



## 0-6827: Strategies for a Comprehensive Inventory and Management of Real Property Assets

### Background

TxDOT has a large inventory of parcels within its right-of-way holdings (ROW) and many parcels that could be used in more profitably or efficiently. In previous projects, CTR has identified several uses for parcels, such as leasing the land for telecommunications infrastructure or energy generation. However, TxDOT currently lacks the means to automatically catalog its real property assets, which presents a significant hindrance to making systematic decisions about maximizing the value of these assets for the public benefit. Thus, the objective of this research project was to develop an automatic methodology for strategic use of excess ROW parcels, maximizing TxDOT's real property assets based on an integrated GIS ROW database.

### What the Researchers Did

This project evaluated technical methodologies to make data about ROW holdings more available to TxDOT personnel for analysis and decision making. The research team reviewed the current related literature, identified decision rules for determining potential alternate uses of ROW parcels, and reviewed existing data sets to determine their ability to support the decision rules. This project provided a basis from which TxDOT can further develop its current investment in a GIS-based inventory of its ROW parcels.

### What They Found

Based on review of the literature, evaluation of ROW management systems deployed both nationally and internationally, and review of TxDOT's current initiatives for a ROW asset management

system, the research indicates TxDOT's "Real Property Delineation and Asset Management System" initiative is moving in a positive direction consistent with other investments made by like agencies. The GIS-based system appears to be a positive step in terms of assembling and making accessible TxDOT's ROW parcels.

There exists enough knowledge about asset valuation to develop decision rules and considerations to support automatic evaluation of parcels. Such rules are important to allow systematic and consistent evaluation of ROW parcels with respect to alternate uses or for disposition—a key capability given the very large ROW inventory that TxDOT controls. This project thoroughly reviewed the asset valuation literature and determined a finite set of decision rules and conditions for evaluation, providing an important starting point for future development of computerized, automatic approaches to review of ROW parcels for alternative uses.

#### Research Performed by:

Center for Transportation Research

#### Research Supervisor:

William O'Brien, CTR

#### Researchers:

Zhanmin Zhang

Nabeel Khwaja

Ambareesha Nittala

Taehoon Lim

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The researchers determined that TxDOT has enough available data (from various data sources inside and outside of TxDOT) to support at least semi-automatic evaluation for most decision rules. The decision rules and available data sets are rich and specific enough to warrant significant future information systems development for at least semi-automatically assessing TxDOT’s inventory of ROW parcels for a variety of uses to maximize value for the public.

Consideration of currently available data is important—if sufficient data is not available, investing in automated systems makes little sense. The researchers were able to match decision rules to specific data across a wide variety of data sets that are available from a variety of sources, all of which should be available for use by TxDOT. Many of the existing data sets are state and national sources and as such should be available at low cost. Further, most of the data sources are GIS-compatible. This bodes well for TxDOT deployment of an ArcGIS-based information system for asset management valuation.

**What This Means**

The availability of data and associated decision rules for automatic review of ROW parcels indicates that TxDOT can reliably invest in future development of its “Real Property Delineation and Asset Management System” to make such automated review possible. The GIS-based system can be expanded using the decision rules and available data identified in this project. Note that parcel evaluation can never be fully automatic, but automated review can identify likely parcels and provide a preliminary evaluation for final review by experts. However, the research findings do suggest that such automatic review is technically feasible and investment in enhanced information systems can be made as an addition to TxDOT’s current initiatives.

<p><b>For More Information</b></p> <p><b>Project Manager:</b> Darrin Jensen, RTI (512) 416-4728</p> <p><b>Research Supervisor:</b> William O’Brien, CTR (512) 471-4638</p> <p>Technical reports when published are available at <a href="http://library.ctr.utexas.edu">http://library.ctr.utexas.edu</a>.</p>	<p>Research and Technology Implementation Office Texas Department of Transportation 125 E. 11th Street Austin, TX 78701-2483</p> <p><a href="http://www.txdot.gov">www.txdot.gov</a> Keyword: Research</p>
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