



## QUALITY AND EXPERIENCE MAKE A SUCCESSFUL PROJECT

Two of Dr. Edward Deming's 14 points that embody his well known and often used Total Quality Management (TQM) approach to business:

- ✦ #4 "End the practice of awarding business on price tag alone"
- ✦ #5 "Improve constantly and forever the system of production and service"

Dr. Deming states that "Quality must be built in at the design stage. Everyone must subscribe to constant improvement, and only by use of properly interpreted data can intelligent decisions be achieved. Meeting specifications alone, does not result in constant improvement but ensures the status quo. Reliance on specifications often becomes a barrier for continuous improvement."

The John Hancock Tower in Boston had a major problem with windows that blew out of their frames. Both the windows and the frame met specifications, but the windows and frames failed to work together as intended. To achieve the intended result, and to obtain a better product, requires the development of a long term relationship of loyalty between team members – the owner, the architect, and the builder.

Deming strongly promotes this approach and deplores the practice of awarding business on price tag alone. "This practice," he states, "encourages a proliferation of suppliers/contractors and multiplies their evils. By selecting on price alone, the comparing companies focus only on meeting the minimum specification; there is no reason, no

cost incentive, nor are dollars available to do anything else."



*Partnering sessions clarify the objectives of each project with all of the involved team members.*

Government agencies generally are required to award building contracts based solely on the lowest price. This system is based on the need to attain impartiality and eliminate fraud. Unfortunately this method does not always result in the best deal for the owner. Studies have repeatedly shown that buildings built in this manner cost more, take longer to build, and often don't meet the owner's expectations.

Dr. Deming's point of selecting a contractor based on experience, knowledge and the ability to meet the immediate and long term requirements leads directly into his point of constantly and forever improving the system and service.

At American Constructors, LP we strive everyday to achieve these same principles. At the beginning of each project, we meet with the Owner, Architect and consultants to identify and understand the goals and expectations of the team members. This helps in establishing a solid foundation for developing the team atmosphere and relationships required to have a successful project.

We have found working under the qualifications based team concept, that many more of the goals and expectations are met. These results are achieved by having more in depth meetings earlier on in the design process. Through these meetings project concerns such as operational efficiencies, cost analysis, maximizing site efficiencies, building systems evaluations, scheduling opportunities, and long term maintenance requirements can all be addressed in a timely manner with the results being incorporated into the project.



*Lessons learned on previous projects are incorporated during the design phase of a new project.*

At American Constructors, LP we continuously look for ways to improve the systems and long term efficiency of the facilities we build and renovate. This practice starts with our involvement during the design/pre-construction phase and continues through the construction and closeout phases. The results of these efforts have benefited our clients by providing quality facilities while saving substantial dollars. These results are basic components of Dr. Deming's "Total Quality Management" concept.

## UNIQUE "BLAST WINDOW" APPLICATION

American Constructors is currently building, as a part of a larger project, a new 16 bed, 7,200 square foot addition to Texas NeuroRehab Center. The south exterior wall is approximately 300 feet from a gas pipeline crossing the hospital property. Accordingly the south walls, doors and windows were designed to meet City of Austin criteria to protect occupants while being evacuated, in the event of a pipeline fire.

Radiant energy from such a fire is largely blocked by solid walls and doors but penetrates normal glass with such intensity it can cause combustible materials to burst into flame and severely burn an occupant. The windows specified have a specially constructed frame glazed with a special composite glass product. The product consists of multiple layers of glass separated with a special transparent material. That material becomes opaque at high

temperatures significantly reducing transmission of radiant energy, thereby protecting the building's occupants.



*An example of a blast window installed for protection at the Texas NeuroRehab Center*

Should windows of this type be required on one of your projects it is very important to understand the performance requirements. During the submittal process more intense review is required to insure the manufacturer meets all of the requirements. Finally, it is very important to allow for extra time for the review, approval and manufacture/delivery time of the windows to meet the desired construction schedule.

## TECH-TIPS

### SAVE MONEY LONG AFTER YOUR PROJECT IS COMPLETE

After identifying successful strategies used in a variety of American School Districts, the US Department of Energy recommends the following guidelines to help with a facilities' energy management effort.

Energy-saving opportunities can be found throughout your school district. Successful districts have frequently found significant savings by improving the control and scheduling of building operation and equipment. Energy saving strategies can be categorized as:

- 1) Limiting equipment operation exclusively to occupied hours and to building areas actually requiring energy services.
- 2) Ensuring adequate provisions and scheduling for weekend and vacation shutdown procedures.
- 3) Performing low-cost repairs or improvements, such as steam pipe insulation or exterior weatherstripping, in-house.

- 4) Following scheduling and maintenance procedures for equipment.
- 5) Periodically tuning-up, calibrating, and ensuring proper operation of school facility equipment.

Because of varying building ages, staff expertise and equipment inventories, an assessment of operation and maintenance practices is essential to identifying energy savings opportunities at individual schools. On average, lighting, space conditioning, heating, and cooling account for the majority of school energy enduse, and they also typically represent the largest cost saving opportunities for your school district.

Schools with successful energy-conserving O&M efforts have found numerous low-cost and rapid payback strategies in building systems some of which include:

- lighting
- computers/office equipment
- building envelope
- heating, ventilation, and air conditioning
- water heating
- kitchen equipment and procedures
- swimming pools
- vending machines
- portable classrooms

Informational resources are available to your facilities O&M staff and school officials, including operations and maintenance guides, energy management guides, technology-specific information, and training resources via the Internet such as the Department of Energy's Guidebook - found at [www.edfacilities.org](http://www.edfacilities.org).

## SITE CAST AND CONCRETE TRAINING - STAYING AHEAD OF THE CURVE

Over the past few months, our employees have attended several conferences and seminars to constantly grow and improve for our clients.

### ✦ SiteCast Construction Corp

Because of the recent advancements in the possible uses of concrete, a tilt-up training session was held in our main office. The presenter, the Vice President of the SiteCast Construction Corporation located in Ottawa, Canada was flown in to teach this informative seminar. He focused on specific tilt-up procedures.

### ✦ American Concrete Institute

Several American Constructors' project managers attended a class through the Central Texas Chapter of the American Concrete Institute here in Austin to learn the latest concrete advances and techniques. They then combined this with previous practical experience gained on site and taught a detailed "lessons learned" class.

### ✦ In House - Lesson's Learned

This class was presented to American Constructors staff as well as to various consultants and architects. The purpose of the class was to make everyone aware of new innovative techniques in concrete slab-on-ground procedures as well as how to trouble shoot concrete floor problems.

### ✦ World of Concrete

Finally, several members of the company flew to Las Vegas in January for the World of Concrete show and conference to find out the latest developments. There they attended many varied sessions targeting specific skills needed to stay competitive, techniques for reducing costs, and classes from Concrete Basics to Decorative Concrete. Several employees are now eligible to receive master certificates which verify their expertise in specific areas of concrete construction.



American Constructors' employees understand that by having a comprehensive knowledge of the latest technologies and trends when going into any job, they have a greater chance of having a successful, long lasting project.

## AMERICAN CONSTRUCTORS PROJECTions

*is published for the friends and team members of American Constructors.*

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