



Update on BWI Marshall & Martin State Airports

Presentation to the Baltimore Regional Transportation Board
Kevin Clarke & Shawn Ames, C.M.

June 22, 2021

Topics

- Mission & Vision
- Announcements
- Our Airports
- BWI Marshall Activity Levels
- Some Recent Projects
 - Midfield Cargo
 - ANOMS
 - ANZ Updates
 - Concourse A Extension
- Select Current Projects
 - A/B Connector & BHS
 - Airline Maintenance Facility
 - Restroom Renovation
 - Residential Sound Insulation Program
- BWI Marshall ALP & Environmental Assessment
- What's Next
 - C/D Connector & ATCT
 - Southwest Quadrant
 - Ground Transportation Center & Roadway Improvements
 - Potential MAGLEV
- MTN ALP & Environmental Assessment
- Closing

MDOT Maryland Aviation Administration

Mission

The Maryland Department of Transportation (MDOT) is a customer-driven leader that delivers safe, sustainable, intelligent, and exceptional transportation solutions in order to **connect our customers to life opportunities**.

Mean

The Maryland Aviation Administration (MAA) **fosters the vitality of aviation statewide** and promotes safe and efficient operations, economic viability and environmental stewardship. Responsible for the operation of Baltimore/Washington International Thurgood Marshall and Martin State airports, the MAA provides friendly, convenient facilities and customer services and develops enhanced domestic and international passenger and cargo opportunities through inter-modalism and state-of-the-art technology.

Vision

Simply stated, our vision is to **'be better'**.

Key Objective

The Maryland aviation system will be the **"Easy Come, Easy Go"** gateway to the world.

Happy Birthday



71 years ago, a dedication ceremony took place to commemorate the opening of what was then known as **Friendship International Airport**.

President Truman delivered a speech and 10,000 spectators were on hand for the **June 24, 1950** event.

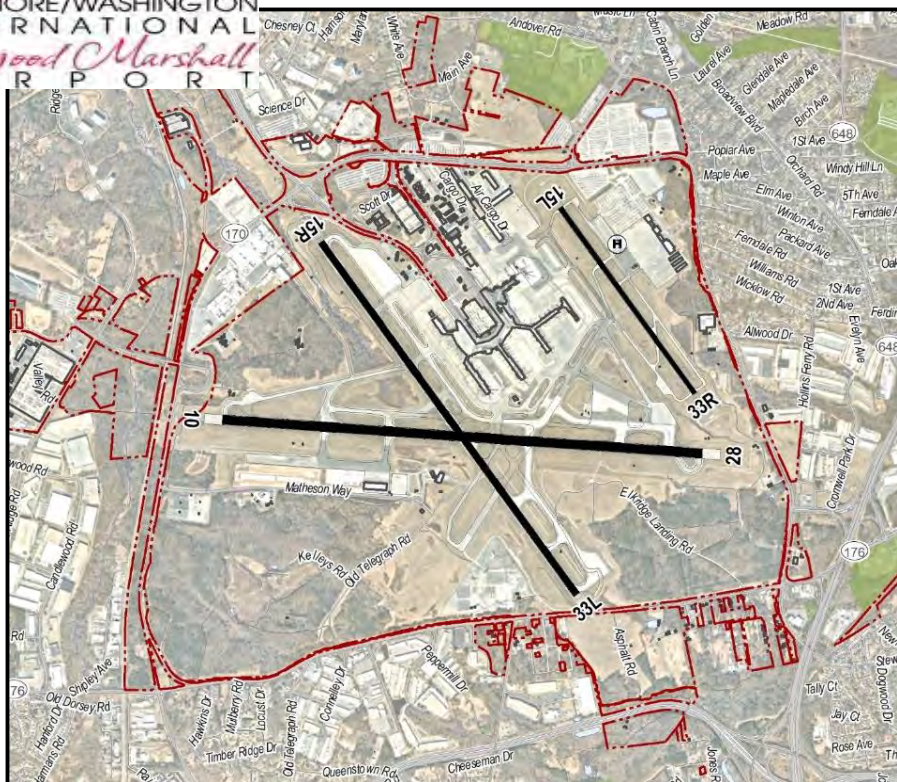
Best Airport in North America

Airports Council International, a major airport industry organization, named BWI Marshall as the **Best North American Airport** in our size category in the 2020 **Airport Service Quality** program.

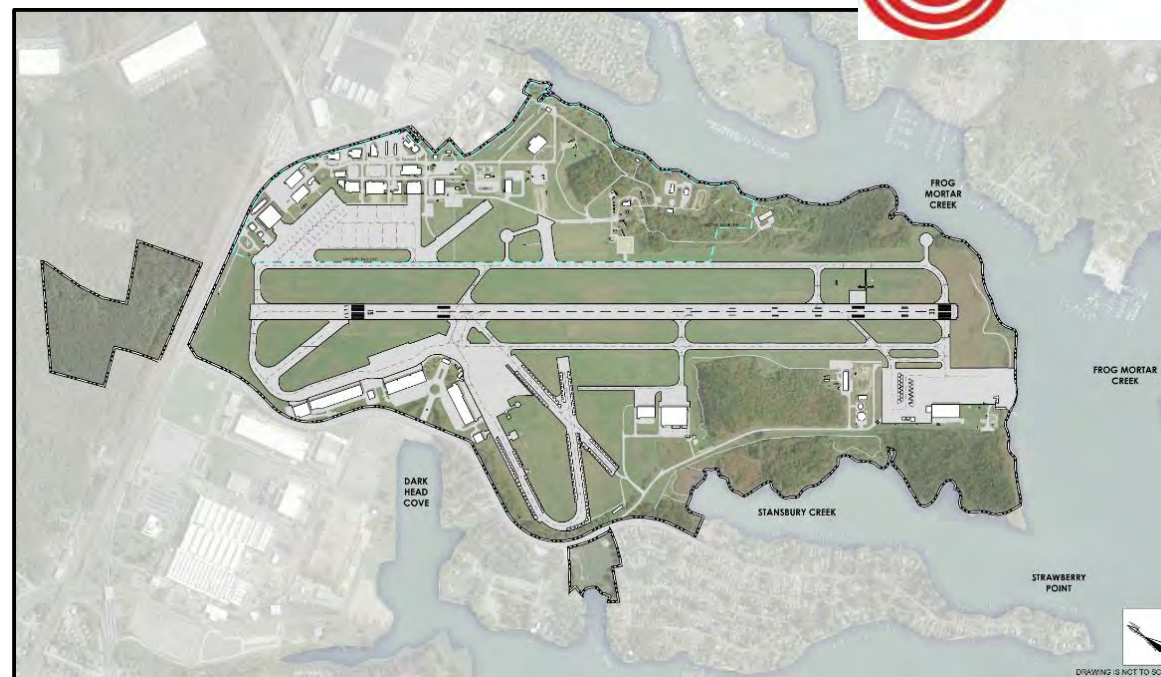
- Reflects passenger feedback on customer service
- Significant accomplishment during pandemic



Our Airports



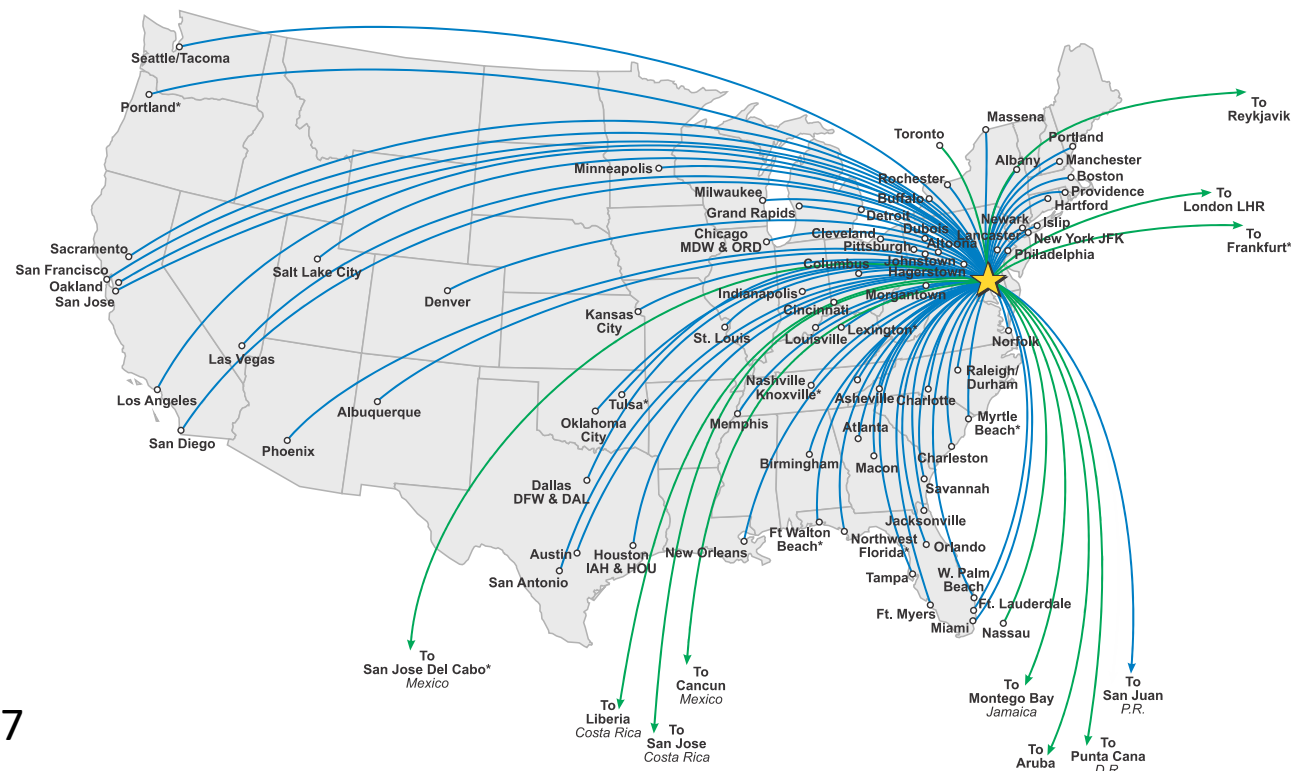
- Commercial Service Airport
- ±3,800 acres
- 2M+ sf Terminal



- General Aviation “Reliever” Airport
- ±800 acres

Baltimore/Washington International Thurgood Marshall Airport

- Busiest airport in the Washington-Baltimore Metro region (enplanements)
- 27 million passengers in 2019
- 22nd busiest U.S. airport
- 262,600 aircraft operations in 2019
- ±330 daily departures to 90+ domestic and international destinations
- 97 aircraft gates
- Record setting air cargo growth
- \$9.3B total economic impact & 106,000 jobs (2017 data)

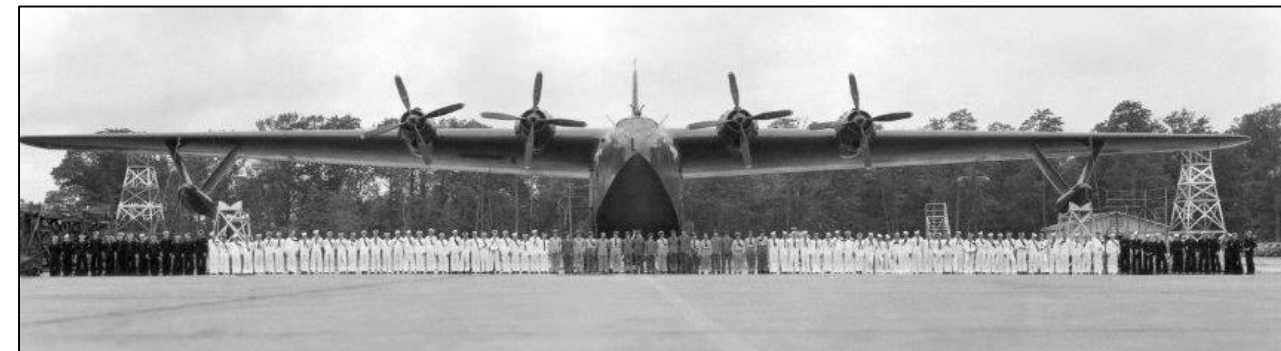
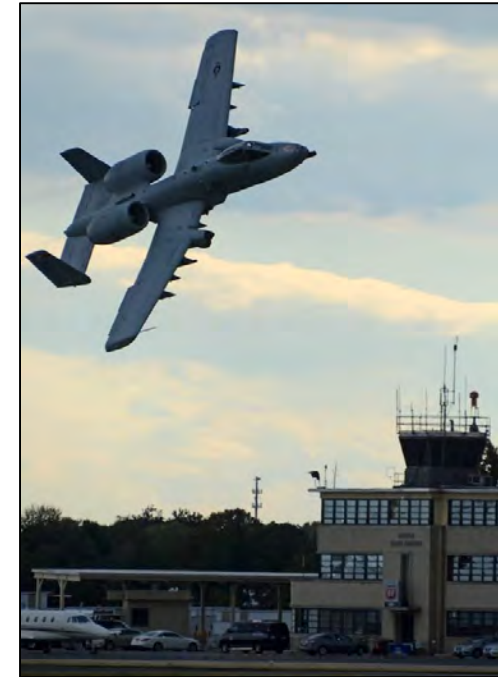


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Martin State Airport (MTN)

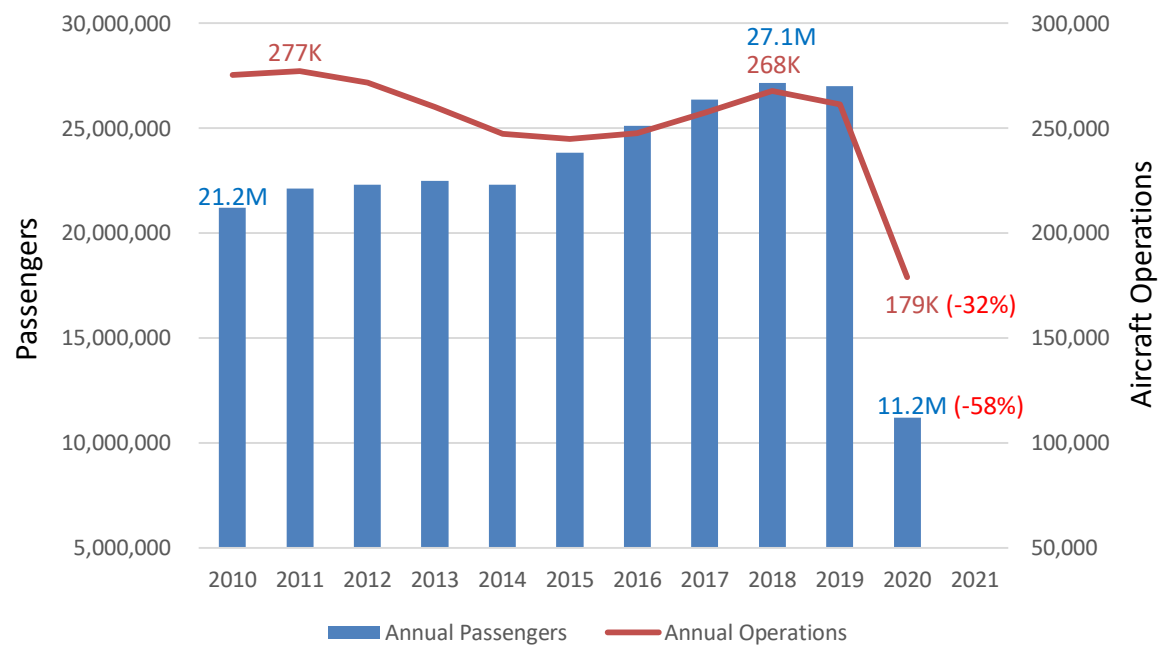
- Historic – WWII aircraft production
- Purchased by the State in 1975
- Over 240 based aircraft
- Maryland Air National Guard 175th Wing
- Maryland State and Baltimore County Police aviation units
- Nearly 84,000 aircraft operations annually
- 2nd busiest general aviation airport in Maryland



