

BILL OF MATERIALS

ITEM	UNIT	QTY
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD (SEE CHART A) W/ MOUNTING HARDWARE	EACH	16
PEDESTRIAN SIGNAL HEAD (12" COMB.) W/ MOUNTING HARDWARE	EACH	8
TRAFFIC SIGNAL POLE (SEE CHART B) STEEL	EACH	4
CONCRETE CONTROLLER PAD	EACH	1
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	4
TRAFFIC MANHOLE	EACH	4
GROUND ROD & CLAMP	EACH	6
CONDUIT CLAMP	EACH	As Req'd
TRAFFIC SIGNAL LAMP RED LED KIT	EACH	16
TRAFFIC SIGNAL LAMP YELLOW LED KIT	EACH	16
TRAFFIC SIGNAL LAMP GREEN LED KIT	EACH	16
TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT	EACH	4
TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT	EACH	4
TRAFFIC SIGNAL LAMP LED (12" COMBINATION)	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	125.60m
STANDARD 1C #8 (GROUND)	LIN. m	207.14m
MULTI-CONDUCTOR CABLE No. 16 A.W.G. 3/C (V3)	LIN. m	160.89m
MULTI-CONDUCTOR CABLE No. 14 A.W.G. 7/C	LIN. m	321.76m
VIDEO CABLE 75 OHM COAXIAL (BELDON 8281) (CX)	LIN. m	160.89m
CONDUIT 50mm RGC - WESTAR	LIN. m	134.63m
CONDUIT 35mm RGC	LIN. m	36.97m
CONDUIT 50mm RGC	LIN. m	7.64m
CONDUIT 75mm RGC	LIN. m	145.37m
CAMERA HOUSING	EACH	4
VIDEO DETECTION CAMERA & MOUNTING HARDWARE (RISER BRACKET)	EACH	4
VIDEO DETECTION PROCESSOR UNIT	EACH	1
VIDEO MONITOR	EACH	1
TETHER WIRE 1/4" ASTM A475 SIEMENS-MARTIN GRADE MIN.	LIN. m	As Req'd
STREET NAME SIGNS W/MOUNTING HARDWARE (D-3)	EACH	4
LEFT TURN YIELD ON GREEN W/MOUNTING HARDWARE (R10-12)	EACH	4

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	4
1	3	A	TYPE III	4
1	1	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. 2+589.297	15.195m	Lt.	14.63m	3	7.41-3.40-3.50	JU
Sta. 2+622.199	17.519m	Lt.	14.63m	3	7.68-3.40-3.28	JU
Sta. 2+621.506	17.169m	Rt.	16.76m	3	9.38-3.40-3.59	JU
Sta. 2+590.850	17.573m	Rt.	15.24m	3	7.74-3.40-3.82	JU

CHART C

CONDUIT SIZE (Millimeters)	TRENCHED (Meters)	PUSHED (Meters)
50mm RGC - Westar	134.63m	-
35mm RGC	3.14m	-
50mm RGC	7.64m	-
75mm RGC	140.73m	-

CHART 'D' - STREET NAME SIGN SUMMARY

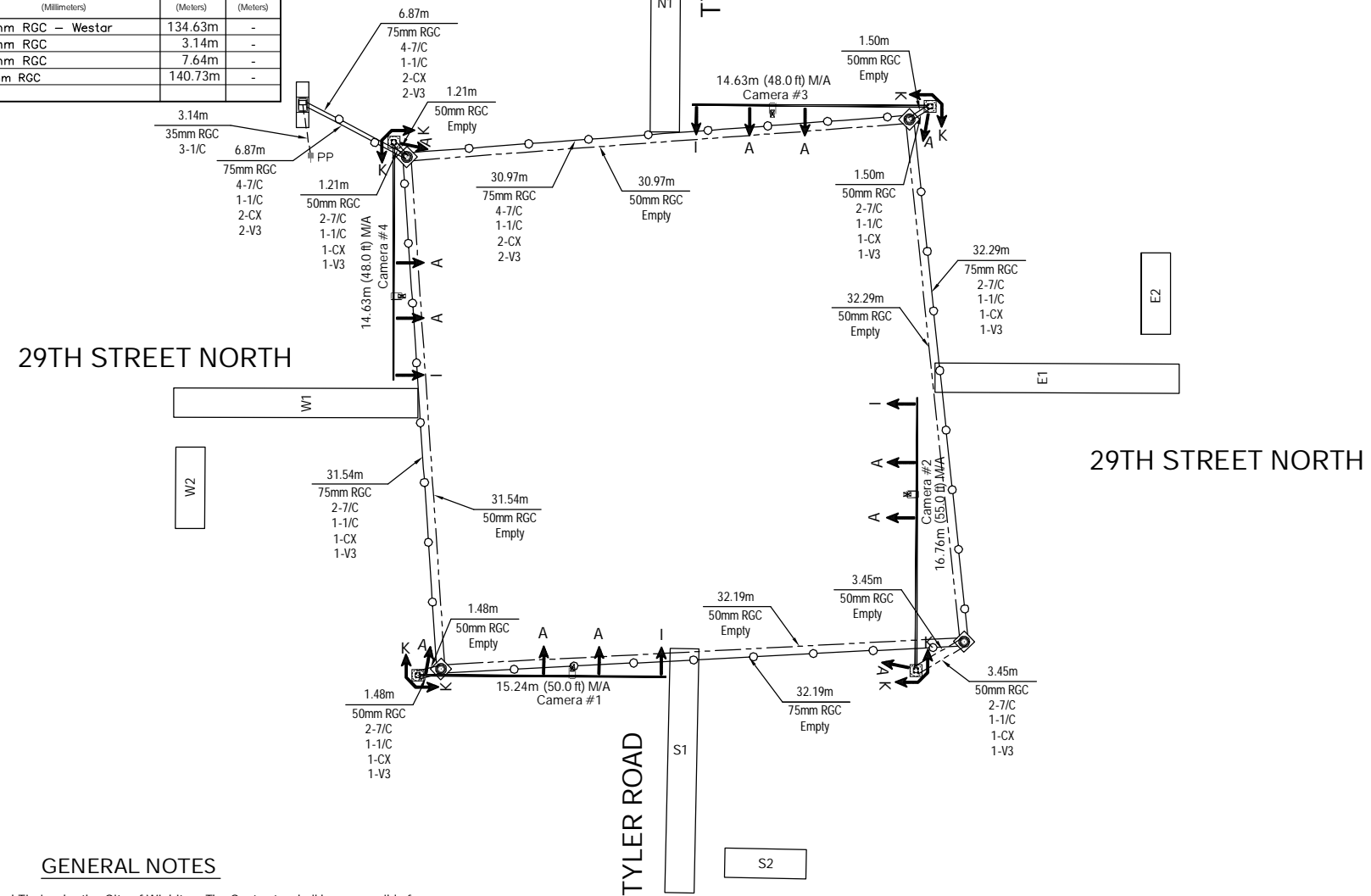
LEGEND	TYPE	QTY	UNITS	SIZE (Millimeters)
29th St	D-3	2	EA	750 x 1500
Tyler Rd	D-3	2	EA	750 x 1500

