

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	1
		ILLINOIS	CONTRACT NO. 61C02	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

IL 43 (WAUKEGAN RD) FROM IL 137 (BUCKLEY RD) TO NORTHPOINT BOULEVARD AND GREENLEAF AVENUE FROM LAKEHURST ROAD / NORTHPOINT BOULEVARD TO WASHINGTON STREET (CH 45) TRAFFIC SIGNAL MODERNIZATION AND FIBER OPTIC COMMUNICATION SYSTEM
SECTION: 12-00999-28-TL
LAKE COUNTY PROJECT: CMM-4003(543)
C-91-411-15

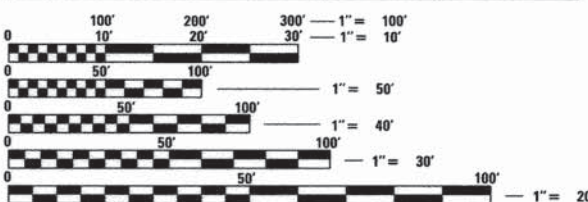
DESIGN DESIGNATION

IL 43 (WAUKEGAN RD) = MINOR ARTERIAL
GREENLEAF AVENUE = MAJOR COLLECTOR

ADT:
IL 43 (WAUKEGAN RD) = 19,500
GREENLEAF AVENUE = 10,800
POSTED SPEED LIMIT:
IL 43 (WAUKEGAN RD) = 45 MPH
GREENLEAF AVENUE = 40 MPH

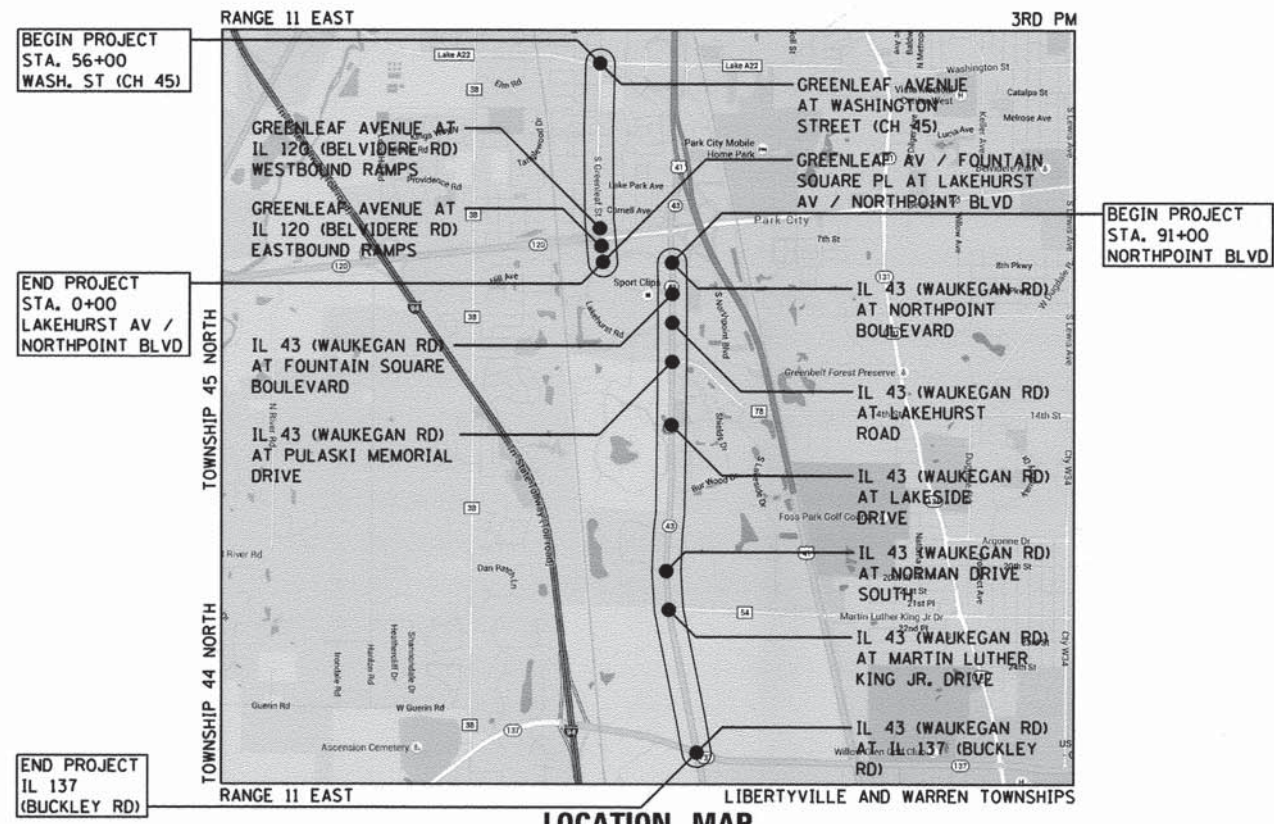


PROJECT IS LOCATED IN THE CITIES OF WAUKEGAN AND PARK CITY, ILLINOIS



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

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



GROSS LENGTH:
IL 43 (WAUKEGAN RD) = 9,800 FT (1.85 MILE)
GREENLEAF AVENUE = 5,350 FT (1.01 MILE)
NET LENGTH:
IL 43 (WAUKEGAN RD) = 9,800 FT (1.85 MILE)
GREENLEAF AVENUE = 5,350 FT (1.01 MILE)

GHA GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive • Vernon Hills, IL 60061
Consulting Engineers & Surveyors
PHONE: (847)478-9700 - FAX: (847)478-9701

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED Oct. 12 2015
Paula T. King
DIRECTOR OF TRANSPORTATION, COUNTY ENGINEER

PASSED OCTOBER 16 2015
Chris Holt
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW October 16 2015
John Fortman
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

SIGNED: *[Signature]*
DANIEL P. BRINKMAN, EXP. 11/30/2015

DATE: 10-7-2015

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID PROGRAM ENGINEER: FAWAD AQUEEL, PE (847) 705-4021 SCHAUMBURG, IL

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GENERAL NOTES

THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", JANUARY 1, 2012; MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION; PROJECT SPECIFICATIONS; ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION; THE CITIES OF WAUKEGAN AND PARK CITY; THE VILLAGE OF GURNEE ; THE LAKE COUNTY DIVISION OF TRANSPORTATION; ALL APPLICABLE REQUIREMENTS OF THE ORDINANCES OF AUTHORITIES HAVING JURISDICTION; AND ALL ADDENDA THERETO SHALL GOVERN THIS WORK.

THE STANDARD SPECIFICATIONS, PROJECT SPECIFICATIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED A PART OF THE CONTRACT.

WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OF UNSTABLE MATERIALS CREATED AS A RESULT THEREOF.

THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL AREAS AFFECTED BY EQUIPMENT OR LABORERS TO EXISTING CONDITIONS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING ALL NEW WORK UNTIL COMPLETION OF THIS CONTRACT.

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION IS BASED ON RECORD INFORMATION PROVIDED BY THE INDIVIDUAL UTILITY OWNERS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. THE CONTRACTOR SHALL ALSO CONTACT J.U.L.I.E. TO OBTAIN LOCATES OF THE RESPECTIVE UTILITY COMPANIES UNDERGROUND FACILITIES.

RESTORATION OF WORK AREA: RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO 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 IN ACCORDANCE TO STANDARD SPECIFICATIONS ARTICLE 252 WHICH SHALL INCLUDE THE REQUIRED WATERING PER ARTICLE 252.08. ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 250 AND 251, RESPECTIVELY.

THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARM LENGTH.

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

THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.

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

THE CONTRACTOR SHALL NOTIFY THE IDOT TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

ANY EXPLORATORY POTHOLING FOR EXISTING BELOW GRADE UTILITIES IN HARD SURFACES OR GRASSED AREAS SHALL BE INCLUDED IN THE COST OF THE CONTRACT. ALL POTHOLES SHALL BE FILLED WITH SAND AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL BE AWARE THAT LCDOT WILL BE LETTING A RESURFACING PROJECT ON GREENLEAF AVENUE BETWEEN IL 120 AND WASHINGTON STREET. THE CONTRACTOR SHALL COORDINATE ALL HIS WORK ACTIVITIES AND SCHEDULE WITH THE RESURFACING CONTRACTOR TO MINIMIZE CONFLICTS, DELAYS, AND DUPLICATION OF WORK.

IDOT STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m)
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701426-07	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45 MPH
701427-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40 MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701606-10	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-09	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
814001-03	HANDHOLE
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTIBLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-05	STEEL MAST ARM ASSEMBLY AND POLE, 16' THROUGH 55'
878001-10	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS

LCDOT STANDARDS

LC4201	CURB RAMPS WITH TRAFFIC SIGNAL POSTS AND MAST ARMS
LC4202	CONCRETE WASHOUT FACILITIES
LC7200	DIRECTIONAL INDICATOR BARRICADES
LC8501	TYPE C (SPECIAL) FOUNDATION FOR TRAFFIC SIGNAL CONTROLLER CABINET AND UPS CABINET
LC8900	VIDEO DETECTION DETAILS

DISTRICT DETAILS

TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-14	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
TC-22	ARTERIAL ROAD INFORMATION SIGN
TS-05	STANDARD TRAFFIC SIGNAL DESIGN DETAILS

CONTROL POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
2	2070199.14	1100777.07	700.19	CP2-DISK	1+96.11	1.93'L
10	2072573.64	1100784.75	694.86	CP10-MAG	N/A	N/A
11	2068936.52	1100886.94	714.88	CP11-XCUT	14+63.36	4.27'R
14	2069775.25	1100826.26	704.72	CP14-XCUT	6+22.44	11.15'L
19	2068830.71	1101033.95	718.14	CP19-XCUT	16+00.85	120.15'L
20	2072962.99	1100795.19	695.66	CP20-MAG	N/A	N/A
30	2073444.28	1100804.98	697.05	CP30-MAG	N/A	N/A
129	2069157.25	1100805.98	711.22	CP129-XCUT	12+35.84	61.75'R

GHA GEWALT HAMILTON ASSOCIATES, INC.

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PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS & GENERAL NOTES

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	2
CONTRACT NO. 61C02				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES		LOCATION OF WORK		1	2	3	4	5	6	7	8	9	10	11	12	13	14
				IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)	IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE	IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH	IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE	IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE	IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD	IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE PLACE	IL 43 (WAUKEGAN RD) AT NORTHPOINT BOULEVARD	GREENLEAF AV/ FOUNTAIN SQUARE PLACE AT LAKEHURST AV/ NORTHPOINT BLVD	GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) E.B. RAMPS	GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) W.B. RAMPS	GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)	INTERCONNECT IL 43 (WAKEGAN RD) FROM MLK JR. BLVD TO NORTHPOINT BLVD	INTERCONNECT GREENLEAF AVENUE FROM LAKEHURST RD TO WASHINGTON STREET (CH 45)
				CONSTRUCTION CODES													
				0021													
				TRAFFIC SIGNALS													
CODE NO.	ITEM	UNIT	TOTAL														
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	10														
* 66900450	SPECIAL WASTE PLANS AND PERMITS	L SUM	1														
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1														
67100100	MOBILIZATION	L SUM	1.00														
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	7,870											157		3,510	4,203
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	108										98	10			
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	169										169				
81400100	HANDHOLE	EACH	12										2			6	4
81400200	HEAVY-DUTY HANDHOLE	EACH	3														3
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	12	1	1	1	1	1	1	1	1	1	1	1	1		
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	8,946													4,337	4,609
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,066		78			195			241		324	228			
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,778										1,778				
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	518										319	199			

* SPECIALTY ITEM

IMPORTANT CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL FURNISH AND INSTALL ONE MEDIA CONVERTER IN THE EXISTING LAKE COUNTY DIVISION OF TRANSPORTATION COMMUNICATION CABINET LOCATED AT IL 43 (WAUKEGAN RD) AND IL 137 (BUCKLEY RD). MAINTENANCE OF COMMUNICATION CABINET SHALL BE INCLUDED IN THE MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION PAY ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE.
- ② THE CONTRACTOR SHALL FURNISH ONE MEDIA CONVERTER AND STORE IT IN THE EXISTING TRAFFIC SIGNAL CABINET AT GREENLEAF AVENUE AND WASHINGTON STREET. THE MEDIA CONVERTER, ALONG WITH ALL PERIPHERAL EQUIPMENT INCLUDED IN THE SPECIAL PROVISIONS, SHALL BE IN THE ORIGINAL PACKAGING AND PLACED ON A SHELF IN THE CABINET AS DIRECTED BY THE ENGINEER.

GHA GEWALT HAMILTON ASSOCIATES, INC.

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PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
SCALE: NONE SHEET 1 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	3
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES		LOCATION OF WORK	CONSTRUCTION CODES																							
			1 IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)	2 IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE	3 IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH	4 IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE	5 IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE	6 IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD	7 IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE PLACE	8 IL 43 (WAUKEGAN RD) AT NORTHPOINT BOULEVARD	9 GREENLEAF AV/ FOUNTAIN SQUARE PLACE AT LAKEHURST AV/ NORTHPOINT BLVD	10 GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) E. B. RAMPS	11 GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) W. B. RAMPS	12 GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)	13 INTERCONNECT IL 43 (WAUKEGAN RD) FROM MLK JR. BLVD TO NORTHPOINT BLVD	14 INTERCONNECT GREENLEAF AVENUE FROM LAKEHURST RD TO WASHINGTON STREET (CH 45)										
CODE NO.	ITEM	UNIT	TOTAL	TRAFFIC SIGNALS																						
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1														1									
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1															1								
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2														2									
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	48														37	11								
87900200	DRILL EXISTING HANDHOLE	EACH	8														2	2					2		2	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	10														8	2								
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	9														4	5								
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2														1	1								
88200410	SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10														8	2								
88500100	INDUCTIVE LOOP DETECTOR	EACH	49		6	10	9						11									13				
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	4														2	2								
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	4			1	1						1									1				
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	5					1	1	1			1			1										
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2,244														1,815	429								

*SPECIALTY ITEM

IMPORTANT CONSTRUCTION NOTE:

① THE CONTRACTOR SHALL FURNISH AND INSTALL ONE MEDIA CONVERTER IN THE EXISTING LAKE COUNTY DIVISION OF TRANSPORTATION COMMUNICATION CABINET LOCATED AT IL 43 (WAUKEGAN RD) AND IL 137 (BUCKLEY RD). MAINTENANCE OF COMMUNICATION CABINET SHALL BE INCLUDED IN THE MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION PAY ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE.

② THE CONTRACTOR SHALL FURNISH ONE MEDIA CONVERTER AND STORE IT IN THE EXISTING TRAFFIC SIGNAL CABINET AT GREENLEAF AVENUE AND WASHINGTON STREET. THE MEDIA CONVERTER, ALONG WITH ALL PERIPHERAL EQUIPMENT INCLUDED IN THE SPECIAL PROVISIONS, SHALL BE IN THE ORIGINAL PACKAGING AND PLACED ON A SHELF IN THE CABINET AS DIRECTED BY THE ENGINEER.



FILE NAME : D:\61C02-sh1-500.02.dgn
GHA *4570.800
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USER NAME : zwellsten
PLOT SCALE : 1:20
PLOT DATE : 11/23/2015

DESIGNED - JRD
DRAWN - ZCW
CHECKED - DPB
DATE -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE SHEET 2 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	4
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES		LOCATION OF WORK	CONSTRUCTION CODES														
			1 IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)	2 IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE	3 IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH	4 IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE	5 IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE	6 IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD	7 IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE PLACE	8 IL 43 (WAUKEGAN RD) AT NORTHPOINT BOULEVARD	9 GREENLEAF AV/ FOUNTAIN SQUARE PLACE AT LAKEHURST AV/ NORTHPOINT BLVD	10 GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) E.B. RAMPS	11 GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) W.B. RAMPS	12 GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)	13 INTERCONNECT IL 43 (WAUKEGAN RD) FROM MLK JR. BLVD TO NORTHPOINT BLVD	14 INTERCONNECT GREENLEAF AVENUE FROM LAKEHURST RD TO WASHINGTON STREET (CH 45)	
CODE NO.	ITEM	UNIT	TOTAL	TRAFFIC SIGNALS													
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	10		1	1	1	1	1	1	1	1	1	1	1		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	4									3	1				
X0323906	CAMERA POLE, 45 FOOT	EACH	1										1				
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	324									324					
X0325462	MEDIA CONVERTER	EACH	2	1										1			
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1														
8360030	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	9										9				
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	5		1	1	1				1			1			
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1											1			
X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	742		78			195			241			228			
X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4C	FOOT	742		78			195			241			228			
XX005800	RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM	EACH	4		1	1	1				1						
XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	4		1			1			1			1			
XX006655	LAYER II (DATALINK) SWITCH	EACH	10		1	1	1	1	1	1	1	1	1	1			

*SPECIALTY ITEM

IMPORTANT CONSTRUCTION NOTE:

① THE CONTRACTOR SHALL FURNISH AND INSTALL ONE MEDIA CONVERTER IN THE EXISTING LAKE COUNTY DIVISION OF TRANSPORTATION COMMUNICATION CABINET LOCATED AT IL 43 (WAUKEGAN RD) AND IL 137 (BUCKLEY RD). MAINTENANCE OF COMMUNICATION CABINET SHALL BE INCLUDED IN THE MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION PAY ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE SHEET 3 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	5
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

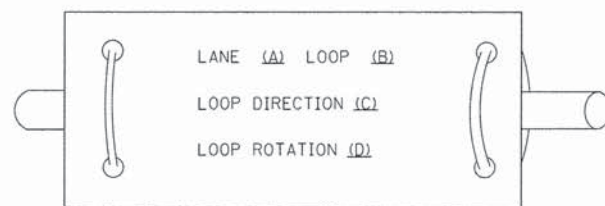
TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED																		
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE																					
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE																					
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA																					
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED																					
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F																					
UNINTERRUPTABLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F																					
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F																					
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F																					
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE																					
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED																					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED																					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED																					
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED																					
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED																					
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR																					
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR																					
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				QUEUE DETECTOR																					
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED QUEUE DETECTOR																					
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																					
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR																					
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				<h2 style="margin: 0;">RAILROAD SYMBOLS</h2> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%;">EXISTING</th> <th style="width: 25%;">PROPOSED</th> </tr> </thead> <tbody> <tr> <td>RAILROAD CONTROL CABINET</td> <td></td> <td></td> </tr> <tr> <td>RAILROAD CANTILEVER MAST ARM</td> <td></td> <td></td> </tr> <tr> <td>FLASHING SIGNAL</td> <td></td> <td></td> </tr> <tr> <td>CROSSING GATE</td> <td></td> <td></td> </tr> <tr> <td>CROSSBUCK</td> <td></td> <td></td> </tr> </tbody> </table>					EXISTING	PROPOSED	RAILROAD CONTROL CABINET			RAILROAD CANTILEVER MAST ARM			FLASHING SIGNAL			CROSSING GATE			CROSSBUCK		
	EXISTING	PROPOSED																											
RAILROAD CONTROL CABINET																													
RAILROAD CANTILEVER MAST ARM																													
FLASHING SIGNAL																													
CROSSING GATE																													
CROSSBUCK																													
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED																									
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID																									
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER																									
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT																									
DETECTOR LOOP, TYPE I				RADIO REPEATER																									
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED																									
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)																									
VIDEO DETECTION CAMERA																													
VIDEO DETECTION ZONE																													
PAN, TILT, ZOOM CAMERA																													
WIRELESS DETECTOR SENSOR																													
WIRELESS ACCESS POINT																													

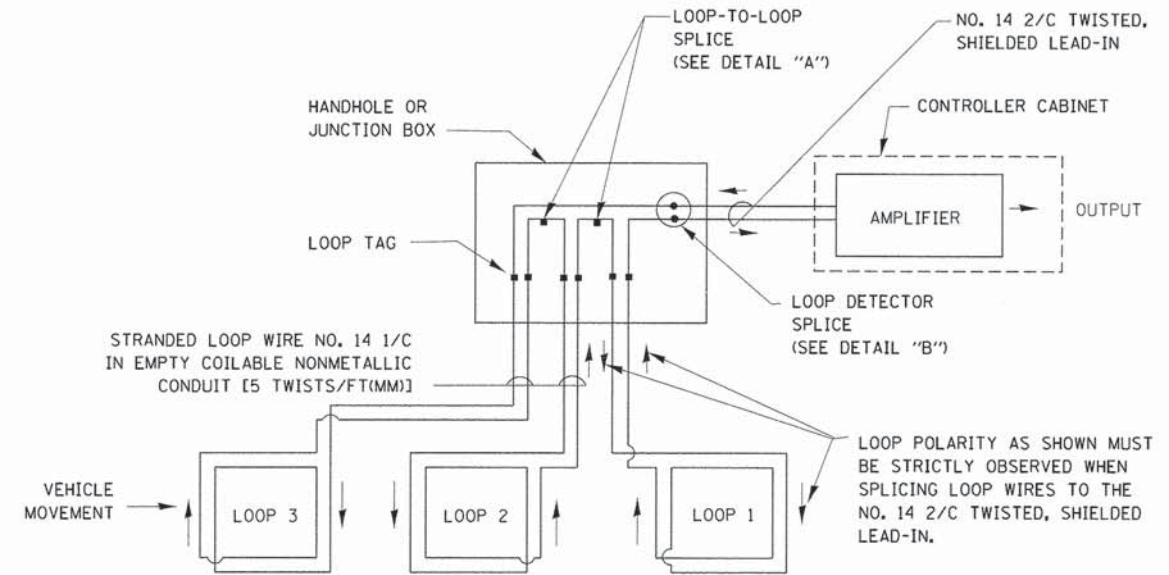
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

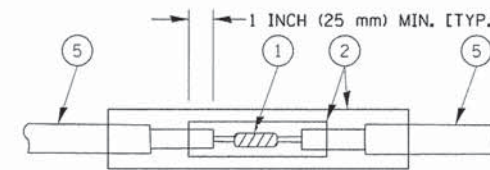


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

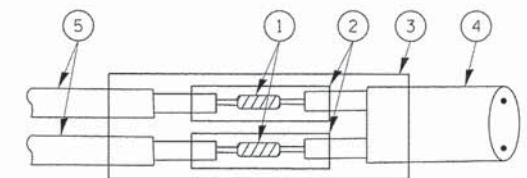


DETECTOR LOOP WIRING SCHEMATIC

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

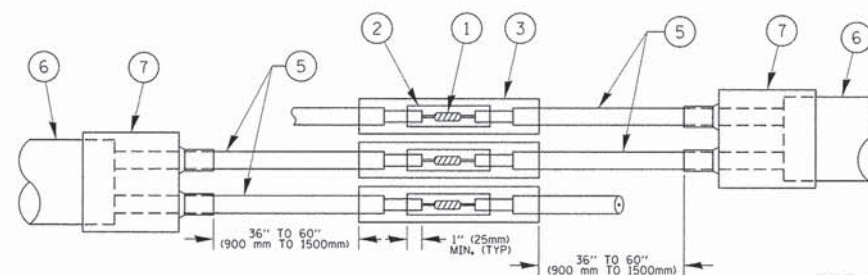


DETAIL "A"
LOOP-TO-LOOP SPLICE

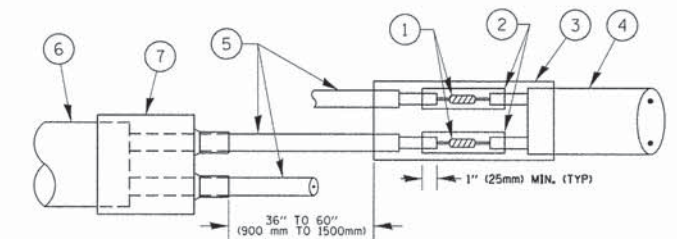


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PRE-FORMED LOOP

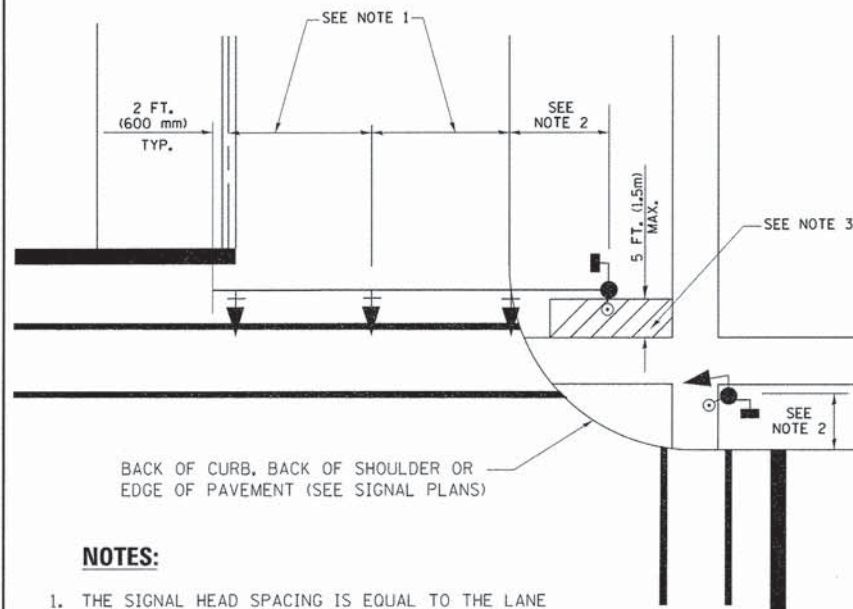
LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME = D161C02-sht-details.IDOT-D1.02.dgn	USER NAME = zwillsten	DESIGNED - DAD	REVISED - DAG 1-1-14
GHA *4578.000	PLOT SCALE = 1:20	DRAWN - BCK	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

DISTRICT ONE		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		VAR.	12-00999-28-TL	LAKE	61	8
SCALE: NONE		TS-05		CONTRACT NO. 61C02		
SHEET NO. 2 OF 7 SHEETS		ILLINOIS FED. AID PROJECT				

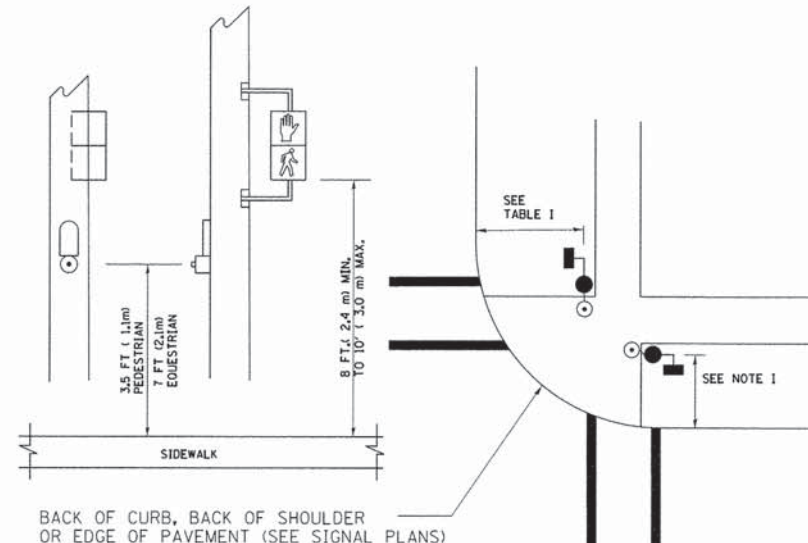
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



NOTES:

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

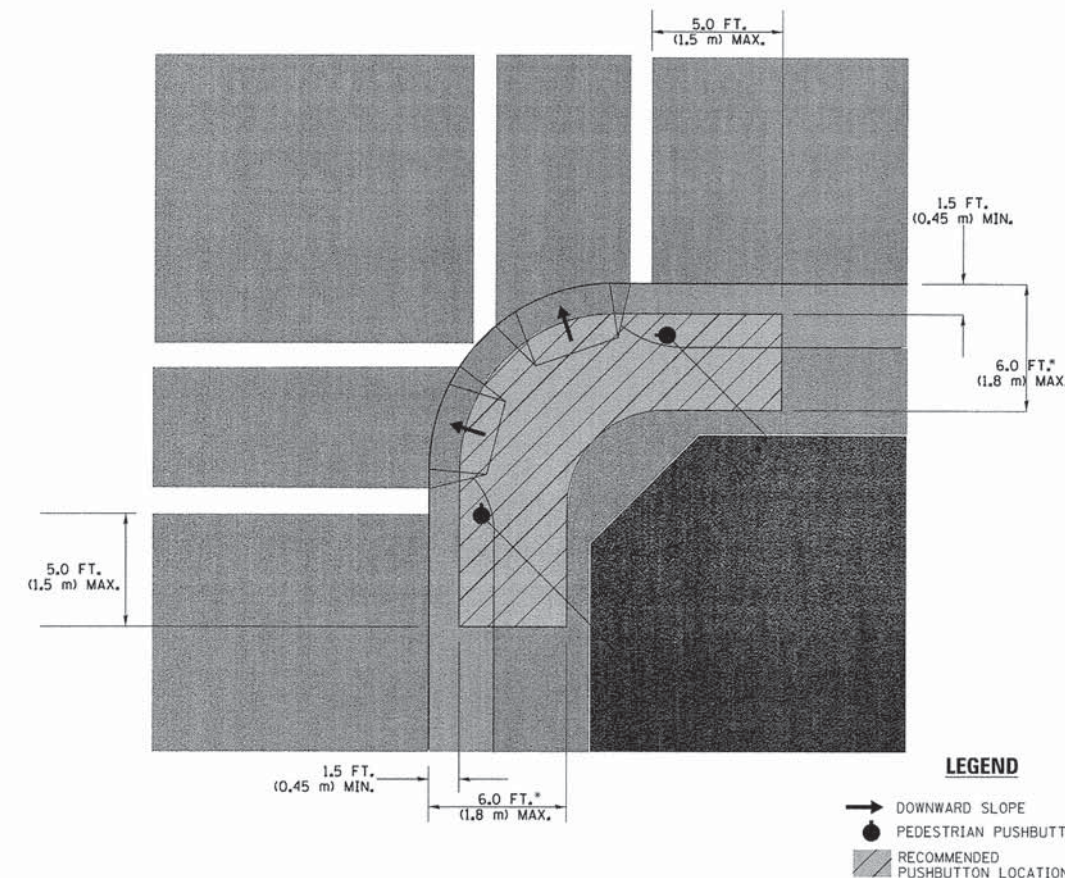
**PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST**



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



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

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

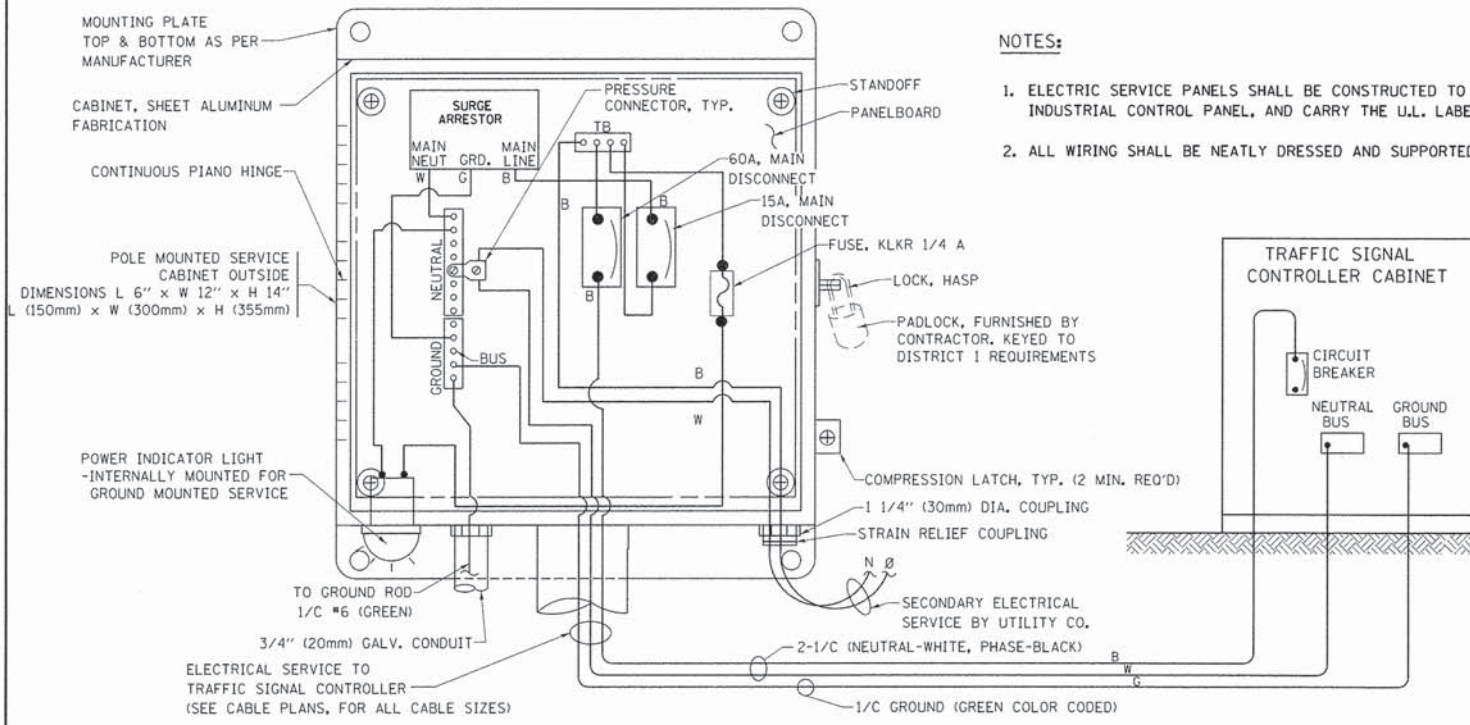
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

