

## Chapter 29

### Intelligent Transportation Systems Plans

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## Chapter 29

# Intelligent Transportation Systems Plans

### 29.1 General

The incorporation of Intelligent Transportation Systems (ITS) Plans is a relatively new development, yet it is becoming more widespread. This chapter was developed to introduce some standardization for ITS Plans. Since the use of these plans is so new, CADD standards may not have been developed at the time of publication. ITS Plans are usually a component set of plans. Projects with minor ITS involvement may include these features on sheets in the roadway plans set or on the roadway sheets (or on sheets in the signalization plans set or on the signalization sheets if applicable). When prepared as component plans they shall be assembled as a separate plans set complete with a key sheet, tabulation of quantities and all other relevant ITS sheets. The sheets shall be numbered consecutively with the sheet numbers prefixed by the letters "IT".

A complete set of ITS Plans shall include the following sheets:

1. Key Sheet
2. Tabulation of Quantities
3. Plan Sheets
4. Detail Sheets (as required)

The ITS Plans show the construction details, electrical circuits, and other data relevant to an ITS project. Some of the different systems that may be produced under the ITS Component set of plans include, but are not limited to the following:

- |                                 |   |
|---------------------------------|---|
| 1. Freeway Management System    | 6. Electronic Toll Collection                                 |
| 2. Incident Management System   | 7. Electronic Fare Payment                                    |
| 3. Arterial Management System   | 8. Highway Rail Intersections (under electronic surveillance) |
| 4. Emergency Management Systems | 9. Regional Multimodal Traveler Information                   |
| 5. Transit Management Systems   |   |

## 29.2 Key Sheet

The key sheet is the first sheet in the component plans set and shall be prepared as described in **Chapter 3** of this volume. The location map, length of project box and contract plans set information are not required on this sheet when shown on the lead key sheet. The index of ITS plans shall be shown on the left of the sheet.

Other data, including name, consultant contract number, vendor number, and certificate of authorization number of the firm (when plans are prepared by a consultant), shall be shown as described in **Chapter 3** of this volume.

If shop drawings are anticipated, the name(s) and address(es) of the Delegated Engineer(s) for shop drawing review(s) shall be shown on the right side of the sheet.

## **29.3      Tabulation of Quantities and Standard Notes**

The tabulation of quantities sheet lists the item numbers, description and quantity of materials. This sheet shall be placed behind the key sheet in plans assembly.

Pay item numbers shall be listed in numerical order. Provisions shall be made to show the original and final quantities per sheet. Pay item notes and general notes that refer to item numbers, description of work to be performed and quantity estimates shall also be shown on this sheet. If space is limited, notes may be shown on a General Notes Sheet.

On contracts with multiple Financial Project ID's, or Federal Aid and non-Federal Aid quantities, provisions shall be made to tabulate and summarize their respective quantities.

## **29.4 General Notes**

General notes pertaining to ITS may be shown on a separate plan format sheet. The general notes sheet lists special ITS design information that is generally not covered in the FDOT Standard Specifications, Supplement or Special Provisions. This sheet shall be placed behind the tabulation of quantities in the plans assembly. On minor projects, general notes may be combined with the tabulation of quantities sheet.

## **29.5 Plan Sheets**

### **29.5.1 Format and Scale**

ITS Plans shall be prepared on standard plan format. The scale shall be such that all details are clear and legible. See the requirements of **Section 10.1** of this volume as a guide. A north arrow and scale shall be shown at a point of maximum visibility on the sheet.

### **29.5.2 Required Information**

The basic information requirements include roadway geometrics, project limits, street names, construction stationing or milepost, curb and gutter, drainage inlets, sidewalks and right of way lines as similarly required on the plan portion of the roadway plan-profile sheets. Those underground and overhead utilities, signing structures, and lighting structures that may cause construction conflicts with ITS components shall be shown. All locations, including existing trees, should be checked for potential conflicts.

All equipment shown on the plan shall be clearly labeled and their respective pay item numbers and quantity indicated.

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