

ACRP Problem Statement: 288

Airport Maintenance Facilities Design

Recommended Allocation: \$300,000

Tags: Airport-Planning, Design, Maintenance

Thought Leader Forum on Emerging Issues: N/A

Research Roadmaps: N/A

Staff Comments

The proposed research would complement related ACRP products, including guidelines for designing terminals, GA airport facilities, and cargo facilities. A budget of \$300,000 is typical for this type of effort.

AVERAGE INDUSTRY RATING BY AUDIENCE SEGMENT

Audience Segment	Average Rating	Number of Responses
Academicians	2.00	2
Airline Representatives	N/A	0
Airport Employees	3.30	10
Consultants	3.63	8
Fed/State/Local Government Employees	4.00	3
Private Sector	4.50	2
Undefined	4.00	1
Overall Total	3.60	26

AOC Disposition

The average AOC rating among voting members was **3.3** on a scale of 1 to 5. There was no discussion. The problem statement was not selected for ACRP funding and will be returned to the idea collection stage of ACRP's IdeaHub.

Airport Maintenance Facilities Design

Summary

Develop guidance to identify and design the necessary features of an efficient, sustainable, comprehensive, safe maintenance facility that is customized to satisfy the needs of a given airport.

Background

There appears to be a shortage of information, guidance, and shared experience to support the the wise design and upgrading of airport maintenance facilities. Airports maintenance efforts would benefit from the gathering of experiences from other airports and from outside the aviation industry.

Objective

Assemble the maintenance experiences of many airports and non-airport entities. Analyze, compare and contrast the results. Organize the findings into a guide publication that provides advice and supports that advice with experiences gathered.

Research Approach

Systematically gather information about existing maintenance facility layouts, features, practices at many airports. The information should include

- + Descriptions of airport maintenance facilities and operations to understand basic circumstances and needs.
- + Interviews of personnel to determine strengths and weaknesses of their facilities and how practices and performance might be improved by changes to facility design.
- + Surveys of non-aviation maintenance facilities to find ideas that could benefit aviation maintenance facilities

Cost Estimate/Backup

Related Research

Author: Mike Coleman, Senior Planner, Port of Portland, Oregon

INDIVIDUAL COMMENTS FROM THE INDUSTRY REVIEW

A properly designed facility(s) with assets placed or staged in the appropriate places around the airport could be instrumental in improving efficiency and response time.

A publication with this guidance would be useful to airports and manufacturers.

Applicable, achievable, but not implementable: Many airports may not find an immediate need.

As the need for larger snow removal equipment increases so does the size and design of maintenance facilities.

Developing adequate long-term maintenance facilities is an important and difficult prospect for airports. These facilities are not revenue generation but must often occupy finite prime airport real estate. Excellent project.

Furthering study on the maintenance of general aviation airports is so important as most small airports with limited resources struggle in this area.

Gathering data from non-aviation sources is a great idea. Implementation would be immediate. Problem statement is a bit weak, because it appears to be from a non-researcher, perhaps someone "in the field." But real-world problems are the types of problems that we want for ACRP research.

Good information for the FAA to use when updating their AIP Handbook.

great idea but this seems somewhat limited.

I agree there is a gap in available standards and the objective is good, but is this achievable? There was no cost identified.

I think this topic is extremely important

Maintenance facility design is specific to each airport. Well known criteria for design exists

Not enough substance to accurately understand and rate properly.

Possible need, but even as an outline it is sketchy. Need more substance to do cost estimating. If it refers to airport facilities and equipment, the bidder will need much more guidance and definition of what is to be maintained, such as groundskeeping, runways and runway lighting, buildings, snow removal, airport offices and bathrooms, security access hardware, emergency equipment and vehicles, and the like, to know how to respond. Is it intended for International airports, small commercial or local GA airports?

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The concept is valid and sharing of information on designs would be beneficial. However the problem statement is shallow and completely omits the issue of cost. All airports must address costs for any facility design or redesign.

There will be many differences in airport maintenance facility designs depending on what the airport is maintaining, what maintenance is outsourced, and whether the maintenance is for airfield and facilities or just one or the other. It is not clear in the problem statement what the qualifiers are for "maintenance facilities." In the Objective, "Assemble the maintenance experiences" does not match well with the Summary statement.

This could be a development of best practices for airport maintenance facilities. However, the problem is that every airport is different and has different needs.

This has long been ignored, and should be a priority

Very important as airports grow/expand and airlines return to a true hub-spoke model post Covid.

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Input Provided by ACRP IdeaHub Community

The votes and comments below were provided by the IdeaHub community prior to the idea's submission as a problem statement.

Idea Link: <http://ideascale.com/t/UKsrZBhzm>

Tags: Airport-Planning, Design, Maintenance

Votes:

Votes	
Up	7
Down	0
Total	7

Comments:

N/A