non-highway use of ROW requires a ROW Use Agreement and approval by FHWA. The FHWA must determine that such occupancy, use, or reservation is in the public interest; is consistent with the continued use, operation, maintenance, and safety of the facility; and does not impair the highway or interfere with the free and safe flow of traffic. Except for Interstate highways, FHWA may assign its determination and approval responsibilities to the State DOT in their Stewardship/Oversight Agreement.

State DOTs are taking many different approaches to facilitate the deployment of broadband. Ohio, for example, has taken a thoughtful and deliberative approach. Ohio Department of Transportation (ODOT) officials surveyed many states across the country to learn lessons and best practices from others. Ohio created an Office of Broadband and published this Broadband Strategy. This strategy lays a framework for establishing a leadership position for Ohio in broadband deployment and utilization. Ohio does not intend to own the network. Instead, Ohio must be a partner at coordinating new or existing high-speed internet expansion efforts. Going forward, Ohio plans to finalize an official broadband policy for deployment across the state. One of ODOT's key lessons learned is that there is no one-size-fits-all solution. Rather, it is important for each state to find a strategy and approach that works for their unique needs.

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UNUSUAL RIGHT-OF-WAY ACQUISITIONS AND RELOCATIONS: CEMETERIES AND GRAVESITES

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act, or URA), 49 CFR part 24, provides important protections and assistance for people affected by the acquisition of real property for Federal or Federally-funded projects. Congress enacted the law to ensure that people whose real property is acquired, or who are relocated as a direct result of projects receiving Federal funds, are treated fairly and equitably and receive assistance in relocating from the property they occupy.

The types and numbers of properties acquired for Federal or Federally-funded projects vary from project to project. A property type that is rarely acquired, but presents unique challenges when an acquisition and relocation is necessary, is cemetery property. Acquisition of cemetery properties and relocation of remains from gravesites is relatively infrequent compared to other properties acquired on projects. Practitioners typically try to design their projects to avoid cemeteries and gravesites given the sensitive nature of these locations. Sometimes, however, these sites are unavoidable and/or initially unknown due to limited boundary records that would identify the extent of cemeteries.

In fact, determining cemetery and gravesite boundaries is often one of the more difficult aspects of these acquisitions and relocations for two reasons. First, at the site level, a fence line, which may encompass the site, does not always represent the property boundary. Secondly, at the individual plot level, headstone markers do not always indicate where remains are actually located. Due to shifts in the ground, which sometimes causes "spillover," a headstone may have shifted as well. Generally, staff employed by the cemetery or a cemetery consultant, for which there are few, can help address the first issue by working with realty specialists to identify the correct cemetery limits. The latter challenge may require an archaeologist who can survey the site in order to identify how ground movements may have affected the position of things that are buried.

Cemetery property acquisition can be further complicated by the fact that cemetery ownerships

improve the process, and the challenges and limitations agencies face for incorporating GIS in this process. The report and demonstration provide information and examples that may be useful to States seeking tools and resources to improve preliminary ROW cost estimates, or that are interested in incorporating GIS into this process, but do not represent tools and resources that FHWA is requiring them to use.

The Volpe Center project team used three data sources to support this effort. First, the project team conducted a document review of publicly available reports focused on tools and methods used for ROW cost estimation throughout transportation project delivery, and the benefits and challenges of a standard electronic ROW cost estimation calculator.[2, 3, 4] Second, the project team interviewed State DOT GIS and ROW specialists from four States with varying degrees of practical experience using GIS in their ROW cost estimation processes. Each participant discussed their roles and experiences with geospatial data during the ROW cost estimation process.[5] The project team used each data source to develop the first version of the report. The report summarized findings from background research, provided a high-level resource for using GIS at a State DOT for ROW cost estimation, and included a step-by-step demonstration of this process. The first version of the report served as a starting point for the peer exchange discussions. The third data source was the peer exchange discussions on potential improvements that could be made to the report.

Next Steps

The second version of the Guide and Demonstration report is being developed and incorporates feedback, comments, and updates based on discussions from the peer exchange and recommendations from the participants. The ultimate goal for this effort is to provide a proof of concept to show how GIS can be a useful analysis tool for transportation agencies as part of a decision tree for making better ROW cost estimations in support of the multifaceted process of selecting preferred alignments.

For more information, contact Peter Clark at peter.clark@dot.gov.

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[2] FHWA report "Major Project Program Cost Estimating Guidance" (2007) https://www.fhwa.dot.gov/majorprojects/cost_estimating/major_project_cost_guidance.pdf
[3] NCHRP Report 625 "Procedures Guide or Right-of-Way Cost Estimation and Cost Management" (2009) http://www.trb.org/Publications/Blurbs/162271.aspx
[4] Cambridge Systematics Report "Right-of-Way Cost Estimation Processes— State of the Practice" (2019)
[5] CA, AK, MD, and MN

ENVIRONMENTAL JUSTICE

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) directs each Federal agency to make achieving environmental justice (EJ) part of its mission. The USDOT EJ Order 5610.2(a) and USDOT EJ Strategy provide directives and guidance on how the principles of EJ should be integrated in Departmental programs, policies, and activities.

