

J:\PROJECTS\2016\150104078\_COW\_21ST & OLIVER\_XXXXXX CAD\SHS\05 CIVIL\TRAFFIC\15178-SC1A.DWG  
 PLOTTED: Thursday, September 22, 2016 @ 03:52PM

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	31
TRAFFIC SIGNAL POLE (SEE CHART B) STEEL	EACH	4
PEDESTAL POLE (SEE CHART B)(10' ALUMINUM)	EACH	1
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING - POLE	EACH	5
CONDUIT ELBOW 90 2"	EACH	AS NEEDED
CONDUIT ELBOW 90 3"	EACH	AS NEEDED
SERVICE BOX	EACH	4
GROUND ROD & CLAMP	EACH	6
TRAFFIC SIGNAL LAMP RED LED KIT	EACH	23
TRAFFIC SIGNAL LAMP YELLOW LED KIT	EACH	23
TRAFFIC SIGNAL LAMP GREEN LED KIT	EACH	23
TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT	EACH	15
TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT	EACH	8
TRAFFIC SIGNAL LAMP LED (12" COMBINATION)	EACH	8
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX 70 AMP	EACH	1
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	8
LEAD-IN-WIRE NO. 6 A.W.G. 1/c	LIN. FT.	350
STRANDED NO. 8 A.W.G. 1/C (GROUND)	LIN. FT.	1075
MULTI-CONDUCTOR CABLE NO. 16 A.W.G. 3/C (V3)	LIN. FT.	1000
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.	740
MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 7/C	LIN. FT.	2115
VIDEO CABLE 75 OHM COAXIAL (BELDON 8281)(CX)	EACH	1000
CONDUIT 1" RGC	LIN. FT.	40
CONDUIT 2" RGC	LIN. FT.	90
CONDUIT 3" RGC	LIN. FT.	590
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. FT.	310
STREET NAME SIGNS W/ MOUNTING HARDWARE (D-3)	EACH	8
LEFT TURN YIELD ON GREEN W/ MOUNTING HARDWARE (R10-12)	EACH	4
LEFT TURN W/MOUNTING HARDWARE (R10-10L)	EACH	4
REMOVAL OF EXISTING TRAFFIC CONTROL EQUIPMENT**	EACH	1
SPLICE DIT (INTERCONNECT)		