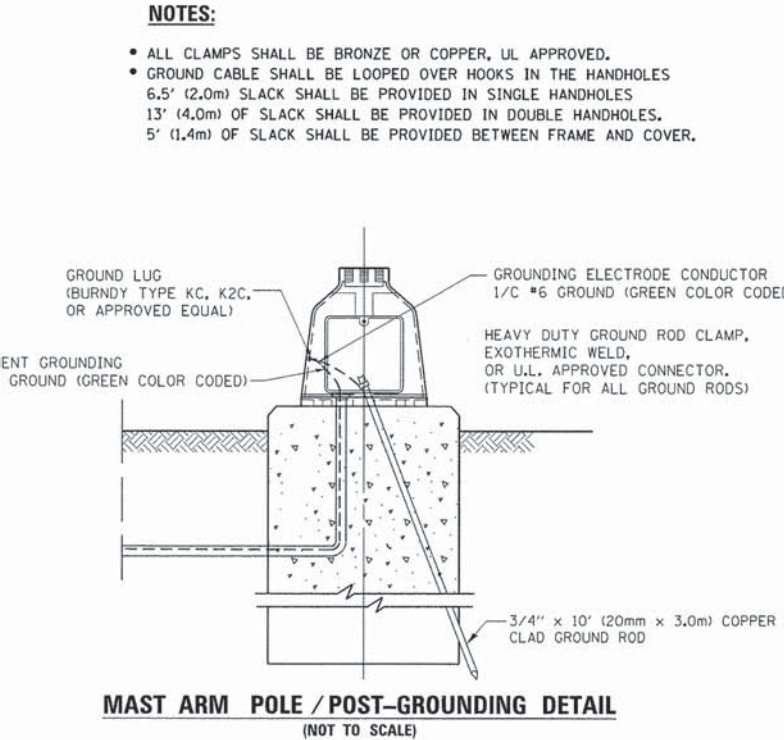
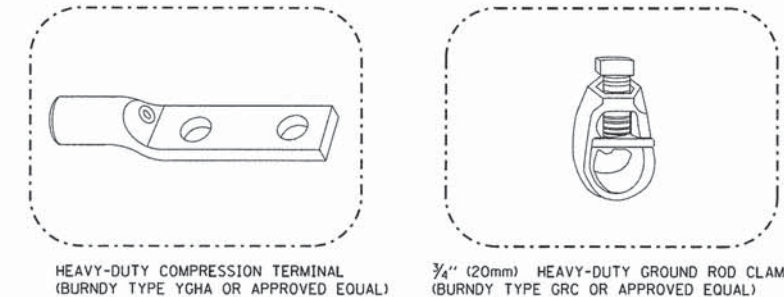
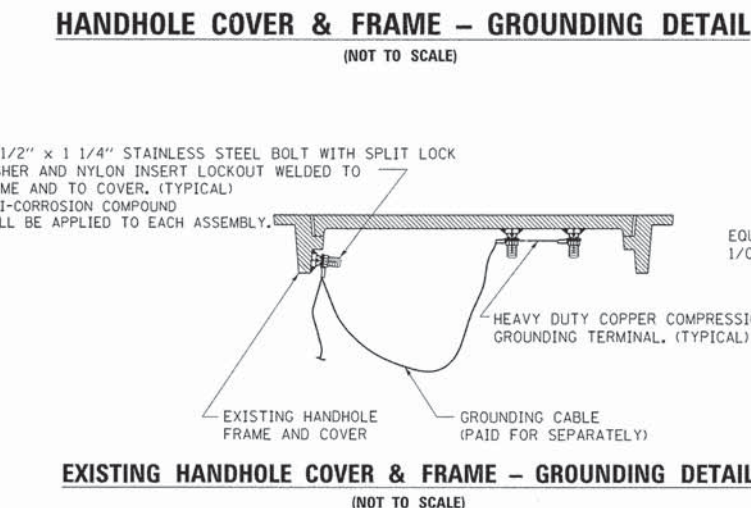
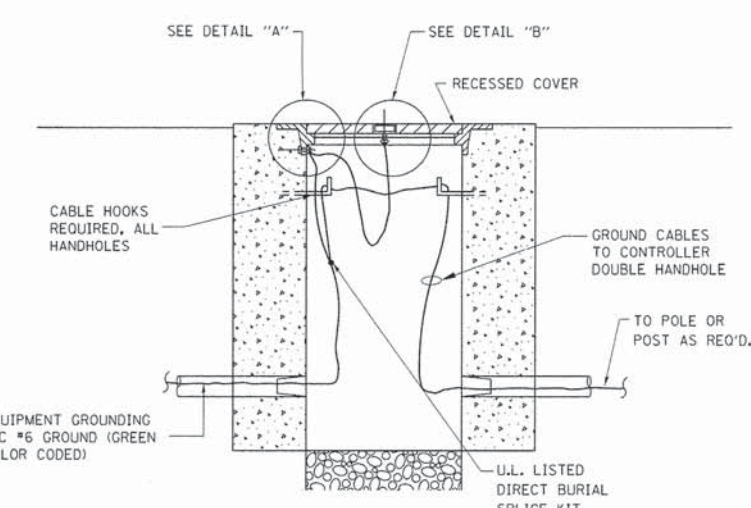
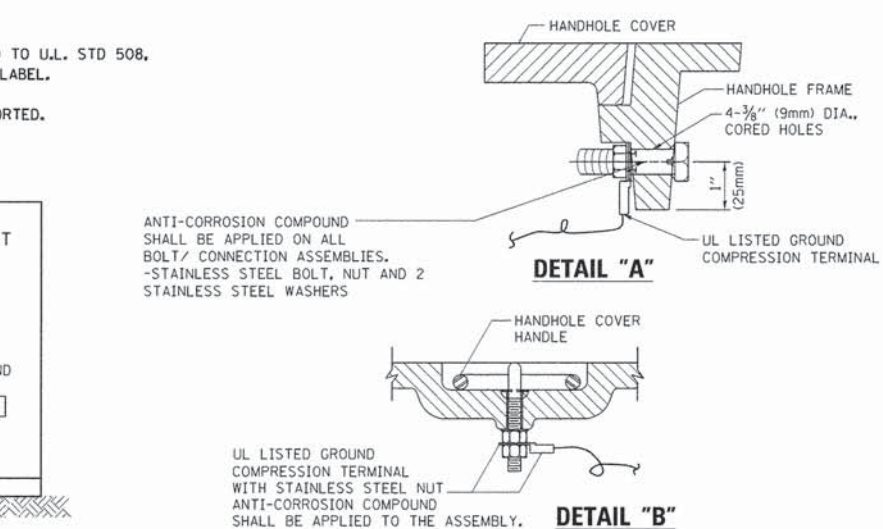
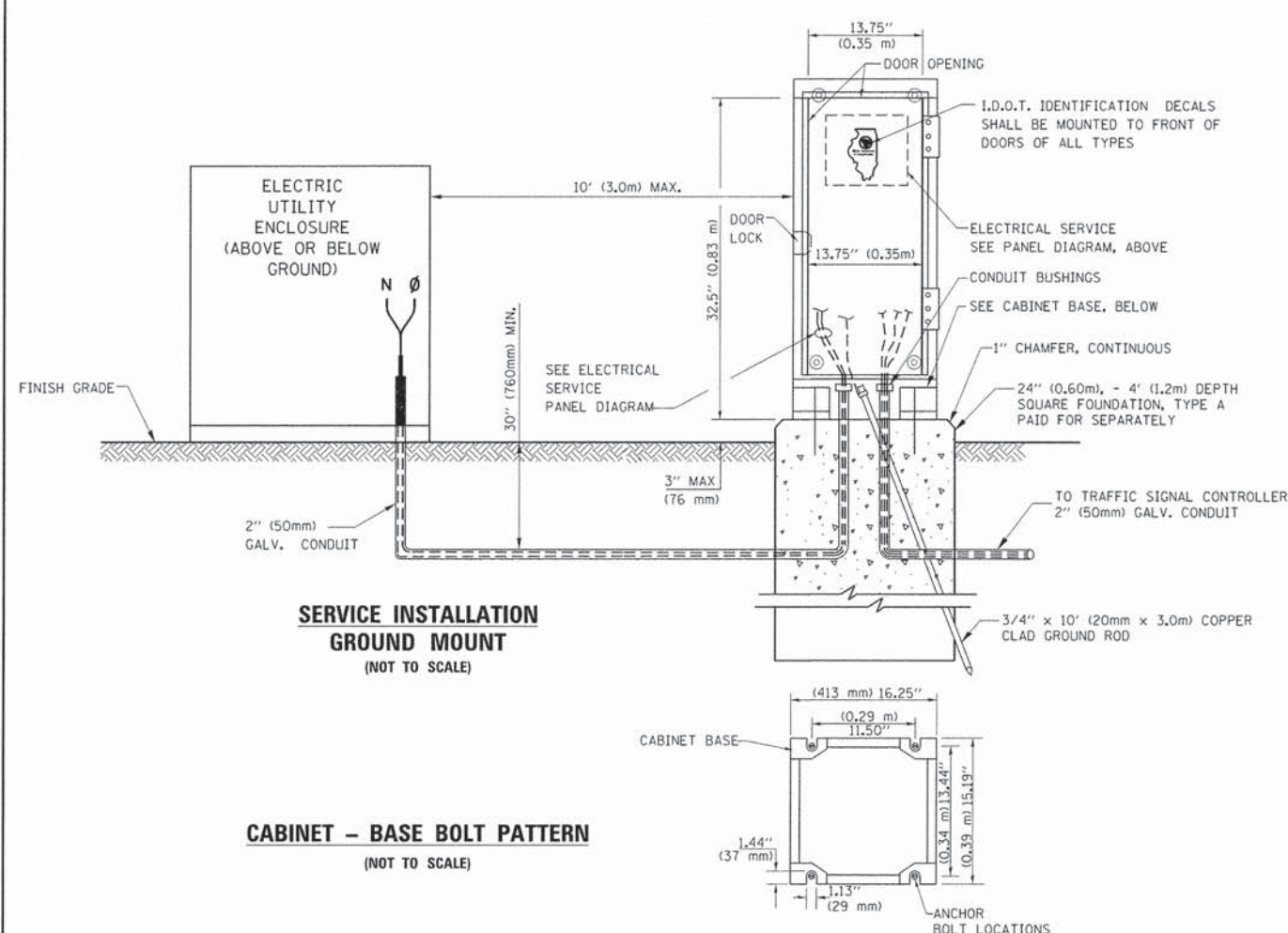
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM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

FILE NAME =	USER NAME = zwallsten	DESIGNED - DAD	REVISED - DAG 1-1-14
D161C02-sht-details.IDOT-D1.03.dgn		DRAWN - BCK	REVISED -
GHA *4570.800		CHECKED - DAD	REVISED -
Default	PLOT DATE = 11/23/2015	DATE - 10-28-09	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	9
TS-05		CONTRACT NO. 61C02		
ILLINOIS FED. AID PROJECT				



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



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.

- 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.

GHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C82-sht-details.IDOT-01.04.dgn
 GHA *4570.000
 Default

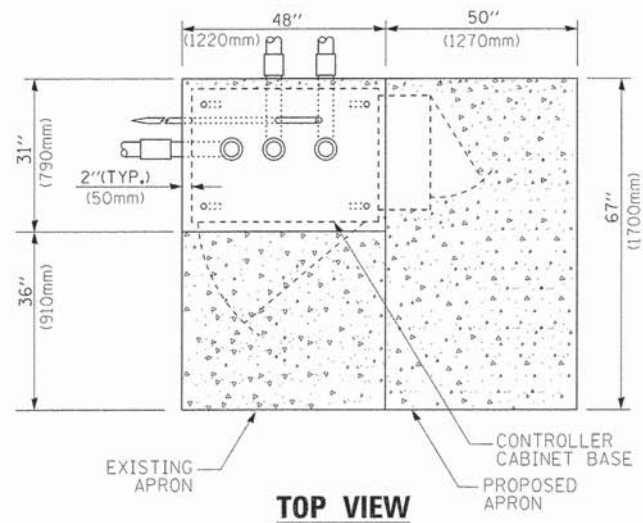
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PLOT SCALE = 1:20	DRAWN - BCK	REVISED -
PLOT DATE = 11/23/2015	CHECKED - DAD	REVISED -
	DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

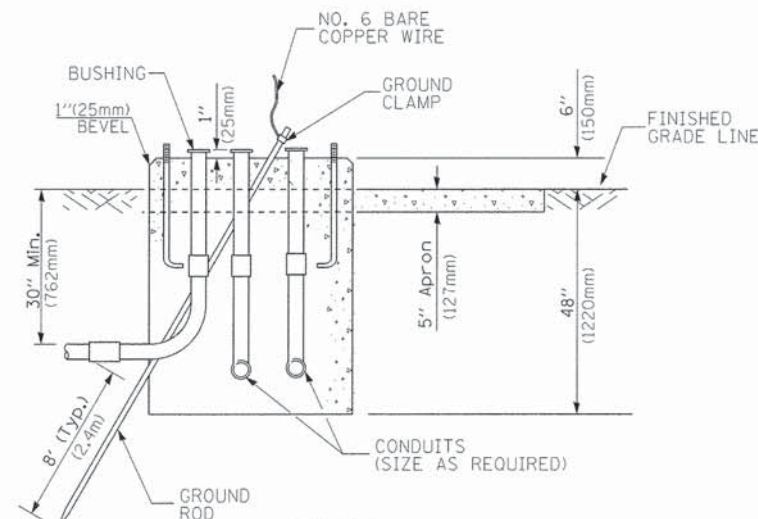
**DISTRICT ONE
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 4 OF 7 SHEETS STA. TO STA.

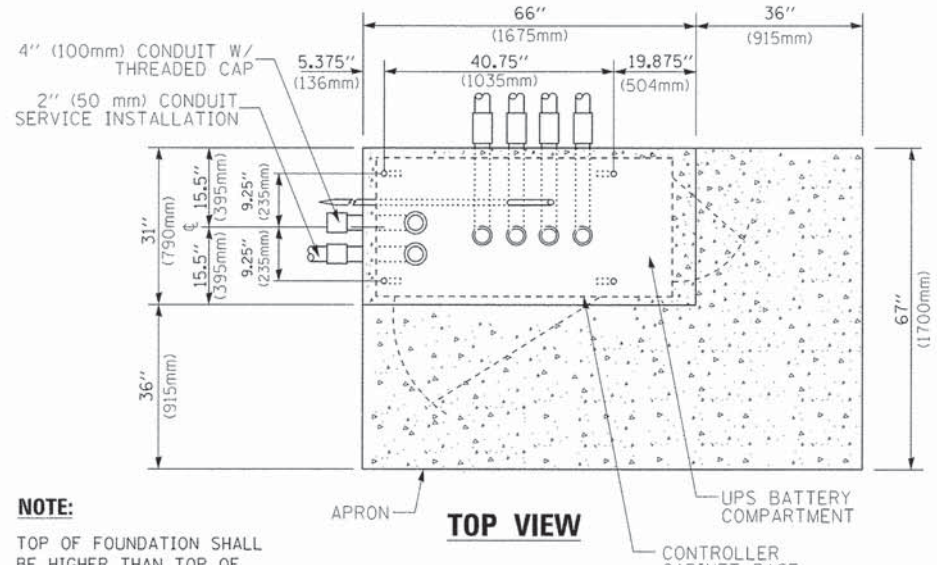
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	10
	TS-05		CONTRACT NO. 61C02	
ILLINOIS FED. AID PROJECT				



TOP VIEW

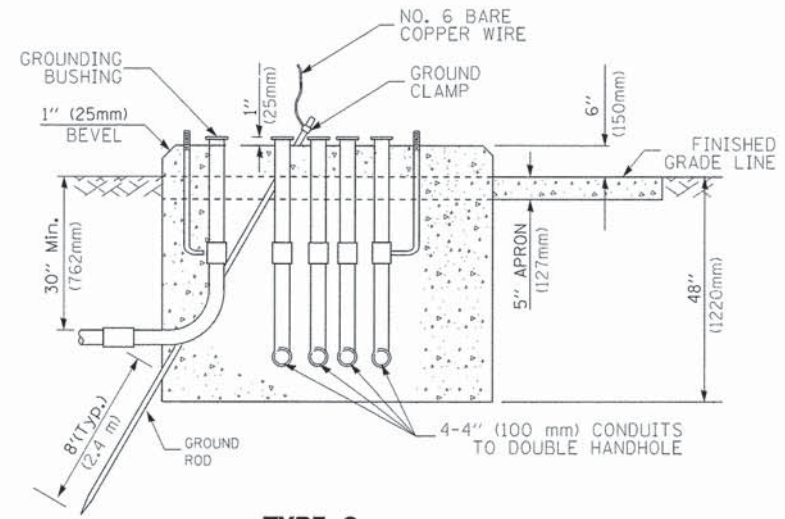


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

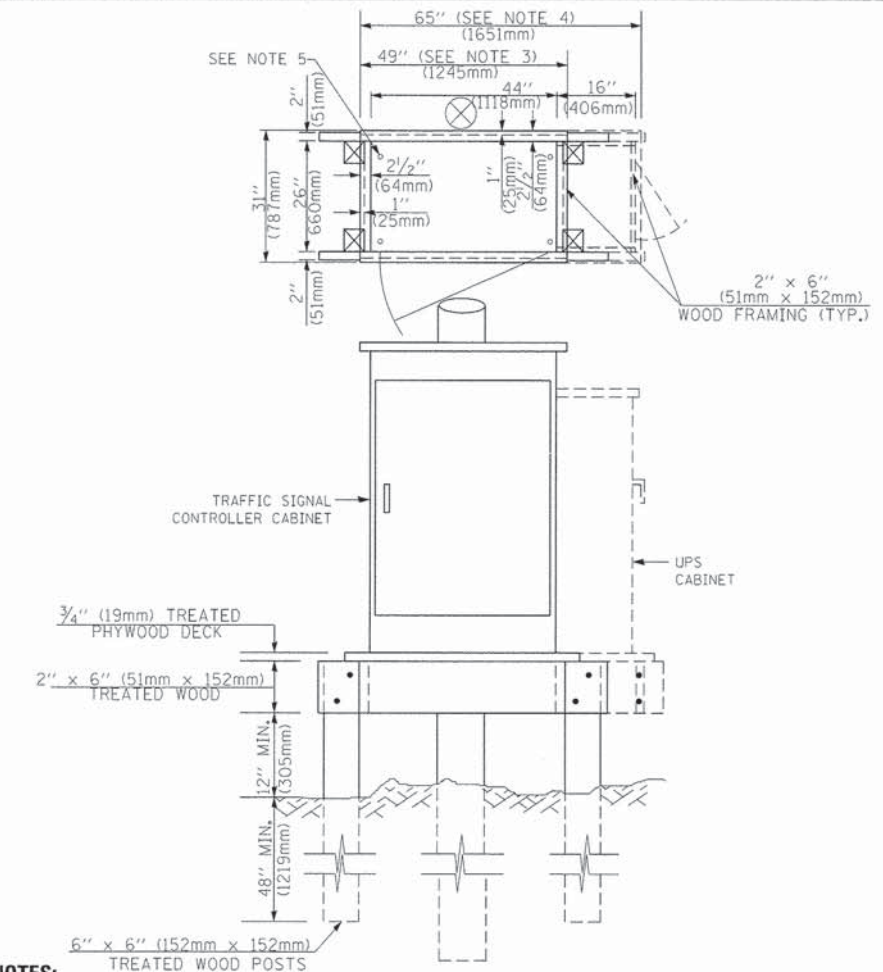


TOP VIEW

NOTE:
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**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)
	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	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

CHAMBERLAIN HAMILTON ASSOCIATES, INC.

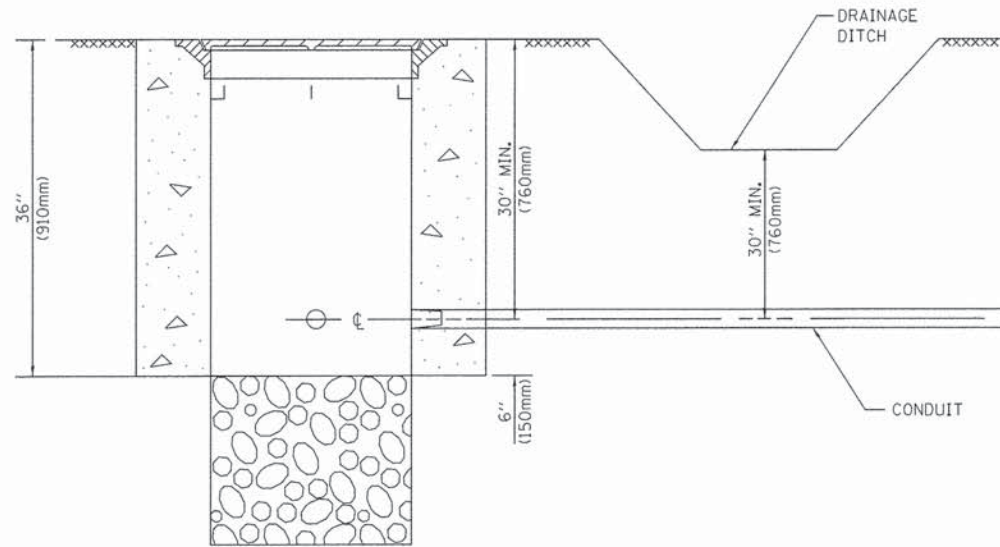
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Default	PLOT DATE = 11/23/2015	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

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

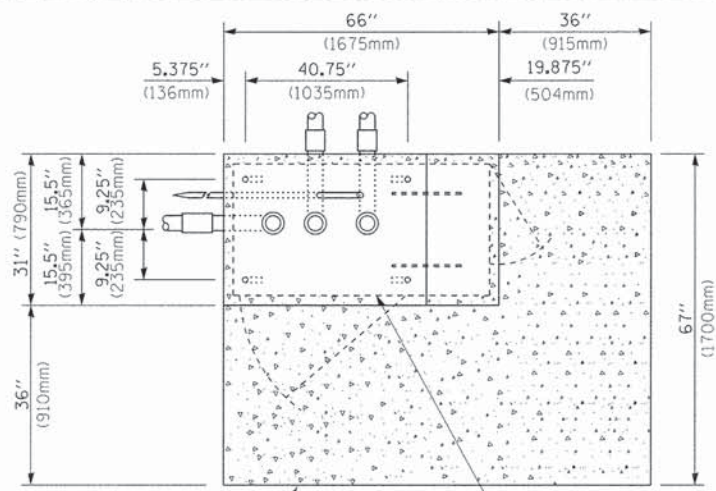
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	11
	TS-05	CONTRACT NO. 61C02		
		ILLINOIS FED. AID PROJECT		



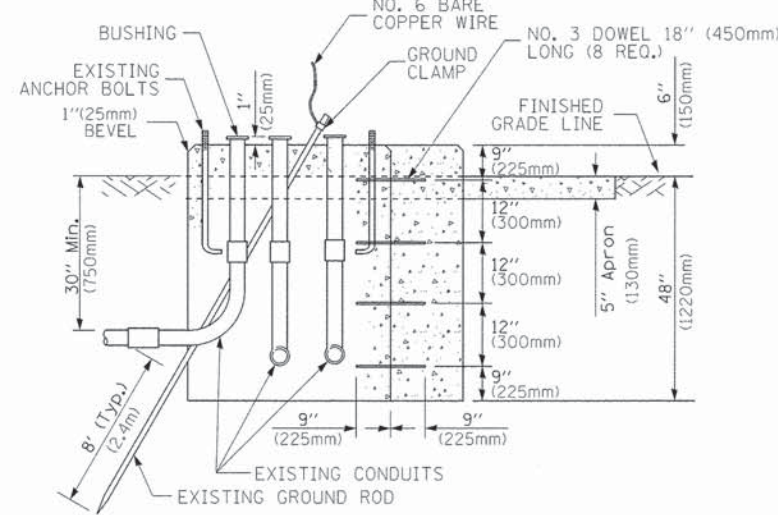
NOTES:

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)



TOP VIEW
(NOT TO SCALE)

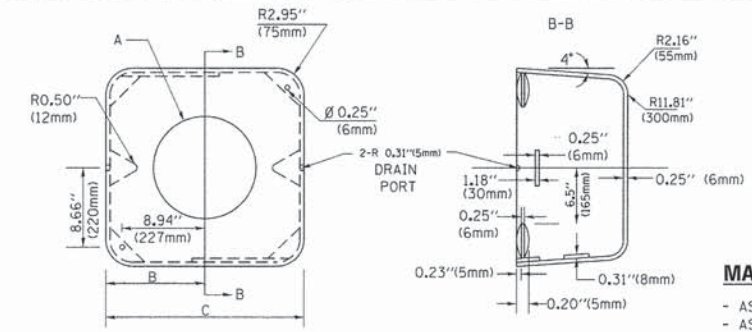


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

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	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5,4 m) POST MIN.]

NOTES:

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)

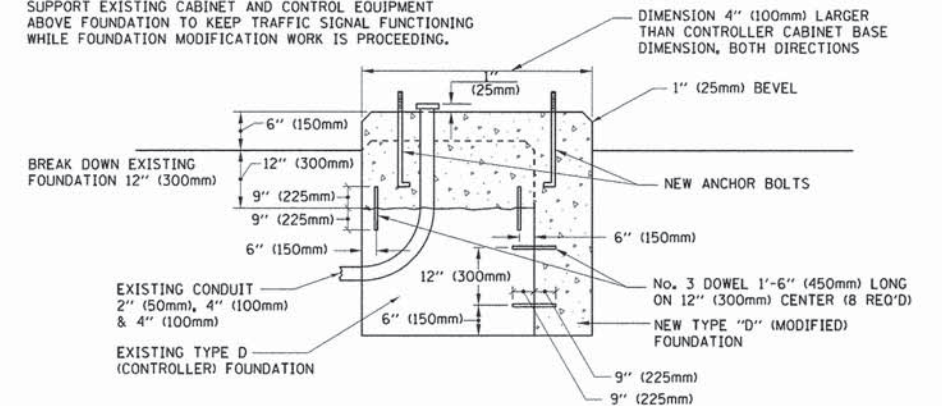
SHROUD

NOTES:

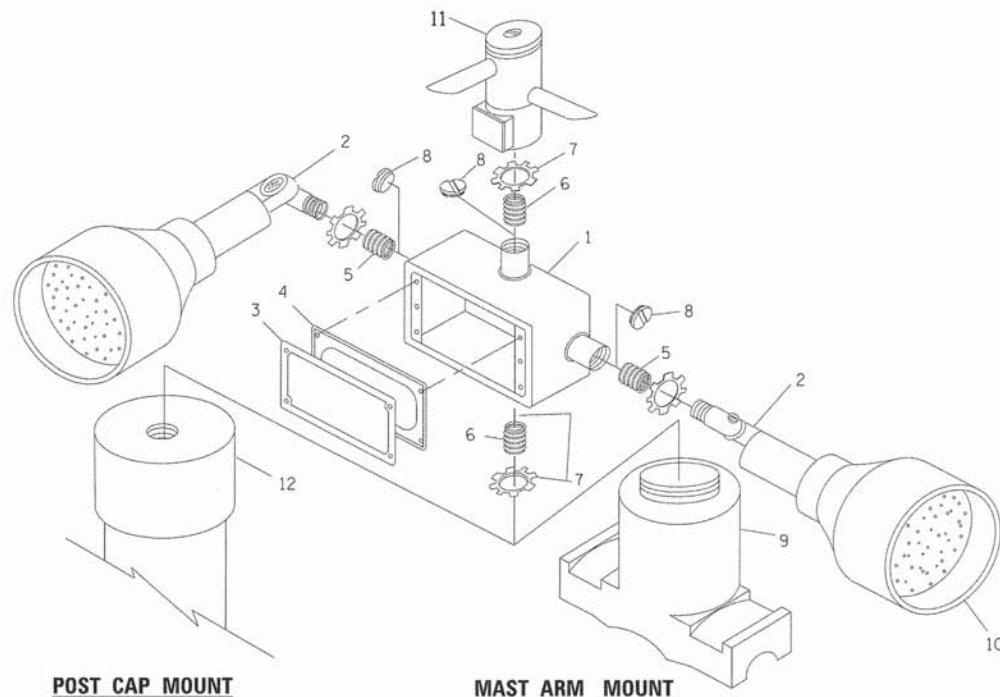
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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

NOTE:

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



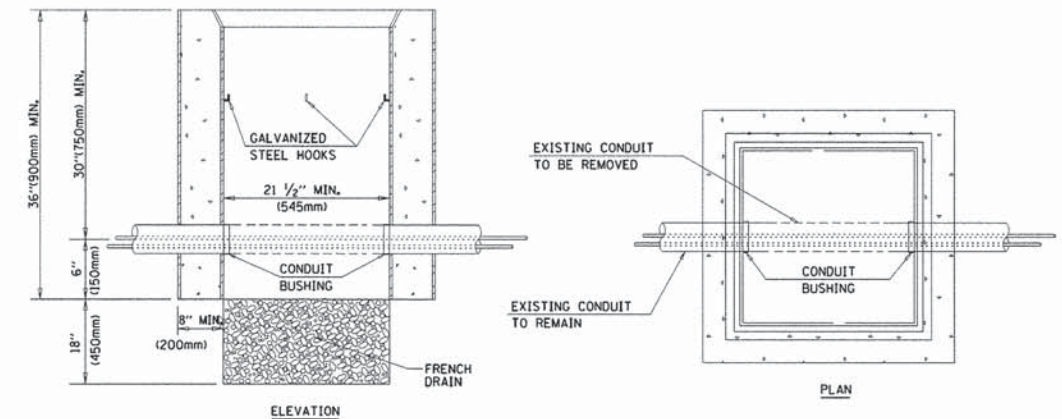
MODIFY EXISTING TYPE "D" FOUNDATION



POST CAP MOUNT

MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



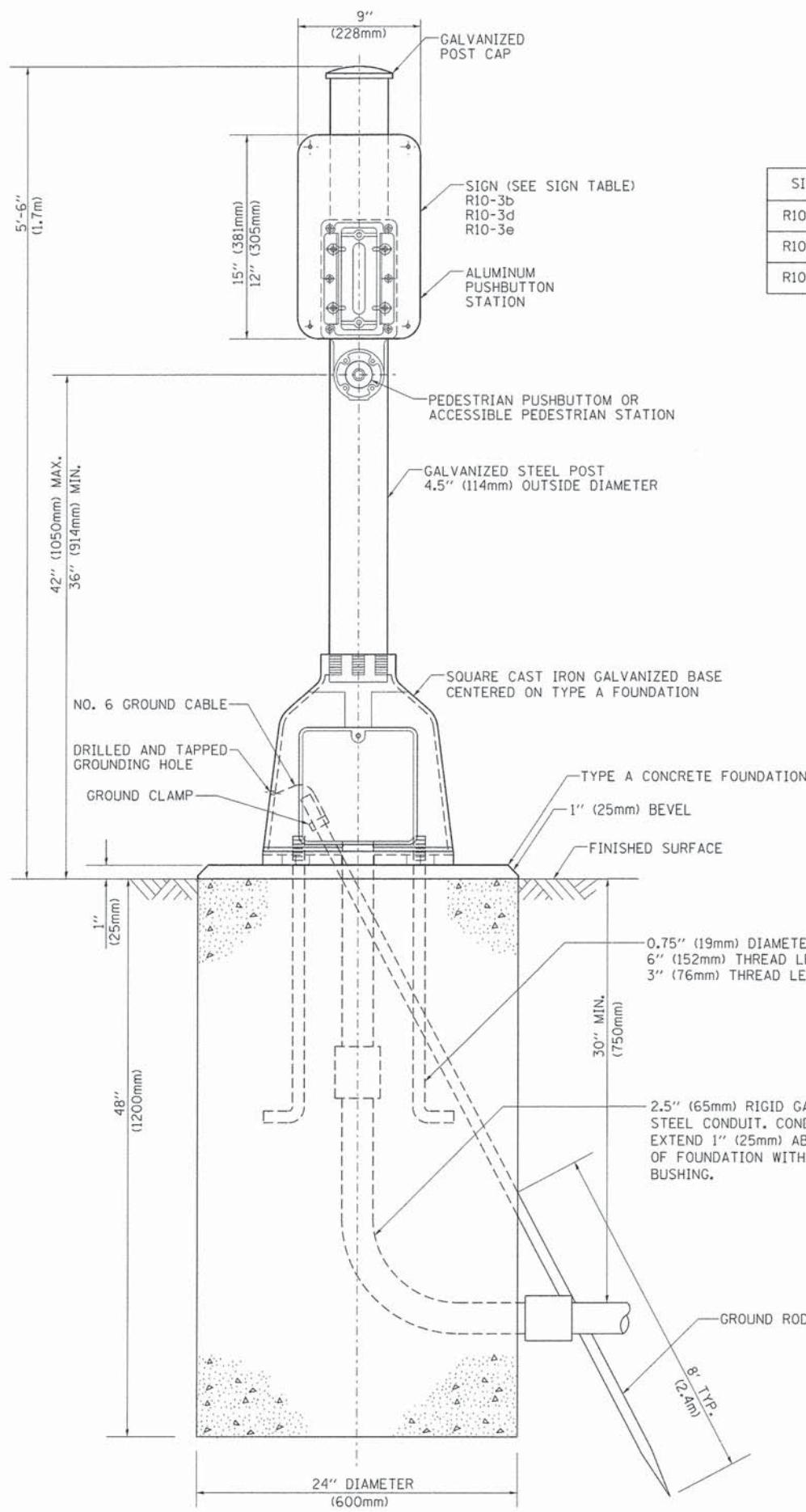
NOTES:

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

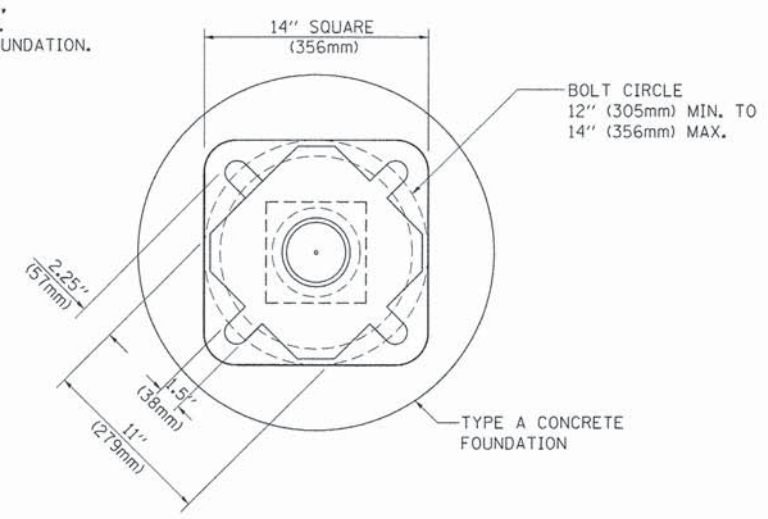
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GHA #4578.800	PLOT SCALE = 1:20	DRAWN - BCK	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	12
	TS-05		CONTRACT NO. 61C02	
[ILLINOIS] FED. AID PROJECT				



SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

GHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = 0161C02-sht-details.IDOT-D1.07.dgn
 USER NAME = zwellsten
 GHA *4570.800
 Default

DESIGNED - DAG
 DRAWN - GND
 CHECKED - DAD
 DATE - 10/1/2012

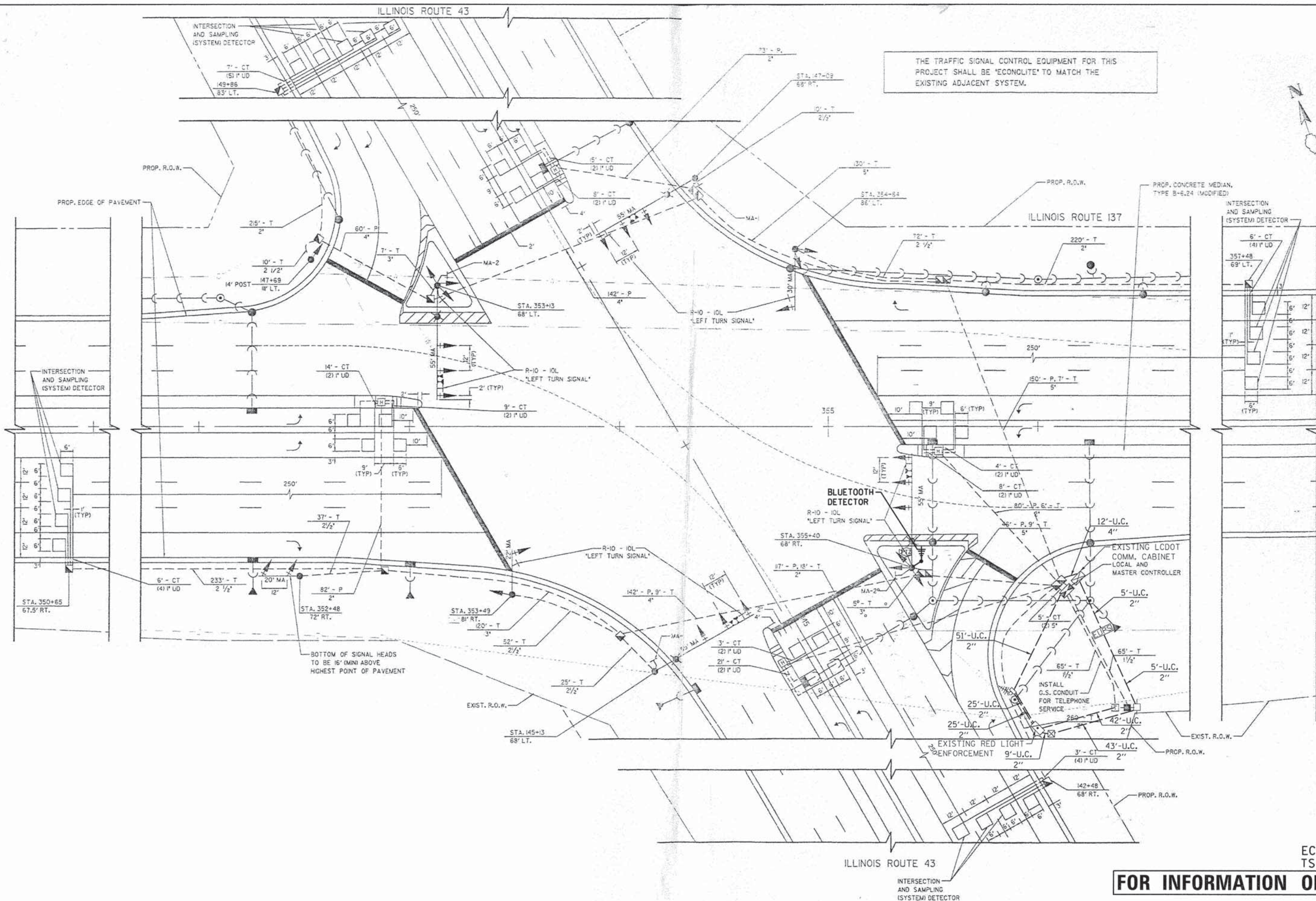
REVISED - DAG 1-1-14
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 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**
 SCALE: NONE SHEET NO. 7 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	13
TS-05			CONTRACT NO. 61C02	
ILLINOIS FED. AID PROJECT				

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE 'ECONCLITE' TO MATCH THE EXISTING ADJACENT SYSTEM.



BOTTOM OF SIGNAL HEADS TO BE 16" (MIN) ABOVE HIGHEST POINT OF PAVEMENT

GHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sht-TS_01.dgn
 USER NAME = zwo11stan
 PLOT SCALE = 1:20
 PLOT DATE = 11/23/2015

DESIGNED - JRD
 DRAWN - ZCW
 CHECKED - DPB
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
 IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)**
 SCALE: NONE SHEET OF SHEETS STA. TO STA.

