

Chapter Reports

ACI Houston Chapter Announces 2021 Excellence in Concrete Construction Awards Winner and Professional Award Recipients

The ACI Houston Chapter held its Annual Meeting and Awards Banquet as well as its 2021 Excellence in Concrete Construction Awards on March 17, 2022. This event honored professionals and the second Project Award.

2021 Infrastructure Project Award

The 2021 Infrastructure Project Award Winner was Project Bullseye. When National Property Holdings was engaged to build a new distribution center for their Home Center client, they turned to PNA Construction Technologies' patented Thin Concrete Pavement (TCP) technology as a cost-effective replacement for traditional concrete pavement design.

Traditional 8.5 in. (216 mm) thick concrete pavement with 15 ft (5 m) joint spacing and No. 4 reinforcing bars at 18 in. (457 mm) on center was initially intended for the bulk of this 2.7 million ft² (251,000 m²) project. A smaller light-duty section that is 5 in. (127 mm) thick with No. 3 reinforcing bars at 24 in. (610 mm) and 15 ft joint spacing was also planned. After consideration, TCP was adopted as a more cost effective, yet superior performing alternative. The TCP design was optimized for the traffic of 4 million ESAL (equivalent single axle load) using OptiPave software. OptiPave systematically models pavement behavior as a function of factor, such as climate, traffic, subgrade support, concrete material, subbase material, pavement geometry, and paving details. The program has been calibrated using a database with decades worth of pavement performance records.

To date, this is the largest TCP project in the world, eclipsing the next largest project by nearly 1 million ft² (93,000 m²). The resulting TCP system comprises 5.5 and

4.5 in. (140 and 115 mm) pavements with saw-cut joints spaced at 6 ft (1.8 m). Also, the pavement is reinforced only with synthetic macrofibers and has no steel reinforcing bars or dowels. Before this project was even completed, the Home Center client chose to use TCP for another project.

Professional Awards

Each year, the ACI Houston Chapter honors professionals who have excelled in service to the Chapter and the concrete industry. The awardees include:

Foundation Award

The Foundation Award is awarded annually and was presented to Terracon Consultants, Inc., for its continued involvement in the ACI Houston Chapter and the advancement of the local concrete industry. Terracon has been a longstanding member of many industry organizations across the United States. Terracon has been nominated for its endless contributions to the ACI Houston Chapter. Because of Terracon's diligence to the Chapter, the ACI Houston Chapter is in the top ranks for certification programs across the nation.

Professional Excellence Award

The Professional Excellence Award was presented to Daniel McPheeters in recognition of his leadership and excellence in his field. McPheeters has served the ACI Houston Chapter by contributing his time to training students; specifically, the Strength Testing Technicians. During his 15 years of service to the ACI Houston Chapter, he has trained approximately 1500 students. Of which, approximately 70% gained their certification on the first attempt. Prior to relocating to its current facilities in 2017, McPheeters was always the first in and last out, ensuring that everything was set up and in place for each session.

Cement Award

The Cement Award is awarded to someone employed within the concrete industry that has promoted the use and advancement of concrete. This year's award was presented to Jonathan Whitmore with Terracon Consultants, Inc. While attending Texas A&M University, College Station, TX, USA, Whitmore worked as a Concrete Materials Testing Technician for the College Station Terracon office. He has endured the early morning concrete placements as well as the midsummer Texas heat. Whitmore continually strived for excellence in his work. Whether it was in making concrete cylinders, recording sample locations, or working in the lab, he always asked the question: "How can I do better and help those around me do better?" The Chapter continuously received compliments from contractors and ready mixed suppliers when he was working



Project Bullseye

on jobs. He was professional and communicated the test results with the on-site personnel as well as the project manager. He pre-task planned and ensured that he had the necessary equipment, supplies, and paperwork to complete the day's jobs and to do them safely. He recently received his degree and has transitioned to the geotechnical side of Terracon.

Professor Achievement Award

The Professor Achievement Award was presented to Jacob Borgerson, PhD. He has promoted the advancement of the concrete industry for over 20 years and has changed the game in the way students are learning about concrete at the University of Houston-Downtown, Houston, TX. His heavy forensics experience brings a different perspective on how students are taught concrete and mixture design in concrete technology. In the short time he has been with the university, he has brought real-world, hands-on application to the students.

He has continually presented, trained, and prepared students for ACI certifications and successfully disseminated the concrete technology and body of knowledge to the engineering students. His involvement at local and national chapter levels with several committees and presentations at various events and conventions more than qualifies him for this award.

Student Member Award

The Student Member Award is presented to a student pursuing a degree in a field related to concrete. This year's award was presented to Mohammed Hasan. Hasan has proven his work ethic and excelled in all academic fields, and shows promise in crossing over to actively participate with the ACI Houston Chapter in his transition to a young professional.

To learn more about the ACI Houston Chapter, visit <https://acihoustonchapter.org>.



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