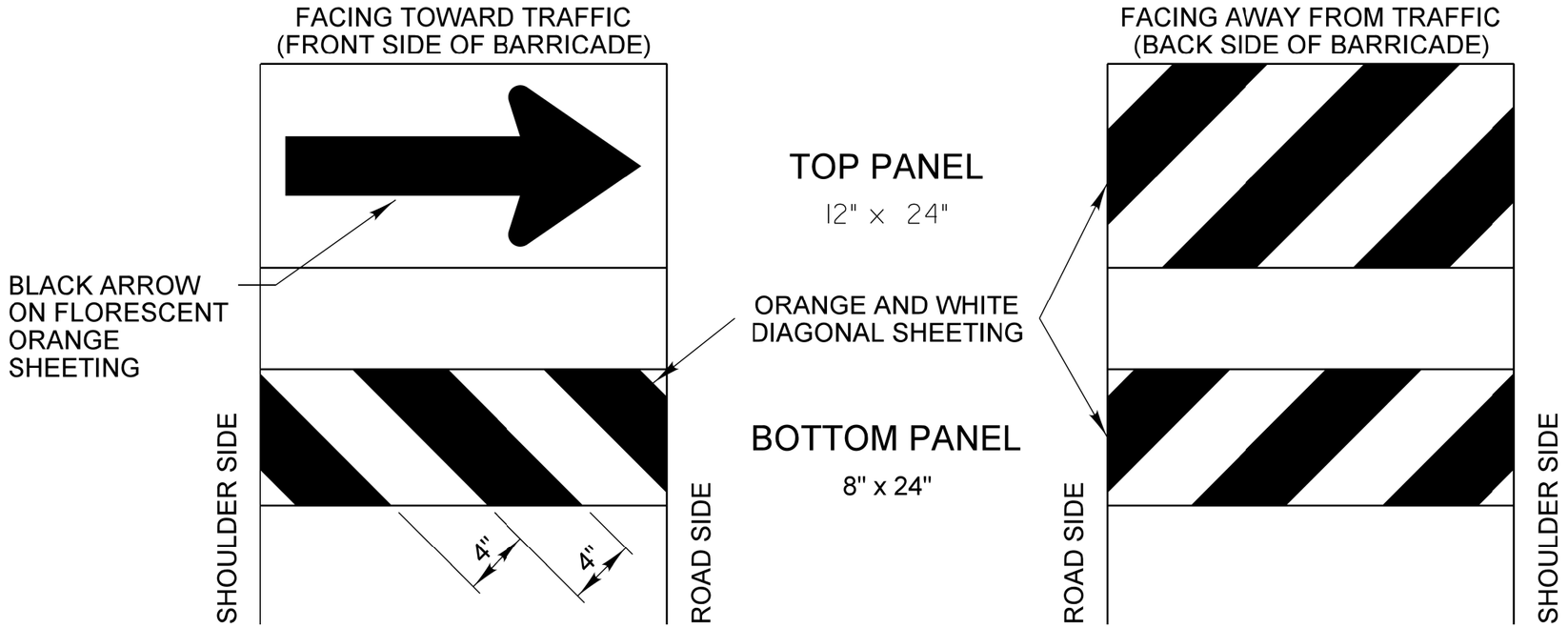
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

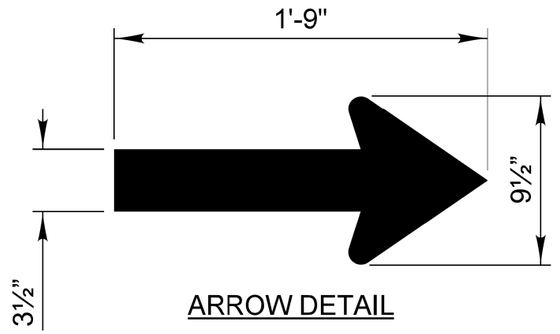
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	66
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

DIRECTION INDICATOR BARRICADES



GENERAL NOTES

1) Direction Indicator Barricades shall be constructed from non-metallic Type II barricades meeting the requirements of Article 1106.02 of the Standard Specifications, except where modified by this detail.
2) The Direction Indicator Barricades shall be equipped with Type C steady burning lights if used to channelize traffic during the hours of darkness.
3) The reflective sheeting for the top panel shall be Type AZ fluorescent orange. The diagonal panels shall have orange and white Type A or better reflective sheeting.



ARROW DETAIL

REVISIONS	DATE
Text Update	7/15/11

LakeCounty
Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE

DIRECTION INDICATOR BARRICADES

LC7200

FILE NAME
LCDOT-LC7200

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

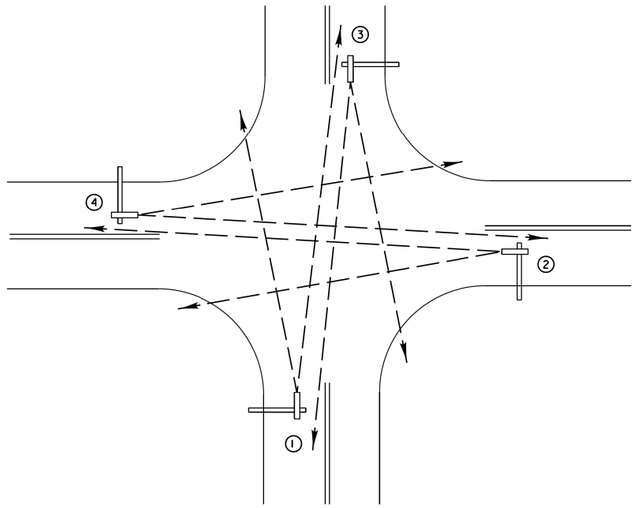
USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

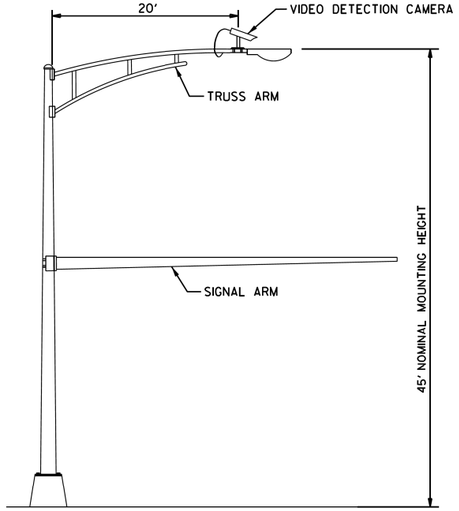
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	67
		CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			



TYPICAL VIDEO VEHICLE DETECTION SYSTEM

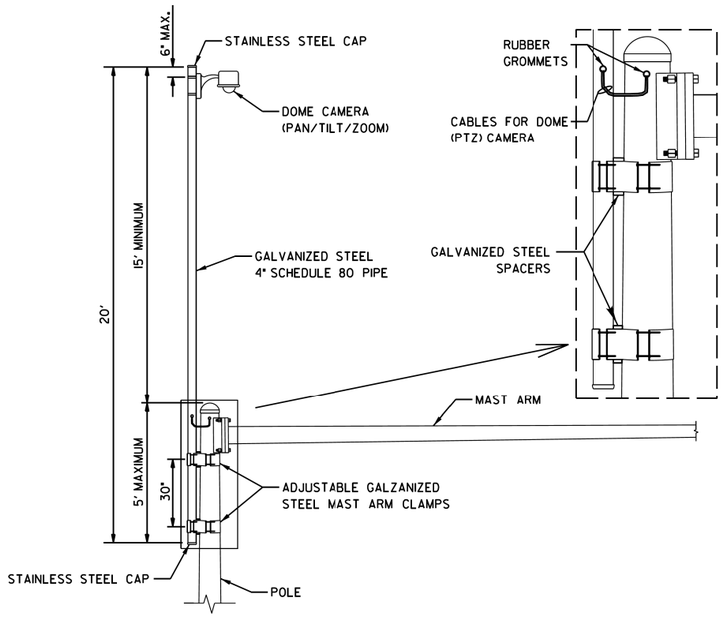
(NOT TO SCALE)

