This is the presentation for the third Technical Advisory Committee (TAC) Meeting being conducted for the Ted Stevens Anchorage International Airport Master Plan Update. It was delivered at approximately 1:30 PM on Thursday, April 4th at the Anchorage International Airport North Terminal Badge Office in Anchorage, Alaska. The presenter was Evan Pfahler, Project Manager with Reynolds Smith, and Hills, Inc.
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What is an Airport Master Plan?

“An airport master plan is a comprehensive study of an airport and usually describes the short-, medium-, and long term development plans to meet future aviation demand.”

—FAA Advisory Circular 150/5070-6B Airport Master Plans

The Master Plan Update Team wants to ensure the audience is reminded what an airport master plan is. United States public commercial service airports are encouraged to prepare airport master plans by the Federal Aviation Administration (FAA). The FAA provides grant funding for airport master plans through the Airport Improvement Program (AIP) and publishes an advisory circular [150/5070-6B, Airport Master Plans] that provides guidance on all elements of the master plan process. The FAA defines an Airport Master Plan as “...a comprehensive study of an airport [that] usually describes the short-, medium-, and long term development plans to meet future aviation demand.” It is important to note that a master plan is intended to prepare an airport to meet future aviation demand which is estimated through a forecast. This presentation includes the results of the forecast prepared for Anchorage International Airport.
The purpose of this presentation is to:

1. Share the findings of the facility requirements analysis conducted for the Ted Stevens Anchorage International Airport Master Plan Update
2. Introduce draft evaluation criteria that will be used to compare the merits of the various alternatives
3. Discuss potential constraints to future development of the Airport and opportunities for future development
ANC Master Plan Update // TAC Meeting 3
This Meeting’s Agenda

1. Update project progress
2. Share facility requirements
3. Introduce draft evaluation criteria
4. Discuss development constraints and opportunities

This presentation covers four agenda items:

1. First, an update the Master Plan Update team’s progress to date will be presented
2. Second, the findings of the facility requirements analysis will be shared
3. Third, draft evaluation criteria will be introduced
4. Finally, a review of development constraints and opportunities will be discussed
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1. Update project progress
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The first part of this presentation is to provide an update on project progress.
This flow chart generally outlines the Master Plan Update process and its primary tasks. The tasks with green check marks have been completed for the Ted Stevens Anchorage International Airport Master Plan Update. The red “A” indicates the task that is currently underway.

The results of the facility requirements analysis are included in this presentation.

As a reminder, the FAA has already approved the updated forecast of aviation activity for Anchorage International Airport. The forecast was presented at Open House 2 in September 2012 and is available at http://dot.alaska.gov/aias/news.shtml#forecasts

The Master Plan Update team is currently working on developing alternatives.

The Master Plan Update will be adopted by the Airport upon its conclusion at the end of 2013. It is important to recognize that the Master Plan Update process is the first step in the planning process and not the last step. Additional environmental analysis and permitting may be required prior to implementation of actions recommended in the Master Plan Update.
The schedule above illustrates the tentative dates for future Master Plan Update Public Open House events, Technical Advisory Committee Meetings, and Working Group meetings. Your continued involvement in the Master Plan Update is both welcome and encouraged.
ANC Master Plan Update // TAC Meeting 3
What We’ve Been Doing

1. Performing ongoing public outreach
   🌐 Listening to airport staff
   🌐 Listening to stakeholders

2. Completed the facility requirements analysis

3. Preparing concepts

The Master Plan Update team is very busy working on continued public and stakeholder involvement and technical analysis. Ongoing efforts focus on three primary elements.

First, we have continued our public involvement program by working with our valued stakeholders. Stakeholders include groups and individuals interested in the Airport and the Airport Master Plan Update.

Secondly, we have completed the facility requirements analysis.

Finally, we have begun preparing development alternatives. The early stages of alternatives development consider the future needs of the various functional areas of the Airport such as the airside, terminal, landside, and airport support facilities.
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1. Update project progress
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The second part of this presentation shares the findings of the facility requirements analysis for the Ted Stevens Anchorage International Airport Master Plan Update.
The facility requirements analysis documents whether existing facilities are capable of accommodating forecast demand. If the existing facilities cannot meet forecast demand, the analysis determines facilities required to meet unmet demand.

