



MEMO

December 15, 2021

To: District Engineers

From: Marisabel Z. Ramthun, P.E.
Director, Design Division

Subject: Reviewing and Documenting Construction Cost Estimates

Introduction & Purpose

TxDOT is committed to meeting or exceeding Federal Highway Administration (FHWA) metrics for the accuracy of final construction cost estimates. [FHWA Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation](#) recommends engineer's estimate should be within ± 10 percent of the low bid for at least 50 percent of projects.

This memo has been developed to provide guidance and highlight the importance of documenting QC reviews and storing supporting project documents pertaining to construction cost estimates. The methodology of developing a construction cost estimate at all stages in project development, including the engineer's estimate at letting, will be in accordance to [TxDOT's Construction Cost Estimating Guide](#).

District Action Item

Every district should have documented procedures for the review of construction cost estimates, how it will be documented, and where it will be stored.

Typical Estimate Documentation

It is important to maintain proper documentation for construction cost estimates and have it readily available to staff. Every estimate should include enough documented information to ensure continuity in achieving consistency in the estimation of project costs. Below is a list of recommended items to include in the documentation of a construction cost estimate.

- Estimate
This document should include the total estimated cost including base estimate, risk allowances, and contingencies. All calculations including quantities, basis of estimate, units of work, and unit prices should also be included in this document.

- Assumptions
The assumptions documentation goes hand in hand with the project scope. It needs to provide enough information that another estimator could reproduce the construction cost estimate with relative accuracy.
- Estimate Review
The review should be completed by a peer or a more experienced staff member that has sufficient knowledge of estimate procedures to provide quality feedback. The reviewer could use the attached Design Division estimate checklist, or another similar tool adopted by the district to document the review.

Maintenance and Retention of Estimate Documentation

Just as important as creating the documentation for construction cost estimates, so is maintaining, and retaining the data so that it can be used throughout the project development process.

- Maintenance
Changing site conditions, volatile markets, fluctuations in letting volumes, and contractor availability are just a few of the factors that can significantly impact construction cost estimates. Regular maintenance of construction cost estimates is the key to mitigating the effects of these and other factors. Maintenance of construction cost estimate consists of:
 - Adjusting unit prices up or down as needed to meet the identified change factors.
 - Reviewing the assumptions to make certain that changes in district policy/preferences are captured.If no changes are made to the cost estimate at a review milestone it is recommended that a note be added to the documentation that clearly shows that a review was completed.
- Retention
To maintain project continuity, project construction cost estimate documentation must be retained and accessible. At a minimum documentation for the most recent cost estimate must be kept until replaced by updated documentation. Documentation for the development of the final engineer's estimate must be kept as a part of the final project design documentation.
- Document Storage
It is recommended that the site visit, scope, assumptions, and general information all be stored in a single location. Construction cost estimate documentation should be saved in a digital format rather than hard copy and stored in a central file storage location where it will be easily accessible to all district staff. ProjectWise is an ideal location for storing construction cost estimate documentation since it can be accessed across the district.

Attachments