

ALASKA

Aviation System Plan



Alaska Aviation System Plan Phase 1, Stage 1 Final Report

October 2008

**ALASKA AVIATION SYSTEM PLAN
PHASE 1, STAGE 1 REPORT**

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LIST OF ACRONYMS

AAB	Aviation Advisory Board
AASP	Alaska Aviation System Plan
DOT&PF.....	State of Alaska Department of Transportation and Public Facilities
FAA.....	Federal Aviation Administration
navaids	navigation aids

1.0 INTRODUCTION

The State of Alaska Department of Transportation and Public Facilities (DOT&PF) has launched an update to the Alaska Aviation System Plan (AASP). The AASP sets the vision for the Alaska aviation network by:

- Identifying airport improvements needed,
- Setting priorities for funding,
- Proposing aviation policy, and
- Documenting the existing system with photos, maps, and data.

The AASP is an integral part of an overall statewide transportation planning process as described in the Statewide Long-Range Transportation Policy Plan - *Let's Get Moving 2030*. That planning process, depicted in the following figure, is based on a state mandate defined in Alaska Statute 44.42.050. The Statewide Long-Range Transportation Plan sets overall state policy and direction for all of the modes of transportation. Regional transportation plans, metropolitan plans, and modal plans, such as the AASP, provide input into the Statewide Long-Range Plan, and are influenced by it. Airport master plans and airport layout plans define needs at individual airports and are the most detailed plans for a particular airport. Airport master plans are guided by the standards and policies in the AASP and also provide data and information for the AASP. Ultimately, all of these plans influence decisions made about aviation capital and operating budgets.