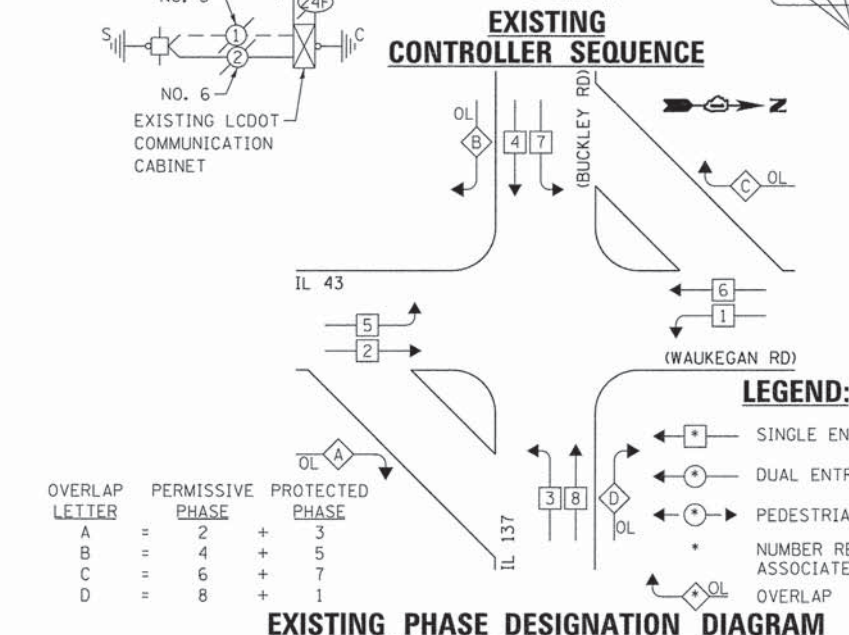
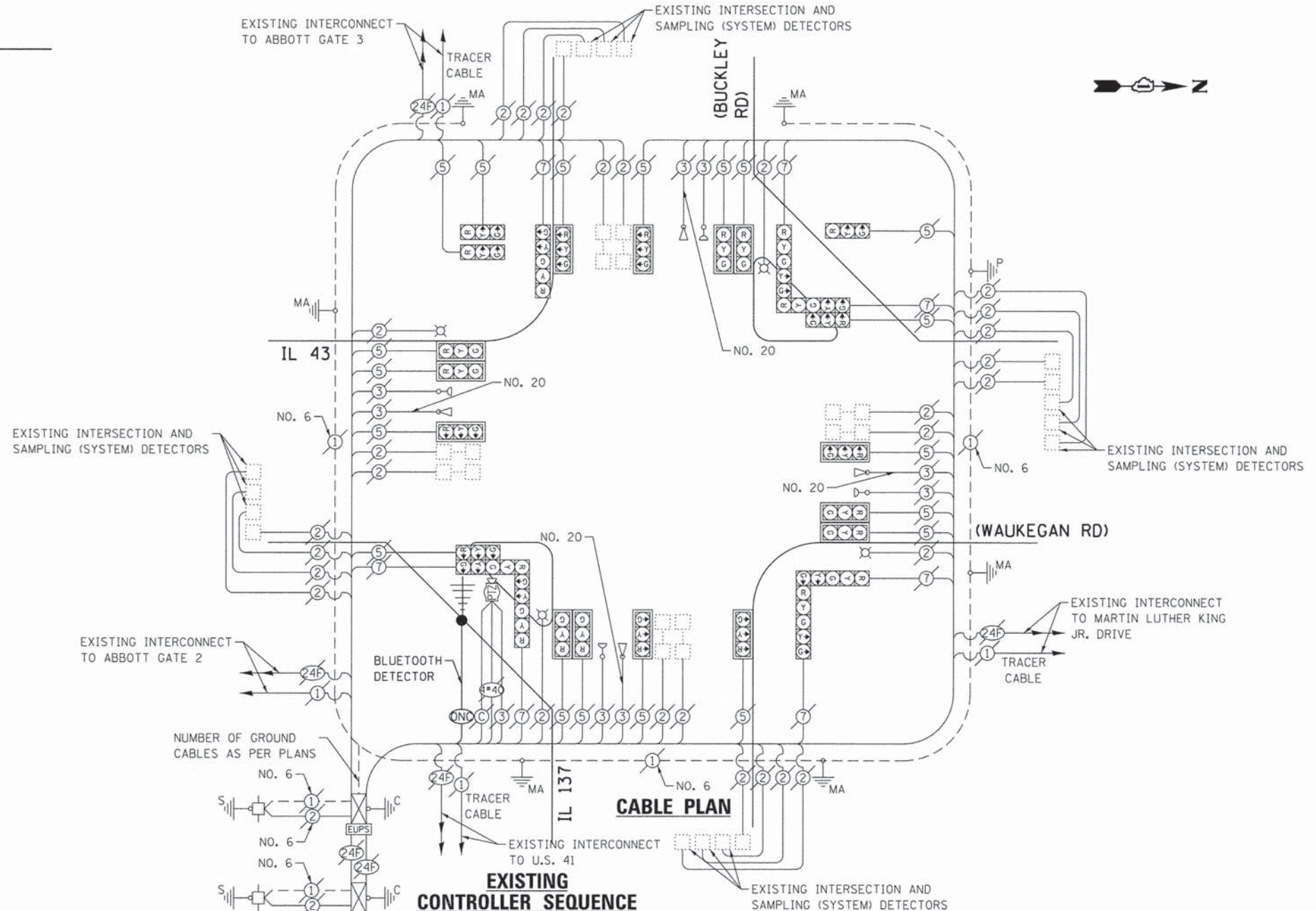
FOR INFORMATION ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	14
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 22
 TS 6800

SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)

NO. QUANT.	UNIT	DESCRIPTION
1.	132 FOOT	OUTDOOR RATED NETWORK CABLE
2.	1 EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3.	1 EACH	MEDIA CONVERTER
4.	1 EACH	BLUETOOTH DETECTOR



CONSTRUCTION NOTE:

① THE CONTRACTOR SHALL FURNISH AND INSTALL ONE MEDIA CONVERTER IN THE LAKE COUNTY DIVISION OF TRANSPORTATION COMMUNICATION CABINET. MAINTENANCE OF COMMUNICATION CABINET SHALL BE INCLUDED IN THE MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION PAY ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE	OPERATION		
		INCAND.	L.E.D.		
SIGNAL (RED)	26	135	17	0.50	221.0
SIGNAL (YELLOW)	26	135	25	0.25	162.5
SIGNAL (GREEN)	26	135	15	0.25	97.5
ARROW	14	135	12	0.10	16.8
FED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					772.8

ENERGY COSTS - BILLED TO: LAKE COUNTY DIVISION OF TRANS.
(ADDRESS) 600 WINCHESTER ROAD
(ADDRESS) LIBERTYVILLE, IL, 60048
ENERGY SUPPLY - CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COM-FD (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =	USER NAME = zwallston	DESIGNED - JRD	REVISED -
DIGIC02-shr-TS_02.dgn		DRAWN - ZCW	REVISED -
GHA #4570.000	PLOT SCALE = 1:20	CHECKED - DPB	REVISED -
Default	PLOT DATE = 11/23/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

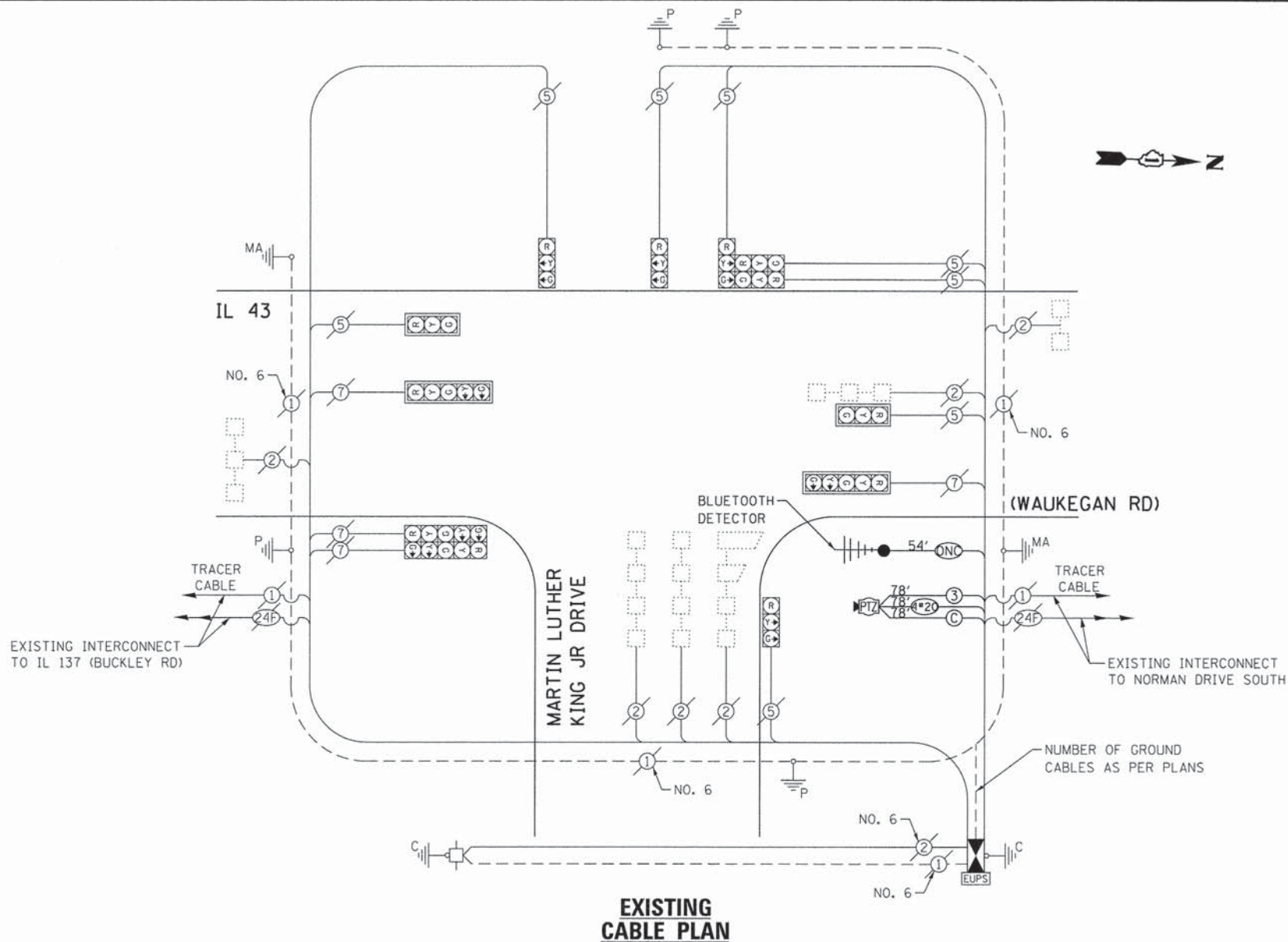
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	15
CONTRACT NO. 61C02			ECON 22 TS 6800	
ILLINOIS FED. AID PROJECT				

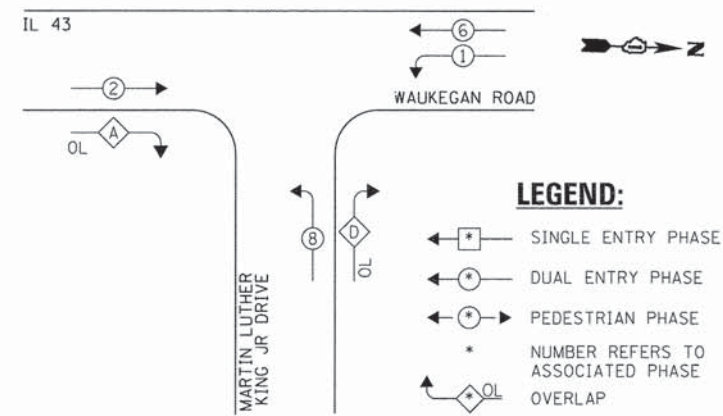
SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	78	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
3.	6	EACH	INDUCTIVE LOOP DETECTOR
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
6.	78	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
7.	78	FOOT	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4C
8.	1	EACH	RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM
9.	1	EACH	REMOTE CONTROLLED VIDEO SYSTEM
10.	1	EACH	LAYER II (DATALINK) SWITCH
11.	1	EACH	VIDEO ENCODER
12.	54	FOOT	OUTDOOR RATED NETWORK CABLE
13.	1	EACH	BLUETOOTH DETECTOR
14.	1	EACH	CAMERA MOUNTING ASSEMBLY



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

EXISTING & PROPOSED CONTROLLER SEQUENCE



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	75.0
SIGNAL (GREEN)	12	135	15	0.25	45.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	-
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					506.6

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHALMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

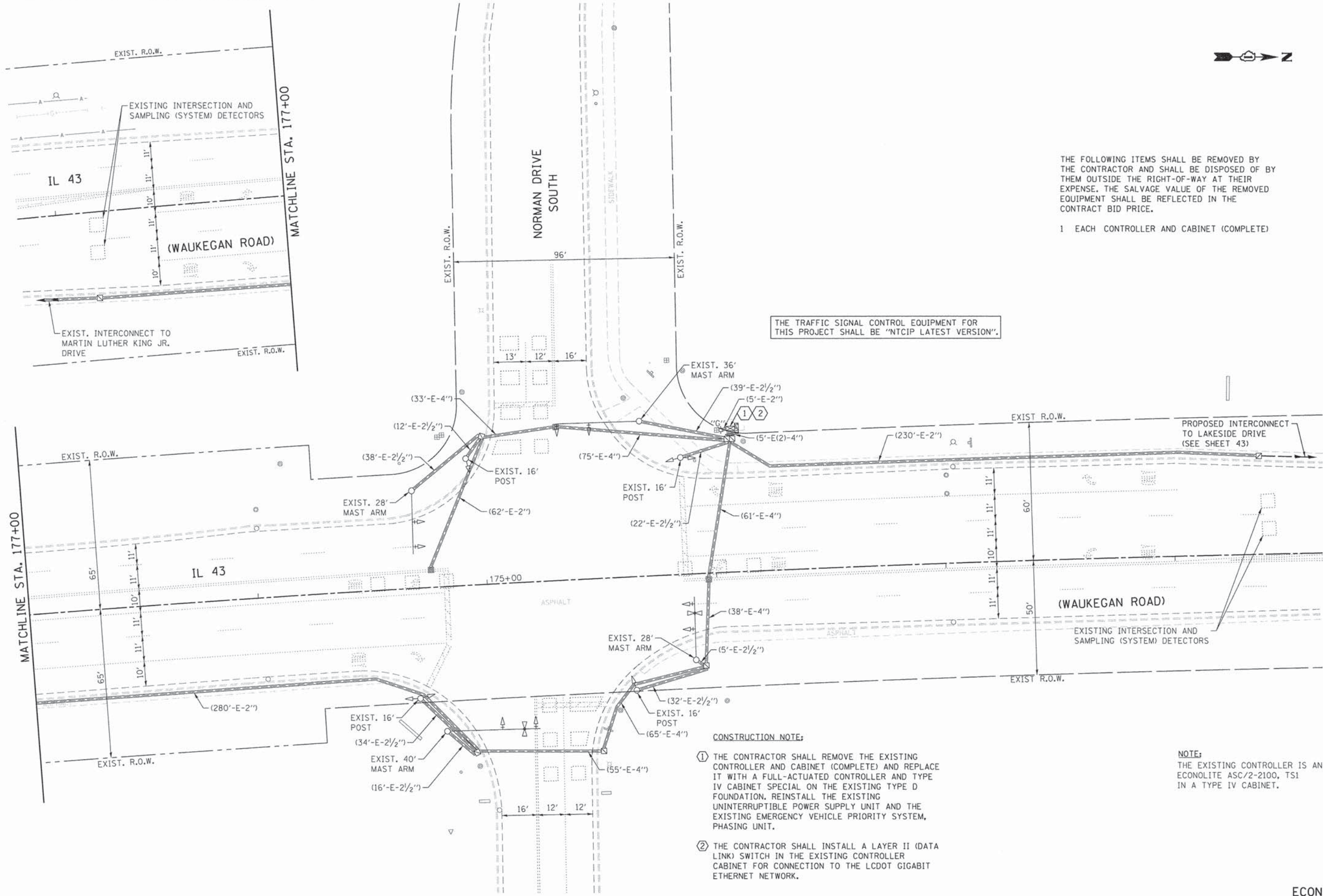
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GHA #4570.800	PLOT SCALE = 1:20	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM
IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	17
CONTRACT NO. 61C02				
ILLINOIS FED. AID PROJECT				

ECON 22
 TS 6810



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)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

- CONSTRUCTION NOTE:**
- ① THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND CABINET (COMPLETE) AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER AND TYPE IV CABINET SPECIAL ON THE EXISTING TYPE D FOUNDATION. REINSTALL THE EXISTING UNINTERRUPTIBLE POWER SUPPLY UNIT AND THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT.
 - ② THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER CABINET FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/2-2100, TS1 IN A TYPE IV CABINET.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sht-TS_05.dgn
GHA *4570.800
Default

USER NAME = zwillsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

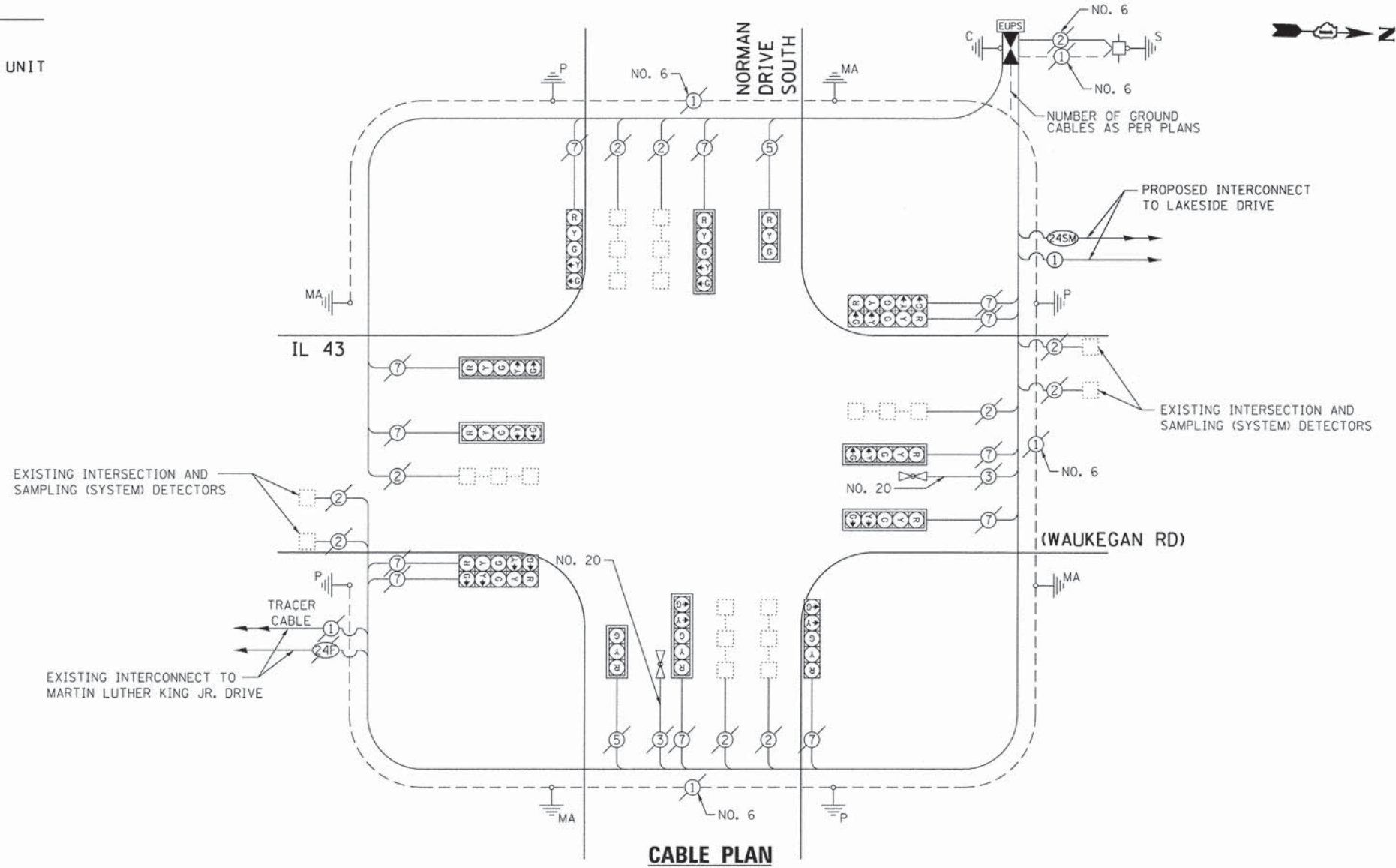
**TRAFFIC SIGNAL MODIFICATION PLAN
IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH**
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	18
CONTRACT NO. 61C02				
ILLINOIS FED. AID PROJECT				

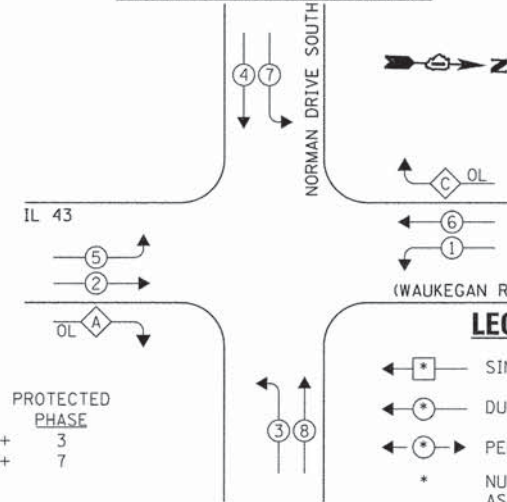
ECON 22
TS 21695

SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH

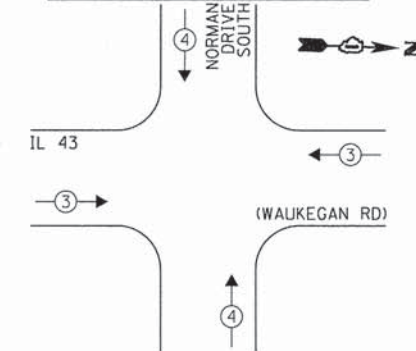
NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	10	EACH	INDUCTIVE LOOP DETECTOR
3.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
6.	1	EACH	RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM
7.	1	EACH	LAYER II (DATALINK) SWITCH



EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◐ DUAL ENTRY PHASE
- ◑ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- ◊ OVERLAP

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
C	= 6	+ 7

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE INCAND.	OPERATION L.E.D.		
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	24	135	12	0.10	28.8
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					412.8

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
 (ADDRESS) 100 N. MLK JR. DRIVE
 (ADDRESS) WAUKEGAN IL 60085
 ENERGY SUPPLY - CONTACT: FERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 43 (WAUKEGAN RD) AND NORMAN DRIVE SOUTH

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	19
			CONTRACT NO. 61C02	
[ILLINOIS] FED. AID PROJECT				

GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =	USER NAME = zwellston	DESIGNED - JRD	REVISED -
D161C02-shr-TS.06.dgn		DRAWN - JPW	REVISED -
GHA *4570.B00		CHECKED - DPB	REVISED -
Default	PLOT DATE = 11/23/2015	DATE -	REVISED -

ECON 22
TS 21695

SCALE: NONE SHEET OF SHEETS STA. TO STA.



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.

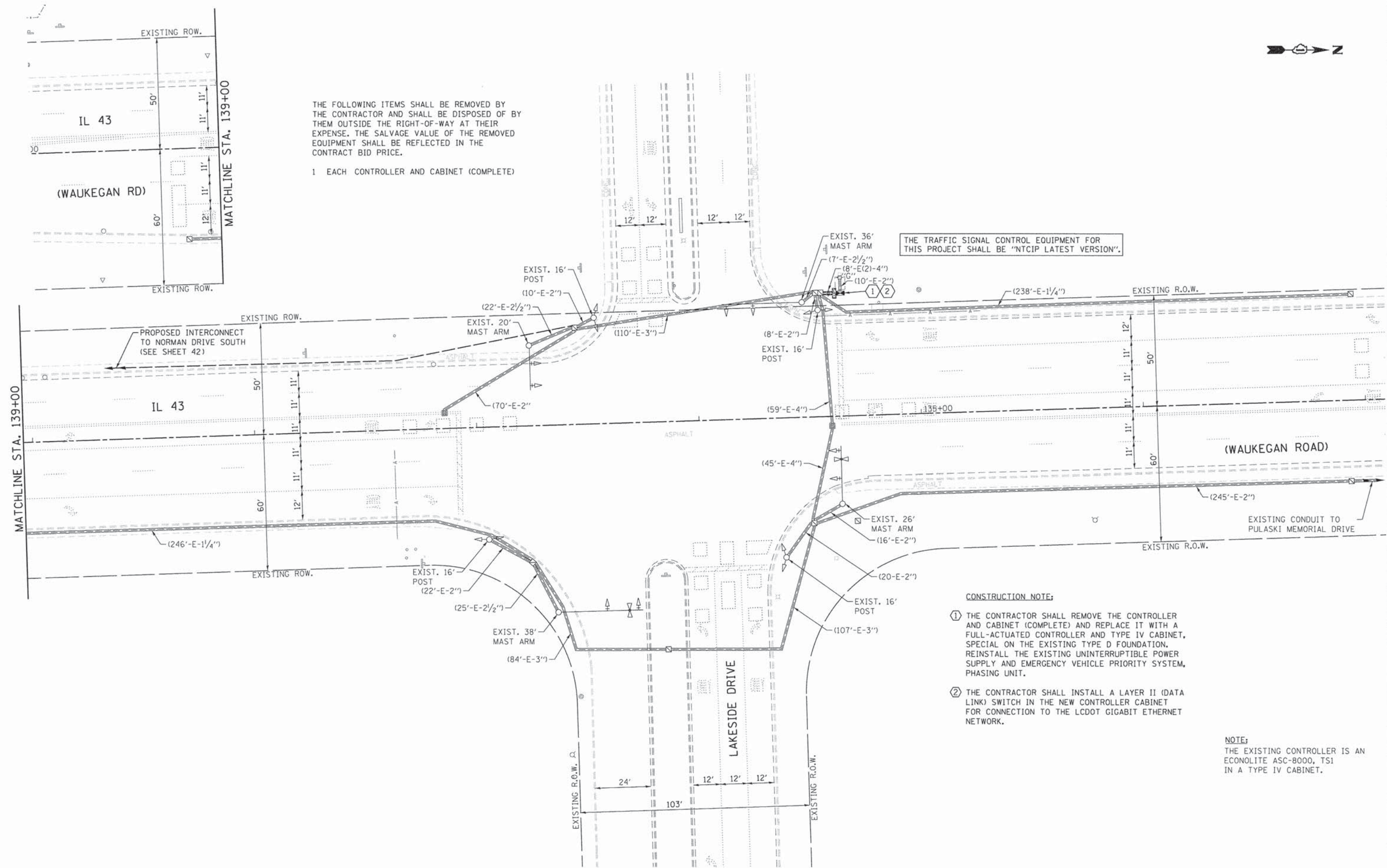
- 1 EACH CONTROLLER AND CABINET (COMPLETE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE CONTROLLER AND CABINET (COMPLETE) AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL ON THE EXISTING TYPE D FOUNDATION. REINSTALL THE EXISTING UNINTERRUPTIBLE POWER SUPPLY AND EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT.
- ② THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE NEW CONTROLLER CABINET FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC-8000, TS1 IN A TYPE IV CABINET.



GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sht-TS_07.dgn
GHA *4570.800
Default

USER NAME = zwoilsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

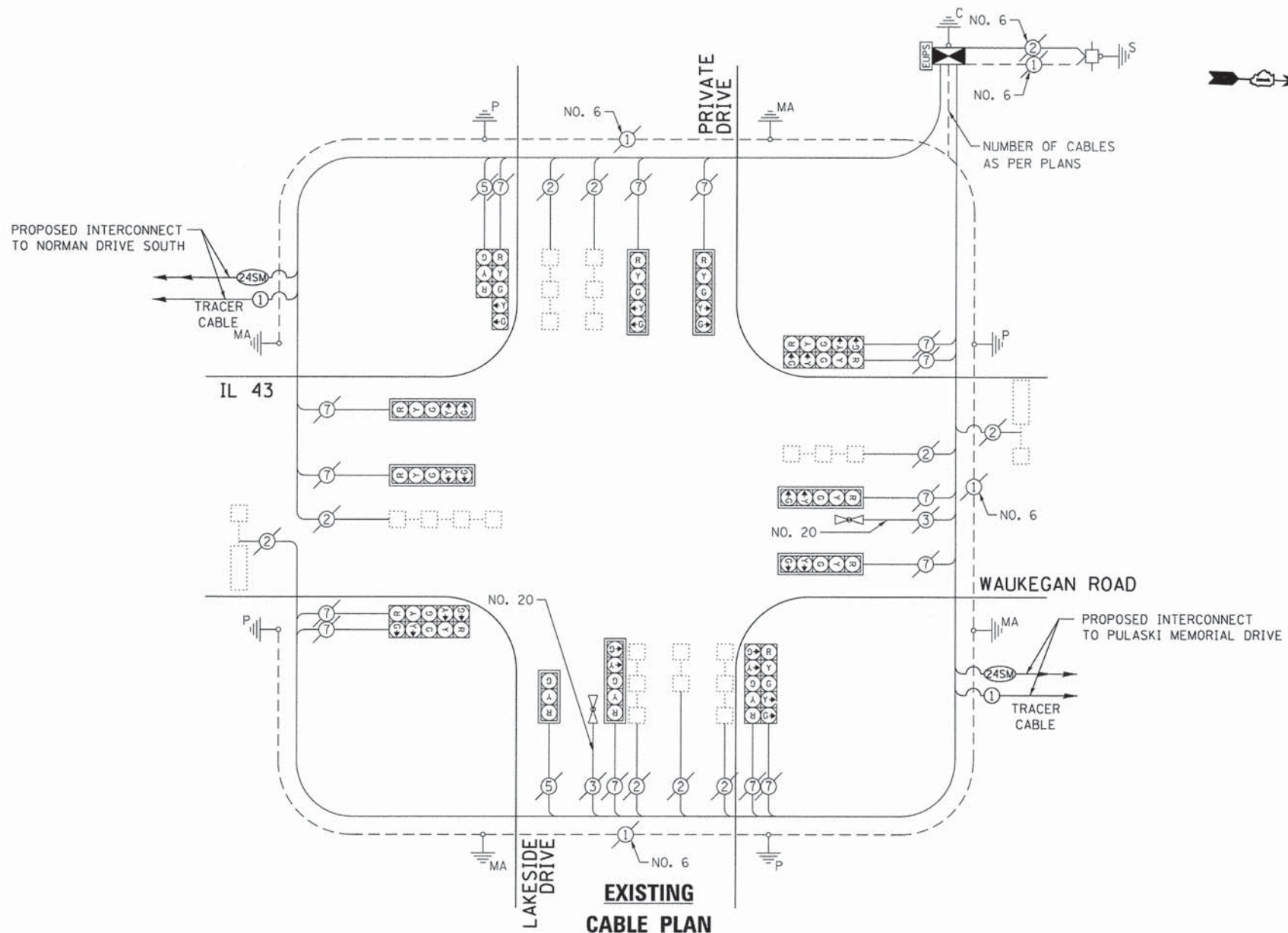
**TRAFFIC SIGNAL MODIFICATION PLAN
IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE**
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	20
				CONTRACT NO. 61C02
ILLINOIS FED. AID PROJECT				

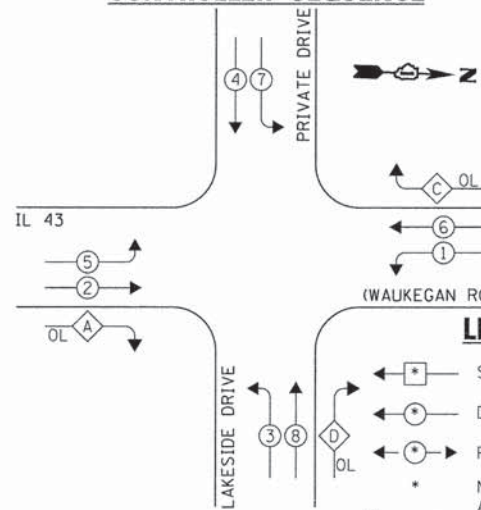
TS 14197

SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	9	EACH	INDUCTIVE LOOP DETECTOR
3.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
6.	1	EACH	RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM
7.	1	EACH	LAYER II (DATALINK) SWITCH

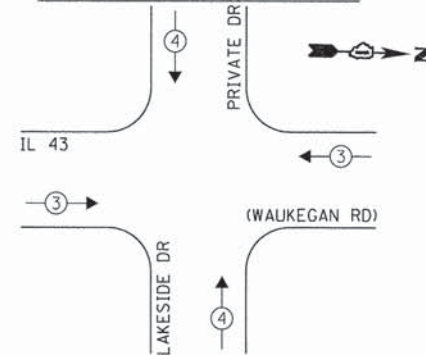


EXISTING AND PROPOSED CONTROLLER SEQUENCE



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

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◐ DUAL ENTRY PHASE
- ◑ PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE (INCAND. L.E.D.)	OPERATION	
SIGNAL (RED)	16	135 17	0.50	136.0
SIGNAL (YELLOW)	16	135 25	0.25	100.0
SIGNAL (GREEN)	16	135 15	0.25	60.0
ARROW	28	135 12	0.10	33.6
PED. SIGNAL	-	90 25	1.00	-
CONTROLLER	1	- 100	1.00	100.0
LUMINAIRE	-	- 250	0.50	-
L.E.D. ST. NAME SIGN	-	- 64	0.50	-
VIDEO SYSTEM	-	- 150	1.00	-
BATTERY BACKUP	-	- 25	1.00	-
ILLUMINATED SIGN	-	- 25	0.05	-
TOTAL =				454.6

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. MLK JR. AVENUE
(ADDRESS) WAUKEGAN, IL 60188
ENERGY SUPPLY - CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE 'NTCIP LATEST VERSION'.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-sht-TS_08.dgn
GHA *4570.808
Default

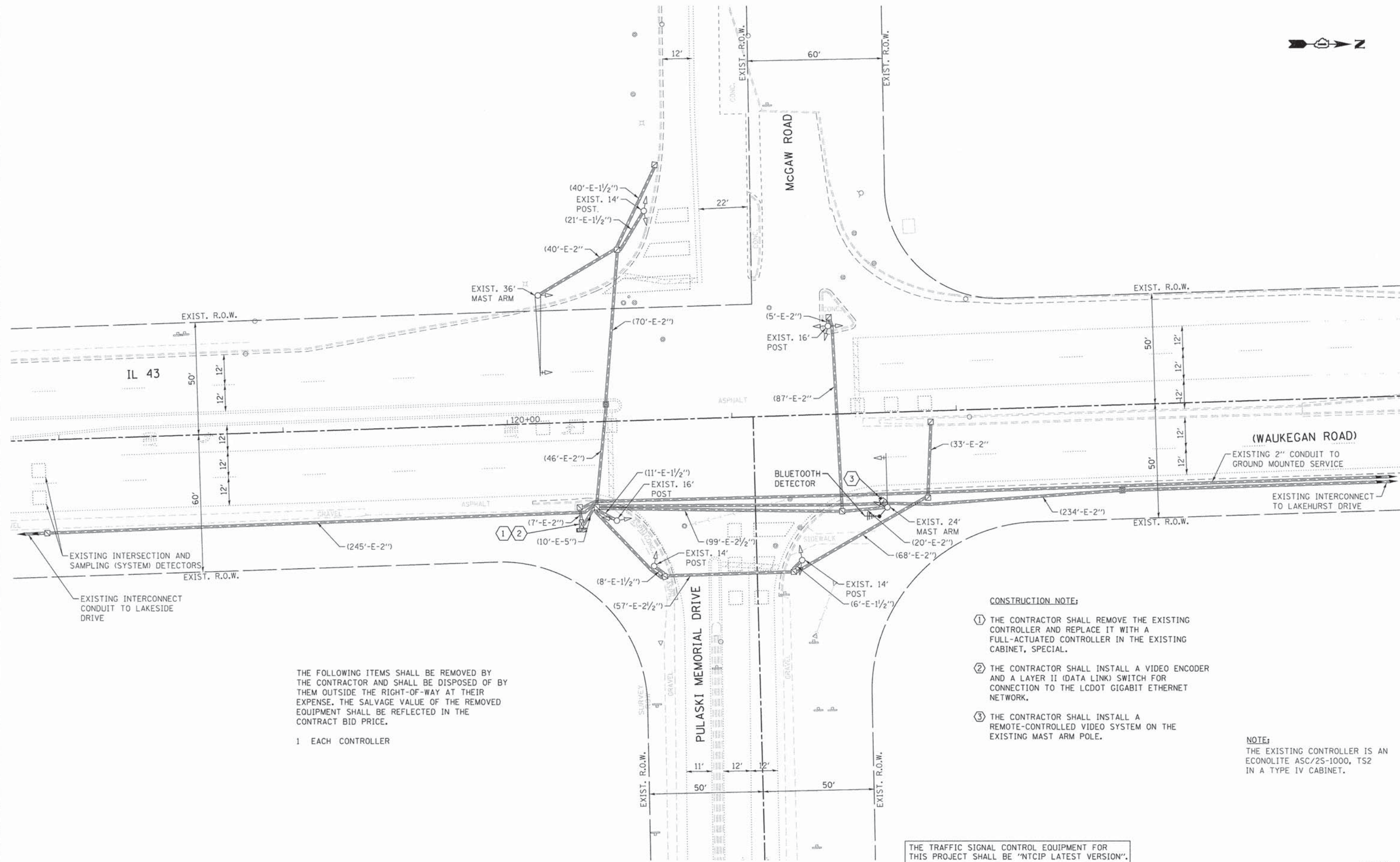
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PLOT SCALE = 1:20	DRAWN - JPW	REVISED -
PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 43 (WAUKEGAN RD) AND LAKESIDE DRIVE**

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	21
CONTRACT NO. 61C02			TS 14197	
ILLINOIS FED. AID PROJECT				



EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS
 EXISTING INTERCONNECT CONDUIT TO LAKESIDE DRIVE

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

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.
- ② THE CONTRACTOR SHALL INSTALL A VIDEO ENCODER AND A LAYER II (DATA LINK) SWITCH FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.
- ③ THE CONTRACTOR SHALL INSTALL A REMOTE-CONTROLLED VIDEO SYSTEM ON THE EXISTING MAST ARM POLE.

NOTE:
 THE EXISTING CONTROLLER IS AN ECONOLITE ASC/2S-1000, TS2 IN A TYPE IV CABINET.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-sht-TS_09.dgn
 GHA #4570.800
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USER NAME = zwilsten
 PLOT SCALE = 1:20
 PLOT DATE = 11/23/2015

DESIGNED - JRD
 DRAWN - JPW
 CHECKED - DPB
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
 IL 33 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE /McGAW ROAD**

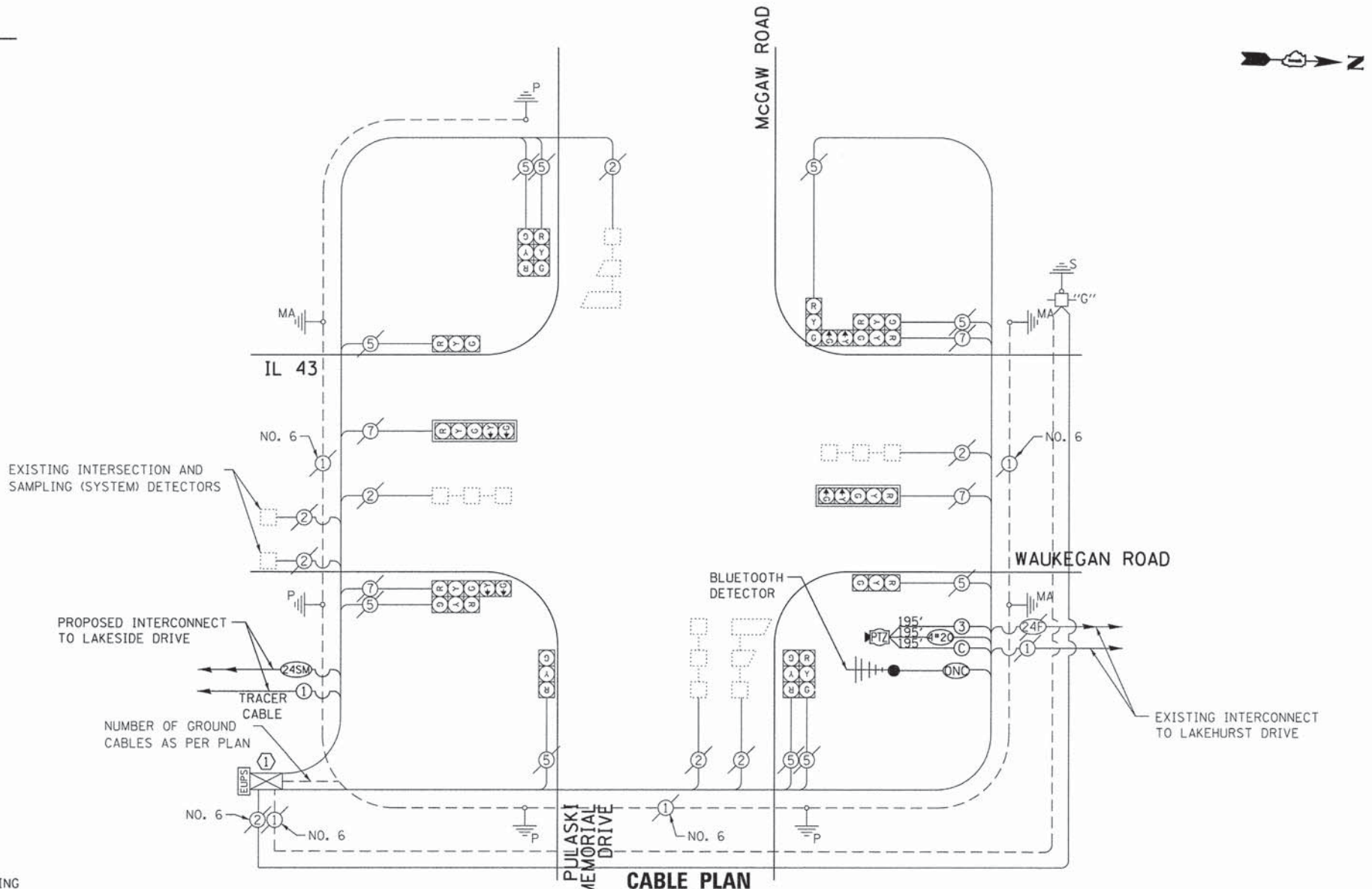
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	22
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 18
 TS 14904

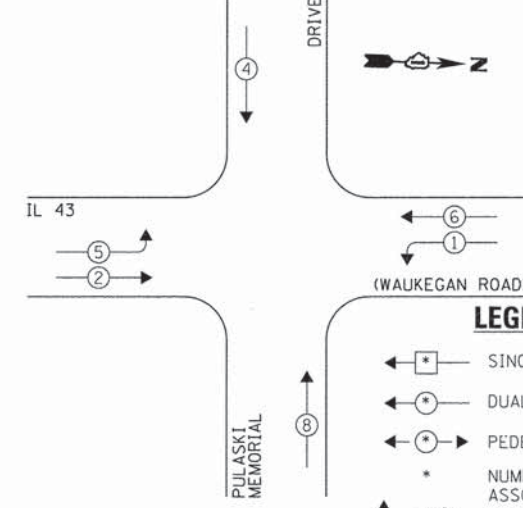
SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	195	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
3.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
4.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5.	195	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
6.	195	FOOT	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4C
7.	1	EACH	REMOTE CONTROLLED VIDEO SYSTEM
8.	1	EACH	LAYER II (DATALINK) SWITCH
9.	1	EACH	VIDEO ENCODER
10.	132	FOOT	OUTDOOR RATED NETWORK CABLE
11.	1	EACH	BLUETOOTH DETECTOR
12.	1	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL
13.	1	EACH	CAMERA MOUNTING ASSEMBLY



CONSTRUCTION NOTE:
① THE CONTRACTOR SHALL REMOVE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.

