Terminal Enhancement Program
Baltimore/Washington International
Thurgood Marshall Airport

County Engineer’s Association of Maryland
April 28, 2016
Paul L. Shank, P.E., C.M.
Chief Engineer
Runway Safety Area, pavement Management & Standards Compliance Program Background
All Commercial Service Airports Must Meet Runway Safety Area Standards by December 31, 2015
Program Background

- RWY 10-28 – Fair
- RWY 15R-33L – Good/Fair
- Taxiways – Fair/Serious
- Hold Pads – Fair/Very Poor
Program Background

• RWY 10-28 – Poor/Serious
• 15R-33L – Satisfactory/Poor
• Taxiways – Fair/Failed
• Hold Pads – Poor/Failed
• Escalating rehabilitation cost
Program Background

- Addresses Non-Standard Conditions
- Required for AIP Grant Eligibility
RSA Program Summary
RSA Program Summary

• Meet all FAA Runway Safety Area Standards
• Long Term Runway Pavement Rehabilitation (20+ Years)
• Connecting Taxiways in Concrete at Runway Ends
• Concrete Runway Ends
• New Hold Aprons (Runway 15R/33L)
• NAVAID Replacement/Relocations to Meet Standards
• Resolution of FAA Modifications of Standards (MOS)
• Taxiways meet Engineering Brief 75 Standards and -13A
• Removal of Historic Identified “Hot Spots”
• Complete Dual Parallel Taxiway System
• Obstruction Removal for Runways 10-28 and 15R-33L
RSA Program Summary
RSA Program Progress to Date

- 52 Design Tasks Completed
- 10 Inter-Governmental/Agency Agreements Executed
- 27 Construction Projects Complete
- 2 Construction Projects Underway

- BWI fully RSA and Standards Compliant!
  - Ahead of Schedule!!
  - On Budget!!!
Airfield Standards and Pavement Rehabilitation Project (ASAP)

Project Scope
Airfield Standards and Pavement Rehabilitation Project (ASAP)
Design Criteria – A Moving Target

- Advisory Circular Changes mid-design
- Airfield Geometry Changes
- Taxiway Centerline Lighting

150/5300-13 Change 18

150/5300-13A
Existing Conditions

• Subgrade Conditions under Taxiway U
• Earthwork – Hill Removal
• Existing/Proposed Utilities
Operational Elements

- Hot Spot Elimination
- ARFF Road
- PCC vs Asphalt
Construction
Construction

- Working on the Active Airfield
  - Crossing Taxiway C
Construction

Earthwork and Demolition
Construction

P-401: Asphalt Pavement
Construction

P-501: Portland Cement Concrete Pavement
Construction

Thermoplastic Markings
Construction

Electrical Work
Construction

NAVAIDS
Construction

Amtrak

5 Days:
Construction

4 Years:
MOU
Design Phase Agreement
Design
Construction Phase Agreement
Construction

Grading
Revisions
## Construction

### Partnering Decision Ladder

<table>
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<th>Role</th>
<th>Designer</th>
<th>MAA</th>
<th>PM</th>
<th>CMI</th>
<th>Contractor</th>
<th>FAA</th>
<th>Time Frame</th>
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<td>Principal</td>
<td>Janie Tiedeman</td>
<td>Paul Shank</td>
<td>David Lookenbill</td>
<td>Jeff Tyley</td>
<td>Rich Dungan</td>
<td>Jeff Jones</td>
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<td>Director</td>
<td>Larry Bauman</td>
<td>Benjamin Chin</td>
<td>Alan Peljovich</td>
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<td>Eric Eastin</td>
<td>George Dalton</td>
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<td>Manager</td>
<td>Jack Deter</td>
<td>Randy Petersen</td>
<td>Alan Peljovich</td>
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<td>Eric Eastin</td>
<td>George Vanechanos Paul Kirby</td>
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<td>Keith Fritz</td>
<td>Hank Lilly</td>
<td>Alan Peljovich</td>
<td>Terry Seaworth</td>
<td>Craig Cheney Laurie Bryan</td>
<td>Philip Tortorice Chuck Freburger George Garcia</td>
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*Partnering*
Thank you!!!

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<th>Parsons Transportation Group</th>
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Existing Terminal (2011) - Upper Level Plan

Security Checkpoints in the throat of the Concourses restrict Egress/Evacuation Capacity

Corridor Width in Original portions of Concourses Inadequate
New Checkpoints Between Concourses

Widen older portions of Concourses C and D to meet egress requirements

Behind Security Connectors allow for load balancing, connecting flights, and expanded concession options
Concourse D originally first because deficiencies were greater due to the number of gates served.

DE Connector is the second phase currently under construction.

SWA / AirTran Merger and Consolidation on Concourses A/B/C shifted priorities to BC Connector.
BC Connector Program – Two Construction Projects
B/C Connector – Finished Exterior
New B/C Checkpoint
Concourse C Widening and Renovation
Concourse C Exit
DE Connector and Security Checkpoint
Final Upper Level

6 Lane Checkpoint Expandable to 8 Lanes

Combined Holdroom – 2 Wide-body or 1 Wide-body and 2 Narrow body gates

Concourse D Widened
Final Upper Level - Amenities

- Concession core at checkpoint with airfield views
- Outdoor Patio
- Outbound Moving Walkway
- Children’s Play Area
- New Restrooms
D/E Connector – Phase 1 Completion May 26, 2016

Sterile Corridor open to FIS Hall

Gates D3 and D5 Open for Arrivals Only
D/E Connector – Phase 2 Completion Dec. 2016

- Gates D1, D3, D5 and E4 fully open
- Connector Open from D to E
- New Checkpoint Open
All work complete May 16, 2017

Renovations at Existing D and E Checkpoints Complete
D/E Connector – March 2016
D/E Connector – Progress Photographs – Exterior
D/E Connector – Progress Photographs – Connector

Interior Perspective Towards D Concourse
D/E Connector – Progress Photographs – Security Checkpoint
D/E Connector – Progress Photographs – Security Checkpoint
D/E Connector – Concourse D

Overbuild to remove “Sea of Columns” at entrance to original Concourse D

Widened Concourse D
D/E Connector – Widened Concourse D
D/E Connector – Overbuild 2 of 3 Phases Complete
Third International Baggage Claim

Third Baggage Claim Carousel with two feed belts

New Restrooms Beyond Primary Screening
Third International Baggage Claim
Concourse E Extension
Concourse E Extension – 6 Gates

Arrival/Departure Gates

90 Foot Expansion recently constructed to house new CBIS

Arrival Only Gates
International Arrival Gate Availability

2015

4

2016

5

2017

7

2018

8

14
Departure Level
Sterile Corridor Level
Project 1 North Cargo Area

6 Gate Extension

Buildings with new card readers
Concourse E Extension Site Package
Existing Conditions

Grassed infield area at remote Group V Parking positions

Grassed infield area / stormwater retention basin
Site Package - General Scope of Work

- New Outfall Pipe
- New Concrete Apron
- Pave remote parking position
Concourse E Extension - phasing

Elimination of Checkpoint J – Complete
Site Package – Under Construction 2016 Completion
Building - 2017 Construction
Questions?