

Precast Concrete Tunnel Segments Code Committee

ACI's Technical Activities Committee approved a new technical committee, ACI Committee 533C, Precast Concrete Tunnel Segments Code. The committee's mission is to "Develop and maintain code requirements for precast concrete tunnel segments."

The committee will meet at the ACI Concrete Convention – Fall 2024 in Philadelphia, PA, USA, and Mehdi Bakhshi will chair the committee. Those interested in the work of this committee are encouraged to attend.

ACI Foundation Now Accepting Fellowship and Scholarship Applications

The ACI Foundation is now accepting applications from graduate and undergraduate students for the 2025-2026 academic year. Two new fellowships and one new scholarship have been added, growing the total annual awards available to 48.

The new awards include the Kenneth C. Hover Honorary Fellowship, ACI Houston Chapter Fellowship, and Honorary Dr. Mohan Malhotra Quebec and Eastern Ontario Scholarship.

ACI Foundation fellowships are offered to both undergraduate and graduate students pursuing a concrete-related degree at an accredited institution in the United States, Canada, or Mexico. Students in eligible countries can apply for the ACI Foundation Middle East & North Africa Fellowship. Students must obtain two endorsements, with one being from an ACI member.

Fellowships provide the following benefits:

- An educational stipend of 10,000 USD;
- Airfare, hotel, travel stipend, and registration to attend two ACI Concrete Conventions (travel contingent upon state and country laws);
- Assignment to a mentor;
- An internship, if required; and
- Recognition at ACI Concrete Conventions, in *Concrete International*, and on the ACI Foundation's website and social media.

ACI Foundation scholarships are offered to graduate and undergraduate students pursuing a concrete-related degree or program. International students are eligible to apply for all scholarships that are not region-specific as defined by the sponsor. Among other requirements, students must obtain two endorsements with one of the endorsements being from an ACI member. Each ACI Foundation scholarship includes an educational stipend of 5000 USD (two of the scholarships are paid in CAD) plus recognition in *Concrete International* and on the ACI Foundation's website and social media.

The deadline for this application period is November 1, 2024, at 11:59 p.m. EDT. The full award cycle covers the 2025 Fall semester through the 2026 Spring semester. For more information, visit www.acifoundation.org/scholarships.

23rd Annual Paul Zia Distinguished Lecture

The 23rd Annual Paul Zia Distinguished Lecture will be presented on October 7, 2024, at 3 p.m. at the Stewart Theatre located in the Talley Student Union on North Carolina State University's (NC State) campus in Raleigh, NC, USA. An online interactive livestream will also be available. This annual lecture honors Professor Emeritus Paul Zia, former professor and department head for NC State's Department of Civil, Construction, and Environmental Engineering and a structural engineer who was eminent in research, professional society leadership, and practice. Zia was an ACI Honorary Member and Past President.

This year's presentation will focus on the Frederick Douglass Memorial Bridge in Washington, DC, USA. Presenters include Adam Hollon, Senior Project Manager, Archer Western, and Ken Butler, Director of Complex Bridge Practice, AECOM. The speakers will present on various design and construction aspects of the 1600 ft (488 m), three-span through-arch bridge that features an innovative V-pier design and state-of-the-art corrosion-protection system. The project was the largest transportation project in the history of Washington, DC.

Registration will open in mid-August. For more information, visit <https://zialecture.com>.

DOE Announces National Definition of a Zero Emissions Building

The U.S. Department of Energy (DOE) announced a National Definition of a Zero Emissions Building to advance public and private sector efforts to decarbonize the buildings sector. The definition is intended to provide industry guidance to support new and existing commercial and residential buildings to move toward zero emissions across the entire sector and help the nation achieve President Biden's ambitious climate goals, while cutting home and business energy costs. The standardized definition for zero-emissions buildings will help advance next-generation clean energy solutions, drive innovation, and tackle the climate crisis, while supporting workforce development. Additionally, the definition provides market certainty and clarity to scale zero emissions new construction and retrofits.

Earlier this year, DOE laid out a blueprint to reduce U.S. building emissions 65% by 2035 and 90% by 2050. Major technical advances in energy efficiency, heat pumps, and clean energy mean that new and existing buildings can help the

nation achieve zero emissions, while ensuring domestic manufacturing of the technologies and low-embodied-carbon materials needed for these next-generation buildings.

The National Definition of a Zero Emissions Building: Part 1, Operational Emissions from Energy Use, sets criteria for determining that a building generates zero emissions from energy use in building operations. At a minimum, a zero-emissions building must be energy-efficient, free of on-site emissions from energy use, and powered solely from clean energy. Future parts of this definition may address emissions from embodied carbon (producing, transporting, installing, and disposing of building materials) and additional considerations.

