

BILL OF MATERIALS		
ITEM	UNIT	QTY
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD (SEE CHART A) W/ MOUNTING HARDWARE	EACH	23
TRAFFIC SIGNAL POLE (SEE CHART B) STEEL	EACH	4
CONCRETE CONTROLLER PAD	EACH	1
JUNCTION BOX	EACH	2
CONCRETE FOOTING - POLE	EACH	4
CONDUIT ELBOW 90°	EACH	As Req'd
CONDUIT ELBOW 90° 3"	EACH	As Req'd
BACK PLATE 5" - 3 SECTION	EACH	8
BACK PLATE 5" - 5 SECTION	EACH	3
SERVICE BOX	EACH	4
GROUND ROD & CLAMP	EACH	6
CONDUIT CLAMP	EACH	As Req'd
TRAFFIC SIGNAL LAMP RED LED KIT	EACH	15
TRAFFIC SIGNAL LAMP YELLOW LED KIT	EACH	15
TRAFFIC SIGNAL LAMP GREEN LED KIT	EACH	15
TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT	EACH	3
TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT	EACH	3
TRAFFIC SIGNAL LAMP WALK LED KIT	EACH	8
TRAFFIC SIGNAL LAMP DON'T WALK LED KIT	EACH	8
CLASS 4 - WOOD POLE	EACH	0
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX	EACH	1
GUY WIRE GUARD	EACH	As Req'd
GUY WIRE CLAMP	EACH	As Req'd
THIMBLE EYE ANCHOR ROD	EACH	As Req'd
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	8
LEAD-IN WIRE No. 4 A.W.G. 1/C (TYPE THNN)	LIN. m	115.3m
STANDARD 1C #8 (GROUND)	LIN. m	143.6m
MULTI-CONDUCTOR CABLE No. 16 A.W.G. 3/C (V3)	LIN. m	115.3m
MULTI-CONDUCTOR CABLE No. 14 A.W.G. 7/C	LIN. m	172.2m
VIDEO CABLE 75 OHM COAXIAL (BELDON 8281) (CX)	LIN. m	115.3m
CONDUIT 50mm PVC - WESTAR	LIN. m	114.0m
CONDUIT 35mm RGC	LIN. m	50.2m
CONDUIT 50mm RGC	LIN. m	11.1m
CONDUIT 75mm RGC	LIN. m	108.1m
CAMERA HOUSING	EACH	4
VIDEO DETECTION CAMERA & MOUNTING HARDWARE (RISER BRACKET)	EACH	4
VIDEO DETECTION PROCESSOR UNIT	EACH	4
VIDEO MONITOR	EACH	1
CAMERA CHARGED COUPLING DEVICE	EACH	4
TETHER WIRE 1/4" ASTM A475 SIEMENS-MARTIN GRADE MIN.	LIN. m	As Req'd
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT **	L.S.	1
STREET NAME SIGNS W/MOUNTING HARDWARE (D-3)	EACH	4
LEFT TURN YIELD ON GREEN W/MOUNTING HARDWARE (R10-12)	EACH	3
SPLICE KIT (TRAFFIC INTERCONNECT)	EACH	As Req'd

CHART 'A' - SIGNAL INVENTORY				
NO. WAYS	NO. SECTIONS (Per Face)	SIGNAL FACE ARRANGEMENT	MOUNTING TYPE	QTY
1	3	A	TYPE I	8
1	5	I	TYPE I	3
1	3	A	TYPE III	4
2	2	K (SYMB)	TYPE II	8

