

Project 08-55

Real Estate Data Integration for Project Delivery

Research Field: Transportation Planning

Source: Washington

Allocation: \$100,000

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Right-of-way issues are commonly identified as one of the causes for project delay and cost increases in project estimates. Some state departments of transportation use data-recording and -storing methods that can be unresponsive to the demands of modern project management, making convenient access of real-time information by multiple users difficult and potentially causing undue delay.

Many departments use Computer-Aided Drafting and Design (CADD) and Computer-Aided Civil Engineering (CAiCE) to develop right-of-way plans. Often, the final approved right-of-way plans are recorded and filed on paper or on Mylar. This information includes desired data such as agency ownership, appraisal information, acquisition status, and property management functions that are important to any array of users; however, the way in which this data is gathered and stored makes access difficult, particularly by those addressing real estate issues, utilities, environmental permitting and mitigation, access management, maintenance, and programming issues. Moreover, the current system of posting right-of-way ownership by hand is obsolete and inefficient and, in the case of a catastrophic event, the information would be irretrievable.

A system needs to be developed that utilizes existing technology and software to integrate information to enable its access by all users. The integration and automation of this data would be beneficial in improving coordination and consistency of data, leading to reduced project delivery delays caused by right-of-way acquisition. In addition, automation and the ability to retrieve this data electronically will provide consistent information to all users, reducing the time and expense needed to ship documents; eliminate repetitive entries; minimize errors due to multiple formats and data entry operators; and ultimately save money for the departments of transportation. Electronic management of real estate information could improve coordination with local jurisdictions and provide appropriate data on agency ownership of property to the public.

The research objective of this project is to develop an estimate of cost and time savings for a Geographic Information System (GIS) that integrates right-of-way plans with other pertinent common transportation management systems. The specific tasks include (1) identifying real estate data needed for development and delivery of highway projects, (2) evaluating options for a GIS utilizing data developed in CADD and CAiCE, (3) identifying options for sharing data amongst users such as a web-based system, and (4) determining how to utilize an imaging system to include land acquisition document images as a GIS layer.

Note: The AASHTO Standing Committee on Research directed that the original scope and funds be reduced to that of a synthesis.