

1. USE OF COST CONTROL GUIDELINES

COST CONTROL AND BUDGET SETTING

When the Administration determines that new University facilities are required, one of the considerations is the cost of the new facility. Traditionally, throughout the design and construction industry, rules of thumb have been applied in an attempt to answer the question of, "How much is it going to cost?" The more important question is, "How much should it cost?" The traditional approach bases the answer on average unit cost per square foot for several different building types. Too many varying factors have influence on each proposal, and the result has been to consider ranges of acceptable cost in order to account for some of the variables.

THE RECOMMENDED METHOD

A more accurate method to answer, "How much should it cost?", is needed. There are many accepted line item breakdowns used in the industry. The recommended method needs to recognize the major Building Systems in as simple and straightforward a manner as possible. The following breakdown has proven to be useful:

Building Systems

1.0	Site Work	5.4	Interiors
2.0	Substructure	6.0	Specialties
3.0	Structure	7.0	Equipment
4.1	Enclosure, Vertical	8.0	Special Construction
4.2	Enclosure, Horizontal	9.0	Conveying
4.3	Support Items	10.1	Plumbing and Fire Protection
5.1	Internals, Vertical	10.2	Heating, Ventilating and Air Conditioning(HVAC)
5.2	Internals, Horizontal	11.0	Electrical
5.3	Finishes, Special		

Site Work cost is always dependent on the site selected and related to the quantities of specific Site Work items, not on the size of the proposed structure. It is not feasible to establish Site Work cost guidelines based on building size. Site Work cost must not be ignored when considering the total cost of a proposed facility. From a practical standpoint these costs must be estimated on the basis of specifics of distance to service connection points and quantity of development. *Once specifics of project site infrastructure are known, Site Work prices for utilities, storm drainage and sanitary sewer pipe, water, steam & gas distribution piping, electrical distribution, etc., can be determined by using section 2. Site Work of "Current Construction Costs" by Saylor Publications and/or Division No. 2 Site Construction of "Building Construction Cost Data" by R. S. Means.

The Building Systems which make up the shell of the structure are the following:

2.1	Substructure
3.0	Structure
4.1	Enclosure, Vertical
4.2	Enclosure, Horizontal
4.3	Support Items
9.0	Conveying

* Revised April 29, 2002

The cost of these systems is more dependent on building configuration than on interior use. Categories of building configuration appropriate for University use have been identified. Guidelines in terms of unit cost per square foot of gross building area have been established for each Building System within each configuration category.

The cost of the following Building Systems are more dependent on interior use than on configuration:

- 5.1 Internals, Vertical
- 5.2 Internals, Horizontal
- 5.3 Finishes, Special
- 5.4 Interiors
- 6.0 Specialties
- 7.0 Equipment
- 8.0 Special Construction
- 10.1 Plumbing and Fire Protection
- 10.2 Heating, Ventilation and Air Conditioning (HVAC)
- 11.0 Electrical

Categories for interior building use have been identified. Guidelines in terms of cost per square foot of building area have been established for each Building System within each use category.

The Guidelines are presented as a series of matrices which display unit cost for each Building System within each category. The estimate can then be prepared by determining the mix of interior uses desired in a proposed facility, related to the unit cost specifically applicable for the use intended. This cost would be added to the cost obtained by applying the shell cost specifically related to the configuration contemplated. The result will be a budget amount more specifically related to the requirements of the proposed facility than is possible with the lump sum unit cost for building use type previously employed.