TRAFFIC MANHOLE SUMMARY

STATION	DIST. - SIDE
Sta. 2+590.098	14.287m Lt.
Sta. 2+620.932	16.709m Lt.
Sta. 2+624.459	15.386m Rt.
Sta. 2+592.272	17.184m Rt.

TYPE 170 CONTROLLER SETTINGS

Interval	WAPITI PROGRAM								Nominal Display								
	Phase								Time Clock				Features				
	1	2	3	4	5	6	7	8	1	2	3	4	1	2	3	4	
Max. 0	30	60	30	60	30	60	30	60	0	Year							
Max. 2	1	30	60	30	60	30	60	30	1	Month							
Walk	2		8		8		8		2	Day/Month							
Fl. Dw.	3		20		20		20		3	Day/Week							
Max. Init.	4	6	10	6	10	6	10	6	4	Hour							
Min. Green	5	5	8	5	8	5	8	5	5	Minute							
TBR	6	1	15	1	15	1	15	1	6	Second							
TTR	7	1	25	1	25	1	25	1	7								
	8								8								
Passage	9	1.0	2.5	1.0	2.5	1.0	2.5	1.0	9	Start Up Yel							
Min. Gap	a	1.0	2.0	1.0	2.0	1.0	2.0	1.0	a	Overlap A							
Add Act	b	1.0	2.0	1.0	2.0	1.0	2.0	1.0	b	Overlap B							
Yellow	c	3.0	4.0	3.0	4.0	3.0	4.0	3.0	c	Overlap C							
Red Clr	d	1.0	2.0	1.0	2.0	1.0	2.0	1.0	d	Overlap D							
Red Rev	e								e	Exclusive							
Walk II	f								f	Sim Gap							



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 minimum of 350 degrees and a maximum of 400 degrees Fahrenheit.

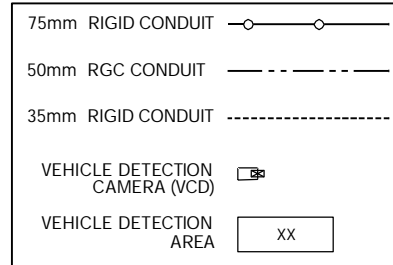
The intermediate coat shall be top coated with one coat of high-build acrylic polyurethane enamel to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the substrate in a convection oven to a minimum of 225 degrees Fahrenheit. The final top coating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

GENERAL NOTES

- Signal Timing by the City of Wichita . 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.
- Lengths given are to the centerline of pole/box and do not include lengths for elbows and risers.
- Signal heads, pedestrian signals, traffic signs, etc. shall include all brackets, hardware, & other incidentals necessary for installation.
- See City of Wichita Standard Specifications for additional wiring notes.
- Quantities are for Information Only.

Type 170 Controller System to include:

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



PROJECT NUMBER 472-83305		SHEET NAME Wiring Plan		ENGINEERING DIRECTORY F:\29th North\Earth\dwg	
DESIGN TPV	DRAWN TPV	APPROVED JFB	DATE Oct. 2004	SCALE Noted	BAUGHMAN NO 02-02-E232

CAPITAL IMPROVEMENT PROJECT
**29TH STREET NORTH & TYLER ROAD
INTERSECTION WIRING PLAN**

BAUGHMAN COMPANY, P.A.
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