**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.

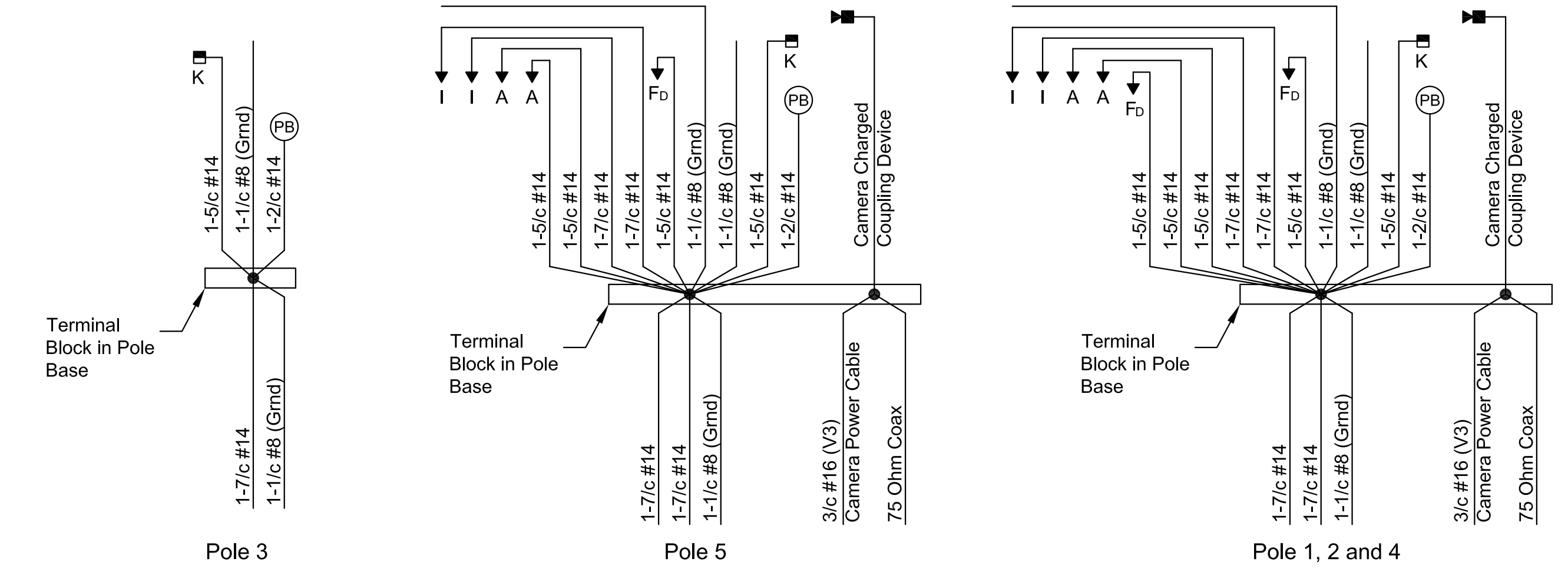
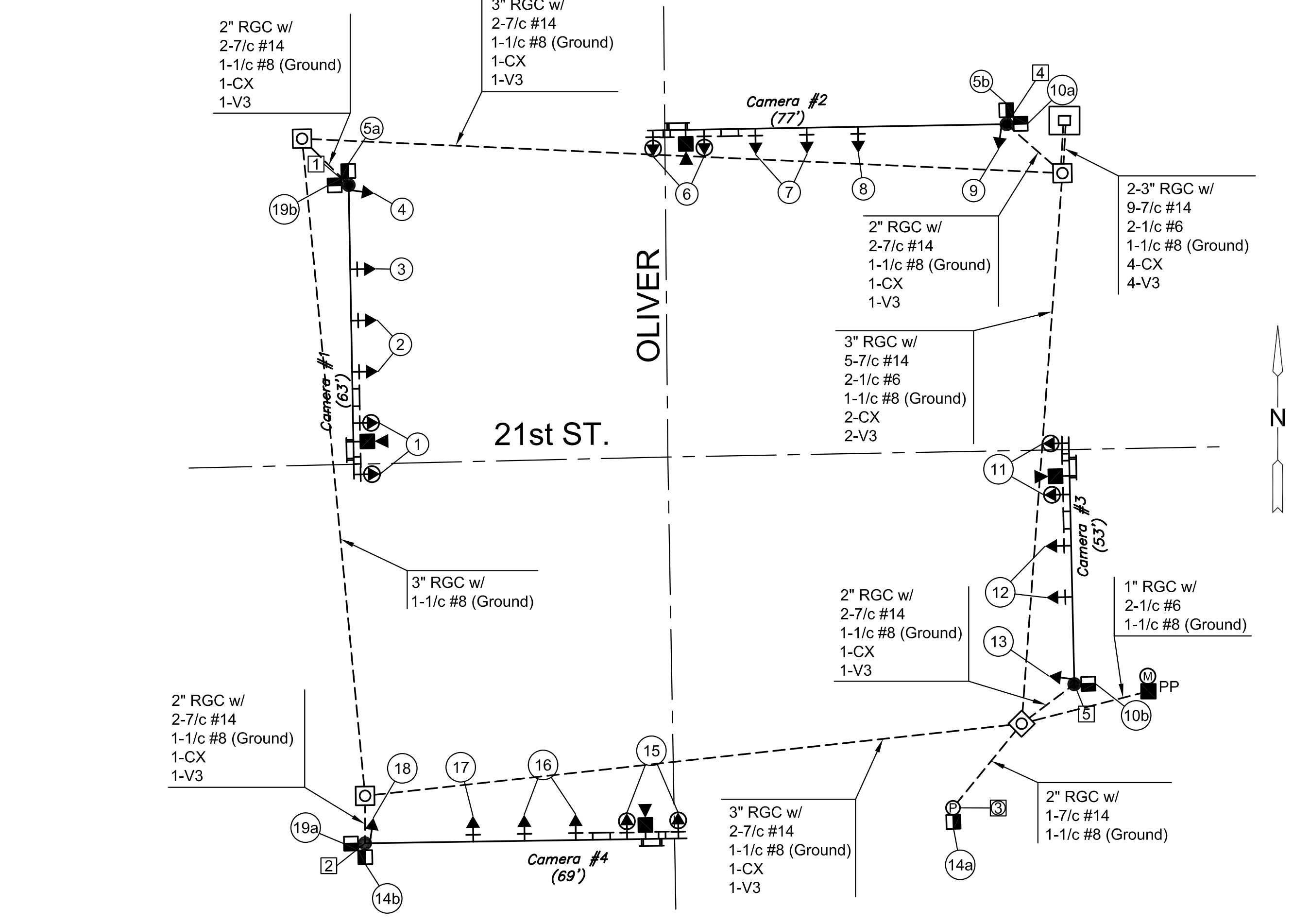
**B. Conflict monitors:**  
 The Conflict Monitors supplied shall be 2010 ECL conflict monitors.  
 C. 1-Loop-back cable for 2070-2A Field I/O (Type 170, 104 pin and 37 pin connector).  
 D. 1-Loop-back cable for 2070-7A port.

