

BILL OF MATERIALS (for Information Only)		
ITEM	UNIT	QUANTITY
Traffic Signal Pole Steel w/Mastarm (Std)	Each	4
Traffic Signal Pedestal Pole Aluminum (10')	Each	1
Concrete Controller Pad	Each	1
Concrete Footing - Pole	Each	4
Concrete Footing - Pedestal Pole	Each	1
Service Box - 36 In. Dia.	Each	4
Ground Rod & Clamp	Each	6
Conduit Clamp	Each	As Needed
Pedestrian Signal Lamp L.E.D. (12" Combination)	Each	4
L.E.D. Unit	Each	36
Back Plate For Signal Head (Type A)	Each	8
Entrance Head	Each	1
Circuit Breaker & Box	Each	1
Traffic Signal Head - 12" (Type A) w/Mounting Bracket	Each	12
Pedestrian Signal - 12" (Type K) w/Mounting Bracket	Each	4
Pedestrian Pushbutton w/Sign	Each	4
Pad Mounted Cabinet & Controller System-Type 2070 (See Note)	Each	1
Lead-In Wire No. 6 Awg 1/c (Type THHN)	Lin. Ft.	49
Multi-Conductor Cable No. 14 Awg 2/c (Includes 14 L.F. for Future Signals) *	Lin. Ft.	29
Multi-Conductor Cable No. 14 Awg 3/c	Lin. Ft.	29
Multi-Conductor Cable No. 14 Awg 5/c (Includes 42 L.F. for Future Signals) *	Lin. Ft.	570
Multi-Conductor Cable No. 14 Awg 7/c	Lin. Ft.	1,122
Standard No. 8 Awg 1/c (Type THHN)(Ground)	Lin. Ft.	807
Rigid Galvanized Conduit 1"	Lin. Ft.	51
Rigid Galvanized Conduit 2"	Lin. Ft.	77
Rigid Galvanized Conduit 3"	Lin. Ft.	423
Video Detection Camera And Mounting Hardware (Riser Brackets)	Each	4
Video Detection Processor Unit (Iteris Vantage Or Apr'vd Equal)	Each	1
Video Power Cable No. 16 Awg 3/c	Lin. Ft.	564
Video Cable 75 ohm Coaxial (Belden #8281)	Lin. Ft.	564
Tv Monitor	Each	1
Street Name Signs	Each	4

TRAFFIC SIGNAL POLE SUMMARY								
POLE NO.	STATION	TYPE	ARM LENGTH	SIGNALS ON ARM	X1	X2	OTHER EQUIP. ON ARM	SIGNALS ON POLE
1	16+54.9, Lt.	B	32'	2-E	11.0	-	1-G, 1-H, 1-I	-
2	16+59.1, Rt.	B	48'	2-E	11.0	-	1-G, 1-H, 1-I	1-F
3	17+61.6, Lt.	B	28'	2-E	11.0	-	1-G, 1-H, 1-I	-
4	17+84.8 Lt.	C	-	-	-	-	-	1-F
5	17+85.9, Rt.	B	27'	2-E	11.0	-	1-G, 1-H, 1-I	2-F

A Joint Use Steel Pole With Mast Arm  
 B Standard Steel Pole With Mast Arm  
 C Pedestal Pole (10' Aluminum)  
 D Left Turn Signal  
 E Traffic Signal  
 F Pedestrian Signal With Push Button  
 G Street Name Sign  
 H Video Detection Camera  
 I Wind Damper

STREET NAME SIGN SUMMARY	
LEGEND	QUANTITY
13th St	2
Gatewood	2
TOTAL	4

Letters shall be series "E Modified".