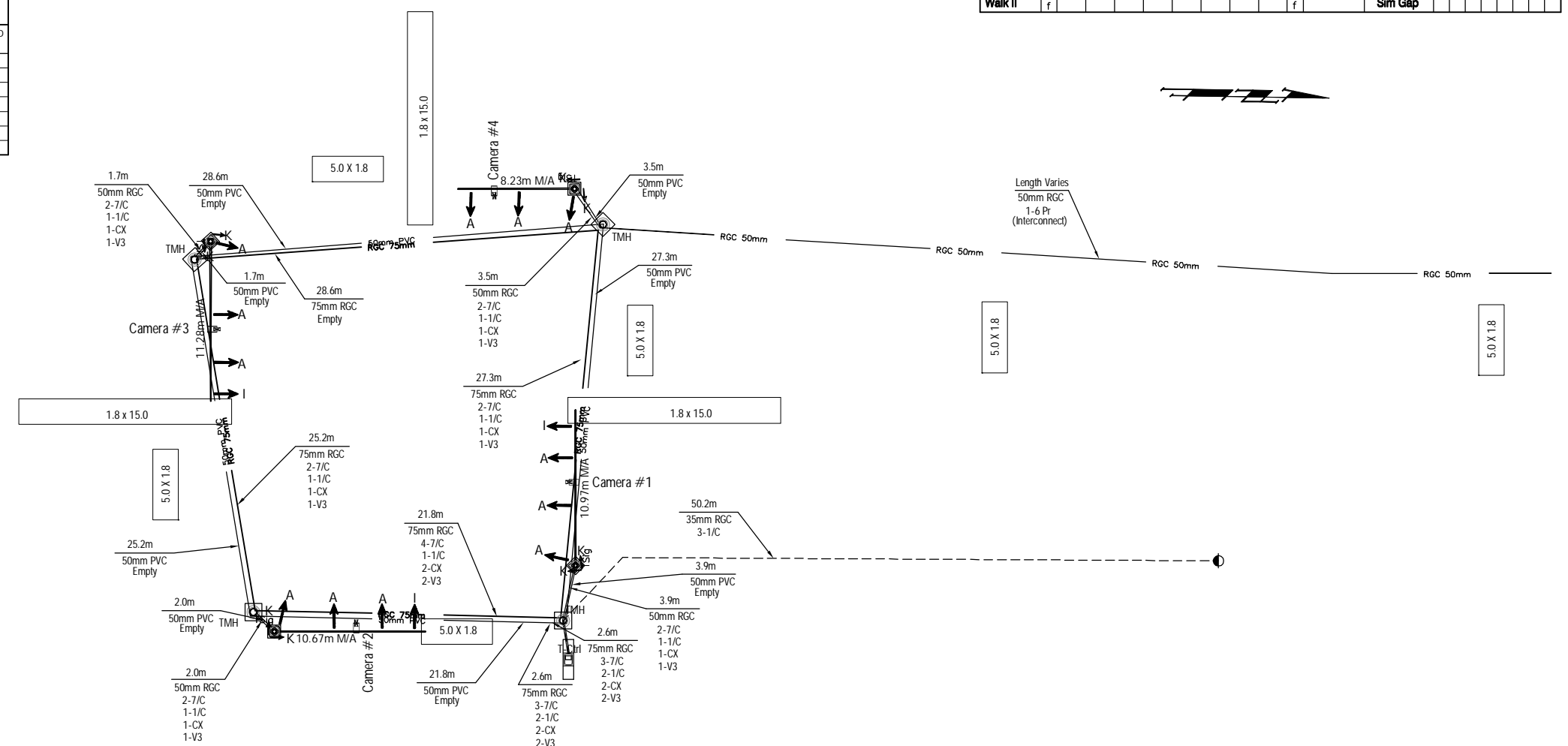
CHART 'B' - TRAFFIC SIGNAL POLES						
STATION	DIST.	SIDE	ARM LENGTH (Meters)	NO. OF SIGNALS ON ARM	SIGNAL SPACING (Meters)	TYPE
Sta. 0+782.6	13.8m	Lt.	11.28	3	5.18-3.35-2.21	JU
Sta. 0+787.1	13.7m	Rt.	10.67	3	4.20-3.38-2.30	JU
Sta. 0+808.2	17.5m	Lt.	8.23	2	4.0-3.36	JU
Sta. 0+808.3	09.0m	Rt.	10.97	3	4.25-3.35-2.22	STD

CHART C		
CONDUIT SIZE (Millimeters)	TRENCHED (Meters)	PUSHED (Meters)
50mm PVC	114.0m	-
35mm RGC	50.2m	-
50mm RGC	11.1m	-
75mm RGC	108.1m	-

CHART 'D' - STREET NAME SIGN SUMMARY					
LEGEND	TYPE	QTY	UNITS	SIZE (Millimeters)	
Douglas	D-3	2	EA	750 x 1500	
Hillside	D-3	2	EA	750 x 1500	

TRAFFIC MANHOLE SUMMARY	
STATION	DIST. - SIDE
Sta. 0+781.4	12.5m Lt.
Sta. 0+785.6	12.3m Rt.
Sta. 0+806.6	12.0m Rt.
Sta. 0+810.2	15.0m Lt.

