



# NANTUCKET MEMORIAL AIRPORT

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## Master Plan Working Group Meeting

Thursday, May 29, 2014



JACOBS



# Meeting Agenda

May 29, 2014

1. **Welcome, Introductions & News**
2. **Review of Master Plan Existing Conditions & Forecasts**
3. **Master Plan Improvement Concepts**
  - ✓ Safety and Security – Bill Richardson, Jacobs
  - ✓ Efficiency and Revenue – Noah Karberg, ACK
  - ✓ Capacity – Bill Richardson, Jacobs
  - ✓ Sustainability Concepts – Meredith de Carbonnel, Jacobs
4. **Discussion/Keypad Preferences**
5. **Next Steps**

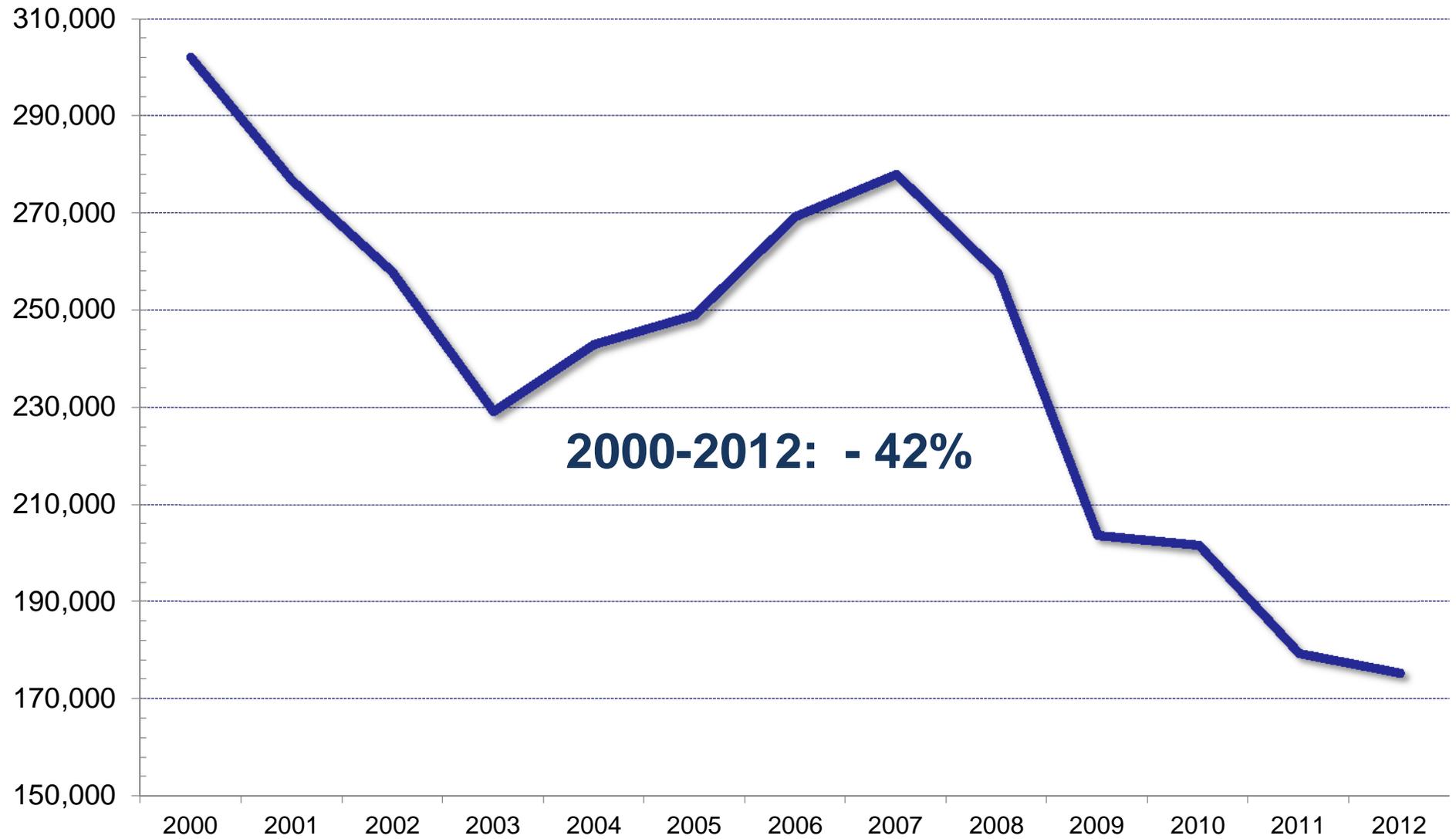


# ACK Master Plan Schedule

Phase/Task	Summer '13	Fall '13	Winter '13	Spring '14	Summer '14
Inventory/ GIS Mapping/ Air Service Trends		█			
Environmental Sustainability	█				
Forecasts/ Fleet Mix			█		
Coastal Process Analysis	█			█	
Alt. Concepts Potential Impacts				█	
Implementations Plan/ ALP				█	
Financial Feasibility Plan				█	
Environmental Overview	█	█	█	█	
Public Outreach		---*---	*---	*---	* 

