SP2925 (~~03-31~~06-12~~-~~08) *(Use this Section only when subsections .42, .51, .65(a-1), ~~or~~ .65(a-2), or .68 are required.*

SECTION 02925 - TRAFFIC SIGNAL MATERIALS

(Follow all instructions. If there are no instructions above a subsection, paragraph, sentence, or bullet, then include them in the project but make necessary modifications to only include project specific specifications. Delete specifications that do not apply to the project.)

Comply with Section 02925 of the Standard Specifications modified as follows:

(Use the following subsection .42 when traffic signal control devices are required. Obtain information from the Signal Designer.)

02925.42 Traffic Signal Control Devices - Add the following to the end of this subsection:

The following changes are made to the September 2001 Standard Specifications for Microcomputer Signal Controller:

(Use the following Chapter 2 lead in sentence and 2.1.10 on all off-system, local Agency funded or developed projects.)

Replace Chapter 2, Section 1, Unit 10 with the following:

(Fill in the blank with CONTRACTOR, COUNTY, CITY, etc. as appropriate.)

2.1.10 The traffic signal control program and PROMS with PROM module for the Model 170E will be furnished by the _____

(Use the following for all signal cabinets.)

3.1.6.1 Replace "15 amps" with "10 amps"

(Use the following when auxiliary files are needed in Model 332 cabinets.)

6.1.1.1 Add the following to the listed items: Auxiliary output file

(Use the following when auxiliary files are needed in Model 334 cabinets.)

6.1.1.2 Add the following to the listed items: Auxiliary output file

(Use the following if a Model 400 modem is not required in Model 332 or 334 cabinets.)

6.1.1.4 In the first sentence, remove "with Model 400 Modem".

(Use the following when Model 332 or 334 cabinets are used.)

6.5.2.1 Replace the last sentence with the following:

All spade connectors on wires connecting to the input panel (terminal blocks TB1 through TB10 and DC ground bus) and/or input files (terminal blocks T1 through T15) shall be crimped and soldered to the wires.

(Use the following when auxiliary files are needed in Model 336s intersection cabinets.)

7.1.1.1 Add the following to the listed items: Auxiliary output file

(Use the following when auxiliary files are needed in Model 336S ramp meter cabinets.)

7.1.1.2 Add the following to the listed items: Auxiliary output file

(Use the following if a Model 400 modem is not required in Model 336 or 336S cabinets.)

7.1.1.4 In the first sentence, remove "with Model 400 Modem".

(Use the following when Model 336 or 336S cabinets are used.)

7.5.2.1 Replace the last sentence with the following:

All spade connectors on wires connecting to the input panel (terminal blocks TB1, TB2, and DC ground bus) and/or input files (terminal blocks T1 through T15) shall be crimped and soldered to the wires.

(Use the following Chapter 8, Section 3 on projects with phone equipped cabinets. Choose either phone line or cellular phone line. Delete the method that does not apply.)

Add the following new Section to Chapter 8:

SECTION 3 - TELEPHONE EQUIPPED CABINETS

8.3.1 **General Requirements**

(Use the following 8.3.1.1 and 8.3.1.2 for cellular phone lines.)

8.3.1.1 Provide and install equipment as shown on Standard Drawing TM423, (Telephone equipped cabinet). Use the following amended parts list:

MC 480 installation kit - #FLN3181
Cellular connector - #S1936C
Transceiver- #19024NAASC.

8.3.1.2 Cellular phone shall have local phone number for the "Installed Signal" location.

(Use the following 8.3.1.1 for phone lines (non-cellular).)

8.3.1.1 Data transmission between the controller and the remote control locations shall be by standard dial-up telephone line. Transmission rate shall support a variable transmission rate determined by autosyncing of the modem. The modem shall operate with the controller at any speed or settings the modem establishes with the external source. The remote station shall have a dial-up telephone line at the remote control. Provide one auto-dial/auto-answer external modem (28,000 bps minimum) for the controller.

(Use the following lead-in paragraph and Chapter 9 on projects when 2070L controllers are required.)

Add the following new Chapter 9:

CHAPTER 9 - MODEL 2070 CONTROLLER UNIT

SECTION 1 - MODEL 2070L CONTROLLER

9.1.1 **Unit Chassis**

9.1.1.1 The 2070L Controller shall consist of a 2070 Chassis meeting the following requirements:

1. Lite Cage
2. 2070-1B CPU Module
3. 2070-2A C1 Field I/O Connector Module
4. 2070-4B Power Supply Module
5. 2070-3B 8x40 LCD Display Module
6. 2070-6A 1200 baud Modem Module
7. 2Mb Data Key

9.1.2 **Controller and Module**

9.1.2.1 The 2070L Controller and module shall meet the following specifications:

1. Caltrans 2002 TEES
2. TEES Errata 1, October 27, 2003
3. TEES Errata 2, June 8, 2004
4. Caltrans QPL Listing, October 2006
5. OS-9 Operating System version 3.3 (Ethernet Capable)
6. Controller Boot Code Compatible with NW Signal Voyage Controller Firmware and all included features
7. Tested and approved Boot Codes are:

    a. Econolite - Boot Code 2002 V1.01.08.02b or later
    b. Simens/Eagle - Boot Code OS0 V3.3.0 Operating System 7.0.0.0.0.15 or later

(Use the following subsection .51 on projects when new vehicle signals or when new pedestrian signals are required. Check with Signal Designer before using.)

02925.51 Traffic Signal Lamps - Add the following to the end of this subsection:

Provide the following LED modules:

Vehicle Signals

Indication Color	8 Inch Lens Type	12 Inch Lens Type
Red	LED [1]	LED [1]
Yellow	LED [1]	LED [1]
Green	LED [1]	LED [1]

Pedestrian Signals [2]

Indication Color	Side by Side Type	Countdown Type
Hand	LED [3]	LED [4]
Walking Man	LED [3]	LED [4]
Numbers	–	LED [4]

[1] Flange mount LED modules.

[2] Pedestrian signal LED modules may be a combination of indication in one module or single indication in separate modules.

[3] Side by side LED modules are a combination of indication (both the hand and walking man in one module).

[4] Countdown LED modules are a combination of indication (both the hand and walking man overlaid on the left with numbers on the right in one module).

(Use the following subsections .65(a-1) and .65(a-2) on projects when new pedestrian signals are required. Check with Signal Designer before using.)

02925.65(a-1) Standard - Replace this subsection with the following subsection:

(1) Standard - The standard light source shall meet the requirements of 02925.51.

02925.65(a-2) Count Down - Replace this subsection with the following subsection:

(2) Count Down - The count down shall meet the requirements of 02925.51.

(Use the following lead-in paragraph and subsection .68 on projects when new vehicle signals or new pedestrian signals are required. Check with Signal Designer before using.)

Add the following subsection:

02925.68 Signal Head Covers - Provide signal head covers that:

- Are yellow prefabricated nylon.
- Completely cover the head, visors, and backplate.
- Include a fine mesh insert for signal testing.
- Have integral elastic bands and clips to secure the covers to the signal.