



# BVY AIRPORT MASTER PLAN

## Town of Wenham Community Meeting

January 27, 2021

**JVIATION**<sup>®</sup>  
A WOOLPERT COMPANY

**ASG**  
AIRPORT SOLUTIONS GROUP, LLC  
*Innovation by Design*

  
**BEVERLY  
REGIONAL  
AIRPORT**



## MEETING OBJECTIVES

Today we will leave with:

- An understanding of the Master Plan process
- A review of the inventory and forecast elements of the Master Plan
- Knowledge of the facility requirements, development alternatives, and recommended development concept
- An awareness of next steps
- An understanding of comments, questions, concerns



# VIRTUAL MEETING

- There will be a presentation with 3 intermittent Q&A sessions during the presentation for clarifying questions
- There will be a general Q&A session at the conclusion of the presentation
- The meeting will be recorded
- Please mute your microphone when you are not speaking
- Please use the “Raise Your Hand” function at the bottom of the screen if you wish to speak during the Q&A sessions
- Please state your name and address or affiliation
- Please don't use the Chat for public comment
- We appreciate everyone's patience!

# MASTER PLAN PROCESS



*Photo Credit: gbouillon*



## WHY DO WE MASTER PLAN AIRPORTS?

The Master Plan is a **20-year plan** to understand the needs of current and future users of the airport. It is important to ensure:

- *safe and orderly development*
- *reflective of the community's values and goals*
- *through a purposeful, inclusive, and educational process*

The Plan must be based on current conditions, community input, and forecasts

- The Master Plan process cannot have a pre-determined outcome





# CLARIFYING QUESTIONS - SESSION #1



- Please use the “Raise Your Hand” function at the bottom of the screen when you want to speak
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# AIRPORT INVENTORY

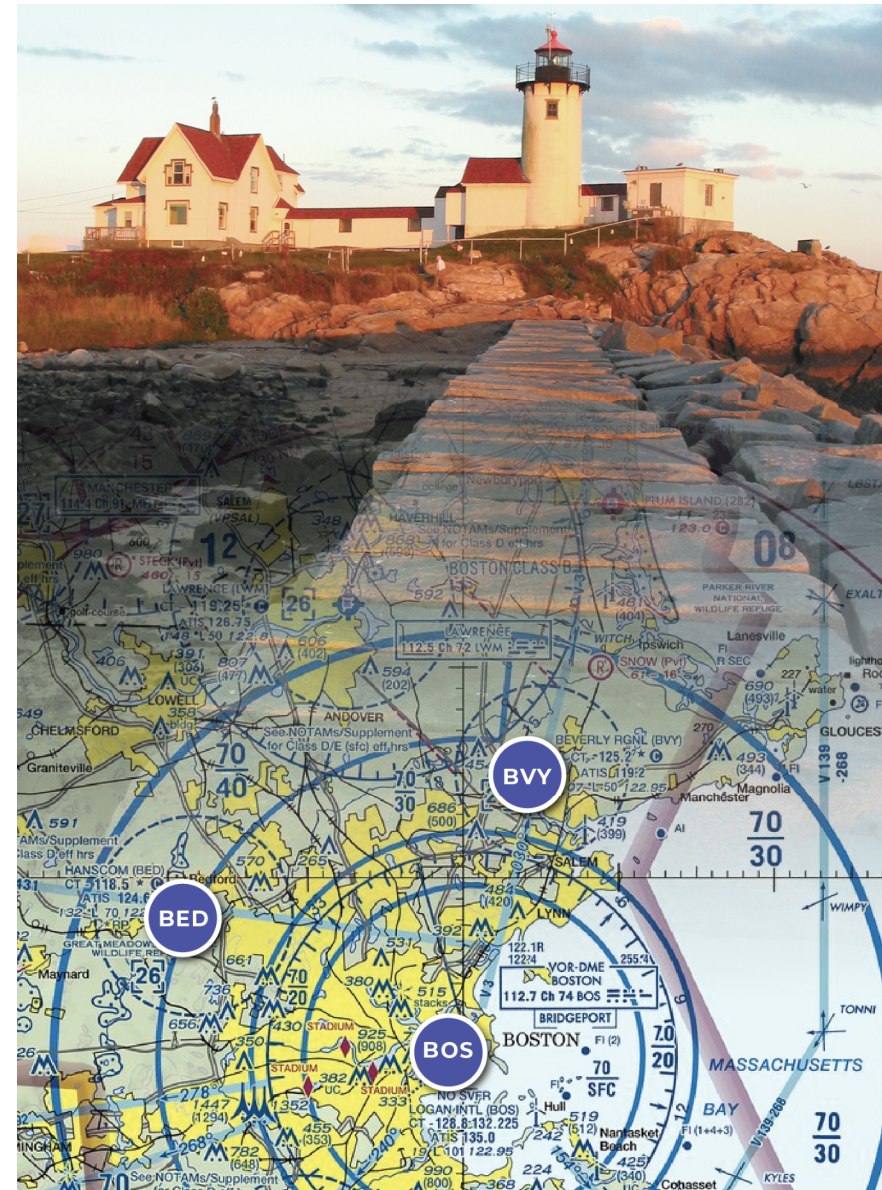




# SERVING THE NORTH SHORE

- Established in 1928
- Operated by the U.S. Navy during World War II (Naval Auxiliary Air Facility)
- Decommissioned in 1945 and returned to the City of Beverly in 1950
- Roles:
  - FAA National Plan of Integrated Airport Systems: General Aviation Regional Reliever
  - MassDOT Aviation System Plan: Corporate/Business Airport
- Governed by the Beverly Airport Commission appointed by the Mayor of Beverly
- BVB serves a primary role as a General Aviation airport in regional economic activities, connected to state and national economies
  - Total Jobs (direct/indirect) = 269
  - Total Annual Payroll = \$11.6 M
  - Total Annual Economic Output = \$34.3 M

