

## **CHAPTER 1—Introduction to Building Cost Estimates**

### **REVIEW QUESTIONS**

**1.** Explain what a building cost estimate is.

A building cost estimate is an attempt to determine the likely cost of some building work before the work is done.

**2.** Explain the following terms:

a. Spec builder

b. Production builder

c. Custom home builder

a. Spec builders buy land for building homes; this is often in the form of housing lots in a new subdivision. They decide on the type of houses to build and make many in-house decisions about the design of the homes they will build. Because this business involves a certain amount of speculation, this group is often referred to as speculative builders.

b. Production builders build production homes that are generally a series of homes of basically the same design, almost like on a production line.

c. Custom home builders build houses to meet the owner's specific design.

Some owners employ architectural consultants to prepare plans and specifications for their home; others rely on the builder to prepare a design that meets their requirements.

**3.** Compare the risks taken by a spec builder with those taken by a custom home builder.

Unlike spec builders, the builders of custom homes do not have to buy building lots, nor do they need to construct show homes. Also, the owner that hires custom home builders usually makes all the design decisions.

The risks taken by builders in the custom home market are associated with the prices they offer owners; if they underestimate the costs, they can lose money on the project.

**4.** Describe the process by which builders are selected for large multi-unit residential

projects.

Builders will usually be selected following competitive bid; the owner usually awards the contract to the lowest priced bidder.

**5. What is a firm price contract?**

A firm price contract requires the builder to complete the project as described in the plans and specifications for a fixed sum.

**6. How can you provide incentive for a builder to exercise cost control with a cost plus contract?**

To provide a cost control incentive, provisions have to be included in the contract that allow the fee to increase when savings are made and to decrease when project costs exceed expectations. These provisions result in what is known as a variable fee cost plus contract.

## **2 ESTIMATING FOR RESIDENTIAL CONSTRUCTION**

**7. How would a builder determine the feasibility of an owner's custom home proposal?**

Since a feasible project is one where the anticipated value of all benefits exceeds the estimated total cost of putting the project in place; a builder determines the feasibility of an owner's custom home by estimating the cost of the proposed home and comparing this with the assessed value of the home.

**8. How can value analysis be used with the design of a house?**

Value analysis is used to compare the estimated cost of a component or element of a house with the perceived value of that element. If the sum allocated to the component is justified by the value, the component is accepted. Following this procedure, only features that provide value at a reasonable cost will be incorporated into the house design.

**9. Describe the value-based approach to setting the sales price of a home.**

To arrive at the sales price of a home using the value-based approach, the builder investigates the current market prices of homes and sets the

price to be competitive with homes that are similar to the type it intends to construct.

**10. How is estimating used in the cost control process?**

The cost control process begins with an accurate estimate from which budgets may be established. Further estimating is needed each month to determine how much work has been done and how much it has cost to do that work.

**11. Describe the following methods of preliminary estimating:**

a. Cost per unit

b. Cost per unit area

c. Cost per unit volume

d. Assembly

a. After completing an apartment building, the analyst divides the construction cost by the number of suites it contains to determine the cost per suite. This unit cost is then used as a guide to the price of future apartment projects. Simply multiply the number of suites in the proposed facility by the unit price per suite to estimate the total building cost.

b. First, divide the construction cost of a new building by its gross floor area to obtain a *cost per unit area*. Then, to estimate the construction cost of a future building, multiply the gross floor area of the proposed building by the *cost per unit area*.

c. First, divide the construction cost of a new building by its volume to obtain a *cost per unit volume*. Then, to estimate the construction cost of a future building, multiply the volume of the proposed building by the *cost per unit volume*.