O’Hare Modernization Program and Chicago Airspace Project

Overview

Presented to: Northwestern University
Transportation Center

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Briefing Agenda

• Federal Aviation Administration (FAA) Overview
• Chicago/Chicago Department of Aviation (CDA) and the O’Hare Modernization Program (OMP)
• Federal Aviation Administration (FAA) actions and analysis
• Funding and schedule
• Chicago Airspace Project (CAP)
• Enhancing safety and efficiency
Federal Aviation Administration

• Agency within the US Department of Transportation. The Secretary of Transportation is a member of the President’s Cabinet.

• Responsibilities include:
  o civil aviation safety
  o air traffic control/management
  o promoting aviation
  o enforcing aviation regulations
FAA Lines of Business

• Four operational organizations
  – Air Traffic Organization
  – Airports
  – Aviation Safety
  – Commercial Space Transport

• Numerous staff offices that provide human resource, legal, financial, communications and other support services to the Agency
FAA relationship with Airport Sponsors

• Regulatory – airport certification for commercial service airports
• Financial
  — federal grants for airport improvements
  — oversight and approval authority to collect airport-specific passenger fees
  — compliance with conditions associated with grants and fees
• Technical – airport planning and design standards
• Collaborative – provide air traffic control and supporting infrastructure
Brief Overview of OMP

• In 2001 the City of Chicago proposed a ~$7 billion reconfiguration of O’Hare, known as the O’Hare Modernization Program (OMP).

• The FAA issued a Record of Decision (ROD) approving the OMP and master plan projects in September 2005.

• The OMP changes the airport from a predominantly intersecting runway configuration to six parallel runways with two crosswind runways.

• Future terminal plans are included.
OMP Funding and Schedule

- To date, Chicago Department of Aviation (CDA) has spent over $3.28B on the OMP.
- The estimated overall program cost through the completion of Phase 2A (October 2015) is $4.4B.
- Phase 2B is not funded or scheduled. Estimated construction cost is over $2B.
- Passenger Facility Charge (PFC) authorization to date - $3.3B
- Through two Letters of Intent and two amendments, the total FAA Airport Improvement Program (AIP) funding commitment for the entire OMP is $902 million.
- The City of Chicago provides additional funding, through the use of General Airport Revenue Bonds (GARBS)
FAA involvement with the O’Hare Modernization Program

- Special Projects Office established in 2002
  - Staff from appropriate functional areas
- Manager represents the FAA and acts as a single point of communication with Chicago
  - Briefs and advises FAA executive management
  - Conducts the FAA orchestra
- Design and implement major airspace changes for the larger Chicago metropolitan area
- Provide design and installation services for FAA equipment and systems
O’Hare Modernization Program (OMP)

Runway 9L-27R
November 2008

Runway 14L-32R
Decommissioning: NLT Aug 2015

Runway 4L-22R
Temporary Closure TBD

Runway 14R-32L
Temporary and extended closures TBD

Runway 9C-27C
TBD

Runway Ext 9R-27L
TBD

Runway Ext 10L-28R
September 2008

Runway 10C-28C
October 2013

Runway 10R-28L
October 2015

7,500 x 150 feet

11,245 x 200 feet

11,260 x 150 feet

13,000 x 150 feet

10,600 x 200 feet

7,500 x 150 feet
Airspace and Runway Utilization

- How O’Hare runways were used before new OMP runways were completed
- Step through runway construction and corresponding airspace configurations
- Runway utilization after Runway 10C/28C commissioning in October 2013
- Final O’Hare configuration
Noise Contours
Runway Utilization Pre-OMP

East Flow
approx 36% with optimal weather

West Flow
approx 42% with optimal weather

Information from FAA EIS, Exhibit D-1
Runway Utilization with Runway 10C/28C

East Flow
approx 18% with optimal weather

West Flow
approx 68% with optimal weather

Information from FAA EIS, Exhibit D-3
Runway Utilization Post - OMP

East Flow
approx 13% with optimal weather

West Flow
approx 41% with optimal weather

Information from FAA EIS, Exhibit D-4
Chicago Airspace Project

• **Stage 1: East Enhancements**
  - Four eastbound departure routes
  - Completed March 2007

• **Stage 2: South Enhancements**
  - Five southbound departure routes
  - High & Wide arrival procedures for ORD west flow
  - Allows triple parallel arrival for west flow at ORD
  - Completed November 2008

• **Stage-3: (Completion Stage) West and North Enhancements**
  - Four westbound departure routes
  - High & Wide arrival procedures for ORD east flow
  - Enabling Infrastructure
  - Allows triple parallel arrival east flow at ORD
  - Completed October 2013
CAP Implementation

Departure Routes

Before CAP
- 2 Corridors
  - Controller Vectored
  - Route Variable
  - Linked to Destination

After CAP
- 4 Routes to 8 Transitions
  - Consistent
  - Predictable
  - User Selectable
CAP Implementation

Arrival Routes

1 Arrival Route
- Controller vectored
- Step down altitudes

Before CAP

2 Arrival Routes
- Full RNAV
- Estimated 1000 flight mile daily reduction on arrival

After CAP