

# Board Report:

## Airport Capital Improvement Program (ACIP), Aviation Workforce Development & Unmanned Aircraft Systems (UAS) Update

October 19, 2020

Presented to:

■ Board of Directors

Presented by:

■ Aeronautics Division

➤ Dr. Jeff DeCarlo

# Airport Capital Improvement Program (ACIP)



## MassDOT Aeronautics CIP Meetings & Planning Process (Early Fall through Spring)

- Joint FAA & MassDOT CIP Meetings** – Followed by Scoping and Independent Analysis  
Publicly Owned Airports leverage FAA Airport Improvement Program (AIP) funds at 90% Federal, 5% State & 5% Local shares. **FY20 AIP Grants are being funded by FAA at 100%**

Airports	Status	Airports	Status	Airports	Status	Airports	Status
Barnstable	Completed	Mansfield	Completed	Norwood	Completed	Taunton	Completed
Beverly	Completed	Marshfield	Completed	Orange	Completed	Turners Falls	Completed
Chatham	Completed	Martha's Vineyard	Completed	Pittsfield	Completed	Westfield	Completed
Fitchburg	Completed	Nantucket	Completed	Plymouth	Completed	Westover	Completed
Gardner	Completed	New Bedford	Completed	Provincetown	Completed		
Lawrence	Completed	North Adams	Completed	Southbridge	Completed		

- MassDOT Aeronautics CIP Meetings** – One-on-one meetings are being scheduled with the Privately Owned Airports – Majority are State-Funded thru Airport Safety & Maintenance (ASMP) Program at (80% State/20% Local shares, although there are some exceptions)

Airports	Status	Airports	Status	Airports	Status	Airports	Status
Falmouth	TBD	Hopedale-Draper	TBD	Myricks	TBD	Spencer	TBD
Great Barrington	TBD	Katama	TBD	Northampton	TBD	Sterling	TBD
Hanson-Cranland	TBD	Minuteman-Stow	TBD	Plum Island	TBD	Tanner-Hiller	TBD

# Airport Capital Improvement Program (ACIP)



## Key Airport Planning & Development Projects - State Fiscal Year 2021

### **New Bedford Regional Airport (EWB) – Install Security Wildlife Fencing Phase – 1**

- EWB has attained FAA Part-139 certification as a commercial service airport. The Airport's Certification Manual recommends that sections of the perimeter fence be replaced due to breaches and felled trees along the fence line that could pose a hazard to flight
- Correcting this condition will prevent wildlife (deer and coyote) from entering the airport, and eliminate a security concern over open access to the Aircraft Operations Area

### **Orange Municipal Airport (ORE) – Reconstruct, Mill & Overlay Runway 1-19**

- ORE was awarded an FAA Supplemental Appropriations grant for the reconstruction of Runway 1-19 to be funded at a 100% federal share. The runway is 5001' long X 75' wide
- The Pavement Condition Index (PCI) for Runway 1-19 is currently 53, on a scale of (0-100)
- The project will reconstruct the existing runway in place and will not require permitting

# Airport Capital Improvement Program (ACIP)



## Key Airport Planning & Development Projects - State Fiscal Year 2021

### **Barnstable Municipal Airport (HYA) – Snow Removal Equipment Purchase (SRE)**

- HYA is required to implement a Snow & Ice Control Plan during snow events
- Current SRE equipment (1995 Plow Truck & 1998 Snowblower) is past its useful service life
- Purchase will include a Snowplow & Spreader with Carrier Vehicle, and a High-Speed Rotary Plow to move snow away from movement areas such as runways and taxiways

### **Lawrence Municipal Airport (LWM) – Airport Master Plan Update**

- The goal of the master plan is to guide future airport development that will cost-effectively satisfy aviation demand while considering key environmental and socioeconomic impacts
- The project will include a public participation process to present the proposed alternatives

### **Westover Metropolitan Airport (CEF) – Hangar 13 Roof Rehabilitation**

- The planned project improvements will include the installation of a new roof membrane with insulation, replacing existing original telescoping sliding doors with taller vertical lift hangar doors, and the installation of a sprinkler/foam fire suppression system

# Aviation Workforce Development – COVID-19

## Impacts on Aviation Education & Training



- In March 2020, Governor Charlie Baker ordered all non-essential businesses to cease in-person operations
- The pandemic has had an immense impact on airport Fixed Base Operators (FBOs), flight schools, and aviation training programs as the number of general aviation flights have decreased worldwide by approximately 67 percent over the same period, last year
- Schools are adapting to operations with fewer students and available staff, while employing new COVID procedures such as mask wearing, social distancing and disinfecting between operations
- With a worldwide shortage of aircraft pilots and mechanics, these training resources are critical in developing the next generation of aviation industry professionals



# Aviation Workforce Development - Aviation Education is Still Thriving Amidst COVID Setbacks



- A renewed emphasis has been placed on STEM education in (K-12)
- Westfield Vocational Technical High School developed an FAA Part 147 maintenance program that enables students to graduate from high school with an airframe and powerplant (A&P) license
- Cape Cod Community College offers a unique FAA-certified aircraft maintenance training program that allows students to earn their A&P license while also completing an Associates' Degree
- Other schools, such as North Shore Community College, Greenfield Community College, Bridgewater University and Westfield State partner with local flight schools to offer opportunities to integrate flight training with an aviation degree program
- These programs are preparing our youth for highly-technical, well-paid jobs to meet the career demands of tomorrow's workforce





# Unmanned Aircraft Systems Update: MBTA Snow Removal Preparation



- The MBTA works with a collection of third-party vendors to keep the transit system free of snow and to ensure employees and revenue vehicles can operate on-a-daily-basis
- The MBTA seeks to use drones as a mean to measure a vendor's snow clearing performance based on established site maps that outline responsibility
- The data will also allow the MBTA to get a better sense of what the “trigger point” for snow removal ought to be, based on how much snow accumulates over time
- Quantitative benefits could include the reduction of internal labor and fuel costs from traveling to these distributed locations, and a safer work environment for MBTA employees and pedestrians who depart from MBTA Stations, before, during and after a snowstorm



# Unmanned Aircraft Systems Update: State Agency Collaboration with the Department of Conservation & Recreation (DCR) & Massachusetts School Board Authority (MSBA)



## Video & Imagery Collection at the Quabbin & Wachusett Reservoir

- The benefit of these flights will allow DCR to adequately track gulls at the Quabbin Reservoir, provide accurate gull population data to DCR staff and discuss/determine other UAS capability use cases which may benefit DCR and the Commonwealth
- DCR staff have been trained by MassDOT as drone visual observers



## MSBA Collaboration with MassDOT on Asset Inspections

- The main benefit of using a drone is that it no longer makes it necessary to put human lives at risk to perform asset inspections
- Drones can provide quicker surveys than traditional methods, faster data turnover and access to otherwise inaccessible areas
- See pre-programmed flight profile of school building roof inspection