The facility requirements analysis does not determine how or where facilities would be provided, only whether additional facilities are necessary within the 20 year master planning horizon to meet unmet demand.
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Review of Aviation Activity Forecast

🌟 Completed as part of the AIAS Planning Study
(Provided forecasts of aviation activity for both Anchorage and Fairbanks Int'l Airports)
🌟 The forecast has been reviewed and accepted by the FAA and by the Airlines
🌟 Per FAA standards, the forecast looks ahead 20 years
🌟 The forecast of aviation demand includes:
   🚁 Enplaned passengers (people boarding planes)
   🚁 Cargo tonnage (tons of cargo carried on planes)
   🚁 Operations (take-offs and landings)

The facility requirements analysis relies on the forecast of aviation demand. Prior to sharing the results of the facility requirements analysis, it is important to review the forecast of aviation demand.

The forecast of aviation demand was prepared as part of the Alaska International Airport System (AIAS) Planning Study and was completed in 2012. Forecasts were prepared for both Anchorage and Fairbanks International Airports. The results of the forecast will support Master Plan Updates and Part 150 Noise studies at both airports. Thus, all major planning efforts at both airports are relying on a consistent set of forecast data.

The Federal Aviation Administration as well as the Airline Airport Affairs Committee were involved in the forecast study and both have endorsed use of the forecast for these planning efforts.

Per FAA guidelines, the forecast of aviation demand looks out 20 years.

Finally, the forecast of aviation demand includes an outlook for enplaned passengers (people boarding airplanes), cargo tonnage (carried on airplanes), and aircraft operations (landings and take-offs)
Planning Activity Levels represent projected future levels of activity used to assess facility requirements. The use of Planning Activity Levels permits planners to assess future facility needs relative to activity levels and not based on a timeline or a specific year.

Once the Master Plan Update is complete, the Airport should monitor activity levels and make decisions about implementing improvements recommended in the Master Plan Update as warranted by growth in activity. This means that future airport improvements will only be made as necessary. Future improvements recommended in the Master Plan Update, therefore, may be required sooner than forecast or later than forecast.

The facility requirements analysis uses four Planning Activity Levels representing incremental growth in enplanements (people boarding planes), cargo tonnage (tons of cargo onboard airplanes) and aircraft operations (landings and take-offs). The baseline represents current activity levels.
Passenger enplanements represent people boarding airplanes at Anchorage International Airport.

Passenger enplanements are forecast to grow from about 2.48 million per year to more than 3.00 million per year over the planning horizon.

The Airport’s busiest year for passenger enplanements occurred in 2008 when about 2.59 million passengers were enplaned.
Cargo tonnage represents tons of cargo onboard airplanes at Anchorage International Airport.

Cargo tonnage is forecast to grow from about 5.10 million tons per year to more than 8.84 million tons per year over the planning horizon.

The Airport’s busiest year for cargo tonnage occurred in 2006 when about 5.4 million tons were carried.
Aircraft operations represents aircraft takeoffs and landings at Anchorage International Airport.

Aircraft operations are forecast to grow from about 220,000 per year to more than 280,000 per year over the planning horizon.

The Airport’s busiest year for operations occurred in 2000 when nearly 250,000 landings and take-offs occurred.

Note that the historic operations peak occurred in 2000 while the historic cargo peak occurred in 2006 and the historic passenger enplanements peak occurred in 2008. This fact is explained because airlines today are operating much more efficiently than they did 10 to 15 years ago. Each plane carries more passengers and more cargo on average than in past decades.
Facility requirements will be presented by functional area.

**AIRSIDE** facility requirements are determined by assessing FAA airport design standards and aircraft operations levels

**TERMINAL** facility requirements are determined by assessing passenger aircraft operations and passenger enplanements

**LANDSIDE** facility requirements are determined by assessing passenger enplanements

**AIRPORT SUPPORT** facility requirements are determined by assessing aircraft operations levels and cargo tonnage

**LAND USE** requirements are determined by assessing aircraft operations, passenger enplanements, and cargo tonnage
The airside facilities include the runways, taxiways, aprons, and associated safety areas.

Today through PAL 4, upgrades to airfield facilities will be required to meet new FAA airport design standards as published in Advisory Circular 150/5300-13A, Airport Design. These upgrades will also be necessitated by a growing number of large aircraft utilizing the Airport in future years.

As airside improvements are made, the Airport must address the need to clear and store snow during the winter months. The existing snow storage areas are nearing capacity.