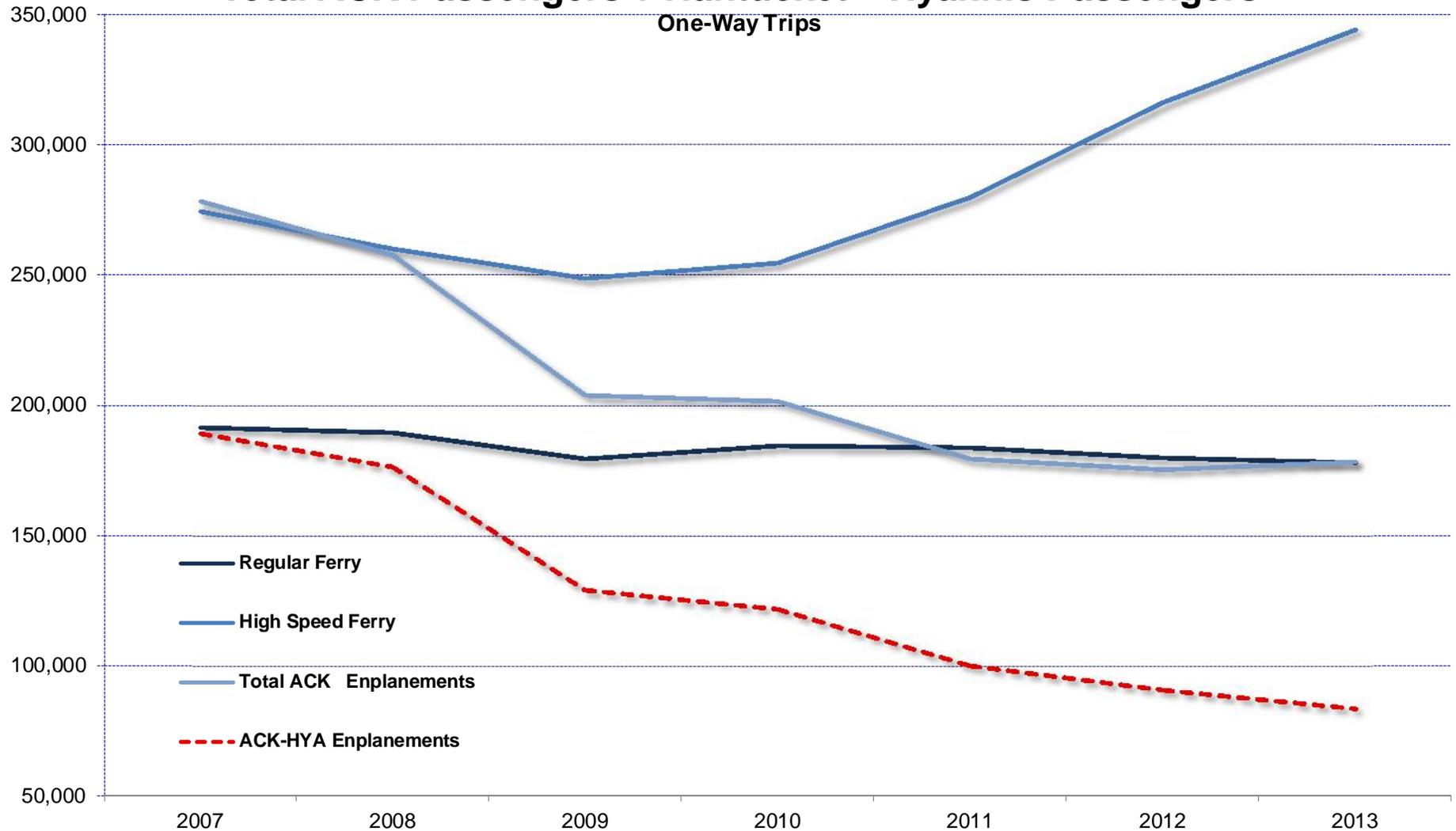
# Passenger Enplanements

Nantucket Airport



# Airline & Ferry Passengers

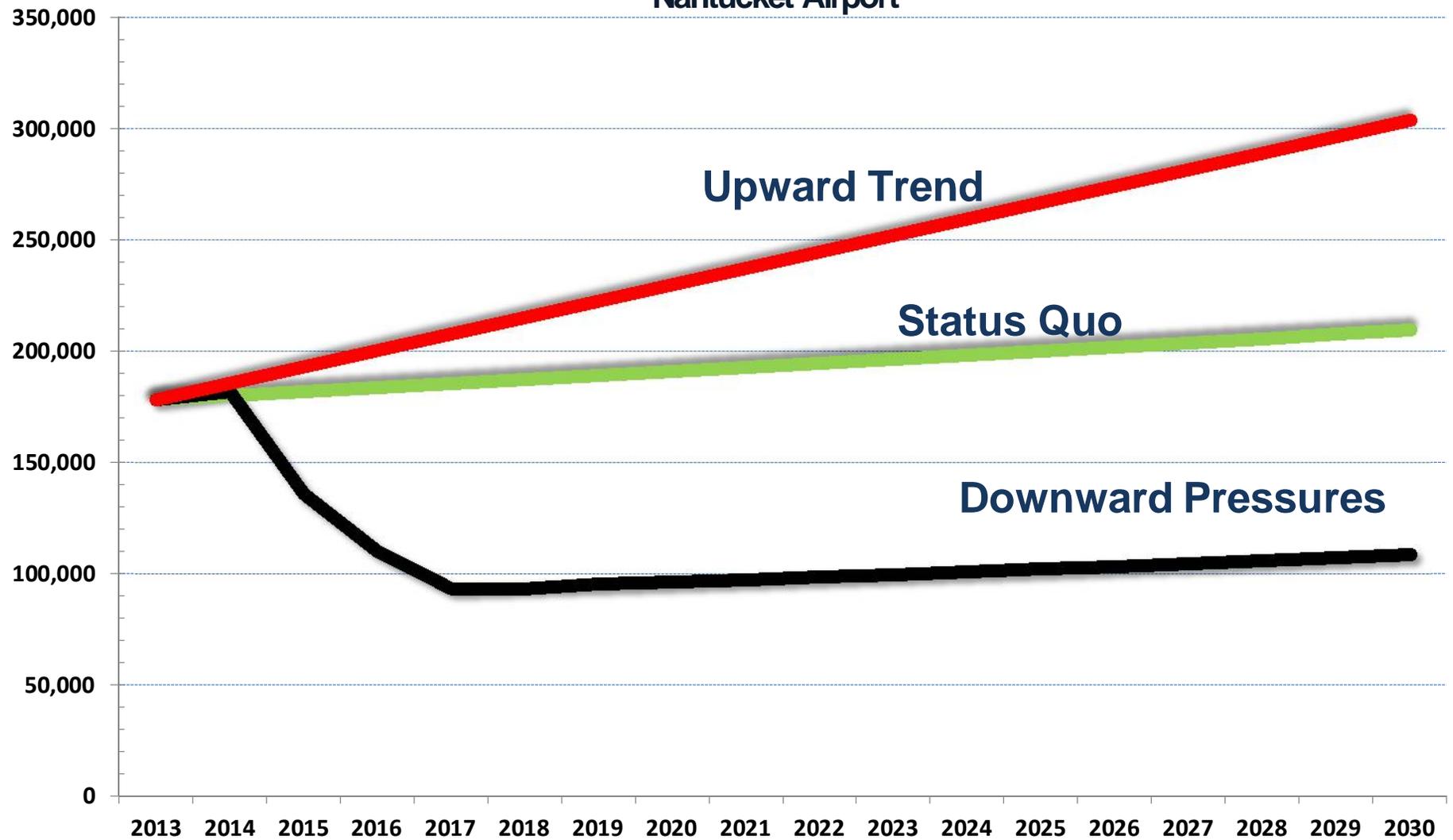
Total ACK Passengers + Nantucket – Hyannis Passengers



