

## SECTION NO. 21

### SPECIAL PROVISION - SIGNAL SPECIFICATION

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## SECTION NO. 21

### SPECIAL PROVISION - SIGNAL SPECIFICATION

#### **21-01 GENERAL:**

- A. Contractor shall furnish, fabricate, and erect signal assemblies at TxDOT's intersection in accordance with the latest TxDOT's Standard Specifications. Specific instructions for controller cabinet, video imaging video detection system (VIVDS), Accessible Pedestrian Signal pushbutton and emergency vehicle preemption detection installation are described below.
- B. City will supply the signal controller and the cabinet. The Contractor shall coordinate with the City to facilitate establishing communication of the new signal to the City Signal Network.
- C. Payment shall be made in accordance with the unit prices bid in the PROPOSAL.

#### **21-02 TRAFFIC SIGNAL CONTROLLER ASSEMBLY:**

- A. The Contractor shall install the traffic signal controller cabinet. Contractor will not energize the Traffic Signal Controller Cabinet without the appropriate City staff presence. The Contractor shall terminate all field wiring on the terminal strip in the traffic signal controller cabinet.
- B. Auxiliary equipment added to existing traffic signal controller cabinets shall be installed as indicated on the construction plans and as specified herein.
- C. Any field modifications shall require the Contractor to submit a modification plan to the City for approval three (3) weeks prior to scheduling the work. The submittal shall include equipment layout and wiring diagrams detailing the work to be performed, as well as the portion of the critical path schedule to be followed. A description of how the work affects traffic and signal operation shall also be submitted, along with information on measures to be taken to minimize adverse impacts on traffic.
- D. Contractor shall notify the City two (2) business days in advance of energizing the unit.
- E. Contractor shall notify the City five (5) business days in advance of controller cabinet pick up. Should the Contractor through carelessness and negligence damage the signal controller or cabinet, it will be the Contractor's responsibility to repair or replace the same at no additional charge to the City.

#### **21-03 PEDESTRIAN PUSHBUTTON ASSEMBLY:**

- A. The complete Accessible Pedestrian Signal (APS) detection system shall be furnished and installed by the Contractor in accordance with the construction plans. The mounting height of the pushbutton shall be approximately 3-feet, 6-inches but no more than 4-feet above the sidewalk. The APS system shall consist of audible tones/message capabilities from the pushbutton housing, pedestrian pushbutton, TMUTCD sign, frame which provides an integral pushbutton mount and sign platform (with sign mounted above the pedestrian

pushbutton), central control unit in the traffic control unit, and all associated cables and mounting hardware in accordance with TXDOT Item 688. The Contractor shall use the cable type and mounting assembly as recommended by the pushbutton manufacturer.

- B. The pushbutton assembly shall be located on the side of the pole as shown on the construction plans or as directed by the City.

**21-04 VIDEO IMAGING VIDEO DETECTION SYSTEM:**

- A. Video camera(s) shall be installed for vehicle detection in locations shown on the construction plans. The Contractor will be responsible for installation and fine-tuning the position of the camera(s). The Contractor will be responsible for providing all materials necessary for a complete system including the controller interface. Contractor shall coordinate with the City to configure the detection processors installed in the controller cabinet. The Contractor shall notify the City ten (10) business days prior to installing the cameras. The Contractor shall test all video detection equipment prior to installation. The testing shall include verification of all components of the camera and lens are operational and that the video image processor unit can power up and receive a signal from the camera.
- B. The Contractor and the City shall be present during the configuration of the detection zones. The Contractor shall keep the video detection equipment fully operational until the project is accepted by the City.

**21-05 EMERGENCY VEHICLE PREEMPTION DETECTORS:** Opticom emergency vehicle preemption detectors shall be installed in accordance with the manufacturer's instructions and with the construction plans. The detector cable shall be brought back to the controller as shown in the wiring schedule on the construction plans. No splicing is allowed between the detector and the controller cabinet.

END OF SECTION