

PCI Design Awards Transportation Submission Guidelines

The following information will be required for all submissions. Any submittal with missing information will be disqualified.

- 1. Enter all information for your submission via the Design Awards submission site or visit our PCI website.
- 2. For each question on the page, you may type information directly into the blanks or cut and paste text from an MS Word document.
- 3. The "*" means the information is required in order to make a submission. These fields must have a selection made in order to save the submission.
- 4. You may return to your submission to make changes or add information until the entry deadline. Simply enter your password in the section titled "For Submitters" on the left side of the submission site.

Generic Title of Project

Enter a generic name for the project such as "1000 feet, four-lane bridge" or "pedestrian bridge." Please avoid using anything that could link the project to a location or company in this section as the judges will receive this information.

Structure Details

The judges will **NOT** be able to see this information.

Enter the actual project title as you would like it to appear on an award and promotional materials. Enter the location information for the project site.

Submitter

This is the primary contact for the award entry, which should be the engineer of record. This person will receive all correspondence in relation to the Design Awards.

Other Contacts

Engineer of Record – If same as submitter above, please re-enter all information.

Structural Engineer of Record -

Project Engineer of Record -

Owner – Current owner of the structure

General Contractor – Prime contractor

Precast Concrete Specialty Engineer – Lead engineer or consulting engineer that designed the precast concrete

Precast Concrete Producer – Precast concrete manufacturer

PCI Associate Member

Additional team member – If another company, such as another precast concrete producer, was involved, please add their information here.

NOTE: If additional people/companies need to be listed, contact PCIDesignAwards@pci.org

Submission Category

Select the primary use category of the structure from the pull-down list.

If your project is located outside of the United States, you must select <u>TI - International Transportation Structure.</u>

Note: Judges will review all projects and may elect to move it into another category.

Project Description

Provide an overview of the project, highlighting why precast concrete was selected for the project, were there any specific project goals that precast concrete help meet and what advantages it offered. Please do not use the actual name of the project in this section.

Example:

"Pressure to upgrade and expand the mainline facility roadways has mounted with our state's aging infrastructure. The increasing traffic volumes, lack of maintenance, and increased truck traffic make replacement the only choice. Rapid bridge construction has become increasingly important, particularly in urban areas. The local business owners and citizens are demanding more speed in construction, safer work zones, and more protection of environmentally sensitive areas. The reconstruction of the interstate, the main north-south corridor in our state, will require construction of numerous bridges in the coming decade. A primary goal for the reconstruction is to reduce the time that traffic is disrupted by lane closures and detours during construction. In the interests of efficiency, economy, and minimized disruption of traffic, the owner wanted a consistent prefabricated bridge system for the proposed interstate reconstruction. The owner identified four representative bridges to use as prototypes for the interstate corridor. These bridges, reconstruction exhibited typical project constraints, allowing engineers to address typical interstate bridge reconstruction constraints in the design for these bridges. For these bridges, high-

performance concrete was used in..."

Project Cost Data

Enter total cost of project in dollars to the nearest \$100,000, without property costs.

Enter total cost of the precast concrete in dollars to the nearest \$10,000, including erection costs.

Schedule Information

Provide the project schedule from schematic design through completion. Additional information is helpful, such as erection time of the precast, design phase time, design assist schedule, and comments about whether precast concrete saved time on the project (for example, compared with another building material).

Example:

Project Construction Start Date: May 2015

Project Completion: January 2017

Precast manufacturing: July 12, 2015, to February 7, 2016

Precast erection: November 2015 to March 2016

Road closure time: 8 hours per span

Project was completed in 60% of the time as compared with cast-in-place concrete."

Key Design Challenges

Provide details of any design challenges of the project, especially highlighting how precast/prestressed concrete contributed to overcoming them. How did precast concrete bridge materials systems address the design objectives, aesthetic goals, and strategies of the project?

Example:

- Limited structure depth required span-to-depth ratio of 20.2
- Speed of construction within the right-of-way
- Distinctive aesthetics

Innovations/Accomplishments

Describe any unique innovations or accomplishments here that make your project stand apart from others. Please make sure to note any innovative materials used.

Example:

"The following preconstruction methods were employed to minimize disruption to interstate traffic:

- Precast concrete column shells
- Pre-topped U-beams

The project required spans of 115 feet with a total superstructure depth of 53 inches. To speed construction, the designer limited the use of site-cast concrete while ensuring that the ride quality of the finished bridge deck would not be compromised. To speed substructure construction..."

Project Details

Precast components summary – Provide a summary of the precast concrete components used in the project, including quantity. Were there any cost savings using precast? Was precast concrete compared to other building materials? If so, how did it compare to precast concrete?

Example (Not from a real project):

Summary of pieces

- (20) 115-foot-long pre-topped U-beams
- (60) 40-foot girders"

Overall length of bridge – Enter total length of bridge in feet

Overall width – Enter width in feet

Total area of deck – enter deck area in square feet

Number of spans and their lengths –

Example:

"Frontage road bridges = 4 @115-foot spans, Mainline bridges 4 @115-foot spans."

Skews of the supports – enter skew of supports measured from a line normal to the bridge centerline.