In developing Part 1 of the Definition, DOE published a request for information (RFI) that solicited input from members of the public, in response to which industry, academia, research laboratories, government agencies, and other stakeholders provided feedback. Implementation guidance included with the Definition provides additional information on these criteria. The Definition is not a regulatory standard or a certification. It is guidance that public and private entities may adopt to determine whether a building has zero emissions from operational energy use. The definition is not a substitute for the green building and energy efficiency standards and certifications that public and private parties have developed.

The full National Definition of a Zero Emissions Building Part 1 is available at www.energy.gov/eere/buildings/national-definition-zero-emissions-building.

United Nations Industrial Development Organization and the GCCA Partner to Drive Industry Decarbonization

An agreement was signed by the United Nations Industrial Development Organization (UNIDO) and the Global Cement and Concrete Association (GCCA) to work together on decarbonizing the cement and concrete industry, with a strong focus on the Global South.

UNIDO supports its 172 Member States with economic and industrial development, in line with the UN's Sustainable Development Goals (SDGs). With its experience in renewable energy projects and the application of clean energy technologies in the industry, UNIDO collaborates with a wide range of partners globally supporting industries on their pathway to net-zero emissions.

A membership body of the cement and concrete industry, GCCA represents 80% of cement production outside of China, as well as several leading Chinese manufacturers. It is a leader in the industry's decarbonization work, with its members, through delivery of the GCCA 2050 Net Zero Concrete Roadmap.

The partnership agreement includes pledges to:

- Provide recommendations for decision-makers to create the right market environments for the development of low and near zero emissions cement and concrete;
- Develop innovative technological solutions to help meet net-zero commitments;
- Organize joint international industry and government events;
- Jointly author and publish documents, recommendations, and research tools; and
- Identify promising companies and innovative solutions and showcase these at relevant events and in publications.

ESF and CPWR Partner to Raise Awareness of Construction Electrical Safety

The Electrical Safety Foundation (ESF) and the Center for Construction Research and Training (CPWR) are partnering on a campaign to raise awareness of construction electrical safety. The campaign aims to educate the public about the electrical hazards on construction jobsites to prevent avoidable injuries and fatalities.

“By identifying the leading causes of electrical fatalities on construction sites, ESF and CPWR can target all construction trades to educate on electrical hazards,” said ESF President Brett Brenner.

Included in the campaign materials is an infographic on OSHA's Focus Four construction hazards, which include electrocution, falls from heights, struck-by, and caught-in/between. Simple tips to keep workers safe on the jobsite

ReadCi

ONLINE COVER-TO-COVER

A full version of the current issue of *Concrete International* is available to ACI members by logging in at www.concreteinternational.com.

Click “download the issue” on the magazine’s home page.



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include locating and identifying utilities, such as overhead power lines and underground wires, before starting work, as well as maintaining safe distances from power lines. It's also imperative not to operate portable electric tools unless grounded or double insulated and to always use ground-fault protection.

For ESF's complete collection of free electrical safety materials, visit www.esfi.org. For more information on CPWR, visit www.cpwr.com.

Majority of Firms Performing Highway Upgrades Experienced Work Zone Vehicle Crashes in the Past Year, New Data Finds

Sixty-four percent of highway contractors report that motor vehicles crashed into their construction work zones during the past year, according to the results of a new highway work zone study conducted by the Associated General Contractors of America (AGC) and HCSS. Association officials and construction workers urged drivers to slow down and be

careful this summer while driving through construction zones and pushed public officials to enhance work zone safety laws.

Jeffrey Shoaf, AGC Chief Executive Officer, noted that 24% of respondents reported experiencing five or more crashes during the past 12 months. Among respondents who reported experiencing work zone crashes, 29% experienced crashes that resulted in injury to construction workers. But more than twice as many firms—66%—reported experiencing a crash in which drivers or passengers were injured.

Work zone crashes are also nearly three times as likely to result in fatalities to drivers or passengers as construction workers. Nine percent of contractors in the survey report that construction workers were killed in work zone crashes, while 24% of survey respondents report drivers or passengers were killed in those crashes.

The association is pushing the U.S. Congress to require the National Highway Traffic Safety Administration to collect comprehensive data on work zone crashes, including who is killed or injured in those crashes and to require states to create

ACI CODE-440.11-22

IN LBS Inch-Pound Units


An ACI Standard

**Building Code Requirements
for Structural Concrete
Reinforced with Glass Fiber-
Reinforced Polymer (GFRP)
Bars—Code and Commentary**


Reported by ACI Committee 440

ACI CODE-440.11-22 is the first comprehensive building code covering the use of nonmetallic, GFRP reinforcing bars in structural concrete applications.

