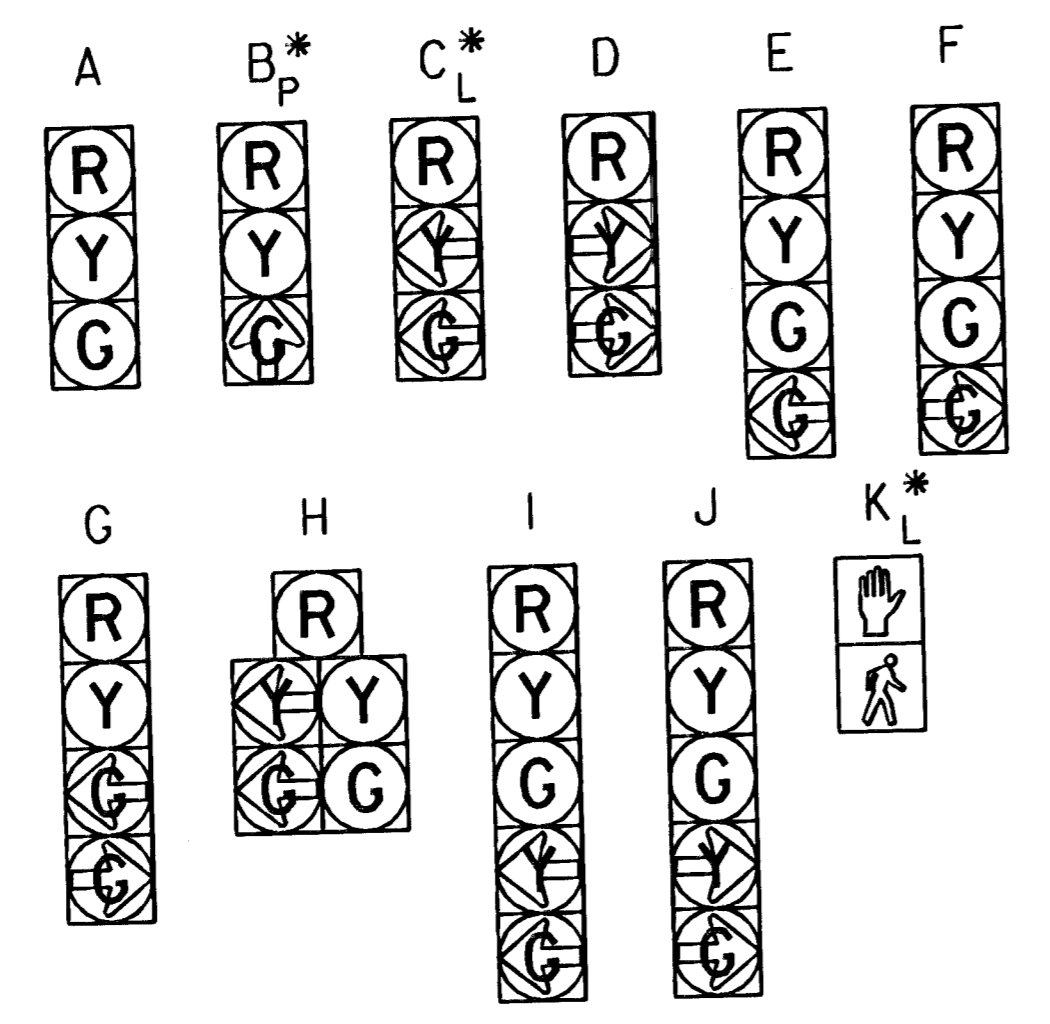


BILL OF MATERIALS

ITEM	QUANT.	UNIT	SPEC. NO.	NOTE
TYPE 170E CONTROLLER UNIT	1	EACH		W/ 400 MODEM
W4IKS PROGRAM MODULE 4I2B (LATEST REVISION) 53A	1	EACH		
CONFLICT MONITOR (MS ON E.C.L.)	1	EACH		
FLASHER	2	EACH		
LOAD SWITCH	12	EACH		
FLASH TRANSFER RELAY	4	EACH		
SURGE PROTECTOR	1	EACH		
DC ISOLATOR	3	EACH		
AC ISOLATOR		EACH		
DETECTOR, 2-CHANNEL (C-800)	12	EACH		
DETECTOR, 4-CHANNEL		EACH		
POLE MOUNTED CABINET	1	EACH		
PAD MOUNTED CABINET	1	EACH		
DIAL-UP MODEM (HAYES COMPATIBLE)	1	EACH		
TRAFFIC SIGNAL HEAD (ALL L.E.D.)	CHART A	EACH		
SIGNAL HEAD MOUNTING BRACKET	CHART A	EACH		
BACK PLATE	CHART A	EACH		
VEHICLE TRAFFIC SIGNAL LAMP	49	EACH		
PEDESTRIAN TRAFFIC SIGNAL LAMP	16	EACH		
PEDESTRIAN PUSHBUTTON & SIGN	8	EACH		
TRAFFIC SIGNAL POLE	CHART B	EACH		
TRAFFIC SIGNAL PEDESTAL ALUMINUM		EACH		
TERMINAL BLOCK	5	EACH		
JUNCTION BOX		EACH		
SERVICE BOX	7	EACH		
UNFUSED STREET LIGHT CONNECTOR KIT		EACH		
FUSED STREET LIGHT CONNECTOR KIT		EACH		
OVERHEAD STREET NAME SIGN	CHART C	EACH		
R10-10 SIGN (600 mm X 750 mm)	2	EACH		
R10-12 SIGN (600 mm X 750 mm)		EACH		