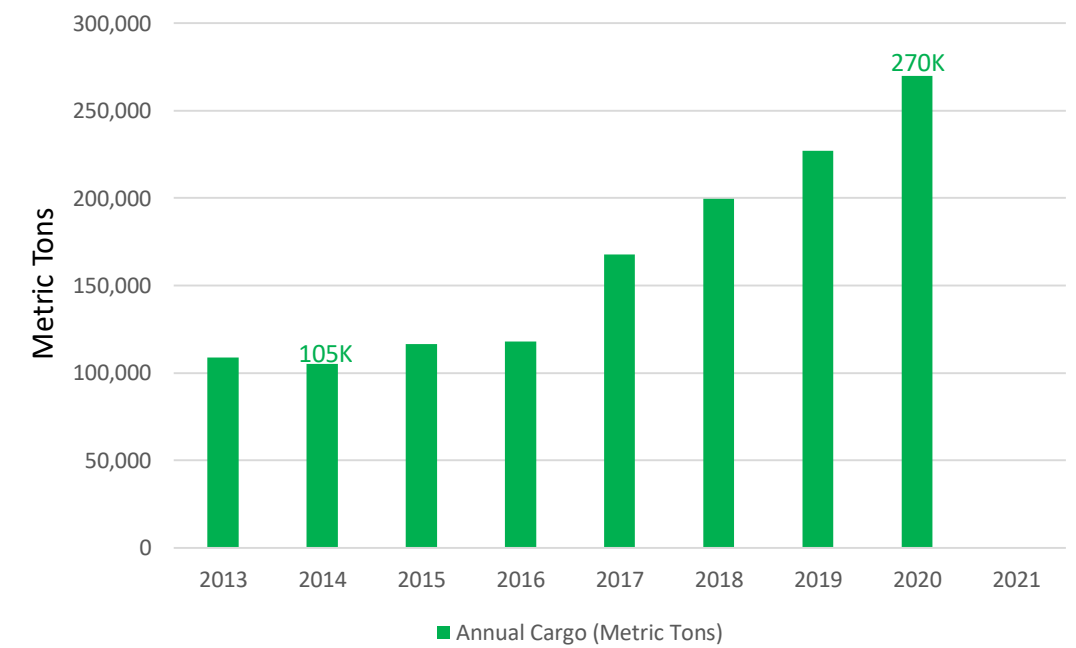
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BWI Activity Levels (2010-2020)

Passengers & Operations



Air Cargo & Freight



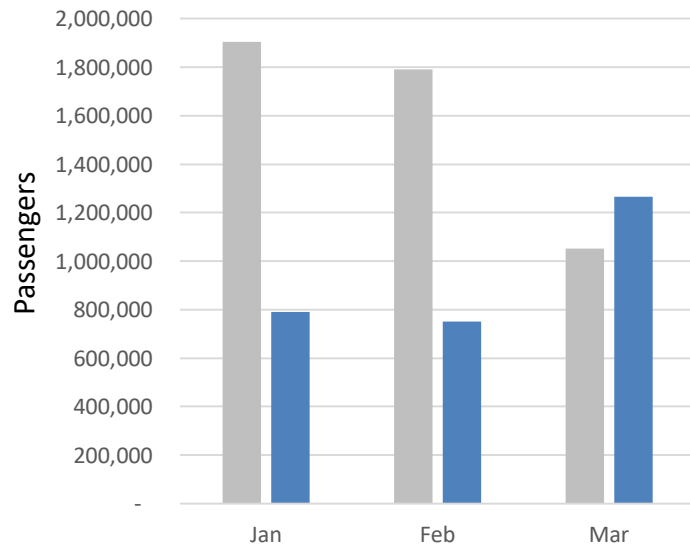
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BWI Activity levels (2020-2021 / Q1)

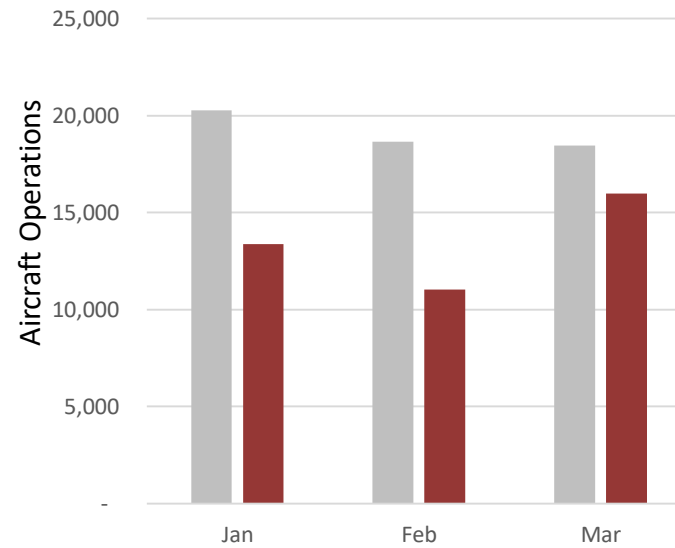
Passengers

-41% YTD



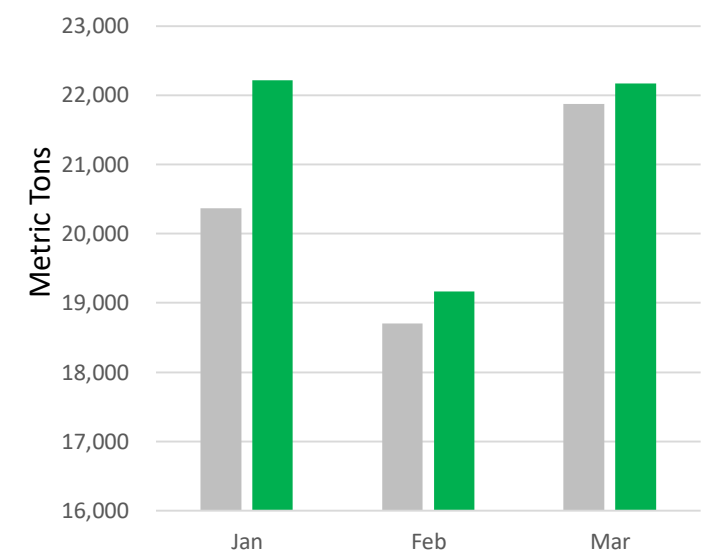
Operations

-30% YTD



Air Cargo & Freight

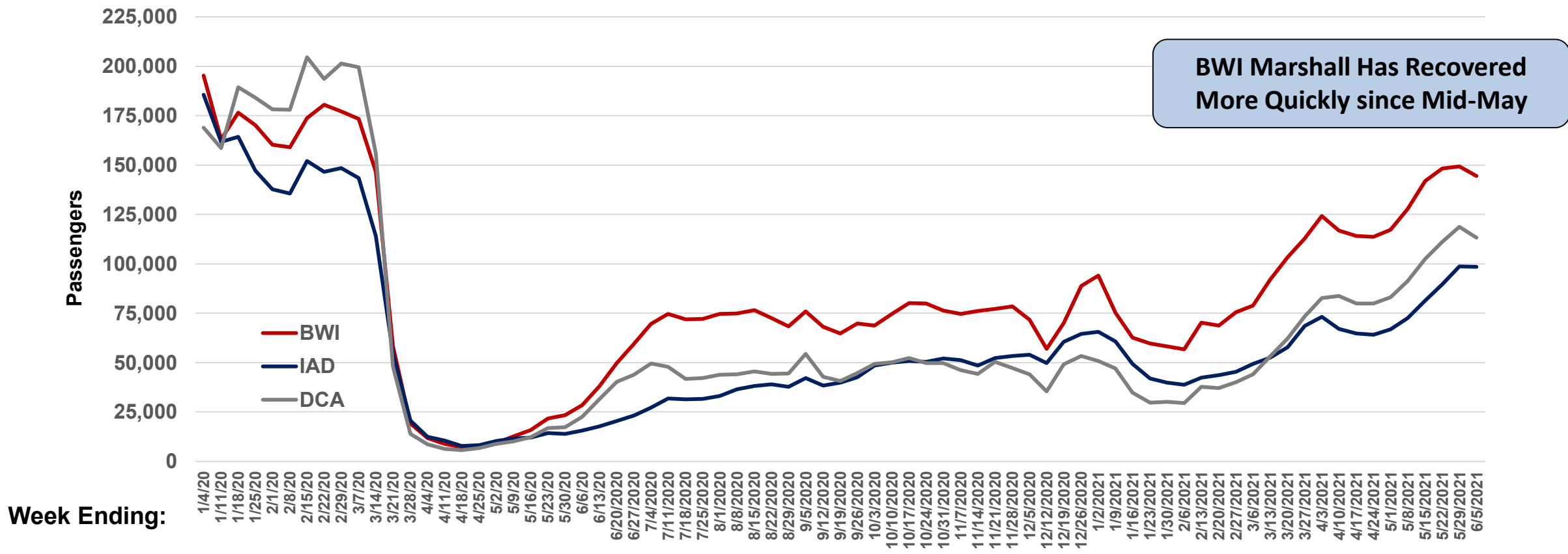
+4% YTD



2020
2021

TSA Numbers Show Recovery at BWI Marshall Leads the Region...

Weekly TSA Passenger Throughput for WAS Airports
Week-Ending 04 Jan 2020 through 5 June 2021



BWI Marshall Has Recovered More Quickly since Mid-May



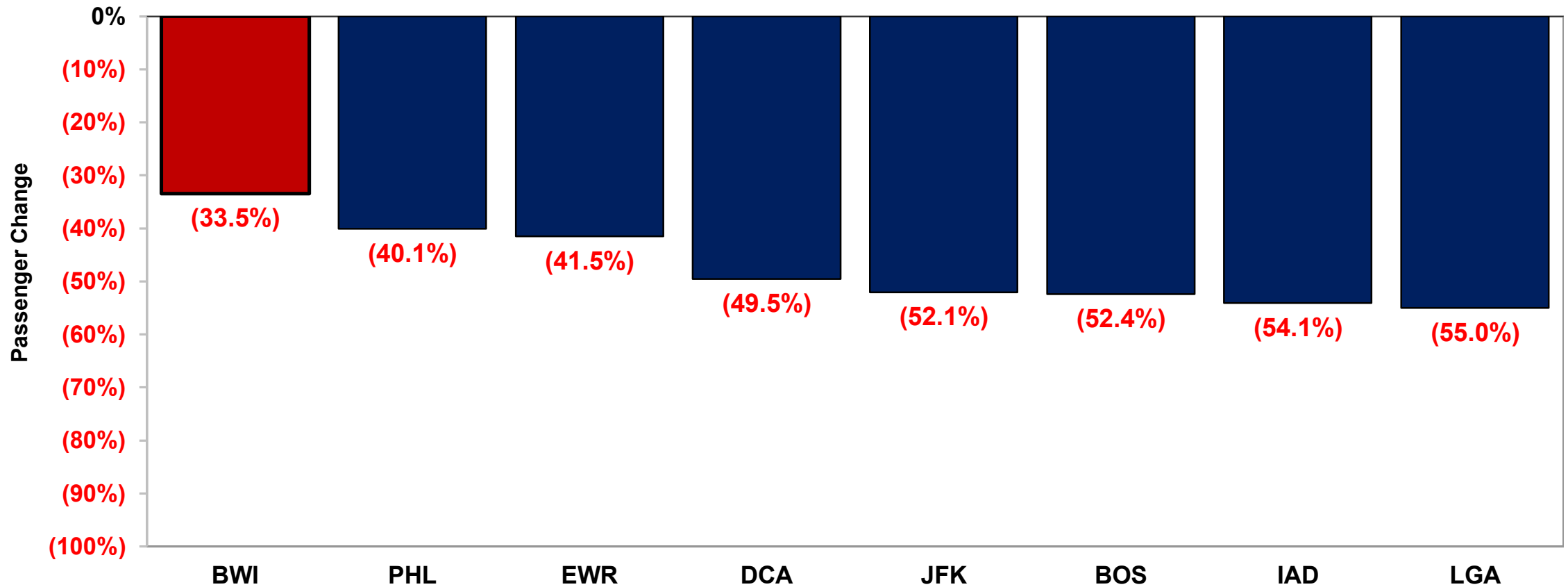
Source: TSA Throughput Statistics

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...As Well as Large Airports in the Northeast United States

Change in TSA Passenger Throughput
 Week-Ending 5 June 2021 vs. 2019



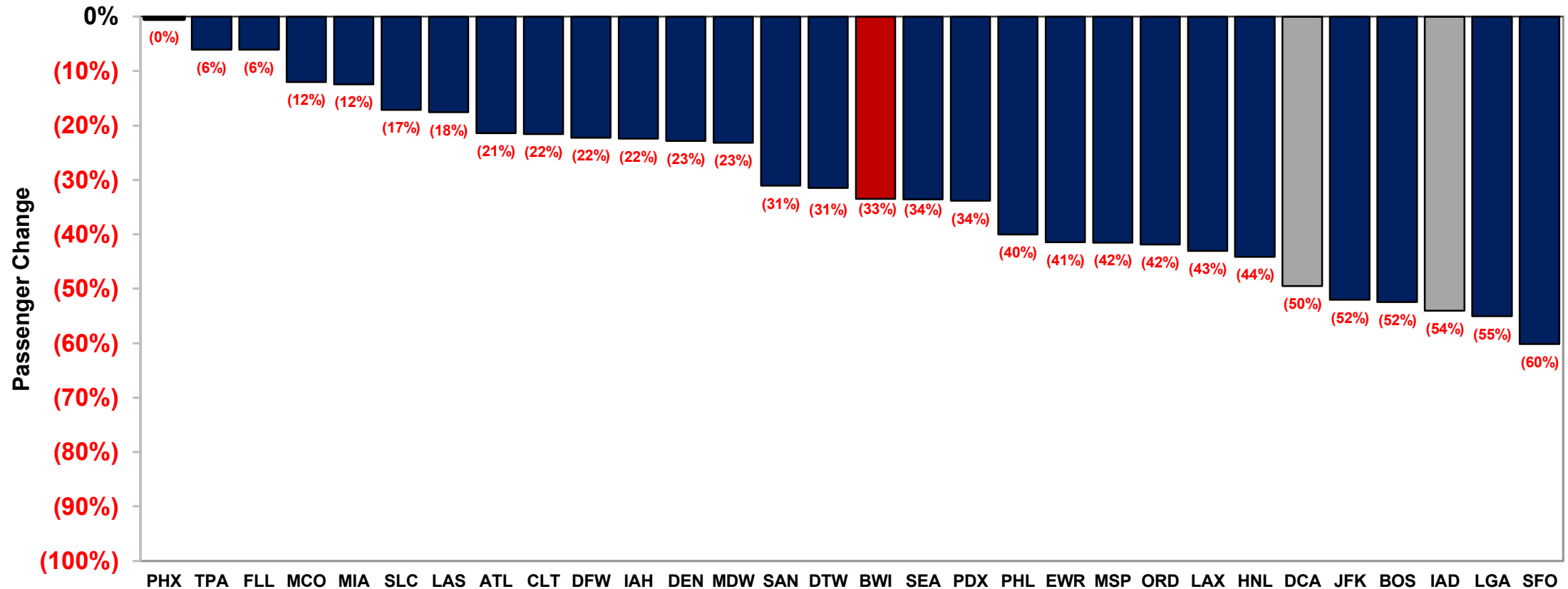
Source: TSA Throughput Statistics

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Compared to All 30 U.S. Large Hubs, BWI Marshall's Recovery Ranks #16

Change in TSA Passenger Throughput
Week-Ending 5 June 2021 vs. 2019



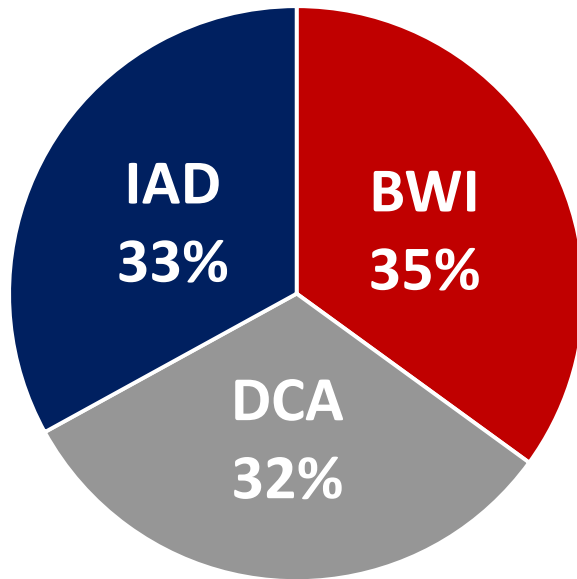
Source: TSA Throughput Statistics

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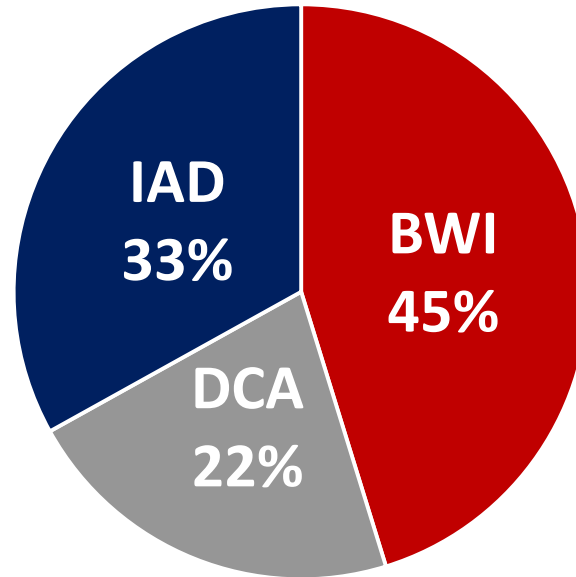


