

# Airport Concrete Pavement Technology Program

## Status Report

October 18, 2021

**IOWA STATE UNIVERSITY**  
**Institute for Transportation**



**National Concrete Pavement  
Technology Center**



# Background

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The objectives of this Agreement are:

- To re-establish the Airport Concrete Pavement Technology Program (ACPTP)
- To identify airport pavement issues and problems that could be eligible for funding through the ACPTP
- To coordinate FAA and industry efforts to implement technologies and to solve problems identified through the program as important to the interests of FAA and industry
- To pursue the technology transfer of new solutions, practices, and recommendations as needed, resulting from the individual or collective results of implementation trials and research.

# Role of the PCG

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- Identify airport pavement issues and problems that could be eligible for finding solutions using the ACPTP
- To recommend priorities for the research projects to be undertaken
- Review findings of the program and recommend
  - Avenues of further research
  - Technology transfer media to accelerate implementation
- Direct course corrections

# PCG

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• Brian Olsen	National Association of State Aviation Officials
• Jack Christine	American Association of Airport Executives
• Christopher Oswald	ACI—NA
• Arthur (JJ) Morton	Airport Consultant Council
• Martin Holt	American Concrete Pavement Association
• Priyanka Sarkar	Boeing
• Craig Rutland	Air Force and Tri-Services
• Anthony Cochran	FAA
• Harold Honey	FAA Liaison
• Gary Mitchell	ACPA Liaison

# Program Interest

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- 5 to 10 submittals on each project
- 62 different entities have submitted
- Broad mix of teams
- Many have submitted on multiple projects
- Reached many industry experts

# Research Needs

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- Alkali silica reaction prevention
- Rapid repair protocols
- Mixture proportioning tools
- Quality acceptance manual
- Rubber removal methods
- Strength Acceptance
- Diamond grinding protocols
- Limestone cements acceptability
- Panel size selection
- Stop start practices

# Research Needs

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## Ongoing activities

- Alkali silica reaction prevention
  - 10 proposals received
  - Contract being prepared with Oregon State University
- Mixture proportioning tools
  - 9 proposals received
  - Contract being prepared with Oklahoma State University
- Rapid repair protocols
  - 6 proposals received
  - Contract being prepared with Applied Research Associates

# Research Needs

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## Planned activities

- Quality acceptance manual
  - 5 proposals received under review
  - Technical Panel meeting to select being scheduled
- Rubber Removal Best Practices
  - RFP under development
  - Release planned this week
- Remaining topics
  - PTP's being assembled
  - Aiming at one RFP a month

