

Charles Pankow Foundation, PCI fund hybrid-shear-wall research

The Charles Pankow Foundation and PCI are funding a new research project on hybrid precast concrete shear-wall systems, which combine mild-steel reinforcement with high-strength post-tensioning steel to resist lateral forces across horizontal joints.

The objective of the project, which began in January 2008 at the University of Notre Dame in Notre Dame, Ind., is to provide the required experimental, analytical, and design validation for the classification of hybrid precast concrete wall systems as special reinforced concrete shear walls based on *Building Code Requirements for Structural Concrete (ACI 318-08)* and *Commentary (ACI 318R-08)* and ACI ITG T5.1.

Principal investigator Yahya C. (Gino) Kurama, associate professor of civil engineering and geological sciences at Notre Dame, says that the overall project vision is to develop an innovative building system that is economical to construct and can survive a large earthquake with little damage, proving superior to conventional reinforced concrete shear-wall systems in speed, cost, and durability. The key deliverables from the project will be the code validation of the new system and a design-procedure document that can be used by practicing engineers and precast concrete producers in seismic regions.