- LEGEND**
- Steel Traffic Signal Pole (Joint use)
  - Steel Traffic Signal Pole (Std. Pole)
  - ⊕ Pedestal Pole (10' Aluminum)
  - Traffic Signal Indication (Type A)
  - ⊥ Mast Arm Suspended Traffic Signal
  - Video Detection Camera
  - Service Box
  - ⊗ Controller
  - Pedestrian Indication
  - ⑦ Pole Number
  - ⊕ Pedestrian Signal Number
  - Rigid Galvanized Conduit (RGC)
  - ⊥ Overhead Street Name Sign
  - ⊥ Wind Damper
  - CX Video Coax Cable (75 OHM)
  - V3 Video Power Cable (#16 AWG 3/c)
  - ⊕ Existing Meter Box & Power Disconnect
  - PP Existing Power Pole
  - MH TRAF Existing Service Box

L.E.D. Signal Heads: All lenses in each signal head shall be a self-contained, sealed unit designed to fit a regular 12-inch traffic signal housing. It shall incorporate a minimum of 186 high reliability, high intensity LED indicators. The lens shall provide a light beam spread of 30 degrees on all sides of its center axis which shall be designed to provide a 5 to 7 degree downward angle.

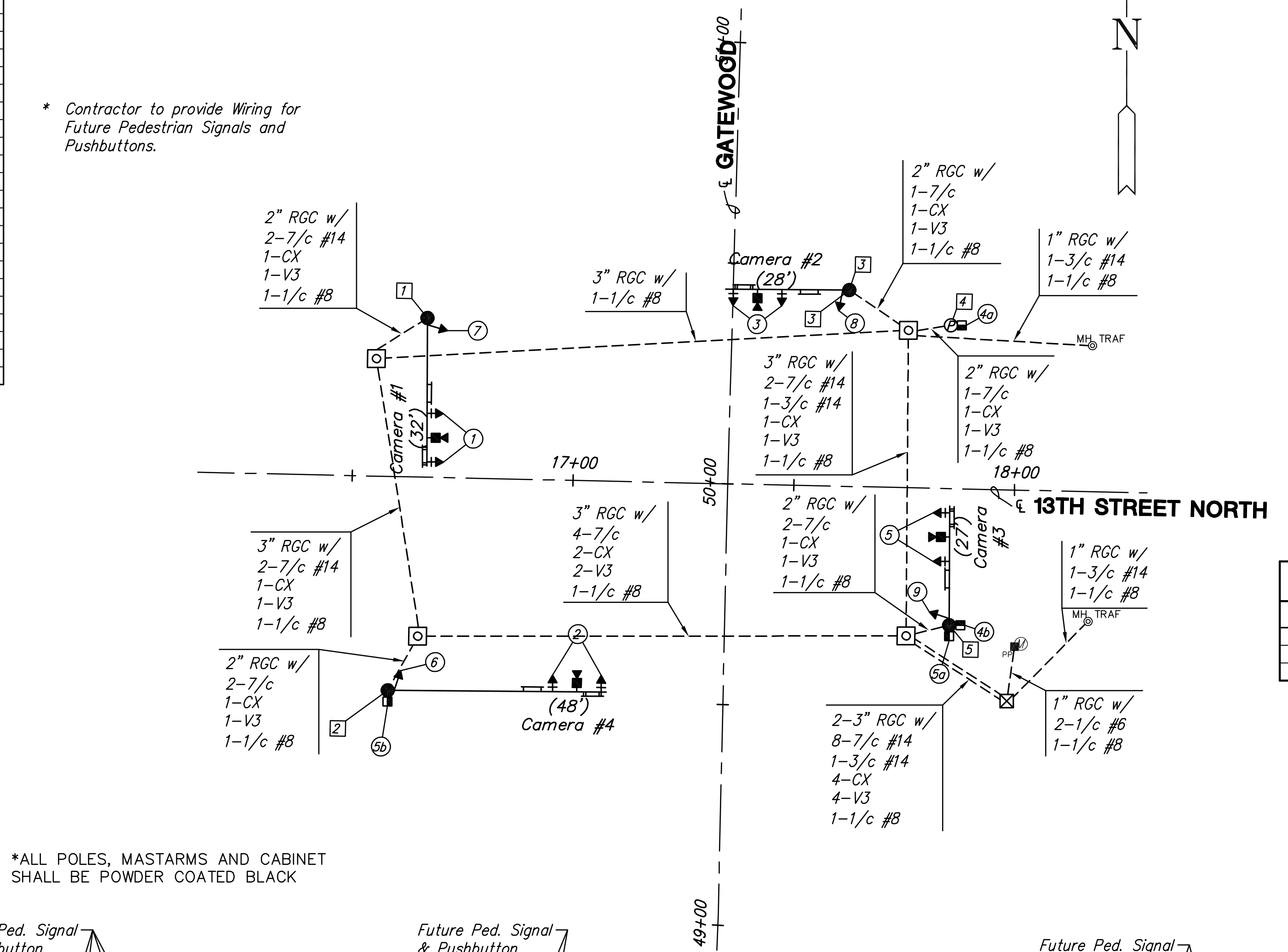
The lens shall be made of UV stabilized plastic. The rear cover shall be of non-flammable material and the entire unit shall be totally sealed to preclude the entrance of water, dust or other contaminants.

