

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0684-01	2019	65	109

**BILL OF MATERIALS**  
- FOR INFORMATION ONLY -

ITEM	KELLOGG DRIVE QUANTITIES								TOTALS	UNIT	NOTE	
	MAIN ST.		MARKET ST.		BROADWAY ST.		TOPEKA ST.					
	WB	EB	WB	EB	WB	EB	WB	EB				
CONTROLLER UNIT	1	1	1	1	1	1	1	1	1	8	EACH	Trafficware 2070C/LX ATC
MALFUNCTION MANAGEMENT UNIT	1	1	1	1	1	1	1	1	1	8	EACH	
SURGE PROTECTOR	1	1	1	1	1	1	1	1	1	8	EACH	
LOAD SWITCH	4	3	4	4	6	7	3	4	4	35	EACH	
FLASHER	2	2	2	2	2	2	2	2	2	16	EACH	
FLASH TRANSFER RELAY	4	4	4	4	4	4	4	4	4	32	EACH	
DC ISOLATOR	2	2	2	2	2	2	2	2	2	16	EACH	
DETECTOR, 2-CHANNEL										-	EACH	
DETECTOR, 4-CHANNEL										-	EACH	
PAD MOUNTED CABINET (342 LX)	1	-	1	-	1	-	1	-	-	4	EACH	Double Cabinet. See Note 4.
BATTERY BACKUP (BBS/UPS)	1	-	1	-	1	-	1	-	-	4	EACH	
TYPE 2 SURGE PROTECTOR	1	-	1	-	1	-	1	-	-	4	EACH	See Note 14
GPS TIMECLOCK	1	1	1	1	1	1	1	1	1	8	EACH	
KYLAND SWITCH	1	1	1	1	1	1	1	1	1	8	EACH	Reuse Existing Switch
JUNCTION BOX										-	EACH	
PULL BOX	-	1	-	-	-	1	-	-	-	2	EACH	Wichita\Electric. See Detail Sheet ITS-D07
CIRCUIT BREAKER, TRAFFIC SIGNAL, 50 AMP.	1	1	1	1	1	1	1	1	1	8	EACH	
CIRCUIT BREAKER, AUXILIARY 15 AMP.	1	1	1	1	1	1	1	1	1	8	EACH	
GROUND ROD & CLAMP	1		1		1		1			4	EACH	At Each Cabinet
SERVICE WIRE NO. 0 AWG 1/C		1005		1368		825		990		4188	LIN FT	
LIGHTING DISTRIBUTION WIRE NO. 8 AWG 1/C										-	LIN FT	Not Included. See General Note 5
POLE & BRACKET WIRE NO. 10 AWG 1/C										-	LIN FT	Not Included. See General Note 5
GROUND WIRE NO. 6 AWG 1/C	690	1080	635	1100	670	1150	400	945		6670	LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 5/C										-	LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 7/C	1410	1595	1770	1795	2335	3095	745	1985		14730	LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 2/C										-	LIN FT	
DETECTOR LOOP WIRE NO. 14 AWG 1/C										-	LIN FT	See General Note 4
LOOP SEALANT										AS REQ'D		
CONDUIT, 3" & FITTINGS	25	140	20	160	20	210	20	200		795	LIN FT	
CONDUIT, 2" (TRENCHED)		140		150		140		20		450	LIN FT	For Signal Electric Power
CONDUIT, 2" (BORED)		55		55						110	LIN FT	For Signal Electric Power

NOTES:

- QUANTITIES SHOWN ARE FOR EASTBOUND & WESTBOUND KELLOGG DRIVE TRAFFIC SIGNALS FROM MAIN STREET TO TOPEKA STREET. EXISTING SIGNAL POLES, MAST ARMS, SERVICE BOXES, JUNCTION BOXES, AND SIGNING TO REMAIN. QUANTITIES ARE FOR THE REPLACEMENT AND RELOCATION OF THE TRAFFIC SIGNAL CONTROLLER CABINETS.
- THE TRAFFIC SIGNAL SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS NECESSARY FOR THE SATISFACTORY OPERATION OF ELECTRICAL APPARATUS AND FOR COMPLETE OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT. EXISTING SIGNAL TIMINGS SHALL BE USED UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- THE CONFLICT MONITORS SHALL BE 2010 ECL-IP CONFLICT MONITORS AND SHALL MEET THE REQUIREMENTS OUTLINED IN CALTRANS TEES 2002 (LATEST VERSION).
- FOR ADDITIONAL TRAFFIC SIGNAL EQUIPMENT INFORMATION, SEE SHEET 6
- ALL CABINETS OR OTHER EXPOSED ITEMS SHALL BE POWDER COATED BLACK.
- WIRING SHALL BE REPLACED FROM NEW SIGNAL CABINET TO EXISTING TRAFFIC SIGNAL POLES. EXISTING WIRING NOT BEING REUSED SHALL BE COMPLETELY REMOVED FROM CONDUIT. CONTRACTOR SHALL FURNISH NEW WIRING NECESSARY FOR THE SATISFACTORY OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.
- CUT OVER FOR ALL SIGNALS SHALL OCCUR DURING A WEEKEND AND BE COORDINATED WITH THE CITY OF WICHITA. CUT-OVER TIME SHALL BE LIMITED TO THE BEST EXTENT POSSIBLE AND BE LIMITED TO A SINGLE WEEKEND UNLESS OTHERWISE APPROVED.
- NEW SIGNALS SHALL BE INSTALLED PRIOR TO CUT OVER. ALL EQUIPMENT SHALL BE NEW EXCEPT KYLAND SWITCHES.
- THE CONTRACTOR SHALL COORDINATE THE LOCATION OF TRAFFIC SIGNAL CABINETS WITH THE CITY OF WICHITA AND ENGINEER PRIOR TO INSTALLATION.
- THE TRAFFIC SIGNAL CONTROLLER SHALL BE LOCATED ON SHELF BRACKETS AND SHALL NOT BE BOLTED TO VERTICAL CABINET RAILS.
- BATTERY BACKUP SYSTEM (BBS) SHALL BE ALPHA FXM 1100 UPS MODULES. THE ALPHA UNIT AND TRANSFER SWITCH SHALL BE MOUNTED INSIDE THE SIGNAL CABINET. THE BATTERIES SHALL BE LOCATED IN AN AUXILIARY ENCLOSURE. THE BATTERY CHARGE MANAGEMENT UNIT MAY BE LOCATED IN AUXILIARY ENCLOSURE WITH BATTERIES.
- THE CONTRACTOR MAY CHOOSE AN ALTERNATE ROUTE FOR WIRING BASED ON FIELD CONDITIONS. ALTERNATIVE ROUTES MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ALTERNATIVE ROUTES.
- ALL EXISTING SWITCHES, CABINETS, AND OTHER SIGNAL EQUIPMENT SHALL BE REMOVED IN SALVAGEABLE CONDITION. ITEMS SHALL BECOME THE PROPERTY OF THE CITY OF WICHITA AND DELIVERED TO THE CENTRAL MAINTENANCE FACILITY.
- TYPE 2 SURGE PROTECTION SHALL BE PLACED IN ADVANCE OF BBS SYSTEM MEETING SPECIFICATIONS OUTLINED IN ITS SPECIFICATION 14.2.12. THIS SURGE PROTECTION SHALL BE IN ADDITION TO OTHER SURGE PROTECTION OUTLINED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

**GENERAL NOTES**

- EXISTING WIRING NOT BEING REUSED SHALL BE COMPLETELY REMOVED FROM CONDUIT. CONTRACTOR SHALL FURNISH NEW WIRING NECESSARY FOR THE SATISFACTORY OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.
- ALL WIRES SHALL BE AWG #14 UNLESS SPECIFIED OTHERWISE. ALL WIRE SHALL BE SOLID WIRE. STRANDED WIRE IS NOT ALLOWED (EXCLUDING POWER).
- 1C GROUND WIRE SHALL BE #6 AWG GREEN SOLID COPPER WIRE IN ACCORDANCE WITH ASTM B-3, BONDED TO CONDUIT.
- EXISTING WIRE FOR LOOP DETECTORS SHALL BE ABANDONED IN PLACE. ALL CONDUIT FOR LOOPS IS ASSUMED TO BE 3/4".
- EXISTING WIRING FOR POWER AND LUMINAIRE'S IS NOT SHOWN IN THE WIRING DIAGRAMS OR QUANTIFIED AND MAY BE REUSED. ANY REQUIRED SPLICES SHALL BE MADE IN JUNCTION BOXES, SERVICE BOXES, OR POLE BASES AND MEET ALL APPROPRIATE ARTICLES OF THE NATIONAL ELECTRIC CODE. SPLICE SHALL BE MADE WATERPROOF.
- ALL CONDUIT FOR SIGNALS SHALL BE GALVANIZED RIGID STEEL (G.R.S).

**LEGEND**

EXISTING DEVICES/CONDUITS ARE SHOWN USING GRAYSSCALE

	LUMINAIRE	<i>COND.</i>	CONDUIT
	TRAFFIC SIGNAL POLE	<i>SIG.</i>	SIGNAL CABLE
	JUNCTION BOX	<i>PWR.</i>	POWER CABLE
	SERVICE BOX	<i>PED.</i>	PEDESTRIAN SIGNAL CABLE
	TRAFFIC SIGNAL HEAD	<i>DET.</i>	DETECTOR LEAD-IN CABLE
	PEDESTRIAN SIGNAL & PUSHBUTTON	<i>ST. LT.</i>	STREET LIGHTING CABLE
	CONTROLLER CABINET (SINGLE)	<i>INT.</i>	SIGNAL INTERCONNECT CABLE
	PAD MOUNTED DOUBLE CABINET (342 LX)	<i>GRND.</i>	WIRE FOR POLE GROUND
	EXISTING POWER SERVICE	<i>COAX.</i>	COAXIAL CABLE
	DETECTION LOOP WITH 3/4" CONDUIT	<i>FUT.</i>	FUTURE CABLE
	BORED CONDUIT (NEW)	<i>EXIST.</i>	EXISTING
	TRENCHED CONDUIT (NEW)		
	EXISTING CONDUIT		
	EXISTING 3/4" CONDUIT FOR LOOP		

DATE	
BY	
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : Road  
 File : c:\transystems\pw\_local\transyscorp-pw\ccbanakid0643930\C-SIG-MOA-600.dgn  
 Plotted : 7/23/2019

KANSAS DEPARTMENT OF TRANSPORTATION  
 KELLOGG DR. TRAFFIC SIGNAL  
 NOTES, LEGEND & QUANTITIES