*(2019 Massachusetts Airport Economic Impact Study)*



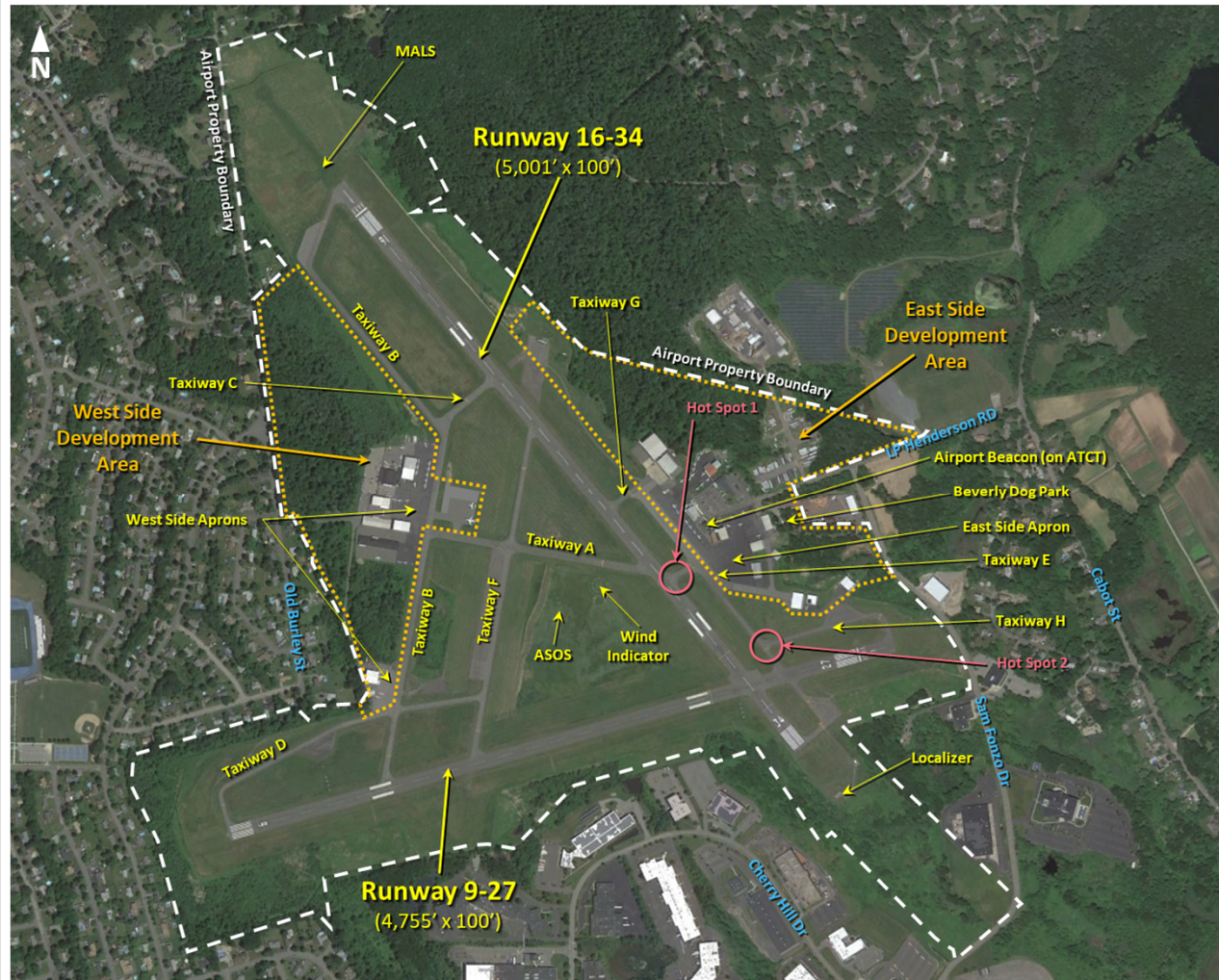


## BEVERLY REGIONAL AIRPORT

- Located in **three** jurisdictions: City of Beverly, Town of Danvers and the Town of Wenham
- 470 acres
- Services: FBO, Flight Training, Aircraft Management Tie-Downs, Hangars, MRO
- 105 based aircraft
- 2020 annual Operations = 69,117
  - 3.5% increase over 2019
  - Last time operations at this level = 2008
  - BVY highpoint = 144,156 (1991)
- Air Traffic Control Tower hours: 0700-2100 (6 mon/yr summer) and 0700-2000 (6 mon/yr winter)

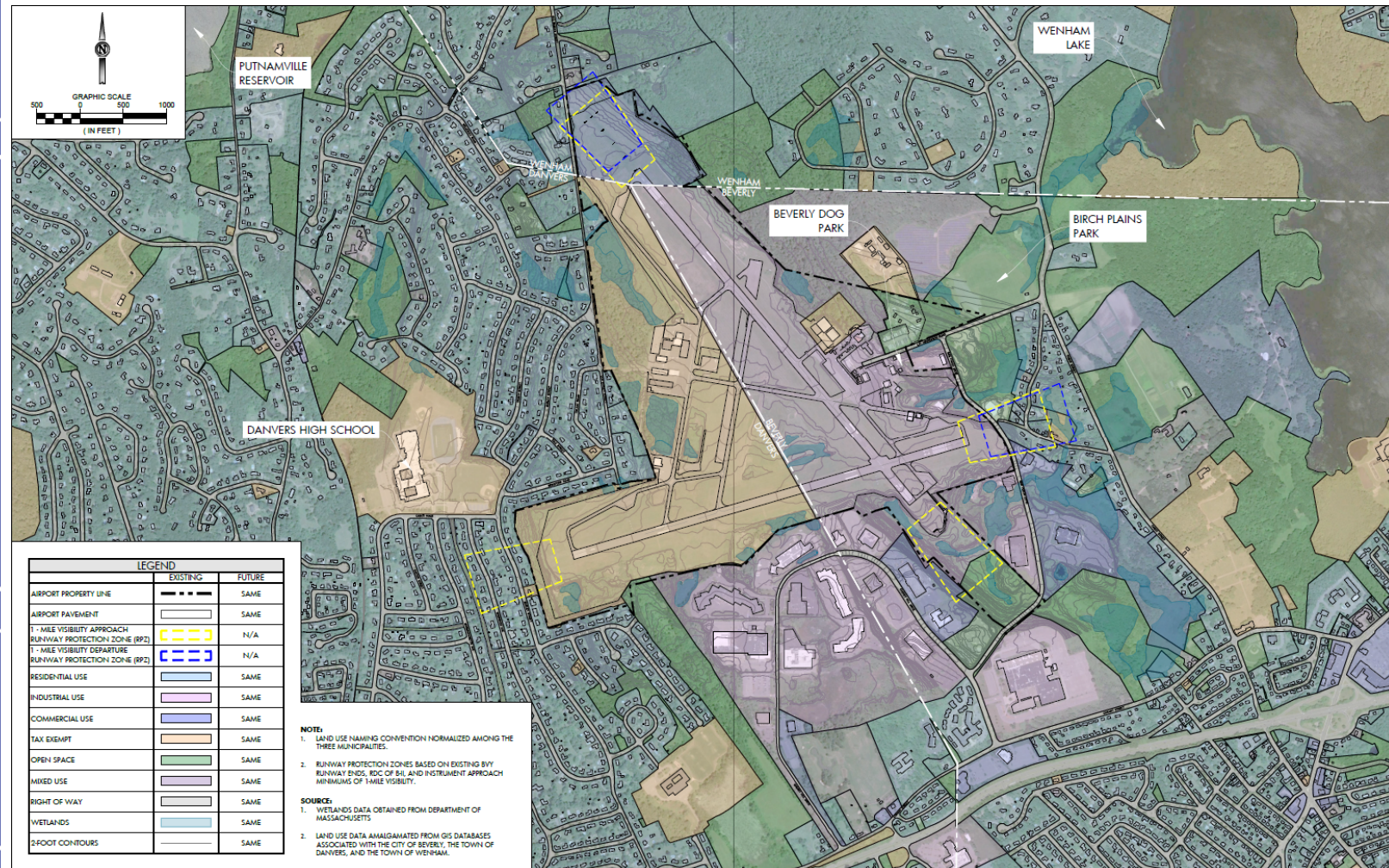


# INVENTORY





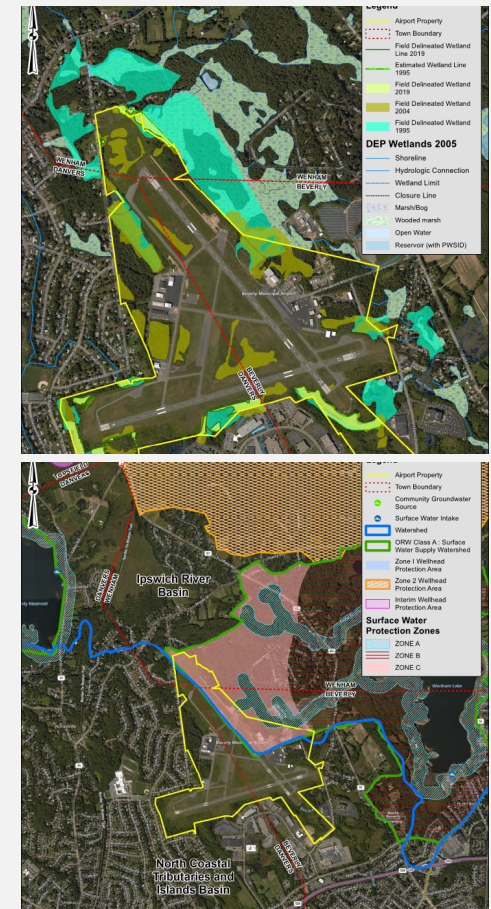
# BVY LAND USE CONSIDERATIONS





# ENVIRONMENTAL REVIEW

- 20 environmental categories are reviewed in context of potential impacts associated with the alternatives
  - Categories include such things as air quality, surface and groundwater, noise, light emissions, etc.
- The Airport is currently undertaking a noise study to look at noise contours today and into the future
- Any future development project(s) will have to undergo federal and state environmental review and approval before proceeding



