

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 1  
June 10, 2004

AGENDA

Welcome and introductions

Master plan overview

- Background
- Goals, objectives, and expectations (below No. 1)
- Process (below No. 2)
  - Aviation Stakeholder Advisory Committee composition and role (below No. 3 and No. 4)
  - Proposed meeting topics (below No. 5)
  - Overall schedule (12 to 14 months)

Summary of existing conditions

- Land use map
- Statistics
- Concluding remarks
  - Web site ([www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan))
  - Sign-in sheet and primary method of communication
  - Meeting minutes
  - Schedule next meeting (in about 2 months)
  - Transportation (parking and AirBART)

Questions / comments

NO. 1: WHAT IS A MASTER PLAN AT OAK?

A master plan at OAK will:

- Follow FAA Advisory Circular (AC) No. 150/5070-6A (*Airport Master Plans*)
- Identify near-term projects (5-year timeframe) and provide long-term (20 year) on-Airport general land-use guidance
- Provide a vehicle for community participation in airport planning

- Meet the requirements in the settlement agreements with the City of Alameda, Citizens League for Airport Safety and Serenity (CLASS), and Berkeley Keep Jets Over the Bay (KJOB) Committee for a master plan

A Master Plan at OAK will NOT:

- Focus on detailed plans for individual projects or facilities
- Include every project that the Port might propose during the 20-year planning horizon
- Approve specific projects

NO. 2: MASTER PLAN PROCESS

FAA AC No. 150/5070-6A

- Allows for flexibility in scope, depending on the type and size of airport and nature of issues
- Elements
  - Existing conditions and issues
  - Aviation demand forecasts
  - Requirements analysis and concepts development
  - Airport site selection (not applicable)
  - Environmental procedures and analysis
  - Simulations
  - Airport plans
  - Implementation plans
- Future FAA updates to AC No. 150/5070-6A

NO. 3: STAKEHOLDER ADVISORY COMMITTEE COMPOSITION

Individual Stakeholder Advisory Committee members and alternates are appointed by their respective cities or organizations (and in the case of Airport tenants and regulatory agencies, the Port) to advise Port staff on preparation of the master plan for OAK. The Committee composition is as follows:

City of Alameda

- 2 community members
- 1 staff person (plus 1 alternate)

City of San Leandro

- 2 community members
- 1 staff person (plus alternate)

City of Oakland

- 2 community members
- 1 staff person (plus 1 alternate)

San Leandro Unified School District

- 1 community member
- 1 staff person (plus 1 alternate)

CLASS

- 1 community member (plus 1 alternate)
- 1 staff person

Berkeley KJOB Committee

- 2 community members

Fixed Base Operators

- KaiserAir (1 representative, plus 1 alternate)
- Business Jet Center (1 representative)

Airlines

- Steve Swanson, Airline Liaison Office
- Federal Express (1 representative)
- 1 passenger airline representative

Flight Training / Light General Aviation

- 1 flight training / light general aviation representative

Regulatory Agencies

- 1 FAA representative
- Others as-needed (e.g., environmental resource agencies)

Port Staff

NO. 4: ROLE OF THE STAKEHOLDER ADVISORY COMMITTEE

The Stakeholder Advisory Committee will:

- Advise Port staff on long-range high-level planning issues for OAK
- Provide input on master plan technical issues and identify potential impacts early-on in the planning process
- Report back to appointing agency/organization to keep these groups informed on latest master plan issues and progress

The Stakeholder Advisory Committee will NOT:

- Vote on particular projects or other master plan issues
- Make decisions regarding the master plan

NO. 5: PROPOSED MEETING TOPICS

Meeting 1: Introductions, process, schedule, and inventory of existing conditions (today)

Meeting 2: Forecasts, market analyses, airline passenger issues

Meeting 3: Air cargo issues

Meeting 4: General aviation issues

Meeting 5: Airfield, access, and airline support issues

Meeting 6: Environmental and financial issues and constraints

Meeting 7: Discussion of alternative land use plans (prepared based on Meetings 1 through 6)

One meeting every 2 months or so, with each meeting about 4 hours (with more or less time, as necessary, to cover specific topics)

Additional meetings will be scheduled, as requested by the Stakeholder Advisory Committee, to address specific topics as necessary



MINUTES  
Meeting 1

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, June 10, 2004

The meeting was the first of a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the OAK master plan web site to be used as an administrative tool. New postings will be accompanied by e-mail notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (including email addresses) to be used as distribution list.

Handouts: Agenda; Existing Land-Use Map (with Existing Conditions data on reverse)

Following introductions, Ms. Kristi McKenney, Master Plan Project Director, provided a brief master plan history at OAK. The master plan is an element necessary to address requirements of the Airport Development Program (ADP) settlement agreement.

Mr. Doug Mansel, Master Plan Project Manager, distributed the Agenda and Existing Land-Use Map, then provided an overview of the master plan process and a summary of existing conditions. Following are the major topics presented on the Agenda, including questions/comments and responses from meeting attendees.

No. 1: What is a Master Plan at OAK?

The existing Federal Aviation Administration (FAA) Advisory Circular (AC) No. 150/5070-6A (*Airport Master Plans*) allows flexibility with regard to preparing a master plan; the FAA is currently in the process of updating the circular, dated 1985. The Port is aware of the FAA's work, and will keep informed on any proposed changes to the AC.

Master plans for other airports are sometimes developed in greater detail than Port staff anticipates for this effort. The master plan for OAK may identify near-term projects. However, projects that are moved forward will go through the normal Port project development process, which includes:

- Project planning
- Design
- Environmental documentation
- Permitting
- Project bidding

- Project contracting
- Board approvals at various stages

The scope of the master plan includes proposed land uses for areas within the property boundary of the Port. Land uses located outside the Port property boundary will be noted as existing conditions when Airport-related impacts (e.g., noise contours) exist.

Recommendations by the Committee will be recorded in the master plan, to be used for reference when projects are raised. For specific projects, there will be future opportunities for public review and comment at various stages, including the environmental review stage and project-related Board of Port Commissioners (Board) meetings/actions.

The Port Board will adopt the master plan with amendments made as needed. The master plan is a planning document only that will provide a sense of planning opportunities considered by the Port; it is not to be treated like a city's general plan or used to approve specific projects. Deviation by the Port Board from the plan, once adopted, would be noted at Port Board meetings.

OAK master plans were prepared in 1954 (*Development Plan for the Metropolitan Oakland International Airport*, July 1954) and 1978 (*Oakland International Airport Master Plan: 1976-1986, Summary Report*); a master plan was conducted for North Airport in 1984 (*Oakland North Airport Master Development Plan*, July 1984). For the past 10 to 15 years, the Airport has relied on the Airport Development Program (ADP) for airport planning purposes.

No. 2: Master Plan Process

Elements of the master plan area listed in the Agenda and will be discussed during subsequent Committee meetings. Consultants are under contract to assist with airfield simulations, aircraft noise analyses, and master plan-related graphics. It was suggested that financial analyses be included in evaluation of implementation plans.

No. 3: Stakeholder Advisory Committee Composition

Committee meetings are not open to the public. The Port requested that meetings be attended by either (1) the appointed member or (2) the appointed alternate. After discussion, it was agreed that appointed alternates may accompany the primary appointed member to meetings for informational purposes, but only as an observer, except when officially standing-in for the primary appointed member. The intent of limiting participation to primary appointed members is to keep meetings manageable and allow for discussion.

Note: no representatives have yet been named to represent Berkeley Keep Jets Over the Bay Committee (KJOB).

No. 4: Role of the Stakeholder Advisory Committee

As the name implies, the Stakeholder Advisory Committee will provide advice and input to Port staff, with final plans and decisions made by the Port Board. Although the final configuration of layouts will be developed by Port staff, discussions and recommendations of various options from the Committee that may differ will be brought to the Port Board's attention through Committee meeting minutes and text in a section of the master plan that will document the Committee's ideas

and concerns (similar to a response to comments section in environmental documents). Both the meeting minutes and the master plan will be drafted by Port staff, with support from consultants and input from the Committee.

To ensure sufficient time for review of materials, information will be posted on the Port web site a few days prior to meetings. Data will be provided electronically, if available.

**No. 5: Proposed Meeting Topics**

Elements of the master plan generally correspond to future meeting topics.

Description of the Existing Land-Use Map:

During the meeting, Mr. Larry Berlin, North Field Manager for the Port, identified locations of existing and planned air traffic control towers (ATCT) on an Airport aerial plot. The Remain-Over-Night (RON) area between Taxiways Tango and Whiskey was identified as passenger facilities for the Committee. Terminal plans will be discussed in future Committee meetings including potential uses of the area currently occupied by the Oakland Maintenance Center hangar. Reference was made to graphics showing a terminal described in a separate meeting by Ms. Deborah Ale-Flint. Port staff indicated that there are currently no firm plans for the hangar site, and many options, including terminals, will be discussed as part of the master plan.

Additional Existing Conditions data:

Requests were made to determine the number of the estimated 10,000 employees at OAK that are local. General Aviation (GA) comprised 60% of total aircraft operations in 2002 partly due to the manner in which they are counted. For example, if a small aircraft is practicing landings by briefly landing on a runway, then immediately taking-off (i.e., touch and go), that would count as one departure. Previously, OAK was home to more than 500,000 operations (8<sup>th</sup> in the world, 5<sup>th</sup> in the U.S.).

Rental car ready/return facilities currently located at North Field northwest of Langley Street will return to garage after its completion.

Currently, there are 24 gates; construction of Terminal 2 extension and renovation will add 5 net new gates.

Next meeting:

Meetings will be scheduled every other month. The next meeting is scheduled for Thursday, August 19, 2004, from 1 to 5 p.m., at the Airport, Terminal 1, In-Transit Lounge.

Items specifically requested by Committee members:

- Information such as data, charts, and graphics in an electronic format
- Residency of employees working at the Airport
- Economic and budgetary figures associated with the Airport
- Gate turns upon the completion of the ADP
- Show location of proposed ATCT
- Documentation of concerns and direction the Airport is headed on an issue early-on in the process—even if there is disagreement with the Committee

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 2  
August 19, 2004

AGENDA

Welcome and introductions

Approval of meeting minutes from June 10, 2004

Follow-up items from the last meeting

- Residency data for Airport employees
- Airport revenue by major function
- Gate use upon completion of current construction
- Existing wetlands map
- Location of proposed air traffic control tower

Master Plan Forecast Development

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 5, Aviation Forecasts
- Why forecast activity?
  - Forecasts are always wrong
  - Trend-breakers occur (e.g., airline deregulation, Gulf War, September 11, fuel prices, SARS, low-cost carriers (airline competition), competition from neighboring airports, etc.)
  - This reality points to the need for a flexible master plan, flexible development program, flexible projects, etc.
- Level of detail
- Horizon
  - Near-term (5 years): 2010
  - Long-term (20 years): 2025
- Forecast elements / process (see forecasting flow chart)
  - Airline passengers / aircraft operations / near-term gate requirements (future terminal land use to be discussed at next meeting)
  - Air cargo
  - General aviation (training, corporate)
  - Military

Wrap-up items

- Schedule next three meetings: September (passenger terminal concepts), October (air cargo), December (general aviation)
- Sign-in sheet
- Web site
- Transportation (parking and AirBART)

Questions / comments



MINUTES  
Meeting 2

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, August 19, 2004

This meeting was the second in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

Handouts:

- Agenda
- Wetlands Map
- Forecasting Process
- Forecasts, Million Annual Passengers (MAP) – Graph 1P
- Forecasts, Monthly Passenger Variation – Graph 2P
- Forecasts, Percent of Annual Passengers Each Month – Graph 3P
- Forecasts, Monthly Load Factors, All Airlines – Graph 4P
- Forecasts, One-Way Through Passengers – Graph 5P
- Forecasts, One-Way Through Passengers as a Percent of Total Passengers – Graph 6P
- Master Plan Forecast (Excel spreadsheet)
- Forecasts, Million Annual Tons of Cargo (Rolling) – Graphs 1C (Oakland Historic Cargo Activity) and 2C (Forecast Cargo Tonnage)
- Forecasts, General Aviation and Military Operations Forecast – Graph 1G
- Potential Terminal Development Areas
- Conceptual Terminals from Non-Terminal Planning Studies

Following introductions, Ms. Kristi McKenney, Master Plan Project Director, provided a summation of the topics to be covered: progress on passenger, cargo and general aviation forecasts and emphasized that the main focus would be passenger forecasts.

Mr. Doug Mansel, Master Plan Project Manager, distributed the Agenda, Wetlands Map, and Forecasting Process flow chart, and reviewed the items requested by Committee members from the previous meeting. See second agenda item below.

Agenda Item:

Approval of meeting minutes from June 10, 2004

The committee approved the minutes with no comments.

Follow-up items from the last meeting

- Residency data for Airport employees: Provided on revised Existing Conditions data sheet (posted on the web site, and hard copies will be provided at the next committee meeting)
- Airport revenue by major function: Provided on revised Existing Conditions data sheet
- Gate use upon completion of current construction: Discussion prepared and posted on the web site
- Existing wetlands map: Distributed during the meeting and posted on the web site
- Location of proposed air traffic control tower: Provided on revised Existing Conditions data sheet

The Committee discussed the following master plan issues:

- Near-term forecasts will be developed with more detail, and long-term forecasts will be developed with significantly less detail, corresponding to the overall level of detail of the master plan (i.e., more specific projects in the near-term, with general land-use guidance for the long-term).
- Environmental review will occur as projects or groups of related projects are proposed. The Port does not intend to have the master plan undergo environmental review because it is a planning study/document, providing general, non-binding land use guidance. It will not approve any specific project or groups of projects. However, the master plan will discuss environmental issues and constraints, as appropriate.
- The Committee discussed and agreed that a question/answer period should occur at each Committee meeting. Between meetings, questions can be e-mailed to Mr. Doug Mansel ([dmansel@portoakland.com](mailto:dmansel@portoakland.com)).
- The Committee discussed opening the web site to the public. The Port prefers this site to be available only to Committee members, as some of the information on it is not suitable for public review without significant explanation and discussion (i.e., the information posted on the site may or may not be best interpreted by the public at large). The web site is merely an administrative tool (like an FTP site) to allow for easy transfer of master plan documents to the Committee members. Port staff recommended that Committee members act as a portal for the information for their constituents.
- The Committee discussed the level of detail for this master plan, and why the Port was taking a more conceptual approach in the long-term. The FAA Advisory Circular on Airport Master Plans (see discussion below) allows for considerable flexibility in preparation of a master plan and the level of detail in a master plan, because needs vary from airport to airport. For OAK, the master plan will focus more detail on the near-term (when things are more certain), and less detail on the long-term (when things are much less certain), showing general land-use information.
- The Committee asked if the master plan will result in an Airport Layout Plan (ALP) update. Port staff responded that ALP updates will be prepared as individual projects or related groups of projects are proposed.

- The Committee asked if FAA representatives will attend these meetings. Port staff indicated that the FAA will not likely attend these meetings. FAA staff will, however, review and approve the forecasts.

#### Master Plan Forecast Development

FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 5 (Aviation Forecasts). This AC describes the process and requirements for master plan forecasting. The forecasting process discussed at this meeting generally follows the approach outlined in the AC. The AC and this chapter allows for considerable flexibility in the overall approach and detail of the forecasts.

Why forecast activity? Forecasts allow the Port to estimate when it should start planning, designing, and constructing future facilities. If facilities come on-line too early, the Port has spent its limited capital resources too early (i.e., facilities would be underutilized, and the money used to develop them could have been used for other projects); if facilities come on-line too late, the Airport could experience overcrowding and uncomfortable facilities.

Forecasts are always wrong. No matter how detailed or scientifically/mathematically based, forecasts of aviation activity are almost always wrong. In other words, the actual number of passengers realized in a particular year rarely ever matches the forecast number of passengers for that year exactly. This difference occurs because of trend-breakers. Example trend-breakers include airline deregulation, the Gulf War, September 11, jet fuel availability and prices, SARS, economic downturns, low-cost carrier competition, etc. Because of this reality, airport planners must focus on providing plans, programs, and projects that are flexible and workable for a range of possible future conditions.

Level of detail. Near-term forecasts will be more detailed than long-term forecasts, paralleling the overall level of detail in the master plan.

Horizon. The near-term planning horizon will be 5-years out, or 2010, and the long-term planning horizon will be 20-years out, or 2025. Intermediate years can be examined, depending on the airport planning topic. Although forecasts are generally for specific years, it is important to note that the projected activity (operations, passengers, etc.) might occur before or after the projected year, or in the case of long-term forecasts, not at all. For this reason the master plan will focus on ranges of activity and years. The master plan focus is on what level of activity requires new facilities, rather than a specific year (this is sometimes called "planning activity level"). For example, for terminal development, it will be necessary to look beyond 2010 (see discussions below). Forecasts for 2025 will look at land requirements (in terms of acreage) for possible future terminal development.

Forecast Elements/Process – Airline Passenger and Passenger Airline Operations: Mr. Doug Mansel reviewed existing airline passenger forecasts for Oakland International Airport, including those prepared for (1) the Federal Aviation Administration's (FAA's) Terminal Area Forecast (TAF), (2) the Regional Airport Planning Committee's (RAPC's) Regional Airport System Plan (RASP), and (3) the Port's Airport Development Program (ADP) 2003 Supplemental Environmental Impact Report (SEIR). Based on this data and a review of historic growth, Port staff has determined that the Airport can expect approximately 18 million annual passengers (MAP) in 2010 and 30 MAP in 2025. For comparison, the Airport accommodated 13.5 MAP in calendar year 2003 and 13.9 MAP for the 12 months ending in June 2004. The following paragraphs detail the methodology of passenger

forecast process. The Committee asked for historic FAA TAFs for OAK. Port staff explained that this data has been requested, but is not generally available.

For planning purposes, the number of annual passengers was translated into the number of passengers expected on the average day of the peak month (ADPM). Historically, August has been the peak month at the Airport, during which 9.7% of the annual passengers fly. To get the number of passengers on the ADPM, the number of annual passengers that fly during August (9.7% of the annual passengers) is divided by 31 (the number of days in August). This calculation yields 56,047 passengers and 93,412 passengers on the ADPM in 2010 and 2025, respectively. This compares to 42,582 passengers on the average day in August 2003.

Once ADPM passengers are computed, one can assign these passengers to airlines, which fly certain types of aircraft with certain seating configurations. It was assumed that on the ADPM, the airlines serving the Airport would achieve an 80% load factor (i.e., 80% of the seats departing and arriving would be occupied, on average, on the ADPM). A flight schedule from the ADP SEIR was used as a starting point, modified as appropriate, and then flights were added to this base schedule to achieve the assumed 80% load factor. It was assumed that the Airport would have approximately 10 airlines, with Southwest Airlines continuing to be the dominant air carrier with a market share (based on seats) of slightly over 60%. These assumptions yielded the need for 542 fights (arrivals and departures) on the ADPM in 2010. For comparison, the Airport had 430 passenger flights on the ADPM in August 2004. The Boeing 737-series aircraft would continue to be the dominant aircraft at the Airport, with just over 80% of the flights. The new 18 MAP ADPM flight schedule will be used for follow-on master plan tasks, such as studying future terminal and gate requirements, taxiway congestion, runway capacity, and other operational issues. The Port and Committee also discussed the development of a 20 MAP (2012) flight schedule, based on a flight schedule from the ADP SEIR, which yields 63,158 passengers and 598 flights on the ADPM. 18 to 20 MAP (and the associated ADPM passengers and flights) provides a good range to consider for the next round of passenger facility planning, design, and construction at the Airport.

Based on simulation analyses that count the number of aircraft by airline on the ground throughout the day, and more traditional master plan calculation techniques, it was estimated that the Airport will need between 46 and 50 total aircraft gates (between 12 and 16 gates more than was proposed in the ADP) to accommodate passenger demand in the 2010 to 2012 timeframe. From a level of service perspective, 46 to 50 total aircraft gates results in between 6 to 6.5 departures per gate per day, and 37,000 to 42,000 passengers per gate in the peak month (August). This compares to 8.9 daily departures per gate per day in August 2004 (from 24 gates), and 55,000 passengers per gate in August 2003. The national average is about 5.5 departures per gate per day, with Mineta San José International Airport having approximately 6.3 departures per gate per day from 31 gates (based on June 2004 data). The Committee discussed airline gate sharing. Although some airlines can share gates because of Common Use Terminal Equipment (CUTE) computers, there are some limitations due to operations factors, such as positioning of ground service equipment (airlines in the U.S. do not typically share ground handling responsibilities).

Although runway capacity/delay/congestion will be the topic of a future Aviation Stakeholder Advisory Committee meeting, it appears, based on preliminary analyses, that the number of aircraft operations required to serve 18 to 20 MAP can be accommodated on the existing South Field runway (Runway 11-29), with some reasonable increase in delay (there is almost no delay today).

