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Massachusetts Department of Transportation
Aeronautics Division

Board Report:

Southbridge Municipal Airport Master Plan Update, New Bedford Regional Airport Apron Reconstruction, Paris Air Show & Advanced (AAM) Air Mobility Event, American Robotics Drone-in-a Box Kickoff & NASAO AAM Working Group

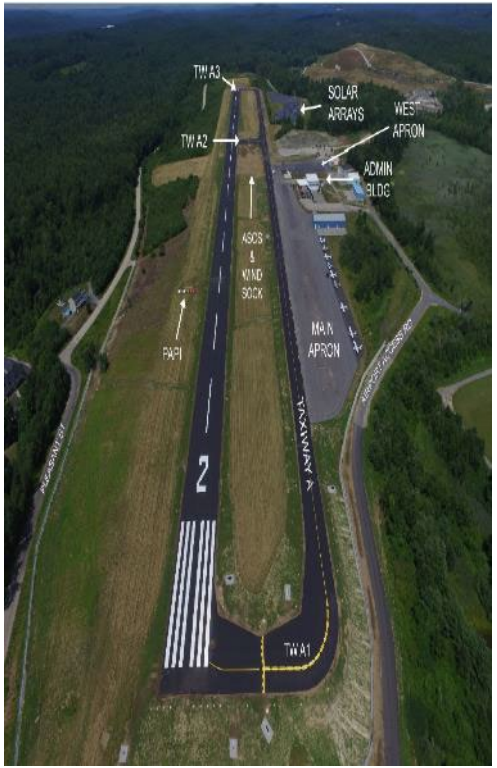
July 19, 2023

Presented to:
- **Board of Directors**

Presented by:
- **Aeronautics Division**
  - Dr. Jeff DeCarlo

Southbridge Municipal Airport Master Plan Update

- The primary goal of the master plan update is to provide the airport with a comprehensive 20-year plan to secure funding, improve facilities, and allow the airport to continue as a transportation asset to the community and the National Airspace System
- The study will identify future airport development needs and priorities that cost-effectively satisfy aviation demand while considering environmental, land-use and socioeconomic issues
- The Master Plan includes a Public Involvement process that will provide updates on the study's progress and allow for public input
- Once a preferred alternative is selected, the projects will be depicted on an Airport Layout Plan (ALP). The FAA and MassDOT must sign and approve the ALP for projects to be eligible for state/federal funding, and inclusion in the FAA's 5-year Airport Capital Improvement Plan
- The master planning process for Southbridge began in May 2023 and should be completed within 18 months



Southbridge Municipal Airport

New Bedford Regional Airport: Aircraft Parking Apron Reconstruction

- The New Bedford Regional Airport completed the third and final phase of the reconstruction of the aircraft parking apron
- The project was completed with the help of three (3) grants from the FAA and five (5) grants from MassDOT Aeronautics which included local participation from the Airport
- The project was funded over six (6) fiscal years and the total cost was $12.9M with the FAA funding $7.4M, MassDOT funding $5.3M, and the City/Airport funding $0.2M
- The project included rehabilitation of 510K SF of pavement (PCI rating of 35), drainage upgrades to latest stormwater standards, new apron lighting, pavement markings, and signage
- The project provides new pavement for commercial service operations, transient aircraft, and existing airport tenants
- The new pavement will provide economic opportunities for the airport during lease negotiations with current tenants

Paris Air Show and Advanced Air Mobility Event

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- Administrator DeCarlo was invited to Paris as Chair of the World Economic Forum (WEF) Advanced Air Mobility (AAM) Cities and Regionals Coalition
- Participated in WEF event in conjunction with Groupe ADP and “Choose Paris” Regional leaders to understand challenges associated with utilizing electric vertical take off & landing vehicles (eVTOL) as part of Paris 2024 Olympics
- Exchanged ideas with international thought leaders relating to policy, community acceptance, vertiport design, and other challenges
- Visited Pontoise Airport, Paris Region’s first Advanced Air Mobility Sandbox, to understand how this test bed has helped to address and realize the complexities of bringing advanced air mobility to the Paris Region

