



BACKGROUND

Building resources are, and always have been, limited. Looking back even to the Egyptian Period, there is discussion of waning materials. For the past 200 years, the United States has used technology to support consumption. Building construction and operation is a sector of the economy that produces one of the largest amount of energy consumption, which is split between the actual building materials and energy used to physically construct and maintain/operate these buildings. Buildings also consume billions of gallons of fresh water daily. Owners and design-build teams, when considering sustainability, should focus on site design, energy and water consumption, carbon footprint, selection of building materials and indoor environmental quality when considering sustainable building strategies. Building sustainably is a characteristic of design excellence and should be considered in the development of the planning, design, construction and facilities operations solution.

Environmental and conservation laws in the United States have traditionally protected land and human health. Sustainable consumption and production are being addressed in the building industry through building codes, standards and rating systems. The use of these tools is very important to the success of any sustainable design-build project.

POSITION

Building sustainably should be considered as an up-front goal shared by the stakeholders of any project. Owners should clearly state the sustainability goals for the project in their solicitations, and emphasize which sustainable characteristics are most relevant or desirable, and which strategies may not be appropriate for the project. Owners should indicate the level of financial resources that should be allocated towards sustainable strategies and whether first cost or total life-cycle cost should be considered in the selection of materials and systems. If a particular rating system is to be used, the level to be achieved should be stated, and adequate resources should be budgeted to achieve the project goals. Design-build teams should clearly understand an Owner's sustainability goals and project vision.

Design-build teams should explore innovative ways to enhance the sustainable characteristics of projects while meeting Owner requirements including performance, budget and schedule. If sustainability goals are not clearly specified by the Owner, the design-build team should advise the Owner on appropriate strategies within the context of the budget and program. It is the obligation of design professionals, Owners and contractors to stay current in codes, standards and rating systems. Furthermore, an open dialogue and a holistic approach on how to achieve the project's sustainability goals is encouraged.

Another component of successful, sustainable design teams and projects is the knowledge of the most current software available in the marketplace that is used by the industry and leveraging these tools to enhance integration, design and performance.

The purpose and design of energy modeling, commissioning and post-occupancy surveys should be understood by team members. Performing design charrettes to promote collaboration needs to be part of the design process.

Knowing how to achieve sustainable goals is key to the team's collaborative success. Using a rating system as a "roadmap" to achieving a project's sustainability goals can be a useful and strategic tool. Past team experience is helpful in forming a team, but open communication is a key in any team.

In summary, DBIA supports the whole-building-systems thinking in the procurement, design, construction and operation phases of a project. All stakeholders will be well served by the conservation of natural resources. The DBIA family of contractual documents includes a Sustainability Exhibit designed to draw attention to the issues and choices involved in pursuing a sustainable project. As sustainability evolves and changes, so will DBIA's educational resources.