DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

BILL OF MATERIALS (FOR INFORMATION ONLY)

ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL POLE STEEL W/MASTARM (5.8 m STANDARD POLE)	EACH	2
TRAFFIC SIGNAL POLE ALUMINUM (4.6 m)	EACH	2
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING – POLE	EACH	2
CONCRETE FOOTING – PEDESTAL POLE	EACH	2
GROUND ROD & CLAMP	EACH	6
CONDUIT CLAMP	EACH	AS REQUIRED
PEDESTRIAN SIGNAL LAMP L.E.D. (300 mm COMBINATION)	EACH	2
L.E.D. UNIT	EACH	35
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX	EACH	1
BACK PLATE FOR SIGNAL HEAD (TYPE A)	EACH	6
BACK PLATE FOR SIGNAL HEAD (TYPE I)	EACH	1
TRAFFIC SIGNAL HEAD – 300 mm (TYPE A) W/MOUNTING BRACKET	EACH	10
TRAFFIC SIGNAL HEAD – 300 mm (TYPE I) W/MOUNTING BRACKET	EACH	1
PEDESTRIAN SIGNAL – 300 mm (TYPE K) W/MOUNTING BRACKET	EACH	2
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	2
PAD MOUNTED CABINET & CONTROLLER SYSTEM–TYPE 170 (SEE NOTE)		
TYPE 170 E CONTROLLER UNIT	EACH	1
MODEL 332 CABINET W/ALL ACCESSORIES	EACH	1
MODEL 430 TRANSFER RELAYS	EACH	4
MODEL 204 FLASHER UNIT	EACH	2
MODEL 210PC (ECL OR MS) CONFLICT MONITOR	EACH	1
SURGE PROTECTOR	EACH	1
MODEL 242 TWO CHANNEL ISOLATOR	EACH	3
MODEL 200 SWITCH PACK	EACH	12
LEAD–IN WIRE NO. 6 AWG 1/c (TYPE THHN)	m	95
MULTI–CONDUCTOR CABLE NO. 14 AWG 2/c	m	3
MULTI–CONDUCTOR CABLE NO. 14 AWG 5/c	m	208
MULTI–CONDUCTOR CABLE NO. 14 AWG 7/c	m	240
STANDARD NO. 8 AWG 1/c (TYPE THHN)(GROUND)	m	194
6 PR. NO. 19 IMSA 20–2, 600 V SHIELDED COMMUNICATION CABLE	m	65
SUPPLY AND INSTALL UNDERGROUND SPLICE KIT FOR THE COMMUNICATION CABLE	EACH	1
CONDUIT 25 mm	m	43
CONDUIT 50 mm	m	27
CONDUIT 75 mm	m	20
STREET NAME SIGN W/MOUNTING HARDWARE	EACH	2
LEFT TURN YIELD ON GREEN (R10–12) W/MOUNTING HARDWARE	EACH	1
CAMERA HOUSING (ITERIS VANTAGE)	EACH	3
VIDEO DETECTION CAMERA AND MOUNTING HARDWARE (RISER BRACKET)	EACH	3
VIDEO DETECTION PROCESSOR UNIT (ITERIS VANTAGE PLUS OR APPROVED EQUAL)	EACH	1
VIDEO POWER CABLE NO. 16 AWG 3/c	m	75
VIDEO CABLE 75 OHM COAXIAL (BELDON #8281)	m	75
TV MONITOR	EACH	1
CAMERA CHARGED COUPLING DEVICE (ITERIS VANTAGE OR APPROVED EQUAL)	EACH	3

TYPE 170 TRAFFIC CONTROLLER SYSTEM TO INCLUDE:
ONE (1) MODEL 170E CONTROLLER UNIT COMPLETE WITH 412B2 SYSTEM MEMORY MODULE CAPABLE OF SUPPORTING WAPITI MICRO SYSTEM W4IKS (LATEST REVISION 53A) TRAFFIC PROGRAM ON 27256 EPROM WITH 400 MODEM.

NOTE: THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NECESSARY MATERIAL AND EQUIPMENT FOR THE COMPLETE INSTALLATION AND OPERATION OF THE TRAFFIC SIGNAL WHETHER SPECIFICALLY MENTIONED OR NOT.