Growth in aircraft operations will result in higher delays at and above PAL 3. Increasing delay will need to be addressed at or above PAL 3.
The passenger terminal facilities consist of the North Terminal and South Terminal.

Today, the South Terminal’s outbound baggage system must be addressed to accommodate peak demands during summer tourist season.

The Airport has a sufficient number of gates and large enough terminal facilities to meet demand through PAL 4. However, there is a substantial disparity in the quality of terminal facilities between the South Terminal and the North Terminal. As passenger enplanements continue to grow, this disparity will need to be addressed such that a consistent, high-quality customer experience is provided for airline passengers regardless of their terminal.

The Master Plan Update must address repurposing of the terminal facilities to make enhancements and improve the overall customer experience for all passengers and as activity levels warrant.
Landside facilities include airport access roadways, airport circulation roadways, parking facilities, and the Rental Car Center.

Today through PAL 4, tenant auto parking in the Airparks must be addressed to accommodate demand.

By PAL 4, terminal loop road, rental car center, public parking, tenant parking, and airport employee parking capacity shortfalls must be addressed.
The airport support facilities include those facilities that generally support the aviation function of the Airport and include the air traffic control tower, airfield and aircraft maintenance facilities, cargo facilities, the fuel storage facility, and other facilities not included in the Airfield, Terminal, Landside, or Land Use functional areas.

By PAL 1, fuel storage facilities may need to be addressed to accommodate greater amounts of fuel shipped by ocean-going tanker.

From PAL 1 through PAL 4, cargo and general aviation building capacity must be addressed.

From PAL 2 through PAL 4, cargo and general aviation apron areas must be addressed.

It is important to note that most airport support facilities are developed by airport tenants. Planners must designate sufficient land for tenants to make necessary improvements as warranted by growth in activity. When tenants determine that additional facilities are needed, they will then have the opportunity to address their needs as they see fit.
The largest remaining areas of contiguous developable land for future airport development are located east of the North Airpark, the West Airpark, and the western portion of the South Airpark. Developable land is limited and the Airport must preserve all remaining lands for aviation use or for the generation of additional revenue.
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The third part of this presentation introduces draft alternatives evaluation criteria.
Evaluation criteria provide planners with a set of consistent criteria against which the merits of a given development alternative can be measured.

The primary purpose of using these criteria is to assess whether Master Plan Update Goals and Objectives are being met.
Evaluation criteria are based on the Master Plan Update Goals and Objectives. The Goals and Objectives cover six broad topic areas. The Master Plan Update goals and objectives are foundational to the alternatives development process. Both concepts and alternatives are prepared by the Master Plan Update team with consideration for the Master Plan Update goals and objectives.

Note that the goal of open communication is an important goal for the overall Master Plan Update process. However, this particular goal does not lend itself to evaluating development alternatives and will not, therefore, be included in the evaluation criteria.
For the purposes of this presentation, we are sharing an example evaluation criteria associated with each goal. However, there are several other criteria that have been developed and continue to be developed for use in evaluating alternatives. The evaluation criteria are, again, based on Master Plan Update Goals and Objectives. The Technical Advisory Committee and the Master Plan Update Working Group participated in the development of draft evaluation criteria during their March 2013 meetings.

The Master Plan Update team encourages interested individuals to review all of the draft evaluation criteria available on the Master Plan Update website (www.ancmasterplan.com)
The illustration above is a simplified example of an alternatives evaluation matrix. It demonstrates that each alternative will be assessed as to what degree it meets the evaluation criteria that are derived from the Master Plan Update Goals and Objectives. The Master Plan Update will document the evaluation process and define how alternatives were assessed.
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The final part of this presentation discusses development constraints and opportunities
Prior to preparing alternatives it is important to consider overall constraints to future facility development at the Airport.

Development constraints establish potential boundaries or limitations to future airport development. In addition to defining development constraints, planners seek to identify development opportunities. Development opportunities are defined as those areas best suited to accommodate future facility development.
This map of the Airport was used by the members of the Technical Advisory Committee to consider development constraints and opportunities.
Thank you for viewing the Ted Stevens Anchorage International Airport Master Plan Update Technical Advisory Committee 3 presentation. You may submit a comment to the Master Plan Update team on the project website www.ancmasterplan.com or by sending an email to contact@ancmasterplan.com.