Radius of horizontal curve -

Example:

"U-1 lane: 500-foot radius with an upslope constantly varying from 0.1% to 2.785% through the length of the bridge with three super elevated girders with varying cross slope for drainage and built in reverse camber of 2-1/2."

Predominant grade (%) – enter grade; for example, Frontage road bridges: 2.4%, Mainline bridges: 1.6%

Number of lanes – enter total number of lanes; for example, 2 lanes per bridges for a total PCI Design Awards Transportation Submission Guidelines

of 4 lanes.

Project Delivery Method – select best option from drop down menu (e.g. design-build, IPD).

Please elaborate and provide more details on how precast concrete was used to meet project goals – how did precast concrete help to accomplish goals set by the owner, architect, etc.?

If ultra-high-performance-concrete (UHPC) was used on this project, please elaborate and provide more details on how UHPC was used on this project – provide all details on UHPC that was used on this project.

Precast, Prestressed Concrete Attribute Keywords – select all attributes (keywords) that precast, prestressed concrete contributed to apply on the project. Then provide more details in the box.

Example:

"The precast concrete girders allowed the project to be completed within 6 months, saving almost 8 months from the original construction schedule. This reduced inconvenience for the public and saved x detour miles over the period.

The precast concrete bridge is also designed to withstand a CAT 4 hurricane"

Special Awards

The projects submitted in this category **must be located in the United States** in order to qualify. This section is not mandatory, and you may select none or all of the categories.

In the submittal portal please place a check mark next to the special awards that you are entering your project in. Please keep in mind that you must show the jury why your project should be considered for your selected special award(s) beyond your initial submission (Buildings or Transportation).

Harry H. Edwards Industry Advancement Award

Submitters may also choose to have their projects considered for the Harry H. Edwards Industry Advancement Award. The purpose of this award is to showcase fresh, uninhibited concepts that hold the potential to move the industry to the next generation of technology for industry, materials, products, processes, and applications.

All-Precast Concrete Solution Award

Submitters may also choose to have their project considered for the All-Precast Concrete Solution Award. This award recognizes the structure in which the owner's needs were best achieved by the selection of an essentially all–precast, prestressed concrete system.

Sustainable Design Award

Submitters may also choose to have their projects considered for the Sustainable Design

Award. PCI seeks to promote green building and infrastructure, which incorporates environmental considerations in every phase of the process, including design, construction, and operation. The purpose of this award is to encourage the construction of responsible, innovative designs that are sensitive to the environment while meeting the needs of the public, owner, or occupants. Projects need not be LEED certified to qualify.

- 1. List all green goals or owner project requirements for this project and a short explanation of how they were achieved.
- 2. Submit a short narrative on any green/sustainable modifications to your typical plant processes and procedures that were required for this project.
- 3. Provide a breakdown of all LEED points achieved (if applicable) in this project, as well as a short description of any points that precast concrete contributed to the attainment of.
- 4. Describe the sustainable attributes that precast concrete added to the project.
- 5. Describe any up-front and ongoing collaboration among team members.
- 6. List any lessons learned related to working on a green project.

Keywords/Topics:

Submitters will choose all keywords/topics that apply to their project.

Improved thermal performance/reducing energy consumption Increased open space of floor plate (e.g. reduce no. of columns, obstructions, etc.) Aesthetic versatility (helped meet project's aesthetic requirements) Improved storm resistance Helped meet sustainability goals Improved fire resistance Improved safety and security to occupants Cost-Benefit Improved blast resistance Minimized construction site disturbance (e.g. tight site) Increased service life/durability Contributed to improved IEQ (e.g. no mold, no VOCs, rapid enclosure...) Structural versatility (precast used as at least part of the structural system) Accelerated construction (speed of construction) Aesthetic versatility (helped meet project's aesthetic requirements) Reduced long-term life-cycle costs

Image (Photo) Uploads

Ultra-high-performance concrete (UHPC)

Resilient design

This is one of the most important sections, since the jury will not be able to visit your project

in person. You must submit a minimum of five photos of your project, and no more than 10 photos. **No pdf or word documents of photos will be accepted.** Photos must have a resolution of at least 900 x 1200 pixels for a 3 in. or 4 in. photograph.

These photos must convey structural integrity and aesthetic details to the jury; capture any uniqueness of your project; show the big picture, such as how the project fits into its surroundings; phases of the project; and **highlight the precast concrete.** Professional photographs are highly recommended. You should also submit drawings and details. Most submissions include:

Floor plans, site plans, and drawings may be printed and scanned into one or a few documents instead of uploading them individually. It is highly recommended that you include at least one in-process construction photo.

Please include a caption/description for each image you upload in the entry field titled "Image X description".

Image Licenses Request Forms

Please upload your <u>completed</u> image license request form, which must be signed by each photographer or non-professional providing pictures for your submission. (Including cell phone photos). If all photos are taken by a single individual, you can submit a single image license form. Please ensure the Image Name/Description on the Image License Request Form matches each image description provided for each image submitted.

All submissions must be made electronically. If you have any difficulty, questions, contact PCIDesignAwards@pci.org. Thank you and we look forward to your submission!