The Potential Terminal Development Areas handout was distributed, and Mr. Doug Mansel concluded his discussion on the forecast process by describing three possible on-Airport areas for future terminal development (12 to 16 new gates beyond ADP, or 17 to 21 gates beyond existing plus under-construction gates). In order for an area to be considered for future terminal development, it had to be feasible from one of the following perspectives: environmentally, operationally, or financially.

Ms. Kristi McKenney introduced a series of detailed drawings entitled Conceptual Terminals from Non-Terminal Planning Studies. These drawings showed examples of conceptual terminals that were drawn in the process of studying other issues at the Airport, such as siting a parking garage and studying possible re-use alternatives of the former United Airlines maintenance hangar.

Forecast Elements/Process – Air Cargo and Cargo Airline Operations: As an introduction to air cargo, Mr. Hugh Johnson, Aviation Planner, detailed the cargo components and their relationship to the passenger figures distributed at the beginning of the meeting. FedEx is the largest air cargo airline at the Airport, handling over 80% of air cargo tonnage. Analysis shows month-to-month changes have historically been linked to economic factors, including Sept. 11, 2001, which triggered a consistent downward trend in growth. Currently, Oakland's cargo growth rate has stabilized and is expected to parallel the growth rate for Bay Area airports at 3.59% annually. The Airport accommodated 0.68 million annual tons (MAT) during calendar year 2003, and is at 0.70 MAT for the 12 months ending in June 2004. Future cargo activity is projected to reach 0.9 MAT in 2010 and 1.5 MAT in 2025, less than both the 2.1 MAT projection used for the ADP SEIR and 2.06 MAT projection for 2020 used in the RASP. Cargo airline operations estimates and development will be presented in the upcoming air cargo meeting in October 2004.

Forecast Elements/Process – General Aviation Operations: General aviation consists of corporate jets and light general aviation aircraft (including student pilots/flight training and touch-and-go operations). Data reported by the SEIR, RASP and FAA in the same year vary due to differences in data collection and reporting. The Port will be developing forecasts of general aviation operations in 2010 and 2025 for the December 2004 meeting.

[Wrap-up Items](#)

Schedule Upcoming Meetings:

- Thursday, September 30, 2004 (SUBJECT: Passenger Terminal Development)
- Thursday, October 28, 2004 (SUBJECT: Air Cargo)
- Thursday, December 9, 2004 (SUBJECT: General Aviation)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 3  
September 30, 2004

AGENDA

Welcome and introductions

Approval of meeting minutes from August 19, 2004

- Follow-up items from last meeting and questions/answers (open forum)
- Hardcopy of Existing Land-Use Map and Existing Conditions (July 2004)
- Questions/answers

Terminal Development Concepts

- Brief review of passenger forecasts and requirements from last meeting
  - Near-term passenger terminal planning horizon: 2010 to 2012
  - Anticipated range of passengers in 2010 to 2012: 18 to 20 million annual passengers (MAP)
  - Anticipated range of aircraft gates: 46 to 50 total gates (or 12 to 16 beyond ADP, or 17 to 21 beyond existing plus under-construction gates)

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Sections 4 and 5)

Potential Terminal Development Areas (Areas 1, 2, and 3)

- Terminal Planning Considerations
  - Airfield access/taxiways
  - Remote aircraft parking area
  - Landside access roads, wayfinding, curbside length, parking (area and revenue)
  - Walking distances (planning goal: security checkpoint to farthest gate: approx. 1,000 ft. unassisted)
  - Environmental constraints
  - Constructability (existing facilities must remain operational)
  - Total project cost (including environmental mitigations, replacement facilities, etc.)
  - Other considerations

Ten Potential Terminal Development Concepts

- 1A: Central Basin unit terminal (1)
- 1B: Central Basin unit terminal (2)

- 2A: Add on to Terminal 1
- 2B: Add on to Terminal 1 and centralize bag claim
- 2C: Unit terminal (south)
- 2D: Unit terminal (north)
- 2E: Unit terminal (push on north Taxiway B/maximize landside area)
- 2F: Unit terminal (split terminal/concourse)
- 3A: Add on to Terminal 2 extension (south)
- 3B: Add on to Terminal 2 extension/renovation (double-load/north)
- Preferred Terminal Development Concept Area for 2010 to 2012
- 2025 terminal land use requirements/acreage

Wrap-up items

- Schedule meeting on airfield issues in February 2005
- Upcoming meetings reminder:
  - Oct. 28, 2004, 1:00 PM, Rear Conf. Room (air cargo forecasts/issues)
  - Dec. 9, 2004, 1:00 PM, Rear Conf. Room (general aviation forecasts/issues)
- Sign-in sheet
- Web site
- Transportation (parking and AirBART)

[Questions / comments](#)



MINUTES  
Meeting 3

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, September 30, 2004

This meeting was the third in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by e-mail notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

Handouts:

- Agenda
- Potential Terminal Development Concept
  - 1A (Central Basin unit terminal/replacement facilities)
  - 1B (Central Basin unit terminal)
  - 2A (Add on to Terminal 1)
  - 2B (Add on to Terminal 1 and centralize baggage claim)
  - 2C (Unit terminal, south)
  - 2D (Unit terminal, north)
  - 2E (Unit terminal, push onto Taxiway B/maximize landside area)
  - 2F (Unit terminal, split terminal/concourse)
  - 3A (Add on to Terminal 2 extension, south)
  - 3B (Add on to Terminal 2 extension/renovation, double-load/north)

Mr. Doug Mansel, Master Plan Project Manager, distributed the Agenda and the potential terminal development concepts and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

Agenda Item:

[Approval of meeting minutes from August 19, 2004](#)

The committee approved the minutes with no comments.

[Follow-up items from the last meeting](#)

A hardcopy of the updated Existing Land-Use Map and Existing Conditions data (July 2004) was distributed (it was previously posted on the web site).

The Committee discussed the following master plan issues:

- A Committee member indicated that the Port provided extensive background information on the forecasts discussed at the last Committee meeting, and that the forecast methodology appears thorough and accurate.
- A Committee member asked how to reconcile expectations of a 20-year master plan with the focus of the passenger forecasts being on the 2010 to 2012 (near-term) horizon. Port staff responded that the Committee has already started discussing the 2025 horizon by projecting 30 million annual passengers (MAP) for that timeframe, but that it is not useful to create highly detailed forecasts (e.g., the number of operations by airline, by aircraft type, by time of day, etc.) for 2025, as these forecasts would be too speculative given inherent uncertainties in forecasting, forecast methods, and the aviation industry. It is, however, useful to discuss land use for 2025. That is, how much land should be reserved for potential terminal uses in 2025? Port staff produced a spreadsheet discussing terminal land use in 2025 to be discussed later in the agenda at this meeting.
- Port staff discussed the concept of planning activity levels (PALs). Future airport development should be tied to activity warranting that particular level of development, not specific years. For example, the Committee learned at the last meeting that approximately 46 to 50 total gates would be required in the 2010 to 2012 timeframe. However, the exact years are less important than tracking the actual passenger traffic. If airline passenger traffic does not grow as quickly as anticipated, then the need for additional gates would occur later. Conversely, if the actual passenger traffic grows more quickly than forecast, then the need for additional gates will happen sooner.
- Port staff asked the Committee to consider the Airport's role in providing air transportation services. Why has the Airport grown? Why is it expected to continue to grow (e.g., location, population growth in the region, access/highways, etc.)? Should the Airport grow to accommodate anticipated demand (e.g., up to its natural market share or catchment area for the Bay Area or even beyond)? Should the Port consider not allowing the Airport to grow, forcing other airports in the region, or even outside the region, take more of the market share or causing that demand to go unmet?
- The Committee and Port staff discussed air cargo market share. The Committee pointed out that OAK has a large share of the cargo market, accommodating more than its "fair share" of the natural market or catchment area. Port staff indicated that statistics of actual origin and destination of cargo within the Bay Area are difficult to obtain (a lot of the data is proprietary). SFO and OAK have historically accommodated just under 50% of Bay Area cargo tonnage each, whereas SJC accommodates between 5 to 10% of the market. The Silicon Valley probably generates more cargo than accommodated at SJC. However, it remains difficult to pinpoint where the cargo originates from, where it ships to, how it is distributed between OAK and SFO. Also, SFO and OAK probably carry more than their fair share of certain types of air cargo, with SFO carrying a higher than proportional share of international and belly cargo, and OAK carrying a higher than proportional share of integrated air cargo (e.g., overnight express packages on FedEx and UPS), for example.
- The Committee asked for additional data on airline passengers and market share. Port staff indicated that one resource is the 2001/2002 airline passenger survey by the Metropolitan Transportation Commission (MTC). A summary report is available on MTC's web site, and the Port will post the raw data on the master plan web site, enabling those interested to review the record-by-record data and cross-tab it as desired.

- The Committee asked for additional discussion on airline passenger market share. Port staff explained that airline passengers tend to use the airport closest to their residence or business, in the case of “local” passengers, or closest to their intended destination (hotel, meeting location, etc.), in the case of “visiting” passengers, notwithstanding other factors such as ticket prices, availability of airline service, destinations and service level by specific airlines, availability and price of parking and other ground access modes, etc. There is a natural service or catchment area for an airport. In terms of the forecasts discussed at the last Committee meeting, OAK does not currently serve all of the airline passengers estimated to be in its natural catchment area. The Port’s analysis suggests a continuation of existing conditions and recent growth trends, more or less, with Southwest Airlines and other low-cost carriers continuing to dominate the market at OAK with predominantly smaller aircraft (Boeing 737s and Airbus A320s) flying east towards regional destinations (and continuing to dominate in the north-south market between the Los Angeles basin and the Bay Area). The analysis also suggests a continuation of recent growth trends with longer stage lengths (e.g., new non-stop service to New York, Washington D.C., and Hawaii). Additional information on OAK’s market share will be posted to the web site.
- A Committee member asked if choosing to market international flights with larger aircraft could decrease the amount of expansion required (i.e., achieve the same passenger forecasts with fewer operations and overall facility requirements). At OAK over the past 5 years, there has been an overall decrease in international air service, with the exception of Mexicana Airlines with service to various destinations in Mexico. Most of the recent growth at OAK has occurred with the addition of different kinds of service, mostly with increased stage lengths (e.g., new non-stop service to New York, Washington D.C., and Hawaii). Generally, airlines are choosing to use smaller aircraft to provide more frequent flights to more destinations (rather than using larger aircraft). This trend is generally true for international flights as well (e.g., airlines are flying more Boeing 777s vs. Boeing 747s). Currently the Port has two gates capable of receiving flights arriving from international destinations (i.e., these gates are the ones connected to the customs/immigration area). If the Port were to construct additional international facilities (to market more international flights), it would be doing so on speculation. There is a partially vacant new international terminal at SFO, and if one were constructed at OAK, it too would likely go underutilized for decades. The Port focuses on building facilities for market demands and growth trends, not based on what might be captured in a market for which there is no foreseeable demand. Both the Federal Aviation Administration (FAA) and MTC unconstrained demand forecasts suggest that OAK will not see a significant increase in international flights, and it is unlikely that international airlines would choose to serve OAK and compete with their existing operations at SFO. Moreover, international and domestic flights are linked: passengers transfer from inbound domestic flights to outbound international flights (and visa versa), so that if an international marketing program were successful at OAK, it would likely mean more than 18 to 20 MAP in 2010 to 2012.
- A Committee member suggested that the Committee look at mitigation measures or other mechanisms to reduce the impact of expansion (i.e., air pollution, noise, traffic). Examples include additional roadways and/or taxiways to decrease passenger and aircraft traffic congestion. Port staff suggested that some of the terminal concepts may exacerbate a problem and some may mitigate a problem.

#### Terminal Development Concepts

Review of passenger forecasts and requirements. At the last meeting, the Committee discussed the near-term planning horizon, 2010 to 2012, with a projected 18 to 20 MAP.

The Committee discussed the inherent uncertainty in forecasting and therefore the need to consider activity at the airport vs. the actual year (i.e., planning activity level). 18 to 20 MAP could occur before or after 2010 to 2012. Flexible plans are required. For example, if it appears that OAK will serve 18 MAP earlier than 2010, the Port may need to accelerate terminal development plans. If it appears that OAK will serve 18 MAP at some time beyond 2010 to 2012, the Port could choose to delay the start of construction. The forecasts are approximate and provide a planning guide.

Port staff reviewed the approximate facility requirements discussed at the last Committee meeting. The aircraft operations derived from the forecasts (18 to 20 MAP) require 46 to 50 total gates, or 12 to 16 gates beyond the Airport Development Program (ADP), or 17 to 21 gates beyond our existing facility plus what is under construction (the Terminal 2 renovation and extension).

FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Sections 4 and 5). Section 4 outlines factors to consider when allocating land use at an airport, and Section 5 provides terminal planning criteria.

Potential terminal development areas. Port staff reminded the Committee of the three possible areas under consideration for terminal facilities: (1) Area 1 – the central basin, west of FedEx, south of North Field, and north of Taxiway W, (2) Area 2 – east of Taxiway B, west of the existing terminal area, south of Ron Cowan Parkway, and north of Taxiway T, (3) Area 3 – east of Terminal 2, north of Taxiway W. The terminal development concepts are labeled according to each of the three areas (e.g., Concept 1A is Concept A in Area 1, Concept 2C is Concept C in Area 2, etc.).

Potential terminal development concepts. Port staff and the Committee reviewed and discussed the 10 potential terminal development concepts. Planning considerations for each concept were presented on each graphic. Arrows show the direction of possible future terminal expansion (if warranted).

- Concept 1A constructs a new terminal in the central basin, replacing the existing terminal complex (in addition to adding the new gates). A Committee member indicated that his concept may encourage more traffic to access the Airport through Alameda. Another Committee member pointed out that this concept could more easily allow for a new runway inboard of Runway 11/29 as the existing terminal buildings could be demolished. The Committee discussed that this concept as drawn takes a considerable amount of wetlands.
- Concept 1B constructs a new unit terminal in the central basin, adding 20 new gates. This option too may encourage more traffic to access the Airport through Alameda. This option also takes a considerable amount of wetlands (as drawn). The Committee asked if the FedEx complex could be relocated for terminal development. Port staff responded that it would be very costly, and there are not a lot of advantages to relocating FedEx. All concepts preserve FedEx location, as well as Taxiway Bravo.
- Concept 2A adds onto Terminal 1. This option is probably the least expensive of all the concepts presented, but has curbside operations challenges. The Committee suggested a double-level curbside roadway. Port staff explained that a double-level curbside roadway would provide significant operational benefits; however, it is very expensive. A Committee member suggested that it might be possible to kink or bend the proposed new concourse to preserve the Gate 1 aircraft parking position (the primary international arrivals gate). A Committee member suggested relocating the international arrivals area. Port staff indicated that it could cost

between \$50 and \$60 million to reconstruct the facility, which would likely not be cost-effective, given the existing and projected level of international operations.

- Concept 2B adds onto Terminal 1 and constructs a consolidated baggage claim north of the existing terminal, which provides for more efficient curbside operations (arrival and departure traffic would be split into two separate curbsides).
- Concept 2C constructs a new unit terminal northwest of Terminal 1. The Committee discussed possible security considerations in terminal planning. This concept (and the remaining Area 2 concepts) likely requires a new taxiway parallel to Taxiway B to allow for more efficient flow to/from the new terminal. A Committee member asked how environmental considerations are taken into account, and pointed out that a concept that does not take wetlands is probably more cost-effective. Port staff indicated that known environmental considerations are listed with the other planning considerations.
- Concept 2D constructs a new unit terminal farther to the north than Concept 2C. Port staff pointed out that this concept displaces a considerable amount of surface parking, and a replacement garage parking is expensive to construct. The Port must ensure that the revenue a garage could generate will balance the cost of building it. Airports generally require a mix of structured and surface parking to satisfy the demand for various parking rates. A Committee member asked if the area north and/or east of the FedEx buildings (adjacent to Taxiways B and R) would be available for terminal development and/or related taxiways. Port staff indicated that this area is currently being used to park FedEx aircraft.
- Concept 2E constructs a new unit terminal northwest of Terminal 1, but shifts the terminal/concourse towards Taxiway B on the north end in order to maximize landside area. Aircraft must push back onto Taxiway B at the north end of the proposed terminal. The Committee asked why the curbside was depicted so far away from the terminal building. Port staff indicated that this is a graphical error and will be corrected. The curbside roadways should be near the face of the proposed terminal building. A Committee member suggested a different concept with a remote (off-Airport) unit terminal (with ticketing, baggage claim, etc.). Port staff agreed to sketch this concept and develop the planning considerations.
- Concept 2F constructs a new unit terminal northwest of Terminal 1, but splits the terminal from the concourse to allow a bypass roadway to the existing terminals. This concept also consumes a significant portion of the surface parking lots. The circulation and overall layout is similar to the new international terminal at SFO. The Committee and Port staff discussed the decreasing need for traditional terminal facilities (i.e., ticket counters) due to electronic self-check-in kiosks and the ability to print boarding passes at home (from the airlines web site). This trend is forcing the curbside to become shorter and shorter; however, curbside demand has not changed. The industry needs to rethink the traditional terminal frontage and consider moving walkways and "kiss and fly" drop-off locations.
- Concept 3A extends the Terminal 2 extension. This options places gates in close proximity to Runway 11/29, but is likely not feasible because it does not add any facilities except new gates. That is, other facilities, such as ticket counters, baggage claim, security checkpoints, etc. are required to support additional gates (to achieve balanced airport throughput capability).
- Concept 3B constructs additional gates and terminal facilities east of Terminal 2. This concept is expensive and requires 30+ acres of Bay fill. The Committee indicated that this concept would likely have noise impacts for residents in San Leandro.

A Committee member asked that the Port add a planning consideration on any impacts to the proposed BART Connector project, especially in Area 2.

The Committee asked the status of the Oakland Maintenance Center. The site currently serves as office space for Turner Construction and for advertising. Port staff agreed to note in the planning considerations of each drawing if this structure needs to be demolished. Port staff and some Committee members agree that a unit terminal should be drawn on the Oakland Maintenance Center site (as opposed to relocating the air cargo building to this site). Port staff agreed to sketch this concept and develop the appropriate planning considerations. Other Committee members expressed concern that just because the Committee is considering various options, it does not mean that the Port is proposing to construct any particular one of them. Port staff indicated that this is the nature of planning, and that the master plan process must consider a wide range of concepts, some of which are more feasible or likely than others.

A Committee member provided Port staff with another Area 2 terminal concept. Port staff agreed to sketch this concept and develop the appropriate planning considerations.

Preferred terminal development concept area for 2010 to 2012. Port staff indicated that the Committee should come to some concurrence on the most viable area for future terminal development at OAK (Area 1, 2 or 3). Once an area is selected, Port staff will continue to update the Committee on follow-on terminal planning and programming activities (i.e., terminal development can and will be discussed at future Committee meetings). The Committee indicated that the members will need some time to discuss the concepts and get back to the Port at a later time. Port staff agreed to agendaize this for continued discussion at the next (and other future) meeting as necessary.

A Committee member suggested adding a new taxiway between North and South Fields. Port staff indicated that airfield issues will be the topic of the first meeting in 2005, and that that taxiway congestion issues will be studied in detail.

The Committee indicated that they do not believe Area 1 or Area 3 would be in the best interests of Alameda or San Leandro constituents. Alameda would become the new entrance to the Airport if Area 1 were selected. San Leandro Committee members indicated that San Leandro is likely to be more receptive to near-term development (to accommodate 20 MAP), but less receptive to long-term development (30 MAP).

#### 2025 terminal land use requirements/acreage.

Mr. Doug Mansel distributed an Excel chart and discussed a method for estimating area requirements for potential terminal development for 2025. The estimate of average day peak month passengers for 2025 (2,895,761) is divided by an assumed number of passengers per gate (to achieve a comfortable level of service) to yield an approximate number of gates required for 2025 (65 to 75 total gates, or a 15 to 25 increase over what is anticipated for 2010 to 2012). Based on area per gate calculations from OAK and other U.S. airports, it was assumed that each gate takes approximately 2.2 acres. This yield approximately 33 to 55 acres required for 2025 (beyond the area required for 2010 to 2012). This is the approximate amount of land that should be allocated for future terminal development in 2025.

A Committee member asked if the Port has any control over the number of passengers or the days of the week that the airlines fly. Port staff responded that the airlines decide when and what number of passengers fly in and out of OAK, not the Port. As the market is open and competitive, if airlines do not accommodate demand by providing frequent service some other carrier will. For the first time ever, the FAA is discussing the possibility of controlling the number of flights, in cases of severe delay congestion at Chicago O'Hare.

This is generally a hub-airport phenomenon. We're not in any danger of this now, but we could be by 2025.

Port staff closed the meeting by encouraging Committee members to give input as to which area(s) and layout(s) they prefer and asked that they elaborate why they do (i.e., design, community impact, etc.).