(4) VIDEO DETECTION CAMERA ASSEMBLIES AND BRACKETS ① ② ③ ④



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS

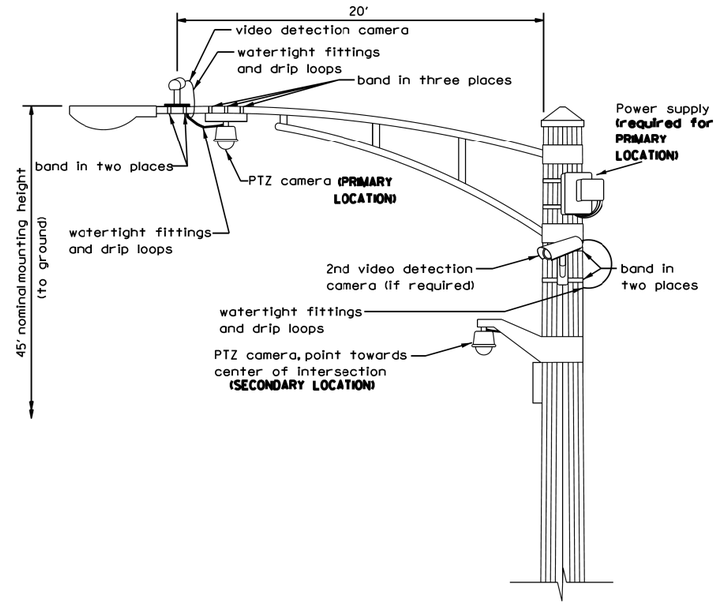
(NOT TO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL

(NOT TO SCALE)

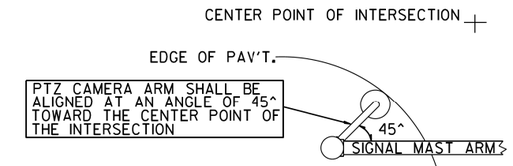
NOTES:
- THE MAST ARM IS TAPERED.
- INSTALL EXTENSION POLE VERTICAL AND PLUMB BY MODIFYING/INSTALLING BRACKETS AS NECESSARY. ADDITIONAL SPACERS REQUIRED ARE INCLUDED IN THE COST OF THE CAMERA MOUNTING ASSEMBLY OF THE TYPE SPECIFIED.
- SPACERS ARE TO BE INTEGRATED OR MANUFACTURED WITH THE MAST ARM BRACKETS



VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL

(NOT TO SCALE)

NOTES FOR SINGLE, DUAL AND MULTIPLE CAMERA MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- MOUNT VIDEO DETECTION CAMERA AIMING DOWN TOWARD THE DIRECTION OF TRAFFIC TO BE DETECTED.



PTZ CAMERA MOUNTING DETAILS (SECONDARY LOCATION)

(NO SCALE)

REVISIONS	DATE
Mounting Details Revised	05/01/08
2nd Camera Locat. added	01/14/09
Mast Arm Taper Detail	06/01/12
Mounting Details Revised	06/13/14

LakeCounty Division of Transportation

APPROVED BY: J. P. NELSON
DATE: JUNE 13, 2014

CAMERA MOUNTING DETAILS

LC8900

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
		/ /		DSGNR/LIAISON:	
		/ /		PLOTTED BY:	hdrmc 5/7/2020

FILE NAME: C:\Users\hdrmc\Desktop\LC8900 VIDEO DETECTION DETAILS.DGN

LakeCounty Division of Transportation

PROJECT NAME
LAKE COUNTY STANDARDS & DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
CHXX	XXX	XX-XXXXX-XX-XX	XXX	XXX

FILE NAME: LCDOT.LC8900

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

USER NAME = patrick.jordan	DESIGNED - NCB	REVISED -
	DRAWN - CAM	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 9/2/2020	DATE - 8-31-2020	REVISED -

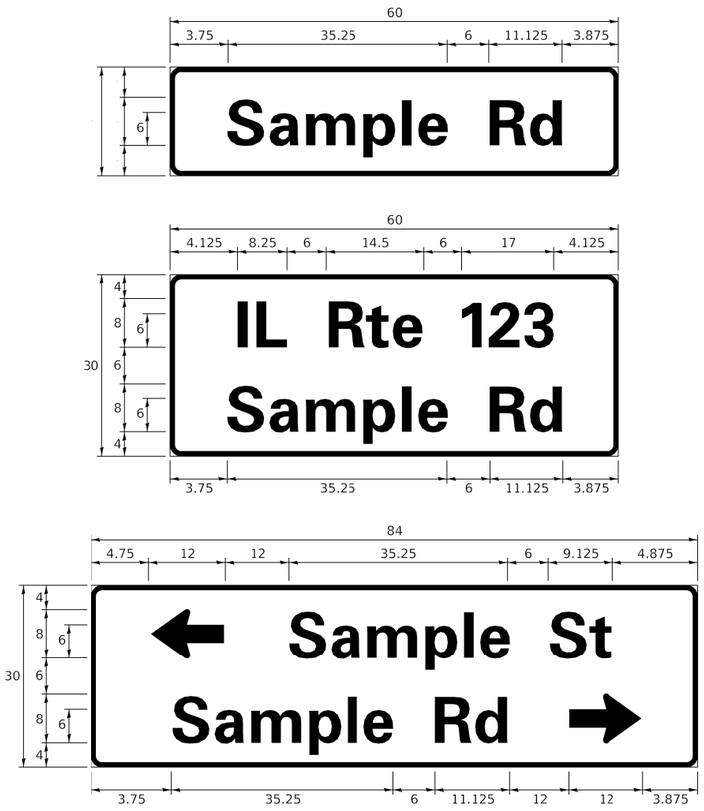
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORATION
STANDARD DESIGN DETAILS

SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	68
		CONTRACT NO. 61G69		
		ILLINOIS	FED. AID PROJECT	

SIGN PANEL – TYPE 1 OR TYPE 2



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

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVATION	WIDTH (INCH)	
		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	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	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.
5. 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:

- J.O. HERBERT COMPANY, INC
  MIDLOTHIAN, VA
- WESTERN REMAC, INC.
  WOODRIDGE, IL

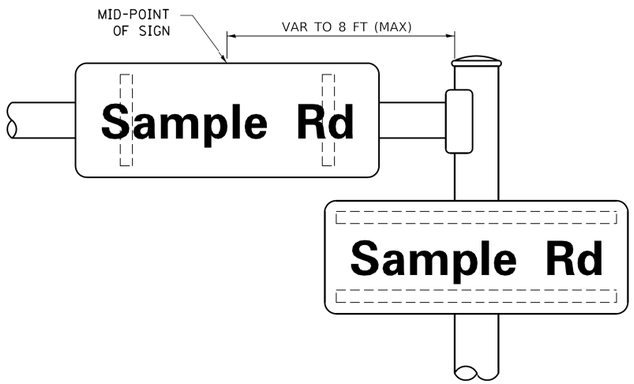
PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

