

AN INVESTMENT WORTH MAKING



The National Concrete Pavement Technology Center (CP Tech Center) is the national hub for concrete pavement-related technology transfer and implementation.

The CP Tech Center stands at the junction of agency, industry, and academia to address priority needs and advance concrete pavement technology.

National Concrete Pavement
Technology Center





WHAT SETS THE CP TECH CENTER APART FROM OTHER UNIVERSITY-BASED RESEARCH CENTERS?

The CP Tech Center facilitates closer and more effective communication between public agencies and industry across the country. Through the relationships it builds, the CP Tech Center identifies and addresses strategic research and technology needs that are not being met by traditional research programs.

By providing intensive training and technical support, the CP Tech Center accelerates deployment so that advancements in concrete paving technologies are adopted into practice sooner rather than later.

WHAT ALLOWS THE CP TECH CENTER TO ADVANCE CONCRETE PAVEMENT TECHNOLOGY?

Core sponsorships—funding primarily from industry partners that is leveraged at about 5:1 with public sector funds—have in the last 10 years unlocked more than \$46 million in public sector investments to advance concrete pavement technology.

By leveraging sponsor contributions with additional state and federal funding, the CP Tech Center is able to provide unique and invaluable services to the national concrete pavement community.

In addition, because the CP Tech Center is part of Iowa State University, a respected academic institution, it can remain unbiased and independent, ensuring its credibility with its customers and, by extension, the credibility of the resources it provides to the concrete paving community.



COLLABORATION



TRAINING



CREDIBILITY



WHAT ARE THE KEY BENEFITS OF THE CORE SPONSORSHIPS?

The CP Tech Center's core sponsorships, together with its research/technology transfer program, afford the CP Tech Center the flexibility to pursue strategic activities and address needs that are not directly tied to deliverables under existing federal or state grants. This allows the CP Tech Center to respond quickly to critical needs as they occur, for example, to address the rapid changes and advancements currently underway in the area of blended cements.

Core sponsorships also provide significant opportunities to build collaborations and play a critical role in meeting industry match requirements under federal cooperative agreements.

A number of essential CP Tech Center activities are possible because of sponsor contributions:

- **Leadership and Influence**—The CP Tech Center leads conversations and sets the agenda at the national level via a strong presence in organizations such as National Concrete Consortium, Federal Highway Administration, Federal Aviation Administration, American Concrete Institute, American Society of Civil Engineers, and Transportation Research Board.
- **Support at the Local Level**—CP Tech Center staff present at state paving workshops to connect with and impact state agencies and local industry leaders. Staff also provide technical services and troubleshooting to local associations and contractors on a variety of topics such as concrete overlay design and construction, concrete pavement mix design, and Type 1L cements.
- **Technology Transfer Events**—The CP Tech Center organizes events such as national Technology Tuesday webinars, local seminars, and lunch and learn seminars. The ability to hold these events independent of grants allows the topics and timing of the events to be chosen strategically.



WHAT IS THE REACH OF THE CP TECH CENTER?

A major component of the CP Tech Center’s technology transfer activities involves in-person training. CP Tech Center staff participate in roughly 40 workshops/ conferences per year, reaching thousands of engineers and agency representatives. Via the National Concrete Consortium alone, the CP Tech Center reaches approximately 200 people representing 35 state agencies twice yearly with cutting edge technical content, addressing their needs directly.

The CP Tech Center’s monthly Technology Tuesday webinar program, conducted in partnership with American Concrete Pavement Association, is free to participants and draws more than 300 attendees per webinar. Since 2020, more than 24,000 attendees have earned professional development hours by attending webinars on topics ranging from performance-engineered mixtures (PEMs) and blended cements to concrete overlays and sustainable pavements.

The CP Tech Center’s publications have been downloaded 500,000 times since March 2022, with every technical resource published by the CP Tech Center provided for free to the user.

Views of 10 most popular documents since March 2022





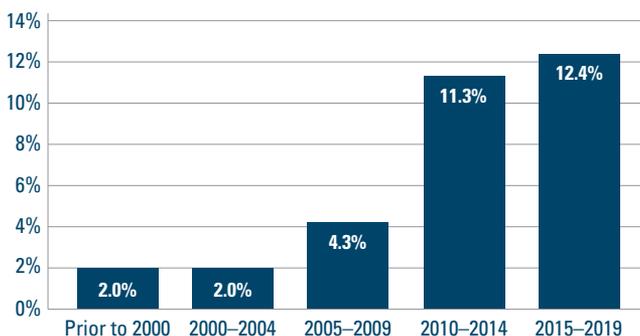
WHAT IS THE IMPACT OF THE CP TECH CENTER?

The CP Tech Center is changing practice by providing technology transfer resources and training to practitioners across the country and worldwide. The CP Tech Center is also known for its ability to provide independent and first-rate technology support to agencies and industry throughout the United States.

