



# Project Summary

Texas Department of Transportation

## 0-4998: Standardization of Special Provisions and Determination of Unit Costs for Utility Installations

### *Background*

The Utility Accommodation Rules (UAR) stipulate minimum requirements for the accommodation of utility facilities on the highway right of way. The UAR cover only basic requirements, making it necessary to rely on additional specifications and special provisions to handle situations not covered by the rules. Because of the lack of standard utility installation specifications at the Texas Department of Transportation (TxDOT), many versions of special specifications exist around the state. There is also a need to standardize procedures for determining utility adjustment costs. In practice, utility companies use a variety of ways to submit utility adjustment costs for reimbursement. A lack of standardization causes difficulties in areas such as verifying cost data submitted for reimbursement and preparing for audits and other inquiries.

### *What the Researchers Did*

The researchers completed the following activities:

- review utility adjustment and reimbursement practices in Texas and other states;
- assess the applicability of a unit cost approach for utility adjustment work at TxDOT and develop a unit cost structure framework;
- develop a framework for utility installation specifications, including specification requirements;
- evaluate current practices for the use of special provisions;
- develop a procedure for early utility adjustment cost estimates; and
- develop recommendations for implementation.

### *What They Found*

The review of existing practices found numerous instances where utility specifications did not conform to TxDOT standards. Specification style varied considerably, including cases where the specifications contained copies of construction specifications from local jurisdictions. In addition, there were cases where specifications included references to legal and administrative requirements such as contractor qualifications, definitions of utility installation ownership, and warranty requirements.

The review found a wide range of methods that utilities use to submit cost data to TxDOT. TxDOT's concern is that billings should provide enough information to determine costs and should follow the same structure as the estimates to facilitate comparisons. In reality, estimates and billings follow different structures, making it difficult to validate charges and compare utility adjustment costs using historical cost data.

### *Research Performed by:*

Texas Transportation Institute (TTI),  
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### **Research Supervisor:**

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The research developed a prototype framework for utility adjustment specifications and unit costs that satisfies the following requirements:

- consistency with TxDOT's unit cost structure;
- consistency with standard-format specifications and provisions, including TxDOT's standard specifications;
- support for current federal and state laws and regulations concerning utility reimbursement requirements;
- support for the development of cost estimates at various stages in the utility adjustment process (from advance planning and preliminary design to post-construction); and
- support for documentation and training needs.

## *What This Means*

Recommendations to help optimize the management of the utility adjustment process at TxDOT were identified.

### **Utility installation specifications and special provisions:**

- standardize utility installation specifications and their format;
- adopt an implementation strategy for utility installation specifications;
- use TxDOT communication asset pricing data to improve estimates of communication installation construction costs;
- apply communication specification and unit cost framework to TxDOT-owned communication assets;
- modify existing standard specifications to support utility installation construction items;
- update TxDOT Form 1814 for the development of construction specifications;
- standardize the use of special provisions for utility permits;
- strengthen description of temporary adjustments in regulatory documents;
- include utility-related definitions in the TxDOT glossary; and
- evaluate feasibility of joint trenching and develop implementation guidelines.

### **Utility adjustment costs and reimbursement practices:**

- adopt a unit cost approach for the reimbursement of utility adjustments;
- link historical costs to work performed;
- implement the prototype methodology for early utility adjustment cost estimates;
- develop a procedure to maintain utility adjustment cost cumulative distribution plots up-to-date; and
- implement changes in ProtoCost to make it consistent with the utility adjustment cost estimation methodology developed in the research.

### **Utility Accommodation Rules:**

- strengthen UAR requirements and modify UAR language to make it consistent with TxDOT's standard specifications; and
- add more references to TxDOT's standard specifications in the UAR.

### **Other recommendations:**

- improve procedure to track construction control section job (CSJ) numbers in the utility agreement database;
- improve utility company awareness of rules and specifications; and
- develop training materials for TxDOT and utility companies.

#### *For More Information:*

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