#### [Wrap-up Items](#)

Schedule Upcoming Meetings:

Thursday, October 28, 2004 (SUBJECT: Air Cargo)

Thursday, December 9, 2004 (SUBJECT: General Aviation)

Thursday, March 3, 2005 (SUBJECT: Airfield/Taxiway Development)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 4  
October 28, 2004

[Questions / comments](#)

#### AGENDA

##### [Welcome and introductions](#)

##### [Approval of meeting minutes from September 30, 2004](#)

##### [Follow-up items from last meeting and questions/answers \(open forum\)](#)

- [Review airline passenger market analysis \(requested by the Stakeholders at the September 30, 2004, meeting\)](#)
- [Review updated potential terminal development concepts](#)
- [Focus area for potential terminal development \(Areas 1, 2 and/or 3\) for 2010 to 2012](#)
- [Questions, answers, and discussion](#)

##### [Air Cargo Development](#)

- [FAA Advisory Circular \(AC\) No. 150/5070-6A \(Airport Master Plans\), Chapter 5, Aviation Forecasts, and Chapter 6, Requirements Analysis and Concepts Development \(Sections 4 and 5\)](#)
- [Review air cargo data from August 19, 2004, meeting](#)
  - [Planning horizon: 2010 \(near-term, 5 years out\) and 2025 \(long-term, 20 years out\)](#)
  - [0.9 and 1.5 million annual tons \(MAT\)](#)
- [Market analysis/discussion](#)
- [Cargo aircraft operations](#)
- [Potential air cargo development areas \(Areas 1 through 4\)](#)
- [Sample air cargo development concepts](#)

##### [Wrap-up items](#)

- [Schedule meeting on access and airline support issues in April 2005](#)
- [Upcoming meetings reminder:](#)
  - Dec. 9, 2004, 1:00 PM, Rear Conf. Room (general aviation forecasts/issues)
  - March 3, 2005, 1:00 PM, Rear Conf. Room (airfield issues)
- [Sign-in sheet](#)
- [Web site](#)
- [Transportation \(parking and AirBART\)](#)



MINUTES  
Meeting 4

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, October 28, 2004

This meeting was the fourth in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

Handouts:

- Agenda
- Airline Passenger Market Analysis (including Tables A and B)
- Potential Terminal Development Concept
  - 1A (Central Basin unit terminal/replacement facilities)
  - 1B (Central Basin unit terminal)
  - 2A (Add on to Terminal 1)
  - 2B (Add on to Terminal 1 and centralize baggage claim)
  - 2C (Unit terminal, south)
  - 2D (Unit terminal, north)
  - 2E (Unit terminal, push onto Taxiway B/maximize landside area)
  - 2F (Unit terminal, split terminal/concourse)
  - 2G (Unit terminal, Oakland Maintenance Center)
  - 2H (Unit terminal, off-Airport/remote people mover)
  - 2I (Unit terminal, north/centralize terminal functions)
  - 3A (Add on to Terminal 2 extension, south)
  - 3B (Add on to Terminal 2 extension/renovation, double-load/north)
- Forecasting Process chart (with completed cargo/cargo airline operations line)
- Forecasts
  - Million Annual Tons of Cargo (Rolling) – Graph 1C (Bay Area Airports)
  - Million Annual Tons of Cargo (Rolling) – Graph 2C (OAK Low Growth Forecast, 3.59%)
  - Million Annual Tons of Cargo (Rolling) – Graph 3C (OAK Medium Growth Forecast, 4.52%)
  - Million Annual Tons of Cargo (Rolling) – Graph 4C (OAK High Growth Forecast, 5.14%)
  - Annual Air Cargo Operations – Graph 5C (South Field)
  - Annual Air Cargo Operations – Graph 6C (North Field)

- Air Cargo Flight Schedule (including Tables A through E)
- Potential Air Cargo Development (Areas 1, 2, 3, and 4)
- Sample Air Cargo Development Concepts (Areas 1, 2, and 4)

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the previous meeting, agenda, and Airline Passenger Market Analysis for Oakland International Airport (OAK), and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

Agenda Item:

Approval of meeting minutes from September 30, 2004

The committee approved the minutes with no comments.

Follow-up items from the last meeting and open forum

At the previous meeting, the Committee requested that the Port provide data on airline passenger market share. Mr. Mansel explained that Table A describes the potential market share for Oakland International Airport (OAK), based on population by Bay Area county. The primary catchment area share was estimated by the Port's Aviation Marketing and Communications Department. For example, in Alameda County, approximately 90% of the estimated population (1,314,927 people) is closest to OAK and would naturally use OAK assuming competitive air service is available (i.e., with the right airlines, destinations, schedules, air fares, etc.). The potential catchment area for Sacramento International Airport, which likely has some influence in the northern Bay Area counties (e.g., Solano County), has been excluded from this analysis. As shown in Table A, approximately 48.6% of the total Bay Area population would naturally want to use OAK, again assuming competitive air service is available (i.e., with the right airlines, destinations, schedules, air fares, etc.).

Mr. Mansel explained that Table B shows the Airport's actual market share. Of all passengers bound to and from specific destinations, Table B shows what percent is served by OAK. For markets (cities) where competitive air service is available at OAK, OAK captures approximately 48.5% of the market, which is close to the estimated potential described above. For well-served markets, OAK captures between 30% (e.g., Houston and Boise) and 60% (e.g., LA basin and Albuquerque) of the market. For those markets that are under-served from OAK, only about 18.9% of passengers traveling to/from those markets choose OAK (vs. the other two Bay Area airports). Looking at both well-served and under-served markets, the total actual market share for OAK was estimated to be 34.2%. That is, of all the domestic passengers beginning or ending their journey in the Bay Area, approximately 34.2% choose OAK.

Mr. Mansel explained that the passenger forecasts, as discussed at previous meetings, suggest that OAK would serve approximately 18 million annual passengers (MAP) in 2010 (give or take) and 20 MAP in 2012 (give or take). OAK is currently serving approximately 14 MAP. The anticipated growth from 14 MAP to 18 to 20 MAP will occur as airlines add flights, realize increased load factors, or upgauge aircraft size in existing markets (capturing an increase in market share at OAK) or add flights to new markets, as suggested in the above market analysis.

Similar airline passenger market share data is not readily available for international airline service, and therefore a similar analysis on international airline passenger market share is not possible.

Currently, the only international flights to/from OAK are to/from Mexico on Mexicana Airlines (on Airbus A320s) and SunTrips charters (on Boeing 757s). North American Airlines will soon start scheduled service to various destinations in Mexico (on Boeing 757s). Mr. Mansel explained that OAK will likely continue to be dominated by domestic airline service, largely because the airlines at OAK primarily serve origin and destination (O&D) airline passengers (passengers starting or ending their trips in the Bay Area). The largest airline at OAK, Southwest Airlines, does not (and has not given any indication they plan to) have interline agreements with other domestic or international airlines, making transfers to international flights difficult or impossible. San Francisco International Airport, on the other hand, serves both O&D airline passengers as well as a connecting hub for several airlines, most notably, United Airlines. Unlike Southwest Airlines, United Airlines has numerous interline agreements, making transfers to other international airlines or even international flights on United Airlines possible. That is, in order to be a significant international hub, the Airport must have a large O&D market, as well as serve as an airline hub for connecting passengers. Examples of large hub airports include San Francisco, Chicago O'Hare, Atlanta, Miami, John F. Kennedy, and Los Angeles international airports. All of these airports serve as hubs for multiple airlines that have interline agreements (also note that of these airports, Southwest Airlines only operates out of Los Angeles International Airport).

Therefore, the Port does not anticipate significant growth in international airline service at OAK, which is consistent with the findings in the Regional Airport System Plan (RASP).

A Committee member asked what "Other" signified in under-served domestic markets on Table B. Port staff explained that "Other" comprised all other cities one could arrive at after starting a trip from OAK.

Port staff emphasized that 18 MAP is not a "goal" (i.e., a goal of the Port), but rather an estimate of airline passenger activity that is likely going to happen at OAK based on the natural market forces (given Bay Area population growth, possible airline service expansion in under-served markets, etc.).

Port staff commented that existing facilities were designed to accommodate approximately 7 MAP, yet for the 12 months ending September 2004, OAK served approximately 14 MAP, albeit at a highly reduced level of service. Although Port staff has not prepared a detailed estimate, it is likely that the Airport could serve 18 MAP or more with its existing gates plus those currently under construction at Terminal 2 (five net new gates), again, at a highly reduced level of service. Port staff indicated that this Committee should consider whether or not to build facilities, based on current and historical growth trends and level of service. As the level of service in existing facilities deteriorates, growth might slow, but it will not likely stop altogether.

The Committee asked for clarification of "level of service." Port staff explained that this is a catchphrase for indicators, such as the number of passengers waiting in hold rooms, the cleanliness of restrooms due to excessive use, gate delay, etc., that reflect the level of passenger comfort, and directed the Committee to earlier handouts which compared data for airports with different levels of service.

A Committee member commented that OAK has a reputation for being convenient and that the existing level of service seems acceptable.

A Committee member (Mr. Andrew Thomas) asked Port staff to explain the business relationship between the Port and its tenants. Port staff indicated that Airport finances are broken into a number of revenue/cost centers, such as airfield, terminal, and landside. Airfield costs include taxiway, runway, and ramp pavement improvements, repair and maintenance, airfield security/safety patrol staff, airport rescue and fire fighting, etc. The airfield revenues come from landing fees (based on aircraft weight) and fuel flowage fees. The airfield revenue/cost center is revenue neutral, meaning that the airlines reimburse the Port for all costs associated with operating the airfield, nothing more, nothing less. Terminal costs include restroom cleaning and maintenance, carpet cleaning, repair, and renovation, terminal security/police staff, and other various terminal improvements, repair and maintenance. Like the airfield, the terminal revenue/cost center is revenue neutral (the airlines reimburse the Port for all costs associated with operating the terminal, minus revenue from in-terminal concessions, nothing more, nothing less). Unlike the airfield and terminal revenue/cost centers, the airlines are not involved with the landside revenue/cost center. The Port is responsible for collecting enough revenue to cover the costs of operating, maintaining, and improving the landside of the Airport. Example costs include pavement maintenance, signage maintenance and improvements, traffic enforcement officers and staff, etc. The largest source of landside revenue is from the Airport's parking lots. By Federal law, all revenue generated at the Airport (from any of the revenue/cost centers) must be used only for Airport operating expenses and capital project expenses, and overall is revenue neutral (i.e., the Port does not make any profits, and must cover its operating and other expenses).

The Committee inquired if there was any quantitative data about what might be causing airport crowding/congestion and asked how the Port determined when congestion warranted action. Another Committee member asked if there might be customer feedback (e.g., comment cards) on the quality/level of service at OAK. Port staff commented that since September 11, 2001, the number of security checkpoint lanes has increased from 6 to 13, yet crowding, extensive queues, and congestion persists. The airport/airline industry uses standard planning criteria to achieve a certain level of service (e.g., security checkpoint throughput per lane, number of passengers per hold room/gate area, etc.). At present, OAK far exceeds these standards in virtually every area in the Airport. The Port is aware that passengers have expressed dissatisfaction with crowding and overall unsatisfactory levels of service.

A Committee member asked what are the deciding factor in what will be built and when. Port staff responded that this Stakeholder Committee has input on a master planning level, but that the Port has a professional planning staff that makes recommendations to senior Port management and the Board of Port Commissioners.

The Committee asked if there is a physical limit to what OAK can accommodate and if the Port works with airlines to mitigate peak periods. Port staff agreed that there is some theoretical upper physical limit, and that it is possible to reach it; however, at present, OAK is serving over twice the number of passengers (MAP) it was originally planned for, albeit at a significantly reduced level of service. The Port cannot legally dictate what an airline does, as it is a private business; however, the Port works with airlines to spread out the peaks throughout the day. Most of the airlines serving OAK are assigned a preferential gate or gates, and that airline can use its gates as much as it wants. If an airline is not using its gate at a particular time of the day, the Port may assign another airline to that gate during those periods. If an airline reduces its schedule enough to not warrant a preferential gate, then the Port may re-assign that gate to another airline. The Airport is part of the public service industry, much like sewage treatment facilities, public schools, etc. and grows in direct proportion to the needs and demands of the larger community it serves.

The Committee asked if the FAA has ever stopped an airline from opening a new route. Port staff responded that the FAA has only done this in the case where runway congestion is extreme, and never in the case of gate capacity or terminal congestion. Even then, the FAA has only implemented slot controls (essentially, a reservation system, and the airlines must have one in order to arrive or depart a flight) at a few U.S. airports (e.g., La Guardia) and even at those airports, severe runway delays and congestion continue.

At this Point, Mr. Doug Mansel passed out updated terminal concepts from the previous meeting (also posted to the web site).

#### Terminal Development Concepts

Potential terminal development concepts. Port staff and the Committee reviewed and discussed the 13 potential terminal development concepts, updated to reflect Committee suggestions from the last meeting. Planning considerations for each concept are presented on each graphic. (Note: arrows show the direction of possible future terminal expansion – if warranted).

- Concept 1A constructs a new terminal in the central basin, replacing the existing terminal complex (in addition to adding the new gates).
- Concept 1B constructs a new unit terminal in the central basin, adding 20 new gates.
- Concept 2A adds onto existing Terminal 1.
- Concept 2B adds onto existing Terminal 1 and consolidates baggage claim in a new facility (north of existing terminals).
- Concept 2C constructs a new unit terminal northwest of Terminal 1 (near Terminal 1).
- Concept 2D constructs a new unit terminal northwest of Terminal 1 (near Oakland Maintenance Center).
- Concept 2E constructs a new unit terminal northwest of Terminal 1 (near Terminal 1).
- Concept 2F constructs a new unit terminal northwest of Terminal 1; splits terminal from the concourse to allow for bypass roadway access to existing Terminals 1 and 2.
- Concept 2G constructs a new unit terminal on the Oakland Maintenance Center site. The Committee asked that this concept be developed. This option more than likely does not preserve the cargo building and would probably require a separate garage and a dual taxiway, but improved curbside operations.
- Concept 2H constructs a new remote (off-Airport) unit terminal with automated people mover link to/from concourse. The Committee asked that this concept be developed. This option would ease airport traffic, but would require purchasing additional land off the existing Airport. The Port would also need to construct an expensive people mover connection.
- Concept 2I constructs a new consolidated terminal north of existing terminals (consolidates existing terminal functions – bag claim, ticketing, etc. – in a new building north of existing terminals). The Committee requested that this concept be developed.
- Concept 3A extends the current Terminal 2 extension project.
- Concept 3B expands the current Terminal 2 renovation and extension project.

A Committee member requested that the planning considerations on each graphic reflect possible impacts to the proposed BART Connector alignment, especially in Area 2. Port staff responded that the planning considerations for each concept have been updated as requested. The planning considerations also reflect that any concept in Areas 1 or 3 move aircraft parking and operations

closer to residential areas, and that any option in Area 1 may increase Airport traffic through the City of Alameda.

Mr. Steve Swanson of the Port's Airline Liaison Office observed that from the airlines' perspective, Area 2 is preferable given (1) the significant capital investment in existing facilities at South Field, (2) the significant capital costs associated with any concept in Areas 1 and 3, and (3) environmental impacts of building in Area 3.

The City of Alameda provided the Port with a comment letter on potential future terminal development at OAK. The Alameda representatives generally agreed that Area 2 appears to be the best option, but given concerns about potential impacts, the Committee would like to continue to discuss mitigation measures of potential expansion, and also continue to explore Concept 3A. Port Staff indicated that there will be an entire session dedicated for discussion of environmental issues and possible mitigations next year.

San Leandro representatives indicated that they generally prefer Area 2, although they would like additional time to discuss it further with their citizens. Port staff agreed to agendaize this discussion again at the next Committee meeting.

A Committee member asked if the Port's noise abatement policy had been updated. Another Committee member responded that there had been a recommendation for better communication, but little change in the policy.

Ms. Pat Mossburg (City of Oakland community representative) indicated that Area 2 is preferable, based on her informal discussions with Councilmember Larry Reid. Ms. Marianne Dreisbach (City of Oakland community representative) indicated that she has not had the opportunity to discuss this with the mayor, but will do so in the near future.

#### Air Cargo Development

Mr. Doug Mansel introduced the discussion on air cargo issues by referring the Committee to the FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development, and Chapter 5, Aviation Forecasts. Mr. Mansel commented that the FAA does not specifically address air cargo issues in this AC, but that some of the principles in Chapters 6 and 5 can be useful.

Mr. Hugh Johnson, Aviation Planner, introduced Mr. Ray Keiser, a national expert on air cargo issues and trends available to answer questions from the Committee. Several Committee members asked if the Federal decision to cancel the requirement for transporting checks (Check21) would decrease the amount of air cargo. Port staff and Mr. Keiser responded that this would have little to no effect on air cargo operations at OAK (based on discussions with Ameriflight).

Mr. Hugh Johnson, Aviation Planner, distributed the cargo forecast graphs. The air cargo forecasting process differs from the airline passenger forecasting process because there is less data available for air cargo (much of the data is proprietary) and because of the disconnect between air cargo flights and air cargo weight (i.e., almost all of the air cargo weight is carried on FedEx and UPS aircraft, while the small air cargo carriers, such as Ameriflight, contribute a significant number of operations but carry a very small proportion of the weight). Existing air cargo activity is approximately 700,000 tons for 2004 (0.7 million annual tons or MAT); it was approximately 800,000

(0.8 MAT) in 2000. Using 2003 as a starting condition, the Port looked at flight schedules developed in 2000 as part of the SEIR, which were keyed to 800,000 tons (0.8 MAT). Future market options/growth rates considered for OAK are low (3.59% annual growth), medium (4.52% annual growth), and high (5.14% annual growth). All three are significantly lower than those presented in the SEIR and those prepared by the Regional Airport Planning Committee (RAPC). The higher SEIR and RAPC growth rates were based on the rapid growth experienced in air cargo at OAK from 1990 through 1998, without the data showing the maturing of the market (leveling and slower growth) from 1998 through 2004.

The Port anticipates that the low growth rate is the most likely for OAK. The high growth forecast, 5.14% annual growth in air cargo weight, was developed to show the growth rate required to reach the weight level projected for 2010 in the SEIR (2.1 MAT) by 2025. The medium growth forecast reflects the RAPC growth rate (4.52% annual growth in air cargo weight) starting from the current weight level. The low growth forecast, 3.59% annual growth in air cargo weight, reflects the historical average annual growth for air cargo in the Bay Area from 1990 through present. Using the low growth forecast (3.59% annual growth rate), the Port forecasts 0.9 MAT in 2010 and 1.5 MAT in 2025, as discussed at previous Committee meetings.

Using the low growth forecast, the Port used the 2000 SEIR air cargo flight schedule as a starting point, and revised it based on changes observed over the past three years (e.g., decreased air cargo flight activity at North and South Fields). The fleet mix assumptions are consistent with 2010 SEIR fleet mix assumptions (e.g., FedEx will phase out all but one daytime Boeing 727 aircraft arrival and one nighttime Boeing 727 aircraft departure). The next step was to interpolate between the 2003 and 2010 flight schedules to arrive at the master plan 2010 flight schedule for 0.9 MAT. The result shows that FedEx maintains its market share by weight at 85%, and the market share percentages of the other major air cargo carriers are also maintained. The total number of predicted flights (164) matches the number presented in the current year 2000 SEIR flight schedule. There will be different aircraft and slight changes in the distribution between North Field (59 flights) and South Field (105 flights). The Port expects flights to ascend to the levels attained in 2000 by 2010.

On Graph 1C, Port staff converted the timeline to a calendar year, while keeping the data that shows month-to-month changes, in order to enable Committee members to easily correlate air cargo data with the passenger chart data presented at previous meetings. This graph shows growth rates tied to the end of historical air cargo data.

Graphs 2C through 4C show low (3.59%), medium (4.52%) and high annual growth rate (5.14%) forecasts. The low growth rate is consistent with the overall historic Bay Area growth rate. In 2010, the suggested planning level is at 900,000 tons (0.9 MAT) and in 2025, 1.5 million tons (1.5 MAT).

A Committee member asked why air cargo would not continue to plateau because of the rising cost of fuel. Port staff responded that the current forecasts are an attempt to remain somewhere in the middle, with the inevitable ups, downs, and level-offs/plateaus. One reason cargo has dropped and stabilized at the present level (aside from the Silicon Valley dot com bust) is that the demand for overnight deliveries has matured and reached a plateau. Port staff anticipates that this market will grow only as the Bay Area population and economy grow.

Graphs 5C and 6C show air cargo flight activity by carrier at North and South Fields, respectively. At South Field, FedEx has about 80% of the flights. The decline in total operations at South Field is a result of a number of air cargo carriers that have stopped operating at OAK, mostly U.S. mail flights

(most mail is now on FedEx aircraft and accounted for in the FedEx weight). The air cargo data presented on Graphs 5C comes from the Port's landing reports.

North Field tends to handle most of the air cargo feeder aircraft, with the number of operations being driven by Ameriflight. Reliable operations data for North Field is available from 1999 to the present. The data used to generate Graph 6C comes from the Port's Airport Noise and Operations Monitoring System. In 2000, the annual number of flights (operations) was approximately 20,000; currently, the annual number of flights has dropped to approximately 16,000 (a 20% decrease). Therefore, the flight schedule for the master plan was adjusted accordingly.