EXISTING AND PROPOSED CONTROLLER SEQUENCE



LEGEND:
 ◀ * ▶ SINGLE ENTRY PHASE
 ◀ * ◀ DUAL ENTRY PHASE
 ◀ * ▶ PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE
 ◀ * ▶ OVERLAP

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE	OPERATION		
		INCAND.	L.E.D.		
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					518.6

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
 (ADDRESS) 100 N. MLK JR. AVE
 (ADDRESS) SCHLUMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-sht-TS_18.dgn	USER NAME = zwillstan	DESIGNED - JRD	REVISED -
GHA *4570.800	PLOT SCALE = 1:200	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES AND CABLE PLAN PHASE DESIGNATION DIAGRAM
 IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE /McGAW ROAD
 SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	23
CONTRACT NO. 61C02				
ILLINOIS FED. AID PROJECT				

ECON 18
TS 14904



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

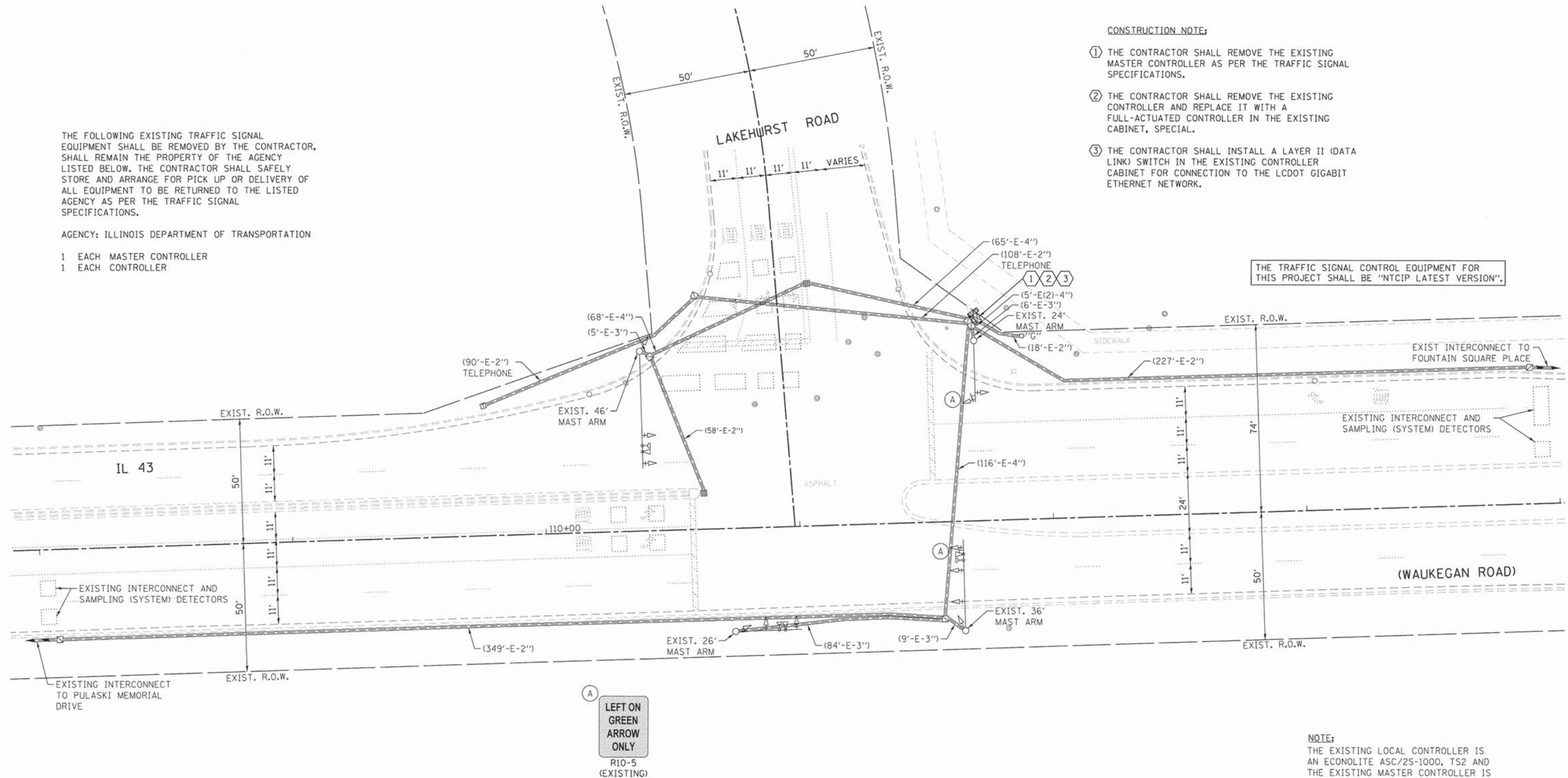
AGENCY: ILLINOIS DEPARTMENT OF TRANSPORTATION

- 1 EACH MASTER CONTROLLER
- 1 EACH CONTROLLER

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING MASTER CONTROLLER AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.
- ② THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.
- ③ THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER CABINET FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".



NOTE:
THE EXISTING LOCAL CONTROLLER IS AN ECONOLITE ASC/2S-1000, TS2 AND THE EXISTING MASTER CONTROLLER IS AN ECONOLITE ASC/2M-1000, BOTH IN A TYPE V CABINET.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sht-TS.11.dgn
GHA *4570.800
Default

USER NAME = zwo11sten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD**

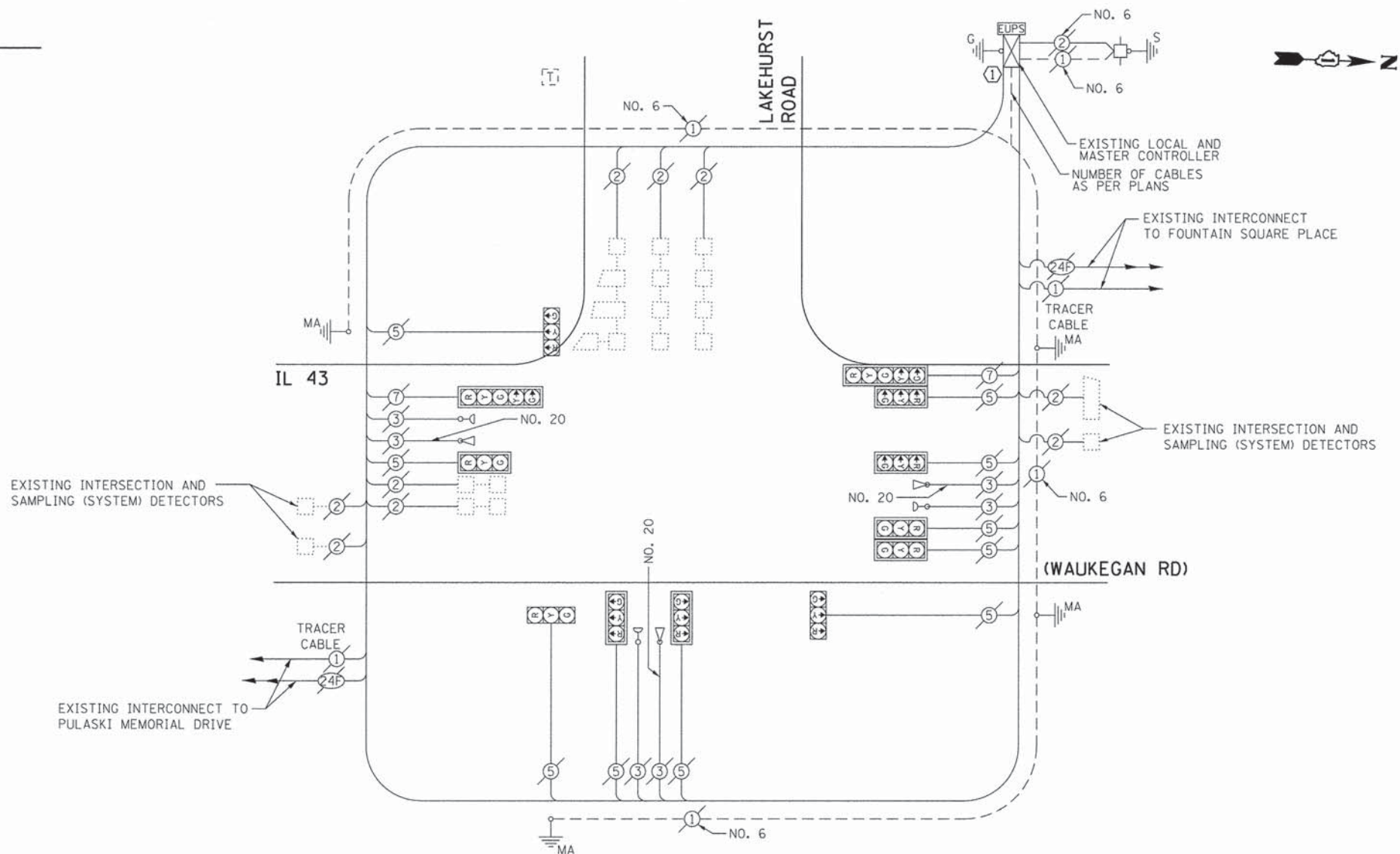
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	24
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 18
TS 14905

SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD

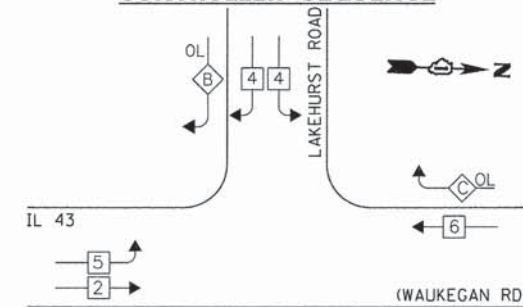
NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
4.	1	EACH	LAYER II (DATALINK) SWITCH
5.	1	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL



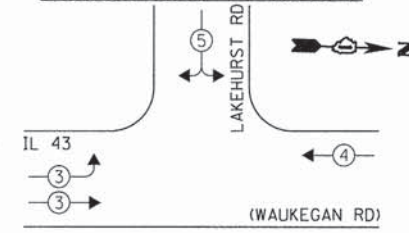
CABLE PLAN

CONSTRUCTION NOTE:
① THE CONTRACTOR SHALL REMOVE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.

EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- ◀ * → SINGLE ENTRY PHASE
 - ◀ * → DUAL ENTRY PHASE
 - ◀ * → PEDESTRIAN PHASE
 - * NUMBER REFERS TO ASSOCIATED PHASE
 - ◀ * OL → OVERLAP
- OVERLAP LETTER PERMISSIVE PHASE PROTECTED PHASE
- B = 4 + 5
- C = 6 + 4

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND. L.E.D.	OPERATION	
SIGNAL (RED)	12	135 17	0.50	102.0
SIGNAL (YELLOW)	12	135 25	0.25	75.0
SIGNAL (GREEN)	12	135 15	0.25	45.0
ARROW	4	135 12	0.10	4.8
PED. SIGNAL	-	90 25	1.00	-
CONTROLLER	1	- 100	1.00	100.0
LUMINAIRE	-	- 250	0.50	-
L.E.D. ST. NAME SIGN	-	- 64	0.50	-
VIDEO SYSTEM	-	- 150	1.00	-
BATTERY BACKUP	-	- 25	1.00	25.0
ILLUMINATED SIGN	-	- 25	0.05	-
TOTAL =				351.8

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. MILK JR. AVENUE
(ADDRESS) WAUKEGAN, IL

ENERGY SUPPLY - CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-shr-TS.12.dgn	USER NAME = zwillsten	DESIGNED - JRD	REVISED -
GHA *4570.800	PLOT SCALE = 1:200	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

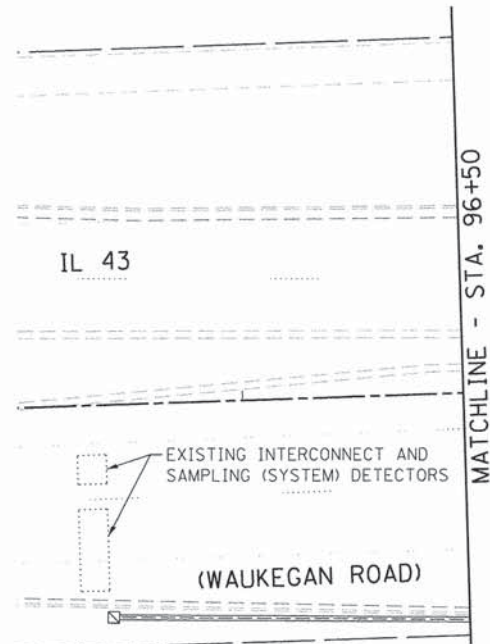
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 43 (WAUKEGAN RD) AND LAKEHURST ROAD**

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	25
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 18
TS 14905



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

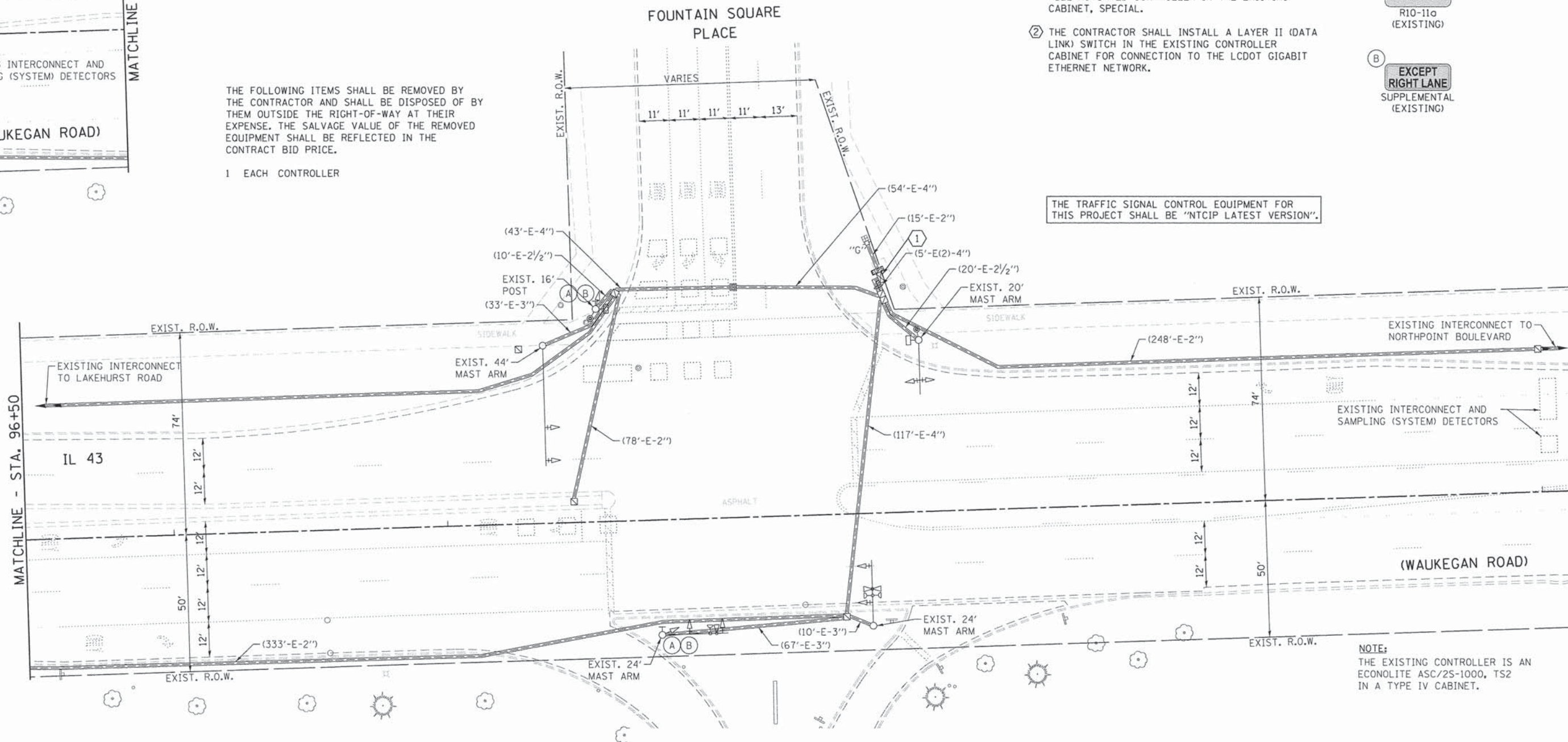
CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.
- ② THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER CABINET FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.

A
NO TURN ON RED
R10-11a
(EXISTING)

B
EXCEPT RIGHT LANE
SUPPLEMENTAL
(EXISTING)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".



NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/2S-1000, TS2 IN A TYPE IV CABINET.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =	USER NAME = zwo1sten
D161C02-sht-TS.13.dgn	
GHA *4570.800	
Default	

DESIGNED - JRD	REVISD -
DRAWN - JPW	REVISD -
CHECKED - DPB	REVISD -
DATE -	REVISD -

DESIGNED - JRD	REVISD -
DRAWN - JPW	REVISD -
CHECKED - DPB	REVISD -
DATE -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE PLACE**

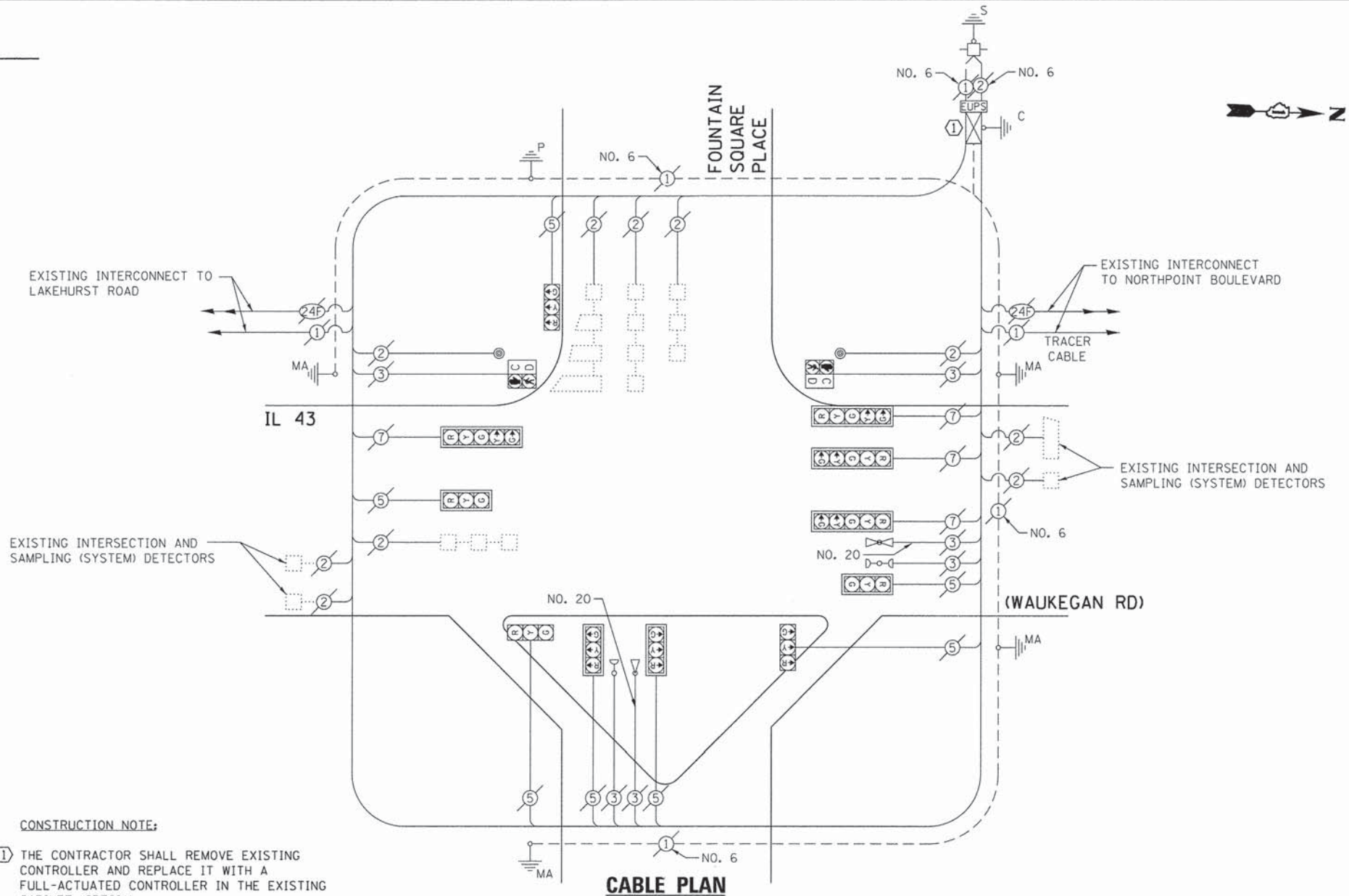
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	26
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 18
TS 14910

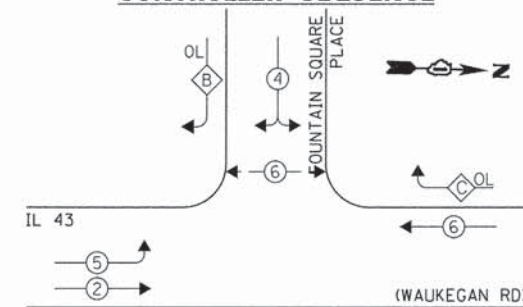
SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE BOULEVARD

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
4.	1	EACH	LAYER II (DATALINK) SWITCH
5.	1	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL

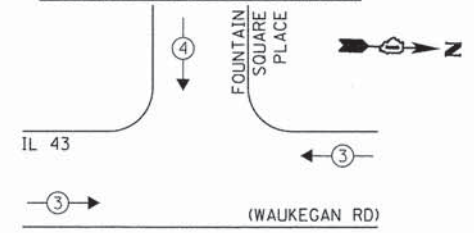


CONSTRUCTION NOTE:
 ① THE CONTRACTOR SHALL REMOVE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.

EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- ◻ SINGLE ENTRY PHASE
 - ◻ DUAL ENTRY PHASE
 - ◻ PEDESTRIAN PHASE
 - * NUMBER REFERS TO ASSOCIATED PHASE
 - ◻ OVERLAP
- OVERLAP LETTER PERMISSIVE PHASE PROTECTED PHASE
 B = 4 + 5
 C = 6 + 4

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
SIGNAL (RED)	11	135	17	0.50	93.5
SIGNAL (YELLOW)	11	135	25	0.25	68.75
SIGNAL (GREEN)	11	135	15	0.25	41.25
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	2	90	25	1.00	50.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					388.1

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
 (ADDRESS) 100 N. MLK JR. AVENUE
 (ADDRESS) WAUKEGAN, IL 60085
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 43 (WAUKEGAN RD) AND FOUNTAIN SQUARE PLACE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	27

CONTRACT NO. 61C02

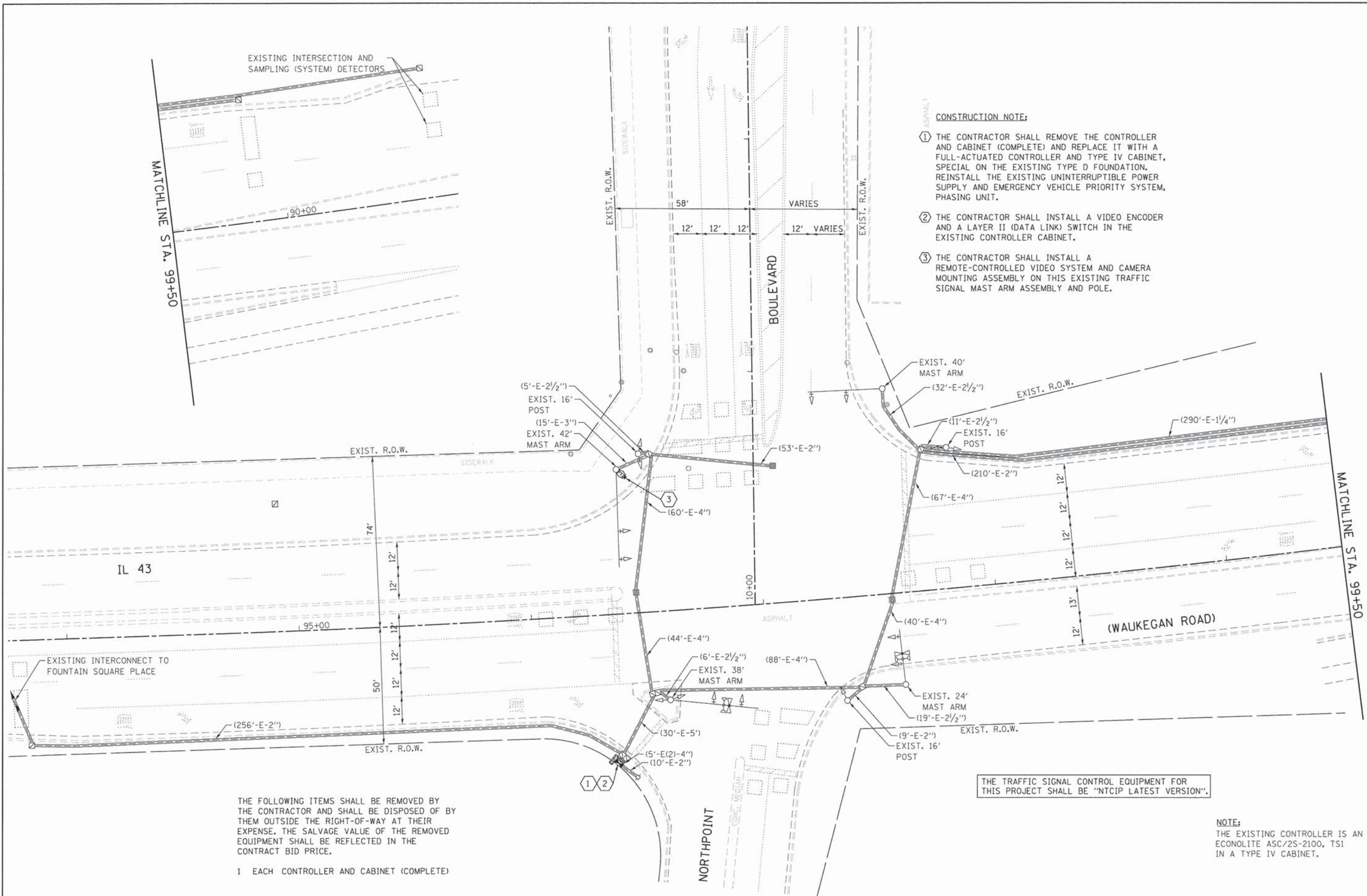
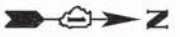
GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =	USER NAME = zwellsten	DESIGNED - JRD	REVISED -
D161C02-shr-TS.14.dgn		DRAWN - JPW	REVISED -
GHA *4570.800		CHECKED - DPB	REVISED -
Default		DATE -	REVISED -

ECON 18
 TS 14910

SCALE: NONE SHEET OF SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT



- CONSTRUCTION NOTE:**
- ① THE CONTRACTOR SHALL REMOVE THE CONTROLLER AND CABINET (COMPLETE) AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL ON THE EXISTING TYPE D FOUNDATION. REINSTALL THE EXISTING UNINTERRUPTIBLE POWER SUPPLY AND EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT.
 - ② THE CONTRACTOR SHALL INSTALL A VIDEO ENCODER AND A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER CABINET.
 - ③ THE CONTRACTOR SHALL INSTALL A REMOTE-CONTROLLED VIDEO SYSTEM AND CAMERA MOUNTING ASSEMBLY ON THIS EXISTING TRAFFIC SIGNAL MAST ARM ASSEMBLY AND POLE.

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)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/2S-2100, TS1 IN A TYPE IV CABINET.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\G1C02-shr-TS-15.dgn
GHA #4578.800
Default

USER NAME = zwallsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

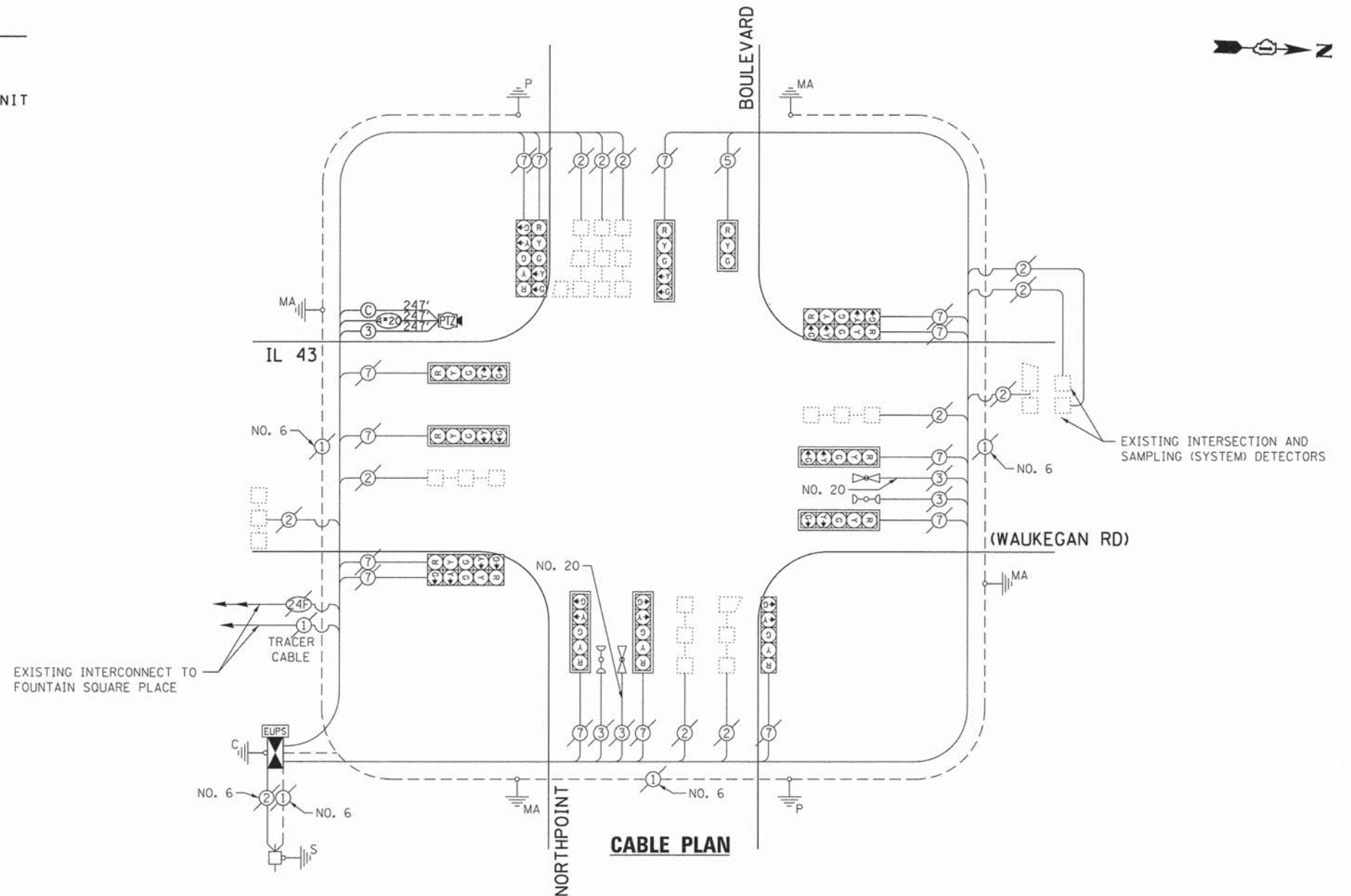
**TRAFFIC SIGNAL MODIFICATION PLAN
IL 43 (WAUKEGAN RD) AT NORTHPPOINT BOULEVARD**
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	28
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

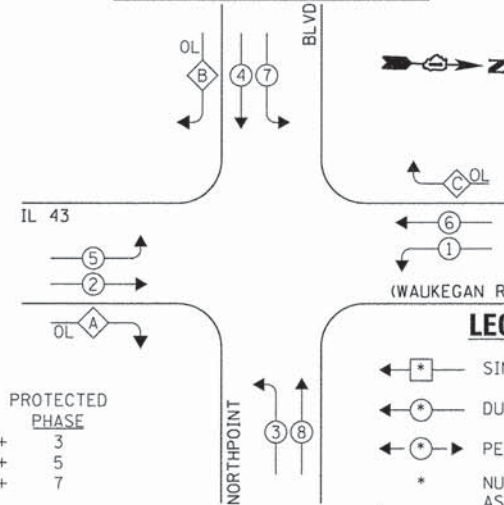
**ECON 18
TS 14915**

SCHEDULE OF QUANTITIES
IL 43 (WAUKEGAN RD) AT NORTHPOINT BOULEVARD

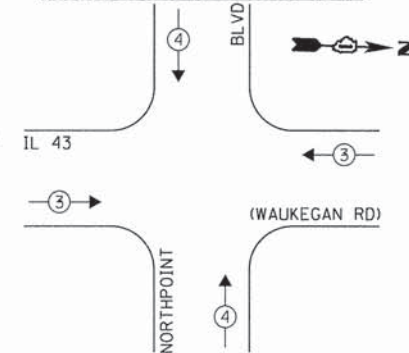
NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	241	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
3.	11	EACH	INDUCTIVE LOOP DETECTOR
4.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
5.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
7.	241	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
8.	241	FOOT	ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4C
9.	1	EACH	RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM
10.	1	EACH	REMOTE CONTROLLED VIDEO SYSTEM
11.	1	EACH	LAYER II (DATALINK) SWITCH
12.	1	EACH	VIDEO ENCODER
13.	1	EACH	CAMERA MOUNTING ASSEMBLY



EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◻ DUAL ENTRY PHASE
- ◻ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE OVERLAP

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

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE INCAND.	L.E.D.	OPERATION	
SIGNAL (RED)	15	135	17	0.50	127.5
SIGNAL (YELLOW)	15	135	25	0.25	93.75
SIGNAL (GREEN)	15	135	15	0.25	56.25
ARROW	28	135	12	0.10	33.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =				586.1	

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
 (ADDRESS) 100 N. MLK JR. AVENUE
 (ADDRESS) WAUKEGAN, IL 60085
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

FILE NAME = D161C02-sh1-TS_16.dgn	USER NAME = zwillston	DESIGNED - JRD	REVISED -
GHA *4570.800	PLOT SCALE = 1:200	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE			
IL 43 (WAUKEGAN RD) AND NORTHPOINT BOULEVARD			
SCALE: NONE	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	29
CONTRACT NO. 61C02				
ILLINOIS FED. AID PROJECT				

ECON 18
 TS 14915

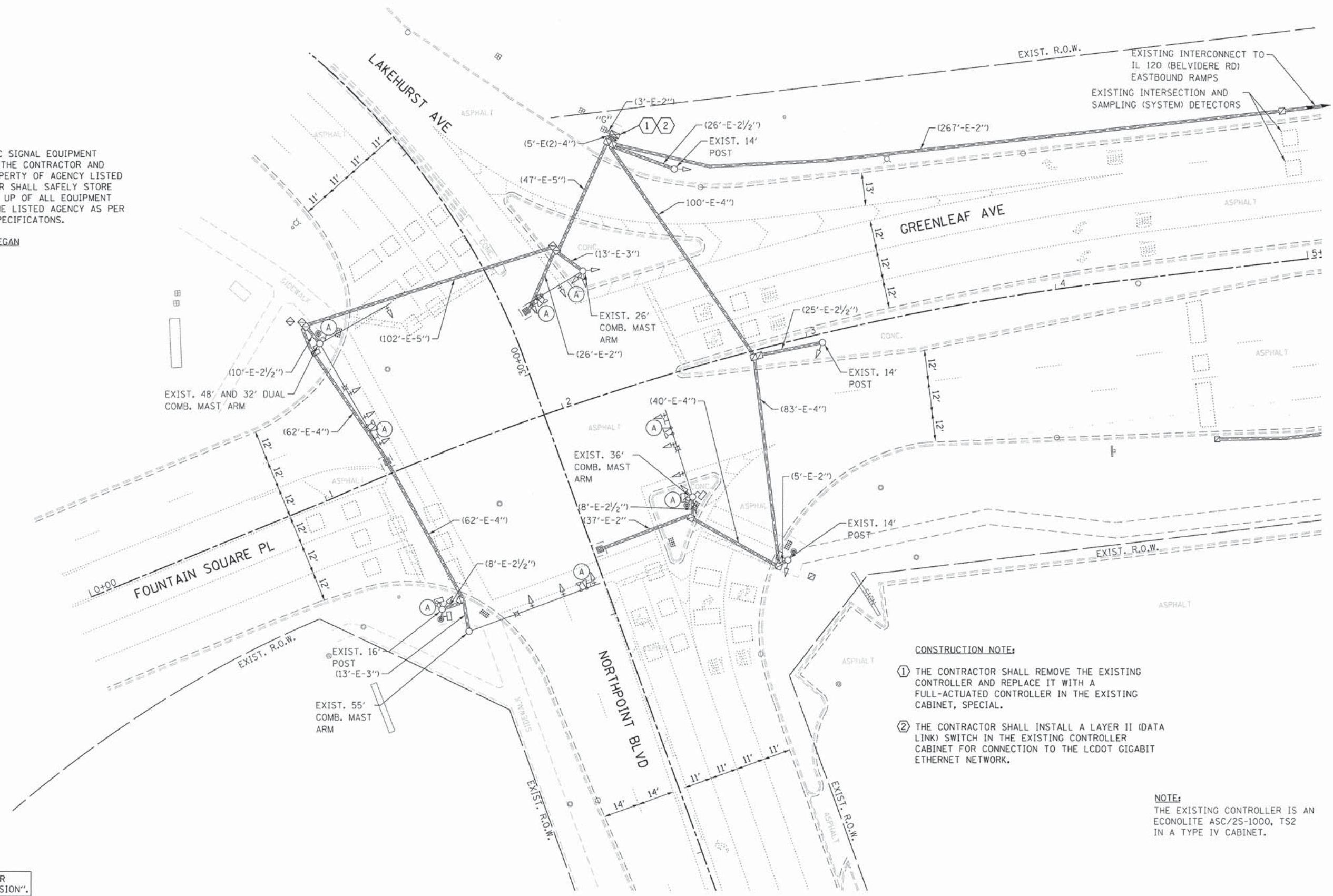


THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATONS.