# OUR COMMITMENT TO SUSTAINABILITY



- Sustainability is a holistic approach to our efforts
- Working to ensure an ongoing commitment throughout our decision-making and our actions
  - Energy Efficient Airport Administration Building - have achieved significant reduction in energy use
  - Allow temporary use of facilities for community events
  - Enhanced marketing strategies to increase rented lands and improvements
  - Provide regular airport updates to area conservation agencies
  - Will be upgrading to LED lighting system with upcoming runway project



# AVIATION ACTIVITY FORECASTS

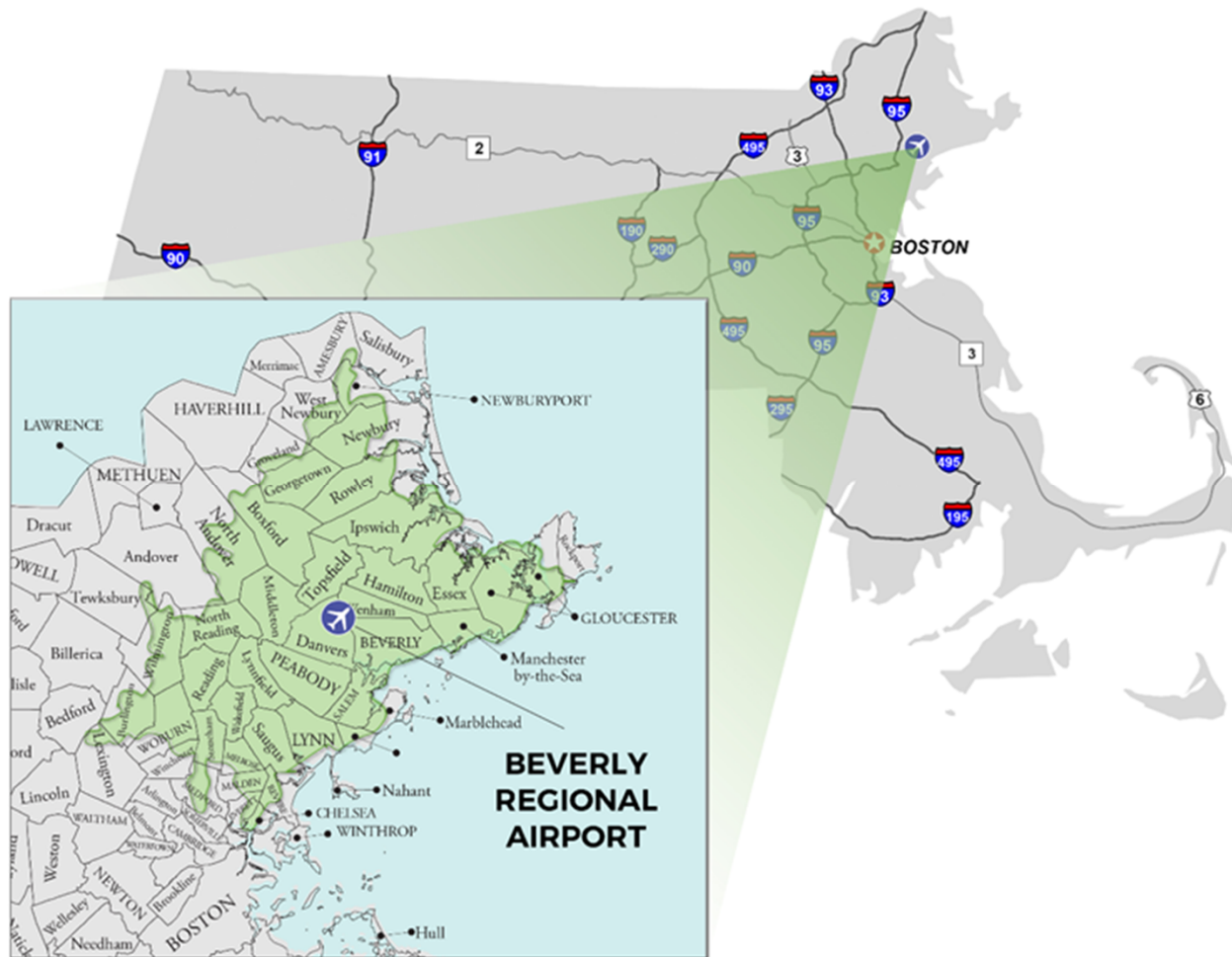


*Photo Credit: gbouillon*

## BVY MARKET AREA

- Beverly
- Boxford
- Burlington
- Chelsea
- Danvers
- Essex
- Everett
- Georgetown
- Gloucester
- Groveland
- Hamilton
- Ipswich
- Lexington
- Lynn
- Lynnfield
- Malden
- Manchester-by-the Sea
- Marblehead
- Medford
- Melrose
- Middleton
- Nahant
- Newbury
- Newburyport
- North Andover
- North Reading
- Reading
- Revere
- Rowley
- Salem
- Stoneham
- Topsfield
- Wakefield
- West Newbury
- Wenham
- Wilmington
- Winchester
- Woburn

Based on 30-minute drive time



# FORECAST CONSIDERATIONS

- National General Aviation trends
  - Business Use
  - General Aviation Piston Operators
- Regional trends
  - Population
  - Employment
  - Personal Income
  - Economic Developments
- FAA Terminal Area Forecast (TAF)





## AVIATION DEMAND FORECASTS

Forecast	Current (2020)	Annual Average Growth Rate
Based Aircraft	105	1.2%
Aircraft Operations	69,117	1.12%

- Airports should be designed to meet the needs and requirements of the aircraft that operate at them
- FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, provides for an airport's design be based on the most demanding or critical aircraft that operates regularly at that airport (500 annual operations or takeoffs/landings)
- Larger aircraft can still operate on the runways
- ***At BVY, B-II remains the current airport reference code represented by the Cessna Citation Latitude***



## CLARIFYING QUESTIONS - SESSION #2



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# FACILITY REQUIREMENTS



Photo Credit: gbouillon



# AIRFIELD FACILITY REQUIREMENTS

- Airport User Input
  - User Survey
  - Pilot Focus Groups
- FAA Requirements
  - Airfield Facility Requirements
  - Landside Facility Requirements
  - Airport Support Facilities
- Other Inputs
  - Regional Airport System Plan
  - Other Planning Studies



# FACILITY EVALUATION

Range of Evaluations				
✓ Airside	✓ Landside	✓ Vehicle Service Road	✓ Fuel Storage	✓ Environmental
✓ Airfield Visual Aids	✓ Obstruction Removal	✓ Aircraft Parking Aprons	✓ De-icing	✓ Aircraft Snow Removal Equipment & Storage
✓ Navigation Aids	✓ Hangars	✓ Landside Access & Parking	✓ Utilities	✓ Others

Key Evaluations	Key Points
Airside Development	<ul style="list-style-type: none"> <li>Promote safety and efficiency through application of FAA/Mass DOT standards and industry best practices</li> </ul>
Landside Development	<ul style="list-style-type: none"> <li>Maximizes financial sustainability for BVY and development potential for area businesses</li> <li>Constructed only if and when demand occurs</li> </ul>
Vehicle Service Road	<ul style="list-style-type: none"> <li>Enhanced operational safety and security as well as increased efficiency</li> <li>Utilization of recycled mill material from runway project</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>Wetlands: Minimal impacts</li> <li>Noise: No significant change anticipated; study underway</li> <li>Lighting: Progressive upgrade to LEDs (incl. RWs &amp; TWs)</li> <li>Waste: Recycling/reuse program</li> </ul>

# ALTERNATIVES ANALYSIS



*Photo Credit: gbouillon*



## ALTERNATIVES CONSIDERATIONS

- **Goals**

- Meet FAA/MassDOT airport design safety standards which are based on upon the weight, size and frequency of aircraft that typically use BVY
- Support or enhance BVY's existing operational safety and efficiency
- Address needs of aircraft operators and tenants
- Maximize airport business development opportunities
- Minimize impacts to neighbors and environment



