Grand Forks International Airport
Master Plan Study

Authority Briefing #3
Grand Forks, ND
December 13, 2016
Airport Master Planning

Planning the future of the Grand Forks International Airport

Pre-Planning
- Facility and Environmental Inventory
  - Aviation Forecasts
  - Capacity Analysis & Facility Requirements

Alternative Concept Formulation
- Alternatives Analysis
- Identify Preferred Alternative

Financial Analysis
- Implementation Plan
  - Master Plan Documentation
  - Airport Layout Plan (ALP)

Public Involvement
- Airport Approval Point
- FAA Approval Point

Current Project Status
Project Status Update

◊ Completed Tasks
  ◊ Capacity Analysis
  ◊ Facility Requirements
  ◊ Alternatives Formulation

◊ Upcoming Tasks
  ◊ Open House
  ◊ Select Preferred Alternative
  ◊ Implementation Plans
Key Facility Needs

- Operational solution for future primary runway reconstruction
- Airfield capacity enhancements
- Upgrade terminal complex for increase in flow/volume of passengers, aircraft
- Flexibility to accommodate development opportunities
Alternatives Evaluation

- Initial Screening Process
- Evaluation Criteria
  - Operational Performance
    - Capacity, Capability, Efficiency
  - Best Planning Tenets & Other Factors
  - Environmental Impacts
  - Fiscal Factors
Airfield

Key Considerations

- Runway 17R/35L Needs Reconstruction
- One Runway Serves Air Carriers
- Limited Total Airfield Capacity
- Safety Risks from Taxiways, Crossing Traffic
- Enhance Approaches to Runway 17R, 9L
Alternative A1
- Reconstruct Runway 17R/35L

Alternative A2
- Reconstruct Runway 17R/35L
- Utilize Taxiway A as Temporary Runway

Alternative A3
- Construct New Runway 17R/35L
- Repurpose Existing Runway as Taxiway
Airfield

Alternative B1
- Reconstruct Runway 17R/35L
- Extend Runway 9L/27R for Air Carrier Use

Long-Term
- Extend Primary Runway to 8,000 feet
## Airfield

<table>
<thead>
<tr>
<th>Category</th>
<th>Alternative A1</th>
<th>Alternative A2</th>
<th>Alternative A3</th>
<th>Alternative B1</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWY 17L/35R Action</td>
<td>Reconstruct</td>
<td>Reconstruct</td>
<td>New Runway</td>
<td>Reconstruct</td>
</tr>
<tr>
<td>RWY 9L/27R Action</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Extend to 6,800’</td>
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<tr>
<td>Taxiway A Action</td>
<td>None</td>
<td>Reconstruct, Temp. Runway</td>
<td>New Taxiway</td>
<td>None</td>
</tr>
<tr>
<td>GFK Air Service Impact*</td>
<td>25-38 Weeks</td>
<td>+/- 1 Week</td>
<td>1-2 Weeks</td>
<td>+/- 1 Week</td>
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<tr>
<td>Wetland Impacts</td>
<td>None</td>
<td>5.0 Acres</td>
<td>5.4 Acres</td>
<td>14.7 Acres</td>
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<tr>
<td>Land Acquisition</td>
<td>None</td>
<td>None</td>
<td>55.6 Acres</td>
<td>76.9 Acres</td>
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<tr>
<td>Temporary Impacts</td>
<td>Air Service to AFB or Other Airports</td>
<td>Limits Aircraft Parking Areas</td>
<td>Not Significant</td>
<td>Not Significant</td>
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<tr>
<td>Permanent Impacts</td>
<td>Not Significant</td>
<td>Reconstructs Taxiway A</td>
<td>Opportunity for Westward Expansion, Additional Pavement Areas</td>
<td>County Highway 5 Realignment, Improves Airfield Safety (ATC)</td>
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<tr>
<td>Planning-Level Cost</td>
<td>$36 million</td>
<td>$58 million</td>
<td>$68 million</td>
<td>$61 million</td>
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</table>

*Closure timelines impacted by project phasing and funding*
# Airfield

## Pros

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<tbody>
<tr>
<td><strong>Pros</strong></td>
<td>Least Costly Alternative</td>
<td>Reduces Air Service Disruption, Utilizes Existing Infrastructure Areas</td>
<td>Minimizes Air Service Disruption, Creates New Opportunities for Terminal Area Development Westward</td>
<td>Reduces Air Service Disruption, Corrects Safety Issue Noted from ATC, Provides Flexibility of Two Air Carrier Runways</td>
</tr>
</tbody>
</table>

## Cons

<table>
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<th>Alternative B1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cons</strong></td>
<td>Long-Term Air Service Disruption, Risk of Permanently Losing Passengers to Other Airports</td>
<td>High Project Cost, Reconstruction of Taxiway A Before End of Useful Life</td>
<td>Highest Project Cost, Land Acquisition + Relocation, Increases Total Pavement Area to Maintain</td>
<td>High Project Cost, Relocation of County Highway 5, Land Acquisition, Highest Wetland Impact</td>
</tr>
</tbody>
</table>
Airfield

Alternative C1

- New 3,300’ x 60’ Runway
- North-South Configuration
- Primarily for Flight Training
- Increases Airfield Capacity by 44%
- Reduces Costly Delays
- Estimated Cost: $8.2 million
Passenger Terminal Area

Key Terminal Considerations
- Passenger Circulation
- Holdroom Space
- Aircraft Gate Layout
- Irregular Operations
- Baggage Makeup
- Storage Space
- Automobile Parking
Passenger Terminal Area

- Terminal Building
  - Holdroom Expansion
  - 3<sup>rd</sup> Boarding Bridge
  - FIS Capability
  - Ultimate Expansion
- Aircraft Parking Configuration
  - Future Fleet Mix
Passenger Terminal Area

- **Air Carrier Apron**
  - Maximize Available Space
  - Improve Traffic Flow
  - Improve Gate Accessibility
  - Dedicated Deicing Pad
  - Irregular Operations
General Aviation / Other

- East GA Hangar Area Development
- Reconfiguration of West Hangar Area
- Alpha Apron Improvements
- Taxiway Safety/Capacity Enhancements
- CBP Replacement Facility
General Aviation / Other
Next Steps

- Focus Group Comments
- Alternatives Refinement/Analysis
- Public Open House
- Preferred Alternative Selection
- Implementation Plans
- Airport Layout Plan
Thank You!

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