Regional Passenger Market Share

Percentage of Total Passengers
October 2019

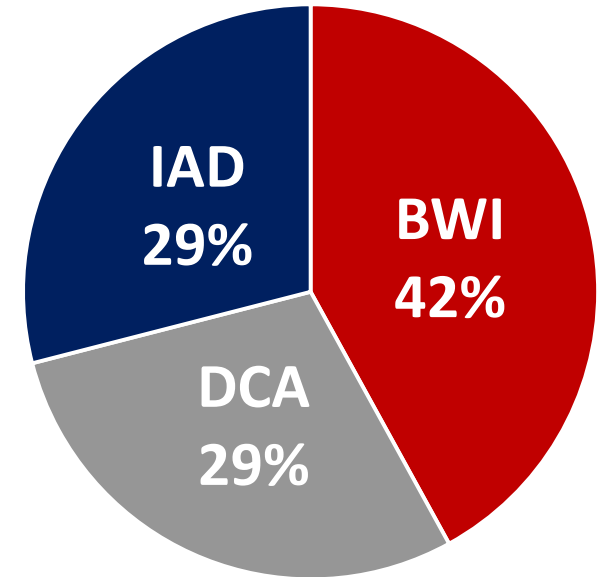


Percentage of Total Passengers
October 2020



Strength of BWI's personal travel market

Total Seat Capacity
Apr-Jun 2021



American Airlines increasing capacity at DCA with new 14-gate regional terminal opened in April

Some Recent Projects

Midfield Air Cargo Expansion



- Opened October 2019
- New 200,000 square foot Cargo Building
- Rehabilitated taxiways and new runway connector
- Mathison Way improvements
- Expanded local bus service to site
- ±2,000 new jobs to the region



“Amazon’s Baltimore location is one of the top 5 busiest Amazon Air facilities in the world.”

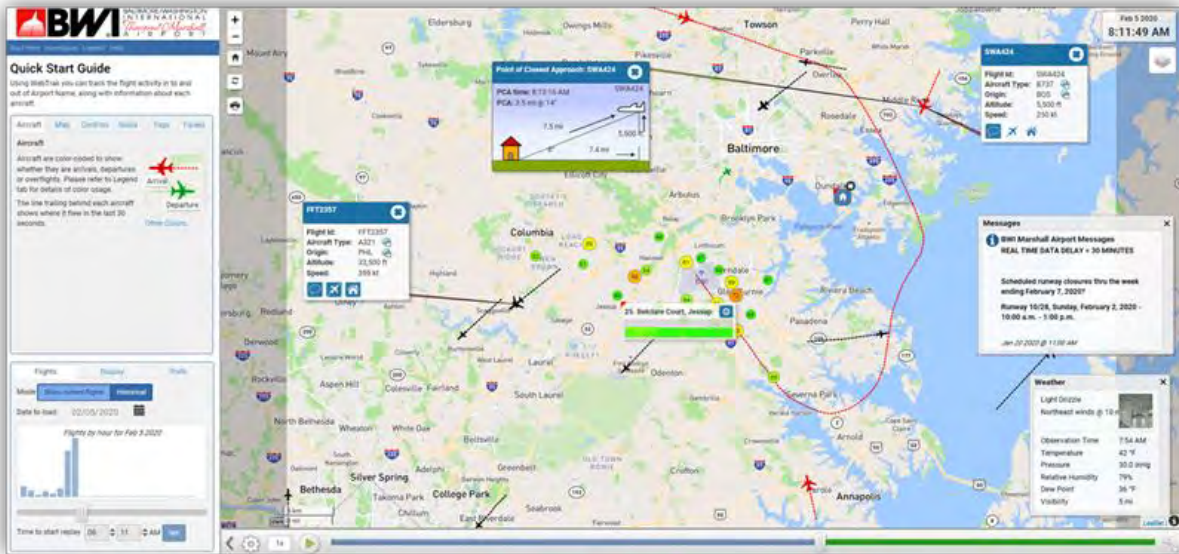
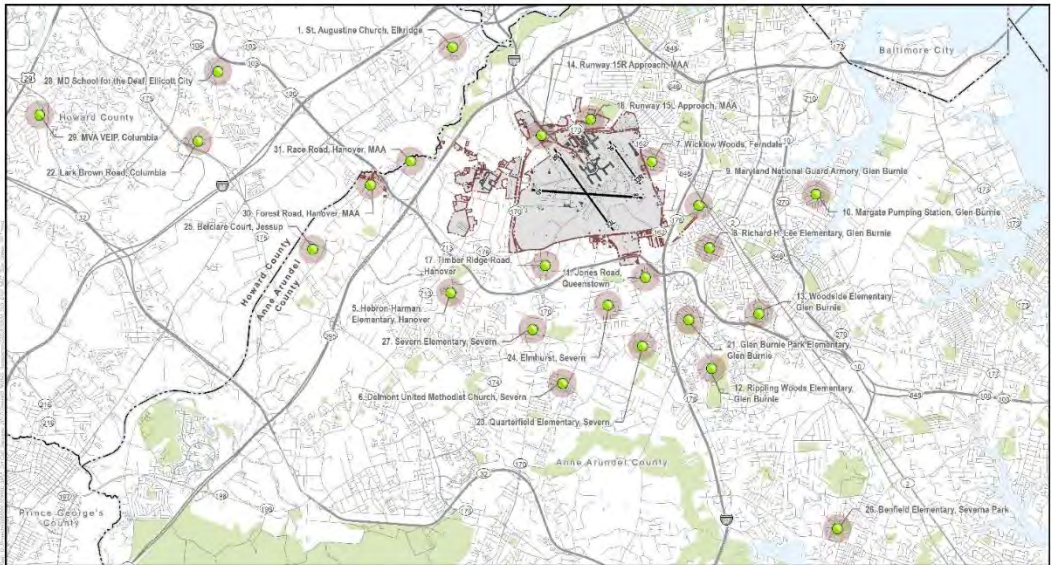
(WJZ-13, 6/8/21)



Airport Noise & Operations Monitoring System (ANOMS) Replacement



- Completed in October 2019
- 24 noise monitors installed throughout the communities surrounding BWI Marshall and advanced analysis software that integrates noise and aircraft operations data
- Used to manage, analyze and correlate aircraft noise, aircraft flight tracks and aircraft noise complaint data that support MAA's Noise Abatement Program
- Launched **WebTrak** in July 2019 – public website providing realtime aircraft activity and noise data within the neighboring communities. Interactive portal provides 24-hour access to information on aircraft overflights and associated noise levels at each permanent noise monitor site. The system also provides a mechanism for community members to file noise complaints with the MAA's Office of Environmental Compliance & Sustainability



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Airport Noise Zone (ANZ) Updates

Purpose

- **Minimize aircraft noise impacts and prevent incompatible land development around airports**
- Informs MAA Airport Zone permitting process and county land use planning

Basis

- Maryland Environmental Noise Act of 1974, refer to:
 - Transportation Article, §§5-805, 5-806, and 5-819, Annotated Code of Maryland
 - COMAR Section 11.03.02.10 and Section 11.03.01.01-1(B)(5)
- Two components – Noise Exposure Map and Noise Abatement Plan
- Uses 10-year activity forecast
- Updated every five years

Process

- Establish Stakeholder Advisory Committee (SAC) – airport users, industry, FAA, community, & local government
- Prepare base year, 5-year, 10-year forecast contours
- Compile composite Airport Noise Zone (ANZ)
- Prepare inventory of existing land use
- Update the Noise Abatement Plan
- Obtain approval from MAC to circulate proposed ANZ Update
- Conduct public workshop/hearing
- Obtain approval from MAC and certification from MAA Executive Director for incorporation into COMAR



2020 approved
Updates for BWI and
MTN published in
Maryland Register
April 9, 2021

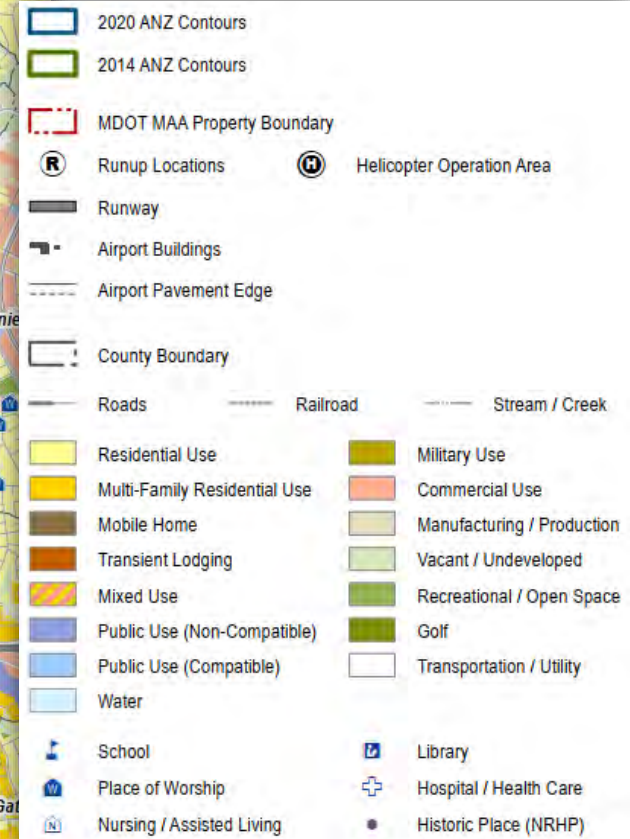
BWI ANZ Update

2020 ANZ

- 5,543 acres
- 2020 ANZ is 23% larger than 2014 ANZ
- 53% on MAA property
- Changes attributable to:
 - Increasing aircraft operations
 - Increasing % of nighttime operations
 - Changes in the aircraft fleet mix
 - Anticipated increases in maintenance runups
 - Updated flight track planning for future Runway 10R/28L
 - Noise model updates



Comparison of 2020 ANZ to 2014 ANZ

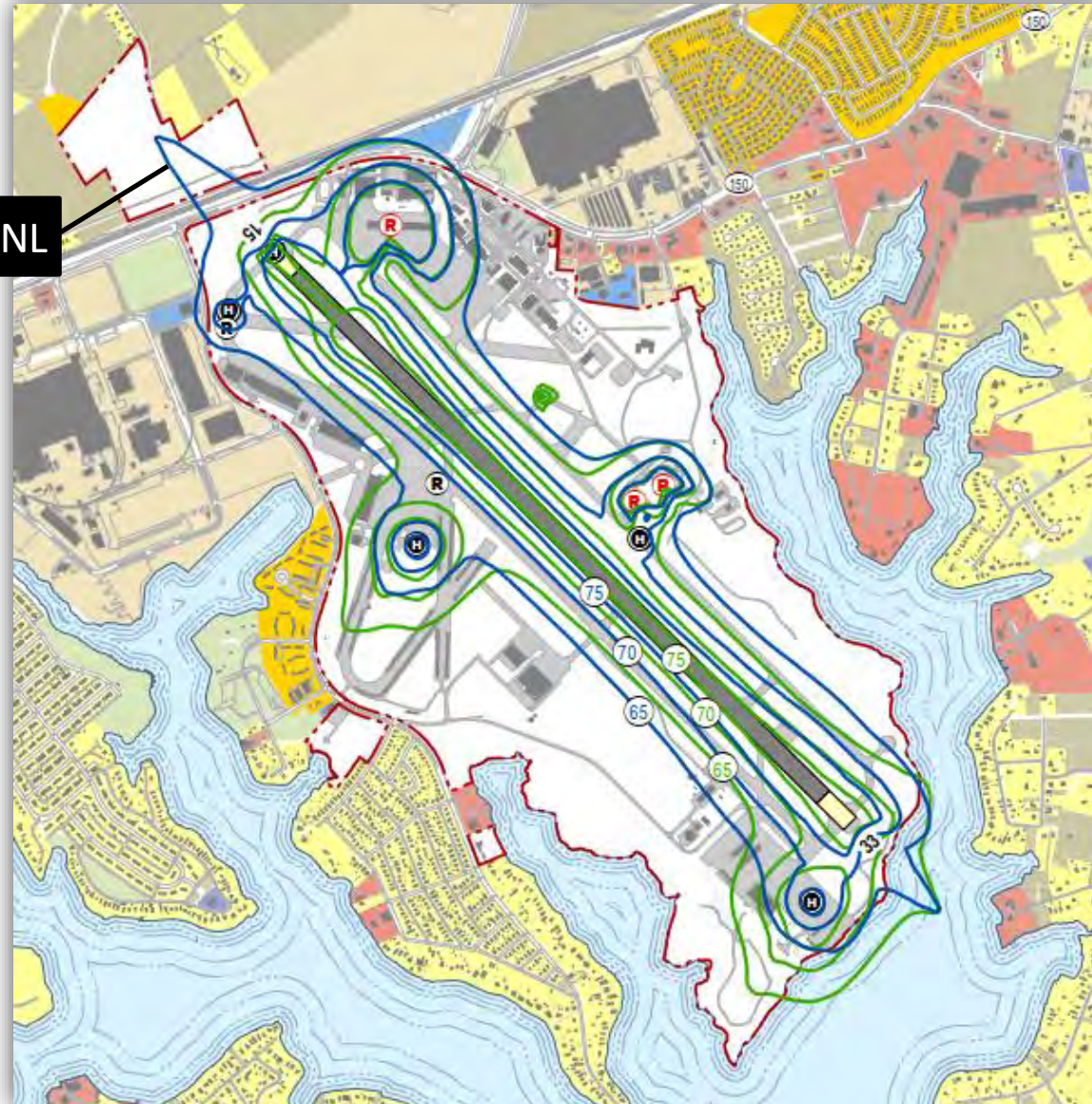


MTN ANZ Update

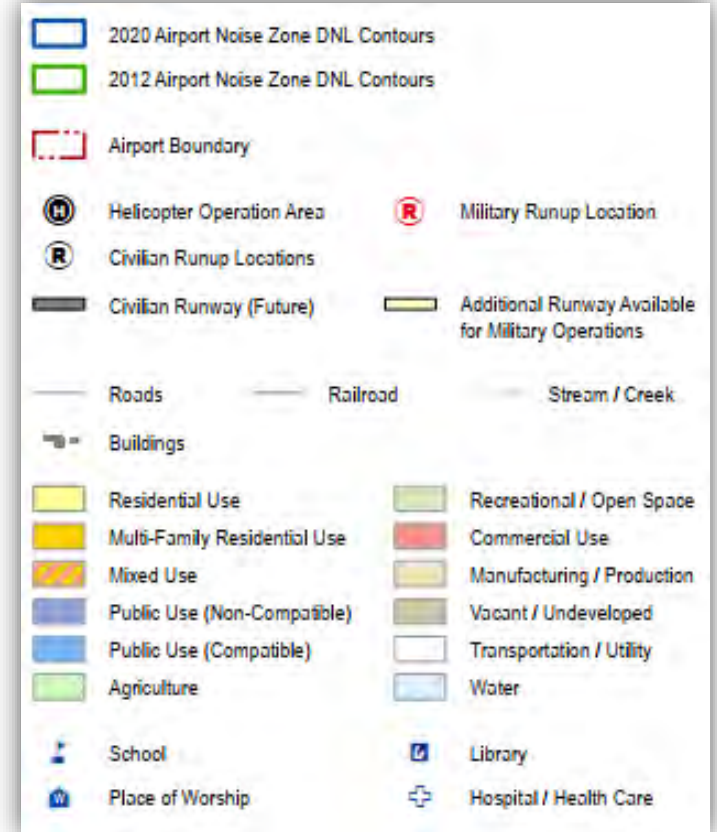
2020 ANZ

- 411 acres
- 2020 ANZ is 4% larger than 2014 ANZ
- 96% on MAA property
- No impacts to noise sensitive land uses
- Changes attributable to:
 - Increasing aircraft operations
 - Future configuration of Runway 15/33
 - Noise model updates