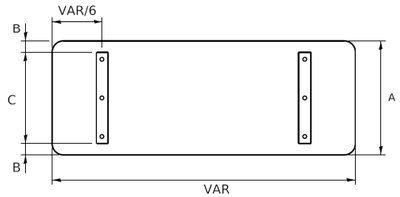
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION

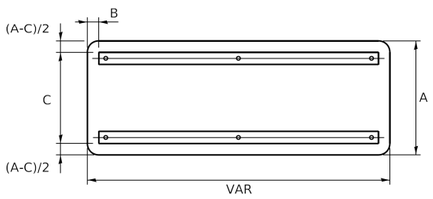
ARM OR POLE MOUNTED



SUPPORTING CHANNELS



A	B	C
18"	2"	14"
30"	2"	24"



A	B	C
18"	2"	12"
30"	2"	22"

STANDARD ALPHABETS SPACING CHART

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

FHWA SERIES "C"				FHWA SERIES "D"			
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	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	H	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	5.234	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	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
V	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
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	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
c	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	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	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
l	0.720	1.120	0.720	l	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
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	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	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.952	0.160	y	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	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
MAST ARM MOUNTED STREET NAME SIGNS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	69
	TS-02	CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

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TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	ECC	CC
MASTER CONTROLLER	EMC	MC
MASTER MASTER CONTROLLER	EMMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	H
DOUBLE HANDHOLE		
JUNCTION BOX		
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET	RXR	RXR
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P	P
SAMPLING (SYSTEM) DETECTOR	S	S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS	IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS	QS
WIRELESS DETECTOR SENSOR	W	W
WIRELESS ACCESS POINT		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	P	P
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	P RB	P RB
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED	5	5
GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	1#6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	6#18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12F 24F 36F	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

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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. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	70
	TS-05	CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			

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LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6'' (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

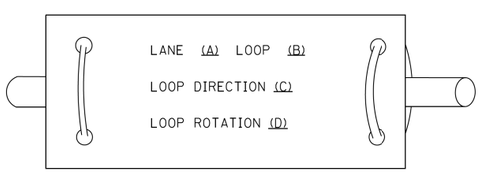
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18'' (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

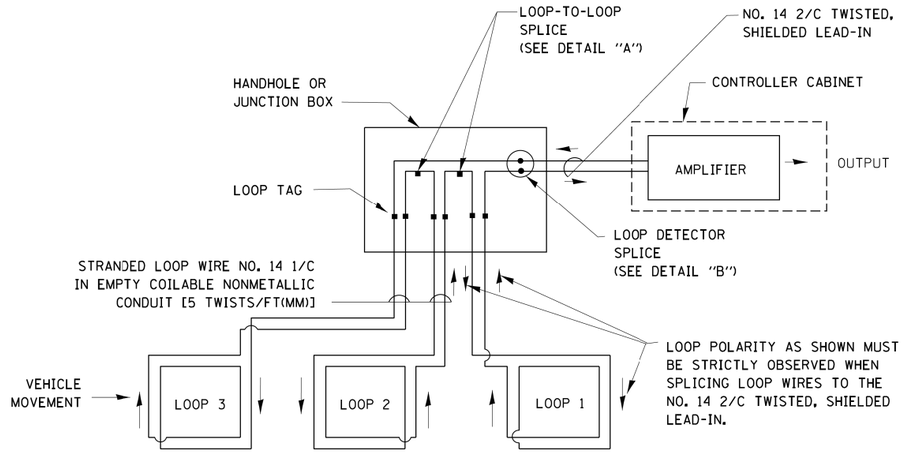


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

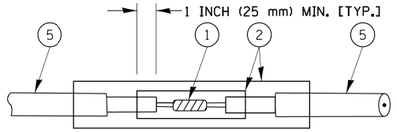
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

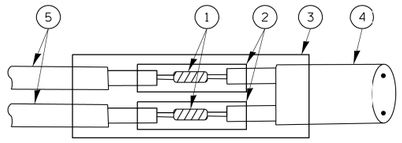


DETECTOR LOOP WIRING SCHEMATIC

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

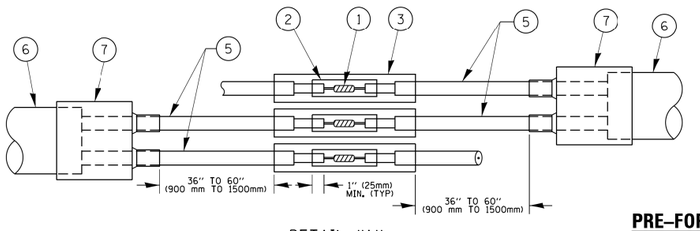


DETAIL "A"
LOOP-TO-LOOP SPLICE



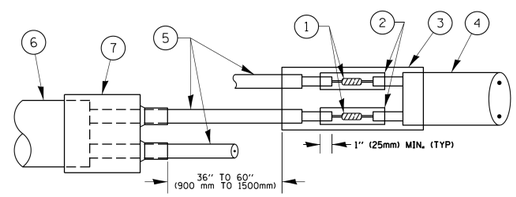
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

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.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	71
	TS-05	CONTRACT NO. 61G69		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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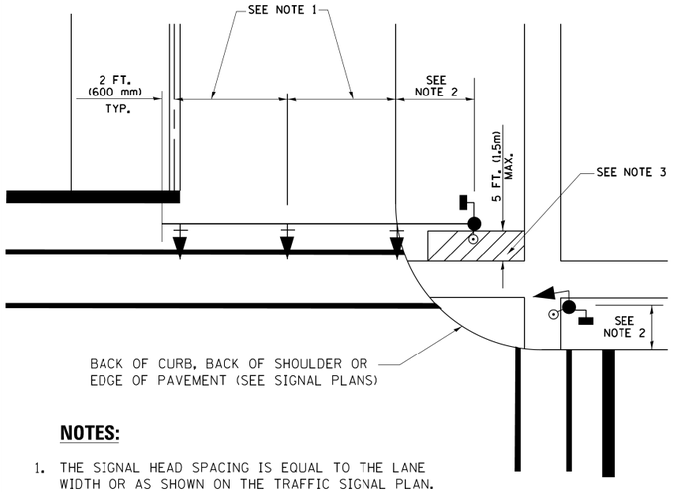
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

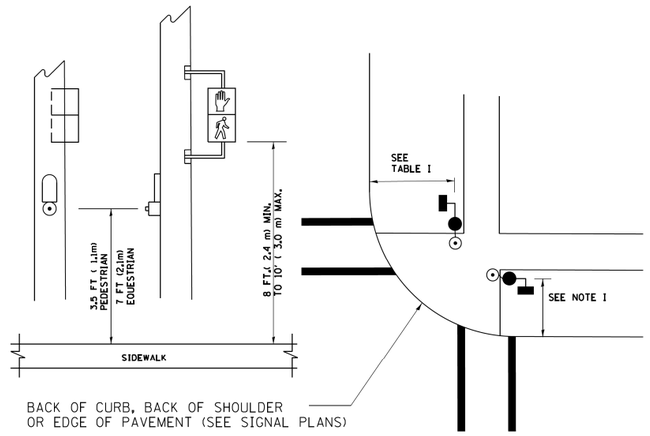
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