Mr. Hugh Johnson then distributed Excel worksheets. For the master plan air cargo forecasts and all SEIR flight schedules, the Port suggests using average annual day (AAD) activity. That is, we would not suggest using average day peak month (ADPM) activity, as was the case for airline passengers, because that would skew the data. Air cargo volume is fairly constant from month-to-month throughout the year, with the exception of December (with its extra weight associated with Christmas shipping needs). Most December activity is handled by expansion onto the ramp and by using larger aircraft. Therefore, it is generally unnecessary to plan facilities for the year around this single month of extra activity. Accounting for December, the percentage of activity by month for every month is below the AAD. The result is the 2000 0.8 MAT air cargo flight schedule (tied to the 2000 SEIR flight schedule), and the number of arrival/departures, which gives the starting point. Table A shows the same data by individual airline. The 2000 SEIR fleet mix is based on current actual fleet mix.

Table B shows the 2003 air cargo flights that coincide with the 0.7 MAT flight schedule and a reduction in flights (as represented on Graphs 5C and 6C). The Port included fleet mix changes for 2010 for FedEx, as we anticipate the entire fleet change used for 2010 SEIR will be in place at that time. The total number of flights drops to 154.

Table C shows the 2010 (1.4 MAT) SEIR flight schedule, the number of flights is 180, and the majority of the increase is on North Field.

Table D shows the master plan 0.9 MAT flight schedule, which is an interpolation between Tables B and C (using the flights from 2003, the fleet mix from 2010 and the different MAT levels for each of them - based on 0.7 MAT for 2003 and 1.4 MAT for 2010). Table C depicts approximately 0.9 MAT using the 2010 fleet mix and the effect of the past three years on the current flight schedule.

The result is 102 flights on South Field, 62 on North Field, a different fleet mix but with the same number of flights by runway and the same total number of flights. The major effect will be in the fleet mix change for FedEx, while the other (major) carriers remain the same.

A Committee member (Mr. Dennis Rosucci) asked for clarification about the 2003 fleet mix data. The 2003 fleet mix data was not available and, for planning purposes the important years are 2000 and 2010. Fleet mix data given for 2003 is what the Port expects for 2010. Port staff agreed to provide the updated fleet mix data for 2003. The Committee expressed interest in the number of Boeing 727 aircraft that would be departing at night. Port staff estimated 6 currently, with a reduction to 1 by 2010.

Potential Air Cargo Development Areas and Sample Concepts. Port staff and the Committee reviewed and discussed four possible areas on the Airport to accommodate future air cargo needs:

- Area 1, at North Field (north of Runway 9L/27R), would provide approximately 180 acres for potential new air cargo development.
- Area 2, the Central Basin (south of Ron Cowan Parkway and north of Taxiway W), would provide approximately 330 acres for potential new air cargo development.
- Area 3, south of Ron Cowan Parkway and north of the existing FedEx facilities, would allow for a modest expansion of existing FedEx facilities.
- Area 4, the existing air cargo area at South Field and the Oakland Maintenance Center hangar site, allows modest expansion and/or relocation of existing air cargo facilities (e.g., the existing cargo building)

Port staff also presented two graphics showing sample air cargo developments in Areas 1, 2, and 4.

A Committee member (Mr. David Needle) suggested that any cargo expansion should be in Areas 3 and/or 4, and suggested eliminating Areas 1 and 2 from further consideration in the interest of time, environmental issues, etc.

Port staff and the Committee members agreed to agendaize air cargo development at the next meeting for continued discussion and input.

#### Wrap-up Items

##### Schedule Upcoming Meetings:

Thursday, December 9, 2004 (SUBJECT: General Aviation)

Thursday, March 3, 2005 (SUBJECT: Airfield Issues)

Sign-in sheet

Web site

Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 5  
December 9, 2004

#### AGENDA

##### Welcome and introductions

##### Approval of meeting minutes from October 28, 2004

##### Follow-up items from last meeting and questions/answers (open forum)

- Focus area for potential terminal development (Areas 1, 2 and/or 3) for 2010 to 2012
- Air cargo forecasts and potential air cargo development areas
- Questions, answers, and discussion

##### General Aviation Development

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 5, Aviation Forecasts, and Chapter 6, Requirements Analysis and Concepts Development (Sections 4, Land Use Criteria)
- Background information on general aviation
  - NBAA Business Aviation Fact Book 2004
  - GAMA General Aviation Statistical Databook 2003
  - GAMA Media Guide: Profiles of GA Usage
  - Washington Post article on microjets (Nov. 27, 2004)
- Review general aviation operations trends at OAK (discussed at August 19, 2004, meeting)
- Forecast of general aviation aircraft operations by type (piston, jet, turboprop, helicopter)
  - Forecasts are always wrong
  - FAA Terminal Area Forecast (TAF)
  - Recent trends and causes
  - Rolls-Royce and Honeywell forecasts (business jet projections)
- Existing and forecast based aircraft at OAK
- Potential general aviation development areas

##### Wrap-up items

- Schedule meeting on access and airline support issues in April 2005
- Upcoming meeting reminder:  
March 3, 2005, 1:00 PM, Rear Conf. Room (airfield issues)

- Sign-in sheet
- Web site
- Transportation (parking and AirBART)
- Happy and safe holidays!

Questions / comments



MINUTES  
Meeting 5

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, December 9, 2004

This meeting was the fifth in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

Handouts:

- Agenda
- Forecasting Process chart (with completed general aviation/military operations line)
- General Aviation supplemental data (on master plan web site)
  - National Business Aircraft Association (NBAA) Business Aviation Fact Book 2004
  - General Aviation Manufacturers Association (GAMA) General Aviation Statistical Databook 2003
  - GAMA Media Guide: Profiles of GA Usage
  - Washington Post Article on microjets (Nov. 27, 2004)
- Potential General Aviation Development (Areas 1, 2, 3, and 4)
- Forecasts
  - Annual General Aviation and Military Operations – Graph 1G
  - Annual General Aviation Operations – Graph 2G

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the previous meeting, agenda, and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

Agenda Item:

[Approval of meeting minutes from October 28, 2004](#)

Port staff and the Committee members agreed to delay approval of the minutes from the October 28, 2004, meeting until the upcoming meeting in March 2005. Mr. David Needle (City of Alameda Community Representative) requested that comments in future meeting minutes indicate who

made the comment. Port staff agreed to include the name of the commenter in the meeting minutes.

[Follow-up items from the last meeting and open forum](#)

The City of Oakland provided the Port with a comment letter on potential future terminal and air cargo development at OAK. Regarding terminal development, the Oakland representatives generally agreed that Area 2 seems to be the best option. Regarding air cargo development, the Oakland representatives believe both Areas 3 and 4 should be considered.

Ms. Kathy Ornelas (City of San Leandro Staff Representative) indicated that Potential Terminal Development Concept 2B appears preferable, but will report San Leandro's final recommendation at the next meeting. Port staff agreed to agendize this discussion again at the next Committee meeting.

Mr. David Needle (City of Alameda Community Representative) indicated that Potential Terminal Development Concept 2B is preferable, with the stipulation that an additional taxiway between North Field and South Field be given consideration.

Ms. Laurel Impett (CLASS Staff Representative) asked if the Port had received a proposal from FedEx for expansion. Ms. Kristi McKenney, Aviation Planning Manager, responded that the Port has not received a formal proposal from FedEx, and indicated that FedEx has expressed no intent to move and will most likely continue to grow within their existing site.

[General Aviation](#)

Mr. Doug Mansel introduced the discussion on general aviation (GA) issues by referring the Committee to FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development, and Chapter 5, Aviation Forecasts. The FAA does not specifically address GA issues in this AC, but some of the principles in Chapter 6 can be useful.

Mr. Doug Mansel passed out the GAMA Media Guide: Profiles of GA Usage. GA includes corporate jets/turboprops, flight training (including touch and go operations), aerial applications (e.g., crop spraying), med-evac flights, law enforcement, and news/traffic reporting.

Ms. Barbara Tuleja (CLASS Community Representative) asked if there was any indication of the noise impacts of microjets. Mr. Vince Mestre, Acoustical Consultant, responded that presently noise data is not available and that there have been no aircraft/engine certifications, but that the engines should be relatively quiet (more so than a single-engine piston engine) and that when test data is completed it will be made available to the Committee. Mr. Doug Mansel added that microjets could be popular with smaller businesses.

Mr. Doug Mansel passed out Graphs 1G and 2G. Previous discussions focused on translating the number of airline passengers into aircraft operations or the weight of air cargo into cargo airline operations. General Aviation (GA) looks directly at the number of aircraft operations (take-offs and landings) and based aircraft (the number of aircraft based at OAK).

Mr. Doug Mansel explained that there is no direct relationship between the number of GA operations and the number of based GA aircraft at OAK. For example, a corporate jet that is based elsewhere but frequently flies into OAK to pick up/drop off passengers and then onto other airports (e.g., fractional jet operators, where the aircraft is owned and shared by several owners) generates more operations at OAK than if that aircraft were based at OAK. Conversely, some corporate jets and turboprops based at OAK generate only a few operations each week. Flight schools, which typically generate a significant number of operations when based at an airport, are the exception. Mr. Doug Mansel noted that an advantage of based aircraft is that they are more likely to follow local noise abatement procedures (compared to transient aircraft).

Ms. Kathy Ornelas asked if there were any new flight schools. Mr. Doug Mansel responded that there is a new helicopter school at the Airport.

Graph 1G shows how many GA operations occur at OAK (excluding air carrier and cargo aircraft) according to the FAA Terminal Area Forecast (TAF), Supplemental Environmental Impact Report (SEIR), and the Port's Airport Noise and Operations Management System (ANOMS). The SEIR data for 2000 was used as the starting point for the GA forecasts. More recent operations data was then obtained through the Port's ANOMS. It is important to note that the FAA TAF data includes some air cargo operations (e.g., Ameriflight operations) and includes only an estimate of the number of GA touch and go operations. The Port believes that the ANOMS data, especially the more recent data, provides the most accurate reflection of GA activity at OAK. Mr. Doug Mansel pointed out that the Port's ANOMS provides exceptionally good data (albeit not perfect) compared to GA data used in most airport master plan efforts, which is extrapolated from a limited field count.

A Committee member asked if the data on Graph 1G excluded passenger and air cargo carriers. Mr. Doug Mansel responded that both were excluded (e.g., commuter aircraft, United Express, and small cargo aircraft, such as Ameriflight).

A Committee member asked why this was important. Mr. Doug Mansel responded that there are different methodologies for forecasting air cargo, passenger airline, and GA operations, as was described at previous meetings. Ms. Kristi McKenney added that the Port's level of detail is comprehensive in an attempt to adequately address the diverse concerns of the Stakeholders' constituents.

Mr. David Needle asked if a small jet ferry service would be considered GA. Mr. Doug Mansel responded this would depend on how the operating certificates were granted by the FAA (e.g., on-demand service would likely be GA, but scheduled service would likely be considered as airline operations).

Ms. Kathy Ornelas asked if Ameriflight activity would be correlated with North Field activity. Ms. Kristi McKenney and Mr. Doug Mansel responded that in the upcoming meeting there will be an airfield simulation in which aircraft will be assigned to different runways and simulated as one flight schedule. But as different operations grow at different rates, it is necessary to segregate passenger airline from air cargo from GA operations for forecasting purposes.

Mr. Doug Mansel indicated the Port would not present exhaustive military operations data, but that for the purposes of the 2010 flight schedule, OAK will have 1 or 2 military operations per day.

Ms. Laurel Impett asked if Port staff could explain the significant downward trend in GA activity since 1998. Mr. Doug Mansel responded that this was due to several factors, including the elimination of flight training sponsored by the military, the Silicon Valley bust, September 11, and the difficulty in obtaining liability insurance for manufacturers of GA aircraft.

Graph 2G shows the number of GA operations by aircraft type: piston, helicopter, jet (including microjet), and turboprop (a jet engine with a spinning propeller). This graph displays actual data through the third quarter of 2004 (solid lines), and forecast data after that (dashed lines). The Port anticipates a gradual downward trend (1% decline per year) in piston GA operations. Helicopters are expected to experience 1% annual growth, after a significant jump in 2005 when the new flight school at North Field is anticipated to start flight operations.

Port staff and the Committee discussed the increasing demand for helicopter flight training and the potential effects of that demand. Generally, operating flight training in the San Francisco Bay Area is difficult due to the high cost of living for students and instructors, even compared to Central Valley locations. However, there is still a high demand for helicopter training. There is a shortage of helicopter pilots because many of the Vietnam-era helicopter pilots are no longer flying.

A Committee member asked whether or not helicopters were more dangerous than other aircraft. Ms. Kristi McKenney explained that it is uncertain whether or not helicopters are statistically more dangerous, but that they do tend to do more dangerous work, such as flight close to the ground and heavy lifting.

Ms. Barbara Tuleja asked if the noise footprint of a helicopter training school would be larger than for an operator such as Sierra Academy, which primarily flew fixed wing aircraft. Mr. Vince Mestre responded that this would depend on the flight patterns used and how they are integrated into overall flight operations by Air Traffic Control. Ms. Carole Wedl (Noise Abatement and Environmental Programs) added that the Port and FAA met with the new helicopter flight school (Silver State Helicopters) to ensure their cooperation with noise abatement procedures and that Air Traffic Control expects very little impact from helicopter operations.

A Committee member asked if there were FAA certification requirements for helicopters. Mr. Vince Mestre responded that there were.

Mr. Redd Wetherill (City of Alameda Community Representative) expressed concern that helicopters using light construction historically have more accidents, and that in general aerodynamically helicopters pose more safety risks.

Mr. Doug Mansel discussed corporate jet operations, anticipated to increase by 3% per year, which is consistent with the Port's trends (since 2000) and industry forecasts (i.e., NBAA, GAMA, and Rolls-Royce). Turboprops have remained consistent and are expected to remain so, though microjets may replace some turboprop operations in the future. Mr. Doug Mansel reminded the Committee that the forecasts are a best estimate and trend breakers (e.g., a new helicopter school) are always a possibility.

A Committee member requested that the forecast graphic for helicopter growth reflect the actual growth rate, including the jump from the helicopter training school. Port staff agreed to adjust the graphic.

Ms. Laurel Impett asked if the GA forecast was based on historic trends. Port staff responded that the forecast is based on the actual number of aircraft (by type) that have flown in and out of OAK over several years, and is the product of that information and industry projections.

A Committee member asked what percent of overall operations at OAK does GA constitute. Port staff will report that percentage at the next meeting, which is believed to be approximately 40%.

Ms. Kathy Ornelas asked if helicopters are counted as touch and go operations? Mr. Doug Mansel responded that the FAA does count helicopters in their touch and go operations (if they are making touch and go operations).

Mr. Doug Mansel passed out an Excel spreadsheet. Port staff will adjust the GA flight schedule from the 2000 SEIR flight schedule, to create the master plan GA flight schedule that will be used in the airfield simulation model to study taxiway systems and runway issues. The first step was to summarize the historic annual GA operations in 2000, 2001 and the 12 months ending September 2004 (projections start from this point). Step two was to project the annual growth rate for 2010. Step three was to take the annual figures and divide by 365 to get the Average Annual Day (AAD). Table E shows required adjustments to the 2000 SEIR flight schedule to obtain the 2010 master plan GA flight schedule (i.e., increase daily helicopter operations by 55, jet operations by 3, and turboprop operations by 0, and decrease daily piston operations by 328, including touch and go's).

To forecast based GA aircraft, Port staff (1) counted the number of aircraft by type based at OAK (277), (3) projected the demand expected for 2010 (384) and 2025 (406), and (4) translated based aircraft demand (i.e., demand for hangar space) into area requirements.

Mr. David Needle expressed concern about based aircraft forecasts being based on waiting lists. Mr. Doug Mansel responded that given the extreme difficulty in obtaining hangar space (it can take as long as 10 years), current waiting list demand is a viable data source for developing these forecasts.

Currently, 65 acres are estimated to be dedicated to based aircraft at OAK. The Port anticipates 77 and 87 total acres would be required to accommodate all of the based GA aircraft demand in 2010 (i.e., 12 to 22 net new acres). Mr. Doug Mansel recommended the Committee consider whether or not it is desirable to plan to accommodate the potential future demand.

#### General Aviation Development

Potential general aviation development areas. Port staff and the Committee reviewed and discussed the four potential general aviation development areas. Planning considerations for each area were presented on the graphic.

- Area 1 provides 20 acres of land for new GA (e.g., hangar) development, and allows for consolidation of smaller aircraft hangars.
- Area 2 provides 65 acres of land for new GA (e.g., hangar) development, and would be good for corporate jet hangars.
- Area 3 provides 15+/- acres of land for new GA (e.g., hangar) development.
- Area 4 (existing) facilities are much older and might require significant upgrading.

Mr. David Needle asked if the area between Ron Cowan Parkway and Runway 9R-27L (in the vicinity of the North Field Air Traffic Control Tower) was available for development of GA facilities. Mr.

Doug Mansel responded that it was probably too narrow, considering runway safety area set-back and taxiway requirements.

Port staff and Committee members agreed to agendaize Airport finances for a future meeting.

#### Wrap-up Items

##### Schedule Upcoming Meetings:

Thursday, March 3, 2005 (SUBJECT: Airfield Issues)

Sign-in sheet

Thursday, April 14, 2005 (SUBJECT: Ground Access/Airline Support Issues)

Web site

Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 6  
March 3, 2005

AGENDA

Welcome and introductions

Approval of meeting minutes from October 28, 2004, and December 9, 2004

Follow-up items from previous meetings and questions/answers (open forum)

- Focus area for potential terminal development for 2010 to 2012
- San Leandro comment letter
- Air cargo forecasts and potential air cargo development areas
- General aviation forecasts and potential development areas
- Update and questions, answers, and discussion on delay of garage project (Oakland Tribune article on January 29, 2005)
- Master Plan Update to Aviation Committee of the Board of Port Commissioners (January 25, 2005)
- Summary of forecasts
- Airport finances briefing paper
- Other questions, answers, and discussion

Airfield Issues and Development

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Section 2, Demand-Capacity Analysis and Section 3, Development Assessment)
- Background on airfield simulation model
  - 2010 master plan operations forecasts
  - Simmod PRO! (ATAC derivative of the Airport and Airspace Simulation Model, SIMMOD™)
  - Terminal Concept 2C and new parallel Taxiway B adjacent to new terminal (between Taxiway B1 and Taxiway T)
  - Relocated air cargo building (all other air cargo facility locations remain unchanged), as shown on Terminal Concept 2C
  - No new general aviation development at North Field
  - Southwest Airlines operates from new terminal; all other airlines operation from Terminals 1 and 2
  - Touch-and-go operations on Runway 27L

- 12 to 15 Taxiway U departures per day
- Helicopter operations not modeled
- West plan VFR conditions only (no southeast plan or IFR simulations)
- OAK airspace only (airspace interactions with SFO not modeled)
  - Existing noise abatement procedures
- Taxiway congestion and potential solutions
- High-speed runway exit issues and potential solutions
- Runway capacity and delay
- North Field-South Field taxiway connections
- Remain overnight (RON) aircraft parking
- New South Field runways
- Runway safety area studies (background and preliminary findings)

Wrap-up items

- Reschedule meeting on access and airline support issues (April 14, 2005) – suggest April 21, 2005
- Schedule second airfield meeting (suggest March 31, 2005) and meeting on environmental/financial issues/constraints (June 2005)
- Open house/public meeting (March 9, 2005)
- Sign-in sheet
- Web site
- Transportation (parking and AirBART)

Questions / comments



MINUTES  
Meeting 6

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, March 3, 2005

This meeting was the sixth in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

**Attendees:** See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

**Handouts:**

- Agenda
- Summary of Master Plan Forecasts
- Master Plan Progress Report/Update to Aviation Committee of the Board of Port Commissioners
- Runway Safety Area Studies (Update Briefing No. 1, March 2005)
- Process and Timeline (for upcoming Open House)
- Potential North Field-South Field Taxiways
- Potential New High-Speed Exit Taxiway – Runway 29
- Potential Runway 29 Access Improvements

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the two previous meetings, agenda, and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

**Agenda Item:**

[Approval of meeting minutes from October 28, 2004 and December 9, 2004](#)

The Committee approved the minutes with one editorial correction to the meeting minutes from December 9, 2004.

[Follow-up items from the last meeting and open forum](#)

The City of San Leandro provided the Port with a comment letter (dated January 21, 2005) on the focus area for potential terminal development for 2010 to 2012 at OAK. The San Leandro representatives generally agreed that potential terminal development Concept 2B is the best option.

Mr. Doug Mansel invited any comments regarding air cargo development and general aviation (GA) forecasts and potential development areas. From the previous meeting, the Port concluded that there is no support for development in the central basin and that air cargo development should be focused at the existing Oakland Maintenance Center (OMC) and/or terminal area at South Field and a modest expansion of the FedEx area.

Mr. David Needle (City of Alameda community representative) requested serious consideration be given to an additional taxiway between North Field and South Field to minimize congestion on Taxiway B and encourage jets at North Field to depart South Field in accordance with noise abatement procedures.

