

RADAR SPEED FEEDBACK SIGN ASSEMBLY

****From Statewide STP SRIN(25)**

- xx. DESCRIPTION. This work shall consist of installing radar speed feedback sign assembly(ies) at the location(s) indicated in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 678 of the Standard Specifications.

- xx. GENERAL REQUIREMENTS. Radar speed feedback signs shall meet the requirements and be configured as specified in the Plans.

The Contractor shall install solar-powered feedback signs where feasible, as determined by the sign manufacturer and the Engineer. Where solar-powered signs are not feasible, ac-powered signs shall be installed.

- xx. MATERIALS. Materials shall meet the requirements as shown on the Plans. Materials shall be approved by the Engineer prior to use.

- xx. SUBMITTALS.

(a) Fabrication Drawings. The Contractor shall submit Fabrication Drawings in accordance with Sections 105 and 678 and the Plans.

(b) Documentation Requirements. Three (3) advance copies of equipment manuals furnished by the manufacturer shall be submitted to the Engineer for review a minimum of ten days prior to the scheduled start of the first Operational Stand-alone Test. The Engineer will verify the manufacturer's equipment manual as part of the test and integration process. The equipment manual incorporating the Engineer's corrections and comments shall be integrated by the Contractor into the operations and maintenance manual. The manual shall, as a minimum, include the following:

- (1) Complete and accurate schematic diagrams.
- (2) Complete installation and operation procedures.
- (3) Complete performance specifications (functions, electrical, mechanical, and environmental) of the unit.
- (4) Complete accurate troubleshooting, diagnostic, and maintenance procedures.

4/1/2013

- (c) AC-Power Requirements. The Contractor shall make a significant effort to use only solar-powered signs for this project. If the Contractor or Manufacturer determines that solar power is not feasible at a location where a radar speed feedback sign is specified, the Contractor shall document why a solar-powered sign is not feasible and present these findings to the Engineer. The Engineer must verify that an AC-powered sign is to be used at that location.
- xx. CONSTRUCTION REQUIREMENTS. Installation of the radar speed feedback signs, flashing beacons, support assembly, power supply, and testing shall be performed in accordance with the Contract Documents, manufacturers' recommendations, and as directed by the Engineer.
- xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Radar Speed Feedback Sign Assembly) of the type specified to be measured for payment will be for each sign assembly installed in the complete and accepted work.
- xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Radar Speed Feedback Sign Assembly) of the type specified will be paid for at the Contract unit price per each at each designated location. Payment will be full compensation for preparing and submitting Fabrication Drawings, foundation design, installing the reinforced concrete base, grounding electrode with conduit, pedestal post and base, breakaway base where required, AC power connection and any associated expenses, solar panel, backup battery, speed feedback screen, "YOUR SPEED" sign, R2-1 or S5-1 sign as specified on the Plans, solar-powered flashing beacon assembly, and any required attachment hardware; testing the feedback mechanism; and for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Payment for Special Provision (Radar Speed Feedback Sign Assembly) will be made as follows:

- (a) When applicable, 10 percent of the Contract unit price will be paid for installation of the pedestal pole.
- (b) Upon installation of a functioning system as indicated by a successful continuous 24-hour operation test period, an additional 10 percent of the Contract unit price will be paid.
- (c) Thirty percent of the Contract unit price will be paid upon receipt by the Engineer of notice from all responsible Agency parties that all paperwork related to the sign installation has been completed to the satisfaction of the Agency.
- (d) The remainder, less 20 percent of the Contract unit price, will be paid after successful completion of the 30-day test control period.

4/1/2013

- (e) The final 20 percent of the Contract unit price will be paid upon acceptance of the project.
- (f) The Contractor will not be paid more than 50 percent of the Contract unit price for Radar Speed Feedback Sign installation, whether directly or through stockpile or any other means, until the Engineer has been notified that all related paperwork has been completed to the satisfaction of the Agency.

Payment will be made under:

<u>Unit</u>	<u>Pay Item</u>	<u>Pay</u>
900.620	Special Provision (Radar Speed Feedback Sign Assembly with Flashing Beacons, AC-Powered)	Each
900.620	Special Provision (Radar Speed Feedback Sign Assembly with Flashing Beacons, Solar-Powered)	Each
900.620	Special Provision (Radar Speed Feedback Sign Assembly, AC-Powered)	Each
900.620	Special Provision (Radar Speed Feedback Sign Assembly, Solar-Powered)	Each