Airspace Modernization Documents

• Airspace Modernization Roadmap Strategy
  • AMR PowerPoint Presentation
  • 2022 Airspace Modernization Roadmap Talking Points
• Memorandum of Agreement, ATO, APL, ARP
• Service Area Leadership Team Charter (SALT)
• SALT Recommendations
• Airspace Modernization Stakeholder Outreach Q+A’s
• NAC Notification Letter
• Airspace Modernization Playbook (in development)
• HCF Presentations
What is the Airspace Modernization Roadmap?

• FAA Strategic Plan to continually evaluate and modernize airspace infrastructure in the National Airspace System (NAS)

• Holistic, data driven approach that produces optimal returns in safety, efficiency, and sustainability. Initially focused on NSG 1, 2 Airports

• Utilizes quantitative data along with qualitative analysis to determine priorities and modernization schedules based on current and projected operations and needs

• Quantitative data includes safety data such as unstable approaches, Class B excursions, Traffic Alert and Collison Avoidance System (TCAS) Resolution Advisories. Efficiency data includes things like procedure conformance, distance flown, distance at level flight, PBN utilization, etc

• Qualitative analysis includes things like project de-confliction/schedules, community support, on-going litigation

• To remain agile, we will continue to evolve our metrics to include future modernization efforts and to synchronize with internal/external stakeholder investments in new technology, procedures, and operations
Airspace Modernization Elements

- Safety System Management initiatives
- Legislative mandates
- Collaborative Air Traffic Management
- On-Demand NAS Information
- Separation Management
- Facility airspace optimization
- Regulatory & non-regulatory airspace
- Instrument Flight Procedure optimization
- Instrument Flight Procedure design criteria/policy changes
- Trajectory Based Operations (TBO)
- Performance Based Navigation (PBN)
- Time Based Flow Management (TBFM)
- Improved Multiple Runway Operations
- Ground-based navigation programs
- Satellite-based navigation programs
- ATC automation
- Improved Surface Operations
- Community Engagement activities
- NextGen initiatives
- Oceanic airspace connectivity
What does success look like?

• Airspace and procedures are modernized to meet current and future needs
• Benefits are delivered to FAA lines of business, air traffic controllers, NAS users, and other stakeholders
• Airports have the right flight procedures at the right time, in consideration of the full portfolio of airport activities
• Resources are aligned with national strategies and regional priorities, creating additional bandwidth for emerging needs (e.g., new entrants)
• FAA is achieving our strategic goals (e.g., FAA Strategic Plan, PBN NAS Navigation Strategy)
Specific Needs at Hawaii

• To improve the safety and efficiency of the NAS by modernizing the 30+ year old Hawaiian airspace design.

• The current airspace has many issues that need to be addressed:
  • Unstable approaches
  • Class B excursions
  • Old Standard Instrument Arrival Route (STAR) and Standard Instrument Departure Route (SID) designs, limited use of PBN procedures
  • Limited STAR and SID conformance
  • TCAS RA
  • Airspace complexity (including Department of Defense needs)
  • Community noise issues
  • Oceanic airspace connectivity

• Focus on HNL (NSG 2) but will include other NSG 3 airports and surrounding airspace

May 22, 2023
Oahu Noise Complaint Locations
Maui Noise Complaint Locations
Airspace Modernization Phases

• Airspace Selection *(Airport Portfolio’s, Airspace Assessments)*

• Scoping *(Study of Current Airspace, and Identification of Areas That Would Benefit From Modernization)*

• Solution Development *(Airspace and Procedural Design)*

• Evaluation

• Implementation

• Post-Implementation
Pre-Scoping Activities

• Notice of Intent, briefings to elected officials, State Government, FAA Facilities, Airports Sponsors, DoD, others. SALT Effort
• Project Team: Management/NATCA Project Co-Leads, PIM, SME’s, MITRE
• Scoping Plan: who, when, what, how long
• Draft HCF Modernization Schedule
• Setting Milestones in CWP, and Placeholders in IFP Gateway
• Draft HCF Modernization Project Costs
• Building graphics of conceptual procedures
• Draft Community Engagement Plan
• Sector 7 Sector Split Staff Study/SRMD
• Offshore Automation (ERAM) adaptation cutoff dates, and HCF Airspace Modernization synchronization
• Integrating project schedules to determine on much AM work can be done before final cutoff date
• Determining HCF critical needs, ones that can’t wait until after ERAM ORD, and burn-in
• KAENA STAR Amendment
Scoping