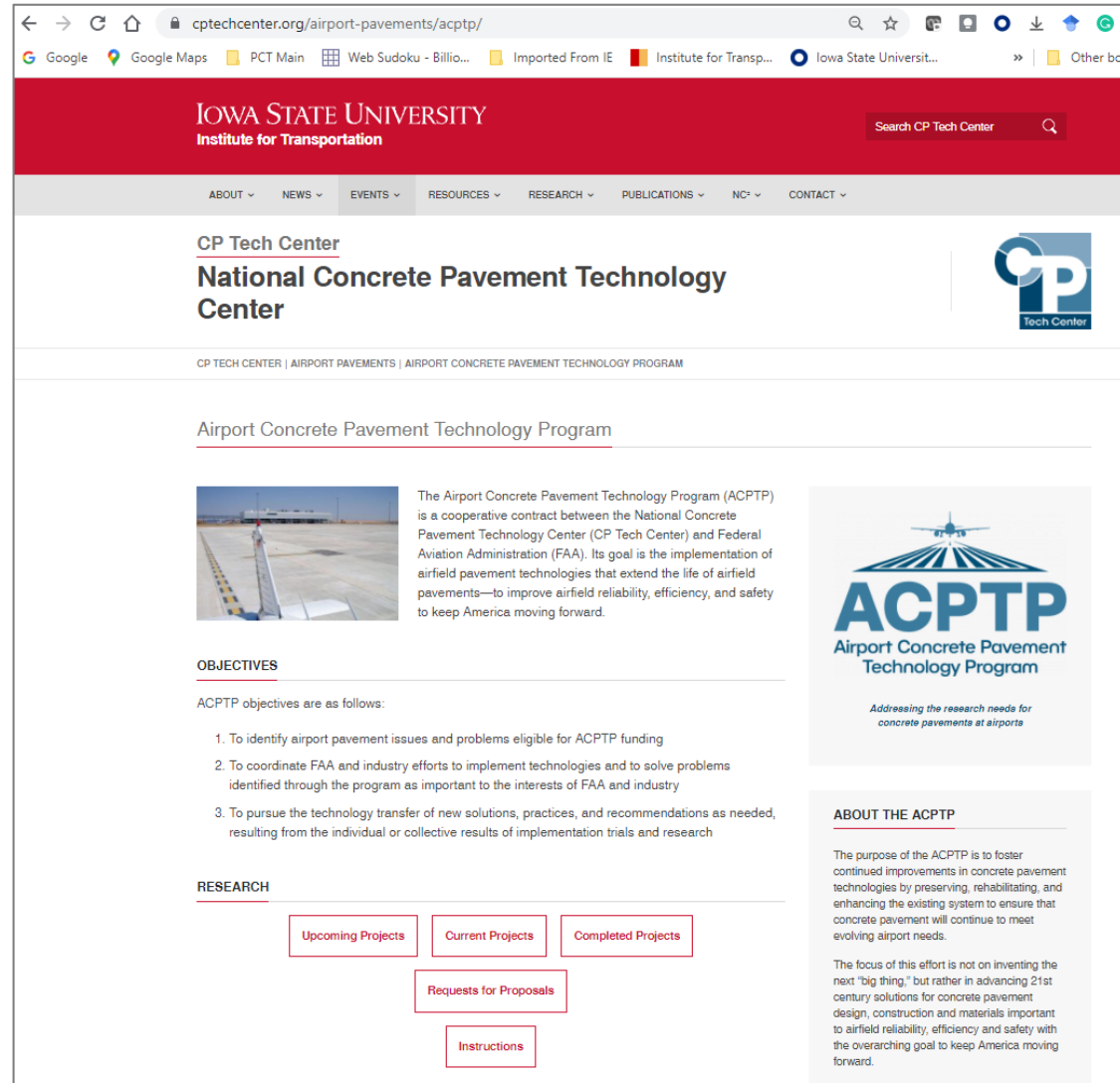


# Research Needs

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- Strength Acceptance
  - QA vs QC beam strength—leads to disputes
  - Research needed to assess other means to accept strength
- Limestone Cements
  - PLC is replacing Type I/II
  - Review needed to evaluate the effects on specification and performance
- Start Stop Practices of Slip-Form Pavers
  - Debate in industry on effects of start-stop
  - Slow forward progress vs stop start
  - Guidance needed to assist contractor and inspector on various condition pertaining to materials delivery

# Web Site



The screenshot shows the CP Tech Center website, which is part of the Iowa State University Institute for Transportation. The website has a red header with the university's name and a search bar. Below the header is a navigation menu with links to ABOUT, NEWS, EVENTS, RESOURCES, RESEARCH, PUBLICATIONS, NC, and CONTACT. The main content area features the CP Tech Center logo and the title "National Concrete Pavement Technology Center". Below this is a section for the "Airport Concrete Pavement Technology Program" with a description of the program's goals and a list of objectives. The objectives are: 1. To identify airport pavement issues and problems eligible for ACPPT funding; 2. To coordinate FAA and industry efforts to implement technologies and to solve problems identified through the program as important to the interests of FAA and industry; 3. To pursue the technology transfer of new solutions, practices, and recommendations as needed, resulting from the individual or collective results of implementation trials and research. There is also a "RESEARCH" section with links to "Upcoming Projects", "Current Projects", "Completed Projects", "Requests for Proposals", and "Instructions". A sidebar on the right contains the ACPPT logo and a description of the program's purpose.

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CP TECH CENTER | AIRPORT PAVEMENTS | AIRPORT CONCRETE PAVEMENT TECHNOLOGY PROGRAM

Airport Concrete Pavement Technology Program

The Airport Concrete Pavement Technology Program (ACPTP) is a cooperative contract between the National Concrete Pavement Technology Center (CP Tech Center) and Federal Aviation Administration (FAA). Its goal is the implementation of airfield pavement technologies that extend the life of airfield pavements—to improve airfield reliability, efficiency, and safety to keep America moving forward.

**OBJECTIVES**

ACPTP objectives are as follows:

1. To identify airport pavement issues and problems eligible for ACPTP funding
2. To coordinate FAA and industry efforts to implement technologies and to solve problems identified through the program as important to the interests of FAA and industry
3. To pursue the technology transfer of new solutions, practices, and recommendations as needed, resulting from the individual or collective results of implementation trials and research

**RESEARCH**

Upcoming Projects Current Projects Completed Projects

Requests for Proposals

Instructions

**ACPTP**  
Airport Concrete Pavement Technology Program

Addressing the research needs for concrete pavements at airports

**ABOUT THE ACPTP**

The purpose of the ACPTP is to foster continued improvements in concrete pavement technologies by preserving, rehabilitating, and enhancing the existing system to ensure that concrete pavement will continue to meet evolving airport needs.

The focus of this effort is not on inventing the next "big thing," but rather in advancing 21st century solutions for concrete pavement design, construction and materials important to airfield reliability, efficiency and safety with the overarching goal to keep America moving forward.