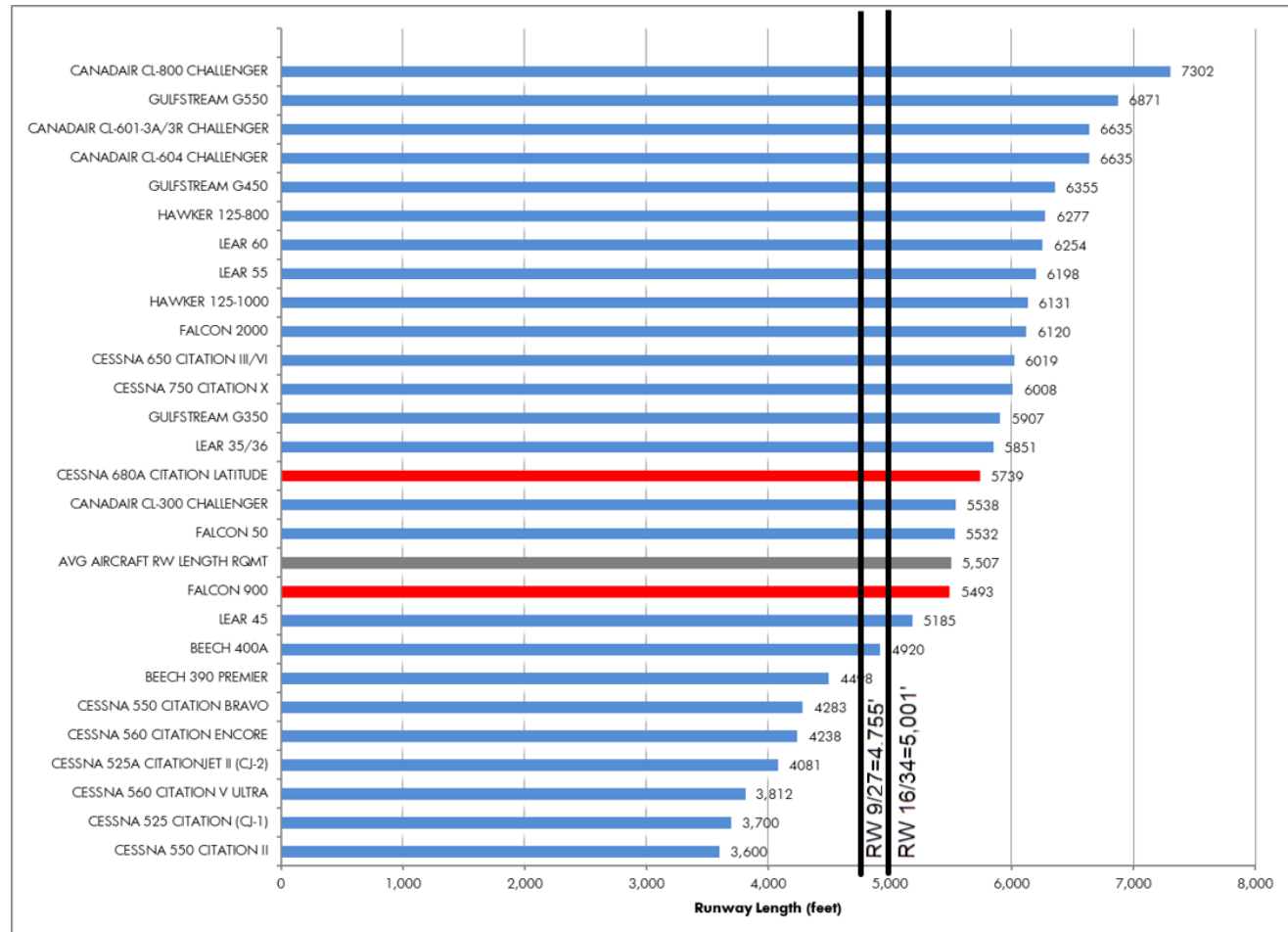


## IN SUMMARY – PREFERRED ALTERNATIVES

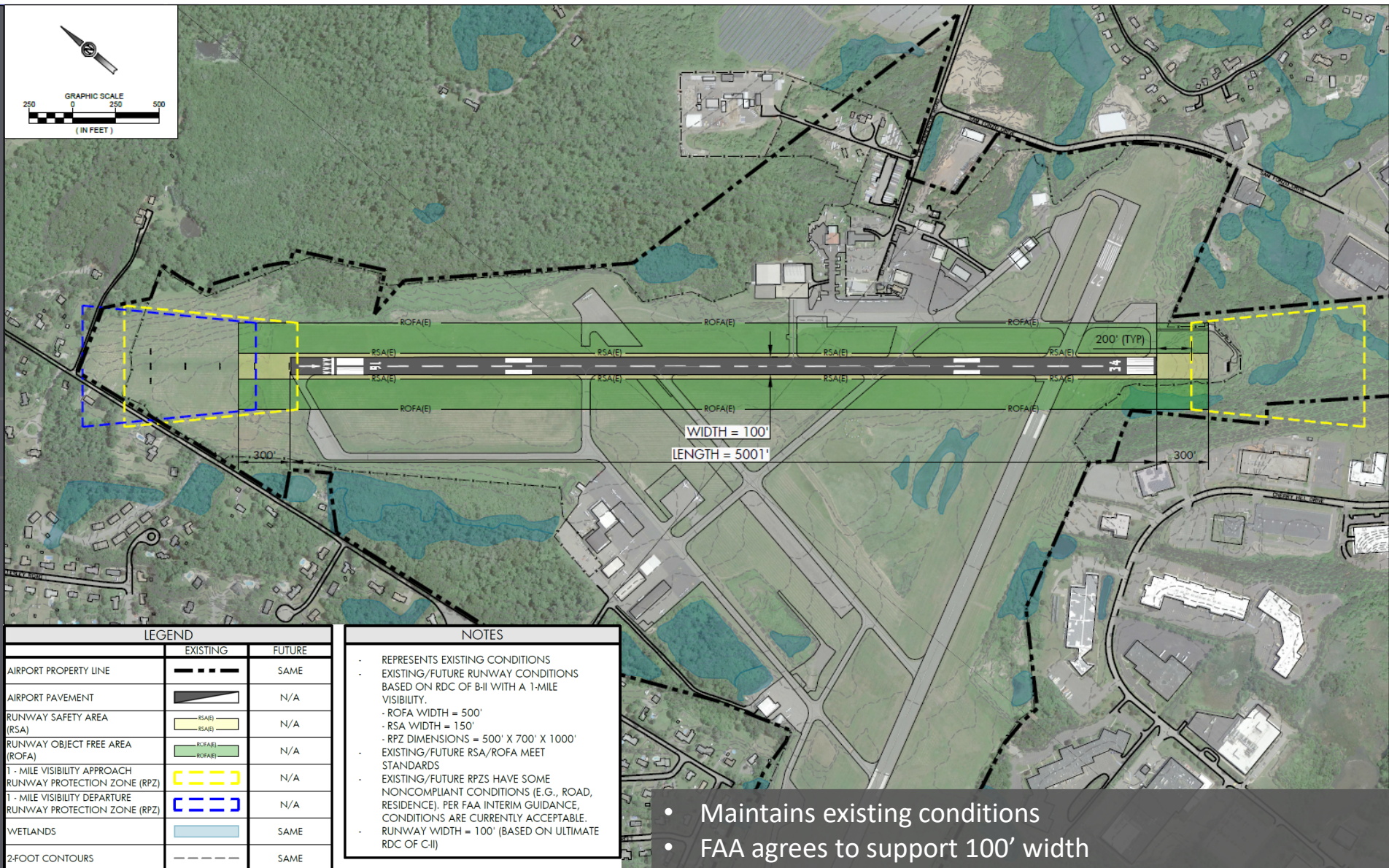
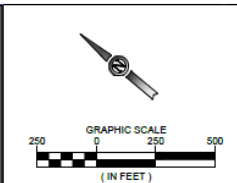
- **Runway 16-34 maintains existing status as a B-II runway**
  - Pave existing Runway Safety Areas (300' each end), enhancing operational safety margins; operational benefits only for departing aircraft; landing lengths remain the same
  - Maintain existing Runway 16-34 width of 100'
  - Supported by FAA and MassDOT with accompanying grant offers
- **Runway 9-27 maintains existing status as a B-II runway**
  - Runway maintains existing length of 4,755'
  - Runway width is reduced to 75' in conformance with FAA minimum width requirements