Volocopter eVTOL Aircraft

Pontoise Airport, 16 Miles NW of Paris

American Robotics Drone-in-a Box Kickoff

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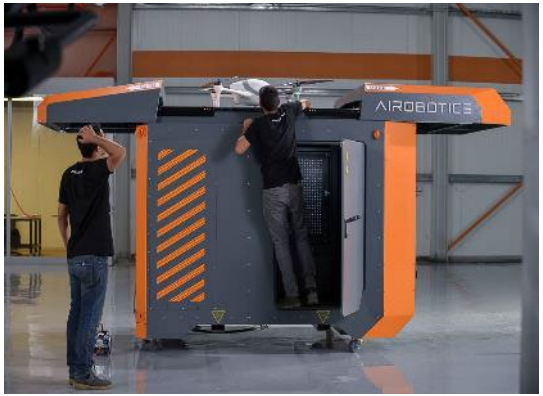
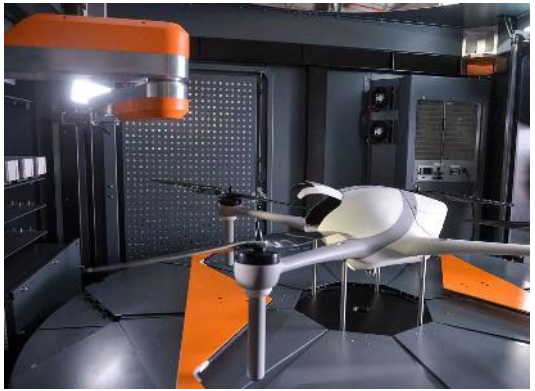
- MassDOT Aeronautics Kicked off the preparation stage of the American Robotics Drone in a Box demo
  - The Optimus Uncrewed Aircraft System (UAS) will be utilized to demonstrate BVLOS (Beyond Visual Line of Site) operations over railroad tracks, as well as collecting data for MWRA
  - Two single day demos will be held late summer/early fall 2023, followed by a longer pilot program demo of a rail line inspection
  - Demos will be open to all state and local government entities
- Optimus Drone Details
  - The system has a 15-mile radius, currently, regulated to two miles without an FAA waiver or type certification.
  - Includes an Automated Battery and Sensor swap for continuous operation
  - Capable of delivering a small payload; (EpiPen, AED, etc.)
  - Flights can be autonomous, with centralized data processing



Optimus UAS System


Interior of the Optimus Box

NASAO Advanced Air Mobility (AAM) Working Group

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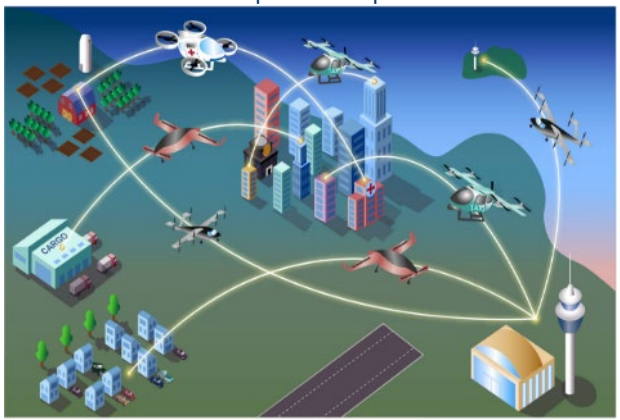
- NASAO (National Association of State Aviation Officials) is providing input to the FAA on development of a national strategy on AAM (Advanced Air Mobility)
  - AAM is an emerging field in which novel aircraft currently in design and testing could provide new levels of accessibility, convenience, and connectivity for people and cargo—and thus transform our nation's transportation system to provide enhanced mobility for the traveling and shipping public
  - Promotes a crawl/walk/run approach, small UAVs with public use cargo, followed by larger UAVs moving heavier cargo with the final stage moving people between gateway cities, urban areas and transportation hubs
- Massachusetts is among 12 states providing input to address issues from airspace management to work force development
  - The purpose of the working group is to plan for and coordinate efforts to integrate AAM aircraft into the national airspace system, particularly passenger carrying aircraft, in order to grow new transportation options, amplify economic activity and jobs, advance environmental sustainability and new technologies, and support emergency preparedness and competitiveness

Vertiport Concept



Potential AAM Use Cases