

**PCI Bridge Deck Panel Committee
Semi-Annual Meeting**

February 27 & 28, 2004

Hosted by

Civil and Environmental Engineering Department

School of Engineering and Applied Science

George Washington University



Precast/Prestressed Concrete Institute (www.pci.org)

1. Who are the PCI Professionals?

The Precast/Prestressed Concrete Institute is composed of more than 1400 professionals - engineers, architects, producers and associate members striving to improve the quality, economy and innovation of the construction industry by establishing new levels of design and engineering in precast applications. (Precast/prestressed concrete is one of the leading edge technologies of the North American construction Industry.) PCI welcomes all professionals...from the student intern... to the seasoned veteran.

2. What is the Precast/Prestressed Concrete Institute?

The Precast/Prestressed Concrete Institute is a unique organization of producers, suppliers and professionals (engineers and academia). PCI is dedicated to fostering greater understanding of the design and use of precast and prestressed concrete. It also encourages and recognizes excellence in the manufacture and use of these materials. Our professional members guide the Institute's efforts in product innovation, new technology adaptation, design methods development, training and quality assurance. Since its inception in 1954, PCI has been a dynamic force in the steady growth, and the current position of this expanding industry.

3. Where is Precast/Prestressed Concrete used?

You've seen our members' work in structural and architectural applications and in transportation, commercial, industrial, housing and specialized structures. Everywhere, when the needs of the construction industry demand strength, beauty, integrity and durability, precast/prestressed concrete is there. From bridges of incomparable beauty and sustainability to office buildings that blend with the environment. From the very latest in manufacturing/processing plants to high-tech chip fabrication buildings. Segmental bridges, airport control towers, college dormitories to huge parking structures, they're all about precast/prestressed concrete.

4. PCI Bridge Deck Panel Committee

This committee has recently formed (July 2003) in response to the growing interest from state highway agencies across the country in utilizing *Full Depth Precast Prestressed Concrete Panel Systems in Highway Bridges*. The committee has 27 voting members from academia, precast concrete producers, concrete suppliers and professional design engineers. The committee objective is to develop State-of-the-Art report that can be used a reference guideline for design engineers and state agencies interested in exploring the use of precast concrete panel systems in bridges. The foundation of this committee has come timely with the award of the \$400,000-NCHRP 12-65 project (sponsored by the National Academy of Sciences) to the George Washington University, Washington DC.

The PCI would like to thank the School of Engineering and Applied Science at George Washington University for hosting the committee meeting on February 27, 2004.

PCI Bridge Deck Panel Committee Meeting
Hosted by
George Washington University, Washington, DC
Agenda

Thursday, February 26, 2004

Field trip to George Washington Memorial Parkway bridges

Meet in the hotel lobby (One Washington Circle Hotel) at 1:15 P.M. Transportation will be provided.
Return to the hotel about 3:30 P.M.

Friday, February 27, 2004, 8:30 AM to 3:30 PM

One Washington Circle Hotel, One Washington Circle, N.W., Washington, DC 20037
Tel 202-293-5390 Fax 202-887-4989

- 8:30 to 9:00 Welcome by Chairman Rose
Welcome by Professor Timothy Tong, Dean of Engineering, GWU
Introductions
Review of Agenda
Housekeeping issues and appreciation to sponsors
Review and approval of the minutes of the meeting in Orlando (PCI Convention)
- 9:00 to 9:30 Review of the construction details for the Turkey Run Bridge by Joe Rose
- 9:30 to 9:45 Review of the design and testing program being developed for the WIDOT by Jay Carter, Alfred Benesch & Company and Scott Markowsky, The Univ. of Wisconsin-Madison
- 9:45 to 10:10 Review of the progress of NCHRP 12-65 by Drs. Maher Tadros & Sameh Badie
- 10:10 to 10:20 Discussion – Are there opportunities to ‘borrow’ from the 12-65 work?
- 10:20 to 10:30 Break
- 10:30 to 12:00 Production issues:
Handling a bridge cross slope (draping strands or other techniques), precast concrete producers may present their experience
Strand size (1/2" vs. 0.6")
Barrier connections
Top surface finishing (texturing)
Forming for the transverse joints
Lifting and Shipping Techniques
Other production/handling/hauling issues?
- 12:00 to 12:45 Lunch provided at the meeting
- 12:45 to 2:20 Design Issues:
Spacing of the system shear connectors (4 ft new target?)
Residual stress due to longitudinal PT (250 psi, source and justification)
Various types of overlays (performance vs. cost)
Integral wearing surface (type, thickness, with or w/o reinforcement)
Properties of the grout material
Other design issues?
Construction issues
Sequence of construction (e.g. from one abutment to the other abutment)
Preparing the panel edges for receiving the grout (e.g. sand blasting)
Grouting under traffic-induced vibrations
Other construction issues?
- 2:20 to 2:30 Break
- 2:30 to 3:25 Discussion of outline/contents of State-of-the-Art report for the *PCI Journal*
- 3:25 to 3:30 Next two meetings – PCI Committee Days, Chicago, April 24 and ???
- 3:30 Adjourn