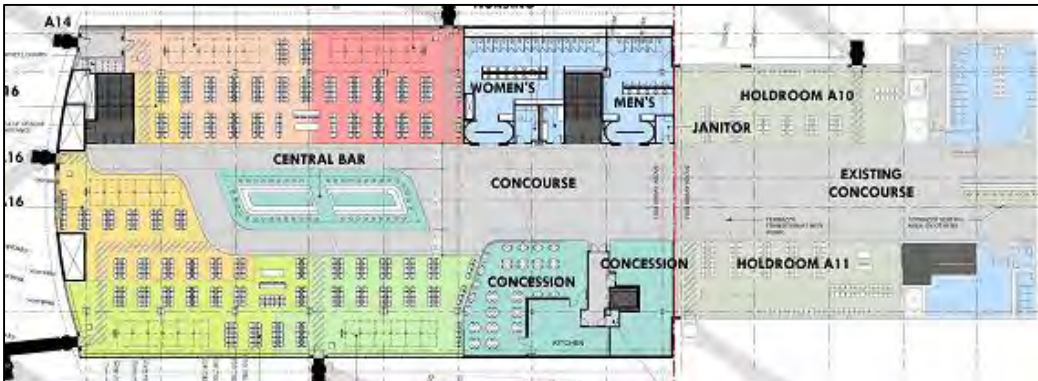
65 DNL



Comparison of 2020 ANZ to Previous ANZ



Concourse A – Five-Gate Extension

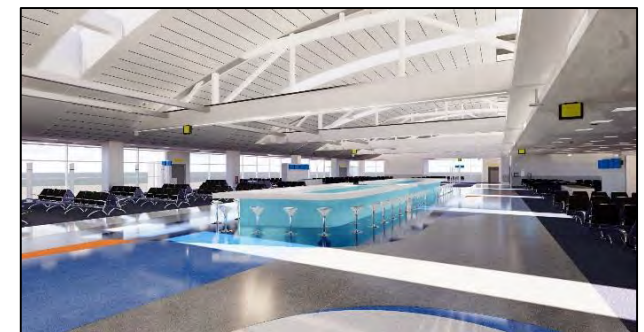


Construction began in Spring 2019 and opened in Spring 2020.

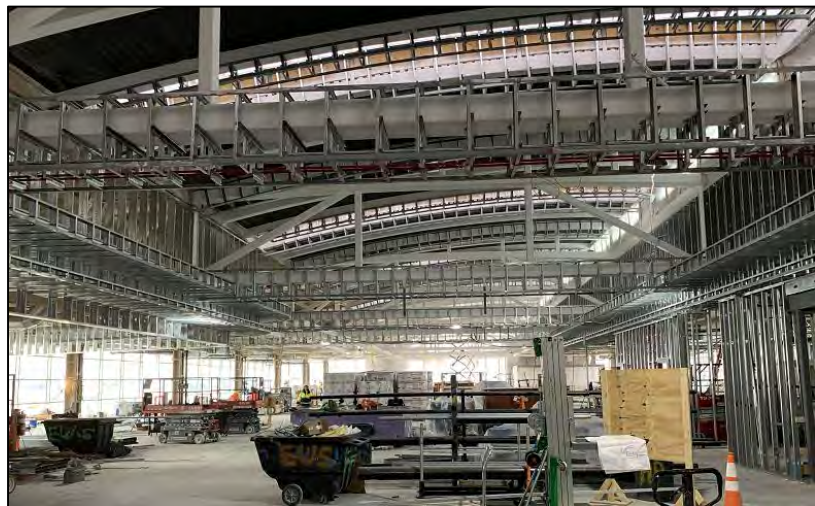
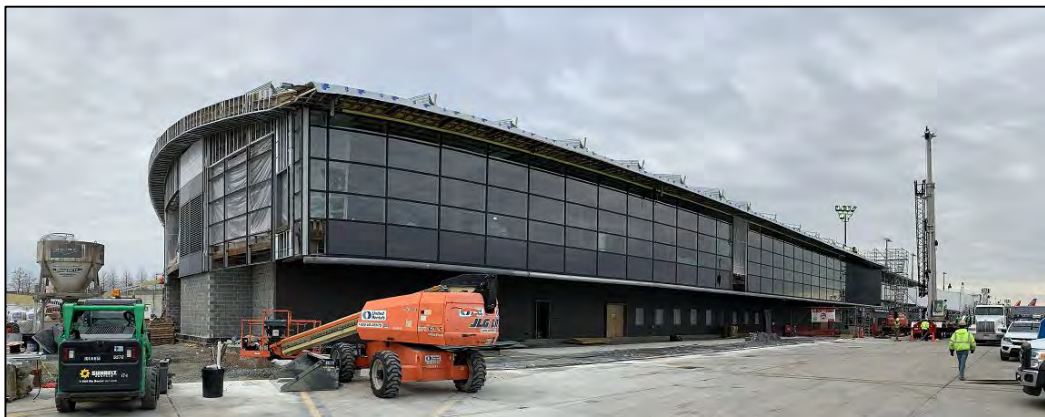
55,000 square foot addition and 5 new gates for Southwest Airlines.

Includes MAA's new prototype restroom facilities, new boarding bridges and additional concessions.

Critical enabler to the current Taxiway T and future Concourse A/B Connector and Baggage Handling System (BHS) projects which require the temporary closure of five existing gates during their construction.



Concourse A – Five-Gate Extension



Concourse A – Five-Gate Extension



Governor Hogan Tour – May 17, 2021



Courtesy of Gov. Larry Hogan's Office

Select Current Projects

Concourse A/B Connector and Baggage Handling

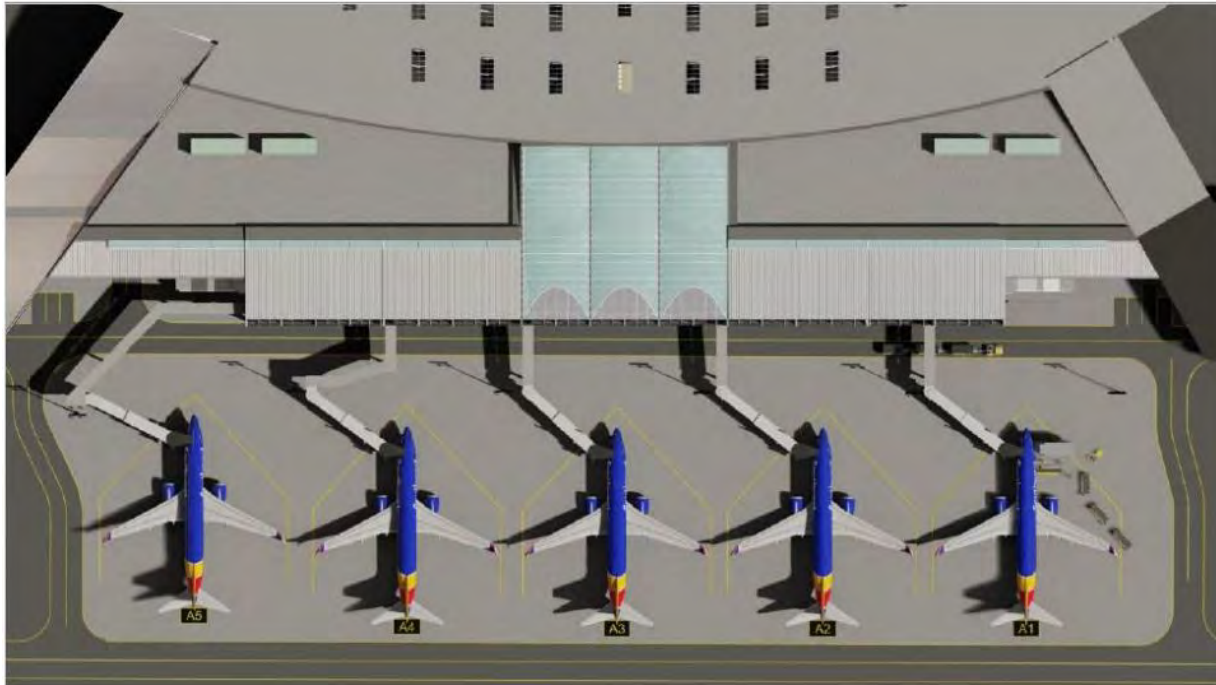


Existing Terminal A/B

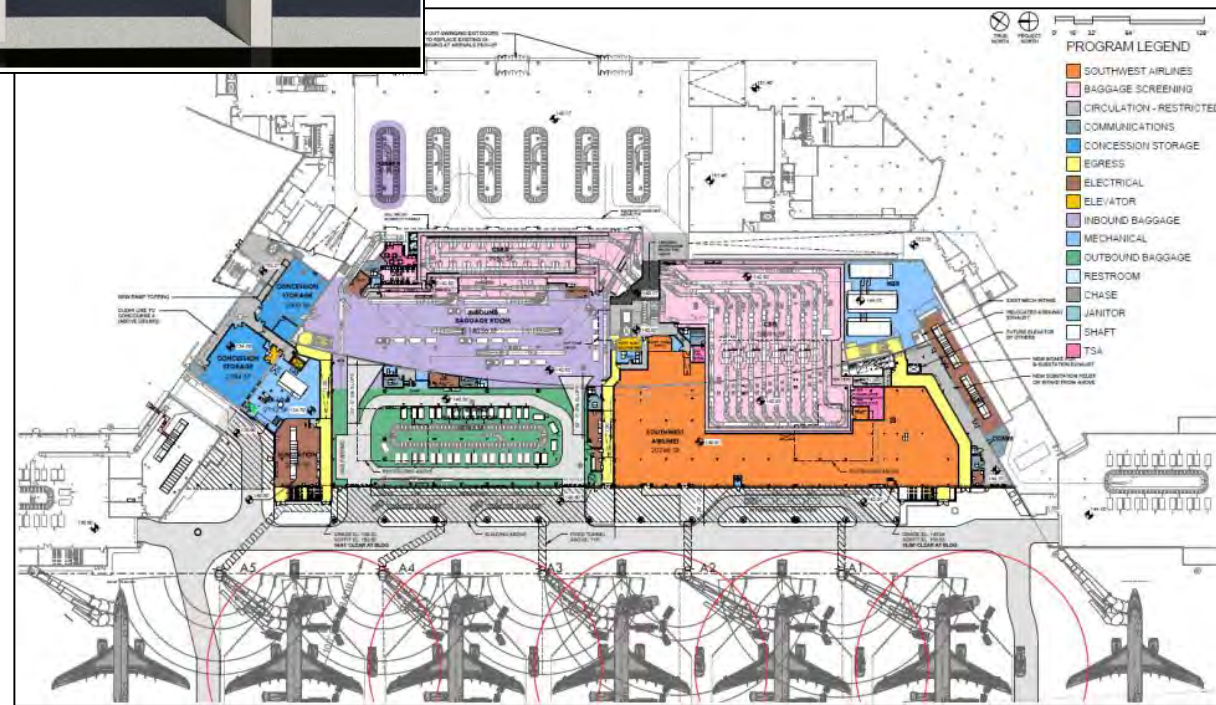
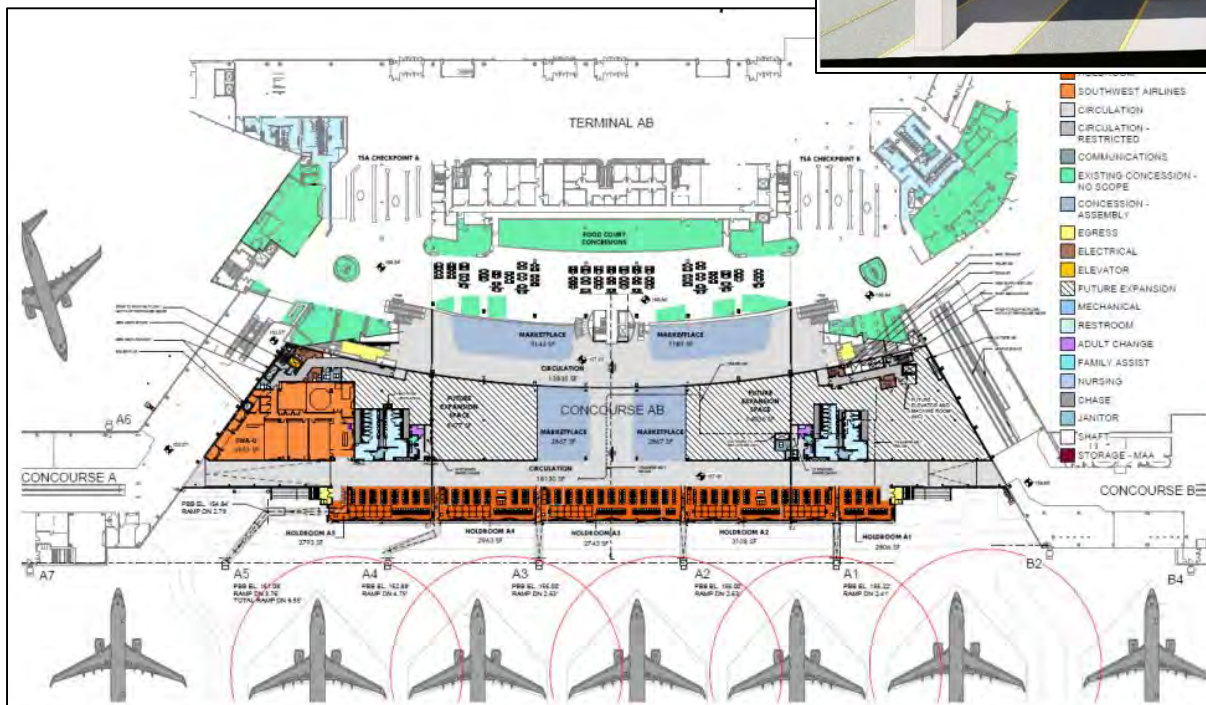
Project Goals

- Size 5 Gates for 737-MAX8 Aircraft
- Better Connect Concourses A & B
- Provide New In-line Screening BHS
- Optimize BHS Tug Operations
- Consolidate SWA Facilities
- Increase Concessions Opportunities
- Enhance Passenger Level of Service
- Modernize Passenger Restrooms
- Minimize Impact to Operations During Construction