AGENCY: CITY OF WAUKEGAN

1 EACH CONTROLLER

(A) LEFT ON GREEN ARROW ONLY
R10-5 (EXISTING)



CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.
- ② THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER CABINET FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/25-1000, TS2 IN A TYPE IV CABINET.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-shr-TS-17.dgn
GHA *4570.800
Default

USER NAME = zwallsten
PLOT SCALE = 1:200
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN - GREENLEAF AVENUE /
FOUNTAIN SQUARE PLACE AT LAKEHURST AVENUE /NORTHPOINT BLVD**

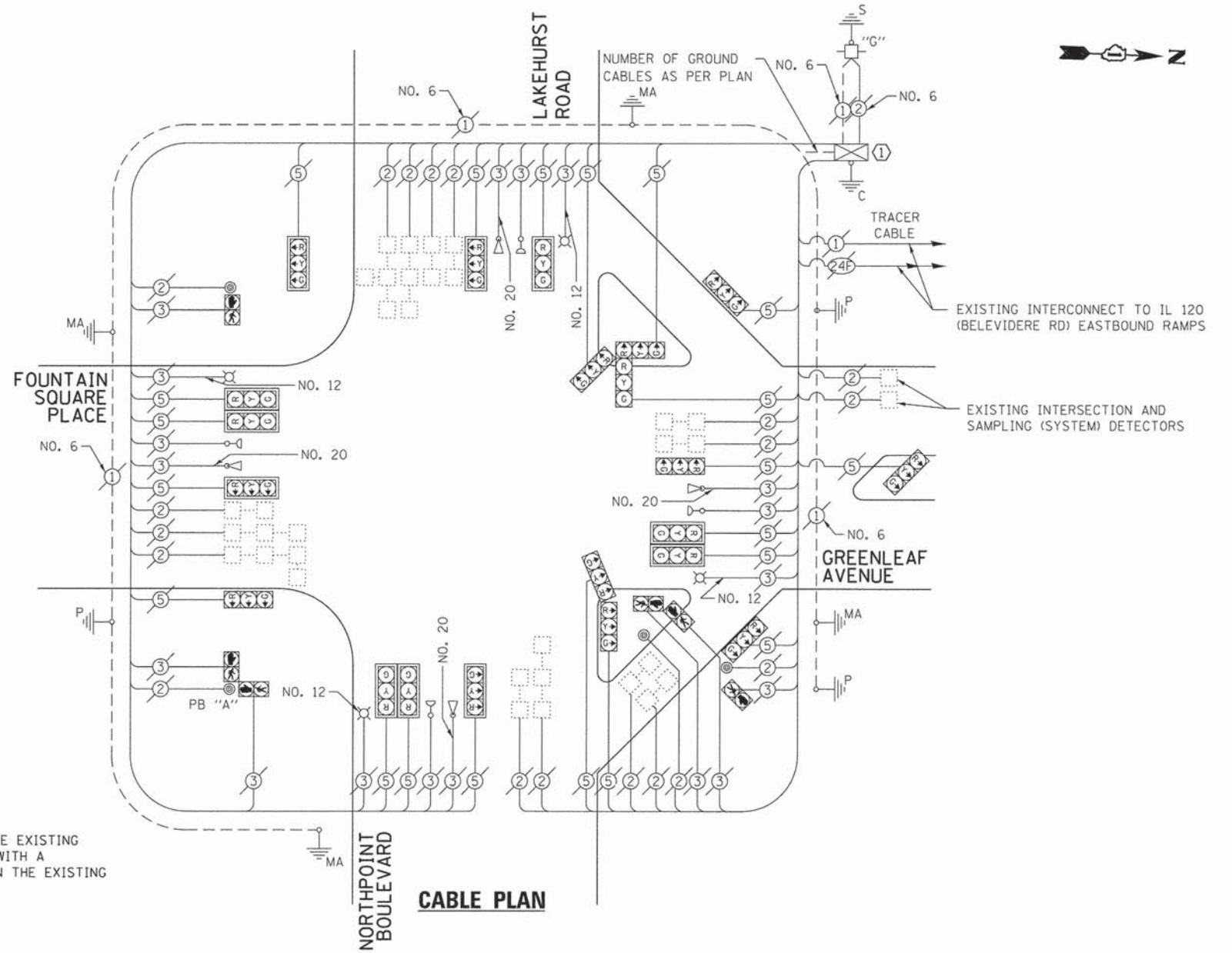
SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	30
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

SCHEDULE OF QUANTITIES

GREENLEAF AVENUE / FOUNTAIN SQUARE PLACE AT LAKEHURST AVENUE / NORTHPOINT BOULEVARD

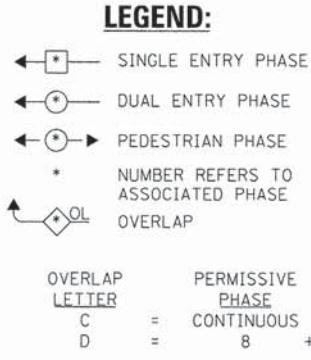
NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
3.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
4.	1	EACH	LAYER II (DATALINK) SWITCH
5.	1	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL



CONSTRUCTION NOTE:
 ① THE CONTRACTOR SHALL REMOVE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.

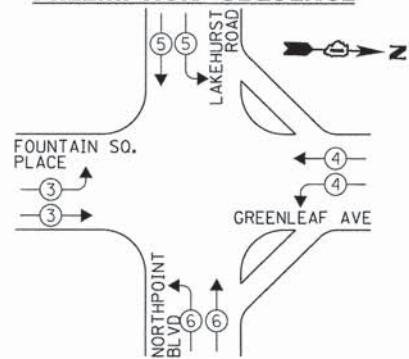
EXISTING AND PROPOSED CONTROLLER SEQUENCE

NOTE:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.

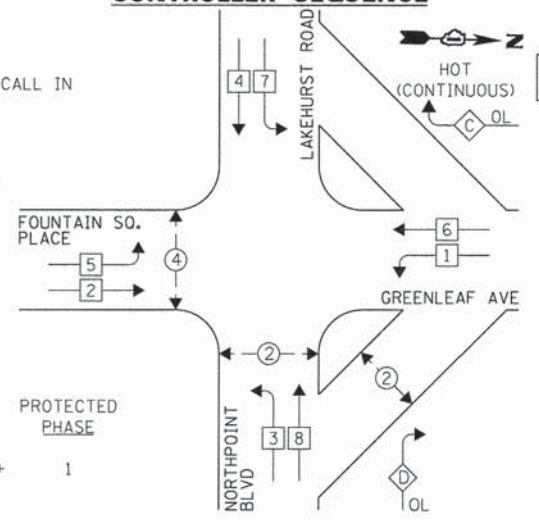


PHASES 1 & 6 SHALL BE PLACED ON RECALL

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE	OPERATION		
SIGNAL (RED)	20	135	17	0.50	170.0
SIGNAL (YELLOW)	20	135	25	0.25	125.0
SIGNAL (GREEN)	20	135	15	0.25	75.0
ARROW	-	135	12	0.10	-
PED. SIGNAL	6	90	25	1.00	150.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					1,120.0

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
 (ADDRESS) 100 N. MLK JR. AVENUE
 (ADDRESS) WAUKEGAN, IL 60085
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

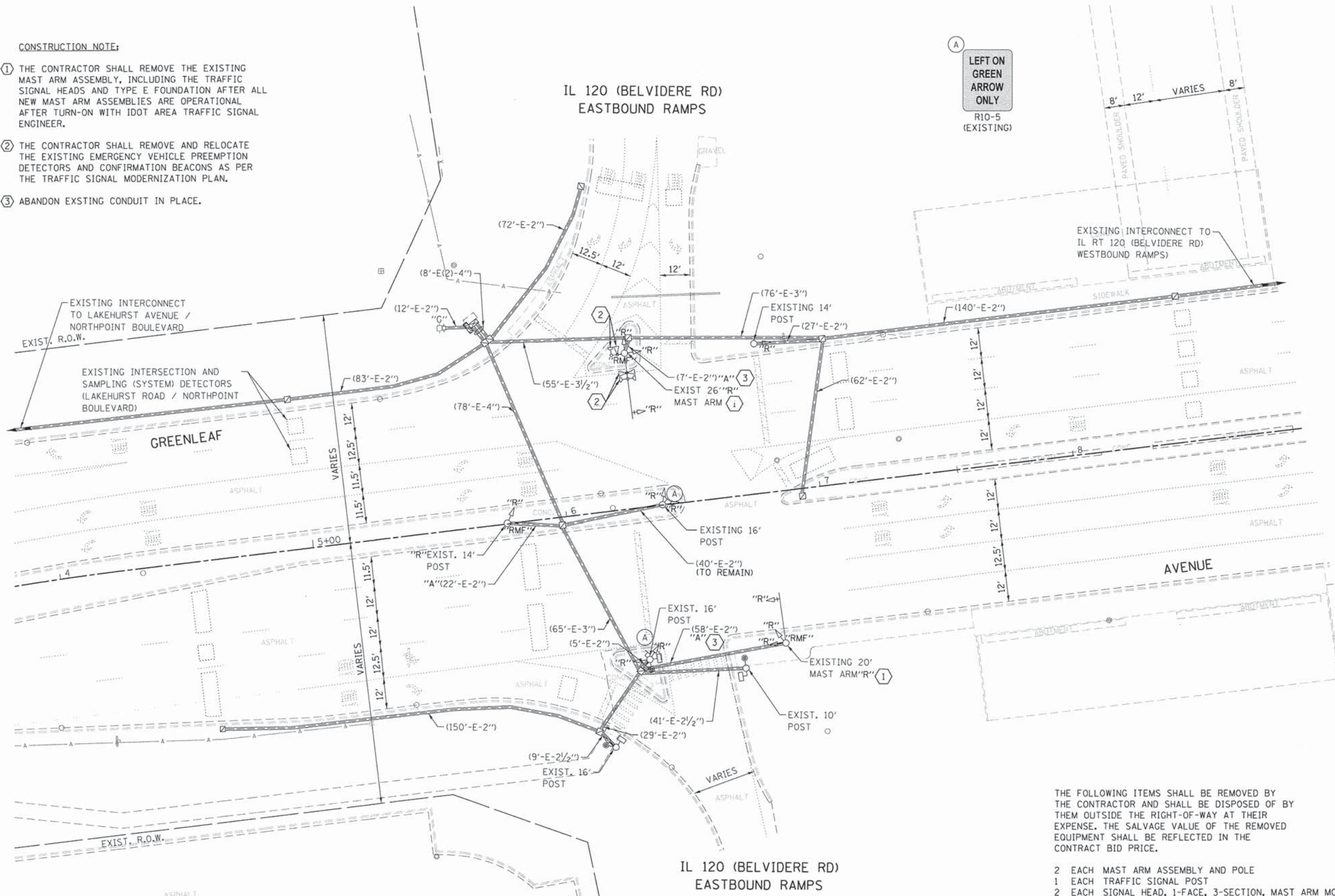
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE - GREENLEAF AVENUE / FOUNTAIN SQUARE PLACE AT LAKEHURST AVENUE / NORTHPOINT BLVD
 SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	31

CONTRACT NO. 61C02
 ILLINOIS FED. AID PROJECT

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING MAST ARM ASSEMBLY, INCLUDING THE TRAFFIC SIGNAL HEADS AND TYPE E FOUNDATION AFTER ALL NEW MAST ARM ASSEMBLIES ARE OPERATIONAL AFTER TURN-ON WITH IDOT AREA TRAFFIC SIGNAL ENGINEER.
- ② THE CONTRACTOR SHALL REMOVE AND RELOCATE THE EXISTING EMERGENCY VEHICLE PREEMPTION DETECTORS AND CONFIRMATION BEACONS AS PER THE TRAFFIC SIGNAL MODERNIZATION PLAN.
- ③ ABANDON EXSTING CONDUIT IN PLACE.



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 MAST ARM ASSEMBLY AND POLE
- 1 EACH TRAFFIC SIGNAL POST
- 2 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
- 2 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
- 2 EACH SIGNAL HEAD, 2-FACE, 3-SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED
- 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH CONTROLLER

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/25-1000, TS2 IN A TYPE IV CABINET.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-sht-TS_19.dgn
GHA *4570.800
Default

USER NAME = zwo11stan
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) EASTBOUND RAMPS**

SCALE: NONE SHEET OF SHEETS STA. TO STA.

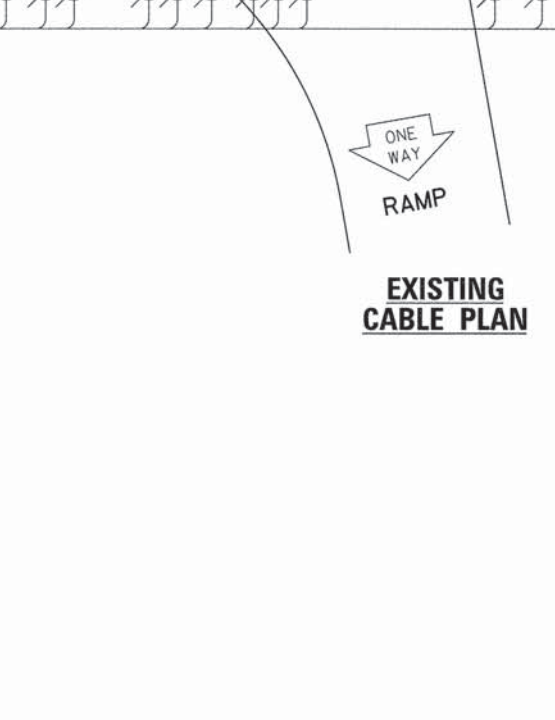
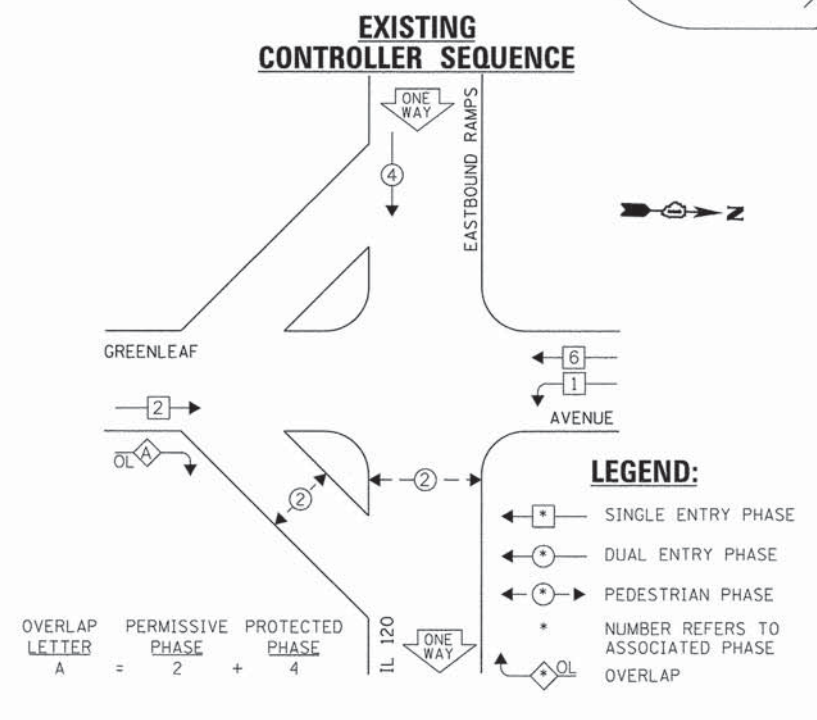
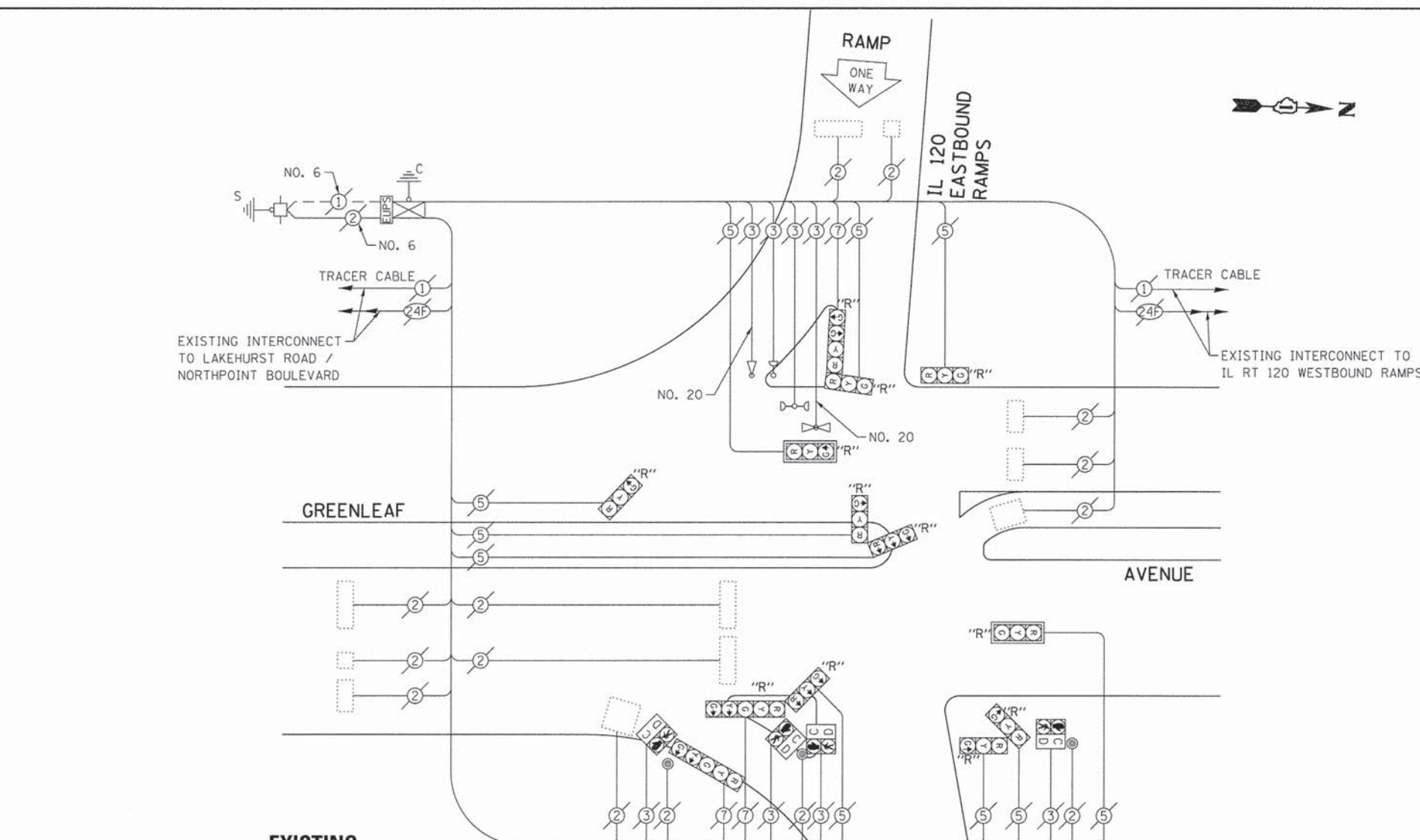
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	32
				CONTRACT NO. 61C02
[ILLINOIS] FED. AID PROJECT				

ECON 19
TS 14930

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	OPERATION		
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	75.0
SIGNAL (GREEN)	13	135	15	0.25	48.75
ARROW	2	135	12	0.10	2.4
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					428.15

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHALMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".



EXISTING PHASE DESIGNATION DIAGRAM

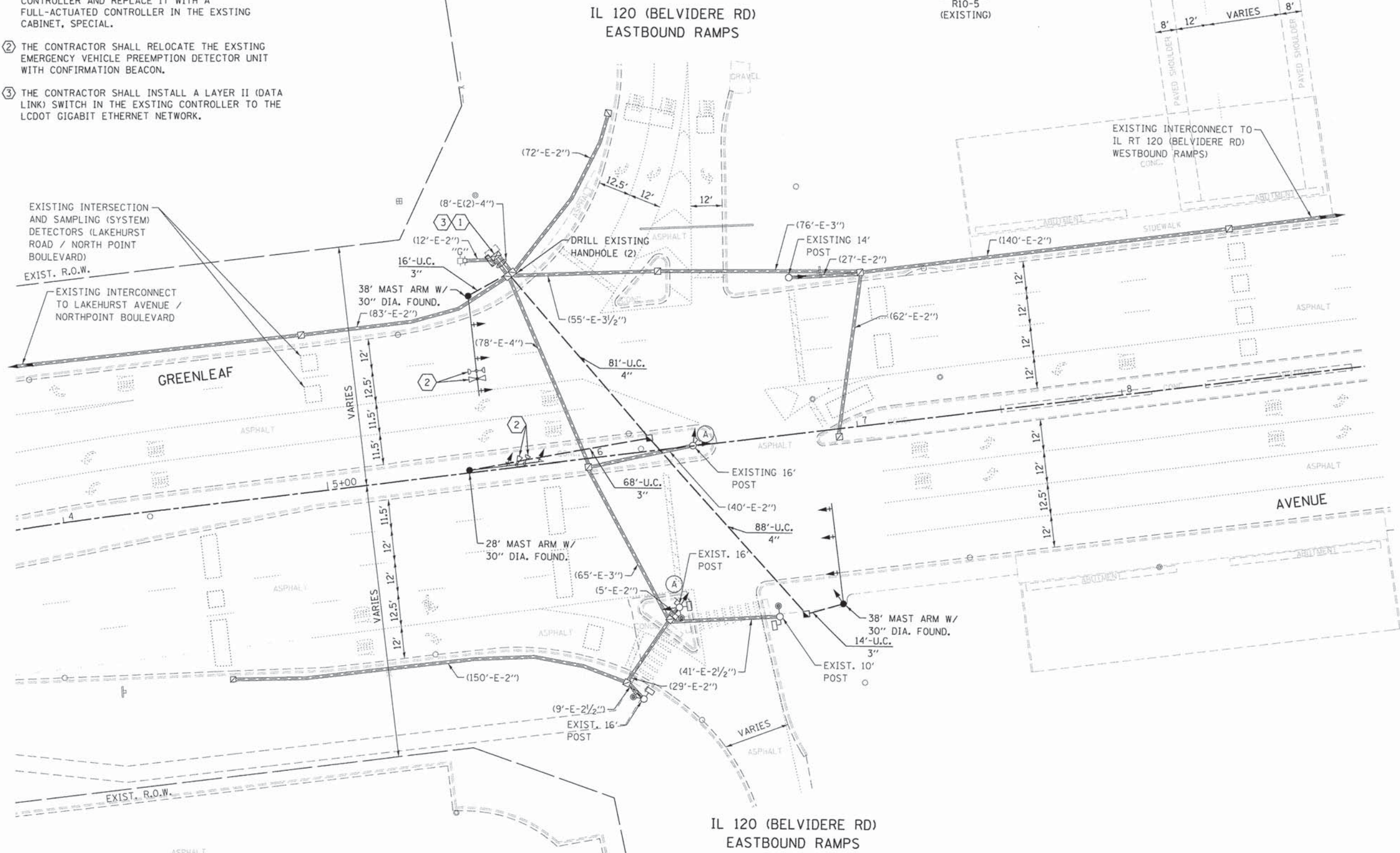
EXISTING CABLE PLAN

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.
- ② THE CONTRACTOR SHALL RELOCATE THE EXISTING EMERGENCY VEHICLE PREEMPTION DETECTOR UNIT WITH CONFIRMATION BEACON.
- ③ THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER TO THE LCDOT GIGABIT ETHERNET NETWORK.

A
LEFT ON GREEN
ARROW
ONLY
RIO-5
(EXISTING)



EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS (LAKEHURST ROAD / NORTH POINT BOULEVARD)
EXIST. R.O.W.
EXISTING INTERCONNECT TO LAKEHURST AVENUE / NORTHPOINT BOULEVARD

EXISTING INTERCONNECT TO IL RT 120 (BELVIDERE RD) WESTBOUND RAMP
CONC.

IL 120 (BELVIDERE RD)
EASTBOUND RAMP

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/25-1000, TS2 IN A TYPE IV CABINET.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\161C02-shr-TS_21.dgn
GHA #4578.800
Default

USER NAME = zwolsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) EASTBOUND RAMP**
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	34
				CONTRACT NO. 61C02
ILLINOIS FED. AID PROJECT				

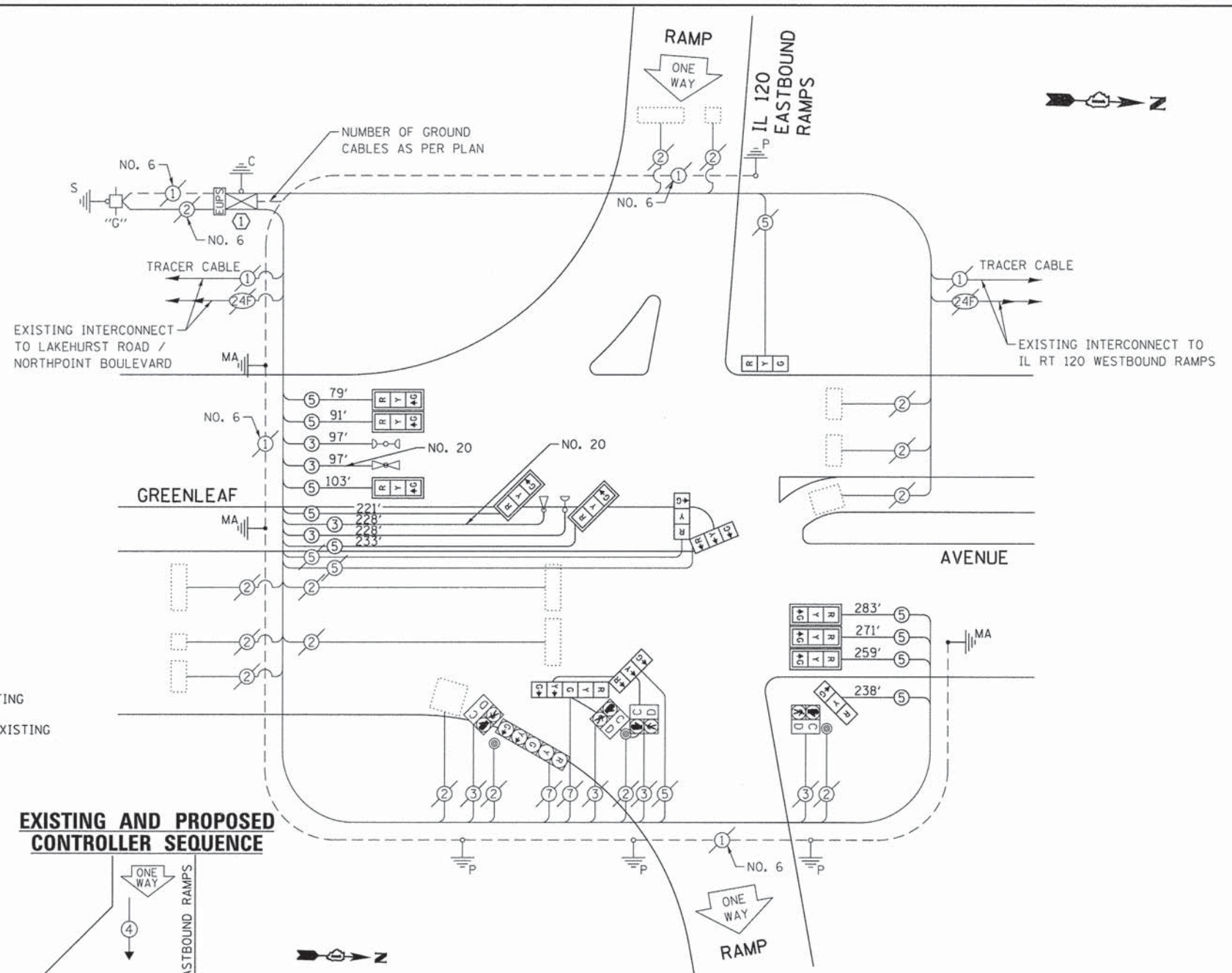
ECON 19
TS 14930

SCHEDULE OF QUANTITIES
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) EASTBOUND RAMP

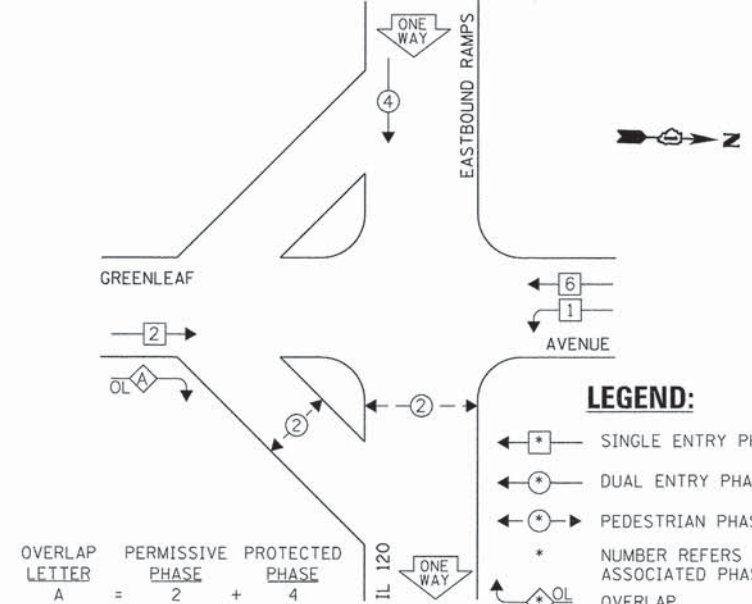
NO.	QUANT.	UNIT	DESCRIPTION
1.	98	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
2.	169	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
3.	2	EACH	HANDHOLE
4.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
5.	324	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
6.	1,778	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
7.	319	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
8.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.
9.	2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.
10.	37	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
11.	2	EACH	DRILL EXISTING HANDHOLE
12.	8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
13.	4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
14.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
15.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC
16.	2	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
17.	1	EACH	MODIFY EXISTING CONTROLLER CABINET
18.	1,815	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
19.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
20.	3	EACH	REMOVE EXISTING CONCRETE FOUNDATION
21.	324	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
22.	1	EACH	LAYER II (DATALINK) SWITCH
23.	1	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE EXISTING CONTROLLER AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER IN THE EXISTING CABINET, SPECIAL.

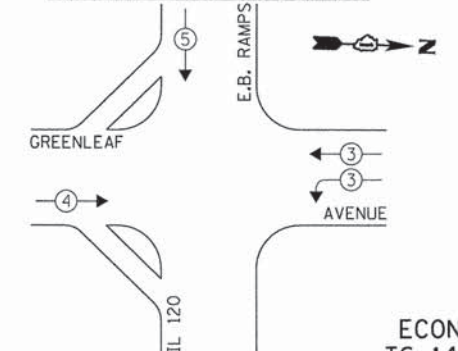


EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE INCAND. L.E.D.	OPERATION		
SIGNAL (RED)	15	135	17	0.50	127.5
SIGNAL (YELLOW)	15	135	25	0.25	93.75
SIGNAL (GREEN)	15	135	15	0.25	56.25
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					507.3

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
(ADDRESS) 201 W. CENTER COURT
(ADDRESS) SCHAMBURG, IL 60196-1096
ENERGY SUPPLY - CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-shr-TS.22.dgn	USER NAME = zwo11sten	DESIGNED - JRD	REVISED -
GHA *4570.800	PLOT SCALE = 1:20	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

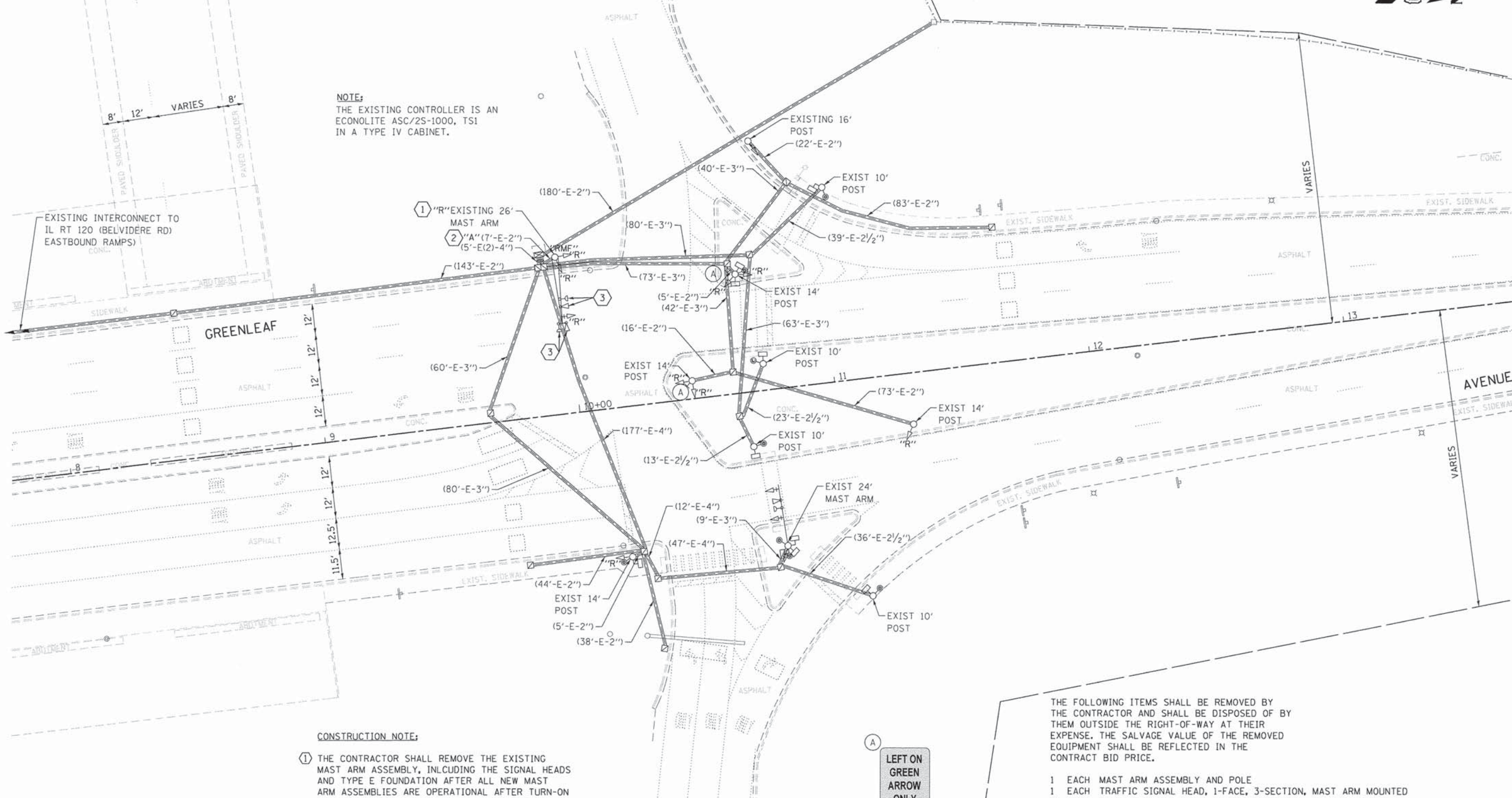
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) EASTBOUND RAMP

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	35
				CONTRACT NO. 61C02
ILLINOIS FED. AID PROJECT				

ECON 19
TS 14930

IL 120 (BELVIDERE RD)
WESTBOUND RAMPS



NOTE:
THE EXISTING CONTROLLER IS AN
ECONOLITE ASC/2S-1000, TSI
IN A TYPE IV CABINET.

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING MAST ARM ASSEMBLY, INCLUDING THE SIGNAL HEADS AND TYPE E FOUNDATION AFTER ALL NEW MAST ARM ASSEMBLIES ARE OPERATIONAL AFTER TURN-ON WITH IDOT AREA TRAFFIC SIGNAL ENGINEER.
- ② ABANDON EXISTING CONDUIT IN PLACE.
- ③ THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PREEMPTION DETECTOR UNIT WITH CONFIRMATION BEACON AND SAFELY STORE IT FOR RE-INSTALLATION TO NEW MAST ARM.

