

**780 INTELLIGENT TRANSPORTATION SYSTEMS-GENERAL REQUIREMENTS.
(REV 8-7-06) (FA 8-15-06) (1-07)**

PAGE 755. The following new Section is added after Section 715:

**SECTION 780
INTELLIGENT TRANSPORTATION SYSTEMS
GENERAL REQUIREMENTS**

780-1 Description.

The provisions contained in this Section include general requirements for all intelligent transportation system (ITS) devices and equipment used on Florida's limited-access and non-limited-access corridors and in transportation management centers (TMCs).

780-2 Equipment and Materials.

Use only ITS equipment and components that meet the requirements of these specifications, and which are listed on the Department's Approved Product List (APL). Use only new equipment and materials, except as specified in the Contract Documents. Ensure that firmware and software furnished and installed as part of an ITS project are the most current and approved releases or versions. Firmware and software updates released during Contractor and manufacturer warranty periods shall be made available at no cost to the Department.

Meet the following requirements:

General Requirements for the Installation and Evaluation of	
Traffic Control Signal Equipment and Materials.....	Section 603
Guaranties	Section 608
Acceptance Procedures	Section 611
ITS Motorist Information Systems	Section 781
ITS Video Equipment	Section 782
ITS Fiber Optic Cable and Interconnect	Section 783
ITS Network Devices.....	Section 784
ITS Infrastructure.....	Section 785
ITS Vehicle Detection and Data Collection.....	Section 786

780-3 Installation Requirements.

Install ITS equipment as detailed in the plans, following the manufacturer's recommendations, and with the review and approval of the Engineer.

Furnish all tools, equipment, materials, supplies, and manufactured hardware necessary for a complete installation. Perform all operations and equipment integration necessary to ensure that the finished ITS equipment functions as depicted in the plans.

Materials and workmanship shall conform to the requirements of the NEC, the National Electrical Safety Code (NESC), and applicable codes of governing jurisdictions.

780-4 Grounding and Transient Voltage Surge Suppression.

Properly ground all ITS equipment and materials to provide personnel and equipment protection against faults, surge currents, and lightning transients. Ensure that the grounding system used meets the grounding requirements defined in Section 620 and in Section 785-1.

Install all ITS components with surge suppressors and lightning arrestors as shown in the plans and according to the ITS device manufacturer's recommendations. Ensure that the surge suppressors and lightning arrestors are capable of meeting or exceeding the device protection requirements as contained in Section 785-1 and that they are listed on the Department's APL. Consider multiple devices installed in the same field cabinet to be a single installation for the purpose of providing grounding and surge suppression under this paragraph. Protect all power, data, and video lines.

780-5 Testing.

Perform the required tests for the ITS equipment installed. Notify the Engineer of ITS installation testing at least 14 days in advance.

Provide the test procedures to the Engineer at least 14 days in advance for approval prior to commencement of testing. Ensure that the test plan demonstrates each and every functional requirement specified for the device or system under test.

Furnish all equipment, software, and supplies necessary for conducting the tests. Include in the test documentation the last calibration date of all test equipment, along with the test parameters as set on the equipment.

All test results shall be compared with their corresponding specifications. Failure to conform to the specifications of any test shall be considered a defect and the equipment shall be subject to rejection by the Engineer. Rejected equipment may be offered again for a retest, provided that all deficiencies have been corrected and evidence thereof has been submitted to the Engineer.

780-6 Electrical Power Service Assemblies.

Furnish and install electrical power service assemblies, either underground or overhead, for the ITS device, as shown in the plans and directed by the Engineer. Ensure that the installation meets all requirements of Section 639.

780-7 Method of Measurement.

The quantities to be paid for will be the quantity, per assembly, for electrical power service; the quantity, in feet, for electrical service wire; and the quantity, per each, for electrical service disconnect.

780-8 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including furnishing and installing all material and hardware as specified in the Contract Documents, and all labor and equipment necessary to make a complete and accepted installation.

Payment will be made under:

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| Item No. 780-1-11 | ITS Electrical Power Service – per assembly. |
| Item No. 780-1-12 | ITS Electrical Service Wire – per foot. |
| Item No. 780-1-13 | ITS Electrical Service Disconnect – each. |