# Forecast Scenarios

## Year-round Passenger Enplanements

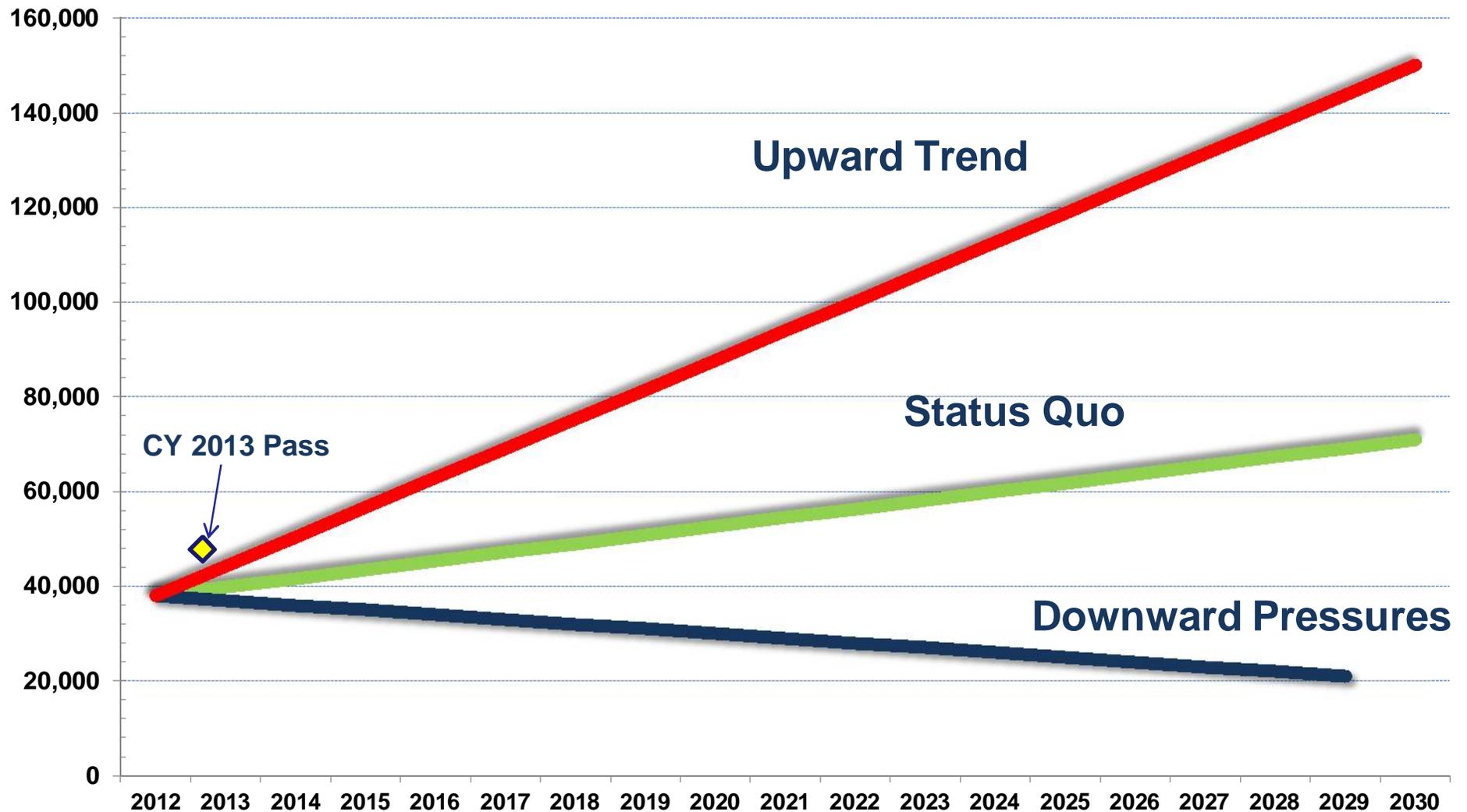
Nantucket Airport



# Forecast Scenarios

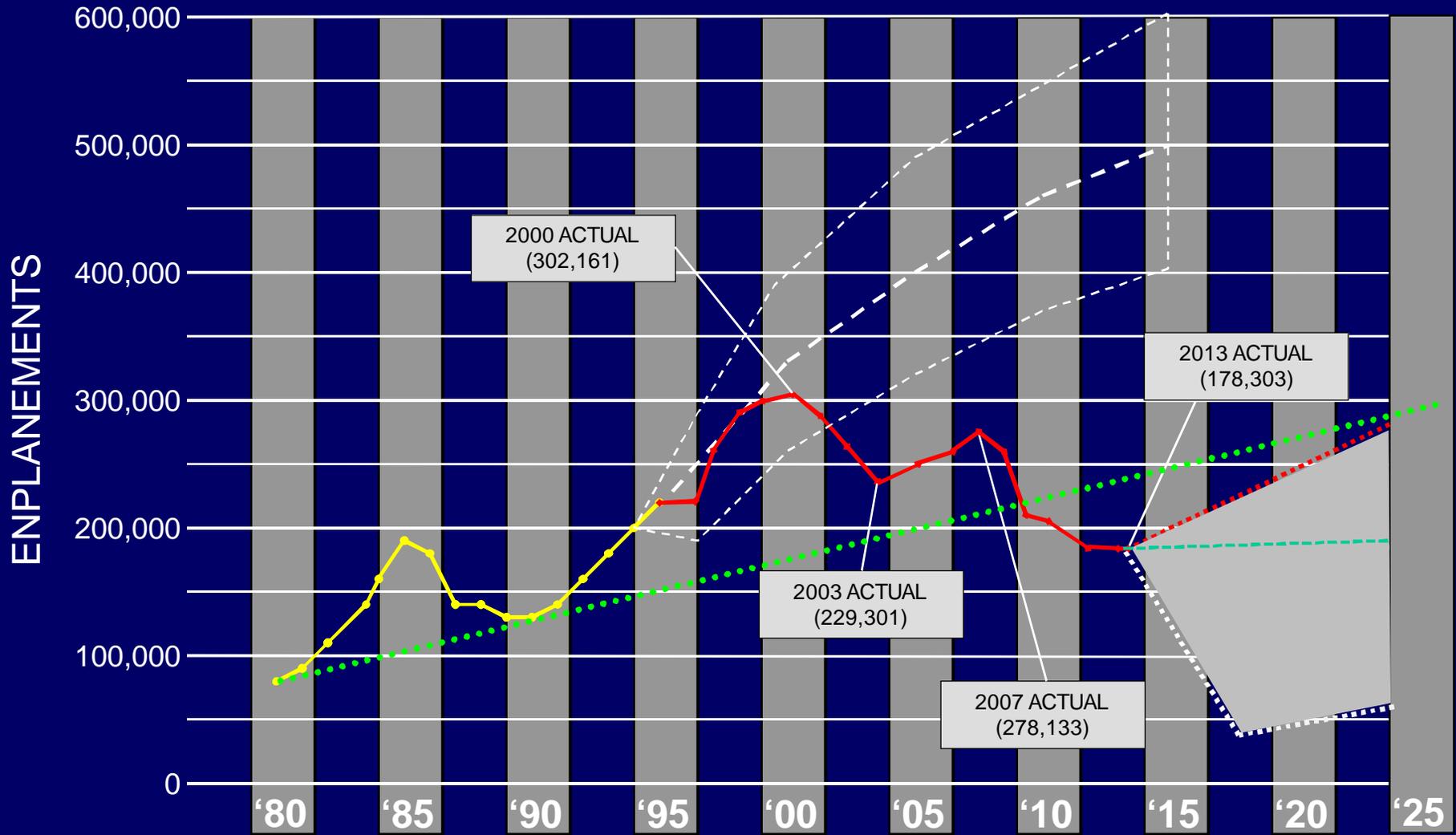
## Summer Season Passenger Enplanements

Nantucket Airport



# Enplanement Forecast

Nantucket Memorial Airport



- HISTORICAL
- - ● - - 1995 FORECAST
- ACTUAL SINCE MASTER PLAN FORECAST (1995)
- ENPLANEMENTS TREND LINE
- POTENTIAL FORECAST RANGE

*Revised ACK Forecast Range 5-23-14.PPT*



# Master Plan Issues

## 1. Safety and Security

- ✓ Existing Needs/Current Activity
- ✓ Airfield Operational Efficiency

## 2. Efficiency/Revenue Enhancements

- ✓ Existing Aviation Revenue Sources
- ✓ New Aviation/Non-aviation Revenue Sources

## 3. Capacity

- ✓ Terminal Spatial Needs
- ✓ Airfield Enhancements

## 4. Environmental/Sustainability Concepts

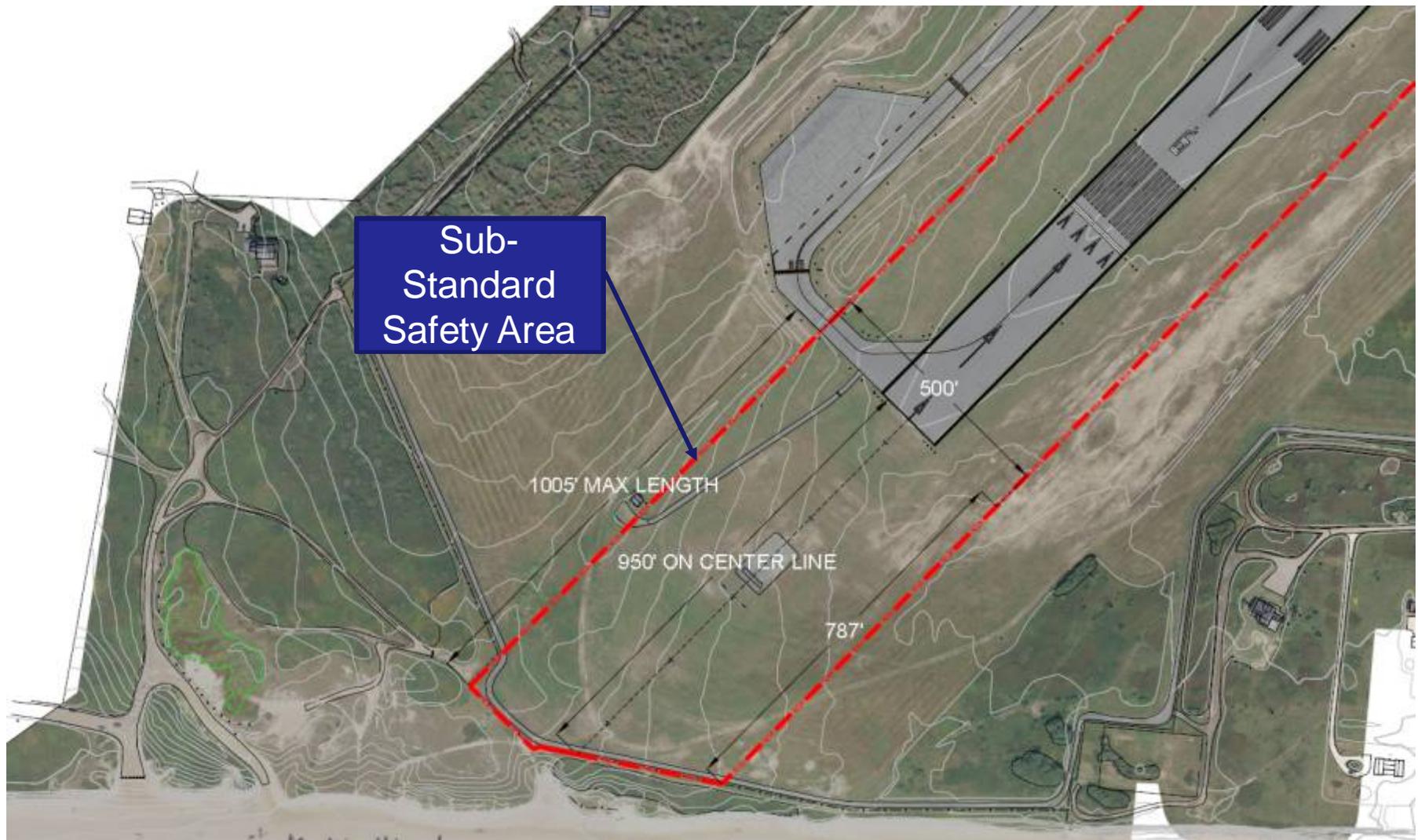
- ✓ Alternative Energy
- ✓ Resource Protection
- ✓ Sustainability Concepts