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 MAST ARM ASSEMBLY AND POLE
- 1 EACH TRAFFIC SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
- 2 EACH TRAFFIC SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
- 2 EACH TRAFFIC SIGNAL HEAD, 2-FACE, 3-SECTION, BRACKET MOUNTED
- 1 EACH TRAFFIC SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
- 1 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH CONTROLLER AND CABINET (COMPLETE)

A
LEFT ON
GREEN
ARROW
ONLY
R10-5
(EXISTING)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE TRAFFIC SIGNAL EQUIPMENT
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) WESTBOUND RAMPS

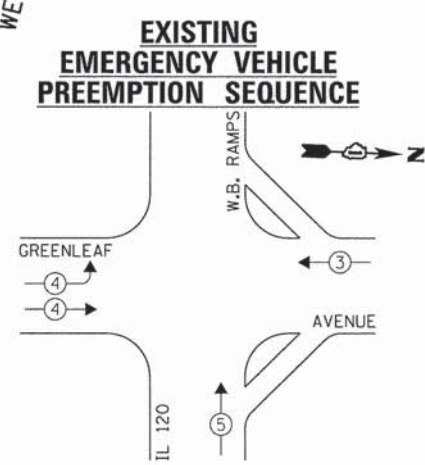
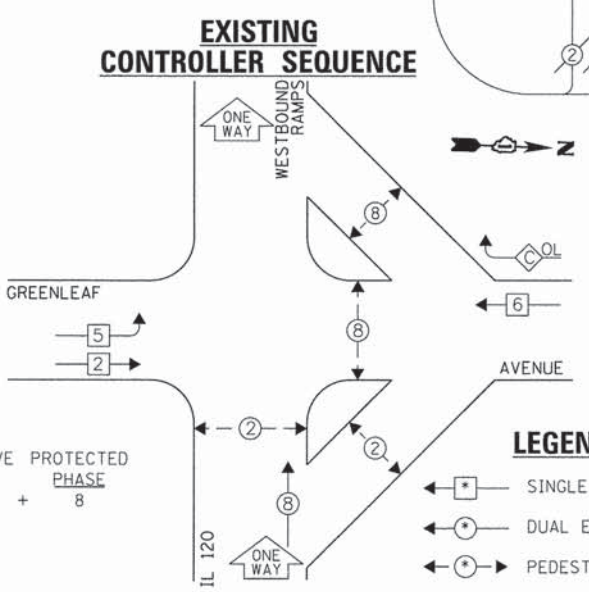
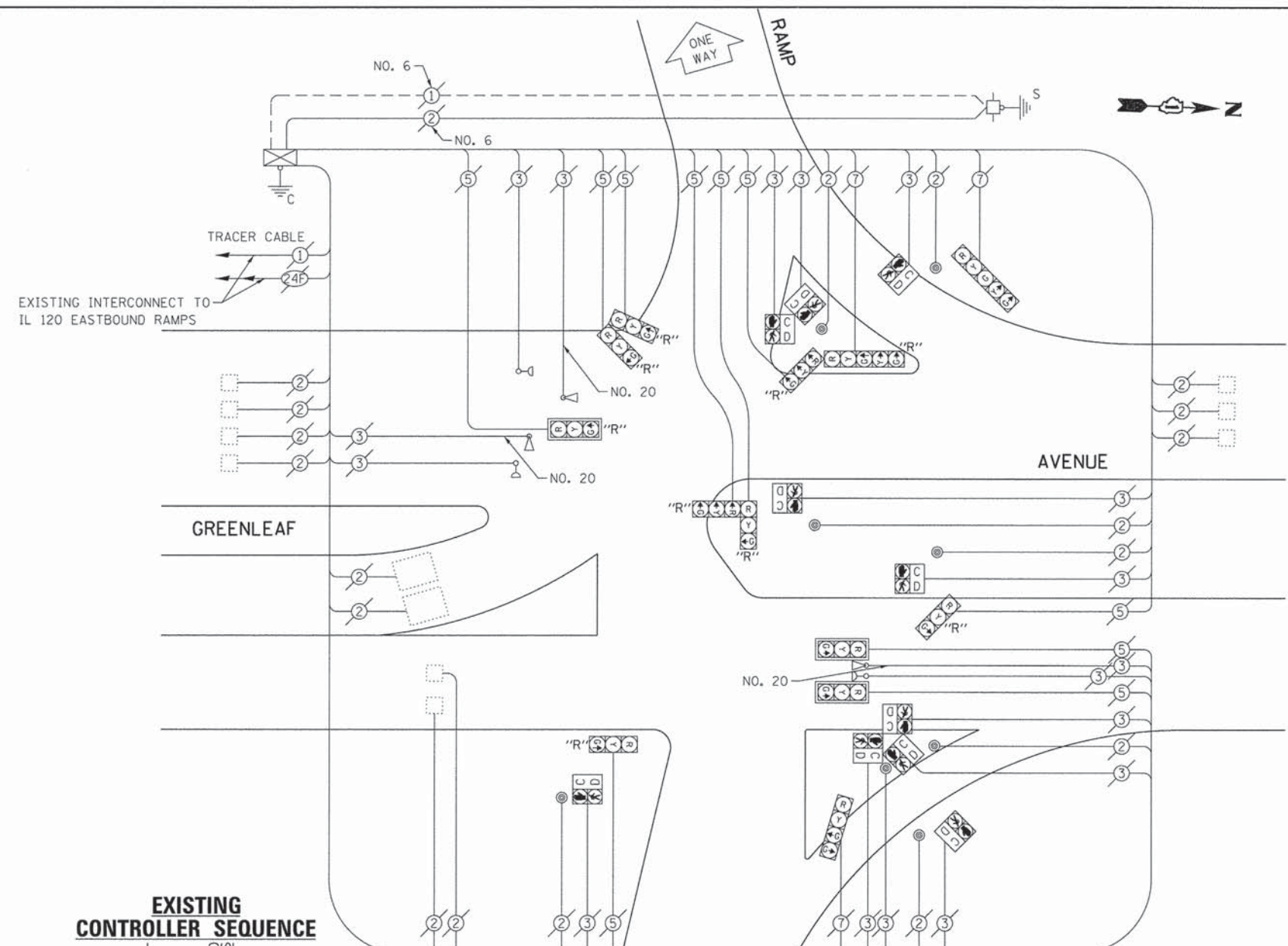
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	36
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 19
TS 14925

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sht-TS.23.dgn	USER NAME = zwillsten	DESIGNED - JRD	REVISED -
GHA #4570.800	PLOT SCALE = 1:20	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -



LEGEND:

- ◀ * ▶ SINGLE ENTRY PHASE
- ◀ * ◀ DUAL ENTRY PHASE
- ◀ * ▶ PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- ◀ * ◀ OVERLAP

OVERLAP LETTER C = PERMISSIVE PHASE 6 + PROTECTED PHASE 8

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	OPERATION		
SIGNAL (RED)	13	135	17	0.50	110.5
SIGNAL (YELLOW)	13	135	25	0.25	81.25
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	10	90	25	1.00	250.0
CONTROLLER	1	-	100	1.00	100
LUMINAIRE	-	-	250	0.50	-
I.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					599.05

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHAMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING CABLE PLAN, EXISTING PHASE DESIGNATION DIAGRAM & EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) WESTBOUND RAMP

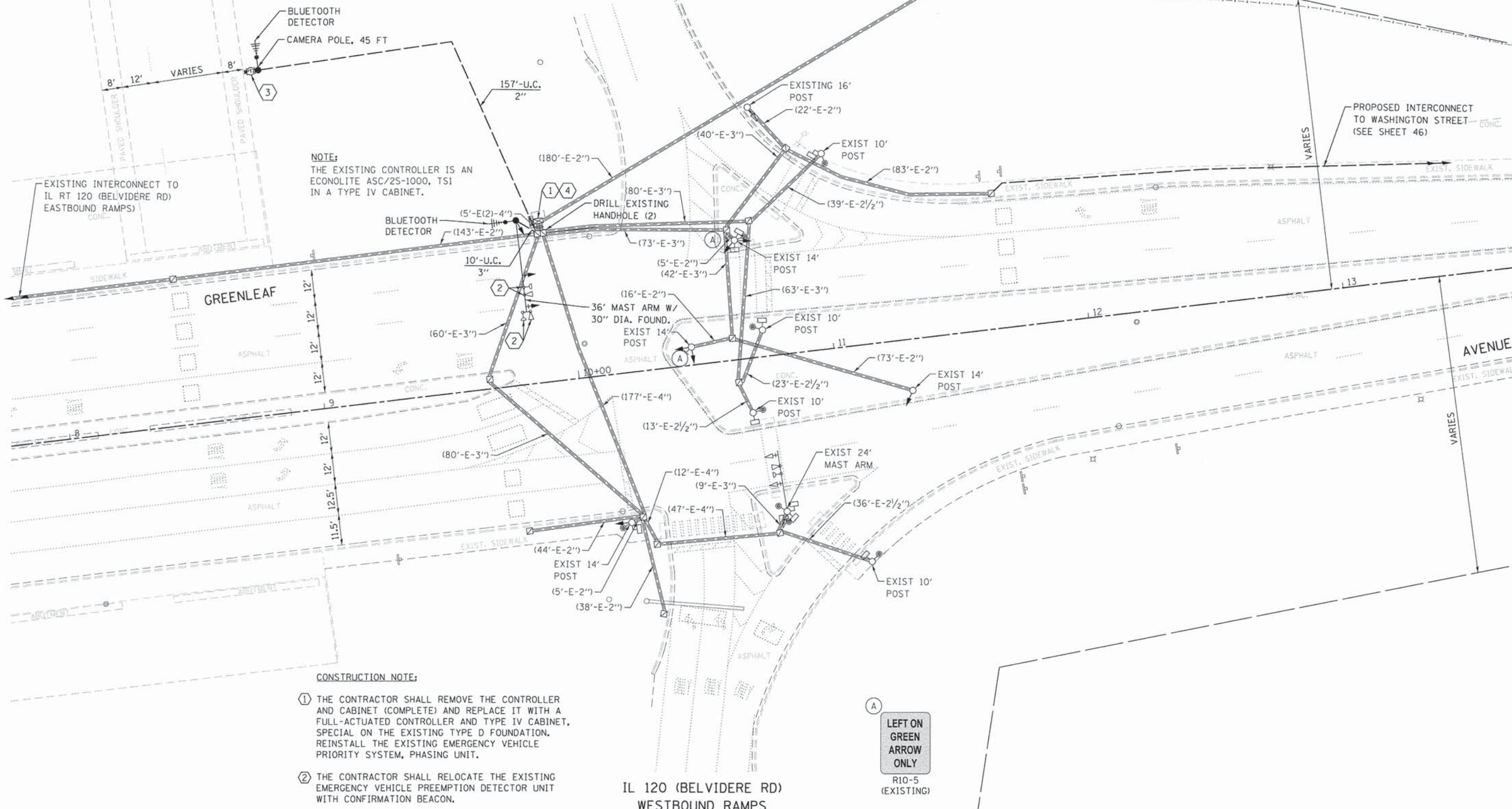
SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	37
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 19 TS 14925

FILE NAME = 0161C02-shr-TS_24.dgn	USER NAME = zwillsten	DESIGNED - JRD	REVISED -
GHA #4578.800	PLOT SCALE = 1:20	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

IL 120 (BELVIDERE RD)
WESTBOUND RAMPS



NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/2S-1000, TS1 IN A TYPE IV CABINET.

- CONSTRUCTION NOTE:**
- ① THE CONTRACTOR SHALL REMOVE THE CONTROLLER AND CABINET (COMPLETE) AND REPLACE IT WITH A FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL ON THE EXISTING TYPE D FOUNDATION. REINSTALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT.
 - ② THE CONTRACTOR SHALL RELOCATE THE EXISTING EMERGENCY VEHICLE PREEMPTION DETECTOR UNIT WITH CONFIRMATION BEACON.
 - ③ THE CONTRACTOR SHALL INSTALL A NEW REMOTE CONTROLLED VIDEO SYSTEM ON A NEW CAMERA POLE, 45 FEET TALL.
 - ④ THE CONTRACTOR SHALL INSTALL A LAYER II (DATA LINK) SWITCH IN THE EXISTING CONTROLLER CABINET FOR CONNECTION TO THE LCDOT GIGABIT ETHERNET NETWORK.

A
LEFT ON GREEN
ARROW ONLY
R10-5
(EXISTING)

IL 120 (BELVIDERE RD)
WESTBOUND RAMPS

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =	USER NAME = zwallsten
D161C02-sht-TS.25.dgn	
GHA *4570.800	
Default	

DESIGNED - JRD	REVISD -
DRAWN - JPW	REVISD -
CHECKED - DPB	REVISD -
DATE -	REVISD -

DESIGNED - JRD	REVISD -
DRAWN - JPW	REVISD -
CHECKED - DPB	REVISD -
DATE -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

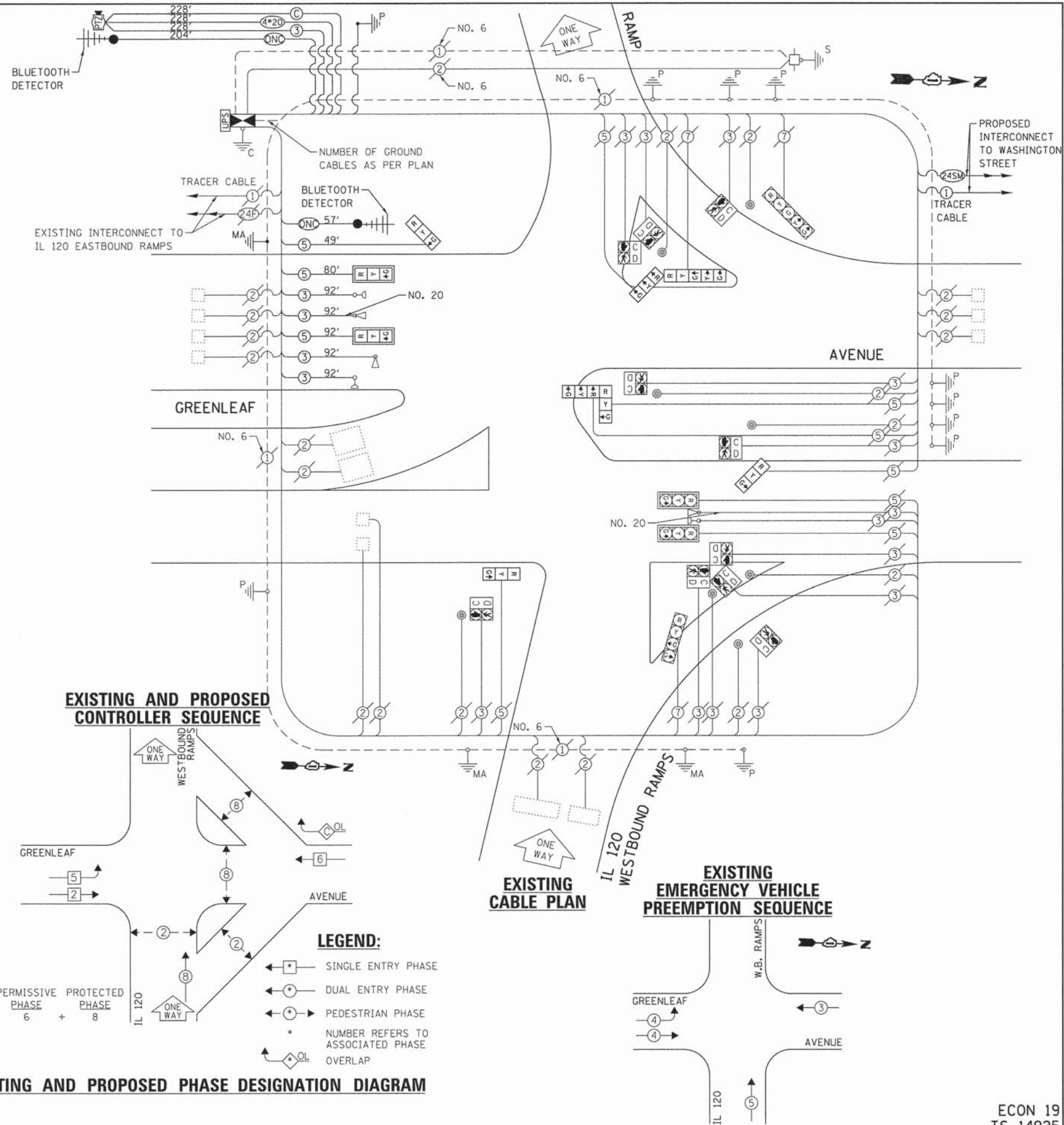
**TRAFFIC SIGNAL MODERNIZATION PLAN
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) WESTBOUND RAMPS**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	38
CONTRACT NO. 61C02			ECON 19 TS 14925	
ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) WESTBOUND RAMPS

NO.	QUANT.	UNIT
1.	157	FOOT UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	10	FOOT UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
3.	1	EACH MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4.	228	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
5.	199	FOOT ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
6.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.
7.	11	FOOT CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
8.	2	EACH DRILL EXISTING HANDHOLE
9.	2	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
10.	5	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
11.	1	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
12.	2	EACH SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC
13.	13	EACH INDUCTIVE LOOP DETECTOR
14.	2	EACH RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
15.	1	EACH RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
16.	429	FOOT REMOVE ELECTRIC CABLE FROM CONDUIT
17.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
18.	1	EACH REMOVE EXISTING CONCRETE FOUNDATION
19.	1	EACH CAMERA POLE, 45 FOOT
20.	9	FOOT LIGHT POLE FOUNDATION, 30" DIAMETER
21.	1	EACH FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
22.	1	EACH UNINTERRUPTABLE POWER SUPPLY, SPECIAL
23.	228	FOOT ELECTRIC CABLE IN CONDUIT, COAXIAL
24.	228	FOOT ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4C
25.	1	EACH REMOTE CONTROLLED VIDEO SYSTEM
26.	1	EACH LAYER II (DATALINK) SWITCH
27.	1	EACH VIDEO ENCODER
28.	261	FOOT OUTDOOR RATED NETWORK CABLE
29.	2	EACH BLUETOOTH DETECTOR



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE	OPERATION		
SIGNAL (RED)	13	135	17	0.50	110.5
SIGNAL (YELLOW)	13	135	25	0.25	81.25
SIGNAL (GREEN)	14	135	15	0.25	52.5
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	10	90	25	1.00	250.0
CONTROLLER	1	-	100	1.00	100
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					774.05

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION (ADDRESS) 201 W. CENTER COURT (ADDRESS) SCHALMURG, IL 60196-1096
ENERGY SUPPLY - CONTACT: FERRI BLECK (PHONE) (847) 816-5239 (COMPANY) COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

OVERLAP LETTER C = PERMISSIVE PHASE 6 + PROTECTED PHASE 8

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-shr-TS-26.dgn	USER NAME = zwallston	DESIGNED - JRD	REVISED -
GHA #4570.000	PLOT SCALE = 1:20	DRAWN - JPW	REVISED -
Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

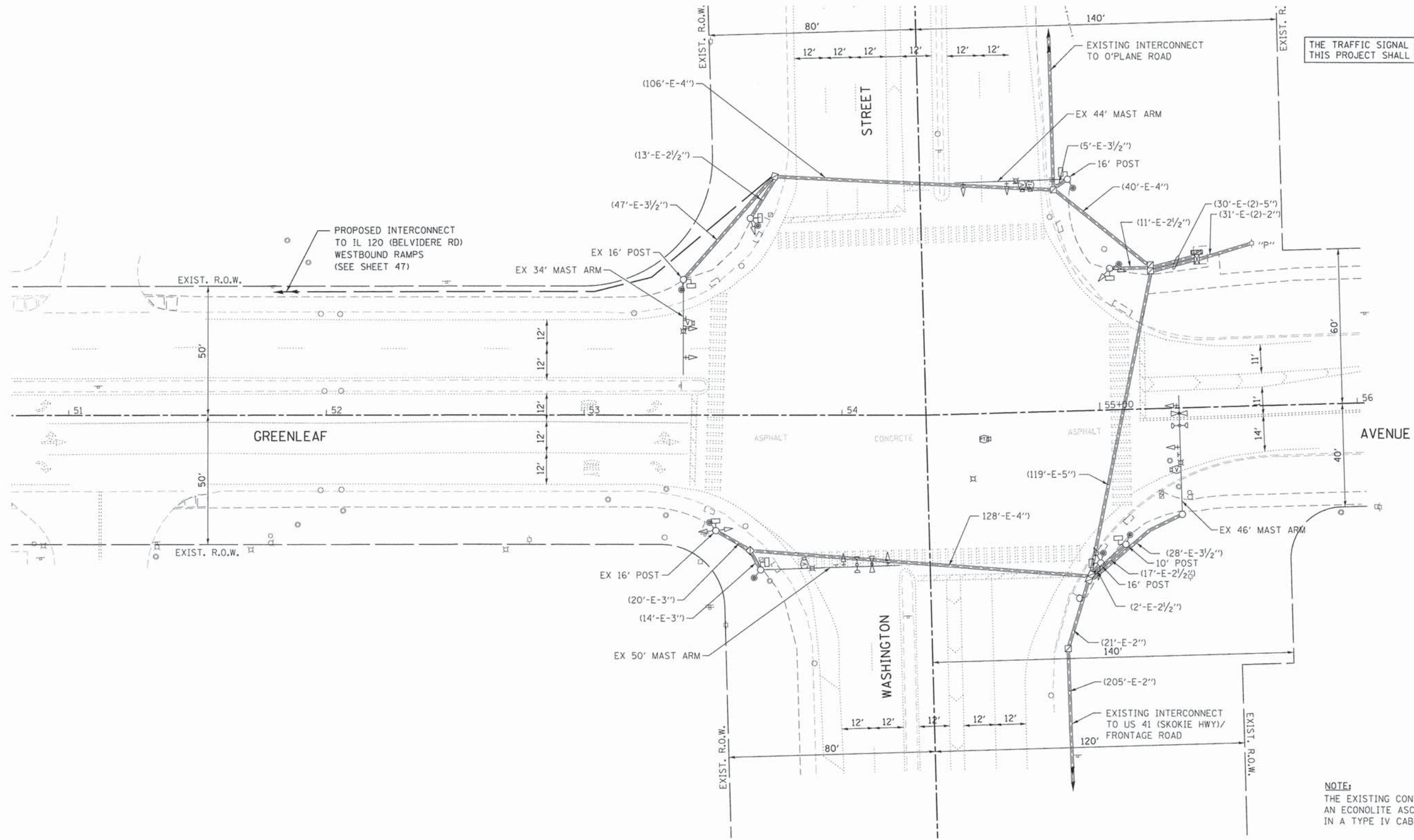
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) WESTBOUND RAMPS

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	39
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 19
TS 14925



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

NOTE:
THE EXISTING CONTROLLER IS AN ECONOLITE ASC/3 TS2 IN A TYPE IV CABINET.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sht-TS-27.dgn
GHA *4570.800
Default

USER NAME = zwoilsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)**

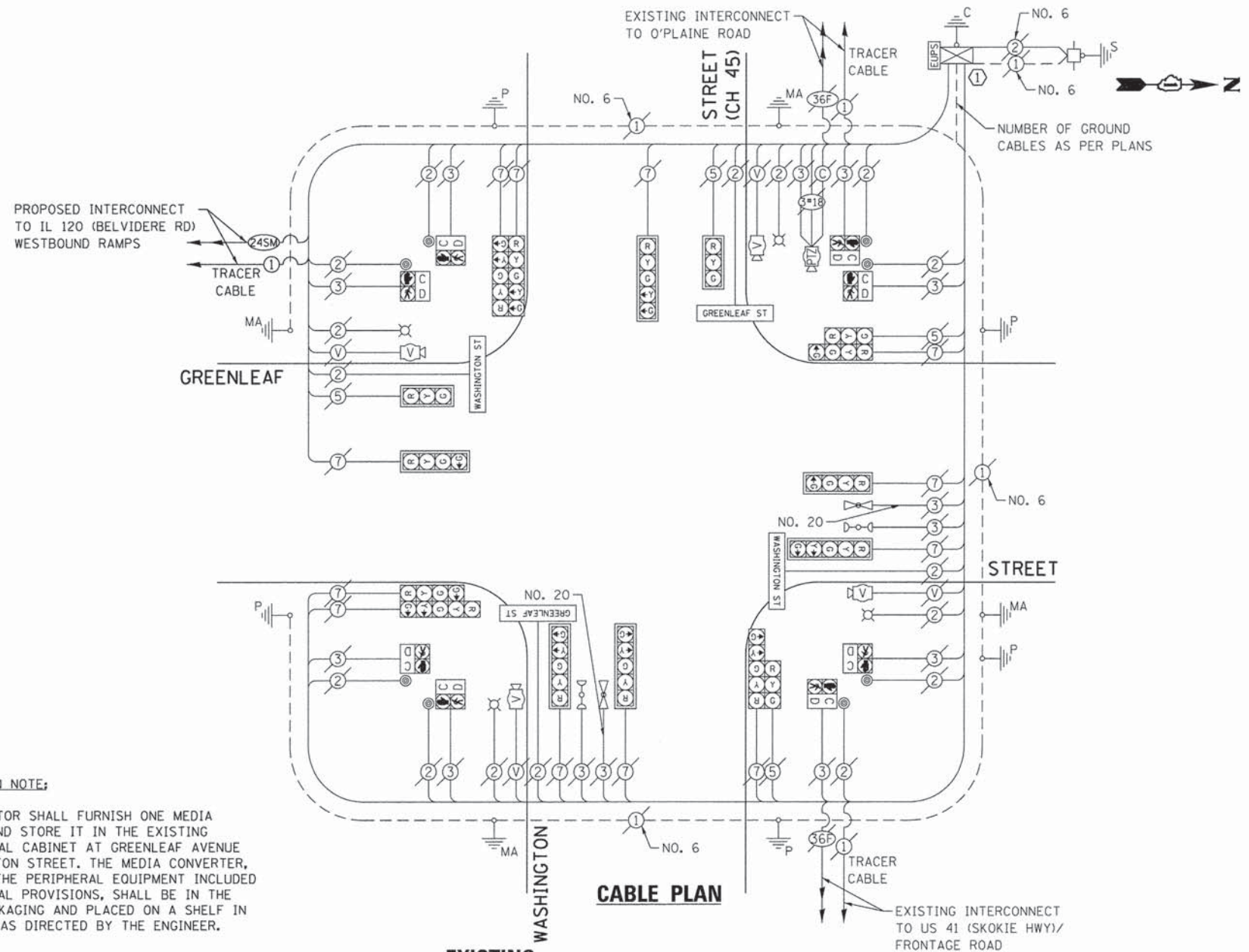
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	40
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 19
TS 12480

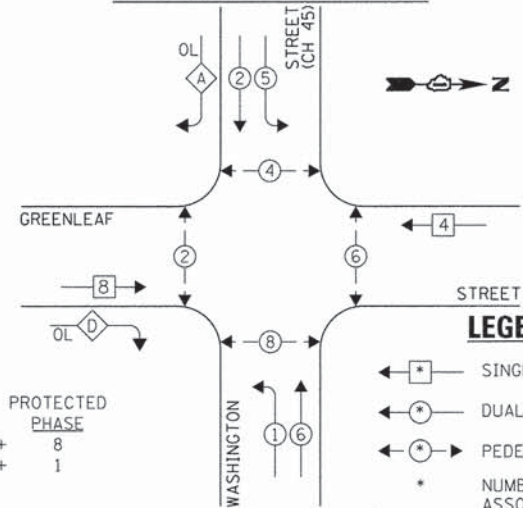
SCHEDULE OF QUANTITIES
GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)

NO.	QUANT.	UNIT	DESCRIPTION
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MEDIA CONVERTER



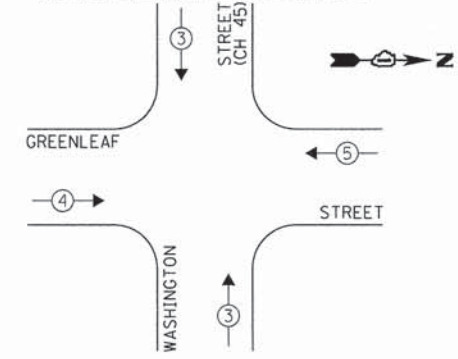
CONSTRUCTION NOTE:
① THE CONTRACTOR SHALL FURNISH ONE MEDIA CONVERTER AND STORE IT IN THE EXISTING TRAFFIC SIGNAL CABINET AT GREENLEAF AVENUE AND WASHINGTON STREET. THE MEDIA CONVERTER, ALONG WITH THE PERIPHERAL EQUIPMENT INCLUDED IN THE SPECIAL PROVISIONS, SHALL BE IN THE ORIGINAL PACKAGING AND PLACED ON A SHELF IN THE CABINET AS DIRECTED BY THE ENGINEER.

EXISTING CONTROLLER SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	OPERATION		
SIGNAL (RED)	16	135	17	0.50	136.0
SIGNAL (YELLOW)	16	135	25	0.25	100.0
SIGNAL (GREEN)	18	135	15	0.25	67.5
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					1,425.7

ENERGY COSTS - BILLED TO: LAKE COUNTY DIVISION OF TRANS.
(ADDRESS) 600 WINCHESTER ROAD
(ADDRESS) LIBERTYVILLE, IL. 60048
ENERGY SUPPLY - CONTACT: TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COM-ED (LIBERTYVILLE)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP LATEST VERSION".

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =	USER NAME = zwellston	DESIGNED - JRD	REVISED -
D:\61C02-sh1-TS_28.dgn		DRAWN - JPW	REVISED -
GHA *4570.000		CHECKED - DPB	REVISED -
Default	PLOT DATE = 11/23/2015	DATE -	REVISED -

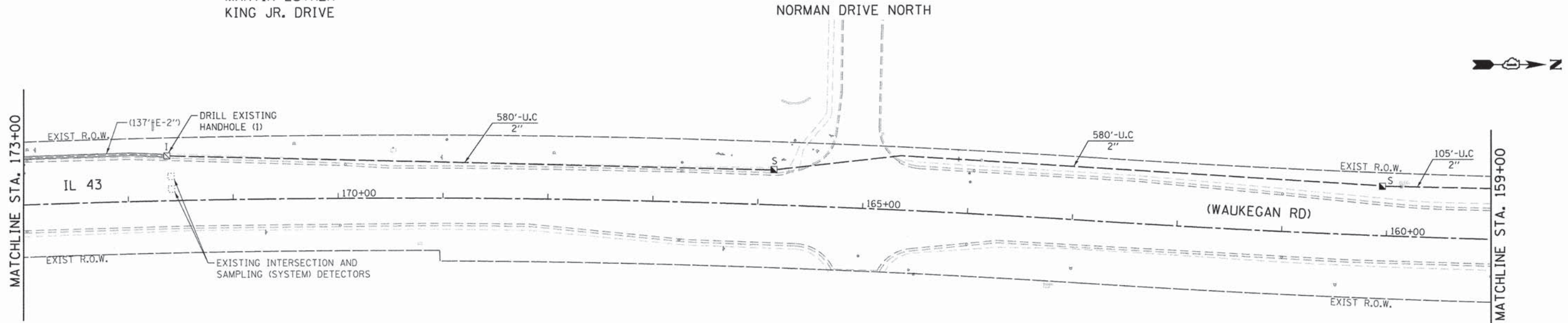
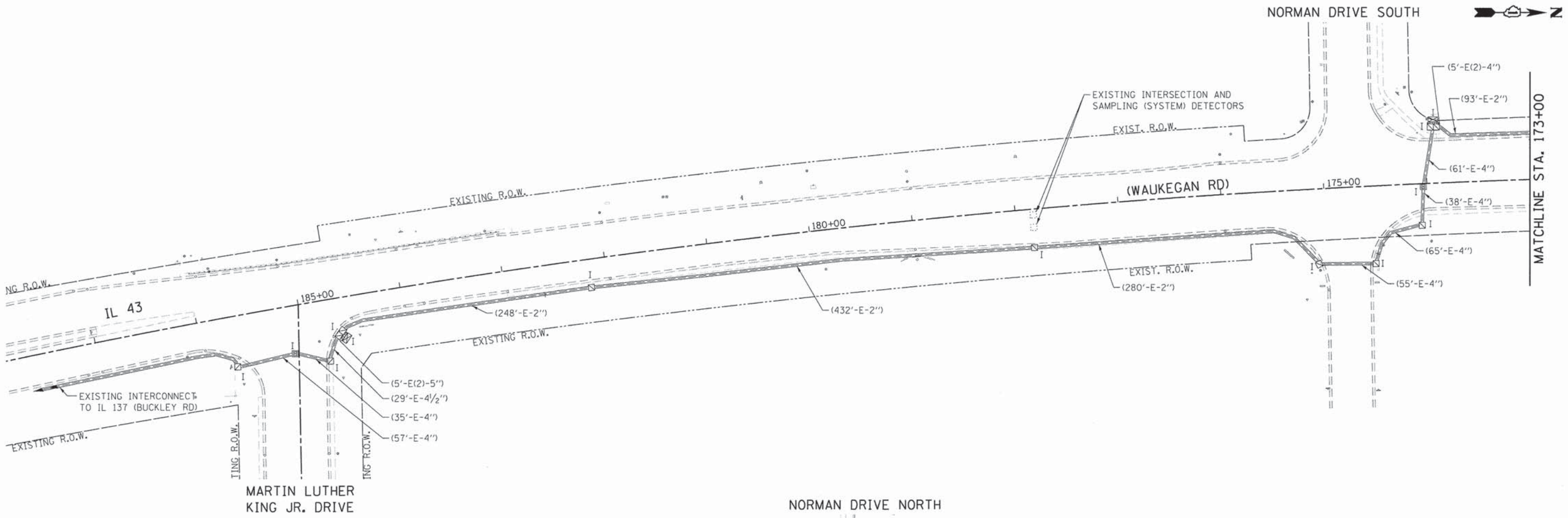
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM & EMERGENCY VEHICLE PREEMPTION SEQUENCE
GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	41
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 19
TS 12480



GEVAULT HAMILTON ASSOCIATES, INC.

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GHA #4570.800
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PLOT DATE = 11/23/2015

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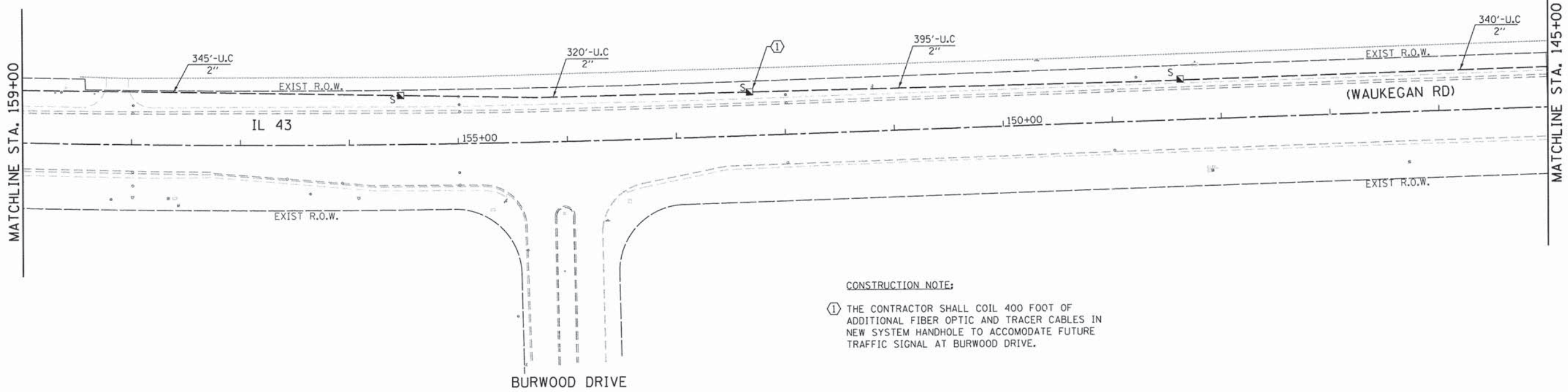
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REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN - IL 43 (WAUKEGAN RD)
FROM MARTIN LUTHER KING JR. DRIVE TO NORTHPOINT BOULEVARD**

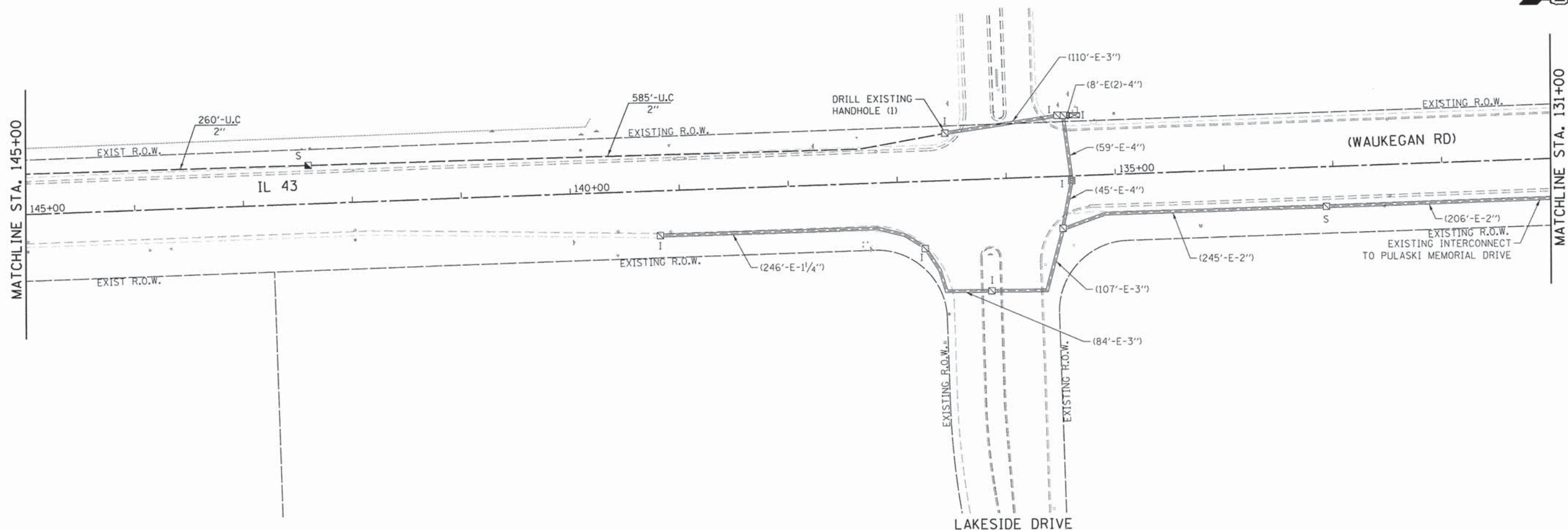
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	42
CONTRACT NO. 61C02			ECON 22	
ILLINOIS FED. AID PROJECT				



CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL COIL 400 FOOT OF ADDITIONAL FIBER OPTIC AND TRACER CABLES IN NEW SYSTEM HANDHOLE TO ACCOMMODATE FUTURE TRAFFIC SIGNAL AT BURWOOD DRIVE.



GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\161C02-sht-TS-Int_02.dgn
 GHA #4570.000
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USER NAME = zwallston
 PLOT SCALE = 1:50
 PLOT DATE = 11/23/2015

DESIGNED - JRD
 DRAWN - JPW
 CHECKED - DPB
 DATE -

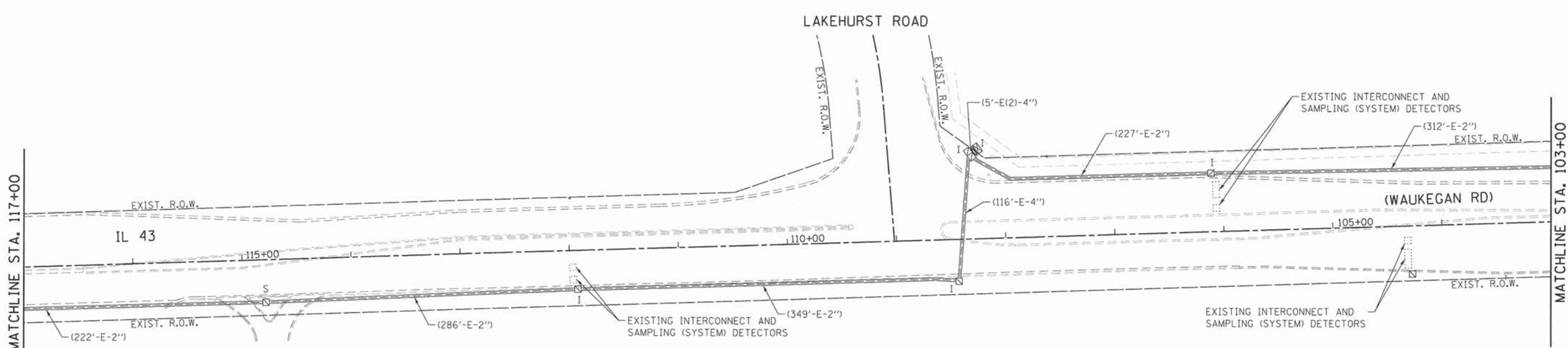
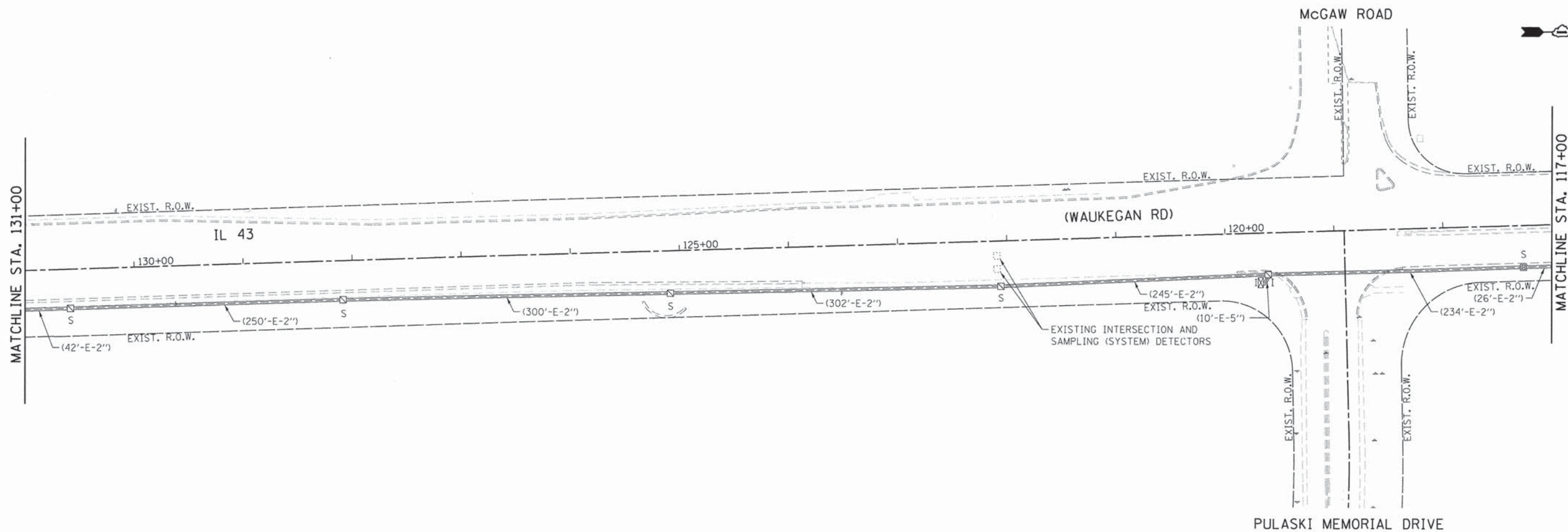
REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN - IL 43 (WAUKEGAN RD)
 FROM MARTIN LUTHER KING JR. DRIVE TO NORTHPOINT BOULEVARD**

SCALE: 1"=50' SHEET 2 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	43
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	



GHA GEWALT HAMILTON
ASSOCIATES, INC.

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GHA *4570,800
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PLOT SCALE = 1:50
PLOT DATE = 11/23/2015

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DRAWN - JPW
CHECKED - DPB
DATE -

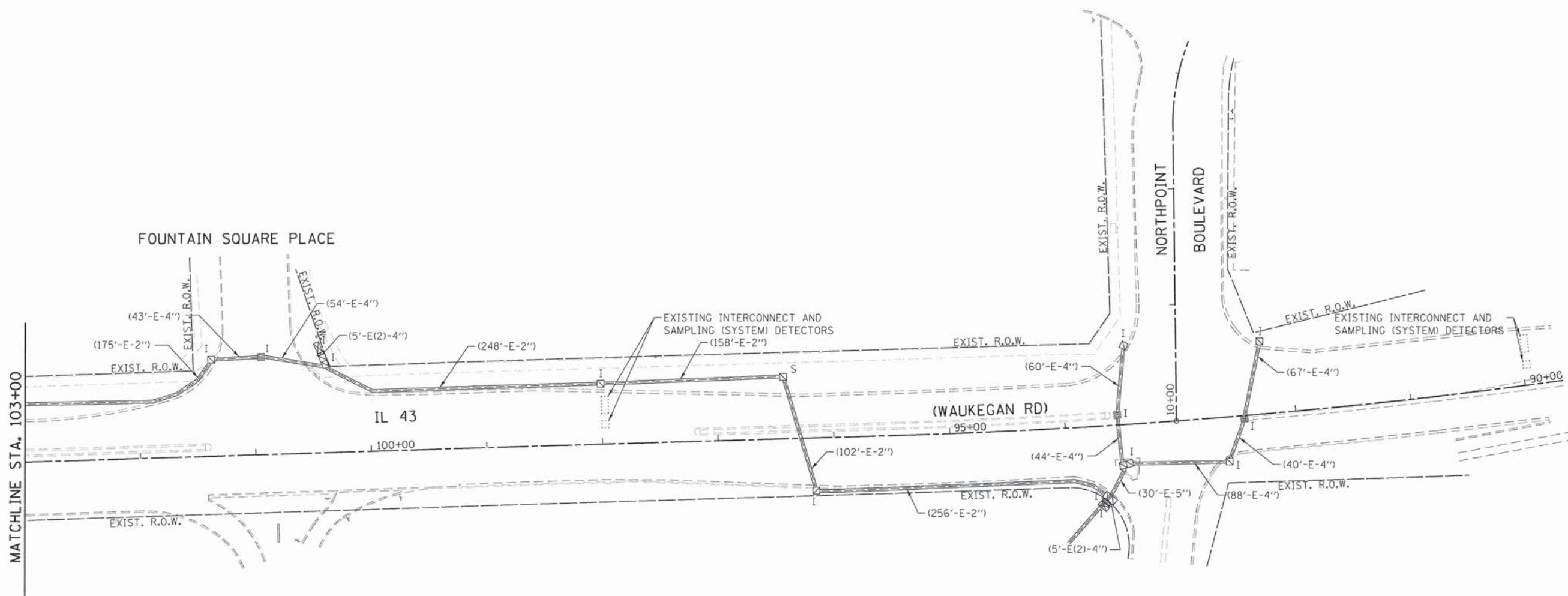
REVISED -
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REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN - IL 43 (WAUKEGAN RD)
FROM MARTIN LUTHER KING JR. DRIVE TO NORTHPPOINT BOULEVARD**

SCALE: 1"=50' SHEET 3 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	44
CONTRACT NO. 61C02			ECON 18	
ILLINOIS FED. AID PROJECT				



GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D:\61C02-sht-T5-Int_04.dgn
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 PLOT SCALE = 1:50
 PLOT DATE = 11/23/2015

DESIGNED - JRD
 DRAWN - JPW
 CHECKED - DPB
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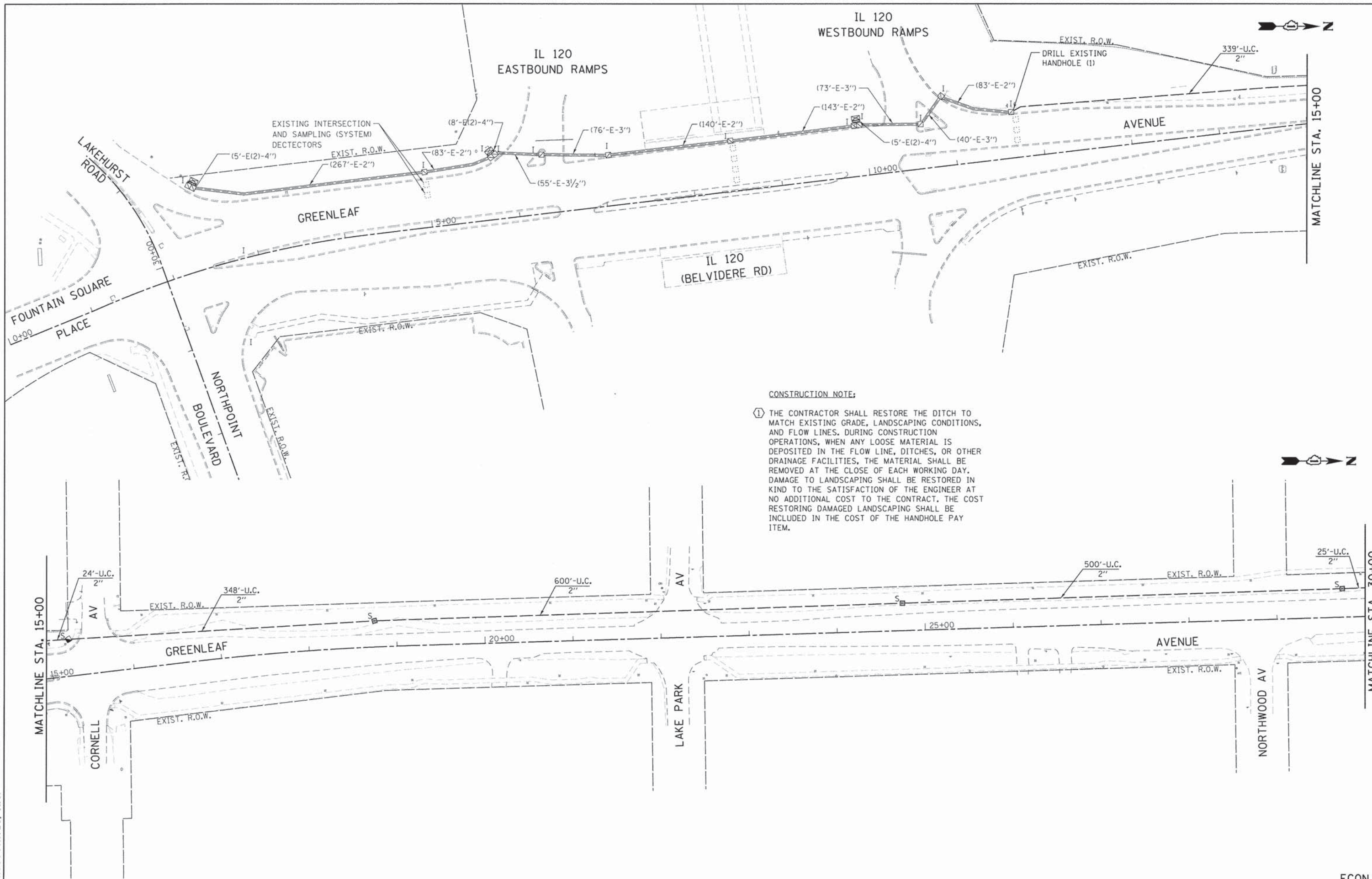
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN - IL 43 (WAUKEGAN RD)
 FROM MARTIN LUTHER KING JR. DRIVE TO NORTHPOINT BOULEVARD**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	45
				CONTRACT NO. 61C02
ILLINOIS FED. AID PROJECT				

ECON 18



CONSTRUCTION NOTE:

① THE CONTRACTOR SHALL RESTORE THE DITCH TO MATCH EXISTING GRADE, LANDSCAPING CONDITIONS, AND FLOW LINES. DURING CONSTRUCTION OPERATIONS, WHEN ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE, DITCHES, OR OTHER DRAINAGE FACILITIES, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. DAMAGE TO LANDSCAPING SHALL BE RESTORED IN KIND TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT. THE COST RESTORING DAMAGED LANDSCAPING SHALL BE INCLUDED IN THE COST OF THE HANDHOLE PAY ITEM.

GHA GEVAULT HAMILTON ASSOCIATES, INC.

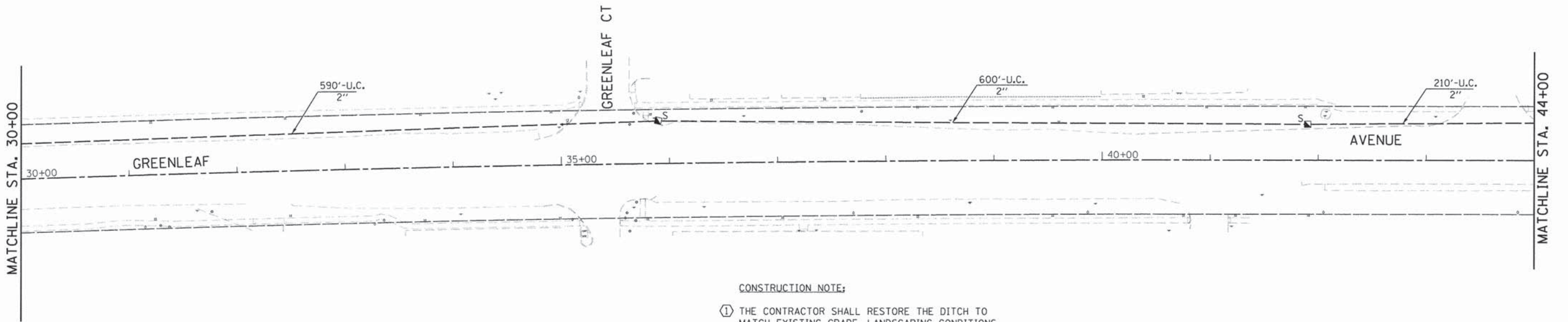
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Default	PLOT DATE = 11/23/2015	CHECKED - DPB	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN - GREENLEAF AVENUE FROM
LAKEHURST ROAD /NORTHPOINT BOULEVARD TO WASHINGTON STREET**

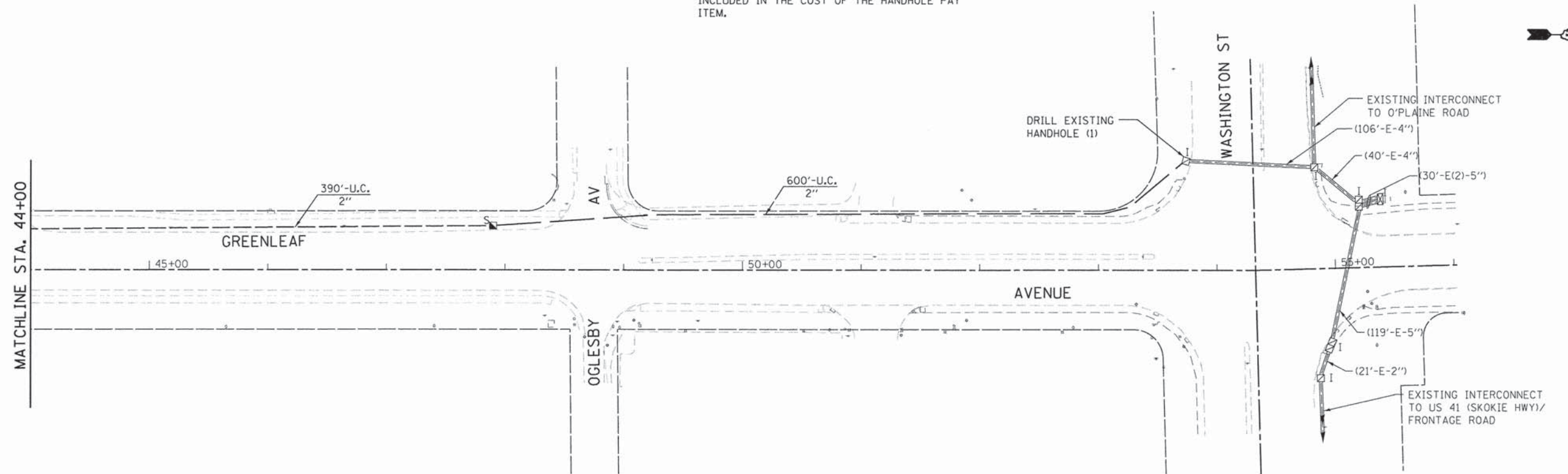
SCALE: 1"=50' SHEET 1 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	46
CONTRACT NO. 61C02			ECON 19	
[ILLINOIS] FED. AID PROJECT				



CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL RESTORE THE DITCH TO MATCH EXISTING GRADE, LANDSCAPING CONDITIONS, AND FLOW LINES. DURING CONSTRUCTION OPERATIONS, WHEN ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE, DITCHES, OR OTHER DRAINAGE FACILITIES, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. DAMAGE TO LANDSCAPING SHALL BE RESTORED IN KIND TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT. THE COST RESTORING DAMAGED LANDSCAPING SHALL BE INCLUDED IN THE COST OF THE HANDHOLE PAY ITEM.



GHA GEVAULT HAMILTON ASSOCIATES, INC.

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 PLOT SCALE = 1:50
 PLOT DATE = 11/23/2015

DESIGNED - JRD
 DRAWN - JPW
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN - GREENLEAF AVENUE FROM
 LAKEHURST ROAD /NORTHPOINT BOULEVARD TO WASHINGTON STREET**

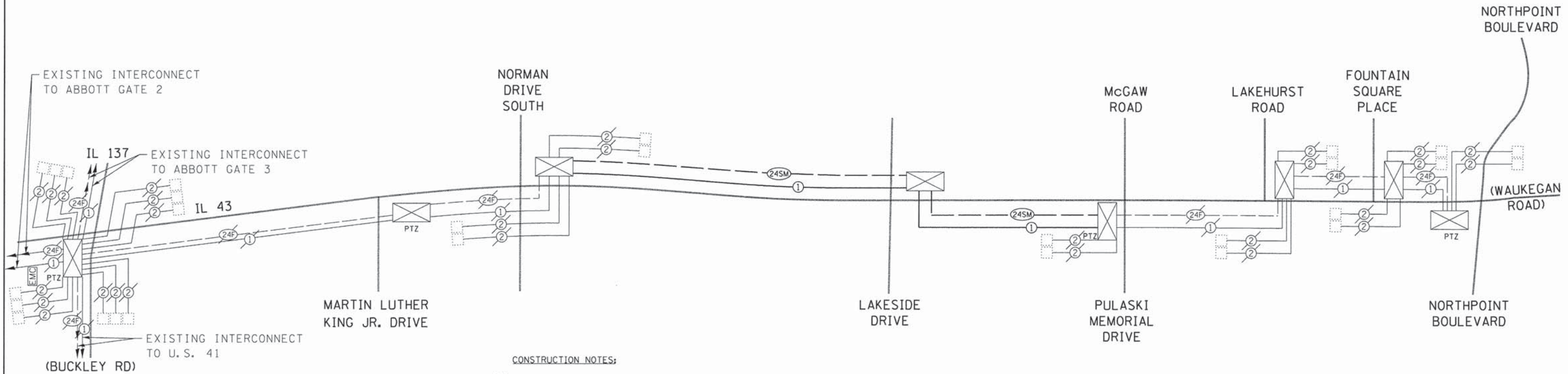
SCALE: 1"=50' SHEET 2 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	47
CONTRACT NO. 61C02				
ILLINOIS FED. AID PROJECT				

ECON 205

SCHEDULE OF QUANTITIES
INTERCONNECT - IL 43 (WAUKEGAN RD)

NO.	QUANT.	UNIT	DESCRIPTION
1.	3,510	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	6	EACH	HANDHOLE
3.	4,337	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
4.	2	EACH	DRILL EXISTING HANDHOLE
5.	60	EACH	TERMINATE FIBER IN CABINET
6.	4,337	FOOT	FIBER OPTIC CABLE IN CONDUIT, 24 SINGLE MODE
7.	18	EACH	SPLICE FIBER IN CABINET
8.	51.40	SO FT	TEMPORARY INFORMATION SIGNING
9.	7	EACH	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2



CONSTRUCTION NOTES:

- ① THE FOLLOWING INTERSECTIONS SHALL BE INCLUDED IN THE PAY ITEM "RE-OPTIMIZE TRAFFIC SIGNAL - LEVEL II":
 1. IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE
 2. IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH
 3. IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE
 4. IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE
 5. IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD
 6. IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE PLACE
 7. IL 43 (WAUKEGAN RD) AT NORTHPOINT BOULEVARD
- ② THE CONTRACTOR SHALL FURNISH AND INSTALL ONE MEDIA CONVERTER IN THE EXISTING LAKE COUNTY DIVISION OF TRANSPORTATION COMMUNICATION CABINET LOCATED AT IL 43 (WAUKEGAN RD) AND IL 137 (BUCKLEY RD). MAINTENANCE OF THE COMMUNICATION CABINET SHALL BE INCLUDED IN THE MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION PAY ITEM TO INSTALL THE BLUETOOTH DETECTOR. NO ADDITIONAL PAYMENT SHALL BE MADE.
- ③ THE CONTRACTOR SHALL COIL 400 FOOT OF ADDITIONAL FIBER OPTIC AND TRACER CABLES IN NEW SYSTEM HANDHOLE TO ACCOMMODATE FUTURE TRAFFIC SIGNAL AT BURWOOD DRIVE.

GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME =
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GHA *4570.000
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USER NAME = zwallsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

DESIGNED - JRD
DRAWN - JPW
CHECKED - DPB
DATE -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC - IL 43 (WAUKEGAN RD) FROM
MARTIN LUTHER KING JR. DR TO NORTHPOINT BLVD

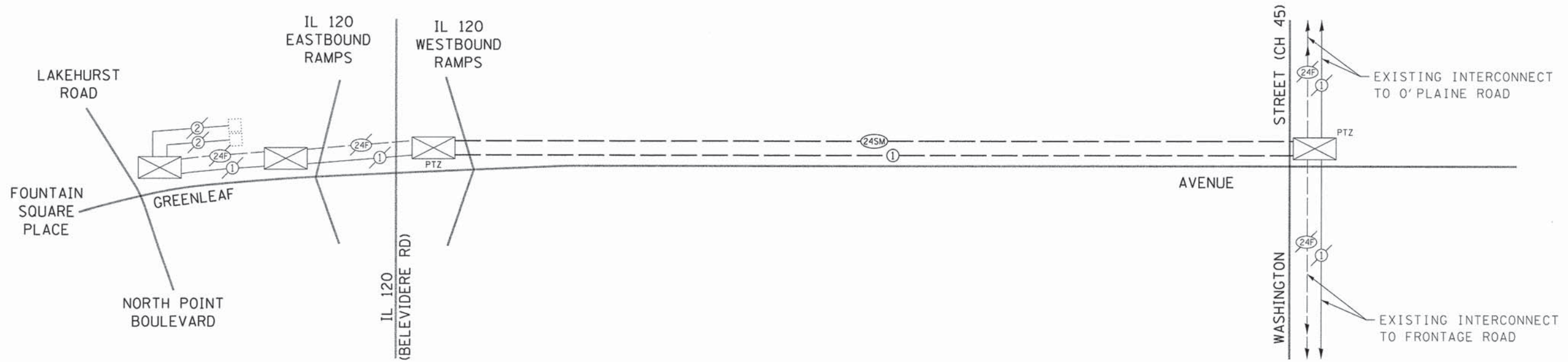
SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	48
CONTRACT NO. 61C02			ILLINOIS FED. AID PROJECT	

ECON 18, 19, 22

SCHEDULE OF QUANTITIES
INTERCONNECT - GREENLEAF AVENUE

NO.	QUANT.	UNIT	DESCRIPTION
1.	4,203	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2.	4	EACH	HANDHOLE
3.	3	EACH	HEAVY-DUTY HANDHOLE
4.	4,609	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
5.	2	EACH	DRILL EXISTING HANDHOLE
6.	30	EACH	TERMINATE FIBER IN CABINET
7.	4,609	FOOT	FIBER OPTIC CABLE IN CONDUIT, 24 SINGLE MODE
8.	6	EACH	SPLICE FIBER IN CABINET
9.	51.40	SQ FT	TEMPORARY INFORMATION SIGNING
10.	3	EACH	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2



CONSTRUCTION NOTES:

- ① THE FOLLOWING INTERSECTIONS SHALL BE INCLUDED IN THE PAY ITEM "RE-OPTIMIZE TRAFFIC SIGNAL - LEVEL II":
 1. GREENLEAF AVENUE / FOUNTAIN SQUARE PLACE AT LAKEHURST AVENUE / NORTHPOINT BOULEVARD
 2. GREENLEAF AVENUE / FOUNTAIN SQUARE PLACE AT IL 120 (BELEVIDERE RD) EASTBOUND RAMPS
 3. GREENLEAF AVENUE AT IL 120 (BELEVIDERE RD) WESTBOUND RAMPS
- ② THE CONTRACTOR SHALL FURNISH ONE MEDIA CONVERTER AND STORE IT IN THE EXISTING TRAFFIC SIGNAL CABINET AT GREENLEAF AVENUE AND WASHINGTON STREET. THE MEDIA CONVERTER, ALONG WITH ALL PERIPHERAL EQUIPMENT INCLUDED IN THE SPECIAL PROVISIONS, SHALL BE IN THE ORIGINAL PACKAGING AND PLACED ON A SHELF IN THE CABINET AS DIRECTED BY THE ENGINEER.

GHA GEWALT HAMILTON ASSOCIATES, INC.

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GHA *4570.000
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PLOT SCALE = 1:20
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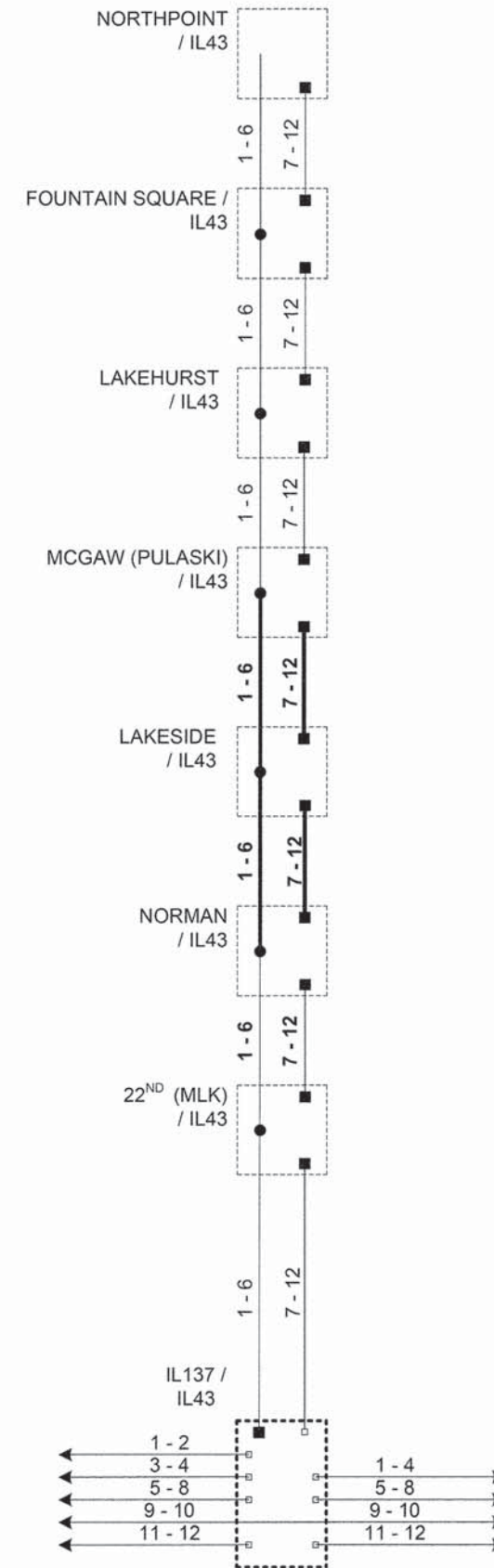
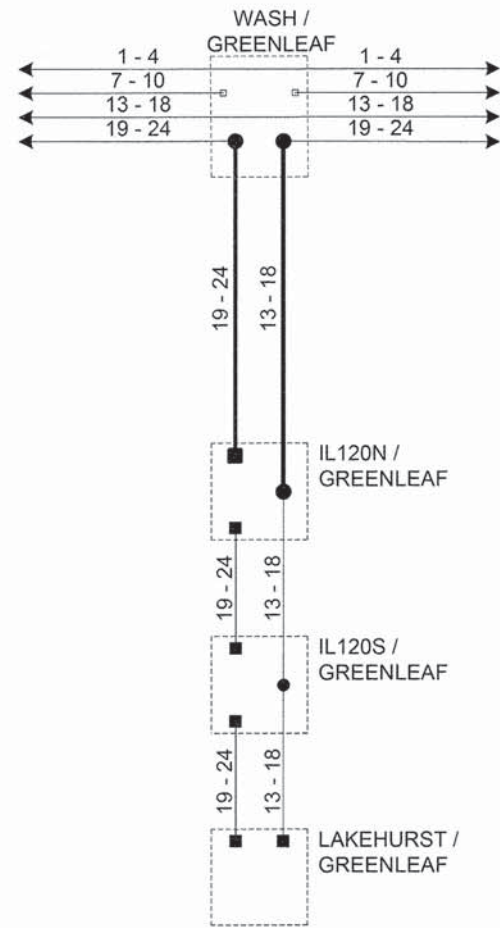
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC - GREENLEAF AVENUE FROM
LAKEHURST RD /NORTHPOINT BLVD TO WASHINGTON ST (CH 45)

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	49
				CONTRACT NO. 61C02
ILLINOIS FED. AID PROJECT				

ECON 205



- 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

FIBER OPTIC CABLE TERMINATION/SPLICING QUANTITIES
(BY INTERSECTION/LOCATION)

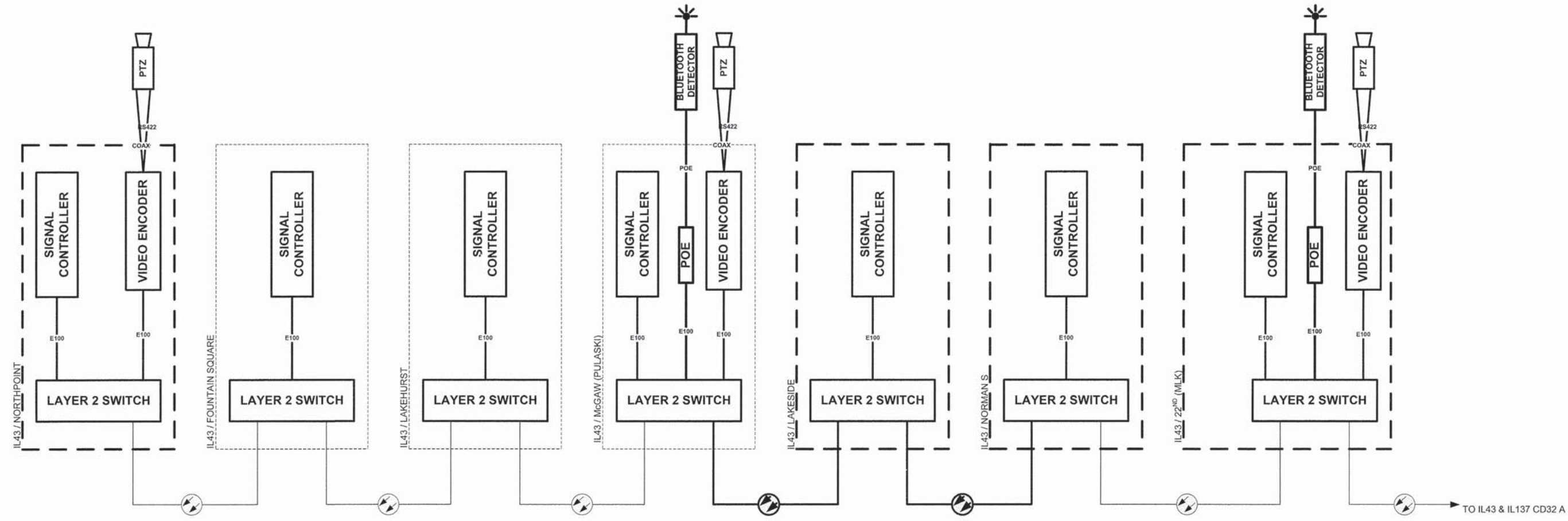
INTERSECTION/LOCATION	INCIDENTAL		BID ITEM	
	T	S	T	S
GREENLEAF AVENUE / FOUNTAIN SQUARE PLACE AT LAKEHURST AVENUE / NORTHPOINT BOULEVARD			12	
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) EASTBOUND RAMP (SOUTH)			12	6
GREENLEAF AVENUE AT IL 120 (BELVIDERE RD) WESTBOUND RAMP (NORTH)	6	6	6	
GREENLEAF AVENUE AT WASHINGTON STREET (CH 45)		12		
SUBTOTAL	6	18	30	6

T = TERMINATE FIBER IN CABINET
S = SPLICE FIBER IN CABINET

FIBER OPTIC CABLE TERMINATION/SPLICING QUANTITIES
(BY INTERSECTION/LOCATION)

INTERSECTION/LOCATION	INCIDENTAL		BID ITEM	
	T	S	T	S
IL 43 (WAUKEGAN RD) AT IL 137 (BUCKLEY RD)			6	
IL 43 (WAUKEGAN RD) AT MARTIN LUTHER KING JR. DRIVE			12	6
IL 43 (WAUKEGAN RD) AT NORMAN DRIVE SOUTH	6	6	6	
IL 43 (WAUKEGAN RD) AT LAKESIDE DRIVE	12	6		
IL 43 (WAUKEGAN RD) AT PULASKI MEMORIAL DRIVE	6	6	6	
IL 43 (WAUKEGAN RD) AT LAKEHURST ROAD			12	6
IL 43 (WAUKEGAN RD) AT FOUNTAIN SQUARE BOULEVARD			12	6
IL 43 (WAUKEGAN RD) AT NORTHPOINT BOULEVARD			6	
SUBTOTAL	24	18	60	18

T = TERMINATE FIBER IN CABINET
S = SPLICE FIBER IN CABINET



- EXISTING EQUIPMENT
- PROPOSED EQUIPMENT
- EXISTING SINGLEMODE ↻
- PROPOSED SINGLEMODE ↻
- EXISTING MULTIMODE ↻
- PROPOSED MULTIMODE ↻
- PROPOSED SINGLEMODE BY OTHERS ↻

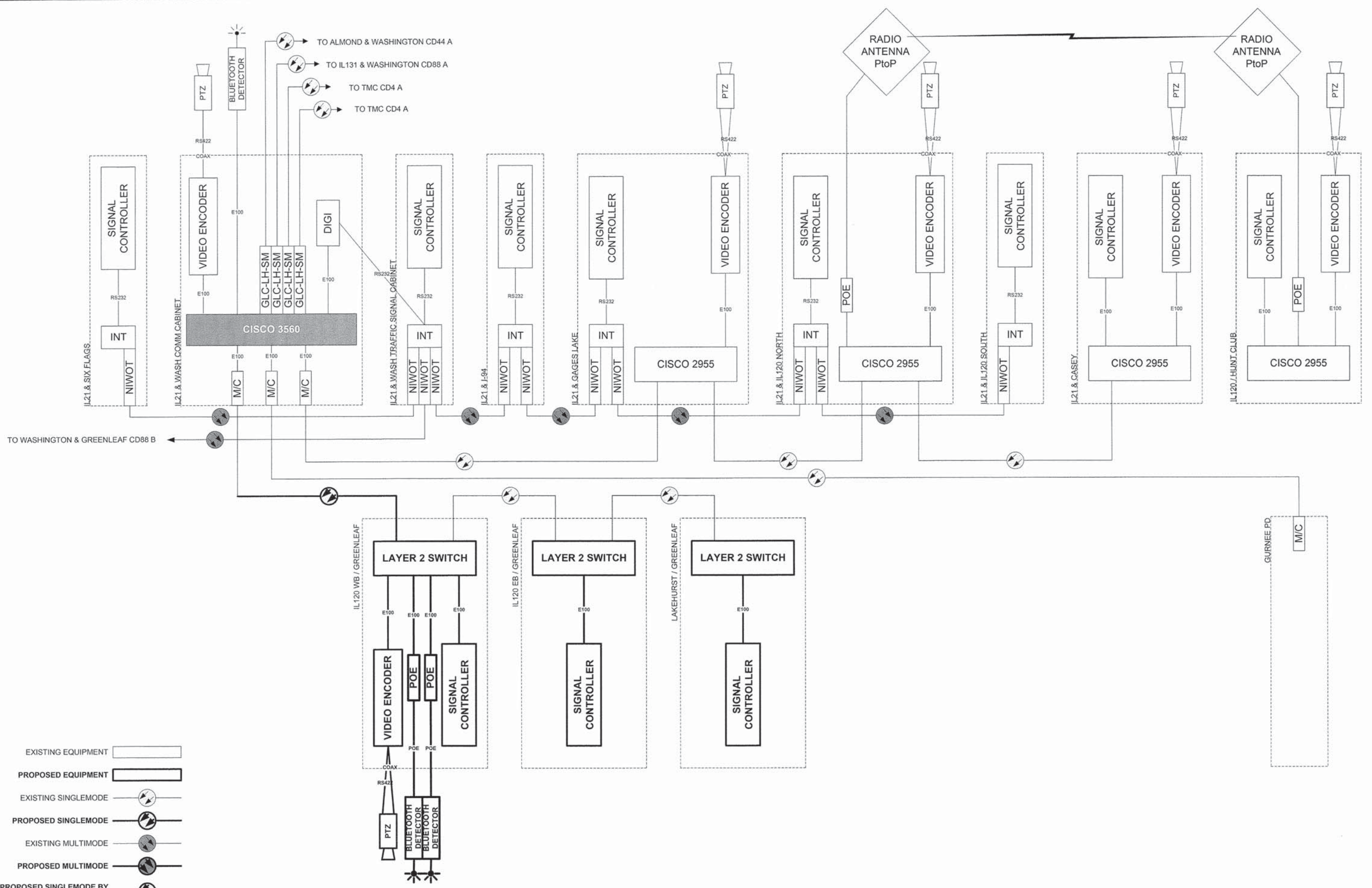
GHA GEWALT HAMILTON ASSOCIATES, INC.

