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A Framework for Geospatially Enabling the Business and Information of Transportation Right-of-Way Activities

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Right-of-Way offices in state transportation agencies are primarily responsible for property appraisal, acquisition, relocation of the affected, and management of the acquired property. Geographical Information Systems are closely linked to these activities because of the geospatial nature of parcel data and the transportation right-of-way. Integrating geospatial capabilities into an information management system can substantially enhance the right-of-way business process. This paper presents a theoretical framework for geospatially enabling the business and information of transportation right-of-way activities by conceptualizing a Geospatial Decision Making Activities (GDMA) framework for transportation right-of-way offices. Geospatial enablement uses GIS as a platform to integrate geospatial information with the right-of-way services for the establishment of a standard infrastructure to share data across the agency enterprise. The current GDMA framework facilitates the integration of right-of-way activities with a geospatial warehouse architecture. The GDMA models the tracking of the detailed status of parcels through the right of way process, as well as geospatial enablement activities in Right-of-Way business processes. The framework is expected to serve as a knowledge base for transportation agencies to incorporate geospatial capabilities into their information management tools.