



The Charles Pankow Foundation exists to advance innovations in building design and construction, so as to provide the public with buildings of improved quality, efficiency, and value.

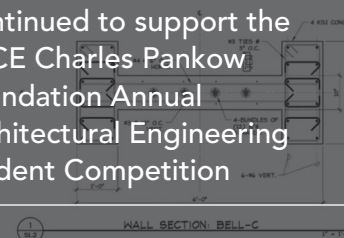
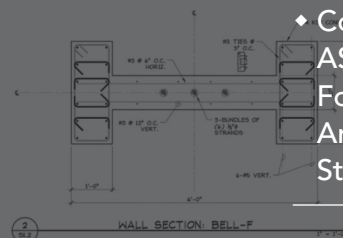
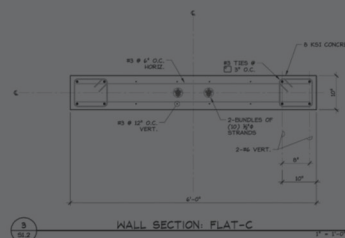
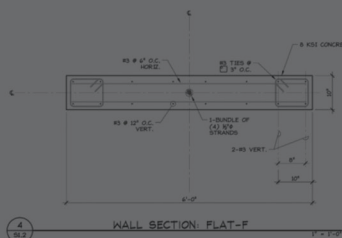
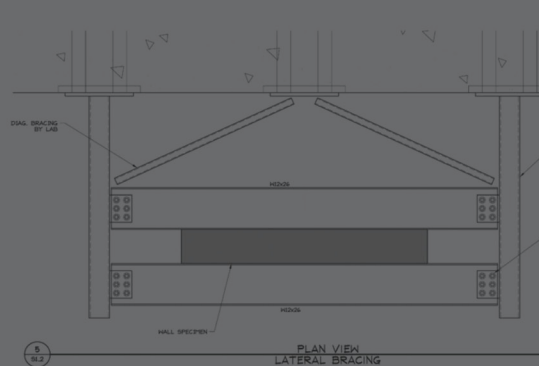
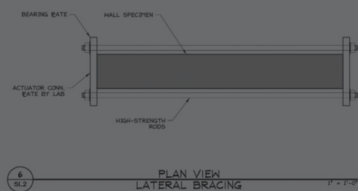
2011 HIGHLIGHTS

- ♦ Awarded nine new research grants
- ♦ Published the landmark *Design Management Guide for the Design-Build Environment*

- ♦ Supported, through research grants, an all-time high of 22 projects underway

- ♦ Reached \$1.5 million in research investments in advancing BIM (Building Information Modeling)

- ♦ Continued to support the ASCE Charles Pankow Foundation Annual Architectural Engineering Student Competition





PRESIDENT'S MESSAGE

2011 was an important year for the Charles Pankow Foundation. Among many achievements, allow me to mention just a few:

- ◆ For the first time in our history, the CPF Advisory Council recommended, and the Board approved, a total of nine research grants. Eight of these were new, and one was a significant follow-on to a previous research endeavor. Six were awarded to first-time university recipients. Expanding the number of universities that apply for CPF grants and subsequently help us complete our work is very encouraging for our future success.
- ◆ Including the 2011 new grant awards, the CPF has funded 39 research endeavors as of the end of 2011. Of these, 26 are now complete, with four expected to be wrapped up in 2012.
- ◆ The CPF Advisory Council helps determine the CPF's research agenda, and recommends projects for funding and process improvements. This year saw Steve Baldrige and Jeff Russell complete their terms on the Council. Both were energetic and committed volunteers for our efforts, and we will miss them. Their replacements, Jack Moehle and Mark Saunders, began their terms this year. We are looking forward to benefiting from their knowledge and commitment to our mission.
- ◆ In addition to our traditional research endeavors, the CPF rolled out our first publication, the *Design Management Guide for the Design-Build Environment*. The guide was presented at DBIA's national conference in Orlando in October. By year's end, over a thousand copies of the guide were in the hands of practitioners involved with integrated project delivery.
- ◆ The CPF continued its funding for ASCE's Architectural Engineering Student Competition in 2011. This annual event has grown to be a significant learning opportunity for architectural engineering students across the country and continues to produce outstanding students to lead our industry in the future.

We appreciate the generous support we receive from the many champions the CPF has garnered over its relatively short history. With your help, we will continue to advance our industry in exciting new ways.

