**REVISION OF SECTION 614**

**GLOBAL POSITIONING SYSTEM (GPS)**

Section 614 of the Standard Specifications is hereby revised for this project as follows:

**DESCRIPTION**

Subsection 614.01 shall include the following:

The Contractor shall collect geodetic data for all roadway devices installed within the project limits.

**CONSTRUCTION REQUIREMENTS**

Subsection 614.08 shall include the following:

The Contractor shall collect and provide electronic Global Positioning System (GPS) Coordinate information for all devices: Control Cabinet, Signal Pole, Power Supply Point of Connection, in Ground Pull Box, Travel Time Indicator locations, Microwave Vehicle Radar Detector, and Pan Tilt Zoom Camera location on this project. Only coordinates of devices installed on this project shall be provided.

The Contractor shall use a device designed specifically for capturing GPS coordinates.

Accuracy tolerances for data collected by the GPS unit shall be 2-5 meters or less.

The GPS coordinates shall be delivered in WGS 84, latitudes and longitudes and be in decimal degree format.

For data collection, the Contractor shall use averaged waypoint at the proposed locations. Minimum averaging time at each location shall be 2 minutes (120 seconds) prior to documenting the information.

Documentation verifying the type of GPS unit being proposed for use and the specifications of the unit shall be provided to the Project Engineer for review prior to data gathering. The Contractor shall completely fill in all information for each device.

Data shall be delivered to the Project Engineer in an electronic Microsoft Excel or Microsoft Access or comma delimitated format to be compatible with ArcView/ArcGIS on a CD-ROM or DVD.

If using a GPS collecting device with Windows CE and ArcPad the data format deliverable shall be ArcView/ArcGIS Export/Import Format \*.e00 files or ArcView/ArcGIS shape files with a minimum of three files \*.shp, \*.dbf, \*.shx.

**REVISION OF SECTION 614**

**GLOBAL POSITIONING SYSTEM (GPS)**

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Control Cabinet

* Type (332, 333, 334, etc)
* UPS
  + Yes
  + No

Signal Pole

* Mast Arm
* Span Wire
* Pedestal
* Flasher

Power Supply Point of Connection

* Meter
* flat rate
* Overhead
* Underground

In Ground Pull Box

* Size
* Content
  + Electrical
  + Signal
  + Communication
* Wire Type
  + Fiber
    - Splice Enclosure
      * Yes
      * No
  + Copper

Travel Time Indicator

* Existing structure
* CCTV Pole

Microwave Vehicle Detector

* Existing structure
* CCTV Pole

Pan Tilt Zoom Camera

* Existing structure
* CCTV Pole

**REVISION OF SECTION 614**

**GLOBAL POSITIONING SYSTEM (GPS)**

**-3-**

Subsection 614.13 shall include the following:

Global Positioning System (GPS) information gathering will not be measured or paid for separately but will be considered incidental to the pay item being installed. This work shall include all labor, materials, and equipment required to complete the work.