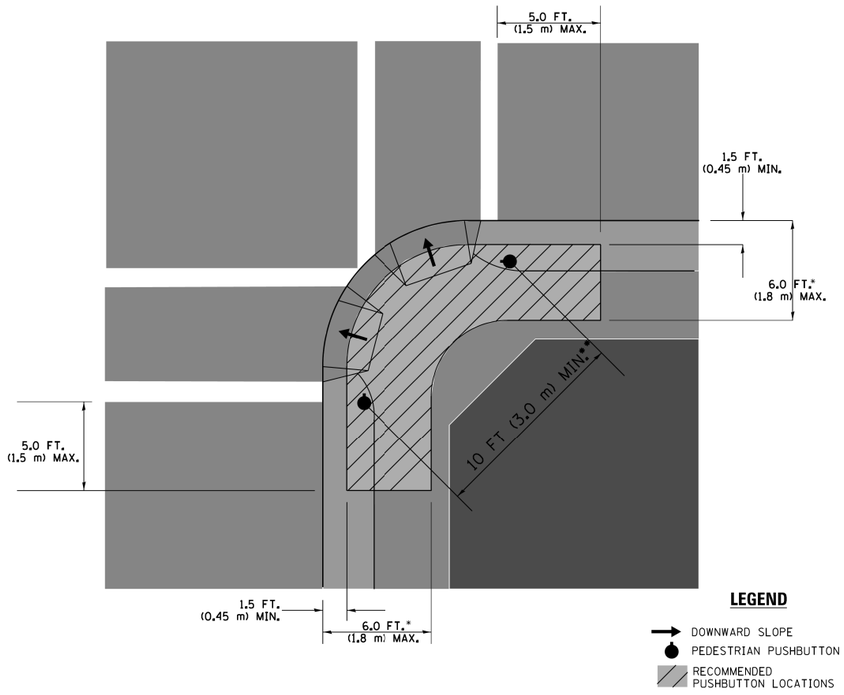
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

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

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT 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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	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	72
	TS-05	CONTRACT NO. 61G69		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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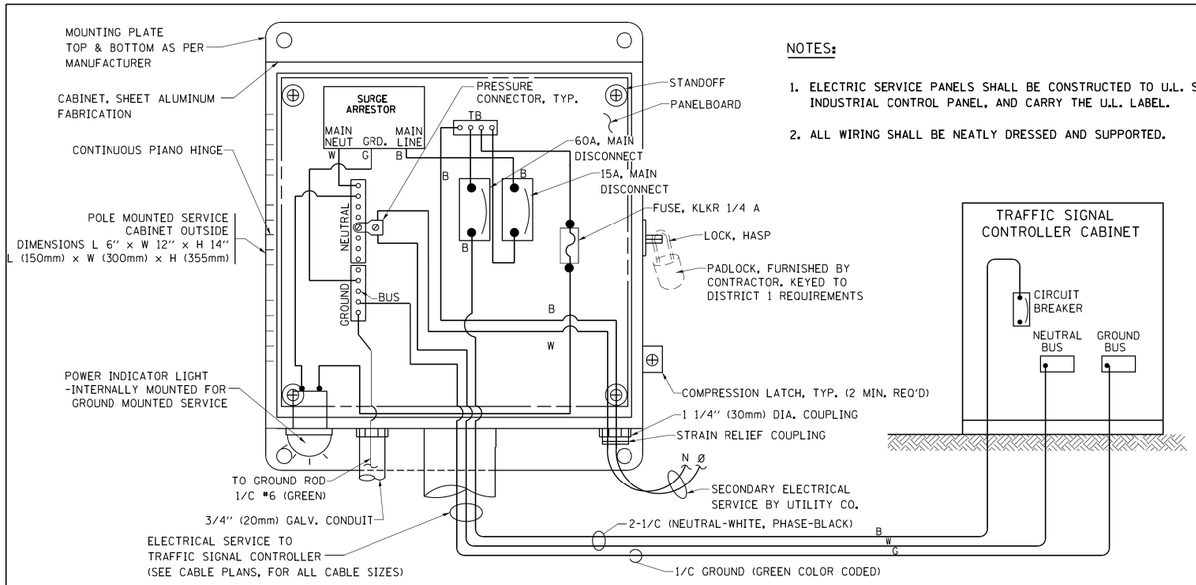
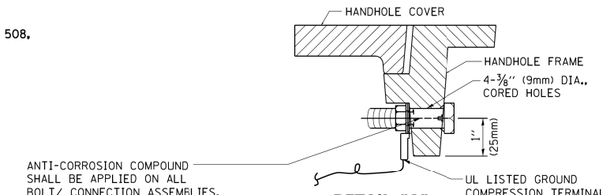


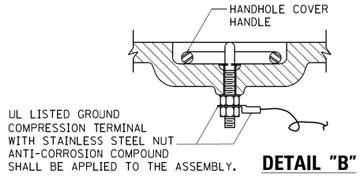
NOTES:

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

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



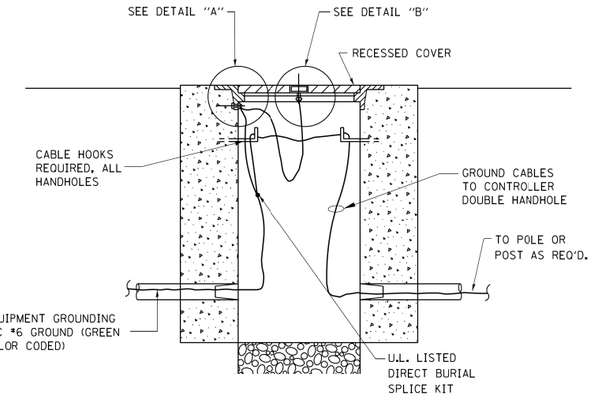
DETAIL "A"



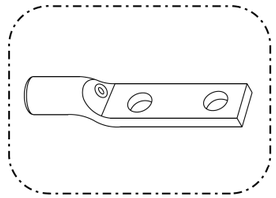
DETAIL "B"

NOTES:
GROUNDING SYSTEM

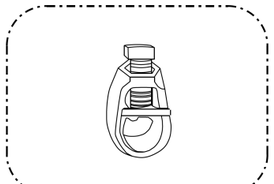
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE,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



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



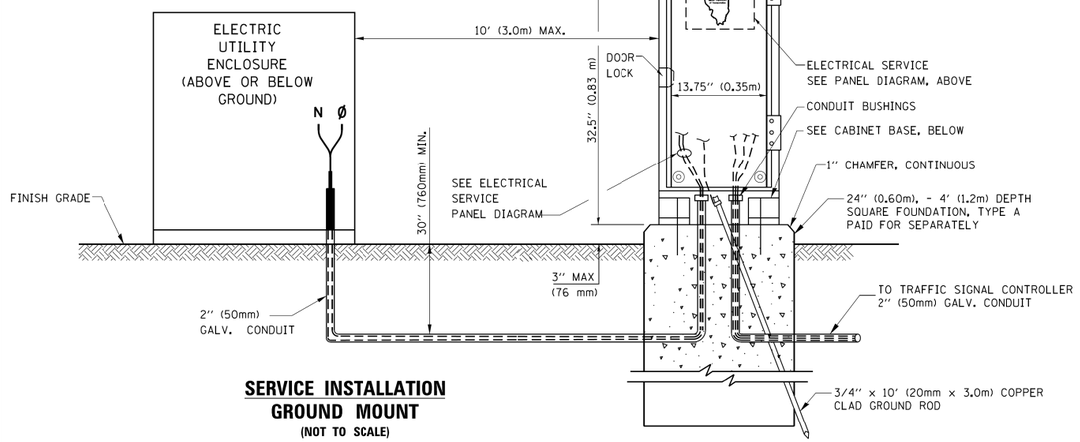
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



