

Integrating Utilities into Transportation Planning and Design

New tool identifies options for documenting, solving, and managing utility conflicts to simplify and speed coordination between transportation agencies and utility companies

State departments of transportation (DOTs) and local agencies have developed many innovative approaches to minimize construction-related delays and congestion. Unfortunately, costly changes related to utilities continue to plague owner agencies, slowing construction and adding significantly to project costs. Locating buried utility lines in the right-of-way and relocating aboveground wires, poles, and equipment often cause costly delays for construction projects and expensive rework for utility companies.

New guidelines developed through the second Strategic Highway Research Program (SHRP2) will help alleviate many of these problems. The **guidelines show agencies and utilities how to quickly identify and resolve conflicts between road and bridge projects and the presence of utility infrastructure.**

Integrating the Priorities of Transportation Agencies and Utility Companies to Speed Up Construction

The Solution

The *Utility Conflict Matrix (UCM)* and its companion report, *Integrating the Priorities of Transportation Agencies and Utility Companies (R15B)*, are designed to help agencies and utility companies quickly identify best solutions. The conflict resolution matrix is scalable to support a range of project sizes and conditions, and establishes easily accessible information to help all parties make more informed decisions. The tools feature a description of best practices from selected state DOTs using utility conflict matrices as well as training, a procedural manual, and implementation guidelines. This SHRP2 Solution includes data from surveys of DOTs and utility companies with best practices and case studies that identified prevailing issues and proven solutions.

Improving utility coordination on highway projects

FOCUS AREA:
Renewal (R15B)

Easy-to-use tools, including a stand-alone utility conflict matrix, a prototype of a data model/database, training sessions for users, and a set of guidelines.

Save Lives

- Timely location of underground lines minimizes potential safety issues.



Save Money

- Earlier and more effective coordination reduces costs from construction delays.



Save Time

- Standard procedures and easy-to-use tools save time in identifying and solving utility conflicts.



The Benefits

The immediate benefits of the guide are simplified identification of conflicts and solutions. The process also fosters greater communication among affected parties. Together, these improvements lead to a more efficient process. Ultimately the benefits of more effective utility coordination on roadway and bridge construction include:

- ▶ Time and cost savings from reduced utility delays;
- ▶ Improved project development procedures based on anticipating and resolving utility conflicts early in the process;
- ▶ Better communication among transportation agencies and utilities; and
- ▶ Reduced impacts on the public from construction-related delays.

Who is using these tools?

- ▶ Georgia DOT uses a utility impact matrix on every project involving utilities and offers programs to train designers in utilities coordination.
- ▶ Both Florida DOT and Georgia DOT have developed protocols for Electronic Plan Transfer, the use of electronic files and file transfer protocols to communicate highway project status to affected utility companies and to maintain archives.
- ▶ Wisconsin has developed a statewide common Transportation Utility Management System (TUMS) for tracking, locating, and managing systems.
- ▶ Texas DOT has developed a tool showing each activity of the right-of-way acquisition and utility adjustment process with the corresponding responsible parties separated into three categories: TxDOT Right of Way (ROW) Division, TxDOT ROW district, and project associates. This tool helps in planning activities and keeps participants updated on the process. It also offers a method and format for recording data. North Carolina DOT is collecting similar data.



How can you learn more?

The report, *Integrating the Priorities of Transportation Agencies and Utility Companies*, is online at <http://www.trb.org/Publications/Blurbs/161801.aspx>. For more information, contact Jon Obenberger at FHWA, jon.obenberger@dot.gov; Keith Platte at AASHTO, kplatte@aaashto.org; or James Bryant at TRB, jbryant@nas.edu.



About SHRP 2 Implementation

The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

Strategic Highway Research Program

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