The resulting impacts are substantial:

- **Growth in the Use of Concrete Overlays**—The CP Tech Center has facilitated strong growth in concrete overlay adoption by providing technical expertise and implementation guidance, including publishing 15 concrete overlay-specific guides and technical briefs. In addition, the CP Tech Center successfully advocated for concrete overlays to be included in Round 6 (2021–2022) of the Federal Highway Administration’s Every Day Counts effort. Today, concrete overlays comprise roughly 12 percent of the concrete paving market, up from less than 5 percent just 15 years ago.

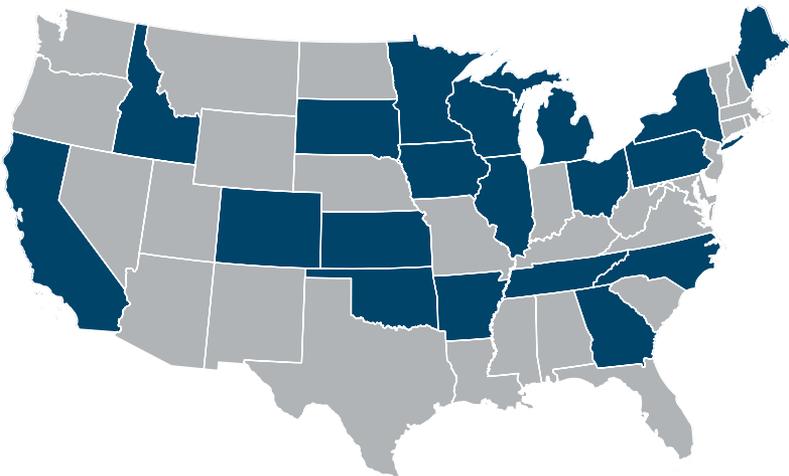
Concrete overlays as a percentage of total concrete paving in the United States





- **Advancing Performance-Engineered Mixture Concepts**—To date, at least 21 states have changed or are changing their specifications to incorporate concepts from the CP Tech Center–led PEM effort. Examples include optimizing cement content limits and implementing resistivity testing. This concerted and focused effort is continuing to improve concrete quality and reduce concrete’s cost and impact. Advances made via the PEM effort have culminated in the development of AASHTO R 101 and are also being leveraged at the MnROAD innovative concrete test sections constructed during the summers of 2022 and 2024.

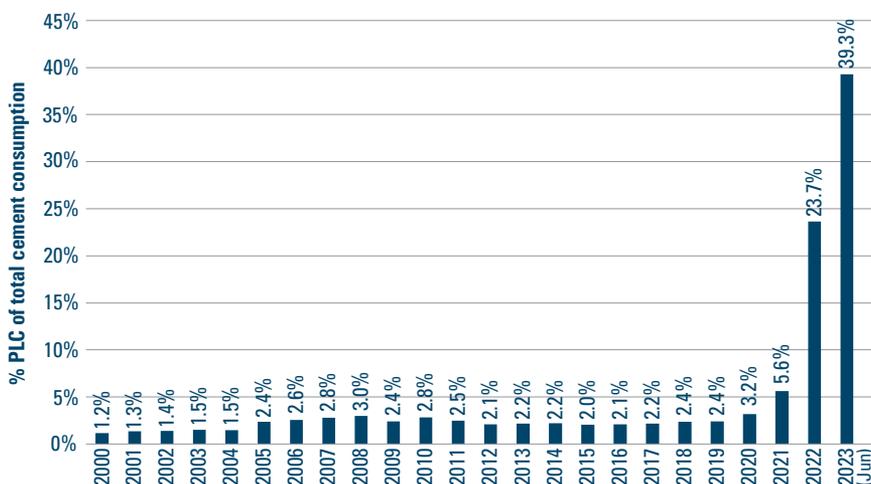
States (in blue) that contributed to the PEM Pooled Fund Study





- Assisting with Acceptance and Use of Type 1L Cements**—By facilitating technical exchange about portland-limestone cement (PLC) at National Concrete Consortium meetings over multiple years, the CP Tech Center has helped highway agencies successfully adopt PLC. Today, departments of transportation in all 50 US states either accept or plan to accept the use of PLC as part of their specifications, whereas only 10 states accepted the use of PLC a decade ago. This has allowed the use of blended cements to grow from roughly 2 percent of cement consumption in 2015 to almost 40 percent through the first half of 2023.

Percentages of blended cement use since 2000



The CP Tech Center is making a difference by uniting public agencies, industry, and academia to change practice, resulting in direct, comprehensive, and national impacts for our sponsoring partners. No other organization is better positioned or better equipped to accelerate the adoption and acceptance of advanced materials and technologies in the coming years.

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