The self-contained, regulated power supply shall allow the unit to operate over an input voltage range between 89 and 135 volts A.C. and shall be configured in at least 3 parallel circuits for reliability. Light output shall be comparable to that provided by a standard, 12 inch traffic signal lens illuminated by a 150 watt incandescent lamp. The red wave length shall be 630 to 660 nm.

The manufacturer shall warrant the unit against defects in workmanship and materials for a period of at least five years after date of shipment. This warranty shall be assigned to the maintenance agency.

- EQUIPMENT SPECIFICATIONS 2070 CONTROLLER**
- A. Controller Units: The 2070L controllers supplied shall meet the requirements outlined in CalTrans TEES 2002 (latest revision), and the following requirements:
- The 2070L controllers shall have a 19" EIA rack mountable chassis (mated to the 170 cabinet). Controllers shall be EAGLE or ECONOLITE.
  - 2070-1B CPU module with RJ-45 Ethernet port.
  - 2070-2A C1 field I/O module for compatibility with CalTrans style C1 connector.
  - 2070-3B 8X40 front panel with LCD display.
  - 2070-4A 10 amp power supply.
  - 2070-7A asynchronous serial communications module (RS-232).
  - 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 complete installation and operation of the Traffic Signal whether specifically mentioned or not.

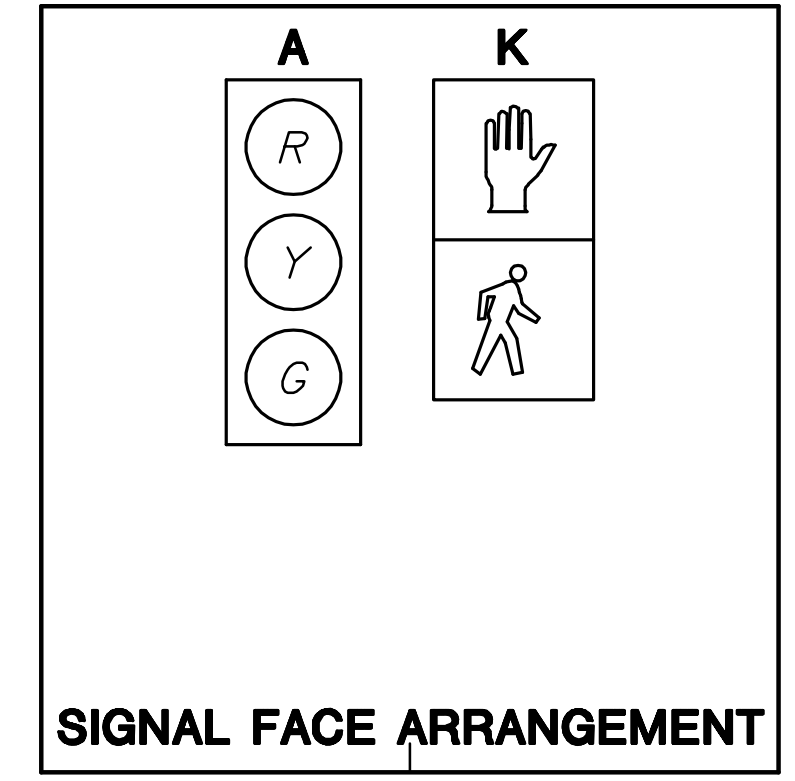
\* Contractor to provide Wiring for Future Pedestrian Signals and Pushbuttons.