Ms. Kristi McKenney, Aviation Planning Manager, discussed the Board of Port Commissioners' decision to delay the parking garage project in front of existing Terminals 1 and 2. After working with Turner Construction throughout 2004, pricing drastically increased (by more than 40% of what was originally budgeted) forcing the Port to study a complex set of issues (e.g., the current parking requirements, delays in terminal development, United Airlines leaving OMC, alternatives to the garage, and financial feasibility). Given the new circumstances, the Board decided not to proceed with development of this garage, and that a more practicable garage project could be built in the future. The availability of this space allows the Committee to rethink terminal development options and associated parking needs. As the Port studies a future terminal in Area 2, staff will provide briefings to the Committee.

A Committee member asked Port staff to describe how enough parking could be provided without the parking garage. Ms. Kristi McKenney replied that there would be a greater amount of land area to devote to surface parking within the reconstructed loop roadway in front of the terminals, in addition to surface parking at the OMC.

A Committee member asked if the rental car center would remain at North Field off Doolittle Drive. Ms. Kristi McKenney responded that it would remain there for longer than anticipated, but that from a customer service perspective, the ideal location in the long term would be in front of the terminals.

Mr. Red Wetherill (City of Alameda community representative) asked if the rising trend in construction costs could possibly reverse. Ms. Kristi McKenney responded that the Port is working to understand the abrupt shifts in construction costs and that the rising cost of raw materials appears to correlate with recent construction bids.

Mr. Doug Mansel passed out the Summary of Master Plan Forecasts (on master plan web site). The data is presented in three sections: (1) airline passenger, (2) air cargo, and (3) GA forecasts and includes the percentage of total daily operations: airline passengers (45.8% existing, 47.5% by 2010), cargo (16.5% existing, 14.4% by 2010), and GA (37.7% existing, 38.1% by 2010). This data is from the staff report briefing to the Aviation Committee of the Board of Port Commissioners. The Port will inform Committee members of future Aviation Committee updates should they wish to attend.

Port staff plans to prepare a briefing paper for the Committee on Airport finances, and will agendize Airport finances for a future meeting (June 2005).

Mr. Dennis Rosucci (City of San Leandro community representative) suggested that noise mitigations be considered in the master plan. Mr. Doug Mansel replied that the Committee will study this issue

and agendize it for a future meeting (June 2005). The master planning steps include (1) complete forecasting, (2) use the forecasts to model (simulate) activity (e.g., the number of operations on each runway, taxiway congestion, etc.), and (3) look at environmental issues, such as noise, and financial feasibility.

Mr. Dennis Rosucci asked if the meeting discussing noise abatement issues would address particularly noisy aircraft. Mr. Doug Mansel responded that the forecasts include assumptions about the future fleet mix, and that this data will be factored into the noise analysis. For example, the forecasts assume that FedEx will eliminate all but one of their nighttime B727 departures by 2010.

Ms. Pat Mossburg (City of Oakland community representative) asked if the number of OAK employees residing in Oakland and other cities was available. Ms. Kristi McKenney responded that the number was included on the Existing Conditions data sheet (on master plan web site). Mr. Doug Mansel added that the data is from the mid-1990s, which was the last time an economic survey was done. Ms. Kristi McKenney added that the Port believes the data should be consistent with current numbers.

#### Airfield Issues and Development

Mr. Doug Mansel introduced the discussion on airfield planning issues by referring the Committee to the FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development, Section 2, Demand-Capacity Analysis and Section 3, Development Assessment. In this AC, the FAA does not provide abundant information on the study of airfield issues, but some of the principles in Chapter 6 can be useful.

Ms. Rosemary Barnes (Aviation Marketing/Media Relations) asked if the FAA had considered updating the AC. Mr. Doug Mansel responded that the FAA is in the process of updating the AC and that Airports Council International-North America (ACI-NA), which the Port is a contributing member, is reviewing the FAA's work.

Mr. Doug Mansel reported that the forecasts of activity that have been developed with the Committee over the last 6 months have been used to simulate the airfield to determine impacts on taxiways and runway capacity. The simulation is based on the following assumptions:

- 1) 2010 master plan operations forecasts
- 2) Simmod PRO! (ATAC derivative of the Airport and Airspace Simulation Model, SIMMOD)
- 3) Terminal Concept 2C and new parallel Taxiway B adjacent to new terminal (between Taxiway B2 and Taxiway T)
- 4) Relocation of air cargo building to the OMC site (all other air cargo facility locations remain unchanged), as shown on Terminal Concept 2C
- 5) No new general aviation (GA) facilities at North Field
- 6) Southwest Airlines operates from new Terminal 2C (all other airlines operate from Terminals 1 and 2)
- 7) Touch-and-go operations on Runway 27L
- 8) 12 to 15 Taxiway U departures per day (which is approximately the number today)
- 9) Helicopter operations not modeled
- 10) West plan VFR conditions only (no southeast plan or IFR simulations)
- 11) OAK airspace only (airspace interactions with San Francisco International Airport (SFO) not modeled)

12) Existing noise abatement procedures (fully compliant)

Mr. Jason Bertino (ATAC, the Port's airfield simulation consultant) presented the Simmod PRO! simulation model to the Committee. The simulation shows delayed and normal airline operations, an underlying link-node network, touch-and-go operations at North Field, and aircraft interactions during a 24-hour simulation (based on 2010 anticipated operations serving 18 million annual passengers). The simulation identifies potential "hotspots" (e.g., queues on taxiway and less than optimal spacing of high-speed exit taxiways for Runway 29). Port staff noted that the length of the queue getting to Runway 29 might be worse than estimated because airspace interactions with SFO are not modeled.

A Committee member asked if the simulation showed excessive queuing at other periods of the day (beside the morning departure peak). Mr. Jason Bertino responded that the simulation shows 20 minutes of delay on average per aircraft in the morning departure peak, and that for the rest of the day, there is substantially less average delay per aircraft. Mr. Doug Mansel added that this morning departure peak will continue to spread out later in the morning beyond 2010.

Mr. Red Wetherill asked what would compel the aviation industry to recognize the fact that OAK is already facing overwhelming congestion, and if the parties that operate/manage the airports (i.e., OAK, SFO) are accountable for exacerbating the problem.

Ms. Kristi McKenney responded that proposals for airport development (at SFO, OAK) are informed by current demand. The Bay Area region and community has to decide to create solutions, what those will be, and when they will implement them. The Port will continue to look at all practicable solutions.

Mr. Doug Mansel passed out the Potential New High-Speed Exit Taxiway – Runway 29 graphic.

Mr. David Needle asked if the simulator was capable of modeling air traffic control and the larger Bay Area airspace. Mr. Jason Bertino responded that the simulation does include some limited airspace around OAK and air traffic procedures, but does not model interactions with SFO. The simulation model is capable of simulating airspace over the entire U.S. Ms. Kristi McKenney added that given the Port is not simulating additional runways, it is unlikely that airspace and air traffic control procedures would affect the simulation of the proposed airfield improvements.

Ms. Laurel Impett (CLASS representative) asked if there was a level of service component for airfield planning. Mr. Doug Mansel responded that there is no standard definition of acceptable level of service and that what amount of delay is deemed tolerable varies from airport to airport. What is typically discussed is average total delay per aircraft, and "what is acceptable" varies. For example, LaGuardia Airport routinely experiences over 20 minutes of average delay per aircraft for significant portions of the day. Airlines and airline passengers tolerate it. Ms. Kristi McKenney added that the airfield simulation assumes a representative busy day (the average day of the peak month). There will be some days with more delay and many with less.

Mr. Doug Mansel discussed a potential solution to minimize aircraft queuing to depart Runway 29: creating a taxiway parallel to Taxiway U (between Taxiway T and Taxiway W) and Taxiway W (between Taxiway T and Runway 29). This solution would enable air traffic control to better sequence aircraft to different destinations, optimize spacing between departures, negate the need for mid-field take-offs (from Taxiway U), reduce queue delay (from between 23% and 39% - if done

in conjunction with a new high-speed exit taxiway), and reduce engine idling noise and emissions. This solution would require wetlands encroachment. Aircraft headed in the same general direction could be queued to allow for alternating departures (because aircraft going in same general direction require more spacing between departures than aircraft going in different general directions).

A second potential solution to reduce the aircraft queue accessing Runway 29 is a new high-speed exit taxiway between Taxiway V and Taxiway Y. Currently, it is estimated that only about 13% of the 2010 aircraft fleet would be able to exit Runway 29 at Taxiway V (i.e., it is too close to the landing point and most aircraft are still going too fast to safely exit the runway there). Meanwhile, Taxiway Y is too far down the runway (i.e., aircraft are going very slowly by then, and then Taxiway Y takes them farther west, away from the terminal area). If a new taxiway between Taxiway V and Taxiway Y were constructed, about 700 ft. west of Taxiway V, almost 79% of the fleet is anticipated to be able to exit there. This new taxiway would reduce runway occupancy time by up to 15%, and reduce the departure queue to Runway 29 by between 21% and 39% - if done in conjunction with the access improvements described above. Landing aircraft are able to get off the runway more quickly, allowing departing aircraft to take-off, reducing the queue accessing Runway 29. This new high-speed exit taxiway would also impact wetlands.

Mr. David Needle asked if it would be possible to view the simulation model in more detail. Mr. Doug Mansel responded that he would try to arrange a more detailed viewing.

Mr. Doug Mansel referred to potential terminal development Concept 2C, which now shows an airfield engineer's rendering of a taxiway parallel to Taxiway B between Taxiway T and Taxiway B2. Based on the simulation results, this new parallel taxiway appears to solve most head-to-head taxi issues between North Field and South Field through 2010. Head-to-head taxi issues occur, for example, when a FedEx aircraft taxis to the FedEx facility when a corporate jet comes from North Field to depart South Field in accordance with the noise abatement procedures.

Mr. David Needle respectfully disagrees, citing the lengthiness as a deterrent to pilots.

Mr. Doug Mansel passed out graphs quantifying the queue delay measured from the simulation model. Graph 1AF shows Runway 29 operations, the number of take-offs and landings by time of day (for any time during the day, the number of take-offs and landings is the number that occurred during the previous hour). Graph 2AF shows average queue delay per aircraft. With a new high-speed exit taxiway and the taxiway access improvements to Runway 29, the peak queue delay during the morning departure peak drops from about 20 minutes per aircraft to about 10 minutes per aircraft on average.

Mr. Dennis Rosucci asked how long the forecast would work. Ms. Kristi McKenney replied that as aircraft operations increase over the forecast (e.g., beyond 2010), the strain on the runway would continue to increase (i.e., delay would continue to increase), but that the amount of delay will consistently be less with the new taxiways than without them.

Mr. Dennis Rosucci asked if the taxiway improvements would increase runway capacity. Ms. Kristi McKenney responded that the capacity of a single runway, given an aircraft fleet mix and percentage of arrivals vs. departures, is fixed. The taxiway improvements allow for improved sequencing of aircraft to take maximum advantage of air traffic control rules, thereby reducing queue delays. These improvements optimize the runway, allowing it to perform closer to its capacity (allowing it to perform to its potential). Any increase in runway capacity would be

marginal. For example, it is unlikely that an airline would choose to serve or not serve OAK based on these improvements and associated marginal increase in runway capacity. The improvements simply make the exiting single runway operate more efficiently, reducing but not eliminating aircraft delay.

A Committee member inquired what would encourage the development of new runways. Ms. Kristi McKenney responded that OAK would approach that juncture in the next decade (2012 to 2015). Mr. Doug Mansel added that the FAA has also said that between 2010 and 2020 they believe OAK will be hitting its runway capacity threshold.

Mr. David Needle asked if the Port would consider starting these taxiway improvement projects before 2010. Ms. Kristi McKenney responded that there would not likely be time to do this before completing the master plan.

Mr. Doug Mansel said the upcoming meeting will include a discussion of options for expanding runway capacity at South Field and then passed out Potential North Field--South Field Taxiways Graph (Taxiways 1 – 4). All four options provide an additional taxiway connection between North Field and South Field, improve airfield flow and minimize head-to-head aircraft operations on Taxiway B, and may not be required if a new taxiway parallel to and east of Taxiway B is constructed south of the Oakland Maintenance Center site (to Taxiway T). In addition:

- Taxiway 1 provides taxiway access to Central Basin, requires a portion of Ron Cowan Parkway to be reconstructed, provides relatively long taxi distances for corporate jets (departing South Field on Runway 29), moves taxiing aircraft closer to the City of Alameda, and requires expensive construction.
- Taxiway 2 provides taxiway access to Central Basin, requires large wetlands impact (30+/- acres), and requires expensive construction.
- Taxiway 3 requires minimum wetlands impact (2 acres +/-) and may require a portion of Ron Cowan Parkway to be reconstructed.
- Taxiway 4 provides taxiway access to Central Basin, requires large wetlands impact (27 acres +/-), and requires expensive construction.

Mr. Doug Mansel added that it was important to note, through the simulation, that in the near-term, building the parallel taxiway at South Field (between Taxiway T and Taxiway B2) solves many head-to-head taxiway problems.

Ms. Kathy Ornelas (City of San Leandro staff representative) asked the City of Alameda representatives what guarantees existed that it would remain a one-way taxiway and not have jets from South Field heading up to North Field for departure.

Mr. David Needle responded that the current noise abatement agreements say no jet departures on North Field, but that there is a need to work with OAK and the FAA to enforce the existing noise abatement procedures. Mr. Doug Mansel stated that there should be no corporate jets taxiing from South Field to North Field (noise abatement procedures permit corporate jets to land at North Field).

Ms. Kathy Ornelas asked why Taxiway 3 was extended to Runway 27R and Runway 27L, thereby encouraging air carriers to use Runway 27. Ms. Kristi McKenney responded that the Port wanted to

consider all possible ways to improve taxiway congestion, but that building a terminal farther south may eliminate the need to extend this taxiway as far as it is depicted on the graphic.

Mr. Darron Evans (Airport Operations – Airside) added that it is extremely rare for an air carrier to want to take off from Runway 27, because to do so would require adjusting passenger, cargo and fuel loads because of the shorter runways at North Field, and would be less profitable for the airlines. In fact, when Runway 29 is closed for maintenance, Airside Operations sometimes receives requests from airlines to reopen it to allow for a departure.

Ms. Kathy Ornelas rebutted that there was a concern that Taxiway 3 would make use of North Field by airlines more attractive. Ms. Kristi McKenney rejoined that the cost of doing so was extremely unattractive to carriers and that the marginal benefits to it were not believed to be motivational in a carrier's decision, but that the Port would be mindful of the concerns about this option and encouraged community input in the decision-making process.

Ms. Kathy Ornelas expressed community concern about the possible use of Runway 27 by regional jets. Mr. Doug Mansel responded that it is difficult for regional jets to use shorter runways and therefore highly unlikely.

Mr. Doug Mansel suggested that even if gates were constructed at the OMC site (proximate to Runway 27L), the taxi time from this location to South Field is still extremely reasonable, considering that at some airports, such as Chicago O'Hare or Dallas/Fort Worth international airports, taxi times frequently exceed 20 minutes (for both take-offs and landings).

Mr. Red Wetherill stated that barring an emergency, there should not be any jets taking off from North Field.

#### Runway Safety Areas

At the FAA's request, the Port has initiated Runway Safety Area (RSA) studies. Mr. Doug Mansel passed out Runway Safety Area Studies (OAK) Update Briefing No. 1, March 2005, which details the project background, scope of work, preliminary field survey findings, project schedule, and next steps. The FAA has established the Runway Safety Area Program, which requires RSAs at all airports certificated under 14 Code of Federal Regulations (CFR) Part 139, including OAK, to meet current FAA dimensional, grading, drainage, and other engineering standards for RSAs. Improvement of sub-standard RSAs is a national, high-priority goal for the FAA. Runway dimensions are established in FAA Advisory Circular (AC) 150/5300-13, Airport Design. According to this AC, Runways 11-29, 9R-27L, and 9L-27R at OAK require RSAs that are 500 ft. wide (centered on the runway centerline) and extend 1,000 ft. beyond the ends of each of the runways. Runway 15-33 requires an RSA that is 150 ft. wide (centered on the runway centerline) and extends 300 ft. beyond each end of the runway.

The FAA requires RSAs to be (1) cleared and graded and have no potentially hazardous ruts, humps, depressions or other surface variations, (2) drained by grading and storm sewers to prevent water accumulation, (3) capable of supporting equipment and occasional passage of aircraft without causing structural damage to the aircraft, and (4) free of objects, except for objects that need to be located in the RSA because of their function (and then they must be frangible). RSAs are provided to (1) protect an aircraft on take-off or landing that departs the main runway surface (e.g., due to an engine failure or blown tire), and (2) provide an area suitable for access by emergency equipment (so that it can quickly reach an aircraft that has departed the main runway surface).

Though uncommon, there was a runway excursion at OAK in 1991, when Southwest Airlines went off the side of Runway 29 due to a mechanical failure. (A picture depicting this was circulated.) This example illustrates the utility of RSAs. A fatal accident at Little Rock, Arkansas, where an aircraft overshot the runway and almost went into a river, also highlights the importance of RSAs.

The Port recently conducted a field survey at OAK and concluded that many RSAs do not meet FAA standards. The development of possible solutions to correct/improve sub-standard RSAs is in progress. Possible solutions include (1) extending sub-standard RSAs to meet current standards, (2) shifting runways (along existing centerlines) to achieve standard RSAs, (3) shortening runways to achieve standard RSAs, (4) establishing declared distances, and (5) installing engineered material arresting systems (EMAS).

Mr. Doug Mansel passed around a brochure for EMAS, which achieves an equivalent 1,000 ft. by paving the end of the runway with a soft concrete (the aircraft sinks into it), which functions as an aircraft arresting bed.

Mr. Howard Klein (URS Corporation, the Port's RSA consultant) discussed Runways 11-29 (South Field), Runway 9R-27L (North Field), Runway 9L-27R (North Field), and Runway 15-33 (North Field) in relation to FAA RSA standards.

#### Runway 11-29 (South Field)

The localizer antenna (an electronic landing aid providing lateral guidance for aircraft on final approach) is located approximately 485 feet from the Runway 29 threshold and does not appear to have frangible mountings. East of the localizer antenna, the ground rises steeply towards the perimeter dike and airfield roadway on top of the dike. San Francisco Bay is on the other side of the dike. Consequently, the required 1,000 feet of RSA is not provided beyond the Runway 29 threshold. There are also wetlands located within the RSA on approach to Runways 29 and 11 that do not meet FAA standards.

#### Runway 9R-27L (North Field)

There is an airfield roadway that traverses the RSA on approach to Runway 27L (and Runway 27R). The grades on both sides of the roadway do not meet FAA RSA standards. There are also wetlands located in the RSA on approach to Runways 9R and 27L. Harbor Bay Parkway (and the associated Airport perimeter fence) is located approximately 114 feet inside of the west limit of the RSA for Runway 9R, and consequently, the required 1,000 feet of RSA is not provided beyond the Runway 9R threshold. On the sides of Runway 9R-27L (within the RSA), there are several areas where the soil (mostly clay) is too soft to support equipment or the occasional passage of aircraft (and would therefore be unable to support fire fighting equipment, in the event of an emergency). Numerous animal (squirrel) burrows were also observed (which do not meet FAA grading requirements for RSAs).

#### Runway 9L-27R (North Field)

There is an airfield roadway that traverses the RSA on approach to Runway 27R (and Runway 27L). The grades on both sides of the roadway do not meet FAA RSA standards. The Airport perimeter fence is located within the RSA on approach to Runway 27R. There are also wetlands located in the RSA on approach to Runway 27R. Although there were some areas of standing water and soft soils,

Runway 9L-27R appeared to have better overall drainage and soil stability (compared to Runway 9R-27L). Numerous animal (squirrel) burrows were observed (which do not meet FAA grading requirements for RSAs).

#### Runway 15-33 (North Field)

There is an uncontrolled airfield roadway approximately 238 feet from the threshold of Runway 15. This roadway appears to violate the requirement for positive control of all vehicle and aircraft movements within the RSA. Numerous animal (squirrel) burrows were observed (which do not meet FAA grading requirements for RSAs). The south end of Runway 15-33 is fully compliant.

At North Field, standing water and soft soils (that would not support a vehicle) are a primary concern, especially around Runway 9R-27L.

Mr. David Needle asked about issues with EMAS for aircraft that land short and whether or not EMAS was being considered for use on both ends of the runways. Mr. Doug Mansel replied that while it is rare for an air carrier to land short, that light GA aircraft are more likely to do so, and consequently, this will be an evaluation criteria of the Port. Because all runways at OAK can be used for take-off or landing in both directions, EMAS is considered a potential solution at both ends of the runways (if sub-standard RSA dimensions exist at both ends of the runway).

Port staff explained that the FAA has conducted several tests (using its own B727) to determine the practicability of EMAS, and that the FAA's guidelines arbitrate what is practicable, and that the Port will be following those guidelines closely.