TRAFFIC SIGNAL POLE SUMMARY

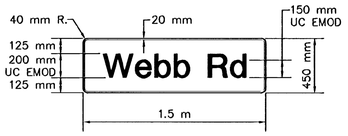
POLE NO.	STATION	TYPE	ARM LENGTH (m)	SIGNALS ON ARM	X_1	X_2	X_3	X_4	X_5	OTHER EQUIP. ON ARM	Y_1	Y_2	Y_3	SIGNALS ON POLE
1	4+956.5, Lt.	B	13.0	2–D	8.8	3.4				G, 2–H	7.1	2.3		1–E, 1–F
2	4+959.7, RT.	B	16.0	5–D	6.2	0.5	4.3	0.5	4.3	C, 2–G	7.0	2.6	5.0	2–E
3	4+982.1, Lt.	A	–	–			–			–		–		1–F
4	4+992.0, Lt.	A	–	–			–			–		–		1–E

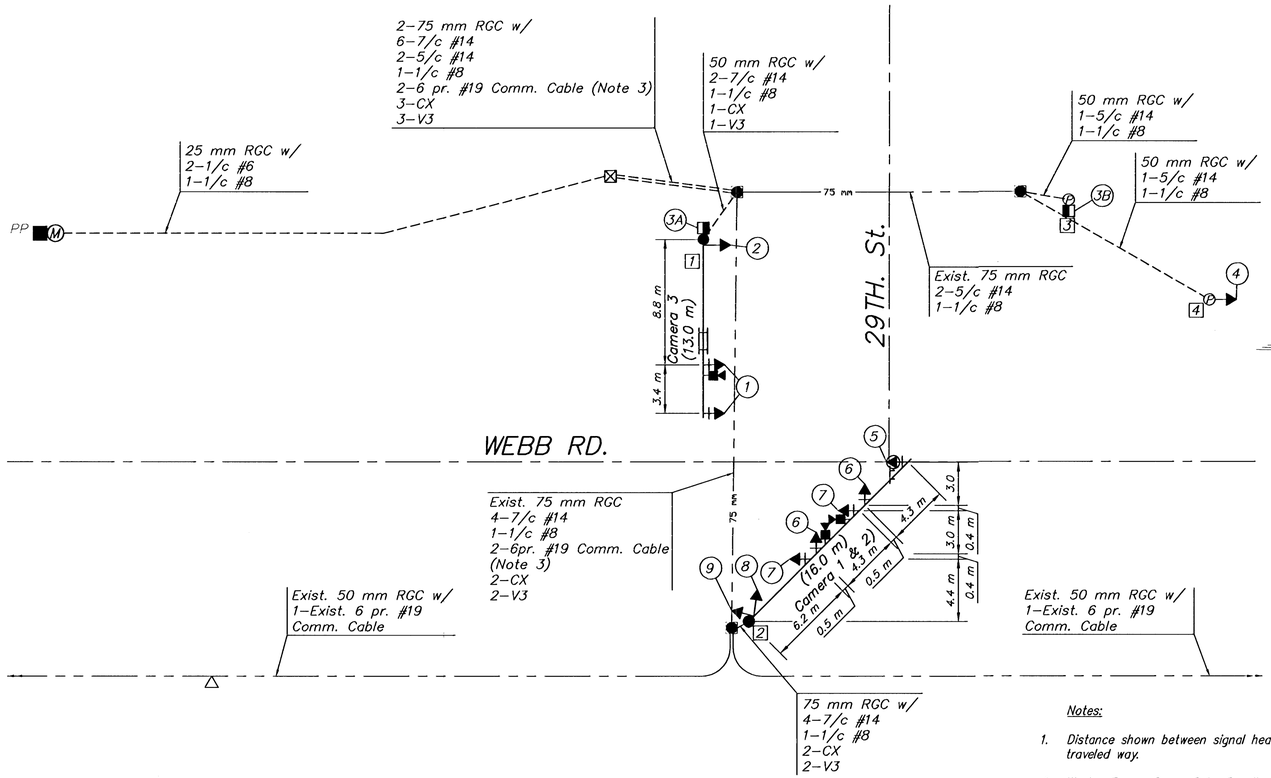
A PEDESTAL POLE (4.6 m ALUMINUM)
B STEEL TRAFFIC SIGNAL POLE WITH MAST ARM (5.8 m STD. POLE)
C PROTECTED TURN SIGN
D TRAFFIC SIGNAL WITH BACK PLATE
E TRAFFIC SIGNAL
F PEDESTRIAN SIGNAL WITH PUSH BUTTON
G VIDEO DETECTION CAMERA
H STREET NAME SIGN

Mast Arm Mounting Dimensions – The dimensions contained in the "Traffic Signal Pole Summary" chart are referenced from the pole to the first signal (X) and sign or camera (Y), with succeeding dimensions being the distance to the next mounting location(s).