# Safety and Security Concepts



# Runway 6 Safety Area Deficiencies



# South Apron



**As Designed**

**As Currently Used**

# Runway 24 High Speed Exit Taxiway



# Runway 33 Exit and Parallel Taxiway



# Safety & Security Concepts

## Other Ideas / Flip Chart Notes



# Efficiency and Revenue Concepts

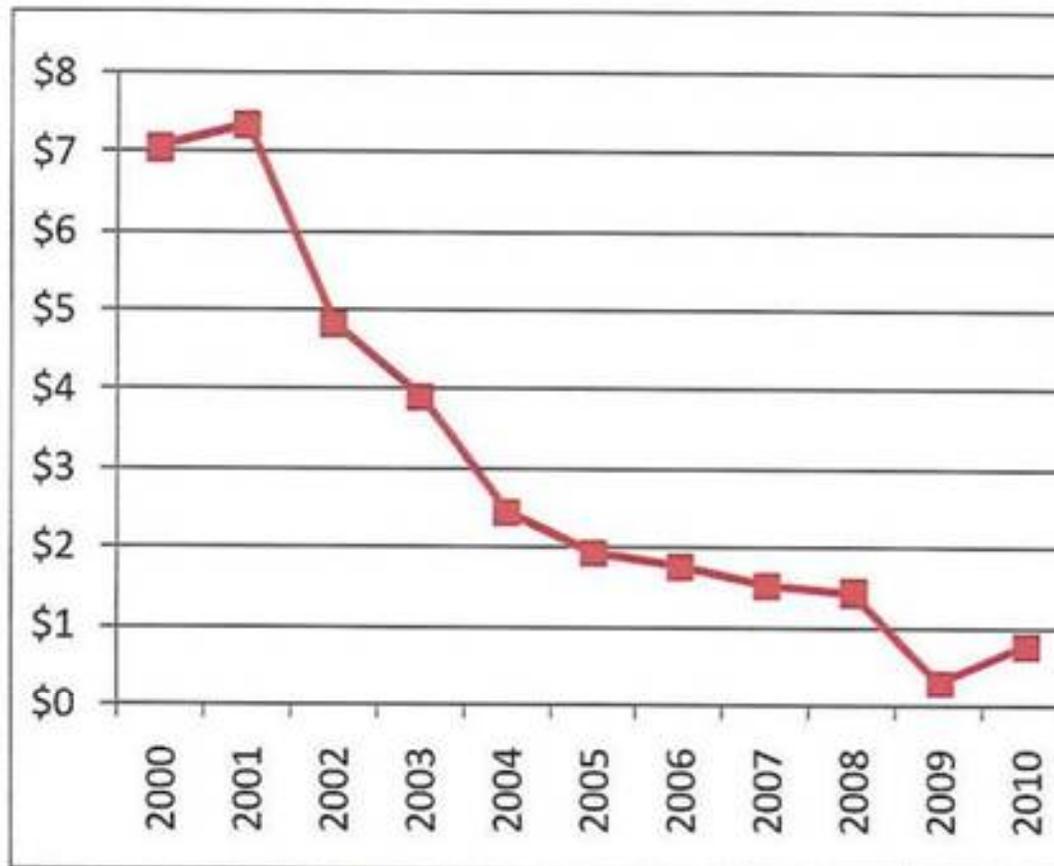
## Aviation Revenue Sources/Existing

- ✓ AIP Entitlement Funds/Discretionary Funds
- ✓ \$4 million FAA Air Traffic Control Tower Earmark
- ✓ MassDOT Airport Safety and Maintenance Funds
- ✓ Existing Rates and Charges
- ✓ Other Concepts



# Airport and Airway Trust Fund Dwindling

## Provides Funding for FAA's Airport Improvement Program



Source: "Airport and Airway Trust Fund: Declining Balance Raises Concerns Over Ability to Meet Future Demands," Government Accountability Office, February 3, 2011.  
Leigh Fisher

# Efficiency and Revenue Concepts

## Potential New Aviation Revenue Sources

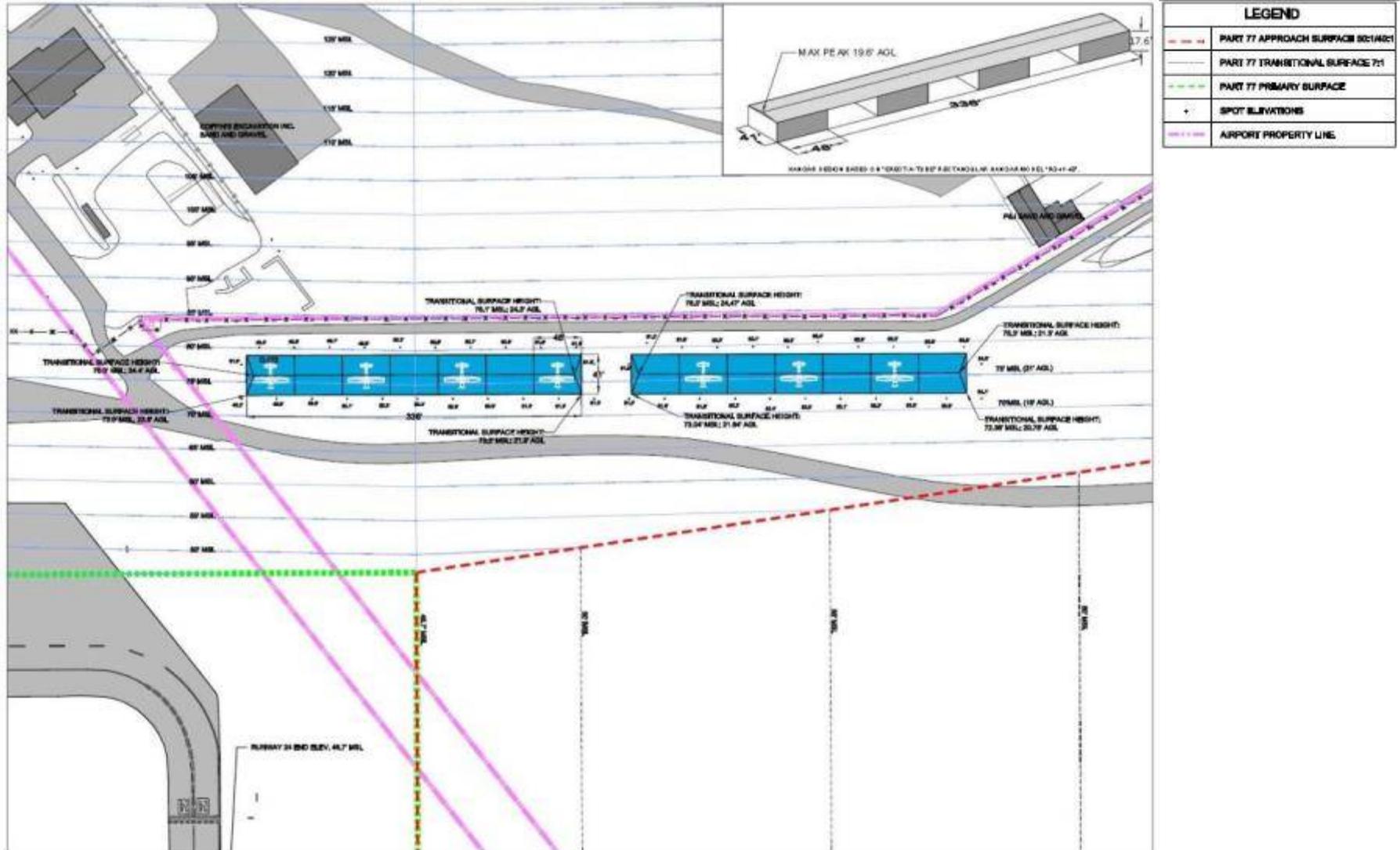
- ✓ Potential GA Hangar/Commercial Combo Space
- ✓ Benchmarking comparable airports' rates and charges
- ✓ Equitable restructuring of ACK rates and charges (landing fees, weight based, ground leases etc. )

