PLOTTED: Friday, August 23, 2019 @ 03:51PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0660-01	2019	122	198

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR MT. VERNON IMPROVEMENTS

BROADWAY TO SOUTHEAST BLVD.

BILL OF MATERIALS (For Information Only)

ITEM	UNIT	QUANT.
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD (SEE CHART A) W/MOUNTING HARDWARE	EACH	20
TRAFFIC SIGNAL POLE (SEE CHART B) STEEL	EACH	4
	EACH	
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING - POLE	EACH	4
CONDUIT ELBOW 90 2"	EACH	AS NEEDED
CONDUIT ELBOW 90 3"	EACH	AS NEEDED
SERVICE BOX	EACH	4
GROUND ROD & CLAMP	EACH	5
TRAFFIC SIGNAL LAMP RED LED KIT	EACH	12
TRAFFIC SIGNAL LAMP YELLOW LED KIT	EACH	12
TRAFFIC SIGNAL LAMP GREEN LED KIT	EACH	12
TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT	EACH	2
TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT	EACH	2
TRAFFIC SIGNAL LAMP LED (12" COMBINATION)	EACH	8
BACKPLATE W/ RETROREFLECTIVE TAPE ALONG THE OUTSIDE FOR SIGNAL HEAD (TYPE A)	EACH	10
BACKPLATE W/ RETROREFLECTIVE TAPE ALONG THE OUTSIDE FOR SIGNAL HEAD (TYPE I)	EACH	2
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX 125 AMP	EACH	1
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	8
LEAD-IN-WIRE NO. 6 A.W.G. 1/C	LIN. FT.	50
NO. 8 A.W.G. 1/C (GROUND)	LIN. FT.	510
MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 2/C	LIN. FT.	30
MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 5/C	LIN. FT.	395
MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 7/C	LIN. FT.	950
CONDUIT 1" RGC	LIN. FT.	10
CONDUIT 1.5" RGC	LIN. FT.	6
CONDUIT 2" RGC	LIN. FT.	46
CONDUIT 3" RGC	LIN. FT.	310
CONDUIT 2" PVC	LIN. FT.	255
WAVETRONIX SMARTSENSOR	EACH	4
WAVETRONIX MOUNTING HARDWARE (MOUNT BRACKET)	EACH	4
WAVETRONIX POLE MOUNT CABINET	EACH	4
SMARTSENSOR CABLE (SC)	LIN. FT.	190
WAVETRONIX POWER CABLE (WPC)	LIN. FT.	425
STREET NAME SIGNS W/ MOUNTING HARDWARE (D-3)	EACH	4
LEFT TURN YIELD ON GREEN W/ MOUNTING HARDWARE (R10-12)	EACH	2
REMOVAL OF EXISTING TRAFFIC CONTROL EQUIPMENT**	EACH	1

EQUIPMENT SPECIFICATIONS 2070 CONTROLLER

Controller Units: The 2070L controllers supplied shall meet the requirements

2 2070-1B CPU module with RJ-45 Ethernet port connector.
4 2070-3B 8X40 front panel with LCD display.
5 2070-4A 10 amp power supply.
6 2070-7A asynchronous serial communications module (RS-232).
7 Any unused slot position shall have a cover plate.

B. Conflict monitors:
The Conflict Monitors supplied shall be 2010 ECL conflict monitors.

C. 1-Loop-back cable for 2070-2A Field I/O (Type 170, 104 pin and 37 pin connector).

D. 1-Loop-back cable for 2070-7A port.

Note: The Contractor shall supply and install all necessary material and equipment for the installation of the Traffic Signal System shown in these plans.

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

BID ITEM	QUANTITY	UNIT
TRAFFIC SIGNALIZATION, MT. VERNON AND WASHINGTON	1	L.S.
TRAFFIC SIGNALIZATION, MT. VERNON AND WASHINGTON (TEMPORARY)	1	L.S.

