

PROJECT OVERVIEW REPORT

1. UTC Identifying Number
69A3551847102
2. Center Identifying Number
CAIT-UTC-REG6
3. Project Title
Airfield Pavement Management Framework using a Multi-Objective Decision Making Process
4. Principal Investigator & Contact Information
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7. Project Description
Airfield Pavement Management collects data of structural condition such as fatigue cracking and rutting. However, important factors affect the safety of aircraft operations including non-structural distresses of low friction and surface distortion are missing in the data collection process. The goal of this research is to develop a decision-making framework for airfield pavement using multi-objective decision-making technique, which considers important criteria of extended pavement life, cost, safety, and sustainability into the evaluation metrics. It is an improvement to the current practice in airfield pavement management system and can result in more durable and sustainable airfield pavement in long term.
8. Implementation of Research Outcomes (or why not implemented)
The multi-criteria decision making framework will include evaluation of pavement life, cost, safety, and sustainability of airfield pavement. The framework will be flexible to meet different needs of airport authority to make sound decisions in choosing investment options.

9. Impacts/Benefits of Implementation (actual, not anticipated)
To Be Determined

10. Dates and Budget

Start date: 9/1/2018

End date: 8/31/2019

UTC (CAIT) Dollars: \$80,000

Cost Sharing: \$0

Total Dollars: \$80,000

11. Keywords

Airfield pavement, LCCA, LCA, cost, sustainability, safety

12. Web Links (Reports and Project Website)

<https://cait.rutgers.edu/research/airfield-pavement-management-framework-using-a-multi-objective-decision-making-process/>