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## Optimization is Key in High-Performance Projects

For more than 50 years, the Precast/Prestressed Concrete Institute has honored innovation and creative design techniques in its Design Awards competition. The program has expanded since its first awards in 1963 to encompass more categories and more types of designs. This correlates with the expanded use of precast concrete systems.

Most designers use precast concrete in bridges, parking structures, warehousing, and other “big-box” type applications. In fact, the majority of structures in these markets are built with precast. However, as our Design Awards presentation shows, the inherent high-performance attributes of precast make it an optimum choice for almost any project type. This is especially true with the ever-growing, high-performance requirements that codes and owners demand today.

In 2013, the Buildings Jury selected 14 projects to receive a PCI Design Award. These buildings represent many market segments, including K-12, higher education, justice and correctional, government and public, mixed use, healthcare, and multifamily along with several others including parking and warehousing. (Bridge and transportation awards, which are presented in *Aspire*,™ magazine, can be viewed at [www.pcidesignawards.org](http://www.pcidesignawards.org).)


These outstanding projects encompass many of the high-performance attributes inherent with precast concrete systems. The word “inherent” is very important. Often, one attribute drives a decision to use precast, such as speed of construction. But once selected, several other attributes are gained whether a designer planned for them or not.

For example, all precast concrete by its nature has thermal mass. Yet design teams do not always evaluate the HVAC design to determine if the systems can be downsized because of this. Often projects can save significant first costs, as well as improve operating efficiency (reducing energy consumption and life-cycle costs), by evaluating the thermal-mass effect.

Another example is aesthetic versatility. Precast can incorporate or emulate most traditional finishes, yet there are still projects that field install a brick veneer over a precast concrete envelope.

By underestimating the value of these attributes, designers may leave a lot of value on the table. After all, a big part of high-performance design involves optimizing all relevant attributes for a project. Precasters can be very helpful in assisting designers with optimizing their projects and should be involved in the early stages of a project’s design.

Do you consider all of the applicable attributes that precast concrete can offer in each project? Do you reach out to precasters with design challenges and work as teams to assist with the early phase of design? Check out how this year’s Design Award winners maximized the benefits in their innovative projects.

You can learn more about high-performance precast by visiting [www.pci.org](http://www.pci.org), as well as find many design resources to help you achieve success and meet owners’ growing needs. We hope the projects in this issue will inspire you to greatness and to earning your own PCI Design Award. 

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