Concourse A/B Connector and Baggage Handling



Concourse A/B Connector and Baggage Handling

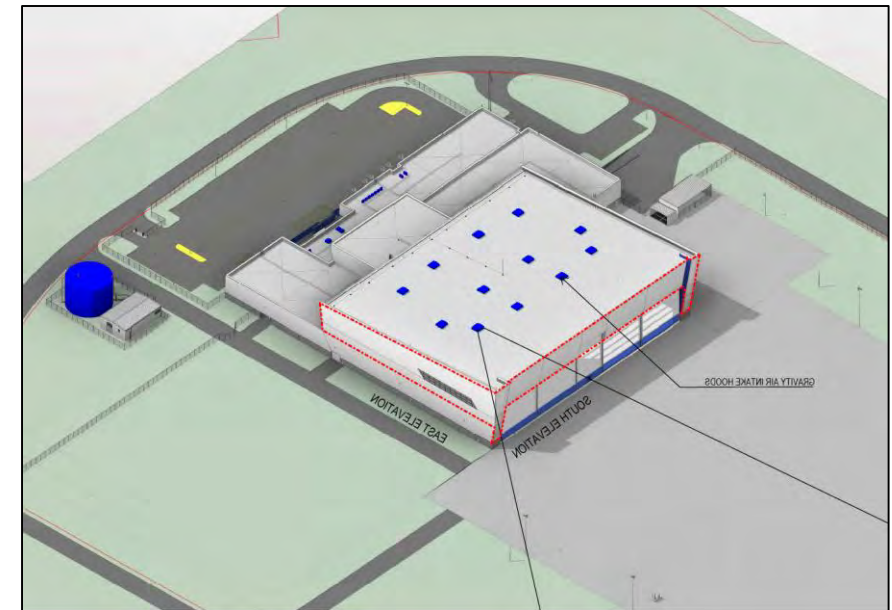
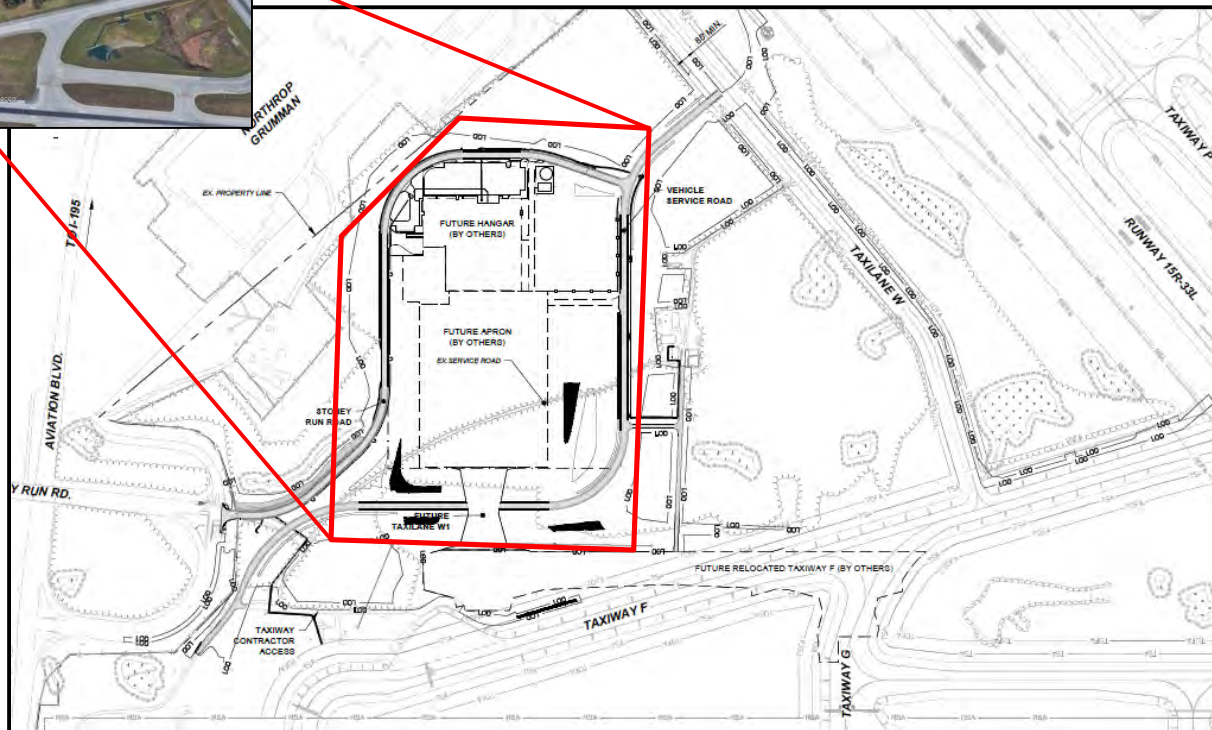


Concourse A/B Connector and Baggage Handling

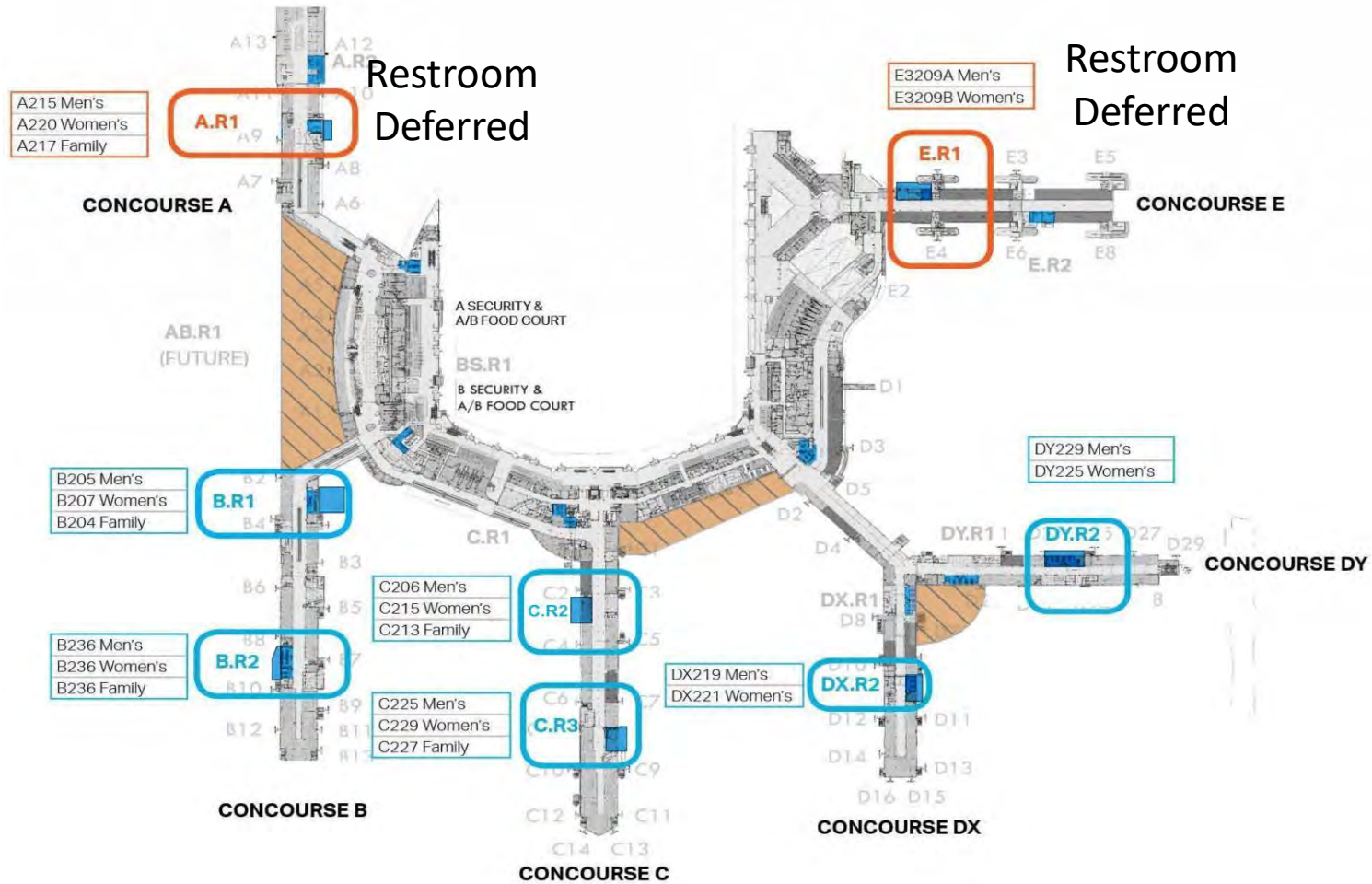


Southwest Airline Maintenance Facility

- Relocates routine maintenance activity currently being performed at gates
- Safe, efficient workspace out of the elements
- Improves ramp efficiency and flexibility
- Creates skilled technical and management jobs

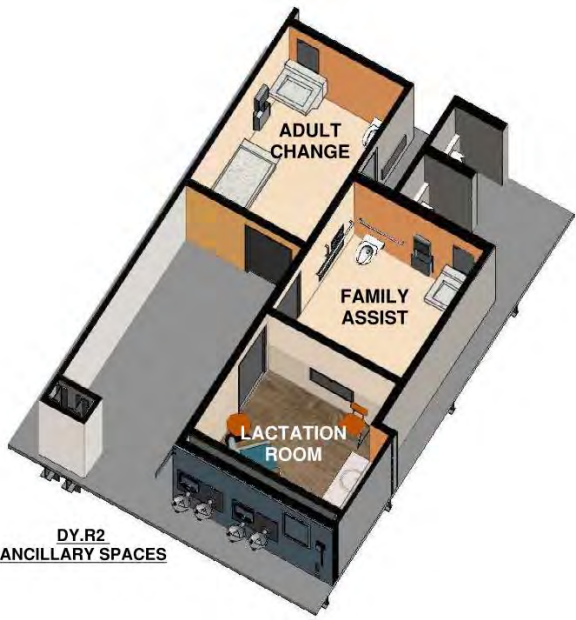


Restroom Renovation Program – Phase 1

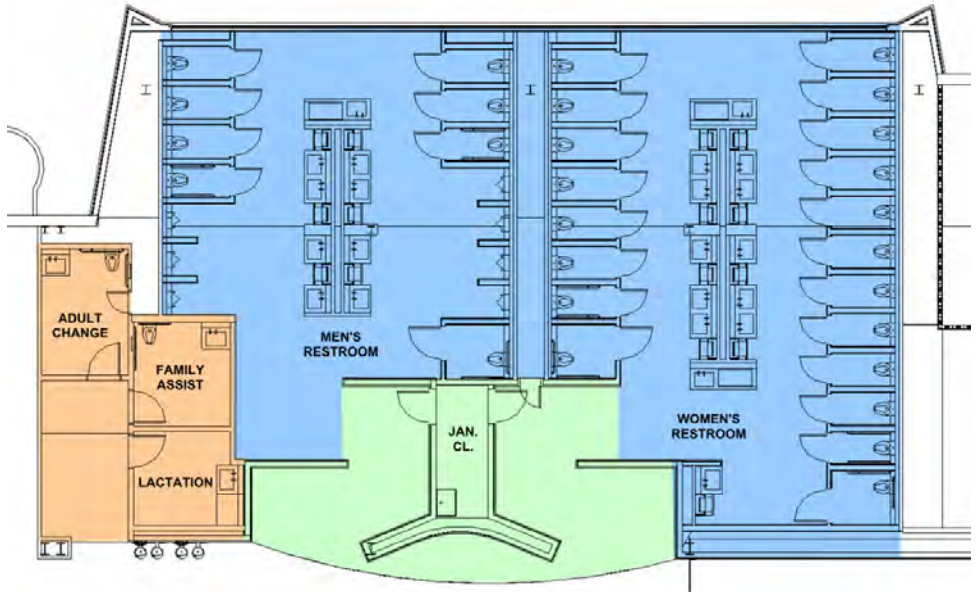


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Restroom Renovation – Typical Layout



Goal – one set in each restroom cluster

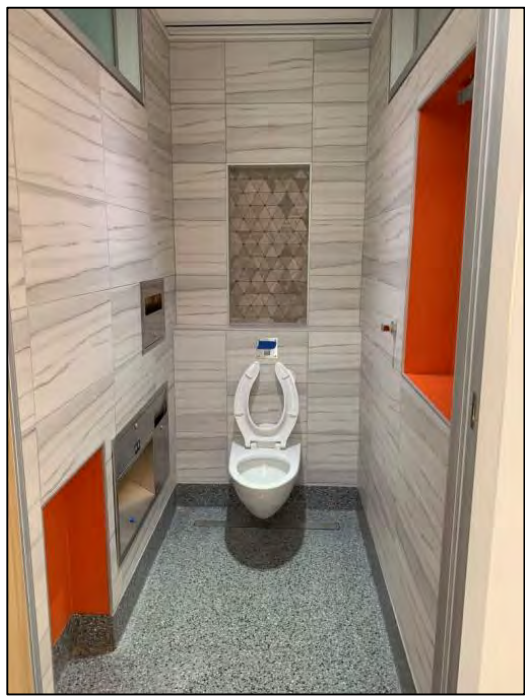


- RESTROOM AREA
- ENTRY AREA
- ANCILLARY SPACES

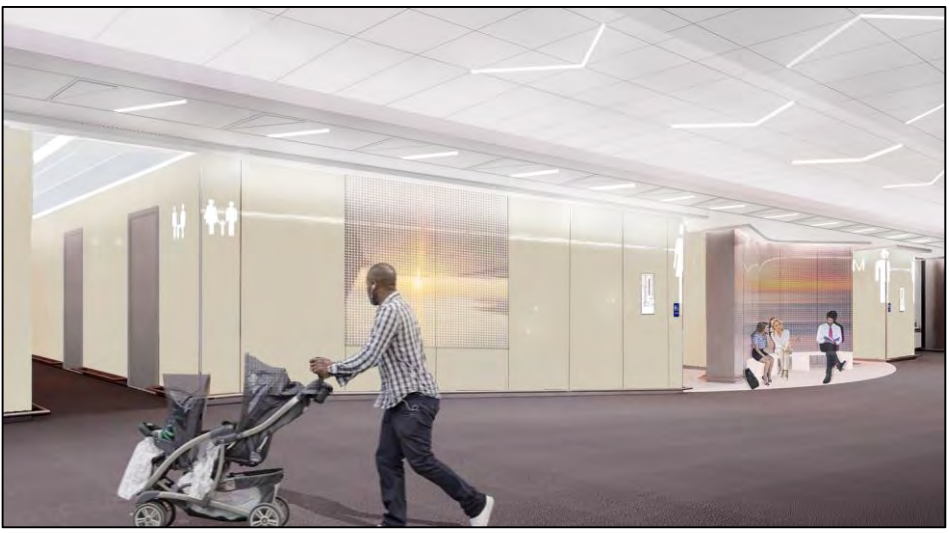
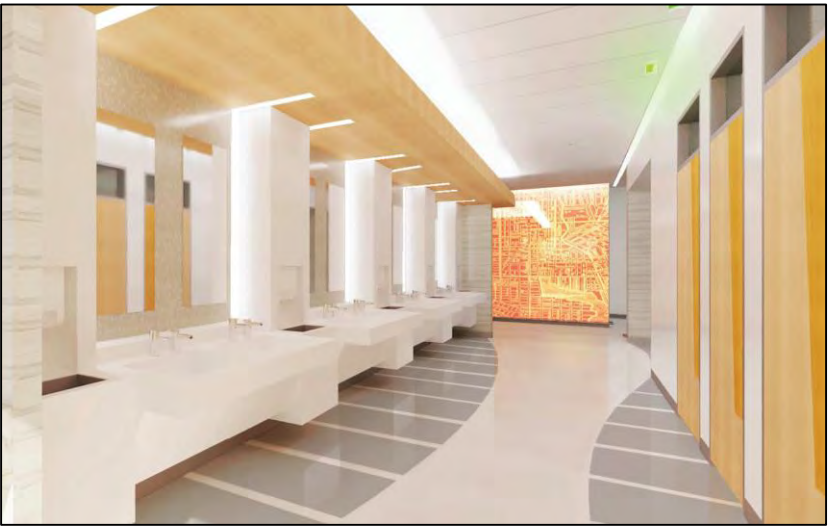


Multiple terminal “bump-outs” to balance restroom, hold room, and concession needs.