Data/Information Collection

- Airport Portfolios
- Airspace Evaluations
- Instrument Flight Procedure
- Safety concerns
- Operational Concerns
- Noise Concerns

- Scoping Document
- Approximately 6 Months in Duration from Project Kick-off

Participants

- FAA
- DOD
- HDOT
- Industry
  - Air Carriers
  - Air Commuter
  - Air Cargo
  - Business Jet
  - General Aviation
- Airport Sponsors
- Public (through Community Engagement Activities)
Scoping Outcome

Scoping Document

• Well Defined Statement of Objectives
• Determine Project Size and Geographical Area
• Scoped to Minimize Environmental Impacts
• Determine what airspace modernization elements will be pursued, and whether they will occur throughout the state or if it will be at targeted locations.
  • Determine project dependencies, and elements
  • Determine project costs and funding
  • Create project schedule
• Airspace integration with new offshore automation system
Solution Development Phase

• Purpose is to design an implementable solution that addresses the project’s objectives that can be carried through operational, environmental, and safety reviews during the evaluation phase.

• Environmental efforts begin.

• Community Involvement Plan (CIP) created, and community engagement activities begin.

• Collaboration with aviation operators, airports sponsors, and others.

• Develop integrated PBN and Time-Based Flow Management (TBFM) designs that achieve Trajectory Based Operations (TBO).

• Simulations of designs to ensure flyability and operational acceptability.

• 6 - 12 months in duration.
Evaluation Phase

- Conduct Operational Validation on Initial Design
- Consider Public Input
- Conduct Appropriate Environmental Review
- Conduct Safety Management System (SMS) Safety Risk Management Panels and Process
- Approximately 12 Months in Duration
Implementation, Post-Implementation Phases

**Implementation**

- Procedure Processing and Publication
- Flight Inspection
- Automation Modifications
- Facility Activities
  - LOA’s, SOP’s, OCP’s
  - Training
- Stakeholder Coordination
- Elected Official Coordination
- Public Notification

**Post-Implementation**

- Assessment of Implemented Actions
- Determine whether expected benefits were achieved
- Feedback solicited from controllers on the workability of design
- Feedback solicited from pilots on flyability of IFP’s.
- Approximately 30 days after implementation
- Refinement of procedures as necessary
Integrating Project Schedules
Draft

Relocate District Personnel - Details TBD

Term Fac Improvement/ERAM Infra *

ERAM Implementation **

Hawaii Airspace Initiative - Preliminary

District Personnel Relocated 12/28/23

ZHN ERAM Critical Path
The National Environmental Policy Act (NEPA) requires the FAA to address the impacts of major federal actions on the human environment. This includes noise, socioeconomics, land uses, air quality, and water quality, among others.
Community Engagement

• The Regional Administrator’s Office in collaboration with the Western Service Center will work to provide an effective and thorough community engagement plan.

• A webpage will be established to help keep the public informed, link will be provided and broadcasted once established.

• If an Environmental Assessment is prepared:
  • In person and/or virtual public meetings will be held
Other Engagement

- If Class B Airspace needs to be modified, comments on the proposed airspace would be solicited via:
  - Ad Hoc Committee Meetings
  - Informal Airspace Meeting(s)

- If Class D Airspace needs to be modified, Notice of Proposed Rulemaking, via Federal Register (45-day comment period) / Final Rule, via Federal Register

- If Special Use Airspace needs to be established/modified, comments from the public would be solicited via:
  - The rulemaking process (Restricted Areas)
  - The circularization process (Warning, Military Operating Areas, Alert Areas. Controlled Firing Areas)