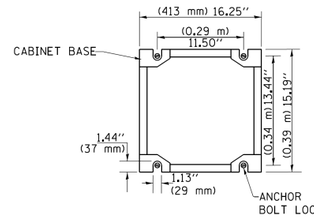
3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

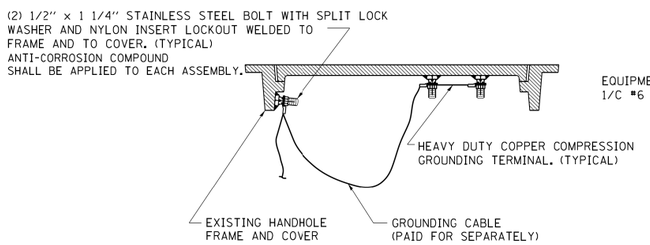
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



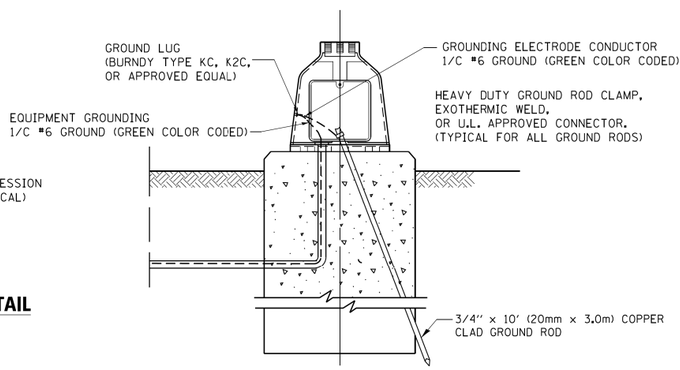
SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)



CABINET – BASE BOLT PATTERN
(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)



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

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	PLOT SCALE = 50.0000 ' / in.	DRAWN - BCK	REVISED -					2647	16-00142-08-TL	LAKE	77	73
	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -						TS-05	CONTRACT NO. 61G69		
		DATE - 10-28-09	REVISED -		SCALE: NONE	SHEET NO. 4 OF 7 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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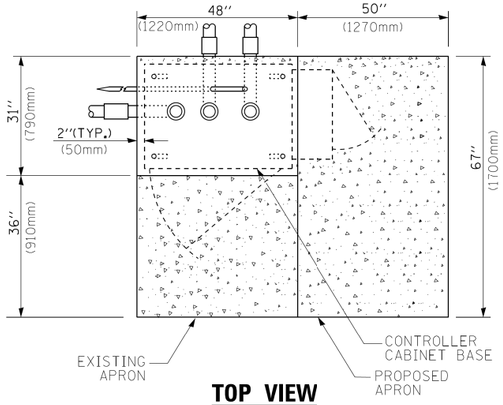
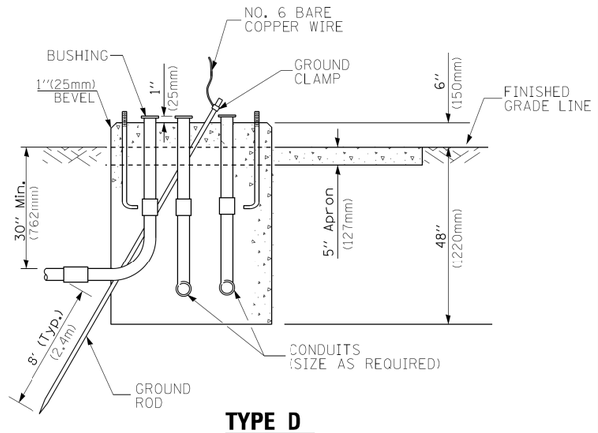
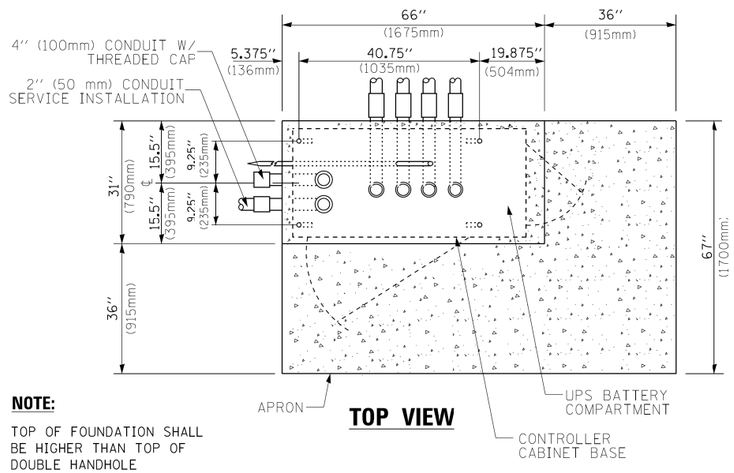


TOP VIEW



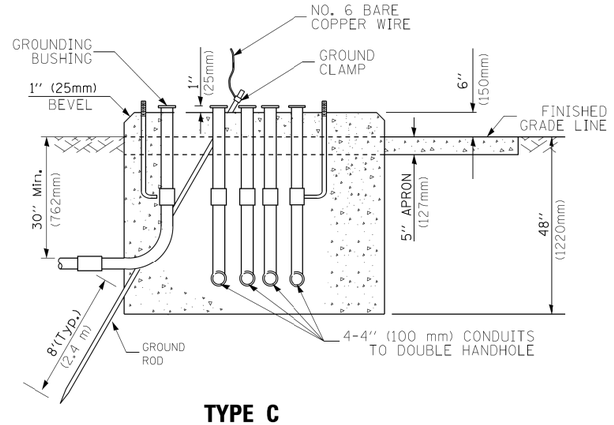
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



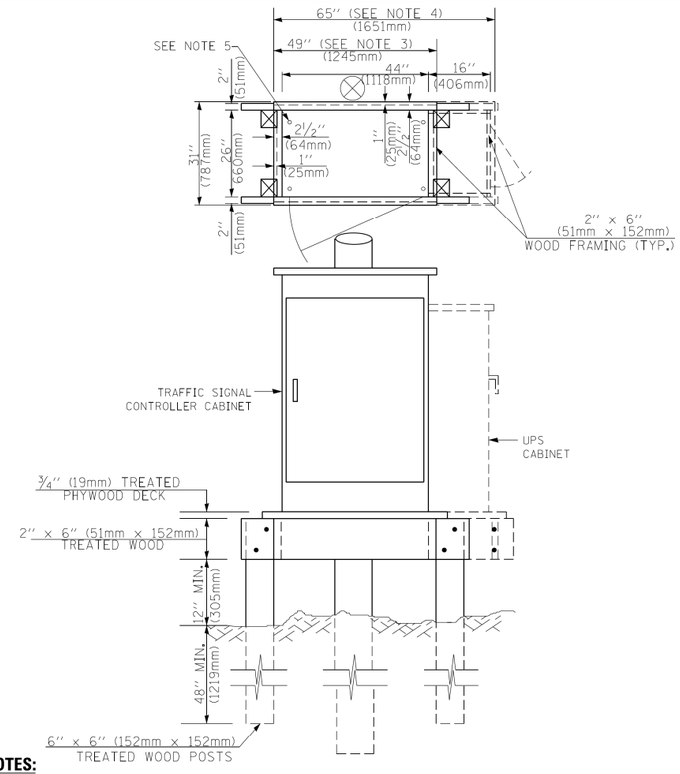
NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE

TOP VIEW



TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS



NOTES:

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

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

Mast Arm Length	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 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