TRAFFIC SIGNAL POLE SUMMARY (CHART B)

POLE NO.	STATION	TYPE	ARM LENGTH	SIGNALS ON ARM	X1 X2 X3	OTHER EQUIPMENT ON ARM	SIGNALS ON POLE	SIGNS ON POLE
1	72+72.9, 32.2' LT	B	34'	2-E	10.5'	1-D, 1-G, 1-H, 1-I	1-E, 2-F	
2	73+31.2, 31.1' LT.	B	28'	2-E	10'	1-G, 1-H, 1-I	1-E, 2-F	
3	73+34.9, 32.3' RT.	A	34'	2-E	10.5'	1-D, 1-G, 1-H, 1-I	1-E, 2-F	
4	72+72.4, 32.3' RT.	B	28'	2-E	10'	1-G, 1-H, 1-I	1-E, 2-F	

A - Joint Use Steel Pole with Mast Arm
B - Standard Steel Pole with Mast Arm
C - Pedestal Pole (15' Aluminum)
D - Left Turn Sign (R10-12)
E - Traffic Signal
F - Pedestrian Signal with Push Button
G - Street Name Sign
H - Radar Detection Sensor
I - Wind Damper

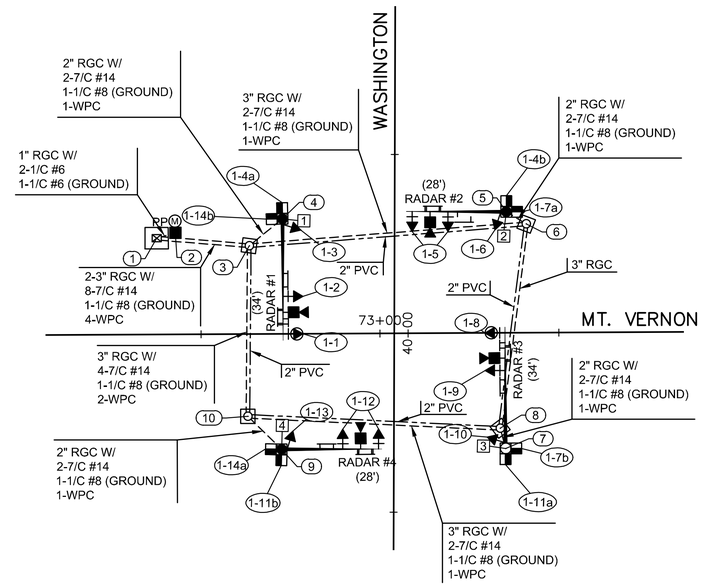
STREET NAME SIGN SUMMARY

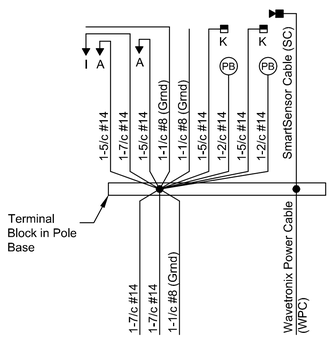
LEGEND	
Mt Vernon 900 E	1
Mt Vernon 1000 E	1
Washington 1900 S	1
Washington 2000 S	1
TOTAL	4

