



Project Cost Estimates

Design Manual
Chapter 1
General Information

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This section discusses the process for developing project cost estimates (see [Section 21M-45](#) and [Section 21M-46](#) for details). These guidelines typically won't apply to 3R projects; however, Districts may choose to apply them to their large 3R projects.

Establishing accurate cost estimates during project development is crucial. Inaccurate estimates may require projects to be delayed, breaking our commitment to the public, or moved forward, allowing less design time.

Cost estimates should be determined at the D0, D2, and D5 milestones, updated annually by January 15, and updated at plan turn-in. It is important to verify that estimates are consistent with programmed amounts. Notify the Office Director if the estimated project costs exceed the programmed amount.

Base Estimate

When determining cost estimates in the early stages of a project, approximately 20% of the bid items will determine 70% of the cost; therefore, larger bid items should be identified first. For example, larger bid items on a paving project may include pavement, granular subbase, granular or paved shoulders, bridges and drainage structures, bridge approach sections and retaining walls. As the project progresses, additional items should be identified and included in the estimate.

Once bid item quantities have been calculated, each quantity is multiplied by the average unit price for that item from the last two years. A Cost Estimate Database to determine these costs is available in the following directory \\ntdfs\W\DataStor\Highway\Design\CADD\Access\SeedCostEstimating.accdb. If no bid data is available from the past two years, the average unit price from the past five years is used for that item. These five year unit prices are then inflated to present day by applying the inflation indexes. It is also acceptable to use the Estimator program to determine unit prices. Once the total costs are determined for the calculated items, these amounts are added and this subtotal is used to calculate the following bid items based upon the associated percentage factors:

- 5% for traffic control
- 5% for mobilization

The total of these prices should then be entered as the base estimate in the Project Scheduling System (PSS).

Adjustments

Adjustments are the amounts added to an estimate because of the designer's knowledge of project specific details or prices. Examples include adding an additional 30% for staging complexities or adding 20% for projects in Scott or Polk Counties to account for higher wage rates. Any values listed in the adjustment field in the PSS should be explained in the comments field.

Contingency (Unquantified Bid Items)

Since all bid items cannot be identified in the early stages of a project, a contingency is added to account for the unidentified costs. Contingency is calculated as a percentage of the identified costs. The following values should be used to calculate contingency unless an explanation is given in the comments field in PSS:

- D0: 30%
- D2: 25%
- D5: 20%
- Methods Turn-In or Contracts Turn-In: 0%

Between D5 and completion of the project, prorate the percentage of contingency based upon the items completed.

Inflation

Construction prices are inflated at a rate of 4.5% per year. PSS will add inflation based upon the program year entered.

Chronology of Changes to Design Manual Section:

001B-006 Project Cost Estimates

9/13/2012 Revised
Cost Estimate Worksheet has moved to CopySeed

9/30/2009
Previously updated