BLANK OUT SIGN	1	EACH		
ENTRANCE HEAD	1	EACH		
SERVICE ENCLOSURE, AMP.	1	EACH		
CIRCUIT BREAKER, TRAFFIC SIGNAL, AMP.	1	EACH		
CIRCUIT BREAKER, LUMINAIRE, AMP.	1	EACH		
GROUND ROD & CLAMP	6	EACH		
SERVICE WIRE NO. 6 AWG 1/C	82	METER		
LIGHTING DISTRIBUTION WIRE NO. 8 AWG 2/C	308	METER		
POLE & BRACKET WIRE NO. 10 AWG 1/C		METER		
GROUND WIRE NO. 6 AWG 1/C	299	METER		
MULTI-CONDUCTOR CABLE NO. 14 AWG 7/C	813	METER		
MULTI-CONDUCTOR CABLE NO. 14 AWG 7/C		METER		
MULTI-CONDUCTOR CABLE NO. 14 AWG 7/C		METER		
VIDEO DETECTOR CAMERA CABLE NO. 18 AWG 3/C	602	METER		
VIDEO DETECTION CAMERAS	6	EACH		
VIDEO DETECTION PROGRAM & SYSTEM SETUP	AS REQ'D			
VIDEO COAXIAL CABLE 75 OHM	602	METER		
CONDUIT, 25 mm & FITTINGS		METER		
CONDUIT, 40 mm & FITTINGS	168	METER		
CONDUIT, 50 mm & FITTINGS	112	METER		
CONDUIT, 75 mm & FITTINGS	96	METER		
CONDUIT, 100 mm & FITTINGS		METER		

CHART A SIGNAL SUMMARY

SIGNAL FACE ARRANGEMENT	NO. SECTIONS (PER FACE)	SIGNAL MOUNTING TYPE	QUANTITY
A	3	MAST ARM W/BACKPLATE	8
I	5	MAST ARM W/BACKPLATE	2
		MAST ARM W/BACKPLATE	
A	3	SIDE-OF-POLE	5
K _L	2	SIDE-OF-POLE	8
		SIDE-OF-POLE	



