

### 7.1.3

#### **Paving the Way to a Robust GIS: Geodatabase Design, Field Inventory, Condition Assessment, and CMMS**

##### **Presenter**

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St. Johns County Public Works Department (Florida) is developing a geographic information system to support management and maintenance operations for their transportation infrastructure. This centralized repository for transportation asset data will also feed a GIS-centric asset management system being implemented at the same time. These systems will house data on pavement, sidewalks, bridges, guardrails, traffic signs and signals, as well as the County's stormwater system.

Data for the GIS will be extracted from orthophotography, collected from the field, and migrated from existing databases. Survey crews capture the location of features with RTD GPS technology and record attribute data on pen-based field computers. Data on pavement condition—distress type, severity, and extent—is documented from visual observation in order to determine the Pavement Condition Index for each section of pavement. A unique video van technology has been employed for this effort. A van equipped with video cameras creates a visual inventory of signs, guardrails, sidewalks, and street lighting. Vans are configured with six cameras to collect a complete panoramic view of all assets as the vans are driven down the roadway. Wide-angle cameras face the front and back to capture complete right-of-way views. Data is then extracted from the best camera view. Video and still view photos are then accessible through the GIS interface.

This presentation will look at the approach taken to designing a geodatabase that met the specific needs of St. Johns County, the challenges of inventorying and assessing the transportation infrastructure throughout the County, and the success of implementing an asset management system that can directly access the data housed and maintained in the GIS.