Restroom Renovation

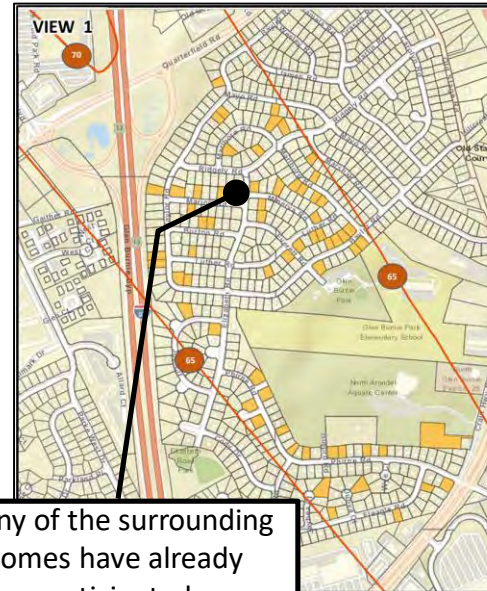


Concourse A Restroom

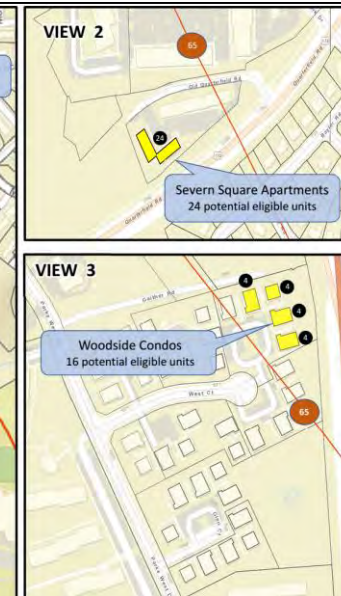
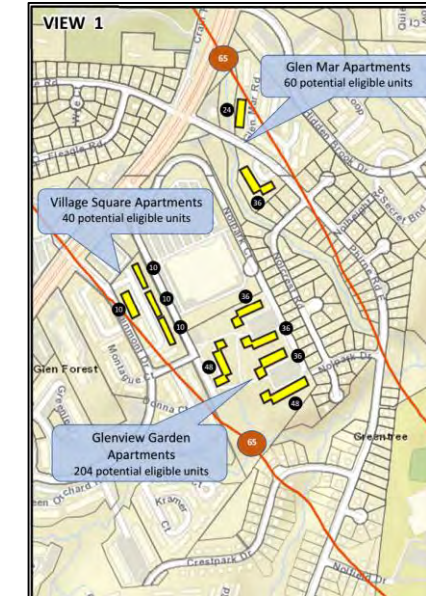


Residential Sound Insulation Program

- Based on voluntary FAR Part 150 Airport Noise Compatibility Program
- 65 dB DNL is metric for compatible residential land uses
- Since the mid-1980s MAA has mitigated over 750 homes and 4 schools
- Goal - reduce interior noise to at least 45 dB with a minimum 5 dB reduction
- Install new acoustically-rated windows, doors, ventilation, insulation, seal gaps, and other customized treatments approved by the FAA
- Current phase of the program includes up to 136 single-family residences and 344 multi-family units

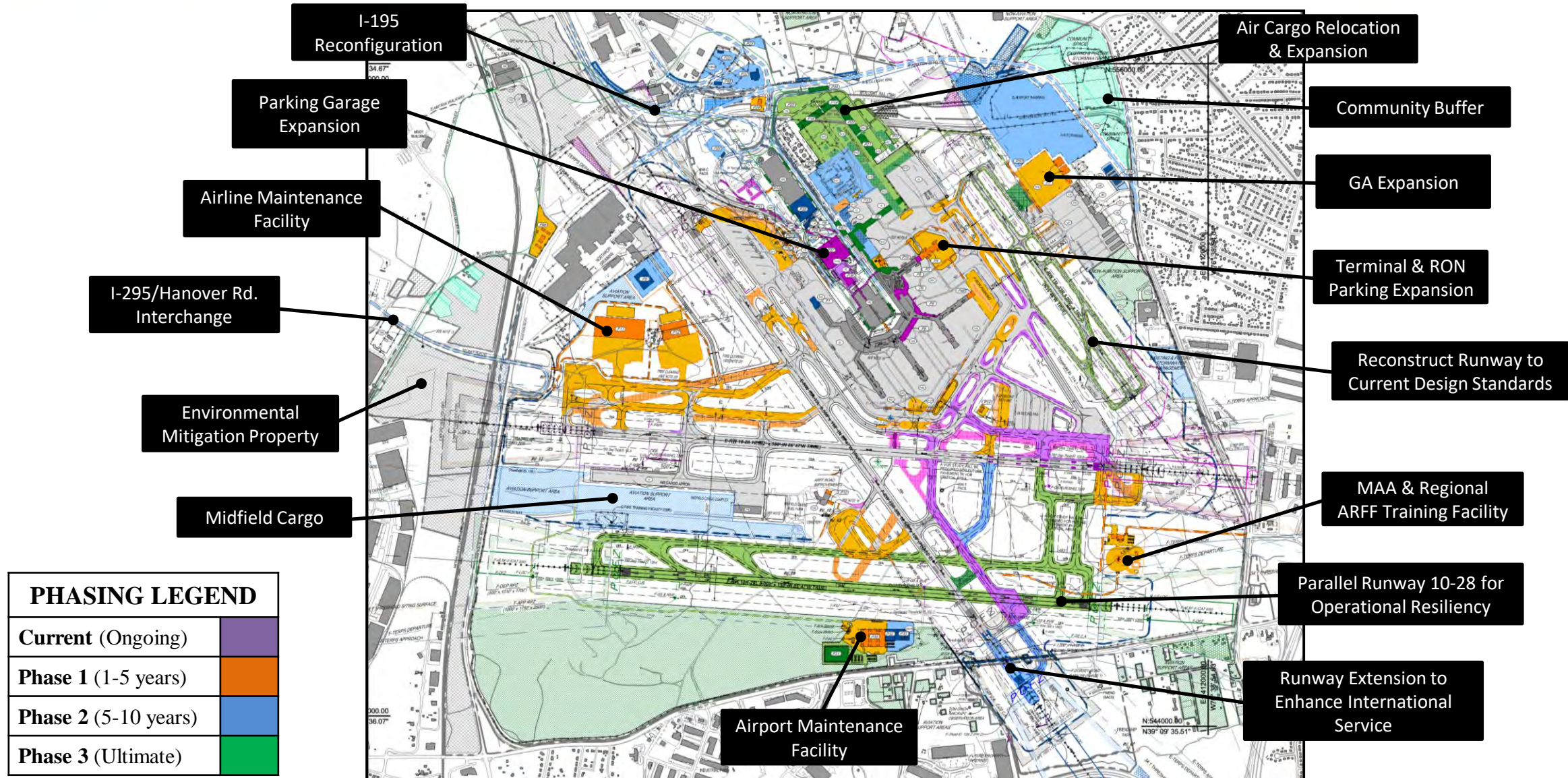


Many of the surrounding homes have already participated

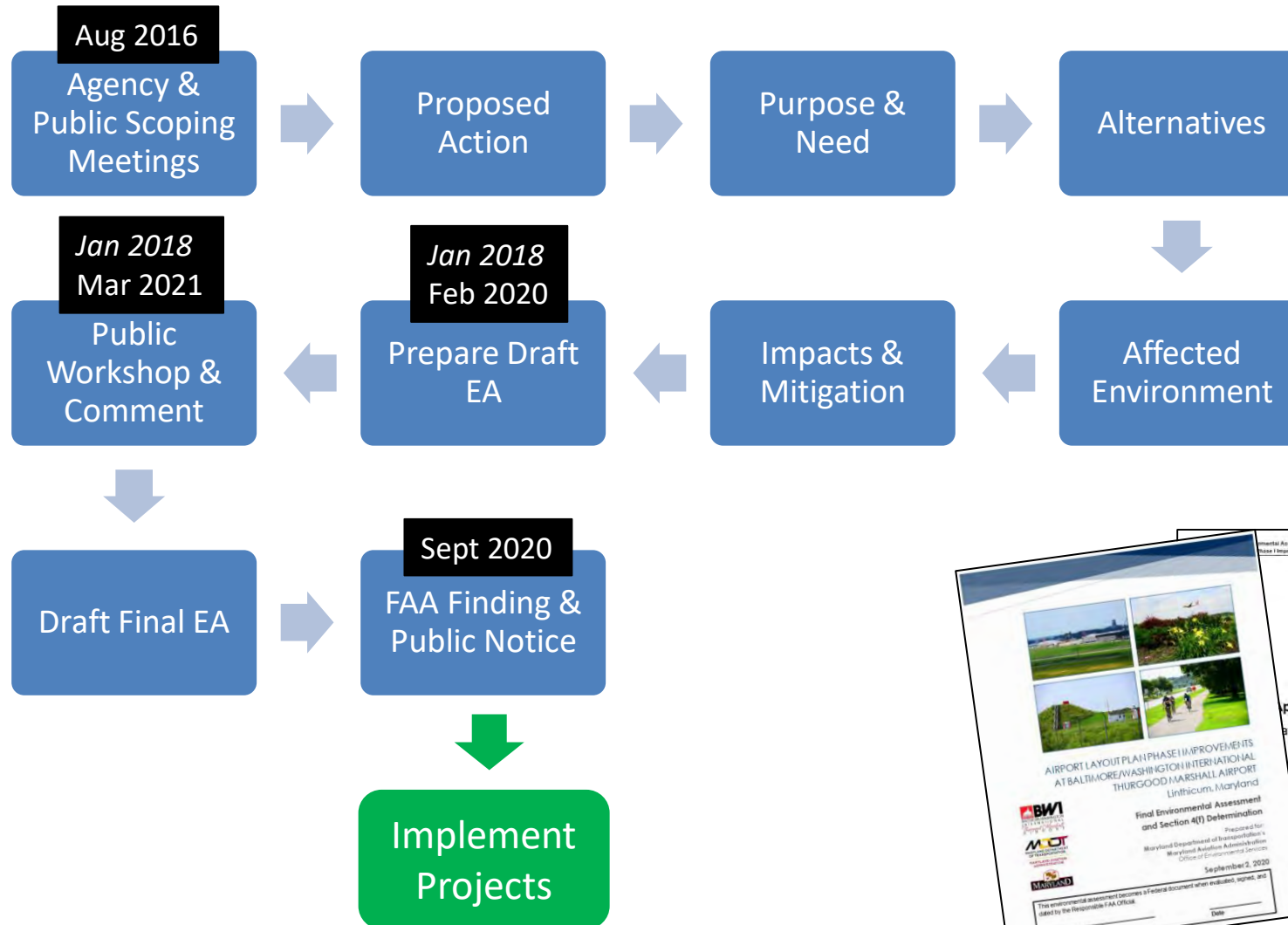


BWI Marshall ALP & EA

BWI Airport Layout Plan (ALP)



BWI Marshall Environmental Assessment (EA) – Process



- There is to compare alternatives and avoid, minimize, or mitigate impacts
- Final environmental document is available on the MAA website and consists of 360 pages plus 14 technical appendices of another 4,890 pages.



BWI EA – What Gets Evaluated



- Air Quality
- Biological Resources – fish, wildlife, plants
- Climate
- Coastal Resources
- 4(f) Resources – public parks
- Farmlands
- Hazardous Materials, Solid Waste, Pollution
- Historical, Architectural, Archaeological, Cultural Resources
- Land Use
- Natural Resources & Energy Supply
- Noise & Compatible Land Use
- Socioeconomics, Environmental Justice, Children’s Health & Safety
- Visual Effects
- Water Resources – wetlands, floodplains, surface waters, groundwater
- Cumulative Impacts

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BWI EA – The Proposed Action

New & Improved Facilities



BWI EA – The Proposed Action

Vegetative Obstruction Removal

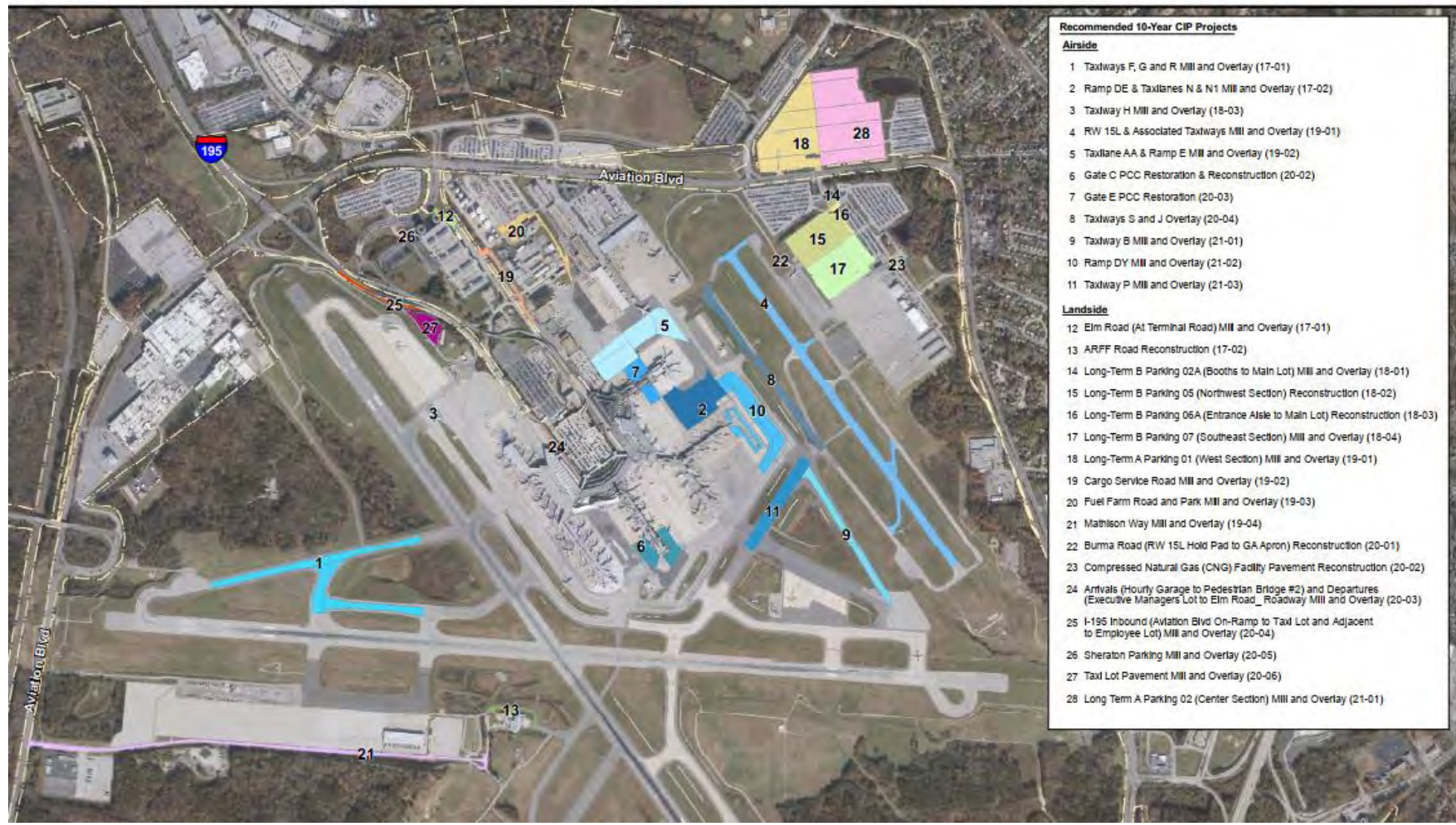


LEGEND

	Airport Property Boundary
	Part 77 (Primary, Approach and Transitional Surface Limits)
	Tree Obstruction Removal (2014 FMP Part 77 Conflict Areas)
	Tree Removal for Phase I Improvements
	Obstruction Removal (2015 ALP Obstruction Points)
	Tree Removal for VORTAC Critical Area

BWI EA – The Proposed Action

Pavement Management



BWI EA – FONSI/ROD

Finding of No Significant Impact / Record of Decision

- Received September 2020
- Now we can start implementing the projects, and
- FAA can fund AIP/PFC eligible items

PUBLIC NOTICE OF AVAILABILITY

Federal Aviation Administration
Maryland Department of Transportation
Maryland Aviation Administration

Final Environmental Assessment and Section 4(f) Determination /
Finding of No Significant Impact and the Record of Decision for
Airport Layout Plan Phase I Improvements at
Baltimore / Washington International Thurgood Marshall Airport
Linthicum, Maryland

The Maryland Department of Transportation Maryland Aviation Administration (MDOT MAA) in conjunction with the Federal Aviation Administration (FAA), is issuing this notice to advise the public of the availability of the Final Environmental Assessment and Section 4(f) Determination (Final EA) and Finding of No Significant Impact (FONSI) / Record of Decision (ROD) for Airport Layout Plan (ALP) Phase I Improvements at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall Airport) in Linthicum, Maryland in Anne Arundel County. The Final EA and FONSI/ROD document that the project is consistent with the National Environmental Policy Act of 1969 (NEPA) (42 USC § 4321, et seq.), its implementing regulations (40 CFR Parts 1500-1508), and FAA directives (Orders 5050.4B, *Airport Environmental Handbook* and 1050.1F, *Environmental Impacts: Policies and Procedures*), Council on Environmental Quality regulations, the requirements of Section 106 of the National Historic Preservation Act, Department of Transportation Act of 1966 Section 4(f), and all other applicable special purpose laws.

The Final EA responds to agency and public comments received by the FAA and it updates the Updated Draft EA, issued on February 6, 2020. The FONSI/ROD sets forth the FAA's final determinations and environmental approvals for the federal actions necessary to implement the Proposed Action. FAA arrived at these determinations by considering public and agency comments and reviewing the environmental analysis in the Final EA and all other relevant documents that comprise the EA record. Issuance of this FONSI/ROD signifies that the FAA will not prepare an EIS and has completed the NEPA process for the Proposed Action and that the NEPA process for the Proposed Action has been satisfied.