Ms. Kathy Ornelas asked if the FAA has set a deadline and if there was a penalty for exceeding it. Port staff replied that the FAA's internal deadline for completing all assessments and commencing the project development process is 2007, and that the Port expects to be in sync with the FAA in terms of RSA solutions. However, there may be issues that cannot be resolved practicably, and that is an acceptable outcome. FAA funding to improve/correct sub-standard RSAs is also an unknown at this time.

Port staff and Committee members agreed to agendaize additional airfield issues and potential solutions, including remain overnight (RON) aircraft parking (for 2010 and 2025), new runways at South Field, and further discussions on potential RSA solutions at the next meeting.

#### Wrap-up Items

##### Schedule Upcoming Meetings:

Thursday, March 31, 2005 (SUBJECT: Airfield)  
Thursday, April 21, 2005 (SUBJECT: Ground Access/Airline Support Issues)  
Thursday, June 16, 2005 (SUBJECT: Financial and Environmental Issues)  
Sign-in sheet  
Web site  
Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 7  
March 31, 2005

AGENDA

Welcome and introductions

Approval of meeting minutes from March 3, 2005

Follow-up items from previous meetings and questions/answers (open forum)

- Focus area for potential terminal development for 2010 to 2012
- Air cargo forecasts and potential air cargo development areas
- General aviation forecasts and potential development areas
- Airfield issues/solutions (improved Runway 29 access and high-speed exit taxiways)
- Open house debriefing (March 9, 2005)
- Airport finances briefing paper
- Other questions, answers, and discussion

Airfield Issues and Development

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Section 2, Demand-Capacity Analysis and Section 3, Development Assessment)
- North Field-South Field taxiway connections (time/distance calculations)
- New North Field taxiway (south of Runway 9R-27L)
- Remain overnight (RON) aircraft parking
- New South Field runways parallel to Runway 11-29
  - The City of Alameda, CLASS, and Port have already conducted an independent study and discarded crosswind runway alternatives (limited or no capacity or noise reduction benefits)
  - By settlement agreement, the Port is precluded from constructing new runways or lengthening existing runways at North Field
  - Four potential outboard alternatives (south of existing Runway 11-29) and one potential inboard alternative (north of existing Runway 11-29)
- Runway 11-29 extension
- Runway safety area studies (alternatives review)

Wrap-up items

- Next meeting on access and airline support issues (April 21, 2005)
- Reschedule meeting on environmental and financial issues/constraints (June 16, 2005) – suggest June 30, 2005
- Sign-in sheet
- Web site
- Transportation (parking and AirBART)

Questions / comments



MINUTES  
Meeting 7

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, March 31, 2005

This meeting was the seventh in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

Handouts:

- Agenda
- Excel Table: Potential New North Field – South Field Taxiways
- Excel Table: Remain Overnight (RON) Aircraft Parking (Passenger Airlines Only)
- Potential RON Aircraft Parking Areas
- Potential North Field – South Field Taxiways
- Potential New Taxiway Parallel to Runway 9R-27L
- Potential New South Field Runways
- Runway Safety Area Studies: Create Standard Runway Safety Areas (RSAs)
- Runway Safety Area Studies: Create Standard RSAs: Shift Runways
- Runway Safety Area Studies: Install Standard Engineered Materials Arresting System (EMAS)
- Runway Safety Area Studies: Install Non-Standard EMAS
- Runway Safety Area Studies: Displaced Thresholds/Declared Distances
- Runway Safety Area Studies: Maximize Existing RSAs

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the previous meeting, agenda, and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

Agenda Item:

[Approval of meeting minutes from March 3, 2005](#)

The Committee approved the minutes with one editorial correction.

#### Follow-up items from the last meeting and open forum

Mr. Doug Mansel, invited comments about potential terminal development areas, air cargo forecasts, and potential cargo development. Ms. Kristi McKenney, Aviation Planning Manager, shared highlights of recent conversations with UPS, which may affect potential cargo development at OAK. UPS is currently located in the cargo building next to Terminal 1 and occupies a portion of the Daily Lot B area and the apron/ramp on the south side of the building, as well as aircraft parking across Taxilane S. They have a large off-Airport facility for handling/sorting packages (little handling/sorting is done on-Airport). UPS has expressed interest in relocating their operation out of the terminal area and up to the Oakland Maintenance Center (OMC) hangar site. UPS is interested in this move independent of potential terminal development. They would like to be located outside of the passenger terminal area with separate access to prevent their trucks from co-mingling with passenger traffic. It would also somewhat shorten their haul distance between their off-Airport and on-Airport sites. If they were to relocate to the OMC site, the development there could be more consolidated and efficient, and they would not have to cross an active taxilane to access aircraft. The Port responded that this is reasonable, but have neither approved nor disapproved of possible UPS relocation, but this will factor into the master plan process.

Ms. Kathy Ornelas (City of San Leandro Staff Representative) asked if UPS anticipated expanding their operations at OAK and if potential development at the OMC site would require construction of a parking garage?

Ms. Kristi McKenney responded that UPS has not expressed any intention to expand at OAK, and that, to the contrary, they would rather reduce the amount of space they are leasing from the Port in a more efficient layout/operation. Their future growth would correlate incrementally with Bay Area growth. The Committee previously discussed having a replacement cargo facility in this area, but these issues need to be worked out in terms of land use. The Port and Committee need to look at the layout of a future terminal in this area, and the amount of parking required would depend on whether or not new terminal development requires parking.

In continuation of the ongoing discussion of airfield issues, Mr. Doug Mansel summarized the analysis (simulation) of taxiway queuing delay from the previous meeting, which determined that the biggest "hotspot" was accessing Runway 29 during the morning departure peak. Mr. Mansel reminded the Committee of the two improvements to minimize this congestion: (1) a new high-speed taxiway exit from Runway 29 (between existing high-speed exits, Taxiways V and Y, and (2) a dual taxiway system accessing Runway 29 (parallel to Taxiways U and W).

Ms. Barbara Tuleja (CLASS Community Representative) stated that Mr. David Needle (Dave) has been conducting independent simulation analyses, and requested that Mr. Needle's comments from the previous meeting be read into the minutes in light of his absence.

Mr. Doug Mansel invited any interested Committee members to accompany Dave and Port staff on a field trip to the ATAC offices in Sunnyvale to learn about Simmod PRO! simulation model (schedule for May 2, 2005). Mr. Mansel also thanked the Committee members for manning tables at the recent master plan open house, in which approximately 50 people attended.

Ms. Kathy Ornelas suggested having subsequent master plan open houses at a venue with less noise.

Ms. Barbara Tuleja asked if the residency of the attendees of the open house was known. Port staff responded that comment cards were submitted from citizens from San Leandro and Oakland.

Port staff plans to prepare a briefing paper for the Committee on Airport finances, and will agendaize Airport finances for a future meeting (June 30, 2005).

#### Airfield Issues and Development

Mr. Doug Mansel introduced the discussion on airfield issues by referring the Committee to the FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development, Section 2 (Demand-Capacity Analysis) and Section 3 (Development Assessment). In this AC, the FAA does not provide detailed information on the study of airfield issues, but some of the principles in Chapter 6 can be useful.

#### Taxiways

Mr. Doug Mansel passed out the North Field – South Field Taxiway Connections graphic and an Excel spreadsheet analysis. In the previous meeting, the Committee looked at a series of taxiways (T1 through T4) to improve access between North Field and South Field and the planning considerations for each option. Since then, the Port has added a potential fifth option (T0) which improves access by allowing aircraft traffic to bypass each other and then be merged using the existing Taxiway B bridge over Ron Cowan Parkway, which achieves almost dual redundancy between North Field and South Field, except at this bridge crossing. Based on the airfield simulation results, building a taxiway parallel to Taxiway B from the Southwest Airlines Provisioning building to Taxiway T, would eliminate the need for a North Field – South Field taxiway connector shown on this graphic, as least through 2010 (the near-term planning horizon). This taxiway at South Field (parallel to Taxiway B) solves most head-to-head taxi issues on Taxiway B, which primarily occur when a FedEx aircraft taxis to/from the FedEx facility while a corporate jet transitions from North Field to depart South Field in accordance with noise abatement procedures.

To address Dave's (City of Alameda community representative) comment from the last meeting that the taxi distance deters pilots from taxiing from North Field to South Field and suggestion that the Committee consider options that shortens this distance, the Port generated an analysis of four alternative taxiways, T1 through T4 (depicted on an Excel spreadsheet in Tables A – E). (See discussion below. 98% of corporate jets currently taxi from North Field to South Field to depart in accordance with existing noise abatement procedures. Mr. Needle's suggestion to provide additional taxiways is intended to increase compliance above 98%. The 2% of corporate jets that do not comply represents about one daytime departure every other day - or ½ of a flight each day.) The calculations in the table assume existing corporate jet parking areas at North Field, specifically KaiserAir, near the middle of the North Field ramp (at the intersections of Taxiways J and D), and Business Jet Center, near the landing threshold of Runway 27R. The tables also show a weighted average North Field taxi start location. The tables show the taxi distances (between 2.6 and 3.8 miles) and times (assuming a 16 knot taxi speed from simulation analyses) for the four alternative taxiways, T1 through T4. Taxiway T3 was the only alternative that decreased taxi distances/times from both KaiserAir and Business Jet Center. The calculated reduction in time was about 1 minute. Based on these calculations, even the best option (T3) does not reduce taxi time enough to encourage more pilots to choose to taxi from North Field to South Field, nor does the cost-benefit seem sufficient to justify building a North Field – South Field taxiway, beyond the one described in the paragraph above, at least in the near-term.

Mr. Red Wetherill commented that analysis of North Field – South Field taxiway alternatives appeared to be overemphasizing the importance of sparing corporate jets a marginal amount of taxi time. The calculated taxi time savings is negligible compared to the total flight time.

A Committee member asked how much time head-to-head conflicts incur and whether taxiway development in North Field might be worth considering. Ms. Kristi McKenney responded that the study showed that head-to-head conflicts occur south of Ron Cowan Parkway (a marginal amount occurs at North Field), so the optimal taxiway development would reduce those conflicts on South Field (which T3 and T0 do not). In previous meetings, the Port has presented graphics which demonstrate that the optimal taxiway development (which would create the greatest reduction in head-to-head conflicts, while avoiding other undesirable side effects) would be a taxiway parallel to Taxiway B. The Port's analysis of options T0 through T4 suggests that they do not significantly reduce taxi times or conflicts.

Mr. James Reynolds (City of San Leandro community representative) asked if the Port had considered developing general aviation facilities south of Rowan Cowan Parkway. Mr. Doug Mansel responded that due to the density of passenger terminal development at South Field, the Port focused its study (in December 2004) on potential general aviation (GA) facilities at North Field. GA development at the South Field would likely require wetlands encroachment and while attractive in terms of noise abatement could increase congestion on the Airport main air carrier runway, Runway 11-29. Port staff offered to factor potential GA development at South Field into the GA analysis of potential land use.

Ms. Barbara Tuleja commented that in accordance with the settlement agreements between the Port and communities, corporate jets should not be taking off from Runway 27L or 27R. Ms. Kristi McKenney responded that the most optimal taxiway development would be a parallel taxiway to Taxiway B (between Southwest Airlines provisioning building and Taxiway Tango) and that the effect of other taxiway developments would be too insignificant to alter existing aircraft operations or to encourage any additional corporate jet pilots to taxi to Runway 29.

Mr. Dennis Rosucci (City of San Leandro community representative) asked how expensive it would be to move corporate jet parking facilities to the South Field (south of Ron Cowan Parkway). Ms. Kristi McKenney responded that the Port could show that on the GA land use options and show the planning considerations, but that it would be very expensive and would need to be subsidized.

Ms. Barbara Tuleja asked if T0 was being considered. Port staff responded that in the near-term what would be required would be a new taxiway from the Southwest Airlines provisioning building south to Taxiway T parallel to Taxiway B, which would most of congestion issues on Taxiway B and make it easier for corporate jets to get from North Field to South Field, and reduce taxi delays.

Ms. Barbara Tuleja expressed concern about business jets taking off from North Field, especially given the FAA's lack of cooperation. Ms. Kristi McKenney responded that the Port's analysis suggests that there are no new taxiway options available which would induce all corporate jet pilots to take off from Runway 29.

Mr. Christian Valdes (Sr. Noise Abatement Specialist) commented that 98% of corporate jets do indeed taxi to South Field to depart Runway 29 and questioned the potential appeal of any new configuration (designed to improve traffic flow to Runway 29) to the 2% of corporate jet pilots that

request to use Runway 27 (North Field). Mr. Valdes added that the 2% of corporate jet departures that do occur at North Field rarely occur at night. The 2% is about one corporate jet departure every other day (or ½ of a flight per day).

A Committee member asked how many corporate jets depart from Runway 27. Mr. Christian Valdes indicated corporate jets represent 2% of about 800 departures per month from North Field and added that many corporate jets are equipped with expensive "quiet jets" and pilots of these aircraft feel that the noise abatement restrictions are punitive, given that most non-jet aircraft departing Runway 27 are not similarly equipped.

A Committee member asked for an itemized list of corporate jet departures. Ms. Carole Wedl (Noise Abatement and Environmental Programs) offered to e-mail their monthly report to the Committee member. Mr. Christian Valdes indicated that an itemized list of corporate jet departures from Runway 27 is available on the web site, and that those corporate jets that depart at night depart from Runway 29.

Mr. Doug Mansel directed the Committee to look at the Potential New Taxiway Parallel to Runway 9R-27L graphic. When Runway 11-29 is closed (e.g., for maintenance, repair, or in the event of an accident), arriving aircraft bound for South Field must land at North Field and then taxi to South Field, crossing three runways: 9L-27R, 27R and 27L to do so). The potential new taxiway would eliminate the need for runway crossings (improving safety), reduce taxi time and emissions, and improve air quality. However, construction would be difficult and costly.

Mr. Dennis Rosucci asked if there would be environmental mitigation in terms of paving. Mr. Doug Mansel responded that the Port would need to do an environmental review, but that this option would not encroach on wetlands and therefore would not require wetlands mitigation.

Ms. Carmen Fewless (City of San Leandro community representative) asked if OAK was subject to the Regional Water Quality Control Board, how often Runway 29 was closed, and if the proposed taxiway parallel to Runway 9R-27L was cost beneficial. Mr. Doug Mansel responded that Runway 29 is not closed often, but it does happen. For example, there is a semi-routine closure for maintenance Monday mornings from about 1:30 AM to 6:00 AM, when there are no scheduled airline departures, but still a few landings needing to go to South Field. Cost-benefit would be difficult to determine at this time. Mr. Mansel added the Port is indeed subject to permits from the Regional Water Quality Control Board.

Another example of when Runway 11-29 was closed for an extended period was during a week in August 2001 when it was closed for resurfacing. The Port set up a one-way flow on Taxiway B: passenger airlines landed at North Field, taxied southbound on Taxiway B to the terminals, and then departed on Taxiway W (converted to a temporary runway). (The FAA allowed cargo airlines to land on Taxiway W.) Mr. Larry Berlin (North Field Manager) stated that airports typically have more than one air carrier runway (OAK South Field does not), and that if OAK were being designed today, it would be designed with two air carrier runways at South Field and that this is one reason a parallel taxiway to Runway 9R-27L is being considered in the master plan.

Mr. Christian Valdes added that it is difficult to assess the cost-benefit of the potential parallel taxiway, but that it is analogous to car insurance. And when interruptions occur on Runway 11-29 (e.g., bird strikes), this option gives a much needed alternative route.

### Remain Overnight (RON) Aircraft Parking

Mr. Doug Mansel passed out the Potential Remain Overnight (RON) Aircraft Parking Areas graphic. OAK has a significant RON aircraft parking demand. Aircraft can park at the gate or remotely overnight. The Port's analysis focuses on remote RON aircraft parking demand. At the end of an aircraft's day, it parks at the gate, meanwhile aircraft continue to arrive later and need a gate to off-load passengers. The first aircraft must be pushed to a remote aircraft parking location, allowing incoming aircraft to arrive at the gate and perhaps park at it. It may also have to push off the gate to a remote parking location if that aircraft is not the first one scheduled to depart that gate in the morning. During the morning departure peak, the majority of aircraft departing OAK start their day at the Airport (i.e., they do not fly in from another airport).

Mr. Doug Mansel directed the Committee to look at the Excel spreadsheet entitled RON Aircraft Parking (Passenger Airlines Only). The analysis summarizes the remote RON aircraft parking area available today and extrapolates to show a range in remote RON aircraft parking area that might be required in 2010 and 2025. The analysis is based on a ratio of gates used for RON aircraft parking to remote RON aircraft parking area. The analysis shows that between 23 and 46 acres of remote RON aircraft parking might be required in 2010, depending on ratio assumptions and the total number of gates in 2010. The analysis shows that between 33 and 68 acres of remote RON aircraft parking might be required in 2025, depending on ratio assumptions and the total number of gates in 2025. Mr. Mansel pointed out that it will be challenging to find areas suitable for remote RON aircraft parking near the terminal area, as demand increases and more of the terminal area is consumed by terminal and other buildings.

A Committee member asked if aircraft using remote RON aircraft parking at OAK are sometimes not picking up or dropping off passengers at OAK. Port staff stated that OAK does not store aircraft for other airports, but that on rare occasions when aircraft intended to land at SFO must divert to OAK due to weather and fuel situations, they may park on the remote RON aircraft parking areas until they can reposition the aircraft to SFO. This occurs once or twice a year. The aircraft will park on the ramp area at OAK, refuel, and then depart, often without discharging passengers.

Mr. Doug Mansel directed the Committee to review the Potential Remain Overnight (RON) Aircraft Parking Areas graphic, which depicts five possible areas for remote RON aircraft parking area development (i.e., large ramp areas). Mr. Mansel discussed the planning considerations associated with each area. Area 1 is the most desirable for remote RON aircraft parking because it could provide ramp area that is close the terminal gates (where aircraft are pushed from and pulled to). However, there are a lot of other uses competing for Area 1, including terminal buildings, air cargo, vehicle parking, etc. Areas 2 through 5 would require filling wetlands and crossing/using active taxiways to reposition aircraft between the gates and remote RON aircraft parking. Ms. Kristi McKenney added that the OMC site, which is part of Area 1, is being used for remote RON aircraft parking today and could be in the future, balancing other competing uses.

Mr. Red Wetherill asked if anyone had looked at the economics of using a folding wing aircraft (like the Navy uses). Ms. Kristi McKenney indicated that the Port was unaware of such an evaluation.

Ms. Carmen Fewless asked if the Port had considered a two-level RON aircraft parking facility. Port staff responded that no one has ever constructed such a facility before, except for very small general aviation aircraft inside a hangar.

A Committee member asked if the tugging distance between some of the potential remote RON aircraft parking areas and the terminal gates was too far. Port staff responded that it probably was not, but it would need to be looked at in light of potential terminal development in Area 1.