STREET NAME SIGN SUMMARY

LEGEND	QUANTITY
29th St	2
TOTAL	2





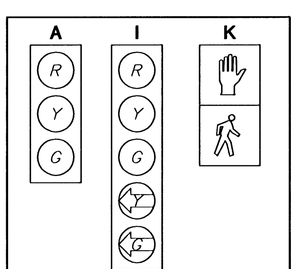
LEGEND

- Pedestal Pole (4.6 m Aluminum)
- Steel Traffic Signal Pole (5.8 m Std. Pole)
- Traffic Signal Indication (Type A)
- Traffic Signal Indication (Type A) w/Backplate
- Traffic Signal Indication (Type I) w/Backplate
- Mast Arm Suspended Traffic Signal w/Backplate
- Video Dectection Camera
- PP Westar Energy Power Pole
- Existing Service Box
- Controller
- Pedestrian Indication
- Existing Junction Box
- [2] Traffic Signal Pole Number
- (2) Traffic Signal Head Number
- Rigid Galvanized Conduit (RGC)
- Existing Conduit
- (M) Meter Box and Power Disconnect
- Overhead Street Name Sign
- Overhead Sign R10–12 (Lt. Yield on Green)
- CX Video Coax Cable (75 OHM)
- V3 Video Power Cable (#16 AWG 3/c)

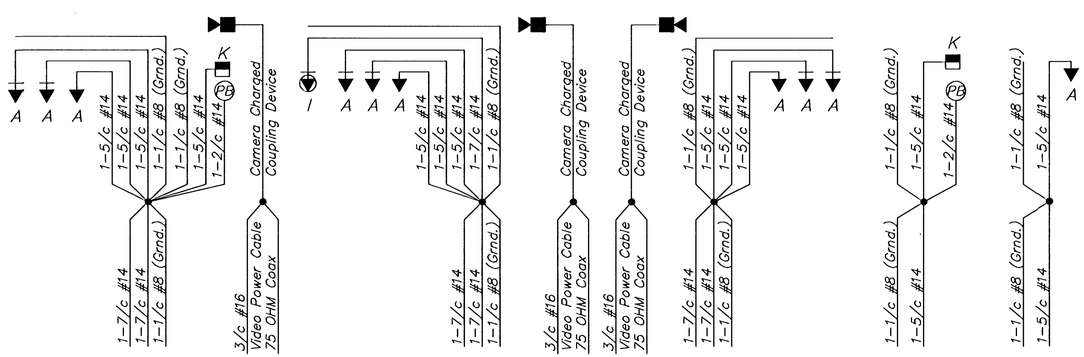
No Scale

TRAFFIC SIGNAL HEAD SUMMARY

SIGNAL NO.	TYPE	SIZE (mm)	MOUNTING BRACKET	QUANTITY
1	A	3–300	TYPE I	2
2	A	3–300	TYPE III	1
3A, 3B	K	2–300	TYPE III	2
4	A	3–300	TYPE III	1
5	I	5–300	TYPE I	1
6	A	3–300	TYPE I	2
7	A	3–300	TYPE I	2
8	A	3–300	TYPE III	1
9	A	3–300	TYPE III	1



All lenses in each head shall be L.E.D. unit per General Note 4. See Sht. No. 2.



Notes:

1. *Distance shown between signal heads shall be field verified to install signal heads in the middle of traveled way.*
2. *Westar Energy Power Pole, Baseline Sta. 4+910.0, 16.0 m Lt., install meter and power disconnect. See Power Pole details. See Sht. No. 8. Meter address 2989 N. Webb Rd.*
3. *The traffic signalization plan for the project to install traffic signal at both the K–96 entrance and exit ramp intersections with Webb Road specifies that 18 m of 6 pr #19 communication cable is to be looped in the existing service box on the east side of the street at 29th. Street. The Contractor will be required to provide an additional 65 m of communication cable with this project, as well as an underground splice kit, to extend the communication cable to the proposed traffic signal controller location at the Southwest corner of the intersection. The City's preference is that the Contractor with this project work with the Contractor for the K–96 ramp signalization project to provide one continuous run of communication cable instead of installing the splice kit. Payment for Communication System shall be Subsidiary to Traffic Signal Installation.*

MKEC ENGINEERING CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

WEBB ROAD @ 29TH. STREET
PROJECT NAME

WEBB RD. @ 29TH. ST. WIRING PLAN
SHEET TITLE

ASH	WNJ	GJA
DESIGN BY:	DRAWN BY:	CHECKED BY:
Jan. 2003	WEBBWR1	4 / 9
DATE	JOB NO.	SHEET/OF

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