# RUNWAY LENGTH ANALYSIS

## Aircraft Currently Operating at BVY



# RW 16-34 Alternative 1



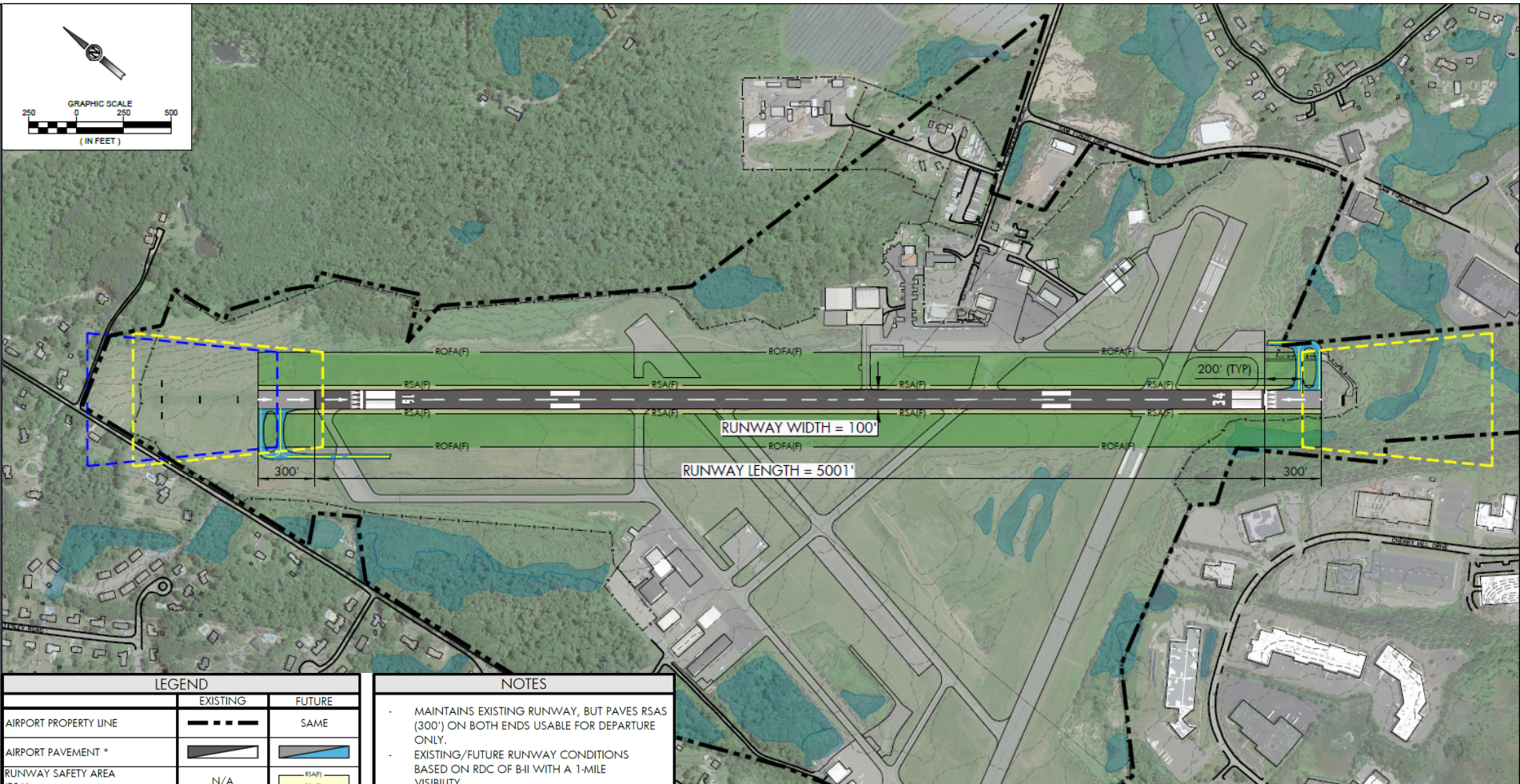
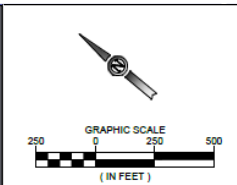
LEGEND		
	EXISTING	FUTURE
AIRPORT PROPERTY LINE	---	SAME
AIRPORT PAVEMENT	▬	N/A
RUNWAY SAFETY AREA (RSA)	▬ (RSA(E)) ▬ (RSA(E))	N/A
RUNWAY OBJECT FREE AREA (ROFA)	▬ (ROFA(E)) ▬ (ROFA(E))	N/A
1 - MILE VISIBILITY APPROACH RUNWAY PROTECTION ZONE (RPZ)	▬ (RPZ(E)) ▬ (RPZ(E))	N/A
1 - MILE VISIBILITY DEPARTURE RUNWAY PROTECTION ZONE (RPZ)	▬ (RPZ(E)) ▬ (RPZ(E))	N/A
WETLANDS	▬	SAME
2-FOOT CONTOURS	---	SAME

NOTES	
<ul style="list-style-type: none"> <li>REPRESENTS EXISTING CONDITIONS</li> <li>EXISTING/FUTURE RUNWAY CONDITIONS BASED ON RDC OF B-II WITH A 1-MILE VISIBILITY.</li> <li>ROFA WIDTH = 500'</li> <li>RSA WIDTH = 150'</li> <li>RPZ DIMENSIONS = 500' X 700' X 1000'</li> <li>EXISTING/FUTURE RSA/ROFA MEET STANDARDS</li> <li>EXISTING/FUTURE RPZS HAVE SOME NONCOMPLIANT CONDITIONS (E.G., ROAD, RESIDENCE). PER FAA INTERIM GUIDANCE, CONDITIONS ARE CURRENTLY ACCEPTABLE.</li> <li>RUNWAY WIDTH = 100' (BASED ON ULTIMATE RDC OF C-II)</li> </ul>	

