

Announcement of Additional Airport Research Projects February 2020

The Airport Cooperative Research Program (ACRP) is a contract research program with the objective of developing near-term, practical solutions to problems facing airport-operating agencies. The ACRP is sponsored by the Federal Aviation Administration (FAA) and managed by the National Academies of Sciences, Engineering, and Medicine, through the Transportation Research Board. Program oversight and governance are provided by representatives of airport operating agencies and others appointed to the ACRP Oversight Committee (AOC) by the Secretary of Transportation.

The ACRP undertakes research and other technical activities in response to the needs of airport operators on issues involving administration, construction, design, environment, human resources, legal, maintenance, operations, planning, policy, and safety at airports.

The AOC met on January 30, 2020 and selected four additional projects for the Fiscal Year 2020 program. Project summaries are attached.

The ACRP is now seeking nominations for serving on project panels. These panels will develop requests for proposals, select contractors, and review draft deliverables prepared by the contractors. Nominations, including self-nominations, may be submitted through [MyACRP until March 31, 2020](#).

Nominations for yourself or others can be done through MyACRP: <https://crp.trb.org/MyACRP>. If you currently have a MyACRP account, you will need to re-register, since ACRP has transitioned to a

new people management platform. This new platform is the same platform used for MyTRB, so if you have a MyTRB account, you may use those credentials to log into MyACRP

Requests for proposals are expected to be released starting in the summer 2020 and will be available only on the World Wide Web. Each proposal will be announced by e-mail. Instructions to register for e-mail notification of requests for proposals is available at <http://www.trb.org/acrp>. Any research agency is eligible to submit a proposal; guidance for proposal preparation is provided in the brochure, [Information and Instructions for Preparing Proposals](#), available at the website referenced above.

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SUMMARY OF APPROVED PROJECTS**■ Project 02-90*****Update the Airport Construction Emission Inventory Tool (ACEIT)***

Research Field: Environment

Allocation: \$350,000

ACRP Research Report 102: Guidance for Estimating Airport Construction Emissions and the Airport Construction Emissions Inventory Tool (AECIT) help airports and stakeholders better understand and quantify airport construction emissions and bring consistency to airport construction emissions inventories. The AECIT enables users to rely on default information about the construction process for typical airport projects. However, since the release of the guidebook and tool in 2014, both on-airport construction practices and modeling techniques have changed. For example, the U.S. EPA emissions models, NONROAD and MOVES, were combined into MOVES; emissions from typical construction projects have decreased due to improved equipment and practices; federal and state regulations have changed; and inventory methods have improved. These changes need to be incorporated into the report and tool to ensure they provide the most helpful guidelines and ensure modeling efficiency and representativeness.

The objective of this research is to update ACRP Research Report 102 and the AECIT to incorporate the latest on-airport construction practices, regulatory requirements, and modeling techniques.

■ Project 09-21***Guidelines for the Effective Transition of Asset Data from Design/Construction to Operations and Maintenance***

Research Field: Maintenance

Allocation: \$400,000

Many airport operators have challenges when transitioning asset data from the planning, design, and construction stages to the operations and maintenance stage. These challenges include issues with timeliness, conformity, completeness, and accuracy. Such issues may lead to poorly informed operations and maintenance planning decisions, resulting in significant financial and functional impacts to operations and maintenance departments. There are a number of technology-based platforms to assist in the efficient and accurate transfer of asset data (e.g., geographic information systems, computerized maintenance management systems, building information modeling), yet many airports need guidelines for mapping not only the transition process, but for involving key departments and stakeholders through the entire process, from procurement to commissioning.

The objective of this research is to develop a “playbook” with standards, specifications, and process flows to help airport operators with the accurate and timely delivery of new and replacement asset information/meta data to key airport stakeholders responsible for tracking and maintaining airport assets.

■ Project 10-30***Guidelines for Systematically Evaluating the Effectiveness of an Airport's Wildlife Hazard Management Plan***

Research Field: Operations
Allocation: \$400,000

All FAA certificated airports have conducted a wildlife hazard assessment and have completed, or are in the process of completing, wildlife hazard management plans (WHMPs). WHMPs must include procedures for their regular review. The FAA/USDA *Wildlife Hazard Management at Airports Manual* provides a framework to evaluate WHMPs, and the FAA's *Advisory Circular 150/5200-38 Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans*, defines minimum acceptable standards, explains continual monitoring programs, and provides evaluation checklists. While these publications provide valuable guidance, they do not include how airports can identify key metrics for success and risk reduction. Simple reductions in the number of wildlife strikes at an airport may not adequately assess a WHMP's effectiveness at reducing risks to aviation, human health and safety, or addressing potentially conflicting goals (such as wildlife conservation efforts).

The objective of this research is to provide airport operators with guidelines and tools to evaluate the effectiveness of their wildlife hazard management plans to reduce wildlife strike risks to aviation.

■ Project 10-31***Remote Airport Ramp Control Facilities—Guidelines for U.S. Airports***

Research Field: Operations
Allocation: \$350,000

Air navigation service providers (ANSPs) have begun to manage local air traffic operations from remote off-airport facilities. These "virtual towers" permit the control facility to be located anywhere that has secure electronic communication capability with the sensor networks installed at the airport. Although the FAA has oversight of airspace and movement areas, ramp control at busy airports is often the responsibility of the airport, an airline, or a third party. While there are several airports around the world employing remote facilities to manage traffic in the local airspace and movement areas, and research and testing are underway in the U.S., there has been less focus on the use of remote facilities to manage ramp activity.

The objective of this research is to provide U.S. airport operators with an understanding of the potential roles remote ramp control facilities can play, their major components and supporting technologies, and the advantages and disadvantages of these virtual facilities relative to their traditional counterparts. Guidelines are also needed to help airports and stakeholders develop a use case for their facility and implement a virtual ramp tower.