Turnpike ITS Design Guidance

ITS Device Infrastructure Guidance

Sole Source:

- Coordinate with Turnpike ITS Design for potential sourcing of equipment and submission of Proprietary Product Certification (Form 110) prior to Phase II submittal. Upon District Design Engineer's approval of the Proprietary Product Certification, coordinate with the Turnpike Specification office to develop a Modified Special Provision (MSP) for each sole sourced product.

Dynamic Message Sign (DMS) and Arterial Dynamic Message Signs (ADMS):

- Coordinate with Turnpike Specifications Office to develop a Modified Special Provision (MSP) with the following requirements:
    - For Walk-In (Mainline) DMS provide:
        - 18-inch font
        - Three lines
        - 21 characters per line
        - Full color
        - Full matrix
    - For Front Access (Arterial) ADMS provide:
        - 15 characters per line
        - Three lines
        - Full color
        - Full matrix

- For all types of DMS, provide a ground accessible cabinet to install uninterruptible power supply (UPS) head units and associated battery equipment. Make provisions to include transfer switch, auxiliary power, and generator connection for the cabinet.

Closed-Circuit Television (CCTV) Systems:

- Use dome PTZ , non-pressurized, IP-addressable, high-definition cameras for Incident Management CCTV.

- Use concrete poles for all CCTV installations unless project conditions demand otherwise.

Microwave Vehicle Detection System (MVDS):

- Place MVDS devices in such a way that traffic entering and exiting the mainline corridor is detected and monitored for volumes and speed.

Automatic Vehicle Identification (AVI) Systems:

- Use Vehicle Detection System (VDS)-AVI based on Bluetooth technology for travel time data collection. Design VDS-AVI at each walk-in DMS and every interchange, with a maximum spacing of 3 to 5 miles.

Remote Power Management Unit (RPMU)

- Ensure the RPMU provides a minimum of eight NEMA 5-15R receptacles, nominal 120 VAC.

Highway Advisory Radio (HAR)

- Remove HAR sites from projects, if affected by construction, and provide notes to salvage equipment/components and return to ITS maintenance yard.

Emergency Generator Power Systems

- When a project includes a permanent generator and SCADA, ensure to place a power monitoring cabinet to house the SCADA module next to the generator. Also, include UPS in the power monitoring cabinet.

Salvageable Items

- Salvageable items must be dropped off at the ITS maintenance yard within 60 miles of Turkey Lake Service Plaza (MP 263) or Pompano Beach Service Plaza (MP 65) depending on project location. Document the make, model and serial number of each dropped off item, if applicable.