- Maintains existing conditions
- FAA agrees to support 100' width



# RW 16-34 Alternative 2



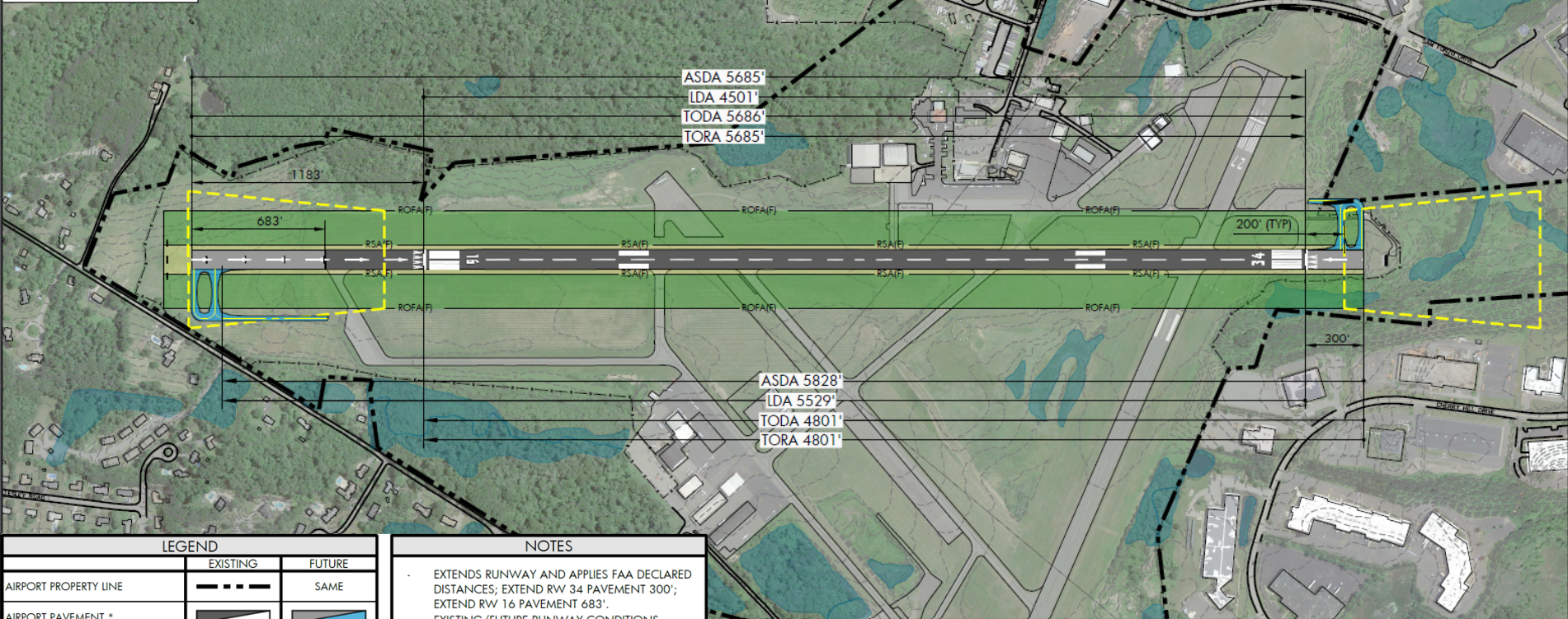
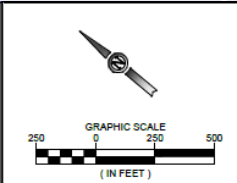
LEGEND		
	EXISTING	FUTURE
AIRPORT PROPERTY LINE	---	SAME
AIRPORT PAVEMENT *	▬	▬
RUNWAY SAFETY AREA (RSA)	N/A	▬ (RSA(F))
RUNWAY OBJECT FREE AREA (ROFA)	N/A	▬ (ROFA(F))
1 - MILE VISIBILITY APPROACH RUNWAY PROTECTION ZONE (RPZ)	▬	N/A
1 - MILE VISIBILITY DEPARTURE RUNWAY PROTECTION ZONE (RPZ)	N/A	▬
WETLANDS	▬	SAME
2-FOOT CONTOURS	---	SAME

NOTES	
<ul style="list-style-type: none"> <li>MAINTAINS EXISTING RUNWAY, BUT PAVES RSAS (300') ON BOTH ENDS USABLE FOR DEPARTURE ONLY.</li> <li>EXISTING/FUTURE RUNWAY CONDITIONS BASED ON RDC OF B-II WITH A 1-MILE VISIBILITY.</li> <li>ROFA WIDTH = 500'</li> <li>RSA WIDTH = 150'</li> <li>RPZ DIMENSIONS = 500' X 700' X 1000'</li> <li>EXISTING/FUTURE RSA/ROFA MEET STANDARDS</li> <li>EXISTING/FUTURE RPZS HAVE SOME NONCOMPLIANT CONDITIONS (E.G., ROAD, RESIDENCE). PER FAA INTERIM GUIDANCE, CONDITIONS ARE CURRENTLY ACCEPTABLE.</li> <li>RUNWAY WIDTH = 100' (BASED ON ULTIMATE RDC OF C-II)</li> </ul>	

- Maintains existing runway
- FAA supports paving RSAs to enhance aircraft departure length (not arrival)
- FAA supports a 100' width



# RW 16-34 Alternative 3



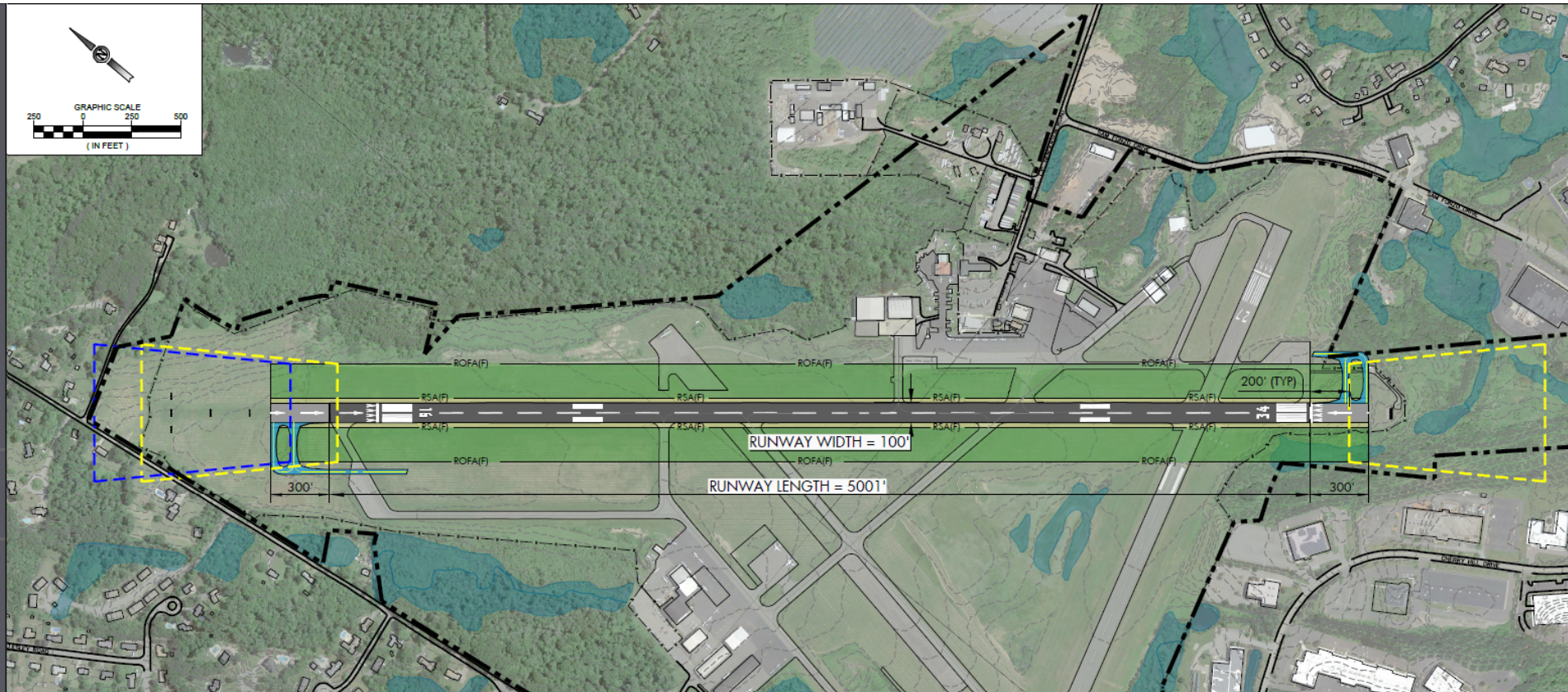
LEGEND		
	EXISTING	FUTURE
AIRPORT PROPERTY LINE	---	SAME
AIRPORT PAVEMENT *		
RUNWAY SAFETY AREA (RSA)	N/A	
RUNWAY OBJECT FREE AREA (ROFA)	N/A	
1 - MILE VISIBILITY APPROACH RUNWAY PROTECTION ZONE (RPZ)		N/A
1 - MILE VISIBILITY DEPARTURE RUNWAY PROTECTION ZONE (RPZ)	N/A	N/A
WETLANDS		SAME
2-FOOT CONTOURS	---	SAME