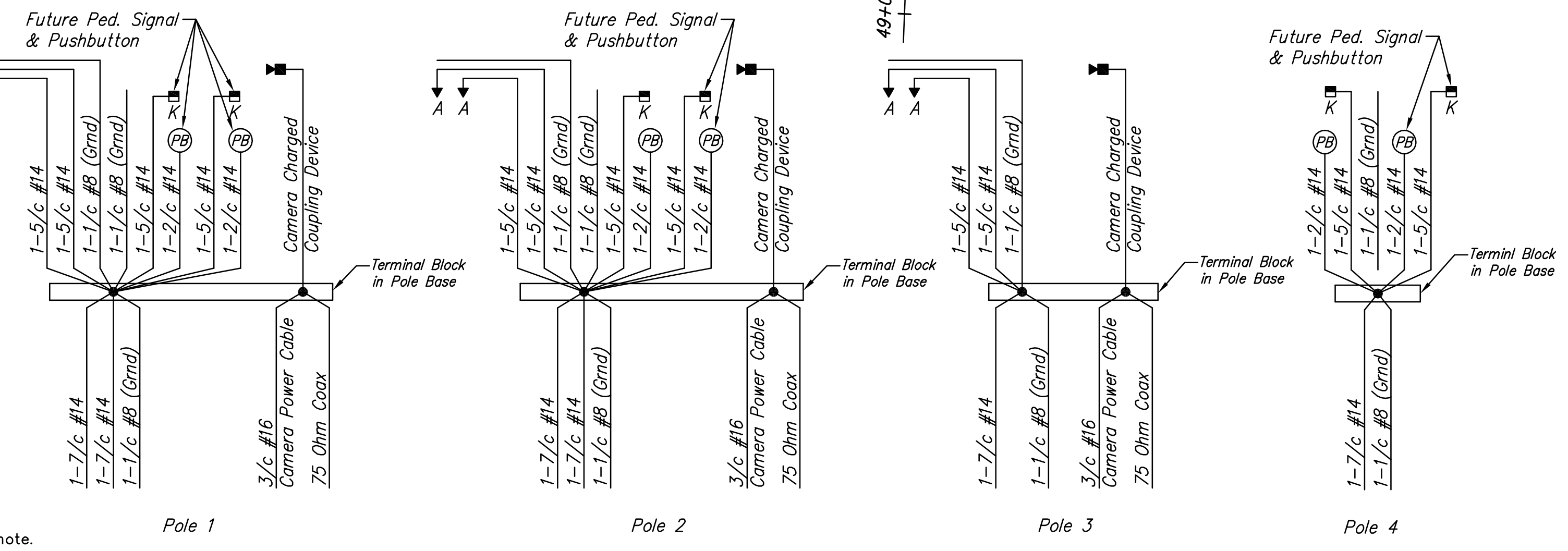
\*ALL POLES, MASTARMS AND CABINET SHALL BE POWDER COATED BLACK

TRAFFIC SIGNAL HEAD SUMMARY				
SIGNAL NO.	TYPE	SIZE	MOUNTING BRACKET	QUANTITY
1	A	3-12"	TYPE I	2
2	A	3-12"	TYPE I	2
3	A	3-12"	TYPE I	2
6,7,8,9	A	3-12"	TYPE III	4
4b	K	2-12"	TYPE II	1
5	A	3-12"	TYPE I	2
5a, 5b	K	2-12"	TYPE III	2
4a	K	2-12"	TYPE III	1

