

Mobile

Case Study - Hillsborough County Field Data Collection Application

Case Study—Hillsborough County, FL

Mobile technology is helping Hillsborough County, Florida extend its enterprise information system to the field. Historically, County crews collected asset condition and location information in the field using a cumbersome system, which functioned independently from their GIS and other in-office systems. The data collection process offered very little in the way of quality control, and was prone to errors. The system did not allow spatial edits, or provide information about existing assets. The process for integrating field data with the corporate database was tedious and time consuming. This inefficient process resulted in data that was not current or accurate. County staff needed a mobile solution to streamline the collection of stormwater asset data.

Hillsborough County's Public Works Department contracted Marshall and Associates, Inc. (MarshallGIS) to develop a mobile Field Data Collection (FDC) solution. The new tablet PC-based solution has allowed the County to extend their enterprise information from the office to the field.

MarshallGIS built the FDC on ArcGIS Engine technology to provide easy-to-use, powerful GIS functionality to field crews. The system, integrated with GPS using wireless bluetooth technology, communicates with a digital camera using 802.11b wireless technology. The fully integrated system allows field crews to locate assets in the field, perform condition inspections, and associate multiple digital images with map features/assets.

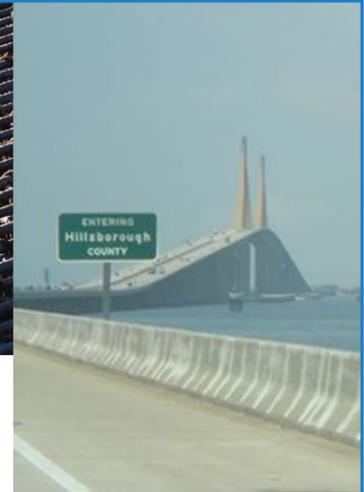
The application controls contents with a drop-down list, eliminating input errors and ensuring speedy data collection. Drag and drop comment fields allow for additional "free form" information gathering.

The application also provides a rich suite of GIS editing tools to add, delete, and/or move point and linear features. The field data resides in a personal geodatabase.

Back in the office, field data is triaged and incorporated with the enterprise ArcSDE database. Asset information is synchronized with the corporate database asset management system (Hansen) using automated processes. What previously required days now takes only hours.

Return on Investment

The new FDC system is providing better data to field crews, which in turn allows them to make better decisions as they perform their work. The automated, controlled nature of the FDC operation ensures that the data returning from the field is of the highest quality. The County is benefiting from significant time savings as well as improved data for their enterprise systems.



"The FDC system Marshall has developed for our stormwater management team is proving to be a success. Updating and synchronizing our corporate data is happening on a weekly basis now, rather than monthly as in the past. We are making plans now, to expand its use to other divisions of the Public Works Department."

- **James Thiggenn, PE, Hillsborough County Public Works Asset Management Team Leader**

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