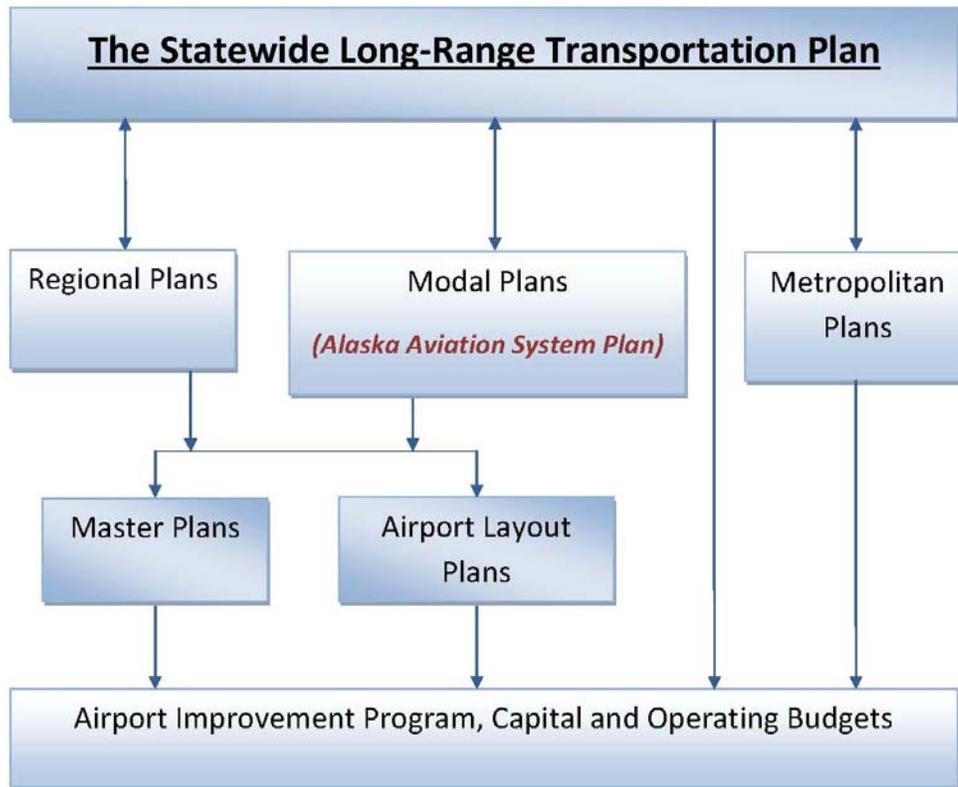


Figure 1: Statewide Long-Range Transportation Plan

Previous AASPs were completed in 1986 and 1995. The Federal Aviation Administration (FAA) requested that the AASP be updated because the 1995 plan is outdated and there are new issues to address. The AASP planning process is guided by FAA Advisory Circular 150/5070-7 - *The Airport System Planning Process*, and the FAA is paying for approximately 95 percent of the costs of the AASP.

This document is a compilation of the Technical Memorandums and deliverables from Phase 1, Stage 1 of the Alaska Aviation System Plan. The purpose of the first phase was to collect existing information and reports, to identify preliminary issues to be addressed in the AASP, and to establish which types of and approaches to forecasting, inventory, web site, and public involvement are needed for the plan. The first phase also included a review of existing FAA programs addressing navigational aids (navaids) and use of airspace in Alaska. The information collected during this first phase and presented herein will be used as the project progresses in later AASP phases.

2.0 DOCUMENT REVIEW

The first task of this initial phase was to collect, review, and categorize existing documents that might be important for the initial identification of issues and scoping of the AASP. A great many reports, studies, and publications have previously been produced which identify aviation issues throughout the State of Alaska. The *Document Index* created during this task is included as Appendix A. The documents were grouped into categories (e.g., prior AASPs, regional aviation system plans, master plans, etc.), and the relevant issues and data contained in each document were briefly summarized. This summary of issues identified during the document review is included with the documentation for the *Initial Outreach and Issues* task, as discussed in Section 5 of this report. The assembled library of documents will serve as useful sources of data and information as we complete the next phases of the AASP.

3.0 FORECASTS

One objective of this phase was to determine what sort of forecasting would be most applicable to the AASP. Based on past experience, aviation forecasts in Alaska have not been particularly useful in helping determine future aviation needs because many needs are driven by design standards and maintenance issues rather than by forecast-driven capacity problems. The *Forecasts, Data Sources, and Potential Economic Factors Technical Memorandum* produced under this task (Appendix B) first describes some forecasting goals and potential data sources and economic factors that could influence future aviation activity. It then describes three different forecast approach options, each with a varying level of detail and cost. Based on discussions with DOT&PF staff regarding the forecast approach options, the technical memorandum recommends an approach that combines aspects of each of the three options, with the following primary elements:

- Data collection from the latest sources,
- Update available master plan forecasts,
- Develop forecasts for airports without a recent master plan or system plan forecasts based on the relationship between aviation activity and other variables, such as population,
- Prepare passenger, cargo, general aviation, military, and critical aircraft forecasts,

- Evaluate the impacts of key aviation trends, such as changes to the Essential Air Service program, on the forecasts (sensitivity tests), and
- Prepare in-depth case studies of up to three airports showing how a major economic development, such as the construction of a natural gas pipeline, could affect activity at each case-study airport.

The forecast approach that has been selected is also included in Appendix B.

4.0 ECONOMIC IMPACTS

The economic impact study will be used to help “tell the story” of aviation’s essential role in Alaska, using data and numbers to reinforce the concept of how important aviation is to the State. During Phase 1, Stage 1 of the AASP, various options for measuring economic impacts were presented to and considered by the DOT&PF and the Aviation Advisory Board (AAB). The purpose of the economic impact methodology was to present information on the benefits and costs of airport improvements, as well as the importance of airports to communities, to aid in the decision-making process. Three proposed methodologies were evaluated, and, following discussions with DOT&PF and the AAB, a blend of items from each of the three methodologies was used to create the final recommended approach. The following primary elements are part of the recommended approach:

- Conduct an economic impact analysis that quantifies and describes the economic effects of airports to the State of Alaska’s economy,
- Conduct eighteen case studies of rural airports to describe the social impacts of airports on Alaska residents,
- Make a comparison of enplanements, pounds of cargo per capita, and similar metrics for case study communities with remote communities of similar population size in the lower 48 states to demonstrate the greater importance of airports to Alaska communities, and
- Analyze the effect of longer runways on the cost of living in rural communities and economic development successes and failures following runway extensions.

