



## Standard Practice for Performing and Reporting Cost Analysis During the Design Phase of a Project<sup>1</sup>

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### 1. Scope

1.1 This practice covers an arranged method for providing cost analysis during the design phase of buildings.

1.2 The use of this practice increases the level of communication between the design professional, owner, and the cost professional providing the cost consulting services.

1.3 The practice establishes a structured method to support design decisions.

1.4 The practice provides design and cost professionals with a framework for historically tabulating information to be used on relevant future projects.

### 2. Referenced Documents

#### 2.1 *ASTM Standards:*

E 833 Terminology of Building Economics<sup>2</sup>

E 1369 Guide for Selecting Techniques for Treating Uncertainty and Risk in the Economic Evaluation of Buildings and Building Systems<sup>2</sup>

E 1557 Classification for Building Elements and Related Site Work—Uniformat II<sup>2</sup>

E 2168 Classification for Allowance, Contingency, and Reserve Sums in Building Construction Estimating<sup>3</sup>

### 3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, refer to Terminology E 833.

### 4. Summary of Practice

4.1 This practice provides an organized approach for cost analysis during the design phase of a building project. The practice presents the necessary information for the design professional and owners to make decisions.

4.2 This practice establishes a recommended procedure for formatting the final project information for its use in forecasting the cost of future projects.

### 5. Significance and Use

5.1 This practice increases the level of communication, provides an organized approach to cost control during the design of a project, and also provides a means of identifying extraordinary cost items and changes in assumptions between estimates.

5.2 The users of this practice include owners, developers, contractors, cost professionals, estimators, architects, engineers, specification writers, quantity surveyors, and anyone charged with the responsibility of successfully managing the design of a building within a specified budget.

5.3 Use this reporting format during the following:

5.3.1 Contracting for design cost analysis services,

5.3.2 Comparing the current design costs to a previous estimate, and

5.3.3 Responding to each design phase.

5.4 This practice provides a tool for analyzing design options and examining strategies to maintain the building budget.

### 6. Types of Estimates and Level of Detail

#### 6.1 *Purpose of Estimate:*

6.1.1 The cost analysis procedure consists of providing information in text and estimate form at the completion of each significant phase of the design process: program, schematic, design development, and construction documents. Apply this format for each component when the construction project is comprised of several definable building types.

6.1.2 Comparisons of Uniformat II estimates to a contractor's proposal will require the estimate to be resummarized to MasterFormat.<sup>4</sup>

#### 6.2 *Program Phase Estimate:*

6.2.1 The program/pre-design estimate includes construction costs, construction impact fees, and construction related expenditures. It is prepared from the early stage of the design process to assemble project data in a systematic format from established project criteria. The resulting report provides the baseline criteria and costs for the design team.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.81 on Building Economics.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.11.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 04.12.

<sup>4</sup> Available from Construction Specifications Institute, 601 Madison St., Alexandria, VA 22314.