Best always,

Rik Kunnath

RESEARCH PRODUCTS COMPLETED IN 2011

During 2011, the Charles Pankow Foundation research grantees completed two research projects funded by CPF grants. Full reports from these and other research products can be seen and downloaded at www.pankowfoundation.org

GRANTEE	PRINCIPAL INVESTIGATOR	PROJECT
Georgia Tech	Chuck Eastman	BIM for Precast Concrete Phase 2
University of Nebraska – Lincoln	Maher Tadros & George Morcous	Shallow Hollow Core Precast Concrete Floor System

RESEARCH GRANTS AWARDED IN 2011

In 2011, the CPF awarded eight new research grants, plus an amendment to an earlier award, totaling \$1,331,000 in value. These research topics address a research need in actual building design and construction practice. They all gained positive recommendations from the CPF Advisory Council, and were subsequently unanimously approved for award by the Board of Directors. See the CPF website, www.pankowfoundation.org, for full descriptions of all new and previous research grant awards.

GRANTEE	AWARD AMOUNT	RESEARCH TOPIC
University of California, Davis	\$270,000	Design of Embedded Column Base Connections
University of California, San Diego	\$250,000	Precast Concrete Cladding Subsystems for High Seismic Regions
Pennsylvania State University	\$200,000	Owner's Guide to Building Information Modeling
University of Michigan	\$162,000	Effect of Shear Stud Layout on the Seismic Behavior of Slab-Column Connections
American Society of Concrete Contractors Foundation	\$125,000	User's Guide to the Use of "Green" Concrete in Building Construction
University of Cincinnati	\$114,000	Continuous Stirrups for Shear and Torsion Reinforcement in Beams
University of California, Davis	\$100,000	Tensile Capacity of Braced Frame Anchor Bolt Groups
UCLA	\$80,000	Amendment, Composite Concrete Coupling Beams
University of Kansas Center for Research, Inc.	\$30,000	Anchorage of High-Strength Reinforcing Bars

CHARLES PANKOW AWARD FOR INNOVATION

Honoring Innovation and Collaboration in the Design and Construction Industry

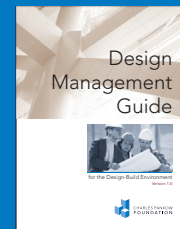
The Charles Pankow Award for Innovation was established in honor of Charles J. Pankow (1924-2004) to celebrate collaboration in innovative design, materials, or construction-related research and development transferred into practice in a sustainable manner.

The 2011 award winner was "Bridge-in-a-Backpack™," a lightweight, corrosion-resistant system for short- to medium-span bridge construction using fiber-reinforced plastic composite arch tubes that act as reinforcement and formwork for cast-in-place concrete.

Bridge-in-a-Backpack™ was developed in a collaborative partnership among the University of Maine's AEW Advanced Structures & Composites Center, Advanced Infrastructure Technologies, and the Maine Department of Transportation. A number of bridges have been built using this technology, and more are planned.

ASCE's Pankow Award Selection Committee is chaired by a representative of the Board of Directors of the Charles Pankow Foundation. The 2011 Charles Pankow Award for Innovation was presented during ASCE's OPAL Awards Gala.

DESIGN MANAGEMENT GUIDE RELEASED



In 2011, the Charles Pankow Foundation published the *Design Management Guide for the Design-Build*

Environment. This guide compiles thoughts and best practices from many people throughout the design-build industry.

Developed to help owners, designers, and builders of a design-build project achieve success via the unique—and relatively new—role of the "design manager," the purpose of this guide is to give design managers the practical tools, information, and advice they need to fulfill their obligations successfully.



ASCE CHARLES PANKOW FOUNDATION
ANNUAL ARCHITECTURAL ENGINEERING
**STUDENT
COMPETITION**

ASCE CHARLES PANKOW FOUNDATION ANNUAL ARCHITECTURAL ENGINEERING STUDENT COMPETITION

Supporting Tomorrow's Architectural Engineers

The Architectural Engineering Institute (AEI) of the American Society of Civil Engineers (ASCE) held the finals of the second annual ASCE Charles Pankow Foundation Annual Architectural Engineering Student Competition in Oakland, California in March, 2011.

The emphases of the competition are integration of the engineered systems for a high-performance building, collaboration, competition, and peer review. The students were asked to design a new Contemporary Art Museum located in San Francisco and to address best practices in sustainable building design and construction; construction and design for high seismicity; and solutions at the Design Development phase.

Seventeen student teams from around the country competed for five awards, and eight teams proceeded to the final competition. Winning teams included:

- ◆ Drexel University: building systems integration
- ◆ California Polytechnic State University: structural
- ◆ California Polytechnic State University: mechanical
- ◆ Kansas State University: electrical
- ◆ Kansas State University: construction management

A member of the Charles Pankow Foundation's Advisory Council participated in the competition jury.

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