Tippecanoe County, Indiana
Parcel Maintenance Backlog Cleared with Enterprise GIS

Tippecanoe County, home of Purdue University, is a diversified community with high-tech companies specializing in life sciences, information technology, and advanced manufacturing in addition to its traditional manufacturing industry.

In 1997, Tippecanoe County was using a blend of geographic information system (GIS) and CAD to maintain its cadastre database. It was converting CAD files of cadastral map data from the county’s old plat map books and integrating them with digital orthophotography to create a new county basemap. In the years that followed, many additional data layers were added including extensive data provided by the City of Lafayette.

**The Challenge**

As the demand for GIS grew within county departments, so did the number of competing software solutions. At one point, county employees were using both CAD and GIS to manage parcel data. As a solution, the county developed a GIS-based Web site and selected ESRI’s ArcIMS® to deploy the many GIS data layers integrated with its tax cycle data. The Web site boasts property data; water and transportation features; contours; and voting, safety, health, utilities, and assessment information. However, county officials found that by operating the Web site with data from two different GIS software providers, it could not deploy information in an effective and time-efficient manner.

“In addition to using ArcIMS for our Web site applications, we also began using ArcGIS® Desktop for data analysis and map production,” says Mark Ehle, Tippecanoe County’s GIS administrator. “We eventually reached a point where ESRI® software was being used for everything but our parcel maintenance, of which we had a significant backlog. It became logical for us to address the backlog and data conversion simultaneously with an ESRI solution.”

**The Solution**

After researching its options, Tippecanoe County chose the Sidwell Company, an ESRI business partner, to migrate all county GIS data into a tagged model inside an ESRI geodatabase. Sidwell used several preprocessing steps to ensure data integrity before the linear data was converted. Concurrently, an enterprise geodatabase was created using ArcSDE® (a technology now included in ArcGIS Server), and the county’s parcel inventory was loaded into Sidwell’s Parcel Builder™-Administrator software (supported by ArcGIS).

Learn more at [www.esri.com/landrecords](http://www.esri.com/landrecords).
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**ESRI SOFTWARE USED**
- ArcGIS Desktop
- ArcIMS
- ArcSDE
- ArcGIS Publisher
- ArcGIS Spatial Analyst

**OTHER SOFTWARE USED**
- Sidwell Parcel Builder

**DATA USED**
- Property (parcel)
- Utilities, Storm Sewer, Sanitary Sewer, and Water Transportation
- Voting
- Public Safety
- Land Use
- Address Points
- Mosquito Monitoring and Septic Permits

**HARDWARE**
- Dedicated GIS and Web Servers
- Dell GIS Workstations

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“ArcGIS allowed us to split up parcel maintenance tasks based on the various strengths of our staff,” explains Ehle. “We were already using a tagged data model, and Parcel Builder allowed us to maintain our investment in that structure. The ArcGIS Publisher extension, along with Parcel Builder, has also allowed us to increase distribution of our data to those without access to GIS software.”

The county also looked to Sidwell’s Mapping Services Department to eliminate its parcel maintenance backlog. Sidwell provided Parcel Builder software and training on editing in ArcGIS Desktop as well as on all four Parcel Builder modules.

According to Ehle, “The data transition was smooth, and the quality control process helped us find and correct errors in our GIS data that we were not aware of.”

**The Results**

Through extensive coordination with the City of Lafayette, Tippecanoe County has improved GIS services to its staff as well as provided better government services to the community by sharing data via its GIS Web site. The implementation of an ESRI enterprise geodatabase has allowed the county to easily serve GIS data to its Web sites, and data no longer must be converted to shapefiles before posting to the Web. The county also has an electronic submission ordinance for new subdivisions and surveys, and the transition to the geodatabase and Parcel Builder has eliminated several steps previously required to integrate files into cadastral data.

In addition, Tippecanoe County has increased its parcel map maintenance productivity through the streamlined GIS maintenance workflows brought to the table by Parcel Builder. As Tippecanoe County deploys its GIS to new users at the county with Parcel Builder-MapViewer, additional return on investment will be realized. The county is well positioned to continue the technical development of its GIS including plans to provide access to plat book pages as PDFs on its Web site.

Approximately 500 square miles of cadastral data resides in Tippecanoe County’s GIS geodatabase.