NOTES	
<ul style="list-style-type: none"> <li>EXTENDS RUNWAY AND APPLIES FAA DECLARED DISTANCES; EXTEND RW 34 PAVEMENT 300'; EXTEND RW 16 PAVEMENT 683'.</li> <li>EXISTING/FUTURE RUNWAY CONDITIONS BASED ON RDC OF B-II WITH A 1-MILE VISIBILITY. <ul style="list-style-type: none"> <li>ROFA WIDTH = 500'</li> <li>RSA WIDTH = 150'</li> <li>RPZ DIMENSIONS = 500' X 700' X 1000'</li> </ul> </li> <li>EXISTING/FUTURE RSA/ROFA MEET STANDARDS</li> <li>EXISTING/FUTURE RPZS HAVE SOME NONCOMPLIANT CONDITIONS (E.G., ROAD, RESIDENCE). PER FAA INTERIM GUIDANCE, CONDITIONS ARE CURRENTLY ACCEPTABLE.</li> <li>RUNWAY WIDTH = 100' (BASED ON ULTIMATE RDC OF C-II)</li> </ul>	

- Extends existing runway
- Applies FAA Declared Distances
- Potentially significant additional construction requirements
- FAA supports a 100' width



# RW 16-34 FAA Preferred Alternative



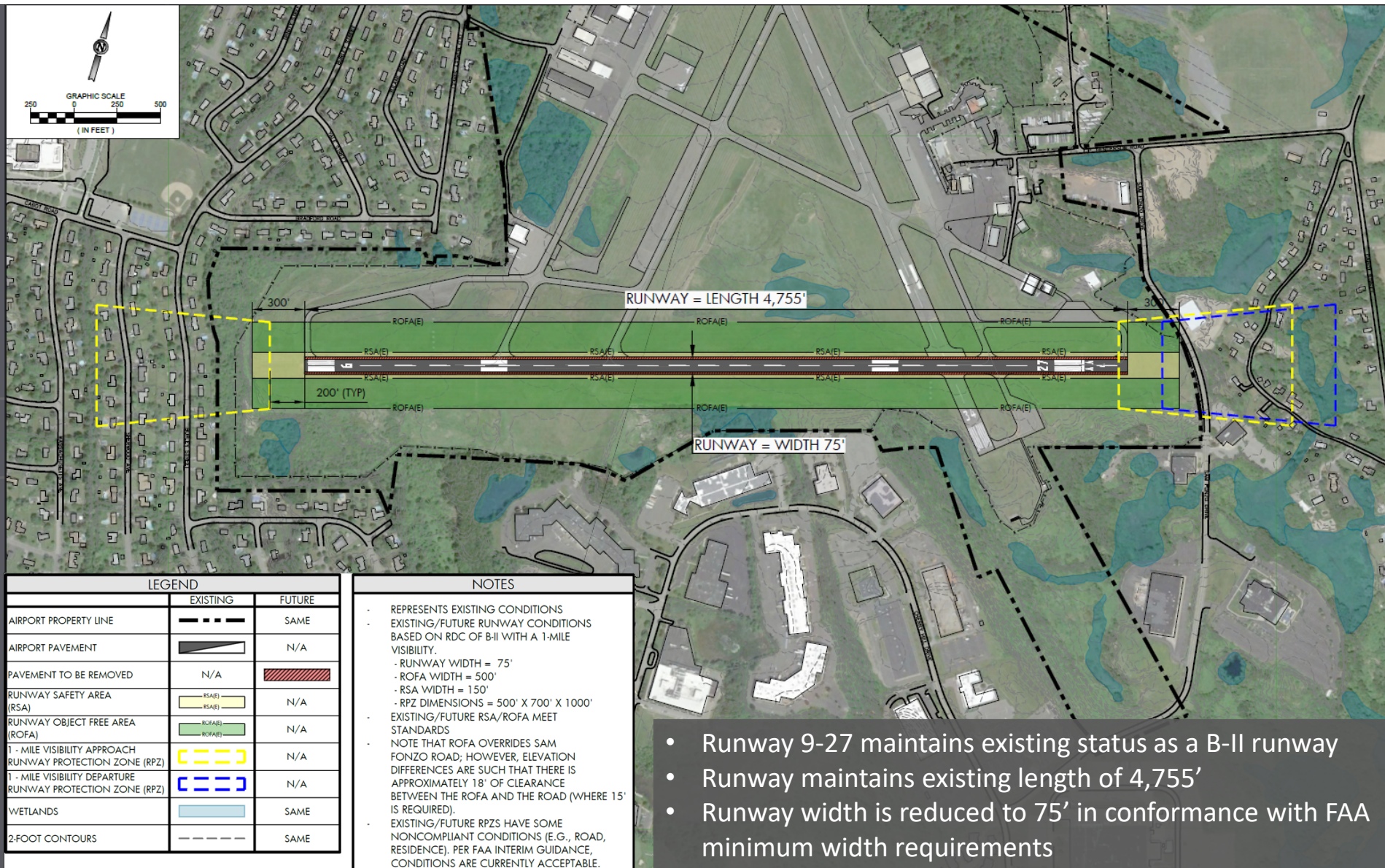
LEGEND		
	EXISTING	FUTURE
AIRPORT PROPERTY LINE	---	SAME
AIRPORT PAVEMENT *	▬	▬
RUNWAY SAFETY AREA (RSA)	N/A	▬ (RSA(F))
RUNWAY OBJECT FREE AREA (ROFA)	N/A	▬ (ROFA(F))
1 - MILE VISIBILITY APPROACH RUNWAY PROTECTION ZONE (RPZ)	▬	N/A
1 - MILE VISIBILITY DEPARTURE RUNWAY PROTECTION ZONE (RPZ)	N/A	▬
WETLANDS	▬	SAME
2-FOOT CONTOURS	---	SAME

NOTES	
• MAINTAINS EXISTING RUNWAY, BUT PAVES RSAS (300') ON BOTH ENDS USABLE FOR DEPARTURE ONLY.	
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• ROFA WIDTH = 500'	
• RSA WIDTH = 150'	
• RPZ DIMENSIONS = 500' X 700' X 1000'	
• EXISTING/FUTURE RSA/ROFA MEET STANDARDS	
• EXISTING/FUTURE RPZS HAVE SOME NONCOMPLIANT CONDITIONS (E.G., ROAD, RESIDENCE). PER FAA INTERIM GUIDANCE, CONDITIONS ARE CURRENTLY ACCEPTABLE.	
• RUNWAY WIDTH = 100' (BASED ON ULTIMATE RDC OF C-II)	

- Runway 16-34 maintains existing status as a B-II runway
- Runway Safety Areas are paved (300' each end), enhancing operational safety margins; operational benefits only for departing aircraft
- Maintain existing Runway 16-34 width of 100'
- Supported by FAA and MassDOT with accompanying grant offers



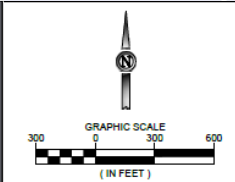
# RW 9-27 FAA Preferred Alternative



- Runway 9-27 maintains existing status as a B-II runway
- Runway maintains existing length of 4,755'
- Runway width is reduced to 75' in conformance with FAA minimum width requirements