Letters shall be series "E" Modified

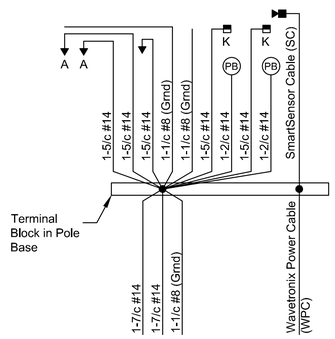
LEGEND

- STEEL TRAFFIC SIGNAL POLE (JOINT USE)
- STEEL TRAFFIC SIGNAL POLE (STD. POLE)
- (P) ALUMINUM TRAFFIC SIGNAL POLE (PEDESTAL)
- TRAFFIC SIGNAL INDICATION (TYPE A) W/BACKPLATE
- TRAFFIC SIGNAL INDICATION (TYPE C) W/BACKPLATE
- MAST ARM SUSPENDED TRAFFIC SIGNAL
- WAVETRONIX RADAR UNIT
- SERVICE BOX
- PEDESTRIAN INDICATION
- [1] POLE NUMBER
- (1) SIGNAL NUMBER
- VEHICLE DETECTION ZONE
- (3-1) DETECTOR NUMBER
- RIGID GALVANIZED CONDUIT (RGC)
- PVC CONDUIT
- OVERHEAD STREET NAME SIGN
- OVERHEAD SIGN R10-10 (LT. TURN YIELD ON GREEN)
- WIND DAMPER
- PP POWER POLE
- (M) METER BOX AND POWER DISCONNECT
- CONTROLLER AND PAD
- (1) BUBBLE POINT #





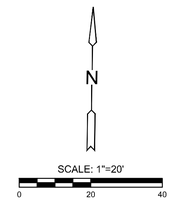
Pole 1 AND 3



Pole 2 AND 4

SIGNAL POINTS

Point #	Station/Offset	Northing	Easting	Desc.
1	72+37.7/26.9' LT.	1675333.797	1652209.710	CONTROLLER
2	72+43.0/28.4' LT.	1675335.355	1652214.904	PP
3	72+63.6/24.7' LT.	1675332.131	1652235.611	SB#1
4	72+72.9/32.2' LT.	1675339.814	1652244.743	POLE #1
5	73+35.5/33.9' LT.	1675342.878	1652307.263	POLE #2
6	73+41.0/30.4' LT.	1675339.566	1652312.871	SB #2
7	73+34.9/32.3' RT.	1675276.721	1652308.200	POLE #3
8	73+33.5/26.7' RT.	1675282.319	1652306.598	SB #3
9	72+72.4/32.3' RT.	1675275.356	1652245.642	POLE #4
10	72+63.0/23.0' RT.	1675284.435	1652236.058	SB #4



TRAFFIC SIGNAL HEAD SUMMARY (CHART A)

SIGNAL NO.	TYPE	SIZE	MOUNTING BRACKET	QUANTITY
1-1	I	5-12"	TYPE I	1
1-2	A	3-12"	TYPE I	1
1-3	A	3-12"	TYPE III	1
1-4	K	1-12"	TYPE II	2
1-5	A	3-12"	TYPE I	2
1-6	A	3-12"	TYPE III	1
1-7	K	1-12"	TYPE II	2
1-8	I	5-12"	TYPE I	1
1-9	A	3-12"	TYPE I	1
1-10	A	3-12"	TYPE III	1
1-11	K	1-12"	TYPE II	2
1-12	A	3-12"	TYPE I	2
1-13	A	3-12"	TYPE III	1
1-14	K	1-12"	TYPE II	2

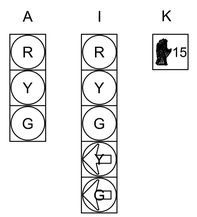
ALL SIGNAL HEADS TO BE LED

Note: The contractor shall supply and install all necessary materials and equipment for the complete installation and operation of the traffic signal system whether specifically mentioned or not.

* Subscript "P" indicates programmed signals. Subscript "D" indicates dual-mode green/yellow arrow section.

** Removal of existing traffic signal equipment shall include removal of foundations, service boxes, and junction boxes. Removals paid for as part of "Removal of Existing Structures".

SIGNAL HEAD ARRANGEMENT



12" LED LENSES
VEHICULAR AND PEDESTRIAN

WIRING PLAN - MT. VERNON & WASHINGTON

PROJECT NO.	87 N-0660-01
DATE	8/19/2019
SCALE	NONE

DESIGNED	DRAWN	CHECKED
JRA	WNJ	JRA

NO.	REVISION	DATE

SHEET NO.

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