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	PLOT DATE = 11/23/2015	DATE 2015/07/17	REVISED -

LAKE COUNTY
DIVISION OF TRANSPORTATION

32D IL137 / IL43
SCALE N/A

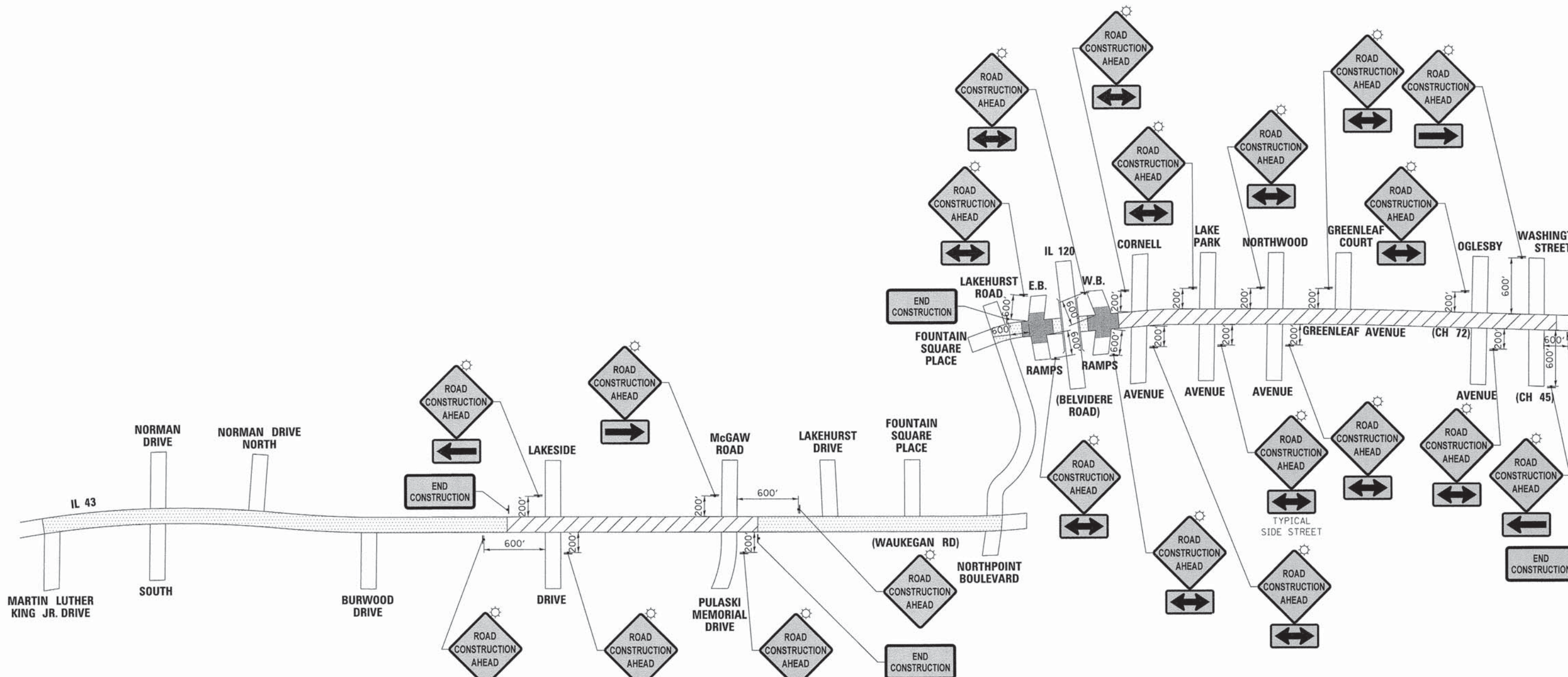
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CONTRAC 61002				







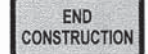
- EXISTING EQUIPMENT
- PROPOSED EQUIPMENT
- EXISTING SINGLEMODE
- PROPOSED SINGLEMODE
- EXISTING MULTIMODE
- PROPOSED MULTIMODE
- PROPOSED SINGLEMODE BY OTHERS

GHA GEWALT HAMILTON ASSOCIATES, INC.





FILE NAME = D161C02-sht-details_Deicon_04.dgn	USER NAME = zwallsten	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	112A WASHINGTON / IL21	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
Default	PLDT SCALE = 1:20	CHECKED - DG	REVISED - 2015.09.22			VAR.		12-00999-28-TL	53	61
	PLDT DATE = 11/23/2015	DATE 2015/07/17	REVISED -		SCALE N/A			CONTRACT		6102



SIGN LEGEND

-  W20-1103(O)
-  M6-4(O)-2115
-  M6-1L(O)-2115
-  M6-1R(O)-2115
-  G20-2-3618

LEGEND

-  WORK ZONE AREA 1 (TRAFFIC SIGNAL MODERNIZATION)
-  WORK ZONE AREA 2 (INTERCONNECT INSTALLATION)
-  WORK ZONE AREA 3 (ITS UPGRADES ONLY)
-  POST MOUNTED SIGNS (FOR DURATION OF PROJECT)

NOTE: ALL OTHER REQUIRED TRAFFIC CONTROL SIGNAGE MAY USE TEMPORARY SUPPORTS. ALL DAY TIME LEFT TURN LANE, SHOULDER OR CORNER ISLAND OPERATIONS SHALL USE STANDARD 701701 (URBAN LANE CLOSURE, MULTILANE INTERSECTION)

CHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161C02-sh1-staging.dgn
GHA #4578.800
Default

USER NAME = zwellsten
PLOT SCALE = 1:20
PLOT DATE = 11/23/2015

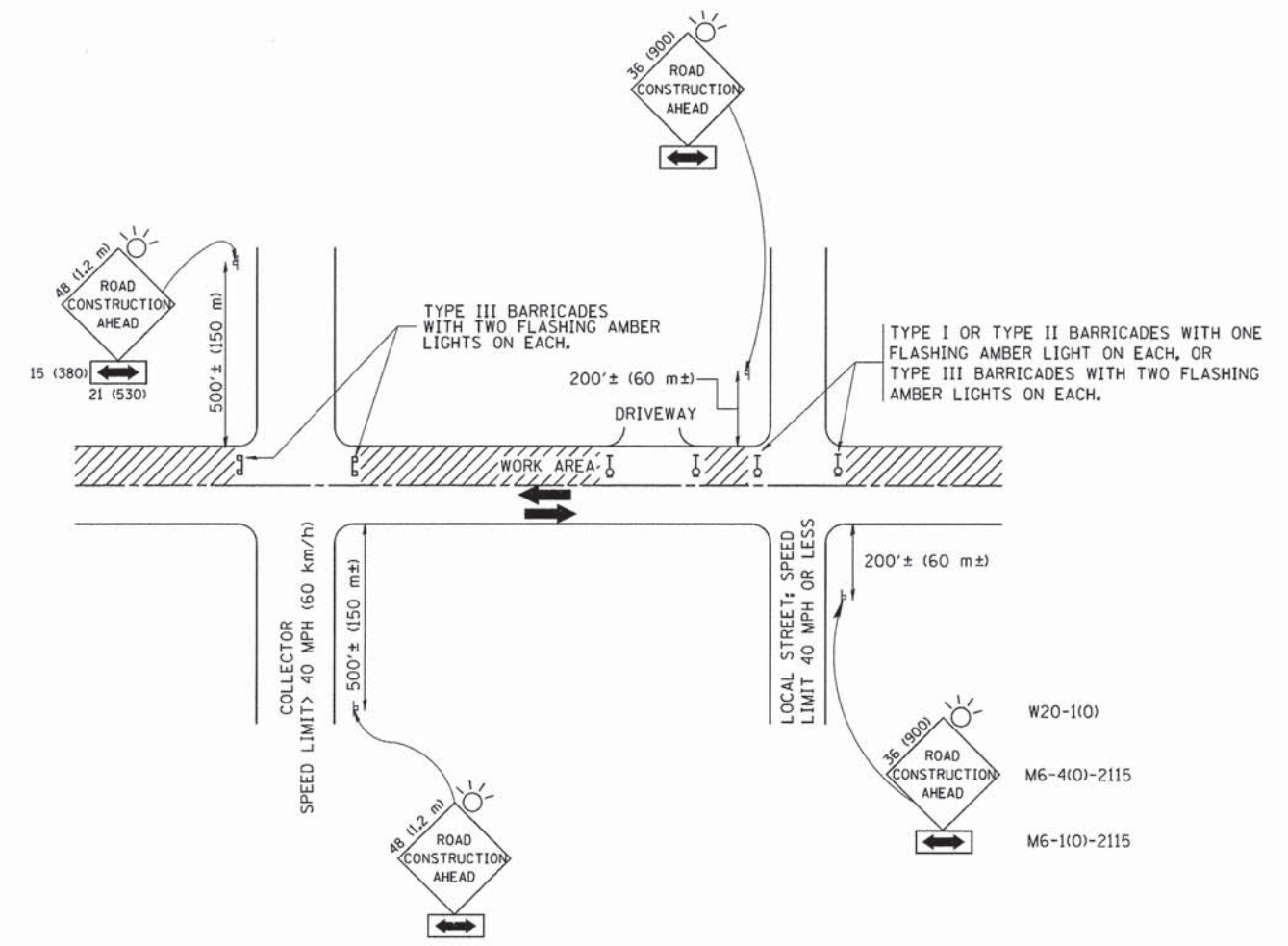
DESIGNED - JRD
DRAWN - ZCW
CHECKED - DPB
DATE -

REVISED -
REVISED -
REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL PLAN
IL 43 (WAUKEGAN RD) AND GREENLEAF AVENUE
SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE. VAR.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	12-00999-28-TL	LAKE	61	54
CONTRACT NO. 61C02			[ILLINOIS] FED. AID PROJECT	



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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

GHA GEVAULT HAMILTON ASSOCIATES, INC.

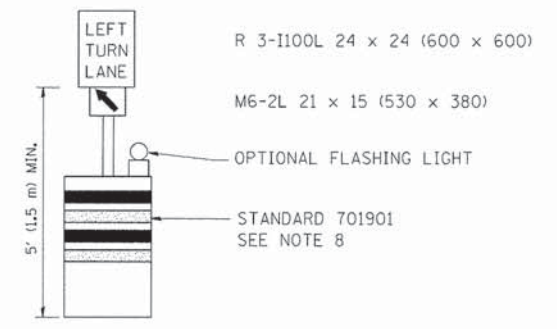
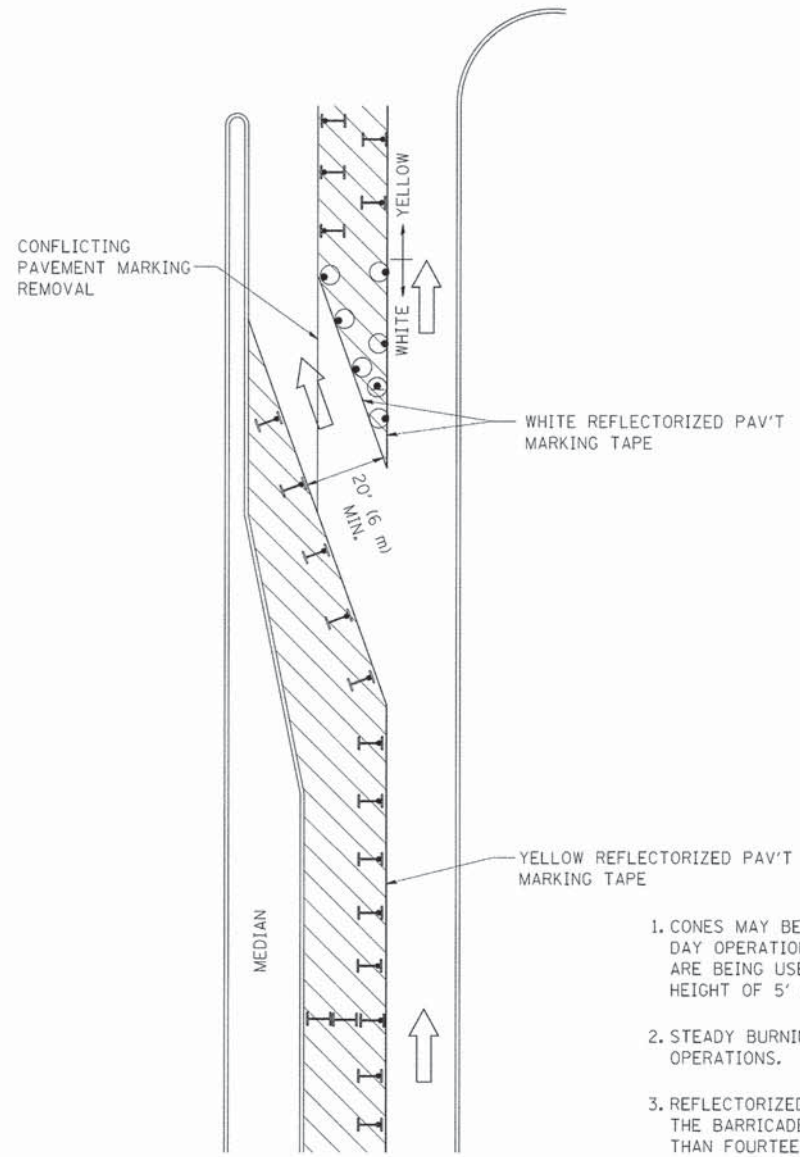
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D161C02-sht-details.ID07-01.08.dgn		DRAWN -	REVISED - A. HOUSEH 03-06-96
GHA *4570.800		CHECKED -	REVISED - A. HOUSEH 10-15-96
Default		DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	55
TC-10			CONTRACT NO. 61C02	
ILLINOIS FED. AID PROJECT				









GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHR 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

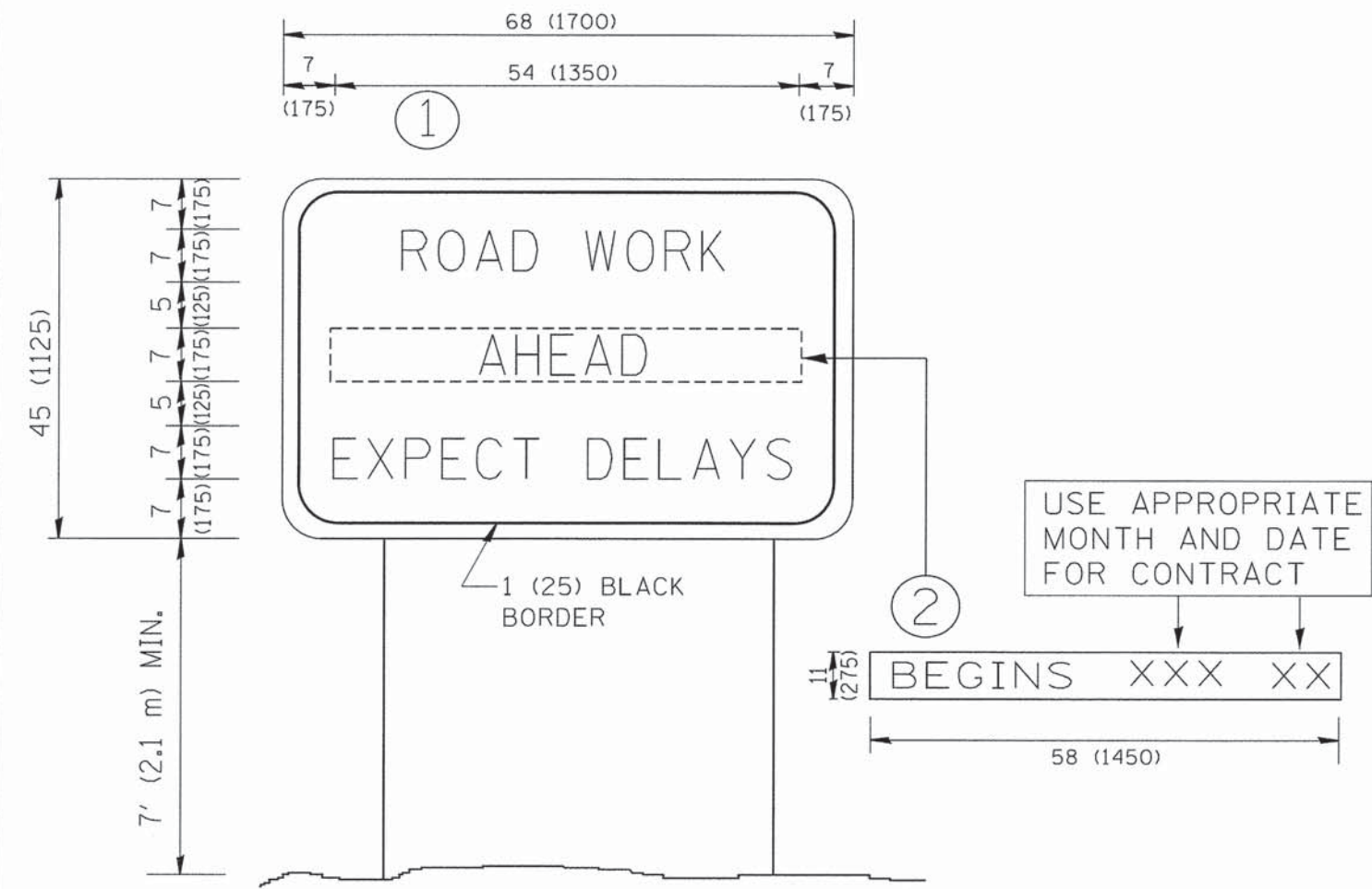
FILE NAME =	USER NAME = zwallsten	DESIGNED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
DIGIC02-shr-details_1007-01.dgn		DRAWN - A. HOUSEH 11-07-95	REVISED -
GHA **4570.000		CHECKED - A. HOUSEH 10-12-96	REVISED -
Default		DATE - T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	56
TC-14		CONTRACT NO. 61C02		
ILLINOIS FED. AID PROJECT				



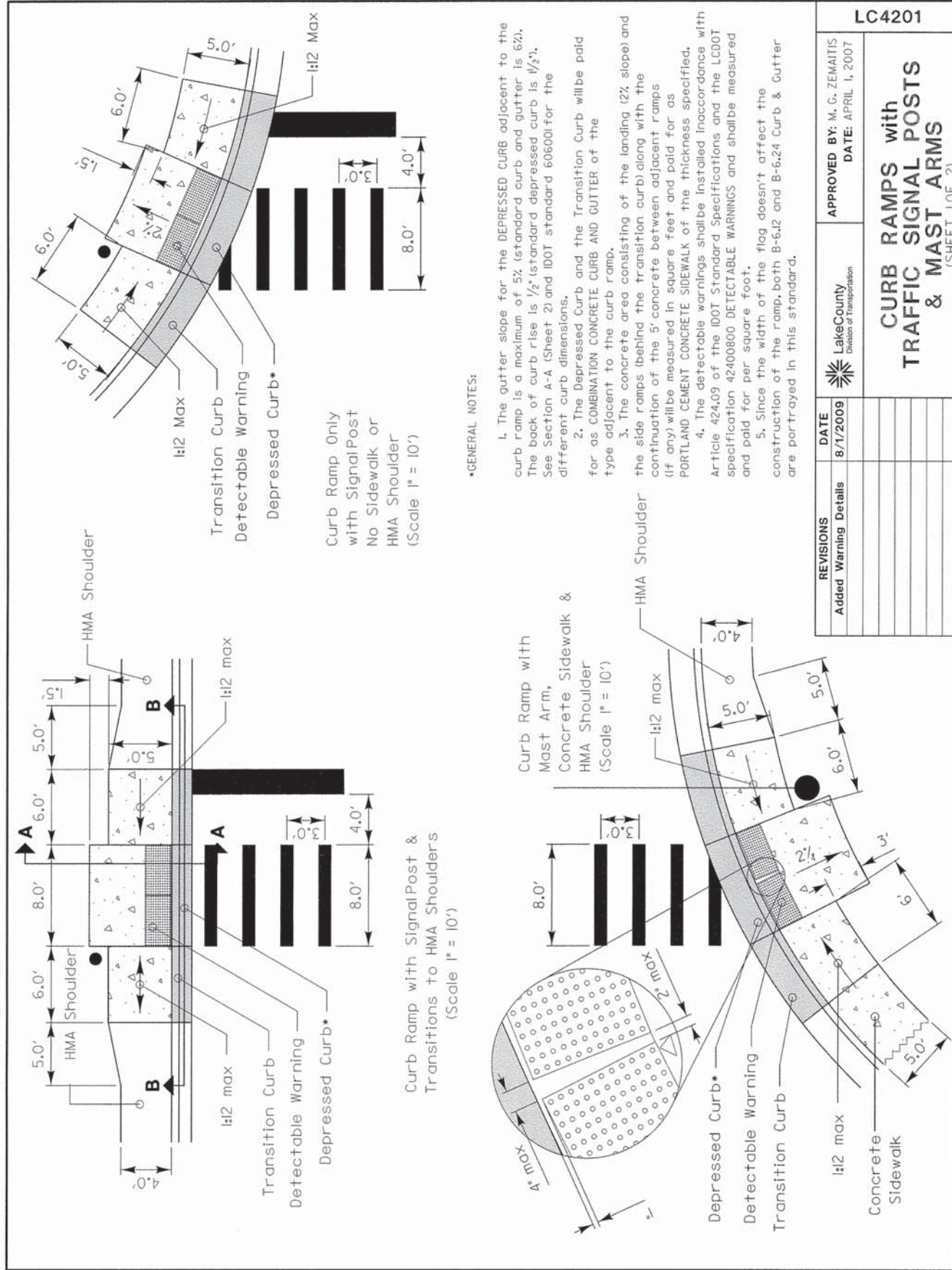
NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

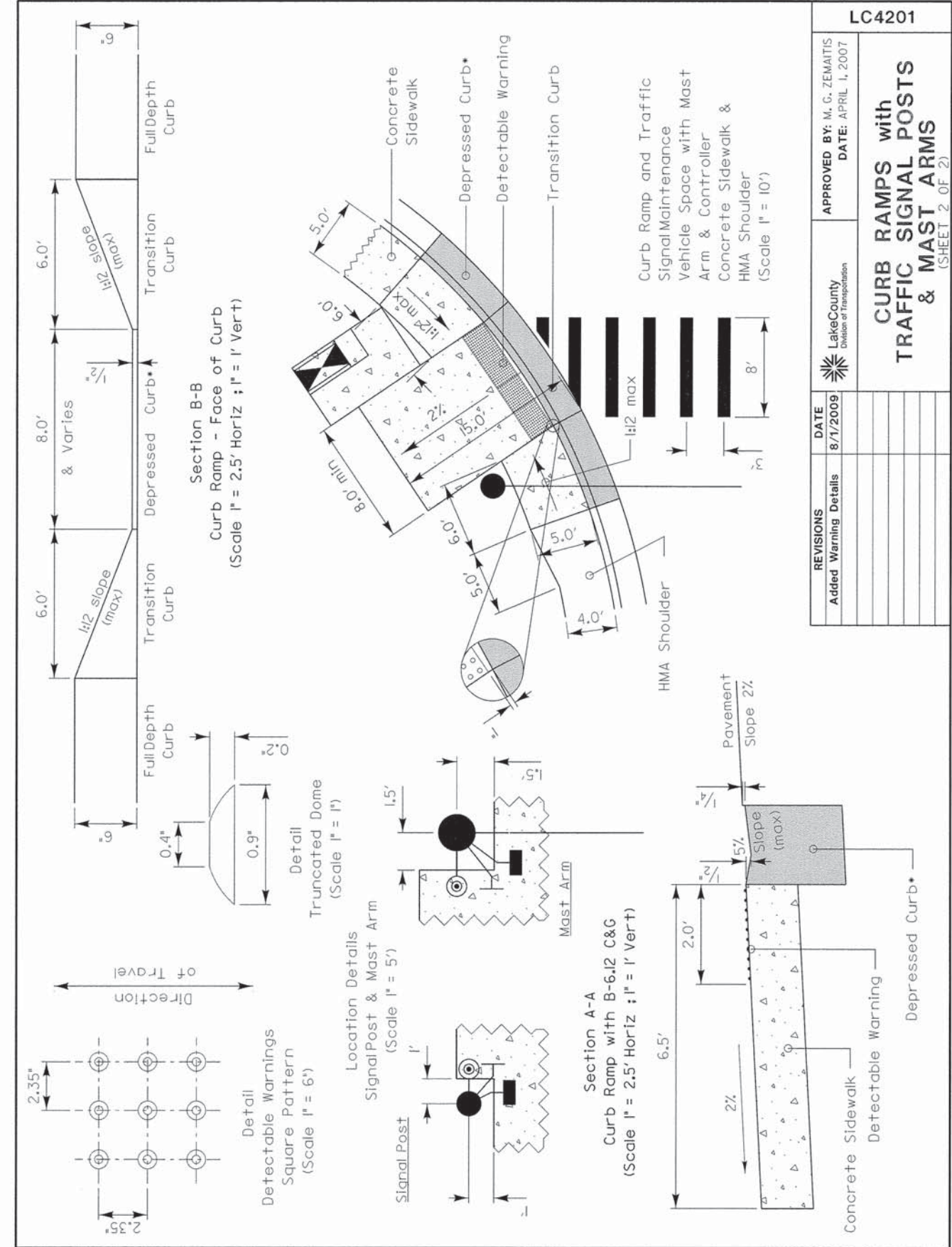
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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D161002-shr-details.1007-01.10.dgn		DRAWN -	REVISED - R. MIRS 12-11-97
GHA *4570.000		CHECKED -	REVISED - T. RAMMACHER 02-02-99
Default		DATE -	REVISED - C. JUCIUS 01-31-07

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	12-00999-28-TL	LAKE	61	57
TC-22			CONTRACT NO. 61C02	
<small>ILLINOIS FED. AID PROJECT</small>				



APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007	
LAKE COUNTY Division of Transportation	
LC4201	
CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS (SHEET 1 OF 2)	
REVISIONS	DATE
Added Warning Details	8/1/2009



APPROVED BY: M. G. ZEMAITIS DATE: APRIL 1, 2007	
LAKE COUNTY Division of Transportation	
LC4201	
CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS (SHEET 2 OF 2)	
REVISIONS	DATE
Added Warning Details	8/1/2009

PLAN VIEW
PREFAB PORTABLE WASHOUT
 SECTION A-A

PLAN VIEW
BELOW GRADE
 SECTION B-B

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

APPROVED BY: MGZ
 DATE: March 17, 2008

CONCRETE WASHOUT FACILITIES
 SHEET 1 OF 2

PLAN VIEW
ABOVE GRADE
 SECTION C-C

PLAN VIEW
ABOVE GRADE WITH STRAW BALES
 SECTION D-D

NOTES:

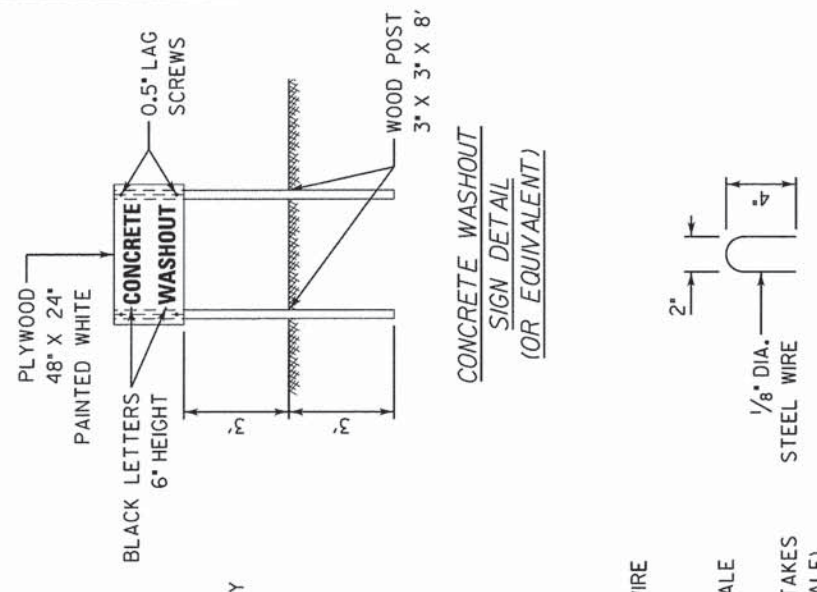
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3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOT TO SCALE

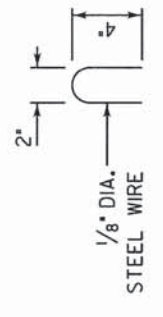
REVISIONS	DATE

APPROVED BY: MGZ
 DATE: March 17, 2008

CONCRETE WASHOUT FACILITIES
 SHEET 2 OF 2

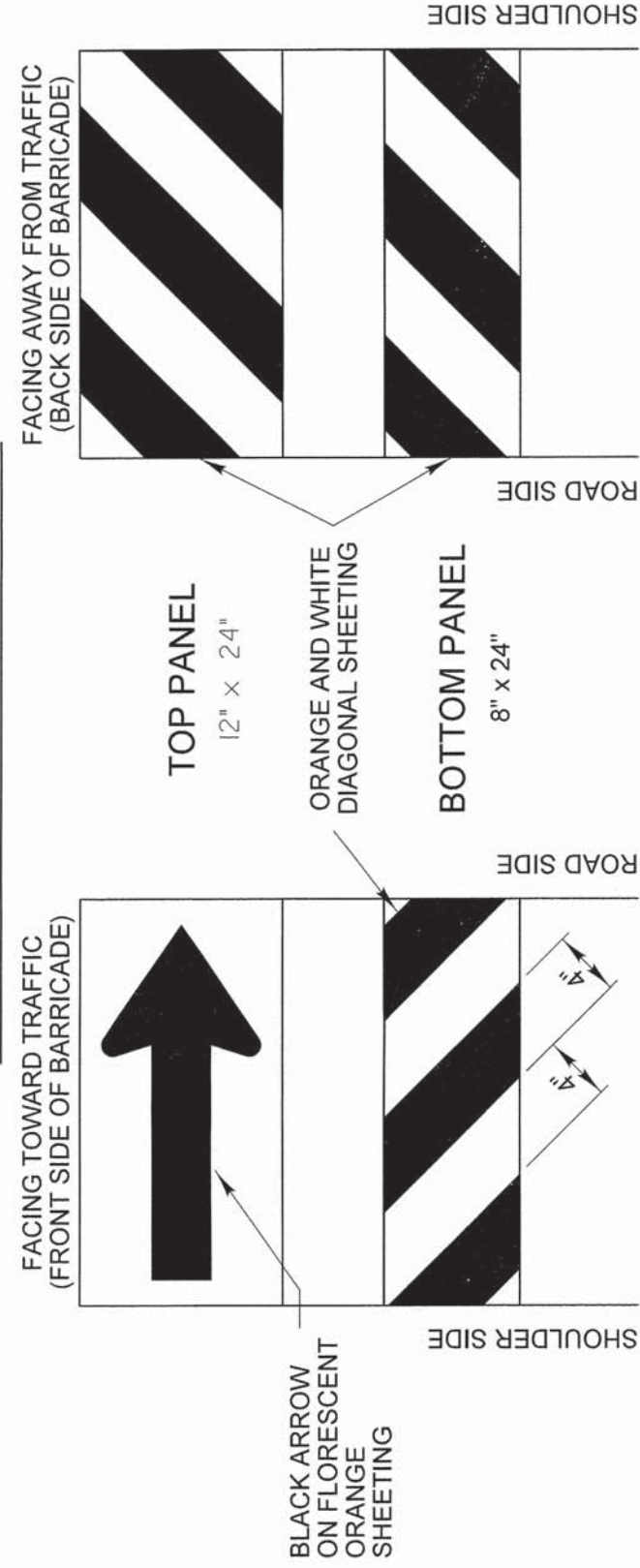


CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



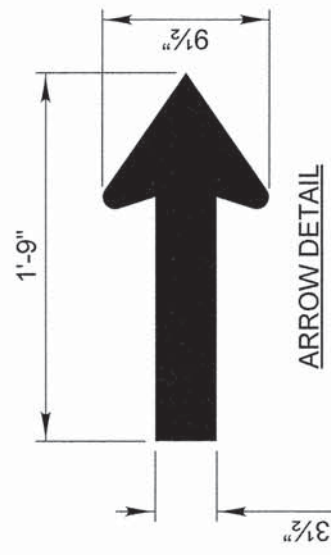
STAPLE DETAIL

DIRECTION INDICATOR BARRICADES



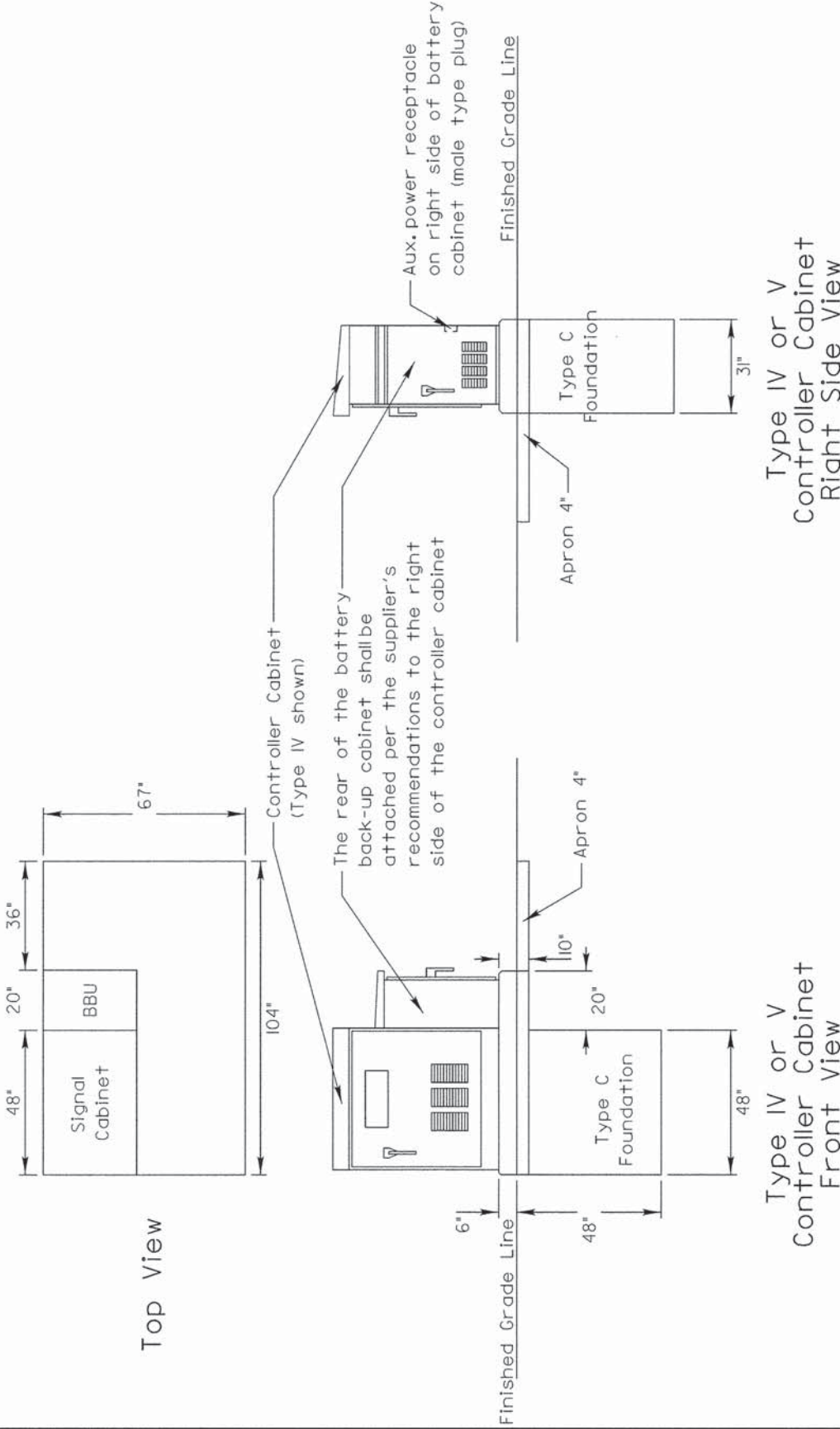
GENERAL NOTES

- 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.



REVISIONS	DATE	APPROVED BY:	LC7200
Text Update	7/15/11	ANTHONY KHAWAJA	
		Lake County Division of Transportation	
		DATE: APRIL 1, 2007	
		TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES	
		HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE	
		DIRECTION INDICATOR BARRICADES	

UNINTERRUPTED POWER SUPPLY CABINET INSTALLATION



REVISIONS	DATE	APPROVED BY:	LC8501
Reclassified Foundation from Mod D to C - JPS	08/28/07	A. KHAWAJA	
		Lake County Division of Transportation	
		DATE: APRIL 1, 2007	
		Type C (SPECIAL) Foundation for Traffic Signal Controller Cabinet and U.P.S. Cabinet	

Note: The full depth (54") foundation is only required under the controller cabinet.