An electronic copy of the Final EA and FONSI/ROD are available on the MDOT MAA website: <http://www.marylandaviation.com/content/environmental/environmentaldocs.html>. Due to the public health emergency, hard copy availability is limited to the following locations:

MDOT Maryland Aviation Administration
991 Corporate Boulevard
Linthicum, MD 21090
By appointment only (kclarke@bwiairport.com) until December 14th, 2020.

Linthicum Library – Anne Arundel County Public Library
400 Shipley Road
Linthicum, MD 21090
By appointment only (410) 222-6265 until December 14th, 2020.

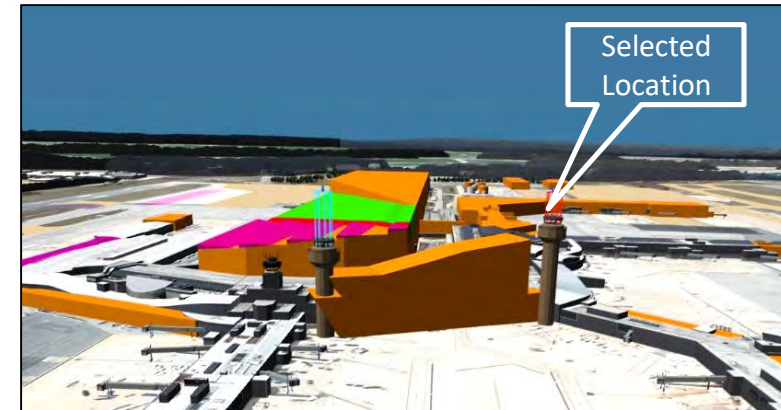
Publication Date(s):
The Baltimore Sun – 11/12/20 and 11/19/20
Howard County Times – 11/12/20
The Capital Gazette – 11/12/20

What's Next

C-D Connector & Airport Traffic Control Tower Program

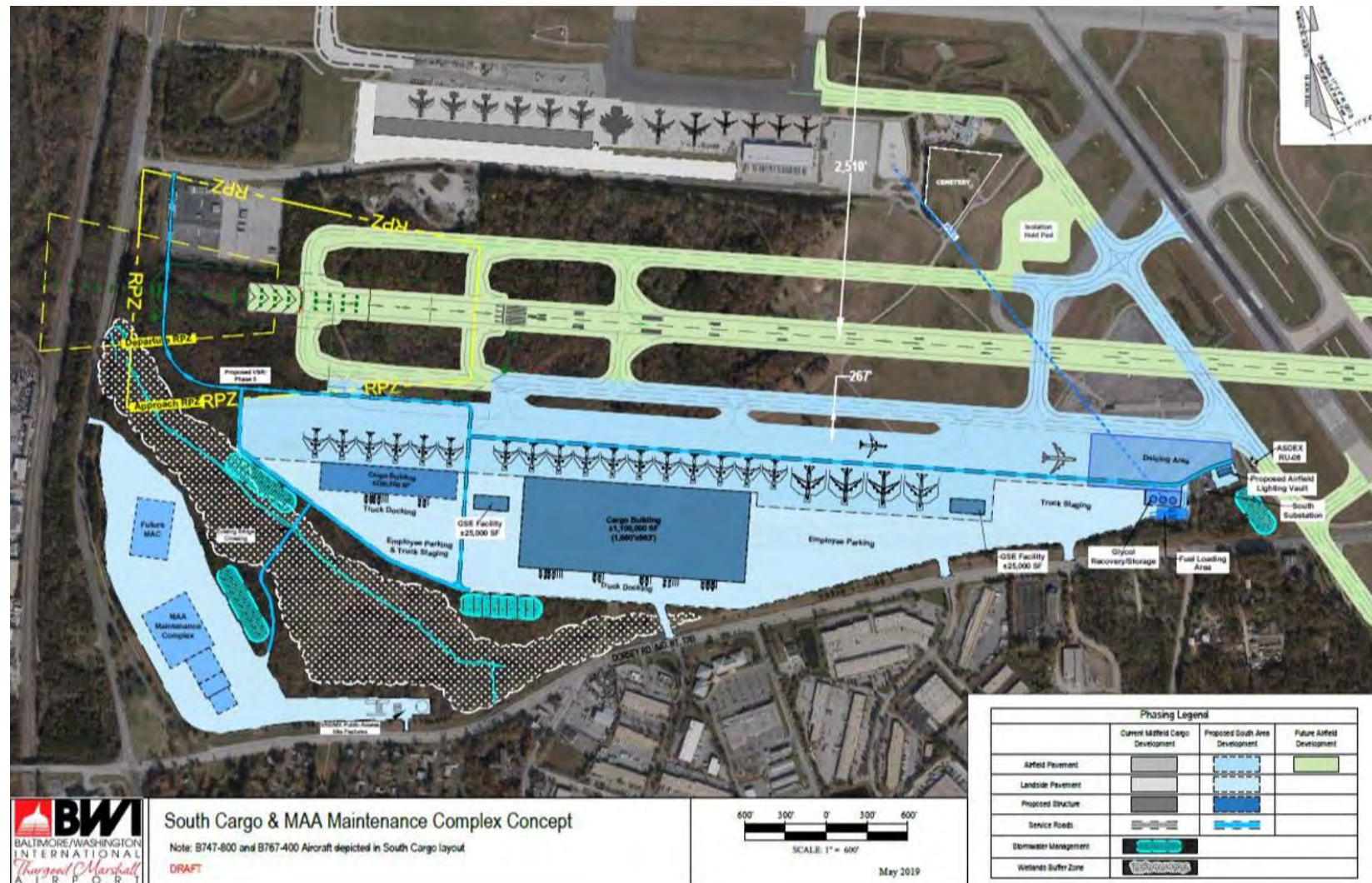


- **Airport's Final Secure Passenger Connector**
- **Passenger Security Screening Checkpoint (6 Lanes)**
- **New Airport Traffic Control Tower (ATCT)**
- **Hotel (200 Rooms)**
- **Consolidated Airport Operations Center**
- Ticketing and ATO Reconfiguration
- Curbside Check-in
- In-line Checked Baggage Inspection System (CBIS)
- Baggage Make-up Improvements
- Baggage Claim Expansion and BSO
- Operational Spaces (FAA and Leasable)
- Airline Lounge

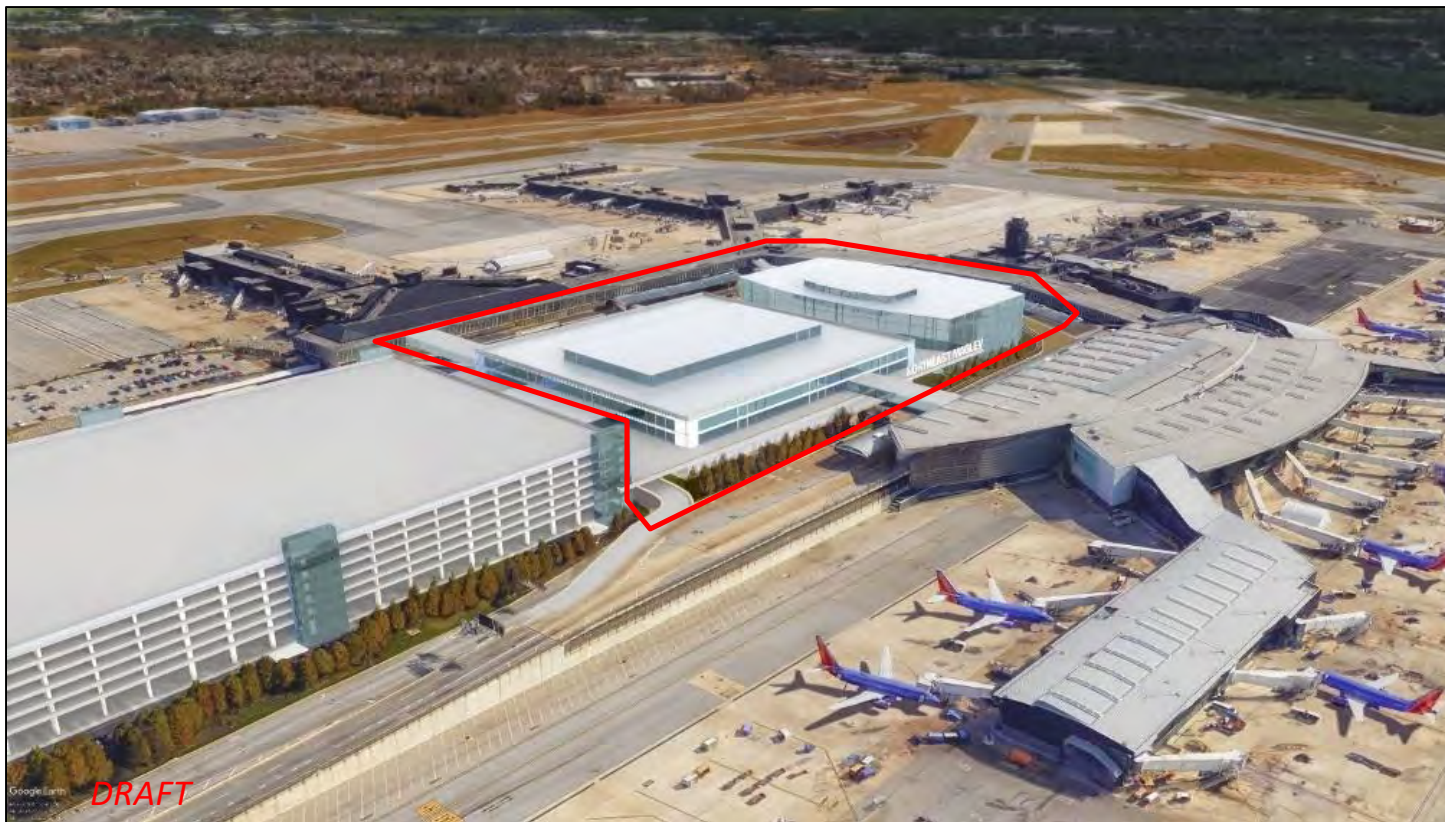


Southwest Quadrant Development

- 400-500 acre site
- Preserve capability for future parallel runway
- Utility spine for flexible pad site development
- Mixed commercial, aviation and support uses
- Environmental protection components
- Currently in planning phase

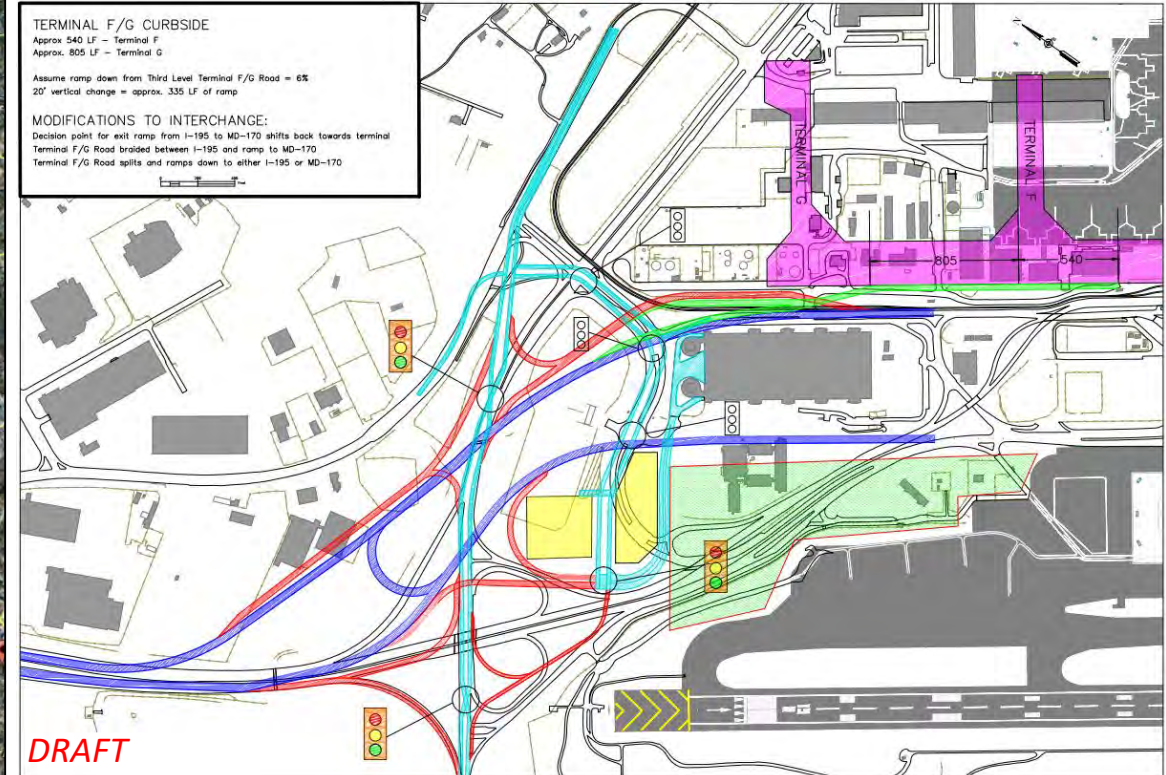


Ground Transportation Center & Roadway Improvements



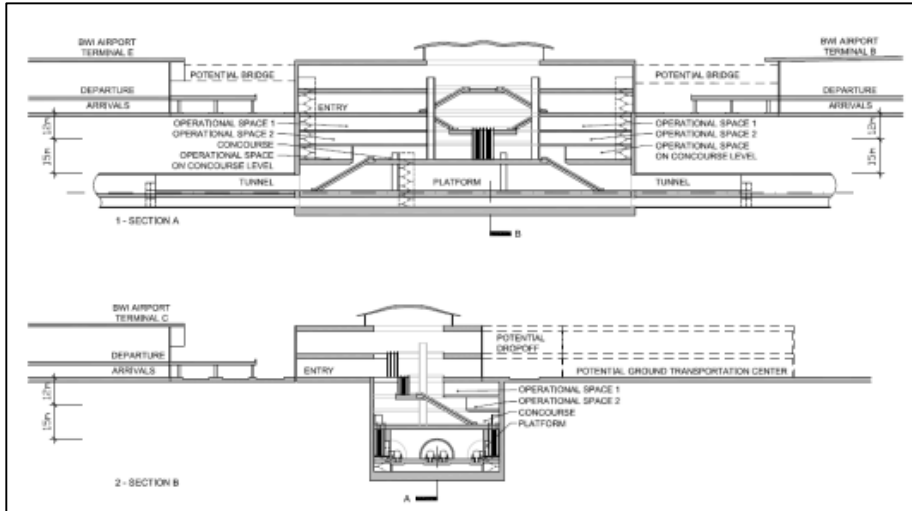
- Separation of private and commercial vehicles
- Reduced curbside congestion
- Improved multi-modal connectivity & efficiency
- Additional covered parking
- Incorporate passenger and airline amenities
- Additional terminal connections/access
- Plan for adaptive reuse