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 (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (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 mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	74
	TS-05	CONTRACT NO. 61G69		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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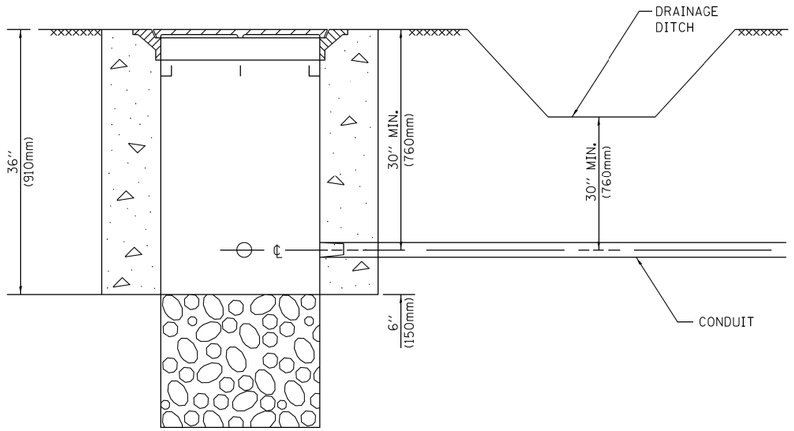
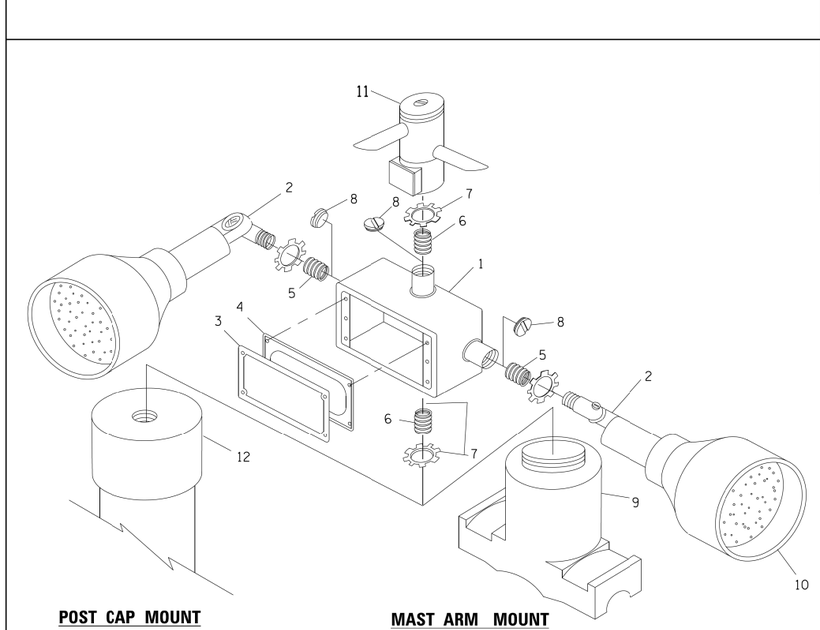


NOTES:

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

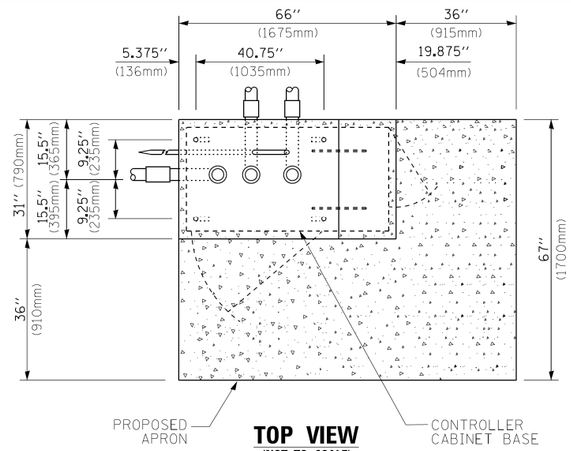
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)

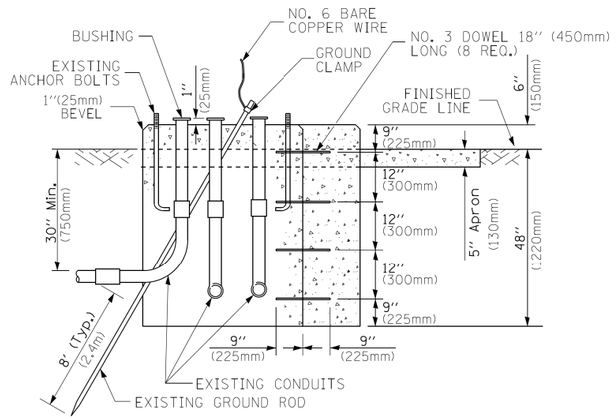


POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



TOP VIEW
(NOT TO SCALE)



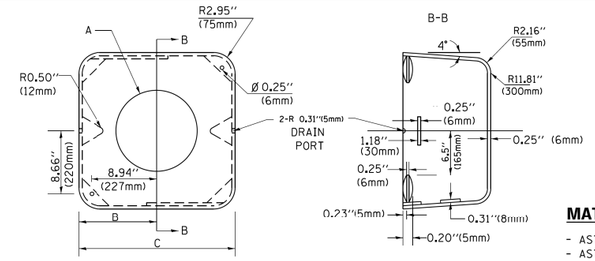
MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(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:

1. 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.



MATERIAL:

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

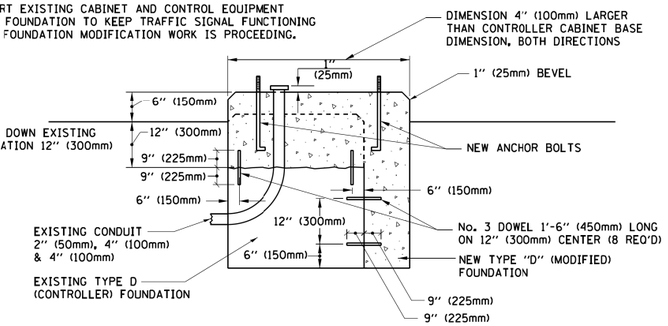
A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57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

SHROUD

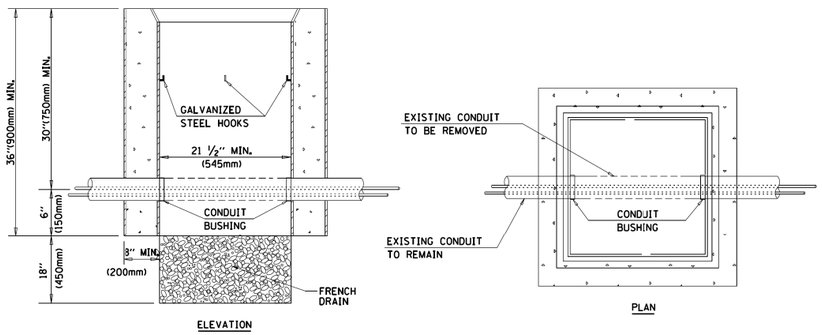
NOTES:

1. DIMENSION "A" IS EQLAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NJTS AND MAST ARM POLE BASE.

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



MODIFY EXISTING TYPE "D" FOUNDATION



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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	I6-00142-08-TL	LAKE	77	75
	TS-05	CONTRACT NO. 61G69		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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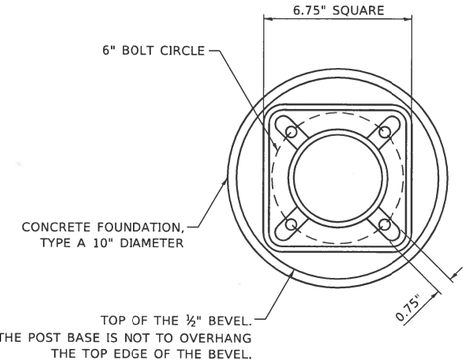
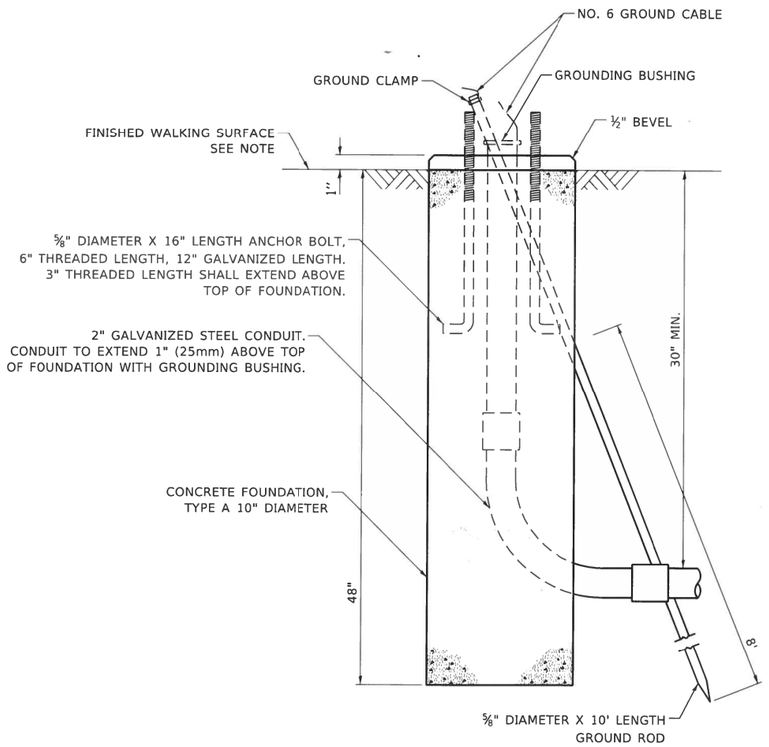


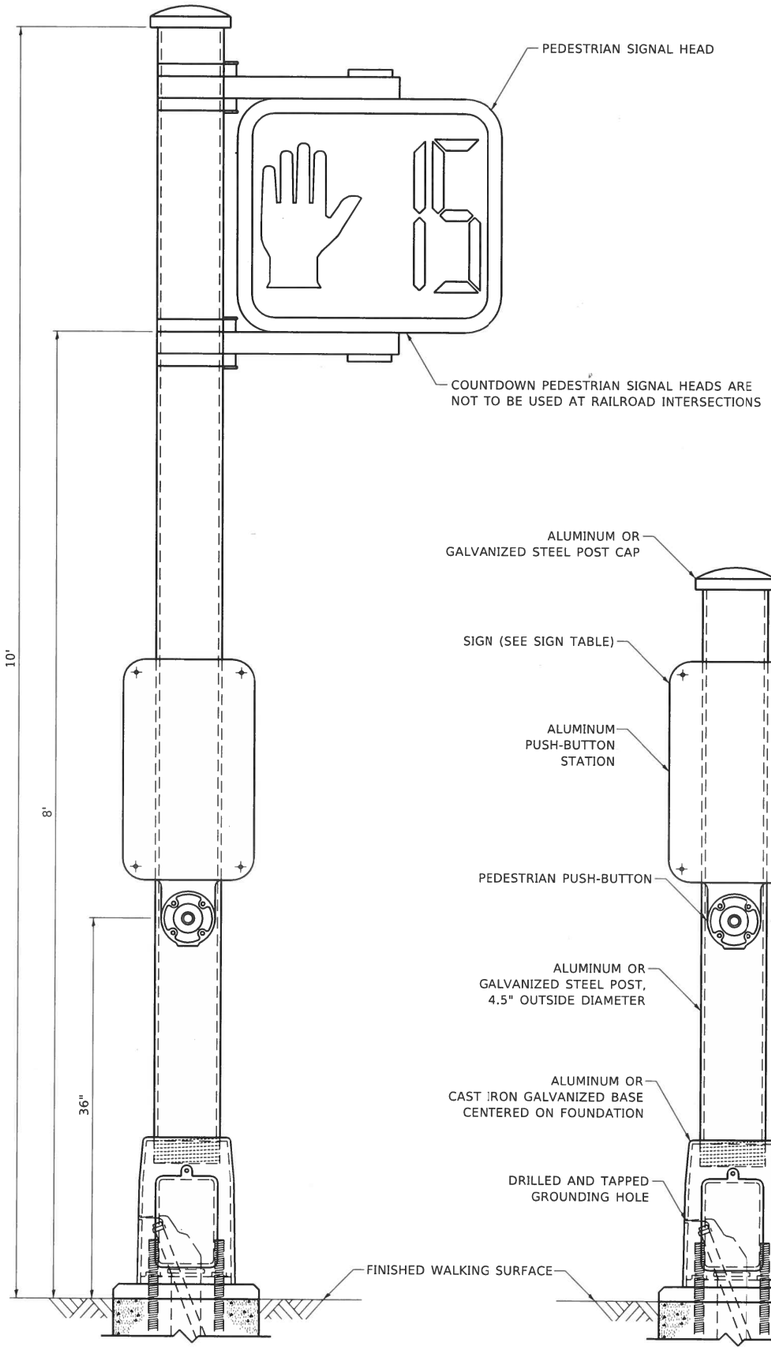
BOLT PATTERN

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

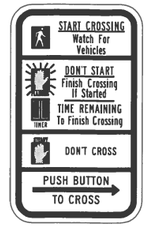


PEDESTRIAN SIGNAL POST, 10 FT.

PEDESTRIAN SIGNAL POST, 5 FT.

R10-3b

R10-3d



R10-3e

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.

MODEL: Default
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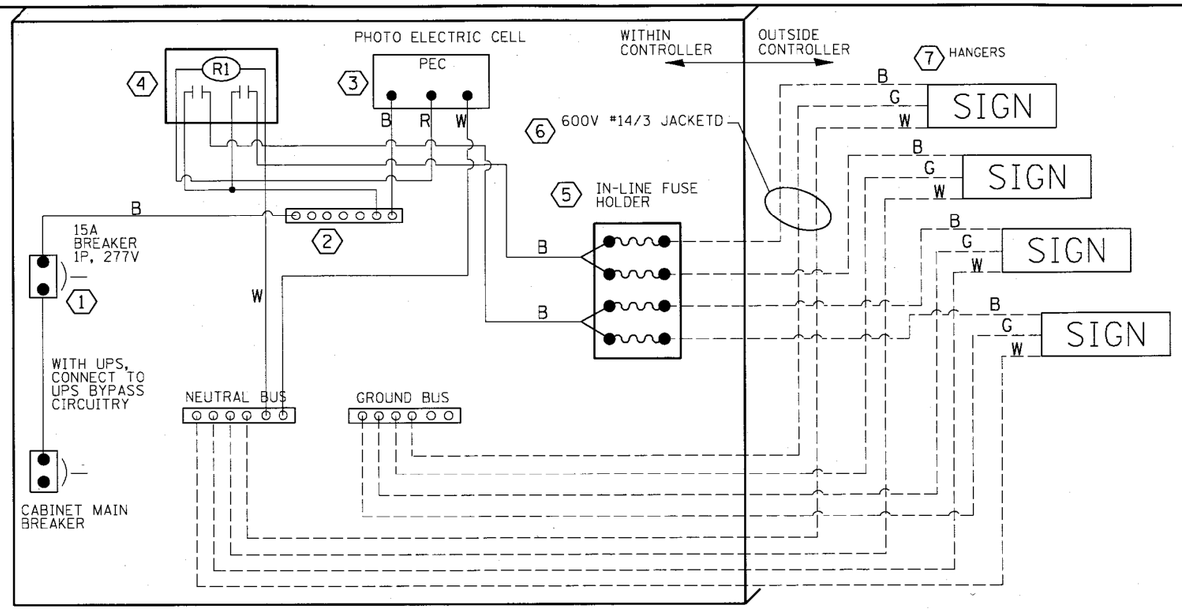
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

