LIFE CYCLE COST ANALYSIS
Significant costs of ownership occur after occupancy.

During the planning and design development of facilities, selecting the most appropriate materials, systems, site, orientation, and configuration is a critical activity. This should be a collaborative effort amongst multiple stakeholders including the Owner, Design Professionals, Contractors, Operation & Maintenance personnel, Vendors.

Life Cycle Cost Analysis (LCCA) is a process that evaluates the total cost of ownership including capital (first) costs and the cost of operating and maintaining the system over the life of the facility. To effectively utilize LCCA, the following should be considered:

- All stakeholders should collaborate to establish parameters, priorities and goals.
  - The analysis should be performed early in the design process to avoid redesign and delays
- Parameters
  - Cost of capital
  - Construction cost and constructability of alternatives
  - Energy, operating and replacement cost of alternatives
  - Maintenance costs
  - Life expectancy of project components
- Priorities
  - Income or other quantifiable benefits associated with time of occupancy
  - Quantified benefits relating to marketability associated with functionality and aesthetics
  - Quantified benefits relating to productivity associated with location, environment and convenience
- Goals
  - Investment tolerance or corporate “pay back” period
  - Design standards
  - Milestone requirements
- Process
  - Usually the design professionals will perform the analysis after the data has been collected and vetted.
  - The analysis is usually accomplished using one of a number of specific computer programs. The programs vary with regard to accuracy and detail. The program to be used should be discussed and agreed upon during the data collection.
The results should be evaluated collaboratively as well. Many times, small changes in some parameters can affect the final results.

Collaborative and effective use of LCCA will benefit Owners, Design Professionals and Contractors.

- Lower costs of ownership
- Less risk of changes during design and construction
- Better understanding of project objectives
- More “buy-in” and commitment

Issued: 2002