# Future Airfield (Runways & Taxiways)



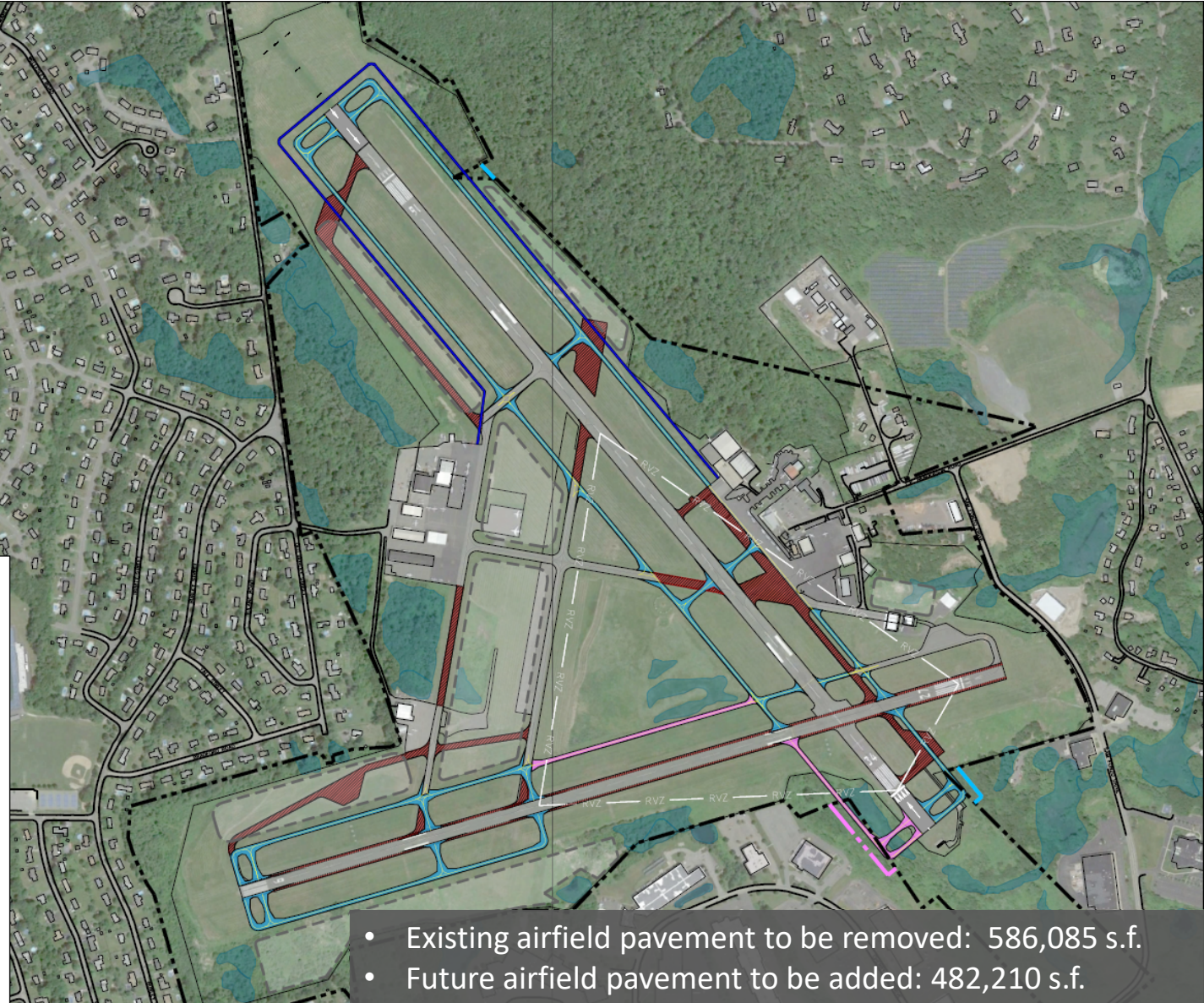
	LEGEND		
	EXISTING	FUTURE	ULTIMATE
AIRPORT PROPERTY LINE	---	---	---
AIRPORT PAVEMENT	---	---	---
PERIMETER ROAD	N/A	---	N/A
PAVEMENT TO BE REMOVED	N/A	---	N/A
RVZ (RUNWAY VISUAL ZONE)	---	SAME	SAME
AERONAUTICAL RELATED DEVELOPMENT	N/A	---	N/A
WETLANDS	---	N/A	N/A

## NOTES

- REPRESENTS OPTIMUM TAXIWAY CONFIGURATION
- CONSTRUCTION PHASING TO BE DETERMINED
- TAXIWAY DESIGN STANDARDS BASED ON TDG - 2
- RUNWAY/TAXIWAY SEPARATION
  - RUNWAY 9-27 - 240'
  - RUNWAY 16/34 - 300'
- TAXIWAY INTERFACE WITH RUNWAY 16-34 ENDS SUBJECT TO ADJUSTMENT BASED ON FINAL DETERMINATION OF RUNWAY END LOCATIONS
- RVZ SUBJECT TO CHANGE BASED ON FINAL DETERMINATION OF RUNWAY END LOCATIONS

## SOURCE:

1. WETLANDS DATA OBTAINED FROM DEPARTMENT OF MASSACHUSETTS



- Existing airfield pavement to be removed: 586,085 s.f.
- Future airfield pavement to be added: 482,210 s.f.



# PROPOSED AIRPORT IMPROVEMENTS

Key Improvements	Key Points
Increased RWY 16-34 Length for Departures	<ul style="list-style-type: none"><li>• Enhances aircraft operational safety factors</li><li>• Promotes effectiveness and benefits of newer GA aircraft</li></ul>
Narrowing width for RWY 9-27	<ul style="list-style-type: none"><li>• Reduce pavement width per FAA design standards</li></ul>
Taxiway Realignments	<ul style="list-style-type: none"><li>• Increases operational safety and efficiency for aircraft</li></ul>
Impervious Surfaces	<ul style="list-style-type: none"><li>• Existing airfield pavement to be removed: 586,085 s.f.</li><li>• Future airfield pavement to be added: 482,210 s.f.</li></ul>
Landside Development	<ul style="list-style-type: none"><li>• Maximizes financial sustainability for BVY and development potential for area businesses</li><li>• Constructed only if and when demand occurs</li></ul>
Vehicle Service Road	<ul style="list-style-type: none"><li>• Enhanced operational safety and security as well as increased efficiency</li><li>• Utilization of recycled mill material from runway project</li></ul>
Environmental	<ul style="list-style-type: none"><li>• Wetlands: Minimal impacts</li><li>• Noise: No significant change anticipated; study underway</li><li>• Lighting: Progressive upgrade to LEDs (incl. RWs &amp; TWs)</li><li>• Waste: Recycling/reuse program</li></ul>



# CLARIFYING QUESTIONS - SESSION #3



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# NEXT STEPS



*Photo Credit: gbouillon*

PUBLIC COMMENTS FOR  
**PHASE 2 & 3** MAY BE SUBMITTED AT  
[BEVERLYAIRPORT.COM/MASTERPLAN](http://BEVERLYAIRPORT.COM/MASTERPLAN)  
PLEASE SUBMIT COMMENTS BY **02.26.2021**



PUBLIC COMMENTS FOR **PHASE 4**  
WILL BE TAKEN AT OUR NEXT MEETING.  
CHECK OUT PROJECT INFORMATION AT  
[BEVERLYAIRPORT.COM/MASTERPLAN](http://BEVERLYAIRPORT.COM/MASTERPLAN)





## NEXT STEPS

- Presentation and draft chapters 4 and 5 are available now online at [www.beverlyairport.com](http://www.beverlyairport.com) (see Master Plan tab)
- Virtual Community Meetings 6-8pm: Beverly (1/21), Danvers (1/26) and Wenham (1/27)
- Development of Implementation Plan and Airport Layout Plan (ALP)
- Completion of noise contours

Please submit comments by **February 26, 2021**

**Email:** [jim.miklas@woolpert.com](mailto:jim.miklas@woolpert.com)

**Mail:** Beverly Regional Airport Administration, 50 L.P. Henderson Road,  
Beverly, MA 01915



# PROPOSED AIRPORT IMPROVEMENTS

Key Improvements	Key Points
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# QUESTION & ANSWER SESSION



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**Email:** [jim.miklas@woolpert.com](mailto:jim.miklas@woolpert.com)

**Mail:** Beverly Regional Airport Administration, 50 L.P. Henderson Road, Beverly, MA 01915





*Thank You!*

Gloria Bouillon  
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[gbouillon@beverlyma.gov](mailto:gbouillon@beverlyma.gov)

Jim Miklas  
Lead Planner  
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