Ground Transportation Center & Roadway Improvements

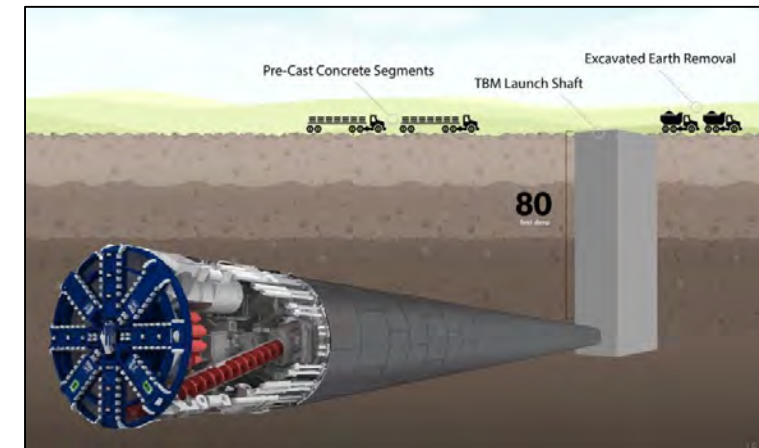


Concept Approach Road & Interchange Improvements

Potential MAGLEV



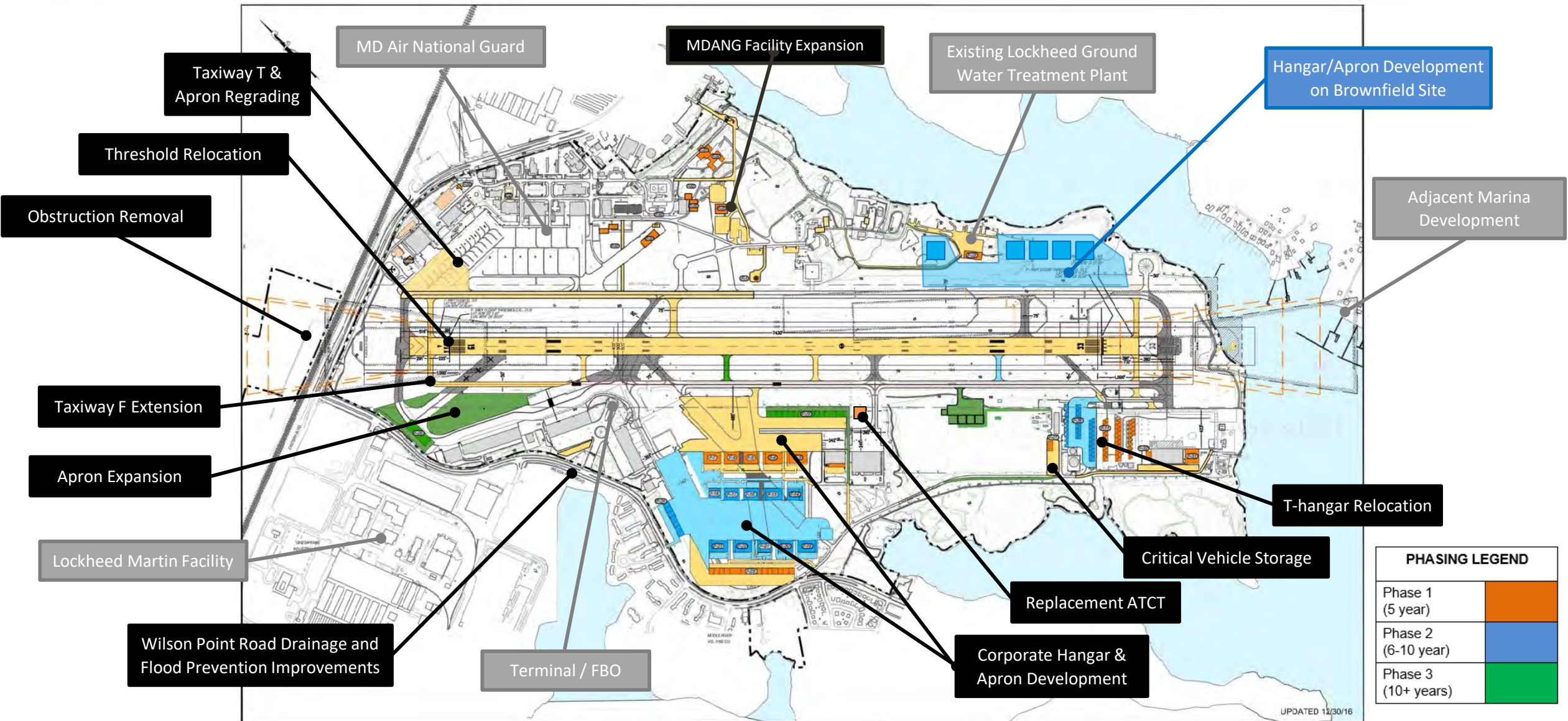
- Federal NEPA process began in 2016, Draft EIS currently out for agency for review
- First phase – DC to Baltimore in 15 mins.
- One stop at BWI
- Station 100' below the BWI hourly garage
- Incorporate into new Ground Transportation Center
- Construction begins in 2024/2025
- Revenue operations start 2030-2032
- Estimated non-airport passenger parking garage demand 5,000-6,000 spaces



'be better'

MTN ALP & EA

Martin State – Airport Layout Plan (ALP)



MTN EA - Process



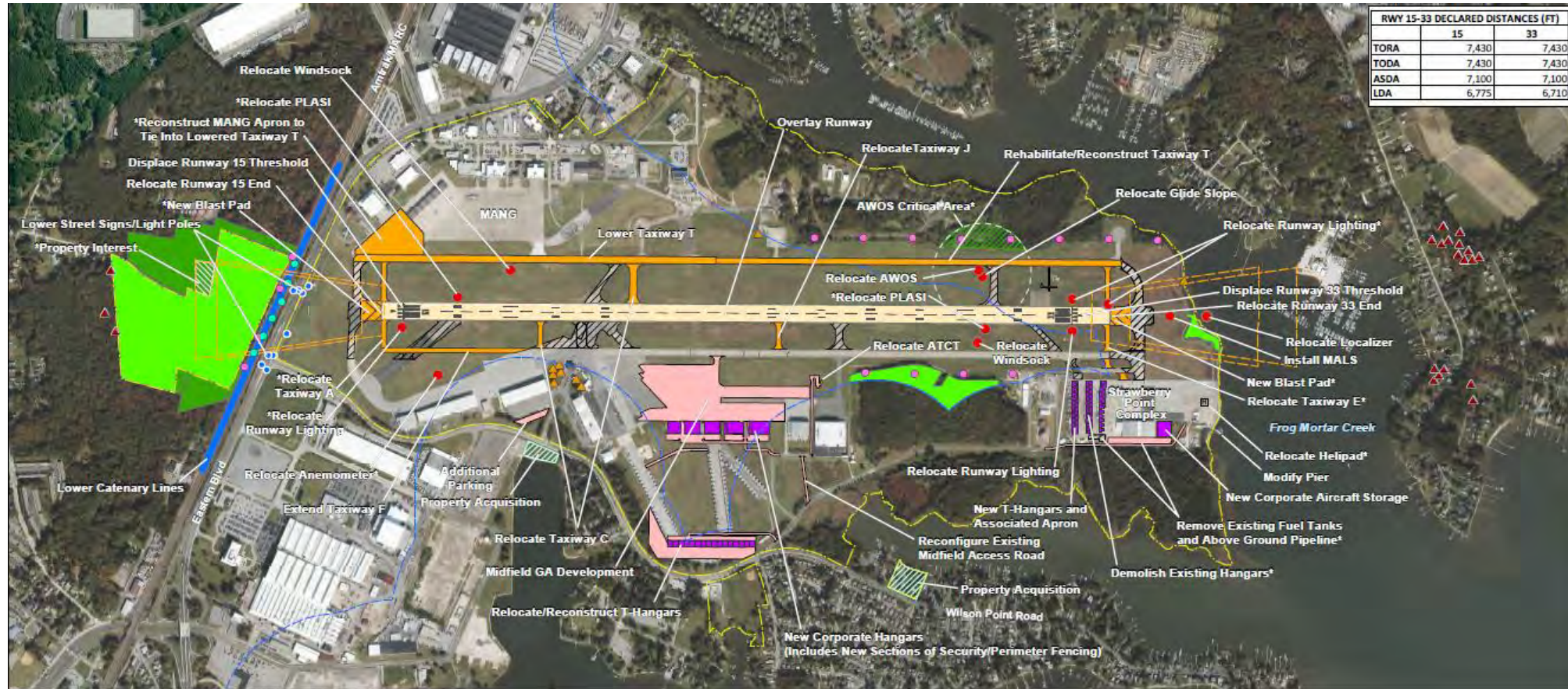
- Theme is to compare alternatives and avoid, minimize, or mitigate impacts
- Draft environmental document is available on the MAA website and consists of 290 pages plus 12 technical appendices of another 4,620 pages.



MTN EA – Proposed Action

Purpose & Need

- Meet FAA Design Standards
- Enhance Airfield Safety
- Improve Airfield Efficiency
- Accommodate Existing and Anticipated User Demand
- Environmental Review for Property Acquisition



RUNWAY 15-33 IMPROVEMENTS

- RUNWAY THRESHOLD DISPLACEMENT (SEE MARKINGS)
- RUNWAY END RELOCATION (SEE MARKINGS)
- FULL-LENGTH REHABILITATION

TAXIWAY IMPROVEMENTS

- NEW/REHABILITATED/RECONSTRUCTED PAVEMENT
- PAVEMENT REMOVAL

NAVAIDS

- RELOCATION

LANDSIDE FACILITIES

- NEW PAVEMENT

GENERAL AVIATION FACILITIES

- NEW STRUCTURE
- NEW PAVEMENT

MARKING & LIGHTING PLAN

- OBSTRUCTION LIGHT
- LIGHTED SPHERICAL MARKER BALL

OBSTRUCTIONS

- ON-AIRPORT VEGETATION REMOVAL
- OFF-AIRPORT VEGETATION REMOVAL
- MAN-MADE OBSTACLE MITIGATION
- ON-AIRPORT ISOLATED TREE REMOVAL
- OFF-AIRPORT ISOLATED TREE REMOVAL
- AWOS VEGETATION REMOVAL

CONNECTED ACTION

- AIRPORT PROPERTY LINE
- FUTURE RPZ
- PROPERTY INTEREST
- PIER MODIFICATION
- PROPERTY ACQUISITION
- CHESAPEAKE BAY CRITICAL AREA

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MARTIN STATE AIRPORT BWI

Maryland Aviation Administration
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Airlines/Aviation - BWI Airport, MD -367 (Bellevue)

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About

MDOT MAA (Maryland Department of Transportation Maryland Aviation Administration) fosters the vitality of aviation statewide and promotes safe and efficient operations, economic viability and environmental stewardship. MAA owns and operates Baltimore/Washington International Thurgood Marshall Airport and Martin State Airport.

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About

Baltimore/Washington International Thurgood Marshall Airport is the 22nd busiest airport in the United States and the busiest in the Washington-Baltimore region. BWI Marshall Airport was recognized as Best Airport in North America by Airport Council International World (ACI World) for 2020. In 2019, BWI Marshall Airport served approximately 21...

Verizon 3:12 PM 92%

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The official Instagram for Baltimore/Washington International Thurgood Marshall Airport (BWI).
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A brand new destination for BWI Marshall Airport travelers!

@SouthwestAir just announced daily nonstop service to @SyracuseAirport beginning November 14. More info at bit.ly/SouthwestBWito...
#SceneAtBWI #MDOTscenes #Open4BizMD #travel #airports

2 6

Newly Updated Website

www.marylandaviation.com

The screenshot displays the website for the Maryland Department of Transportation, Maryland Aviation Administration. The header includes the Maryland.gov logo, navigation links for Maryland.gov, Phone Directory, State Agencies, and Online Services, a search bar, and a main navigation menu with links to Home, About MAA, Doing Business With MAA, Environmental, Tenants, Permits & Forms, Fire & Rescue, COMAR Regulations, Careers, and Contact the MAA. The main content area features the MAA logo and the text 'MARYLAND DEPARTMENT OF TRANSPORTATION' and 'MARYLAND AVIATION ADMINISTRATION'. Below this is a section titled 'About MAA' with a breadcrumb trail 'Home / About MAA'. The main content is divided into two columns. The left column contains the 'Maryland Aviation Administration's Mission' and 'Maryland Aviation Administration's Vision' sections. The right column contains an 'About the MAA' sidebar with links to 'About MAA', 'Our Leadership' (listing Ricky Smith, Hazel Robinson, Dale Hilliard, Renee Larkins, Staci Gorden, Edward P. "Ned" Carey, Annette Fisher, Shanae Murray, Wayne S. Pennell, Al Pollard, Paul L. Shank, Ashish Solanki, and Jim Walsh), 'MAA Commission', and 'Maryland Aviation History' (listing Basil Smith Farmstead and Iron Forge Discovery).

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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND AVIATION ADMINISTRATION

About MAA
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Maryland Aviation Administration's Mission

The Maryland Aviation Administration (MAA) fosters the vitality of aviation statewide and promotes safe and efficient operations, economic viability and environmental stewardship. Responsible for the operation of Baltimore/Washington International Thurgood Marshall and Martin State airports, the MAA provides friendly, convenient facilities and customer services and develops enhanced domestic and international passenger and cargo opportunities through inter-modalism and state-of-the-art technology.

Maryland Aviation Administration's Vision

The Maryland aviation system will be the "Easy Come, Easy Go" gateway to the world.

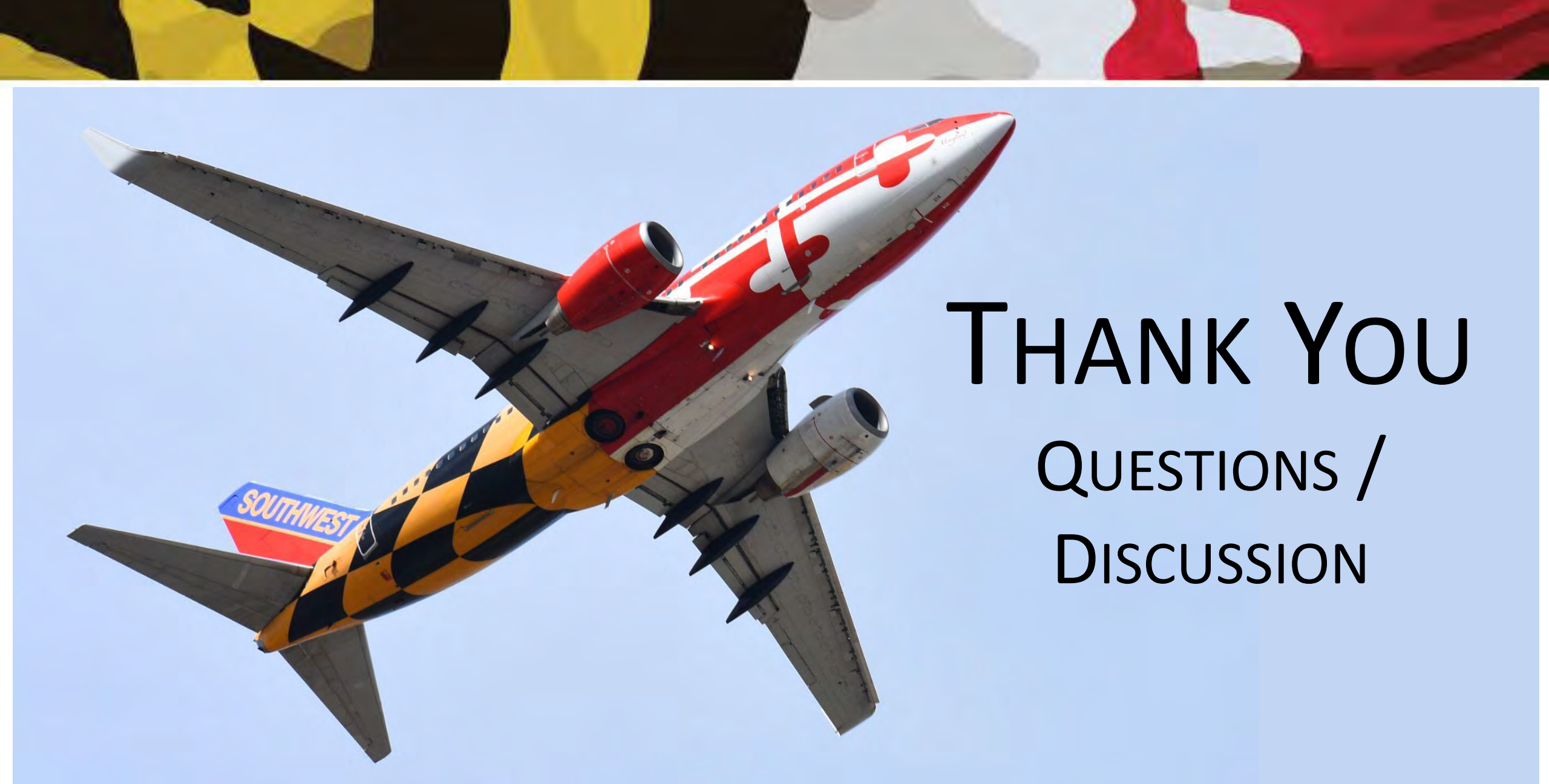
About the MAA

About MAA

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MAA Commission

Maryland Aviation History
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THANK YOU

QUESTIONS /
DISCUSSION