### New South Field Runways and Extensions

Mr. Doug Mansel passed out the Potential New South Field Runways graphic. For the purposes of the master plan, the Port is focusing exclusively on runways parallel to Runway 11-29. The City of Alameda, CLASS, and Port have already conducted an independent study and discarded crosswind runway alternatives (limited or no capacity or noise reduction benefits). By settlement agreement, the Port is precluded from constructing new runways or lengthening existing runways at North Field. Four potential outboard alternatives (south of existing Runway 11-29) and one potential inboard alternative (north of existing Runway 11-29) are being considered in the master plan. The planning considerations are:

#### Runway I1 (700 ft. Inboard of Runway 11-29):

- Provides an increase in runway capacity during visual meteorological conditions (VMC)
- Allows for paired, simultaneous departures if (1) divergent headings (15 degrees or more) are available and (2) the two departing aircraft do not need to turn in the same direction
- Allows one runway to be used for arriving aircraft and the other runway to be used for departing aircraft, eliminating the need to preserve gaps for disparate operations
- Moves aircraft arriving or departing Runway I1 closer to residential areas in San Leandro or Alameda (respectively, in West Plan)
- Minimizes aircraft queuing distance available between terminal area and Runway 29, further congesting the terminal area
- Requires demolition or relocation of the Ground Run-up Enclosure (GRE)
- Possible wake turbulence concerns (may limit simultaneous operations even in VMC)
- Slightly easier/less expensive construction over existing Taxiway W (formerly temporary Runway 12-30)
- Does not require Bay fill
- Impacts wetlands (over 100 acres)

#### Runway 01 (800 ft. Outboard of Runway 11-29)

- Operates similar to potential Runway I1, without impacting aircraft queuing
- Moves aircraft arriving or departing Runway 01 farther away from residential areas in San Leandro or Alameda (respectively, in West Plan)
- Impacts Bay waters (over 150 acres in total in impacted footprint)
- Impacts wetlands (over 80 acres)
- Expensive/difficult construction

Runway 02 (2,500 ft. Outboard of Runway 11-29)

- Allows independent (paired, simultaneous) operations (take-offs and landings) without wake turbulence concerns in VMC
- Allows for independent (simultaneous) arrivals to one runway and departures from the other runway in instrument meteorological conditions (IMC)
- Allows for staggered (not simultaneous), paired arrivals in IMC
- Provides a moderate to substantial increase in runway capacity in VMC and IMC conditions (and associated reduction in delay)
- May be able to use new GPS-based technologies to further improve runway capacity (e.g., allowing for paired, simultaneous arrivals)
- Moves aircraft arriving or departing Runway 02 farther away from residential areas in San Leandro or Alameda (respectively, in West Plan)
- Impacts Bay waters (over 550 acres in total impacted footprint)
- Impacts wetlands (over 4 acres for taxiway connections)
- Expensive/difficult construction

Runway 03 (3,400 ft. Outboard of Runway 11-29)

- Allows for independent (paired, simultaneous) operations in VMC and IMC with special radar equipment to monitor arriving and departing aircraft
- Provides a substantial increase in runway capacity in VMC and IMC conditions (and associated reduction in delay)
- Moves aircraft arriving or departing Runway 03 farther away from residential areas in San Leandro or Alameda (respectively, in West Plan)
- Impacts Bay waters (over 750 acres in total impacted footprint)
- Impacts wetlands (over 4 acres for taxiway connections)
- Expensive/difficult construction
- Possible airspace interaction issues with arrivals to San Francisco International Airport (SFO)

Runway 04 (4,300 ft. Outboard of Runway 11-29)

- Operates similar to Runway 03, without special radar equipment
- Impacts Bay waters (over 1,000 acres in total impacted footprint)
- Impacts wetlands (over 4 acres for taxiway connections)
- Expensive/difficult construction

Runway 11-29 Extension

- Extends Runway 11-29 by 1,600 feet for a total length of 11,600 feet, excluding runway safety areas
- Would require associated taxiway extensions
- May require the runway be shifted 500 feet farther west to provide a full runway safety area on approach to Runway 29 (not shown)
- Does not increase runway capacity
- Allows large air cargo aircraft to depart with heavier loads on longer flights (e.g., air cargo flights to Asia)
- Provides limited or no benefit to passenger airline operations
- Somewhat expensive/difficult construction

- Likely does not provide enough benefit compared to probable costs

The additional runway capacity at South Field would be required sometime between 2015 and 2025 (the 20-year, long-term planning horizon in the master plan). As was shown at the last Stakeholder Advisory Committee meeting, the 2010 (near-term) flight schedule (and associated additional aircraft gates) was able to be accommodated on existing Runway 11-29, with some modest increase in delay during the morning departures peak. Proposed taxiway improvements reduced this delay.

Mr. Red Wetherill asked if the five South Field runway alternatives were compliant with the limitations in the settlement agreements. Port staff indicated that they were.

Mr. Dennis Rosucci asked what percentage of runway capacity was presently being used. Mr. Doug Mansel responded that the analysis is not expressed as a percentage but in terms of delay. Ms. Kristi McKenney added that it was difficult to express runway capacity in terms of passengers, but clearer if expressed in terms of increased delay and projects that could reduce that delay. Mr. Rosucci asked how might the Committee answer this question, how much of the runway capacity is used up now and in 2010, for a larger community. Mr. Rosucci also asked if we really need to look at the long-term requirement, which shows these new runways at South Field parallel to existing Runway 11-29.

Ms. Kristi McKenney responded that per the settlement agreements with the communities, the Port is required to do a master plan that looks at long-term needs, but the Committee does not have to decide what will or should be constructed, especially so far out. Ms. McKenney said that Port staff will prepare a brief statement of simplified runway capacity and delay for the Committee's use in explaining these issues to the larger community.

Ms. Kathy Ornelas asked if the Committee could review the Airfield Planning Study. Mr. Mansel commented that these alternatives are straight from that report.

Mr. Francois Gallo (San Leandro Unified School District representative) added that it might be useful to review FAA Advisory Circular (AC) No. 150/5060-5, which discusses runway capacity and delay. Mr. Doug Mansel responded that the Port opted to use a more detailed simulation model instead of this AC's more simplified approach to runway capacity and delay. However, Port staff would use the AC to prepare the simplified runway capacity and delay analysis requested by the Committee (using Annual Service Volume methods outline in this AC).

A Committee member asked what would be the noise impact in relation to the aviation easements. Port staff responded that it would research this issue and respond to the Committee at an upcoming meeting.

Mr. Dennis Rosucci asked if new runway construction would result in new terminal construction. Ms. Kristi McKenney responded that it was inconceivable that new runways would be built without new terminals (beyond those shown for 2010 to 2012 timeframe).

Ms. Barbara Tuleja asked what type of construction would be used (e.g., floating runways) and what mitigations would be involved. Ms. Kristi McKenney replied that it would likely be traditional fill, although a lot of study was done on various construction methods when SFO was considering their runway reconfiguration program.

Ms. Barbara Tuleja asked if the Port could demand noise abatement, aside from the FAA.

Mr. Francois Gallo asked if possible airspace interaction with SFO could be reviewed. Port staff responded that most impacts were easily worked out (i.e., SFO and OAK have previously agreed not to impact each other's airspace), but that the Port would incorporate this into the planning considerations.

Mr. Red Wetherill found it questionable that SFO and OAK would respect each other's airspace.

Mr. Dennis Rosucci asked if there were any basis to the rumors that the FAA preferences SFO. Ms. Carole Wedl responded that 10 years ago, SFO had more morning flights than OAK, and that at that time, the FAA adjusted Air Traffic Control (ATC) coordination accordingly.

Mr. Francois Gallo indicated that there were different classes of airspace (e.g., Class B and Class C). Mr. Doug Mansel affirmed that these categories existed, but stated that they had no practical effect on the Airport's operations (e.g., no impact on passenger airlines, cargo aircraft, or corporate jets). The difference between Class B and Class C, for example, is that one requires pilots of small, single-engine aircraft (e.g., a Cessna) to establish communication with Air Traffic Control and receive an affirmative clearance to enter the airspace, while the other just required pilots to establish communication with Air Traffic Control.

Ms. Kristi McKenney stated that a major consideration in the design of the current master planning process was the lack of community involvement during the previous planning process. Subsequently, the Port is reviewing all practicable options and factoring in community input via the Committee.

Mr. Dennis Rosucci asked if it was possible to use Travis Air Force Base. Ms. Kristi McKenney responded that this would be a decision for regional entities (e.g., the Regional Airport Planning Committee) and encouraged the Committee to consider ways to meet the long-term capacity demands (or not) in our master plan discussions focused on OAK.

#### Runway Safety Areas

Mr. Doug Mansel passed out six Runway Safety Area (RSA) graphics and turned the discussion over to Mr. Howard Klein (URS Corporation, the Port's RSA consultant).

The first graphic (Create Standard RSAs) shows possible solutions that create standard RSAs by relocating roads, constructing an earth platform (on approach to Runway 29), filling wetlands, and stabilizing soils and improving drainage (at North Field). The limits of the RSA for each runway are shown with dashed red lines on all graphics.

The second graphic (Create Standard RSAs: Shift Runways) shows a solution that creates standard RSAs by shifting runways, displacing thresholds, and filling wetlands, as required.

The third graphic (Install Standard EMAS) shows standard EMAS installations, which, according to the FAA, provide an equivalent level of safety as full-length RSAs. Installation of standard EMAS would require filling wetlands (on approach to Runway 9R at North Field) and displacing the Runway 29 threshold, which would require the approach lighting system to be relocated.

The fourth graphic (Install Non-Standard EMAS) shows non-standard EMAS installations. These installations would likely be considered acceptable to the FAA, but do not meet standard EMAS

criteria because the EMAS would not stop the design aircraft leaving the end of the runway at 70 knots and/or the suggested 600 ft. installation cannot be provided. At North Field, the wetlands on approach to Runway 9R may not have to be impacted and at South Field, a displaced threshold would not be required (and therefore the approach lighting system would not need to be relocated).

The fifth graphic (Displaced Thresholds/Declared Distances) shows the distances required to displace thresholds to create standard RSAs. The table shows the effective take-off and landing lengths. In all cases, the runways would be effectively shortened, which could impact flight operations. Port staff and consultants are coordinating with relevant airline representatives (i.e., aircraft performance engineers) to determine and document potential impacts to the airlines. This documentation is important in order to determine if this potential solution is practicable.

The sixth graphic (Maximize Existing RSAs) shows possible solutions to improve, but not fully correct, sub-standard RSAs. The resulting sub-standard RSA length is shown.

These graphics illustrate families of potential solutions to correct or improve sub-standard RSAs at OAK. Any actual solution may be a combination of those presented on the various graphics. For example, the FAA might determine that it is practicable to shift Runway 15-33 along its centerline, while standard EMAS is most appropriate for the approach to Runway 27L/R, while a non-standard EMAS is the best solution in the approach in Runway 29.

Ms. Kathy Ornelas asked what options existed for extending the runways. Ms. Kristi McKenney responded that this would involve a NEPA and CEQA process and would depend on the proposed RSA solution.

A Committee member asked how feasible the cost of these options was. Mr. Howard Klein replied that the FAA estimates a maximum practicable cost (sliding scale) based several factors.

Mr. Red Wetherill asked what precautions were there in the event that a airplane landed short. Port staff responded that the FAA has to provide 600 feet from the beginning to the end of the bed and that this factor would be considered in the evaluations.

#### Wrap-up Items

##### Schedule Upcoming Meetings:

Thursday, April 21, 2005 (SUBJECT: Ground Access and Airline Support Issues)

Thursday, June 30, 2005 (SUBJECT: Financial and Environmental Issues)

Sign-in sheet

Web site

Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 8  
April 21, 2005

AGENDA

Welcome and introductions

Approval of meeting minutes from March 31, 2005 (approve at the June 30, 2005, meeting)

Follow-up items from previous meetings and questions/answers (open forum)

- Focus area for potential terminal development for 2010 to 2012
- Air cargo forecasts and potential air cargo development areas
- General aviation forecasts and potential development areas
- Airfield issues/solutions
- Master Plan briefing at the Aviation Committee meeting on Monday, April 25, 2005
- Airfield simulation field trip on Monday, May 2, 2005 (Mansel, Needle, Rosucci, and Gallo)
- Airport finances briefing paper
- Other questions, answers, and discussion

Airline Support Facility Issues

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Section 3, Development Assessment)
- Belly cargo
- Provisioning/catering
- Fuel load rack
- Ground Service Equipment (GSE) maintenance
- GSE storage/parking
- Ground Runup Enclosure (GRE)
- Airport Rescue and Firefighting (ARFF)
- Triturator(s)
- Fuel storage

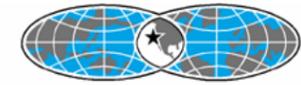
Ground Access Issues

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Section 3, Development Assessment)
- Parking
- Access/roadways
- BART Connector
- Cargo ferry

Wrap-up items

- Next meeting on environmental and financial issues/constraints (June 30, 2005)
- Sign-in sheet
- Web site
- Transportation (parking and AirBART)

Questions / comments



PORT OF OAKLAND

MINUTES  
Meeting 8

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, April 21, 2005

This meeting was the eighth in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

**Attendees:** See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

**Handouts:**

- Agenda
- Demand to Annual Service Volume (ASV) Comparison, Runway 11-29, Master Plan 2010 Operations Forecasts (April 2005)
- Potential Airline Support Facility Development Areas
- Potential Ground Access Development Areas

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the previous meeting, agenda, and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

**Agenda Item:**

Approval of meeting minutes from March 31, 2005 (approve at the June 30, 2005, meeting)

Follow-up items from the last meeting and open forum

Mr. Doug Mansel invited comments about airline passengers forecasts, potential terminal development concepts, air cargo forecasts, general aviation (GA) forecasts, and airfield issues/potential solutions and passed out the Demand to Annual Service Volume (ASV) Comparison, Runway 11-29, Master Plan 2010 Operations Forecasts, which the Port generated in response to Mr. Dennis Rosucci's (City of San Leandro community representative) request for a simplified runway demand to capacity analysis at the last meeting. Using the Federal Aviation Administration's (FAA's) Annual Service Volume (ASV) methodology, an airport's demand to ASV (capacity) ratio is determined at by dividing annual aircraft operations (demand) by the figure in FAA AC 1150/5060-5 (Airport Capacity and Delay, Chapter 2, Figure 2-1, using the airport's runway configuration and fleet mix. Based on this analysis, Runway 11-29 is currently running at about 80% of capacity. Based on the 2010 master plan operations forecasts, which include airline passengers, air cargo operations at South Field, and corporate jets departing South Field, Runway 11-29 will be running at about 98% of capacity in 2010. This simplified methodology estimates 3 minutes of delay per aircraft, which may be true on average throughout the day, but based on the Simmod PRO! simulation model, the delay during the morning departure peak is significantly greater. Because the FAA ASV analysis is based on a 13 to 18 hour day, some nighttime air cargo operations were removed from the demand before dividing by the ASV to produce a fair comparison. Although this

analysis is too simplified to justify a new runway or detailed planning, it should be useful for discussing runway capacity with the public and will be posted to the master plan web site.

Mr. Dennis Rosucci suggested including a caveat that this is a broad-based analysis (not specific enough to be used in planning a runway) before posting it to the site to avoid confusion. Mr. Doug Mansel responded that he would add additional language to the disclaimer and bold it. Ms. Kristi McKenney, Aviation Planning Manager, added that the FAA ASV analysis includes many assumptions which make it unsuitable for actual planning (e.g., a 13 to 18 hour day) and that given the actual numbers likely in 2010, runway capacity at OAK is likely to be closer to 80%. Many airports operate above 100% of this calculation, which means increased delay. The question for each airport becomes what amount of delay is tolerable.

Ms. Carmen Fewless (City of San Leandro community representative) requested that Port staff make it clear that this is not a decision-making document. Port staff agreed to make this explicit.

A committee member asked why the ASV analysis does not include North Field. Mr. Doug Mansel responded that North Field was excluded from the analysis because it has plenty of runway capacity throughout the master plan period (given the general aviation operations forecasts).

Port staff will brief the Aviation Committee of the Board of Port Commissioners on airfield work (potential taxiway improvements, potential South Field runways, etc.) on April 25, 2005. Any interested Committee members are invited to attend. Port staff will produce an airport finances briefing paper on or before the June 30, 2005, meeting and will notify the Committee when it is available on the web site. The next meeting will be focused on financial and environmental issues and constraints.

Mr. Doug Mansel invited any interested Committee members to attend the field trip to ATAC's offices in Sunnyvale (scheduled May 2, 2005) where the airfield simulation will be looked at in more detail.

#### Airline Support Facilities

Mr. Doug Mansel introduced the discussion on airline support facilities by referring the Committee to the FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Section 3, Development Assessment). In this AC, the FAA does not provide abundant information on the study of airline support facilities, but some of the principles in Chapter 6 can be useful. Mr. Doug Mansel passed out the Potential Airline Support Facility Development Areas graphic. Each airline support facility is indicated by the type of access required: (1) airside/landside, (2) airside only, and (3) landside only. Planning considerations provide background information on each facility (Belly Cargo, Provisioning/Catering, Fuel Load Rack, Ground Service Equipment (GSE) Maintenance, GSE Storage/Parking, Ground Runup Enclosure, (GRE), Airport Rescue and Firefighting (ARFF), Triturator, and Fuel Storage).

#### Belly Cargo

A belly cargo facility is a building where the public can pick-up and drop-off cargo (small boxes, packages, etc.) that are transferred to the belly of passenger aircraft. These facilities must have landside access and should be located as close to the terminal as possible. The grid shows possible locations for a belly cargo facility. Area 1 (the terminal area) is optimal, but already overcommitted; Areas 2 and 3 lack the necessary landside access; and Areas 4 through 7 might work. The remaining areas are generally not suitable.

Ms. Barbara Tuleja (CLASS community representative) asked if Area 4 was an option and if there were wetlands there. Ms. Kristi McKenney directed the Committee to the grid chart which indicates

the potential areas available for each facility and affirmed that Area 4 is a possible option. Portions of Area 4 have wetlands, but not the entire area.

#### Provisioning/Catering

Provisioning and catering facilities provide a building for the storage and preparation of in-flight consumables. OAK currently has a catering building depicted in Area 6 on the graphic, which provides catering for all major airlines, except JetBlue and Southwest, which have their own provisioning facilities in the cargo building and in a separate building near Taxiway B (just south of Taxiway B1), respectively. Ideally, these buildings would have airside and landside access. The landside access allows for delivery of consumables, and the airside access is used for loading smaller trucks that take the consumables to individual aircraft. If there is no area that straddles both, the facility can be located on one side or the other. OAK's existing catering facility only has landside access. If the facility is located on the airside, landside deliveries would have to drive through the airfield security gates (past the Alameda County Sheriff's security checkpoint).

Mr. Dennis Rosucci asked if the catering facility could be expanded on the existing site. Mr. Doug Mansel indicated this was a possible solution depending on terminal development (i.e., it might be more desirable to change the roadway exit in front of the terminal or to put a potential new terminal concept in that area). The catering building could be located anywhere, except Areas 2 and 3 which are too close to the airfield, including Area 12 and off-Airport (in Oakland, San Leandro, or Alameda). The Port has retained control of approximately four acres in the Metropolitan Golf Links area bordering Eden Road, which could also be used (Area 12).

Mr. Red Wetherill (City of Alameda community representative) asked if it would be easy to get a separate (restricted or non-public access roadway) from Areas 6 and 7 to the airfield. Mr. Doug Mansel indicated that this was possible and that another option would be a restricted roadway parallel to the dike going to Terminal 2.

Ms. Barbara Tuleja asked if catering facilities were typically located on-site. Ms. Kristi McKenney replied that most are, but it is not required.

#### Fuel Load Rack

The fuel load rack provides fuel to airfield vehicles (e.g., belt loaders, push back tugs, and bag cart tugs) that cannot refuel at other fueling stations, and is also the location where jet fuel can be loaded into airfield tankers and driven to individual aircraft (this does not happen very often at OAK, because all of the gates and many aircraft parking positions are provided fuel via an underground pipeline and hydrant system). Areas 1 through 5 are optimal for this function.

Mr. Dennis Rosucci asked if there were any federal restrictions as to where the fuel load rack could be located. Ms. Kristi McKenney responded that there are some guidelines, which the Port is following, but that FAA guidelines are more concerned with the location of fuel storage (vs. dispensing).

Ms. Kathy Ornelas (City of San Leandro staff representative) asked if Area 4 encroached upon wetlands. Ms. Kristi McKenney responded that the impact on wetlands and the remoteness of the site make it operationally unattractive. The grid depicts where a facility can be located theoretically, but that some areas are less attractive than others.

Mr. Dennis Rosucci asked if the fuel was stored in the fuel load rack area or Area 7. Mr. Larry Berlin replied that there are two tanks for fuel for GSE located in the fuel load rack area and that Area 7 is currently being used to store jet fuel that is distributed underground, but that for future planning, the Airport should have an above-ground airfield gasoline and diesel storage facility for GSE.

#### Ground Service Equipment (GSE) maintenance

Mr. Doug Mansel stated that OAK currently does not have a GSE maintenance facility (e.g., a bay or bays which could be rented for the servicing of GSE), and that this is an important facility to be factored into the master planning process. OAK has received requests from airlines for such a facility. A GSE maintenance facility should be located adjacent to the airfield so that GSE does not have to travel on public roadways to get to the facility. All areas, except Areas 3, 10, and 12, would be suitable for such a facility.

#### Ground Service Equipment (GSE) storage/parking

GSE requires airside storage area and parking, preferably concentrated around the terminal area. This ramp area storage could be accommodated in Areas 1, 2, 3, and 5.

#### Ground Runup Enclosure (GRE)

The GRE provides a sound-deadening enclosure for airlines and is currently in a suitable location unless/until something needs to replace it. However, there is one technicality that should be considered. During the last overlay of Runway 11-29, Taxiway W was converted into a temporary runway (mostly for departures), the majority of aircraft landed in North Field, taxied southbound on Taxiway B to the terminal and then departed Taxiway W. Some cargo airlines landed on Taxiway W. In the future, with the existing GRE, it might be difficult to convert Taxiway W to a temporary runway. Therefore, the Port recommends factoring this into the planning considerations. Areas 4, 5, 8 and 9 are possible locations for future GRE. Presently the GRE is used approximately 40 times per month.

Mr. Dennis Rosucci asked who uses the GRE now. Port staff responded that KaiserAir does (United Airlines and Alaska Airlines used to) and that the overall amount of usage has dropped.

Ms. Barbara Tuleja commented that she had heard complaints about engine runups. Port staff and Ms. Kathy Ornelas responded that what was probably heard was consistent with departures off Runway 29.

#### Airport Rescue and Firefighting (ARFF)

The current ARFF facility is in a strategically located position. The FAA requires that the first ARFF truck must be able to arrive on scene within three minutes (i.e., they must be to the midpoint of the farthest air carrier runway) in the event of an incident. For planning considerations, any potential runways built into the San Francisco Bay must be able to comply with these FAA requirements (i.e., they must be close enough for ARFF trucks to reach any incident on the airfield within three minutes – and if not, a substation would have to be built to comply with this requirement). The graphic grid depicts Areas 2 and 3 as potential fire station locations. The ARFF must respond to all emergencies, but their main concern is aircraft fires (not medical issues inside the terminal or, in general, structural fires). If the ARFF responds to an alternative emergency, they must have backup at the station to serve any potential aircraft incident.