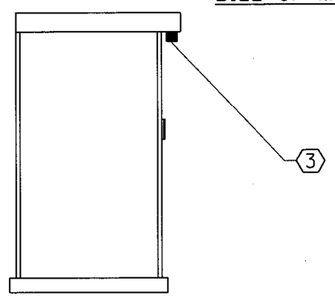
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	76
	TS-05	CONTRACT NO. 61G69		
	ILLINOIS FED. AID PROJECT			



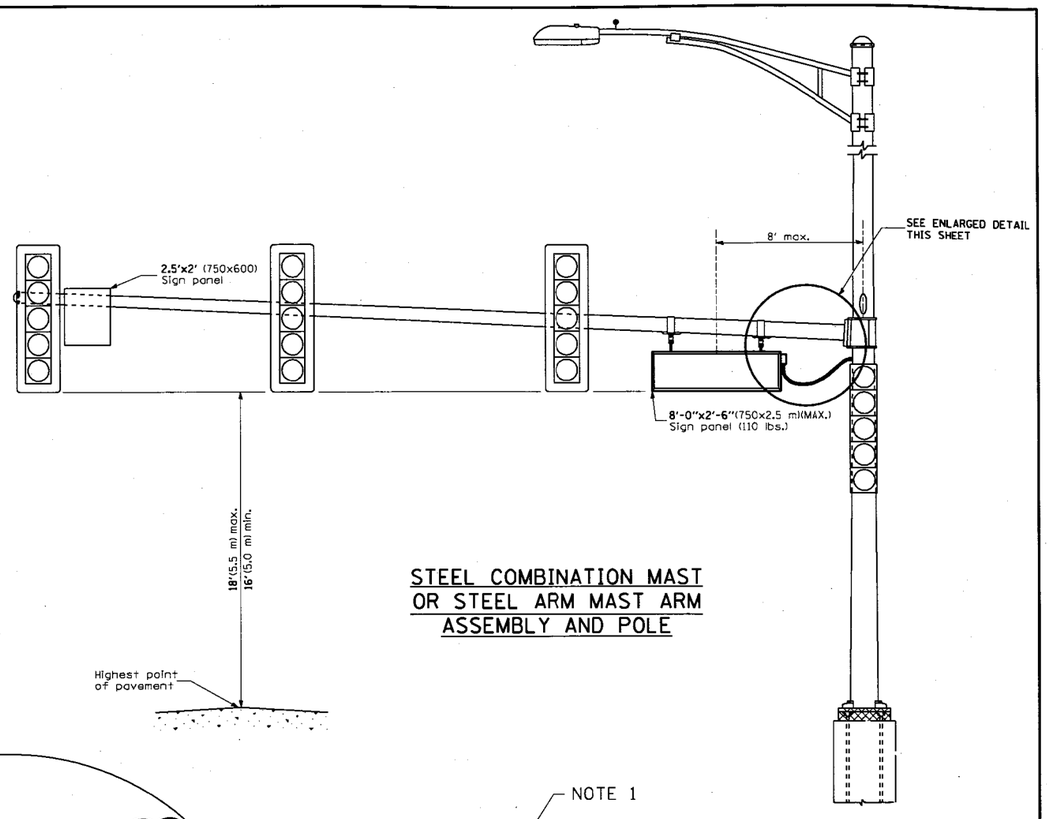
LED SIGN WIRING DETAIL

DESCRIPTION	MANUFACTURER	MODEL	NOTES
1 CIRCUIT BREAKER			Molded case, Thermal Mag. min. R.I. of 14K R.M.S. symmetrical ampere at 277V.
2 TERMINAL BLOCK			
3 PHOTO ELECTRIC CONTROL			
4 CONTROL RELAY			BOLT ON W/SCREW TERMINAL
5 INLINE FUSE HOLDER WITH 5 AMP FUSE			
6 ELECTRIC CABLE, NO. 14, 3/C (BLACK, WHITE, GREEN)			
7 SIGN MOUNTING HARDWARE			S.S. HARDWARE

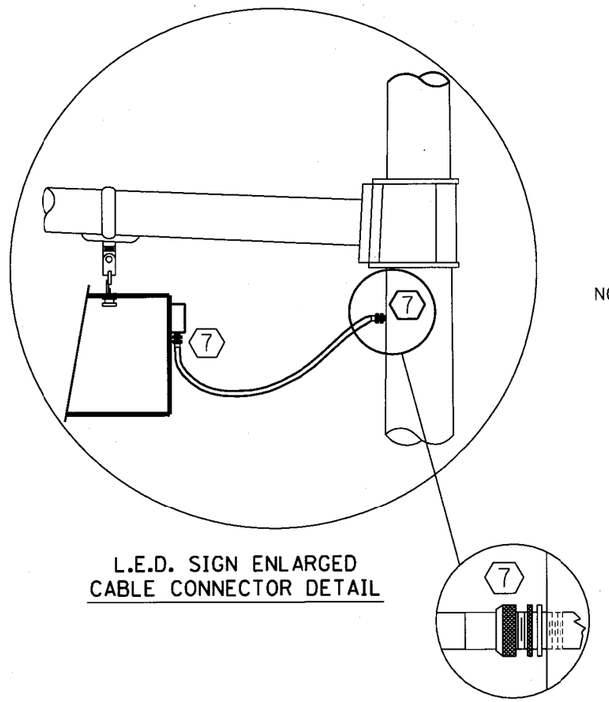
BILL OF MATERIALS



CONTROLLER CABINET
SIDE VIEW

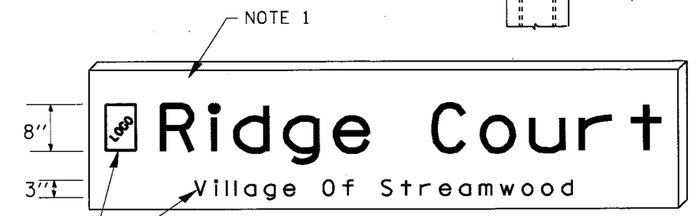


STEEL COMBINATION MAST OR STEEL ARM MAST ARM ASSEMBLY AND POLE



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL

L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL



LED ILLUMINATED SIGN PANEL

8'0 x 2'6" (750 mm x 2.5 mm)(MAX)
CLEARVIEW FONT

NOTES:

1. SIGNS SHALL BE DUAL SIDED. FRONT AND BACK OF SIGN WILL BE THE SAME.
2. CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN. VERIFY WITH ENGINEER.
3. SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS. THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
4. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
   R = RED BL = BLUE W = WHITE
   B = BLACK Y = YELLOW G = GREEN
5. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
6. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
LIGHTED STREET NAME SIGN

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2647	16-00142-08-TL	LAKE	77	77
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		61G69

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