## Potential New Non-Aviation Revenue Sources

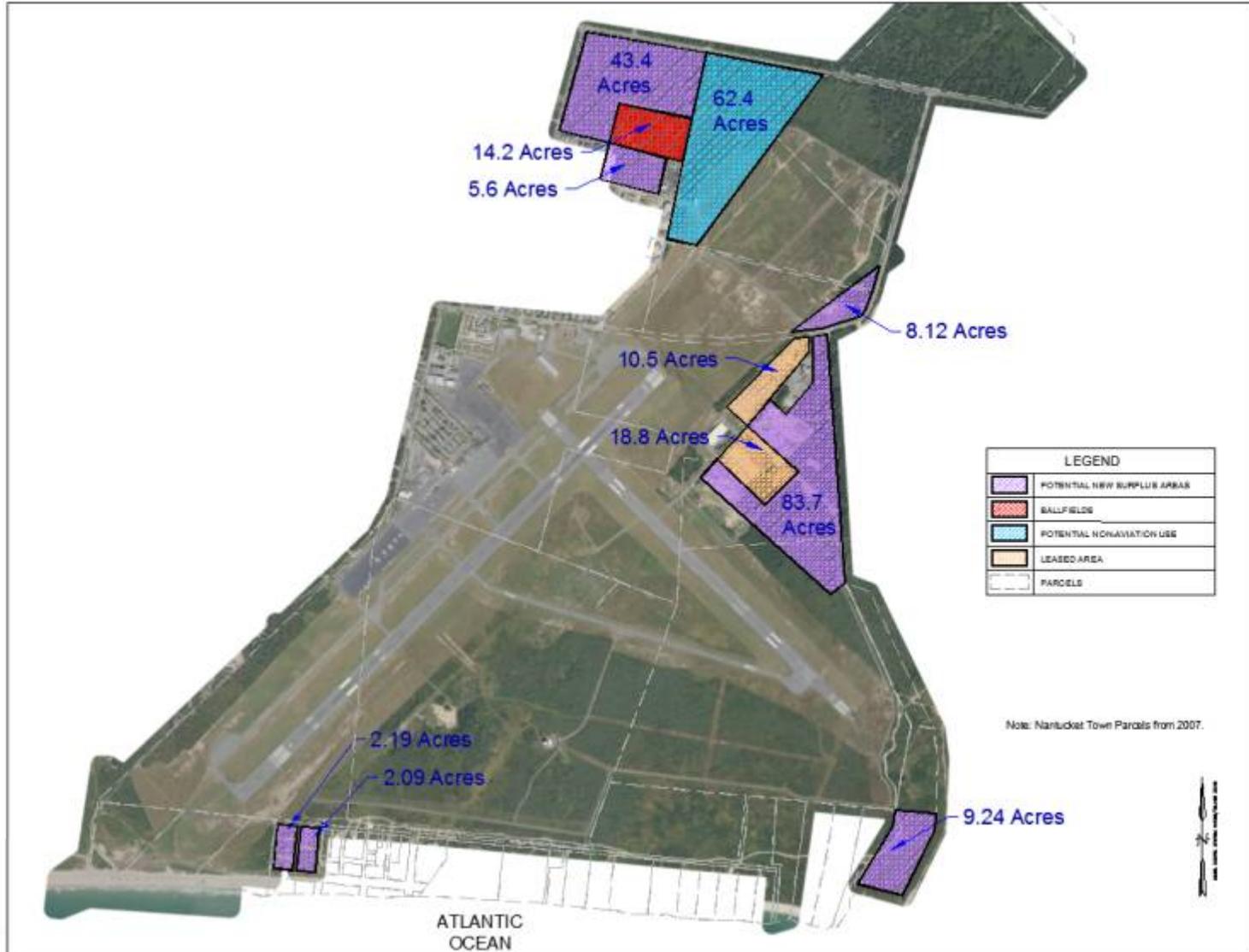
- ✓ Surplus Parcels – swap, sell or lease



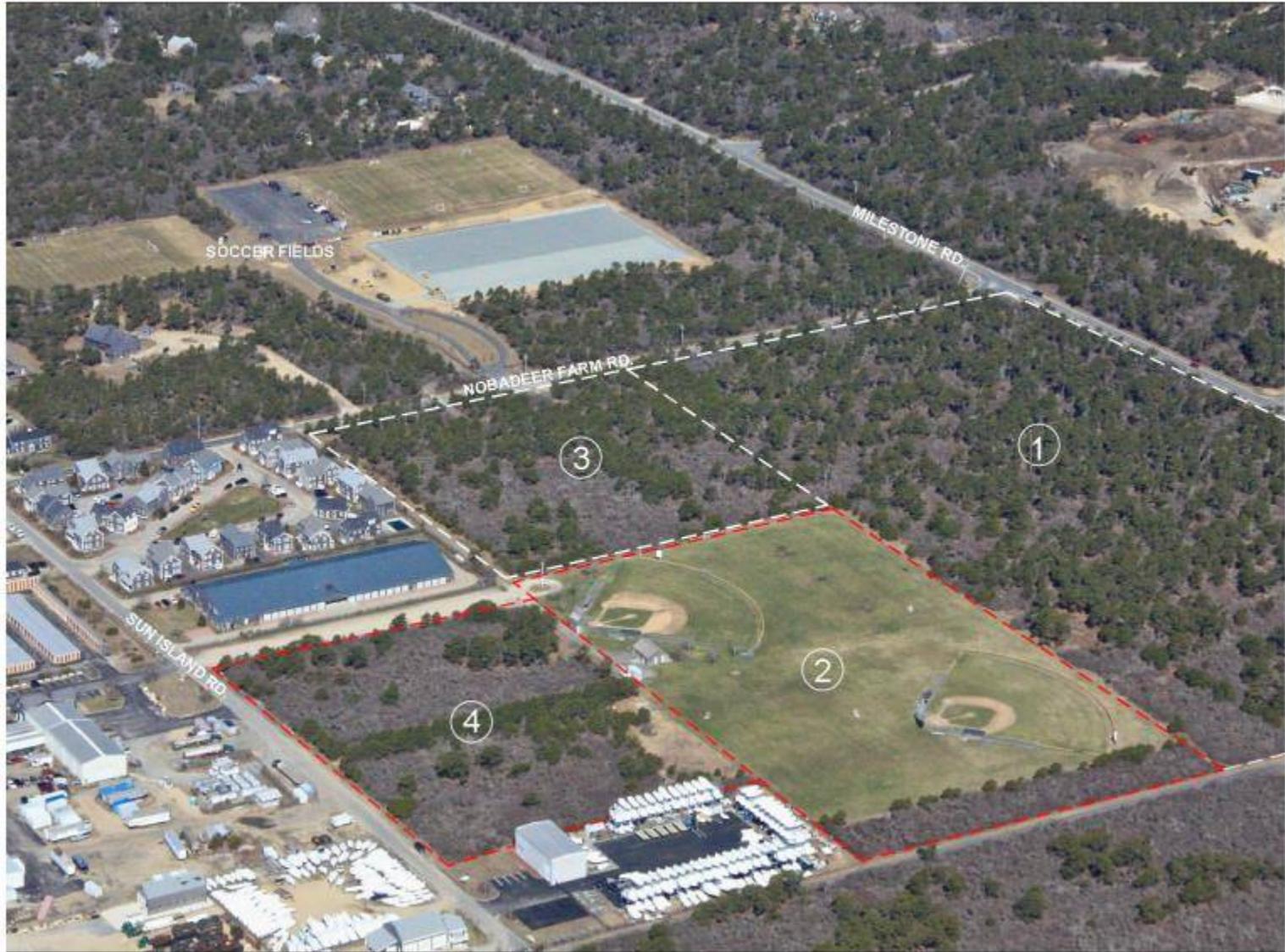
# GA Hangar-Commercial Combo Space Along RW 24/adjacent Coffin Pit