The selected scope of work developed from this task for the *Economic Impact Study* can be found in Appendix C.

5.0 INITIAL OUTREACH AND ISSUES

During this phase, DOWL HKM completed initial outreach to stakeholders including the DOT&PF regions, FAA, air carriers, municipal airports, the consulting community, and others to help identify aviation issues for the AASP. Meetings with individuals and groups were used in conjunction with a written survey (included in Appendix D) to identify and assess critical issues that should be addressed by the AASP. Written surveys were distributed to DOT&PF staff, local airport sponsors, FAA Alaskan Region Airports Division staff, aviation interest groups, members of the aviation industry, and aviation consultants. Responses were compiled into a summary of issues identified. In addition, applicable issues from the various documents reviewed in the *Document Review* task were identified and summarized. Appendix D includes a compilation of the initial issues identified in the following documents:

- *1986 Alaska Aviation System Plan Issues & Implementation Status* – issues identified in the 1986 AASP and the implementation status of each issue, if known,
- *1996 Alaska Aviation System Plan Update Issues & Implementation Status* – issues identified in the 1996 AASP Update and the implementation status of each issue, if known;
- *Preliminary Issues Overview* – An overview of issues compiled from AASP survey responses, meeting and conversation notes, and FAA’s 2004 Survey Results,
- *Aviation Advisory Board – Alaska Aviation System Plan Issues* – issues identified by the Governor’s Aviation Advisory Board at the May 30, 2008 meeting,
- *Alaska Aviation System Plan Issues from Document Review* – issues identified from documents collected during the *Document Review* task,
- *AASP – Initial Issues from Survey Responses* – issues identified through survey responses, categorized according to topic, and
- *AASP – Issues from Meetings & Discussions with Interest Groups* – issues identified through meetings and discussions, categorized according to topic.

A product of this initial identification of issues was identifying issues of sufficient complexity and significance to warrant study by work groups in later phases of the project. Five broad topics were selected for further discussion and consideration by work groups:

- Inventory,
- Website/ GIS,
- Maintenance and Operations,
- Postal Hubs, and
- Funding.

The work groups will meet during the later phases of the AASP to discuss these large and complex issues and make recommendations about how the AASP should address them. Other work groups may be established, as needed, during the course of the AASP.

6.0 PUBLIC INVOLVEMENT

Public outreach throughout the AASP is focused on the following broad efforts:

- Educating the public about Alaska's aviation system and its issues,
- Identifying aviation issues, project goals, and objectives,
- Providing avenues for input on technical analysis, alternatives, and recommendations, and
- Documenting the public comments and communicating them to project decision-makers.

The *Public Involvement Plan* (Appendix E) describes the public involvement approach for the project, identifying the variety of outreach methods to be used and the stakeholder groups that need to be involved in the project. The approach is a combination of targeted outreach to key stakeholder groups as well as broad outreach to the general public. The Plan's targeted outreach to involve key aviation interests is through surveys, meetings with stakeholder groups, advisory committees, and work groups. The Plan's broad outreach to the public is through a website and survey, use of media, public meetings, and piggybacking on other meetings being conducted by DOT&PF or others.

The initial project mailing list is included in Appendix F. The list will continue to be updated with additional interest groups and individuals as the project progresses and outreach broadens.

As part of the Public Involvement task, it was necessary to establish how input will be given and who will make decisions. Since there are so many affected interests, even within DOT&PF, it was important to define the flow of information and to make sure that decisions and direction can be provided in a timely manner and the project can move ahead on a reliable schedule. Two versions of the decision-making structure are shown in Appendix G. They both demonstrate who will make decisions and how input will be obtained from advisory committees and work groups during the targeted outreach efforts. The table detailing memberships includes the specific organizations and members who comprise each group in the decision-making process.