**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	1	L.S.
TRAFFIC SIGNALIZATION (TEMPORARY)	1	L.S.

TRAFFIC SIGNAL POLE SUMMARY (CHART B)									
POLE NO.	STATION	TYPE	ARM LENGTH	SIGNALS ON ARM	X1 X2 X3 X4	OTHER EQUIPMENT ON ARM	SIGNALS ON POLE	SIGNS ON POLE	
1	29+32.9, 59.9' Lt.	B	63'	5-E	11' 11' 11' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F	-	
2	29+33.2, 81.3' Rt.	B	69'	5-E	11' 11' 11' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F	2-J	
3	30+59.7, 76.3' Rt.	C	-	-	-	-	-	-	
4	30+74.0, 70.0' Lt.	B	77'	5-E	11' 11' 11' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F	2-J	
5	30+86.3, 50.3' Rt.	B	53'	4-E	11' 11' 11'	-	-	-	

A - Joint Use Steel Pole with Mast Arm  
 B - Standard Steel Pole with Mast Arm  
 C - Pedestal Pole (10' Aluminum)  
 D - Left Turn Sign (R10-10)  
 E - Traffic Signal  
 F - Pedestrian Signal with Push Button  
 G - Street Name Sign  
 H - Video Detection Camera  
 I - Wind Damper  
 J - Street Name Sign (9" Metro)(See Sh. No. \_\_\_ for details)



STREET NAME SIGN SUMMARY		
LEGEND	60" x 18"	9" METRO
21st St	2	
Oliver	2	
21st St 4700 E		1
21st St 4800 E		1
Oliver 2100 N		1
Oliver 2200 N		1
TOTAL	4	4

Letters shall be series "E" Modified

**LEGEND**

- Steel Traffic Signal Pole (Joint use)
- Steel Traffic Signal Pole (Std. Pole)
- ⊕ Aluminum Traffic Signal Pole (Pedestal)
- Traffic Signal Indication (Type A) w/Backplate
- Traffic Signal Indication (Type I) w/Backplate
- Mast Arm Suspended Traffic Signal
- Video Detection Camera
- Service Box
- Pedestrian Indication
- ① Pole Number
- ① Signal Number
- Vehicle Detection Zone
- ① Detector Number
- Rigid Galvanized Conduit (RGC)
- Overhead Street Name Sign
- Overhead Sign R10-12 (Lt. Turn Yield on Green)
- Wind Damper
- PP Power Pole
- ⊕ Meter Box and Power Disconnect
- Controller and Pad

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. See construction traffic control regarding removal of existing signals.

**SIGNAL HEAD ARRANGEMENT**

A: R, Y, G  
 F<sub>D</sub>: R, Y, G, G  
 I: R, Y, G, G  
 K: Filled Overlay

12" LED lenses - vehicular and pedestrian

TRAFFIC SIGNAL HEAD SUMMARY (CHART A)				
SIGNAL NO.	TYPE	SIZE	MOUNTING BRACKET	QUANTITY
1	I	5-12"	TYPE I	2
2	A	3-12"	TYPE I	2
3	FD	4-12"	TYPE I	1
4	FD	4-12"	TYPE III	1
5	K	1-12"	TYPE II	2
6	I	5-12"	TYPE I	2
7	A	3-12"	TYPE I	2
8	FD	4-12"	TYPE I	1
9	FD	4-12"	TYPE III	1
10	K	1-12"	TYPE II	2
11	I	5-12"	TYPE I	2
12	A	3-12"	TYPE I	2
13	FD	4-12"	TYPE I	1
14	K	1-12"	TYPE II	2
15	I	5-12"	TYPE I	2
16	A	3-12"	TYPE I	2
17	FD	4-12"	TYPE I	1
18	FD	4-12"	TYPE III	1
19	K	1-12"	TYPE II	2

All Signal Heads to be L.E.D.



PROJECT TYPE  
**21ST & OLIVER INTERSECTION**  
 WICHITA, KANSAS

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**TRAFFIC SIGNAL WIRING PLAN - 21ST & OLIVER**

PROJECT NO.	472-85213
DATE	SEPT. 2016
SCALE	1"=200'
DESIGNED	ABC
DRAWN	ABC
CHECKED	ABC

NO.	REVISION	DATE

SHEET NO. 77 OF 125