TYPE 170 CONTROLLER SETTINGS																
WAPITI PROGRAM								Nominal Display								
Interval	Phase								Time Clock	Features						
	1 WBLT	2 EB	3 SBLT	4 NB	5 EBLT	6 WB	7 NBLT	8 SB		1	2	3	4	5	6	7
Max.	0	40	20	40	40	20	40	0	Year	Veh Recall	X	X	X			
Max. 2	1	40	20	40	40	20	40	1	Month	Ped Recall	X	X				
Walk	2	9	0	11	9	0	11	2	Day/Month	Red Lock						
Fl. Dw.	3	14	0	14	14	0	14	3	Day/Week	Yel Lock						
Max. Init.	4	23	6	25	23	6	25	4	Hour	0 Permit	X	X	X	X	X	X
Min. Green	5	22	5	24	22	5	24	5	Minute	Ped Phases	X	X				
TBR	6							6	Second	Lead Phases	X	X	X	X		
TTR	7							7		DbI Entry						
	8							8		Sequential						
Passage	9							9		Start Up Yel						
Min. Gap	a							a		Overlap A						
Add Act	b							b		Overlap B						
Yellow	c	3.5	3.0	3.5	3.5	3.0	3.5	c		Overlap C						
Red Cir	d	1.5	1.0	1.5	1.5	1.0	1.5	d		Overlap D						
Red Rev	e							e		Exclusive						
Walk II	f							f		Sim Gap						



GENERAL NOTES

1. SIGNAL TIMING BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING THE CONTROLLER, CABINET, CONCRETE BASE, AND FOR ALL EQUIPMENT NECESSARY FOR THE COMPLETE AND SATISFACTORY OPERATION OF THE TRAFFIC SIGNAL, WHETHER SAID EQUIPMENT IS SPECIFICALLY MENTIONED OR NOT.
2. LENGTHS GIVEN ARE TO CENTERLINE OF POLE/BOX AND DO NOT INCLUDE LENGTHS FOR ELBOWS AND RISERS.
3. SIGNAL HEADS, PEDESTRIAN SIGNALS, TRAFFIC SIGNS & ETC. INCLUDE ALL BRACKETS, HARDWARE & OTHER INCIDENTALS NECESSARY FOR INSTALLATION.
4. SEE CITY OF WICHITA STANDARD SPECIFICATIONS FOR ADDITIONAL WIRING NOTES.

SPECIAL FINISH FOR TRAFFIC SIGNAL EQUIPMENT:

The traffic signal controller cabinet, brackets, sign blank backs, signal backs and other exposed surfaces shall be shop painted with an aerosol lacquer cellulose ester to match the traffic signal pole color. The contractor shall submit two copies of the proposed coating system to the City for approval to application.

TRAFFIC SIGNAL POLE & PEDESTAL EXTERIOR COATING:

In addition to being galvanized, all exterior surfaces shall be coated with a zinc rich epoxy powder to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and partially cured in a gas fired convection oven by heating the steel substrate to a minimum of 250 degrees Fahrenheit.

The powder primed surface shall be coated with an intermediate coat of polyester powder to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the steel substrate in a convection oven to a minimum of 350 degrees and a maximum of 400 degrees Fahrenheit.

The intermediate coat shall be top coated with one coat of high-build acrylic polyurethane enamel to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the substrate in a convection oven to a minimum of 225 degrees Fahrenheit. The final top coating color shall be BLACK

Contractor shall install traffic interconnect from Central to Douglas. Traffic interconnect shall include One six conductor in a 35mm RGC and junction boxes whose spacing is not to exceed 50m.

NOTE

Contractor shall install Interconnect Traffic Manholes and 50mm Rigid Galvanized Conduit from Douglas to Third Street and join to existing interconnect system.

Approximate location of Interconnect Traffic Manholes are shown on the Marking Plan.

Type 170 Controller System to include:

1. Model 170E controller unit complete with W4IKS (53A or Latest Revisions) traffic program on 412B system memory module with a 400 modem
2. One (1) Model 332 Cabinet complete with all accessories & shall include:
 - A. One (1) Model 210ECL or 210MS Conflict Monitor with software.
 - B. Four (4) Model 430 Transfer Relays.
 - C. Two (2) Model 204 Flashing Units.
 - D. Twelve (12) Model 200 Switch Packs.
 - E. Three (3) Model 242 DC Isolators.
 - F. One (1) Surge Arrester.

1. QUANTITIES ARE FOR INFORMATION ONLY. 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.
2. ** Removal of existing traffic signal equipment shall include removal of foundations, service boxes, and all junction boxes. See construction traffic control regarding removal of existing signals.

TYPICAL TRAFFIC SIGNAL HEADS