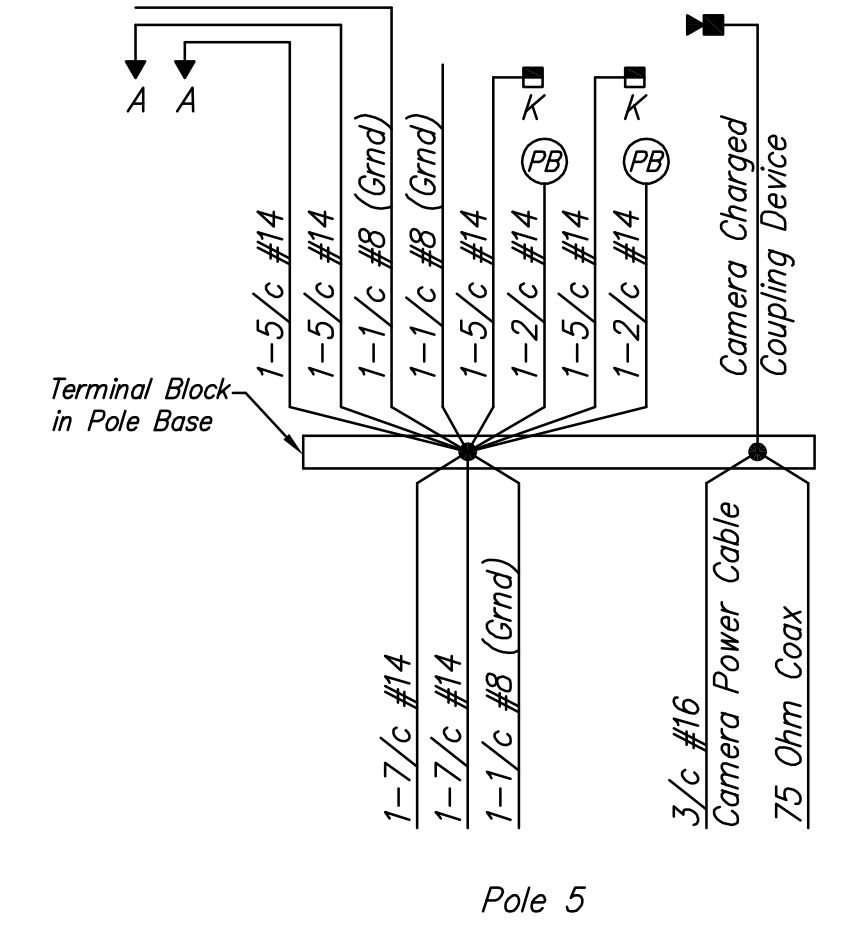
ALL SIGNAL HEADS TO BE L.E.D.



All lenses in each head shall be L.E.D. unit per note.



RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES		
BID ITEM	QUANTITY	UNIT
TRAFFIC SIGNAL INSTALLATION (13TH ST. & GATEWOOD)	1	L.S.
REMOVAL OF PEDESTRIAN CROSSING SIGNAL	1	L.S.
PAVEMENT MARKING	1	L.S.



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**WOODLAWN & 34TH ST.**  
**13TH & GATEWOOD TRAFFIC SIGNALIZATION**  
 PROJECT NAME

**13TH & GATEWOOD**  
**TRAFFIC SIGNAL WIRING PLAN**  
 SHEET TITLE

JTC  
DESIGN BY:

JWC  
DRAWN BY:

GJA  
CHECKED BY:

MAY 2007  
DATE

07174  
JOB NO.

5 / 19  
SHEET/OF