# Potential Non-Aviation Surplus Parcels



# Non-Aviation Parcels



# Parking Lot Revenue Generation



# Efficiency and Revenue Concepts

## Other Ideas / Flip Chart Notes



# Terminal and Airfield Capacity



# Terminal Secure Space/ Hold Room Options (Existing Terminal Congestion)

TSA  
Security  
Checkpoint



Secure Hold  
Room  
(Capacity 127)

# Terminal Secure Space/ Hold Room Options (Future Hold Room Concept)

TSA  
Security  
Checkpoint

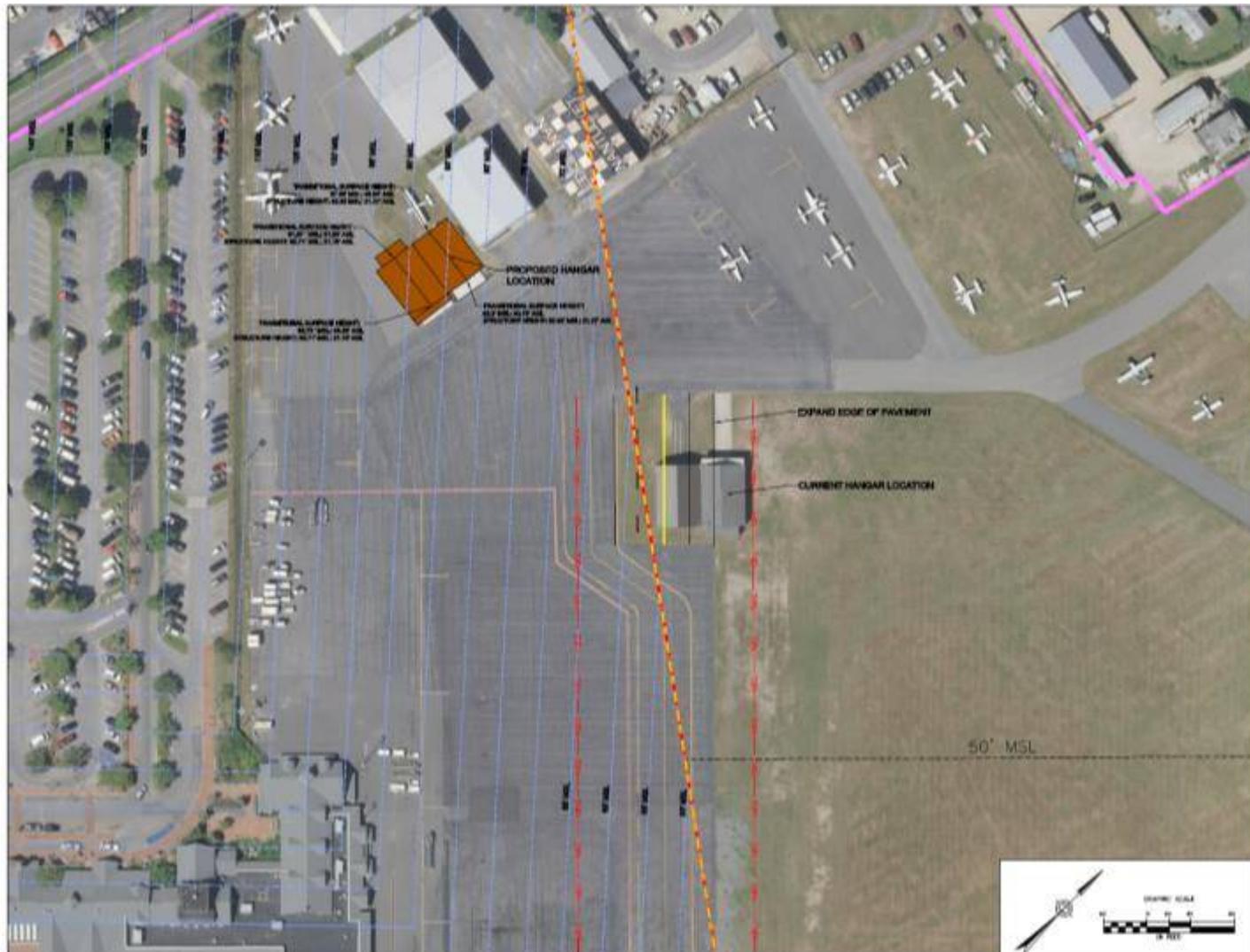


Seasonal bag  
claim (tent)

Secure Hold  
Room  
(Capacity 127)

Secure Hold Room  
Seasonal  
Expansion

# North Apron Repaving Rehab Rebuild and Relocate Hangars 5 & 6



LEGEND	
	PART 77 APPROACH SURFACE 3:1
	RUNWAY PROTECTION ZONE (RPZ)
	PART 77 TRANSITIONAL SURFACE 7:1
	TAXIWAY OBJECT FREE AREA (TOFA)
	AIRPORT PROPERTY LINE
	PROPOSED HANGAR LOCATION
	EXISTING STRUCTURES