7.0 INVENTORY AND DATABASE FRAMEWORK

An inventory is critical for purposes of collecting and analyzing information that will help to assess the condition and performance of Alaska's aviation system. The bulk of the effort in this task was focused on reviewing the types and sources of classification and performance measures information and databases that have been used for other studies, both in Alaska and in other states, and determining which of these are available for the current AASP. The *Inventory, Database, Classifications and Performance Measures Framework Technical Memorandum* (Appendix H) presents the results of these efforts and proposes that a Work Group be formed at the beginning of the next phase to help sort out which classifications and performance measures should be used and what data should be collected in the inventory. The Work Group will use the information collected for this technical memorandum in making its recommendations for classifications, performance measures, and inventory. The selected scope of work developed from this task for later Inventory Database Preparation efforts is also included in Appendix H.

8.0 WEBSITE

A Website/GIS Work Group met in the early stages of this first phase to discuss goals for a project web site that would ultimately develop into a new-and-improved DOT&PF aviation website. The site would be accessible to the public, but could include login options for DOT&PF and FAA staff to access more detailed information for airport planning and record-keeping purposes. As a result of the Work Group efforts, an initial site was launched in

September 2008. The website is actively serving as a forum for the public to be informed about project status, to be notified of upcoming events and meetings, and to participate in the public-involvement program. Updates will be posted as the AASP project progresses, and this site will remain dynamic to provide the latest project information to the public and to expand with capabilities and functions of use to the public, DOT&PF, and the FAA. The *Website/GIS Technical Memorandum* produced from this phase and the selected scope of work developed for this task under NTP2 are included in Appendix I.

9.0 AIRSPACE AND NAVAIDS

The AASP included an overview of FAA airspace/navaid programs because:

- FAA navaids and services are crucial to the aviation system in Alaska,
- Rapid changes to airspace/nav aids, communications, and operating procedures are underway,
- Increased awareness and education is needed on activities of the FAA and other agencies, and
- Consolidation of information will aid in decision making.

A draft technical memorandum was prepared with the title *Overview of National and State Programs Regarding Airspace/NAVAIDs Technologies in Alaska* (included in Appendix J). The stated purpose of this technical memorandum is to summarize the goals of the various technologies and programs, discuss how they relate to each other, and identify their implementation schedule. Another purpose of the memorandum is to discuss policy and implementation issues for the FAA and DOT&PF and provide recommendations for further study.

Consultant team members for the AASP attended meetings of various aviation groups in Alaska, and several meetings with Alaska FAA and DOT&PF staff. During the DOT&PF and FAA review of this technical memorandum, it became apparent that this topic was far more complex than originally envisioned, and the FAA advised that more FAA input by a more diverse mix of FAA employees was needed. Further, the technical memorandum was left in draft form until this group met.

The draft technical memorandum made the following recommendations as the means for progressing with this issue:

- Form a working group with much wider representation from the FAA and other key agencies than was available to those who prepared the initial technical paper, in order to prepare a more comprehensive summary of airspace/navaids programs,
- Create an information-exchange mechanism between FAA leaders and key team members of the AASP,
- Coordinate airport improvements made by the DOT&PF or local airport owners with the improvements being made by the FAA and other agencies to the airspace/navaid structure,
- Make airspace/navaid information more accessible and easy to understand, and
- Study additional ways to enhance safety and usability for both Capstone- and non-Capstone-equipped VFR aircraft.

10.0 CONCLUSION

Upcoming phases of the AASP will continue to build upon the foundation set in this phase of the project. A significant amount of information has been collected that will guide the in-depth studies and analyses to be undertaken as the project keeps moving forward. The ultimate collective result of the efforts from all phases will be a statewide aviation system plan that establishes infrastructure and policy recommendations to best serve the needs of the people of Alaska.

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