The code provides minimum requirements for the materials, design, and detailing of structural concrete buildings and, where applicable, nonbuilding structures reinforced with GFRP bars that conform to the requirements of ASTM D7957/D7957M-22.



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plans to reduce work zone crashes. AGC is also working with its network of chapters to push for better enforcement and education measures.

The association released two new public service videos at www.youtube.com/playlist?list=PLKPSB8wyvvgCKO11hRhS_Ja-bX3CtPJ_H to urge drivers to be more careful in work zones. The work zone safety study was based on a nationwide survey of highway construction firms the association and HCSS conducted in April and May, 2024. Over 700 contractors completed the survey. To view the survey results, visit www.agc.org/news/2024/05/22/nearly-two-thirds-firms-working-highway-upgrades-experienced-vehicles-crashing-work-zones-during.

In Remembrance



McDonald

James E. (Jim) McDonald, FACI, passed away June 7, 2024, at the age of 83, in Clinton, MS, USA. McDonald was a Senior Research Civil Engineer in the Geotechnical and Structures Laboratory, Engineer Research and Development Center (formerly the Waterways Experiment Station), U.S. Army Corps of Engineers in Vicksburg, MS, from 1961 to 2003. He received his BS and MS, both

in civil engineering, from Mississippi State University, Starkville, MS.

McDonald was involved with various aspects of applied concrete research and development for over 40 years and wrote more than 100 technical reports and articles relating to concrete and other construction materials. He received the Superior Civilian Service Medals in 2002 and 2003. He was inducted to the WES Gallery of Distinguished Civilian Employees in 2005.

He was instrumental in the development of the Repair, Evaluation, Maintenance, and Rehabilitation (REMR) research program, a 1 million USD Corps of Engineers' study to develop effective and affordable technology for evaluation and repair of civil works structures. He developed and served as course coordinator and principal instructor for the Corps of Engineers' Concrete Maintenance and Repair training course. McDonald also prepared official Corps guidance, such as engineer technical letters and engineer manuals on various subjects.

He was a member of many ACI technical committees, including four relating to repair and rehabilitation. McDonald served 6 years as Chair of ACI Committee 546, Repair, and as Chair of ACI Committee 210, Resistance to Erosion in Hydraulic Structures. He served multiple terms as a member of the ACI Foundation's Concrete Research Council and was

appointed Chair of the Paper Awards Subcommittee for the Construction Practice Award. He was also Chair of the ACI Technical Activities Committee Repair and Rehabilitation Subcommittee. He served on nine subcommittees of ACI 318, Structural Concrete Building Code. He received the 1996 ACI Wason Medal for Most Meritorious Paper.

An Honorary Member of the International Concrete Repair Institute (ICRI), McDonald served on the Board of Directors and Technical Guidelines Committee. He was also an ICRI Past President and was Chair of the Repair Materials and Methods Committee, Nominations Committee, and Concrete Repair Terminology Task Group. He received the ICRI Distinguished Service Award in 2016 and received the first-ever ICRI President's Award in 2019.



Batson

Gordon B. Batson, FACI, passed away May 24, 2024, at the age of 91, in Syracuse, NY, USA. Batson received his bachelor's and master's degrees from the University of Maine, Orono, ME, USA, and his PhD in structural engineering from Carnegie Mellon University, Pittsburgh, PA, USA.

He worked his entire career as a Professor of civil engineering at Clarkson University, Potsdam, NY, where he retired as Professor Emeritus in 1997. Specializing in research on fiber-reinforced concrete and ferrocement, he served on ACI Committees 544, Fiber Reinforced Concrete, and 549, Thin Reinforced Cementitious Products and Ferrocement, and was Past Chair of both. Results of his research at Clarkson University were extensively used in state-of-the-art reports by these two committees. He also served on ACI Subcommittees 544-A, FRC-Production & Applications; 544-B, FRC Education; 544-C, FRC-Testing; 544-D, FRC-Structural Uses; 544-E, FRC-Emerging Technologies; and 544-F FRC-Durability; as well as the ACI Faculty Network. In addition, Batson served as a judge for the first Fiber-Reinforced Concrete Bowling Ball Competition held at the ACI Concrete Convention – Spring 2002 in Detroit, MI, USA.

A session titled "Advances in Fiber-Reinforced Concrete—A Tribute to Gordon Batson," sponsored by ACI Committee 544, was held at the ACI Concrete Convention – Fall 2008 in St. Louis, MO, USA. This session honored Batson for his many years of dedicated service to ACI Committee 544 and to the development of the field of fiber-reinforced concrete.

He was also a member of ASTM International, American Society of Civil Engineers, and numerous other professional organizations.