Figure 3: Stack of books with a quill pen and ink (Source: 123RF/TatianaEpifanova)

EJ at FHWA means identifying and addressing disproportionately high and adverse effects of the agency's programs, policies, and activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens. FHWA provides a regulatory framework to address EJ with FHWA EJ Order 6640.23A and guidance during the NEPA process through its Memorandum on EJ and NEPA. The FHWA EJ Reference Guide is an excellent resource designed to help FHWA staff consider EJ concerns, issues, and challenges throughout the decision-making process.

Planning, Environment, and Realty are all connected and often intersect at EJ. EJ concerns are often brought to the forefront when property acquisition, relocation, property management, and/or billboard issues are part of a transportation project or activity. It is essential to treat all populations fairly during transportation decision making, and EJ populations are no exception. Early coordination with FHWA Realty staff can help ensure that EJ concerns are considered throughout the right of way decision-making process. Meaningful public involvement should start during the planning phase, and this coordination continues during the NEPA stage to determine the distinct EJ populations who will be affected by a project. Early coordination is essential because Realty can help agency staff determine appropriate mitigation measures when there are disproportionately high and adverse effects on EJ communities.

EJ is an important consideration during right-of-way (ROW) and real property acquisition because ROW activities are linked to (and often run concurrently with) other phases of project development. Realty practitioners should seek to understand impacts on minority communities and low-income communities, and communicate the concerns and issues with others working on other aspects of the project development process. The FHWA EJ Reference Guide also includes helpful information on EJ considerations during the ROW process (p. 51).

A thorough EJ analysis documents the presence of and potential impacts to EJ populations during a project's preliminary design phase, specifically during the corridor selection process by agency ROW personnel. This will allow the agency to identify potential options for mitigation of project impacts to EJ populations. ROW practitioners should make every effort to ensure that relocation options for residential displaced persons address needs for continued access to special needs services, employment, public transportation, schools, child care, medical facilities, and other professional or community services they currently use. Continued access should include the mode of transportation used by displaced persons to these locations. Nonresidential displaced persons may need advisory services for replacement sites that will be viable for their customer base, and accessible for their employees.

Additional EJ Resources:

Articles/Publications:

- In 2016, FHWA published an EJ article in its *Public Roads Magazine* that offers an extensive history and overview of the role of EJ in transportation projects. Other FHWA EJ publications and resources are available on FHWA's EJ website.
- EJ Coordination Groups:
  - Federal Interagency Working Group on Environmental Justice (EJ IWG) facilitates the active involvement of all Federal agencies to implement Executive Order 12898.
  - The DOT EJ Working Group serves as a forum for coordination to better integrate EJ in the Department's programs, policies, and activities.
  - The FHWA EJ Implementation Working Group is an intra-agency work group that coordinates FHWA EJ activities by building awareness of existing EJ-related programs within FHWA, enhances EJ coordination within FHWA and other DOT Operating Administrations, and improves practitioner understanding of EJ policies.
  - The AASHTO EJ Community of Practice is a forum for State departments of transportation and metropolitan planning organization (MPO) practitioners to hold regular discussions regarding EJ emerging issues, and analyze the state of the practice and its implementation.
- Online EJ Trainings and Webinar Recordings:
  - National Highway Institute Course on the Fundamentals of Environmental Justice
  - AASHTO Center for Excellence (CEE) has held several webinars on EJ analysis. In January, 2020, CEE hosted a webinar on AASHTO's Census Transportation Planning Products Program (CTPP), a State DOT-funded, cooperative program that produces special tabulations of American Community Survey (ACS) data that have enhanced value for transportation planning, analysis, and strategic direction. The webinar featured information on how CTPP data can be used in EJ Analysis. A recording of the webinar can be found here.

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STAFF CHANGES

Chineme Ijeabuonwu – Maryland Division & DC Division

Chineme Ijeabuonwu is the new Right-of-Way Program Manager for FHWA's District of Columbia and Maryland Division. Prior to joining the team, she was the Real Property Manager leading the Right-of-Way Division of MDOT State Highway Administration's Public-Private-Partnership I495/I270 77-mile lane expansion. She holds a Bachelor of Arts degree in psychology and a Master's Degree in journalism from the University of Maryland College Park.

Figure 4: Chinee Ijeabuonwu (Source: FHWA)

Abbi Ginsberg – Minnesota Division
Abbi Ginsberg is a Transportation Engineer/ROW Specialist in the Minnesota Division. Throughout her career, she has held various positions as highway engineer, hydraulics engineer, and bridge engineer. Abbi has a Bachelor of Science degree in civil engineering from Iowa State University and a Master of Science degree in water resources engineering from University of Minnesota.


Figure 5: Abbi Ginsberg (Source: FHWA)

Dimas Prasetya – Indiana Division
Dimas Prasetya graduated with a civil engineering degree from Washington State University and was a transportation engineer at the Indiana Division office before taking over as Realty Specialist from Coleen Smith after her retirement in January. Dimas is also responsible for the utility and railroad program in the Indiana Division office.


Figure 6: Dimas Prasetya (Source: FHWA)

Ruth Hepfer – Michigan Division
Ruth Hepfer came to FHWA in 1998 with a Bachelor of Science in civil engineering from Michigan State University. Over the past 20 years she worked as an area engineer for FHWA Michigan Division office. In 2018, she began working in the Realty and Environment program areas.


Figure 7 Ruth Hepfer (Source: FHWA)

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