# Terminal and Airfield Capacity

## Other Ideas / Flip Chart Notes

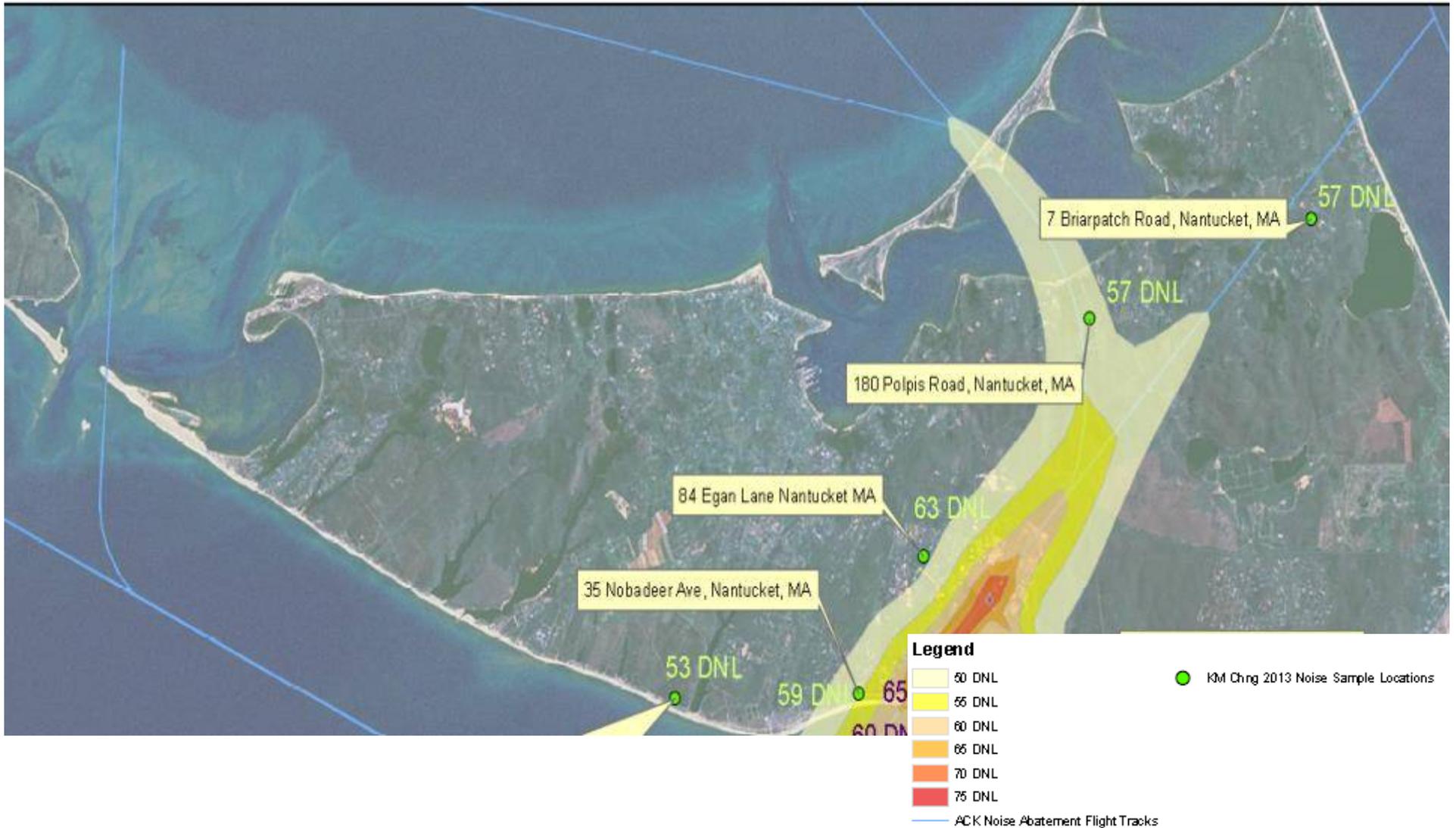


# Sustainability Concepts

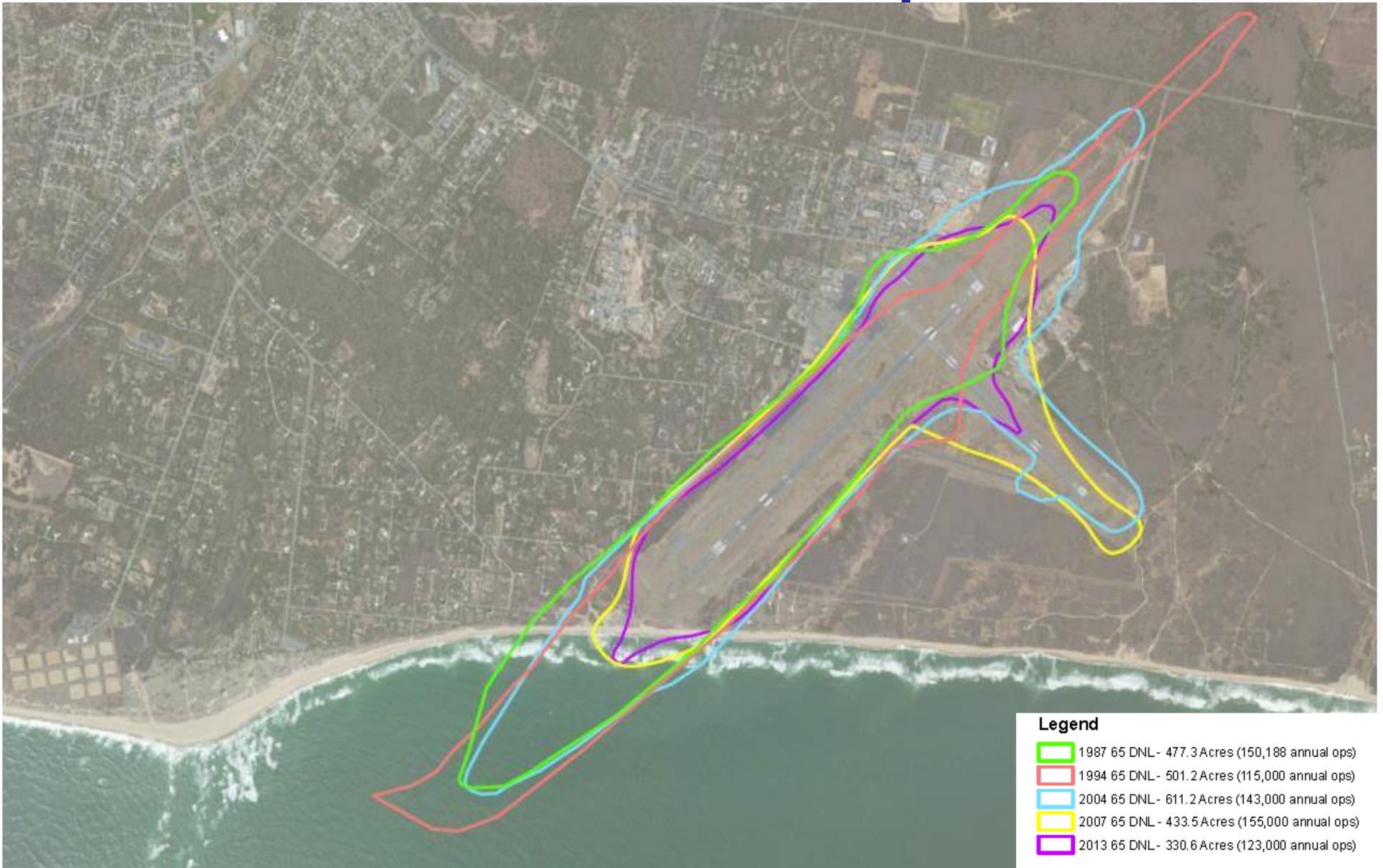


# Integrated Noise Model

## Average Year DNL - 2013



# 65 DNL Threshold Comparison



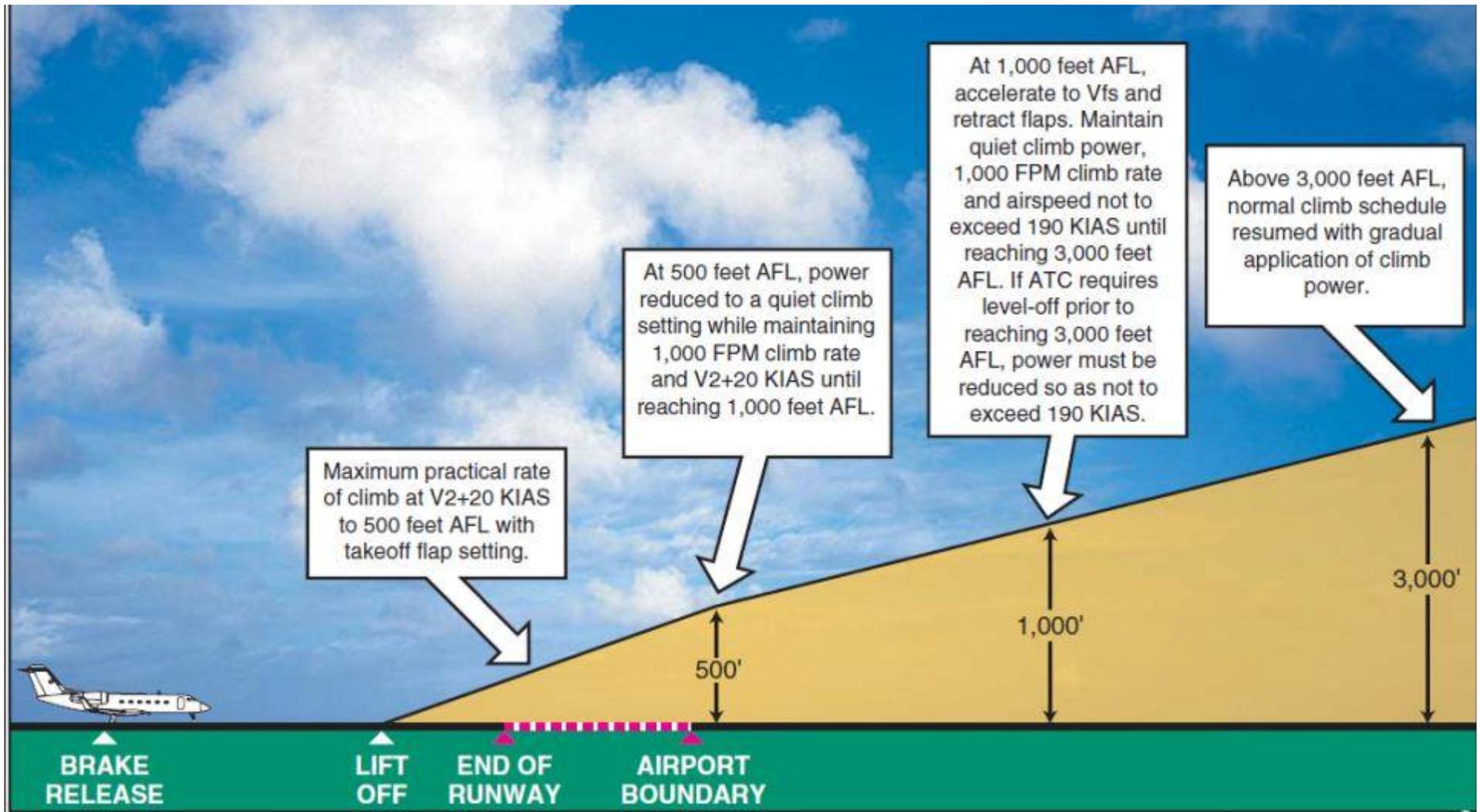
# Sustainability Concepts

## Noise

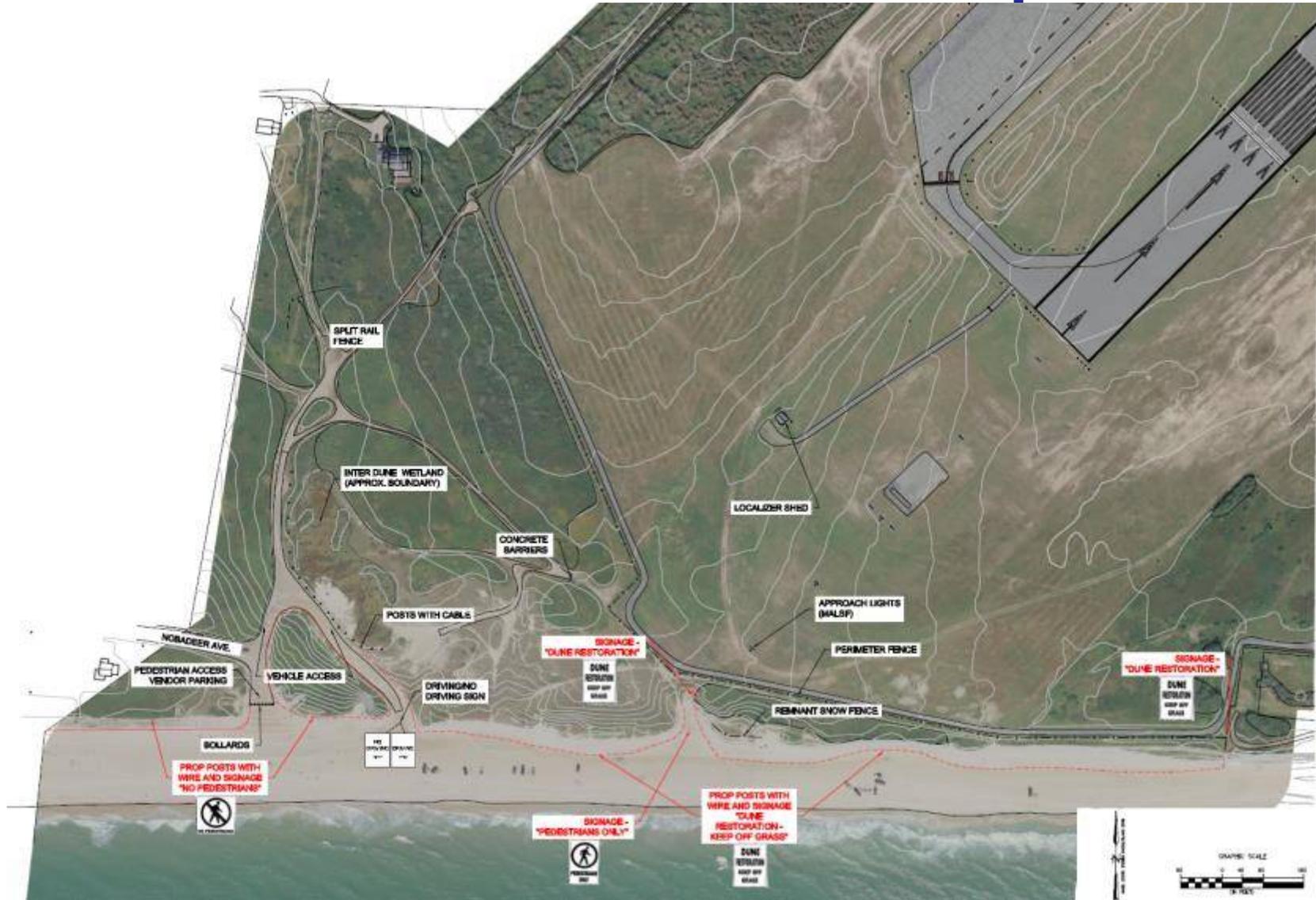
- NBAA/AOPA – options for operational noise control
- Carbon footprint of noise route
  - ✓ 5 miles longer from HYA to ACK
  - ✓ 1,077,215 gallons burned by the 402's since noise route started
  - ✓ 478.8 metric tons of additional carbon per year (402's alone)
  - ✓ \$ 5.1 million to fly the Noise Abatement route since its inception



## Departure Noise Mitigation Procedure (Concept)



# Coastal Stabilization Concepts



# Ground Transportation Improvements

- Promote increased use of NRTA Service
- Preferential parking for alternative-fuel cars/EV charging stations
- Promote increase in use of bicycle transport to airport
- Other Concepts/Ideas
- Ride-Share



# Alternative Energy Concepts

- Explore Potential Areas for Installation of Alternative Energy Generators (ex. solar panels)
- Convert Airport Maintenance Fleet to Propane/Electric
- Other Ideas



# Natural Resource Protection

- Botanical Master Plan vs Project by Project permitting



# Next Steps, Milestones & Schedule



- 
- ✓ **Prioritize 5 Year Improvements Plan**
  - ✓ **Develop Financial Plan**
  - ✓ **Environmental Notification Form for 5 Year Improvements Plan**
  - ✓ **Final Working Group Meeting Early Summer 2014**
  - ✓ **Public Open House Late Summer 2014**



# Questions and Discussion





## Discussion



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