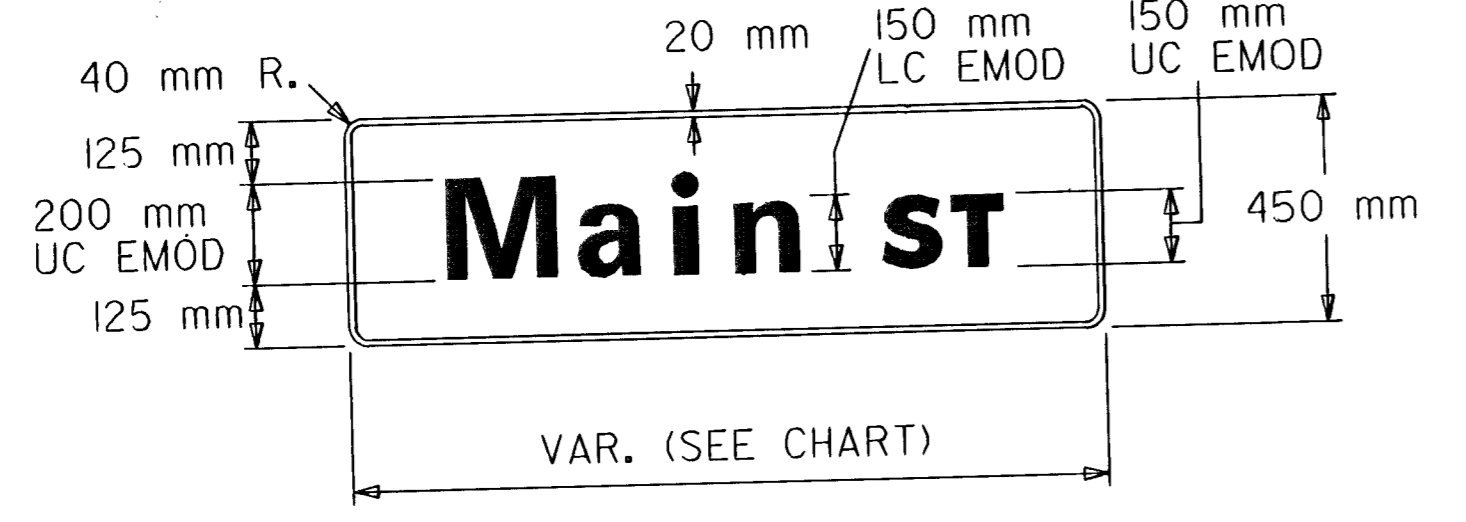
NOTE: ALL HEADS L.E.D.
 * SUBSCRIPT *P* INDICATES PROGRAMMED SIGNALS;
 SUBSCRIPT *L* INDICATES L.E.D. RED LENS.

CHART B TRAFFIC SIGNAL POLES (BLACK)

POLE DESIG.	POLE HEIGHT	SIGNAL ARM LENGTH	SIGNAL ARM MOUNTING HEIGHT	NO. OF SIGNALS ON ARM	SIGNAL SPACING	LUMINAIRE ARM LENGTH	LUMINAIRE MOUNTING HEIGHT	QUANT.
P1	8 m	7 m	5.8 m	2	6.5 - 3.4	2 m	6.8 m	1
P2	8 m	13 m	5.8 m	3	12.3 - 8.5 - 4.6	2 m	6.8 m	1
P3	8 m	8 m	5.8 m	2	7.3 - 4.2	2 m	6.8 m	1
P4	8 m	13 m	5.8 m	3	12.3 - 8.5 - 4.6	2 m	6.8 m	1
P5	3 m							1

CHART C OVERHEAD STREET NAME SIGNS

SIGN	LEGEND	LENGTH	QUANTITY
	Geo Wash Blvd	1.5 m	2
	Mt Vernon	1.5 m	2



NOTE :
 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.

- GENERAL NOTES:
- Removal of existing traffic signal equipment shall include removal of foundations, service boxes, junction boxes and old service riser.
 - See construction traffic control regarding removal of existing signals.
 - Salvagable equipment (cabinet, service box lids, controller, poles, mast arms, etc.) shall be stockpiled on City right-of-way and remain property of the City.
 - Pole/mast arm connection shall be alternative flange plate design.
 - Exact video detection camera locations to be at the direction of the manufacturer's representative. Video camera cable terminations, camera fine tuning, system set-up and programming will be performed by the supplier with the assistance of the contractor.

-QUANTITIES FOR INFORMATION ONLY-

3				
2				
1				
NO.	DATE	BY	APP'D	

KANSAS DEPARTMENT OF TRANSPORTATION

TYPE 170E SYSTEM
 TRAFFIC SIGNAL QUANTITIES SHEET

TEI30BSI 04/28/98
 FHWA APPROVAL 05/18/98 APP'D Linda G. Voss, P.E.
 DESIGNED J.F.F. J.F.F. DETAILED J.F.F. QUANTITIES TRACED
 DESIGN CR. D.A.C. DETAIL CR. D.A.C. QUANT. CR. TRACE CR.

Plotted By : J. TRUMPP
 Plot File : 2232XK00T.SIGS\TEI30BSI
 Plot Date : 4-28-02