

Paves the Way for Smoother Right of Way Acquisition in Atlanta

Improving a major thoroughfare in the community through GIS

BY LINDA FOSTER, PLS, GISP, MGIS

Atlanta is a bustling metropolis and home to nearly 500,000 people. Like most cities, Atlanta works hard to maintain and improve its transportation network for all residents. The main funding sources are from the federal and state governments, with the remainder from local sources. Traditionally, these local dollars came through the city's General Fund budget, which was stretched thin.

When residents approved a half-cent sales tax to fund transit projects, they also approved a special-purpose local option sales tax for transportation, known as Transportation Special Purpose Local Option Sales Tax (TSPLOST). Over 5 years, TSPLOST was projected to raise \$300 million dollars in funding for transportation improvements, including resurfacing, restriping, bus stop and streetscape enhancements, pedestrian safety measures and bicycle lanes. It was TSPLOST funding that finally made improving Cascade Road, a major thoroughfare in southwest Atlanta, a reality.

The City of Atlanta's Department of Transportation (DOT) turned to geographic information system (GIS) technology to visualize the process and progress of acquiring a right of way, which allows them to manage their data more efficiently. This improves the ease of access to information regarding the progress of their project and causes workflows to be significantly faster than before.

Keeping Cascade Road Improvements Project on Track with Advanced GIS Tools

With funding in hand, city officials knew they needed to find new ways to improve the project's efficiency, so they started with the right of way (ROW) acquisition process. The Cascade Road project, at \$20 to \$30 million, required land rights from over 60 parcels of property. Road design and construction project manager Conredge Lewis felt the traditional spreadsheet method could not handle a project of that scale. From experience, he knew the spreadsheets were cumbersome and difficult to analyze, which caused workflows to move slowly and made project updates hard to track, which was concerning.

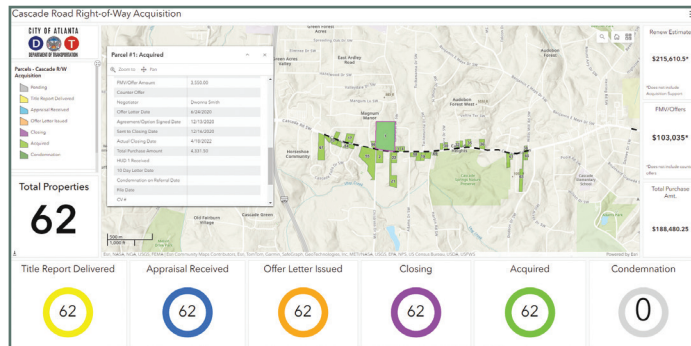
“From the mayor, council members, neighborhood associations, appraisers, contractors, and other internal stakeholders, we knew it would be a challenge to keep everyone involved in the project informed with the latest information.”

Without the use of an efficient ROW acquisition management system, officials also knew additional costs and project delays were likely.

Developing a Custom GIS Solution for Efficient ROW Management

So, Lewis consulted with GIS Manager Greg Underwood, and they went to work developing a GIS solution. Underwood set out to map every parcel of land that needed to be acquired for their project, which provided the foundational visualization of their management system.

Using ArcGIS Dashboards and ArcGIS Web AppBuilder, Underwood created a ROW acquisition application. This app tracked the progress of the project and updated parcel information in real time. By hosting the solution in ArcGIS Online, project managers like Lewis could easily edit and update parcels as their statuses changed. This allowed for easy communication of ROW acquisition progress.



GIS dashboard developed for Cascade ROW acquisition.

GIS Enhances Collaboration and Streamlines Cost Management in ROW Acquisitions

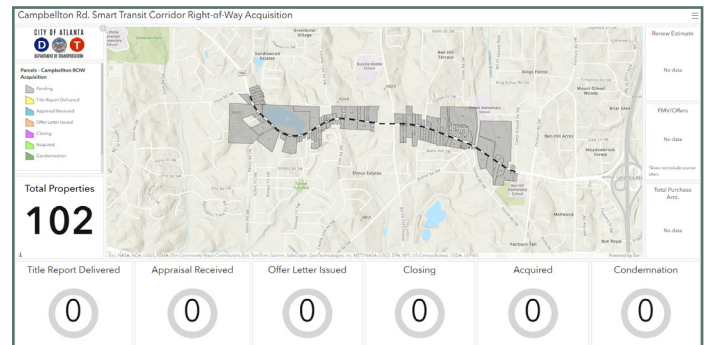
Using GIS to manage ROW acquisition has proven very successful for Atlanta DOT. For the Cascade Road project, officials were able to monitor the cost of acquisition throughout the process, keeping the budget on track. Everyone also had a comprehensive understanding of how acquisitions were progressing, which was vital to the project timeline since construction could not begin until all properties were settled. During public meetings and other interactions where current updates were sought immediately, DOT staff also found the dashboard invaluable.

“The Cascade Road project is a big deal,” said Lewis. “Getting it funded was a big challenge, but now that residents are seeing progress, they are excited. The project means a lot to a lot of people.”

Conredge Lewis, Road Design and Construction Project Manager for the Atlanta Department of Transportation

What Lies Ahead

Responsible for over 1,500 centerline miles of roadway, Atlanta DOT has no shortage of projects. Plans are already underway to continue expanding the use of ROW acquisition GIS dashboards for future projects. The next one will support the Campbellton Road Smart Transit Corridor project. The dashboard is already configured and ready for acquisition data to start flowing in.



Campbellton Road Smart Transit Corridor project ROW acquisition GIS dashboard.

The Georgia Department of Transportation (GDOT) has also partnered with Atlanta DOT on some upcoming projects, which are more complex due to blended funding and other logistics, such as utility relocation and construction administration. The city will acquire ROW for the state, which means it will need to prove to GDOT that it is compliant with the acquisition regulations followed by the State of Georgia. DOT staff are excited to have the GIS ROW acquisition dashboard in place. With slight modifications, it can be extended to track regulatory compliance alongside progress and be provided directly to GDOT in real time. 📍



Linda Foster oversees Esri's worldwide strategic vision for land records, cadastre, surveying and land administration. A leader in professional organizations, she is currently president-elect of the National Society of Professional Surveyors. Foster is a registered land surveyor and certified GISP. She also holds a B.S. degree in geological engineering and a master's degree in GIS from Penn State University. For more information on how to apply GIS to your project, you can visit go.esri.com/rightofway.