#### Triturator

The existing triturator is located in Building M-104 (the operations center). The triturator provides a location to unload aircraft lavatory waste and should be located in the terminal area (Area 1).

#### Fuel Storage

Located in Area 7, fuel storage provides a location to store fuel (e.g., jet fuel, 100LL (low lead), and/or gasoline) in tanks. Distribution of fuel to aircraft can occur via pipelines and hydrants, fuel trucks, or drive-up/self-fuel locations (for small general aviation airplanes). Other fuel storage locations include: the fuel load rack (two tanks of gasoline and diesel fuel), North Field (at two fixed base operators (KaiserAir and Business Jet Center). From a security perspective, this facility should not be in a highly public location and should utilize hydrant distribution (to minimize fuel truck traffic on the airfield). As a sidebar, the Kinder Morgan incident in Walnut Creek did not affect fuel distribution to OAK; however, their fuel leak near Jack London Square did. In the event of a disruption in fuel delivery by pipeline, the Airport can receive some fuel via tanker trucks and the airlines can purchase fuel at other airports.

#### Ground Access

Mr. Hugh Johnson introduced the discussion on ground access by referring the Committee to the Potential Ground Access Development Areas graphic and the FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 6, Requirements Analysis and Concepts Development (Section 3, Development Assessment). In this AC, the FAA does not provide abundant information on the study of ground access; however, the Port has significantly developed ground access to the terminal area and will use the proceeding criteria and goals in the development of any future sites. One primary concern in ground access planning is providing the shortest distance from the activity centers at the terminals to the parking sites (and transport between the two).

#### Parking Areas

Mr. Hugh Johnson reviewed the planning considerations for potential Airport parking areas (Areas 1 through 9). In this graphic (unlike earlier ones), the future terminal loop roadway is more accurately depicted. This gives a good sense of how Area 1 will expand after the roadway and curbside construction is complete.

Areas 2 and 3 would be accessed from Airport Drive. Areas 4 and 5 would be accessed from a new inbound Airport Drive "off-ramp" via the Ron Cowan Parkway bridge underpass. Currently, main public access to the Airport is via the Hegenberger Road and 98<sup>th</sup> Avenue corridors. Separation of access for public and non-public usage is an important planning consideration. It is desirable to pull non-airline passenger traffic from the main inbound roadway and disperse it to a non-public use roadway.

Area 6 could be accessed off Ron Cowan Parkway or Air Cargo Way, and Area 7 could be accessed off Ron Cowan Parkway. Development of an access route within Area 11 would provide a possible terminal area connection to Area 9.

#### Access/Roadways (Only)

Mr. Hugh Johnson explained that the current roadway system (which will be under construction in the loop area in the near future) is expected to serve primary access needs to the Airport until 2010 (and possibly beyond it); however, as the Airport expands, it may become necessary to consider other access options for either egress from the Airport or expanding the loop roadway and parking bowl in Area 1. Area 10 ties the existing outbound roadway into the outbound roadway at the perimeter of the golf course (over viaduct or through fill). Area 10 roadway would allow for expansion of the loop roadway system and parking bowl, but would take wetlands. Area 11 would provide a new connection to Doolittle Dr., and could be for public or non-public access.

Mr. Dennis Rosucci indicated that Area 10 was an attractive option, but strongly recommended Area 11 not be considered. The Committee members unanimously agreed that Area 11 was an undesirable option.

Mr. Dennis Rosucci asked what the reasoning was behind the Area 11 concept. Ms. Kristi McKenney responded that Area 11 is based on potential improvements to Eden Road and could provide long-term subsidiary access. While it might not be suitable for public access, it could be useful non-public access (or construction access).

A Committee member commented that this seems to encourage use of Davis Street access, and given the present level of congestion, that any increase in traffic (public or non-public) would not be desirable.

Ms. Kathy Ornelas commented that for strictly non-public access this option seems extremely expensive.

#### BART Connector

Mr. Hugh Johnson presented the following BART Connector planning considerations:

- Constrained access corridor between outbound lanes of Airport Drive and the golf course
- At-grade alignment preferred (where possible) to minimize cost of guideway
- Airport station should serve existing and potential future terminal, and allow for potential new garage and other on-Airport facility development

A Committee member asked the purpose of the jug handle roadway. Mr. Doug Mansel responded that it was originally designed to provide an efficient route from the United Airlines Oakland Maintenance Center exit on Ron Cowan Parkway towards the City of Alameda.

Mr. Dennis Rosucci asked what the estimated time of completion was for the BART Connector. Mr. Hugh Johnson responded that the date is uncertain and depends on when the project starts, which depends on funding. In the meantime, the Port is examining all available options for and incorporating the Connector into the Port's planning. BART projects this will be a 5-year project. The development of the Airport station will be planned and designed to tie into terminal facilities built on the Airport, as will a potential garage.

Mr. Dennis Rosucci asked if the project was a joint (BART/Port) project. Ms. Kristi McKenney responded that it is (the Port is providing significant funding and is involved in acquiring funding), but that BART is the contracting agent, will be constructing it, and will be operating it.

#### Cargo Ferry Access

Mr. Hugh Johnson and Mr. Ray Keiser (Port Cargo Consultant) discussed the planning considerations for two potential cargo ferry areas (Areas 12 and 13). Mr. Ray Keiser recalled that about six years ago, FedEx commissioned a team to investigate the potential for cargo ferry service at OAK using hovercraft. FedEx had previously considered such an option for transit from JFK International Airport to Wall Street. FedEx, UPS, Airborne Express and DHL were very interested but unable to agree on the location of the facility and configuration of the inside of the hovercraft. Alaska Airlines and United Airlines were also interested in using the service to transport parts for their maintenance centers at OAK, but those have since closed. After further study, it became evident that the environmental impacts would also be substantial and may be cost prohibitive. Consequently, no action has been/or is being taken on this project at this time.

#### Wrap-up Items

##### Schedule Upcoming Meeting:

Thursday, June 30, 2005 (SUBJECT: Environmental/Financial Issues/Constraints)

Sign-in sheet

Web site

Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 9  
June 30, 2005

AGENDA

Welcome and introductions

Approval of meeting minutes from March 31, 2005 and April 21, 2005

Follow-up items from previous meetings and questions/answers (open forum)

- Focus area for potential terminal development for 2010 to 2012
- Air cargo forecasts and potential air cargo development areas
- General aviation forecasts and potential development areas
- Airfield issues/solutions
- Airfield simulation field trip on Monday, May 2, 2005 (Mansel, Needle, Rosucci, and Gallo)
- Draft version of FAA Advisory Circular (AC) No. 150/5070-6B (Airport Master Plans) available for review and comment (available at <http://www.faa.gov/arp/publications/acs/draftacs.cfm>)
- Other questions, answers, and discussion

Environmental Issues

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 8 (Environmental Procedures and Analysis)
- Environmental review (CEQA/NEPA) on projects or groups of related projects as proposed; no environmental review of master plan (per settlement agreements, the master plan is a planning study exempt from CEQA/NEPA)
- Aircraft Noise
  - Introduction, Background, Existing Noise Abatement Procedures, and Existing Mitigation Measures
  - CNEL (2004 vs. 2010 master plan forecasts)
  - Single Event (2004 vs. 2010 master plan forecast)
- Other Environmental Issues and Existing Mitigation Measures
- Preliminary Environmental Screening Matrix
  - Potential Terminal Development Areas (Areas 1 – 3)
  - Potential Air Cargo Development Areas (Areas 1 – 4)
  - Potential General Aviation Development Areas (Areas 1 – 4)

- Potential Airfield Development (Runway 29 Access Improvements and New High-Speed Exit Taxiway)
- Potential Remain Overnight Aircraft Parking Areas (Areas 1 – 5)
- Potential Airline Support Facility Development Areas (Areas 1 – 12)
- Potential Parking and Ground Access Areas (Areas 1 – 11)
- Potential Environmental Projects

Financial Issues

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 10 (Plan Implementation), Section 3 (Financial Plan)
- Overview of Airport Finances
- Possible Funding Sources Matrix (Sample Projects)
  - Terminal (Area 2)
  - Taxiway Improvements (Runway 29 Access Improvements and New High-Speed Exit Taxiway)
  - Relocation of Air Cargo Building
  - Ground Service Equipment (GSE) Maintenance Facility
  - General Aviation Development
- Financial Plan (Sample Projects)
  - Terminal (Area 2)
  - Taxiway Improvements (Runway 29 Access Improvements and New High-Speed Exit Taxiway)
  - New South Field Runway (south of existing Runway 11-29)

Wrap-up items

- Next meeting on airport land use map (August 2005)
- Sign-in sheet
- Web site
- Transportation (parking and AirBART)

Questions / comments



MINUTES  
Meeting 9

Aviation Stakeholder Advisory Committee  
Oakland International Airport  
Thursday, June 30, 2005

This meeting was the ninth in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

Handouts:

- Agenda
- "Protecting the Bay Area's Aviation Resources – The Land Use Connection" (Regional Airport Planning Committee)
- Aircraft Noise graphics (9 pages)
- Aircraft Noise Management Program
- Alameda Quarterly Report Compliance Summary
- North Field Noise Management Program pilot brochure
- Other Environmental Programs graphics (2 pages)
- Master Plan Preliminary Environmental Screening Matrix
- Overview of Airport Finances
- Potential Funding Sources Matrix – Sample Master Plan Projects
- Master Plan Preliminary Financial Plan – 100% Bonding of PFC Revenues

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the two previous meetings, agenda, and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

Agenda Item:

**Approval of meeting minutes from March 31, 2005 and April 21, 2005**

Mr. David Needle (Dave, City of Alameda community representative) requested that the March 31, 2005 minutes be amended to indicate he represents the City of Alameda.

**Follow-up items from the last meeting and open forum**

Mr. Doug Mansel invited comments about airfield issues/solutions, potential terminal development concepts, air cargo forecasts, and general aviation (GA) forecasts and passed out a brochure entitled

“Protecting the Bay Area’s Aviation Resources – The Land Use Connection” prepared by the Regional Airport Planning Committee (RAPC).

Dave expressed appreciation for the competency of the ATAC team and a level of comfort with ATAC simulation methods and model (Simmod PRO!). Dennis Rosucci (City of San Leandro community representative) and Mr. François Gallo (San Leandro Unified School District community representative) concurred.

Mr. Doug Mansel indicated that the FAA is updating Advisory Circular (AC) No. 150/5070-6A on Airport Master Plans, and is renaming it AC No. 150/5070-6B (the draft version of the update is available at [www.faa.gov/arp/publications/acs/draftacs.cfm](http://www.faa.gov/arp/publications/acs/draftacs.cfm)). Mr. Doug Mansel encouraged Committee members to download the updated AC and make any comments to the FAA. The Port has already submitted its comments through Airports Council International-North America (ACI-NA).

A Committee member asked if there was a deadline to submit comments on the AC. Mr. Doug Mansel replied that the deadline may have passed, but encouraged Committee members to provide any comments, as federal deadlines are often extended and the FAA may still consider the comments.

A Committee member asked if the Committee should adopt FAA AC No. 150/5070-6B for this effort. Mr. Doug Mansel replied that per the settlement agreements, the Port will continue to follow FAA AC No. 150/5070-6A, but that in assessing and commenting on the draft version of 6B, the process that we are following for this master plan closely mirrors what is recommended in 6B. In fact, the public outreach process described in 6B is essentially the Stakeholder Advisory Committee process that we have established here. It is also unclear whether the FAA will officially adopt 6B prior to the completion of this master plan.

In reference to the RAPC brochure, Mr. Dennis Rosucci asked where the statistics listed on page two originated. Ms. Kristi McKenney, Aviation Planning Manager, responded that the references can be found on the RAPC website ([www.mtc.ca.gov](http://www.mtc.ca.gov)) and was probably generated from a study done by the Bay Area Economic Forum on the three Bay Area airports a few years ago. Each airport and their counties typically compile this data.

#### Environmental Issues

Mr. Doug Mansel introduced the discussion on environmental issues by referring the Committee to the FAA AC No. 150/5070-6A, Airport Master Plans, Chapter 8 (Environmental Procedures and Analysis), which provides planning guidance and discusses environmental screening for master plans.

The Port recognizes the importance of including environmental planning at the earliest stages of physical planning. Because the master plan is a high-level land-use planning study, it will contain commensurate environmental screening-level analyses. Detailed environmental review in accordance with the California Environmental Quality Act (CEQA) and/or the National Environmental Policy Act (NEPA, for Federal actions) on projects or groups of related master plan projects will commence as projects are proposed and become more defined. The Board of Port Commissioners will adopt the master plan, but that action will not approve, fund, construct, etc. any of the projects studied in the master plan. In accordance with settlement agreements, the master plan is a planning and feasibility study that is exempt from CEQA.

Mr. Dennis Rosucci asked if Mr. Doug Mansel was referring to the Berkeley and Alameda settlement agreements, as he was not aware of such an agreement with the City of San Leandro. Ms. Kristi McKenney recalled that there was no discussion of the master plan in the first settlement agreement with San Leandro, but that there was an amendment for San Leandro to be included in

the master plan process and bound by the same terms as the Berkeley and Alameda settlement agreements.

Mr. François Gallo indicated that his read of the AC suggested that the Port was not exempt from NEPA requirements and asked for a reference in the AC that would clarify this. Mr. Doug Mansel responded that the Port had agendized discussing environmental issues today and that it was possible to do environmental planning at the master plan (screening) level without doing a CEQA/NEPA document. Mr. Danny Wan (Port Attorney’s Office) added that if FAA approval of a new Airport Layout Plan (ALP) was sought, a NEPA process would be required, but that the Port does not intend to seek FAA approval of a new ALP as this time and that the master plan is strictly a planning instrument and does not require this. As with CEQA, as projects or groups of related projects become more defined and a federal action is requested (e.g., approving an ALP), environmental review under NEPA will be undertaken.

#### Aircraft Noise

The Aircraft Noise graphics (9 pages) were passed out and Mr. Vince Mestre (Port Acoustical Engineer Consultant) introduced the topic by providing background information on aircraft noise, Federal Aviation Administration Part 150 Noise and Land Use Guidelines, the Airport Noise And Capacity Act (and its limitations), existing aircraft noise abatement procedures, public outreach, and mitigations. Mr. Vince Mestre then described contours for single-event aircraft noise, including the number of departures and arrivals by time period (day, evening, and night) for existing conditions and anticipated 2010 master plan operations forecasts. Mr. Mestre also described Community Noise Equivalent Level (CNEL) contours for existing conditions and anticipated 2010 master plan operations forecasts. CNEL contours are a time-weighted cumulative noise metric.

#### Sound and Noise

Sound is defined in terms of loudness (amplitude) and frequency (pitch). Noise is commonly defined as unwanted sound, which is subjective and objective. Sound pressure or amplitude is measured in decibels (db). The range of sound pressures (loudness) that occur in the environment is so large that it is convenient to measure them on a logarithmic scale.

The normal hearing range of adolescents is between 20 and 20,000 hertz (pitch) and drops to 16,000 as we grow older. Community noise typically ranges from 50 to 50,000 hertz. Transportation noise tends to be between 500 and 1000 hertz. Jet aircraft are being designed to be quieter by 1) slowing down the velocity of air coming out of the engine, 2) reducing the turbo machinery noise, and 3) cleaning up aircraft to reduce aerodynamic noise (e.g., Boeing’s wind tunnel studies have shown that cleaning up the undercarriage would result in a reduction of 5db in approach noise).

In a normal atmosphere (where temperature decreases with altitude), sound decreases with distance. In a temperature inversion, sound increases. Fog by itself has no significant affect on the propagation of sound, but it does tend to influence transportation (e.g., automobile) velocity, which when reduced dramatically reduces the amount of ambient noise levels, which can cause other noises to become more pronounced. Mr. Vince Mestre directed the Committee to the graphic depicting three rows of houses to illustrate the concept of shielding. In the graph, the first row of houses shields the second and the second the third. However, the houses are facing water, and because sound propagates more over water than it does over land, sound or noise increases for structures near water (e.g., residents near the San Leandro Marina). The other factor to consider are structures built on hillsides: with line of sight, no shielding occurs.

Single-event noise is expressed in terms of the Sound Exposure Level (SEL), which incorporates both duration and maximum sound level. The SEL of typical aircraft would about 100 db, which is about

10 db greater than the maximum sound level that would actually be measured in the field because of the duration of the event. The term Single Event Noise Exposure Level (SENEL), which the state of California uses, and SEL are interchangeable. The national Environmental Protection Agency (EPA) proposed the equal energy hypothesis which posits that noises that have equal amounts of energy have the same potential to cause harm to people. This theory makes measuring acoustic energy very important in assessing noise impacts, which equivalent noise level does. Community Noise Equivalent Level (CNEL) is the amount of acoustic energy over a 24-hour period, accounting for the loudness of the aircraft, the frequency, and the time of day. In computing CNEL, one aircraft operation during the day is treated as one operation; one operation during the evening (7 to 10 PM) is treated as if it were 3 operations; and one operation during the night (10 PM to 7 AM) is treated as if it were 10 operations. Logarithmically, these multipliers are the equivalent to adding 10 db to the noise level of each night operation and about 5 db to the noise level of each evening operation. The FAA and EPA use Day-Night Average Sound Level, or DNL, which is similar to CNEL, except that it does not "penalize" aircraft during the evening hours.

For urban residential areas away from major sources of noise, ambient noise levels are somewhere between 55 and 60 CNEL (and usually come from local motor vehicle traffic), this decreases as you move into rural areas. Primary factors (loudness, frequency, and duration of sound), secondary (spectral complexity), and psychological factors define how people are annoyed by noise. In the 1930s, Theodore Schultz studied people's reported noise annoyance level to their noise exposure; this became the Schultz curve. The Shultz curve (as modified and updated over the years) breaks at about 65 CNEL. The FAA's standard for excessive noise annoyance is 65 CNEL.

There have been several studies of sleep pattern response to noise. During Sandy Fidel's study in Los Angeles, people generally reported their sleep being disturbed only by an aircraft flyover that turned out to be an aircraft flying in an unusual direction (i.e., the aircraft noise was coming from an unexpected location). "Regular" aircraft noise (at the same loudness) did not seem to disturb people sleeping as much. The theory is that our subconscious alerts us to unusual events, even while we are sleeping, and we are habituated to sleeping under "normal" noise exposure.

In 1990, Congress passed the Airport Noise and Capacity Act (ANCA) in an attempt to balance aviation industry needs against community needs. Louder Stage II aircraft greater than 75,000 lbs. are not permitted after 2000 (unless they are equipped with hushkits). In exchange, airport access restrictions are not permitted without a Part 161 study, except for those airports that had restrictions prior to 1990. John Wayne Airport (Orange County), Torrance Municipal Airport, and Santa Monica Airport have rules prohibiting Stage II aircraft. For corporate jets (less than 75,000 lbs.), there are more Stage I and II aircraft on the east coast than the west coast. A Part 161 study would not yield any relief at Oakland because the required cost-benefit analysis only considers impacts inside of the 65 CNEL contour. Largely due to the exceptions for aircraft less than 75,000 lbs. and hushkits, a legislative change would be required to achieve the balance sought in 1990.

#### Aircraft Noise Management Program

Mr. Vince Mestre introduced the discussion on the Airport's Aircraft Noise Management Program and passed out the Aircraft Noise Management Program handout. Noise management measures consist of aircraft engine run-up restrictions, ground run-up enclosure (GRE), runway signage for noise abatement, and the aircraft noise monitoring system. The Port provides detailed quarterly reports on compliance with aircraft noise abatement procedures (e.g., Quiet Hours Program, VFR aircraft departures, noise aircraft levels, and North Field turbojet restrictions); these reports are provided to the Cities of Alameda and San Leandro, CLASS, and KJOB, and are available on the Airport's website. The Port also provides California airport noise regulations reports quarterly which are available on the Airport's website.

The general policy of the North Field Program dictates that aircraft avoid flying over nearby residential areas when arriving or departing the Airport. Day and night procedures restrict certain aircraft from departing Runways 27R/L or landing on Runways 9R/L, except during emergencies, and dictate that helicopters avoid flying over hotels and residential areas. Local helicopter flight training patterns (e.g., touch-and-go operations) generally occur within the Airport boundaries or the commercial/industrial periphery of the Airport. Some aircraft flight training activities (e.g., instrument operations or instrument training flights, even in good weather) require straight out departures from North Field over Alameda.

#### Community Outreach and Public Participation

Community outreach and public participation consists of the Oakland Airport-Community Noise Management Forum (including its North Field and South Field Research Groups), Board of Port Commissioners Aviation Committee meetings; a pilot brochure (North Field Noise Management Program); and noise management program website (including flight replay program).

#### Community Land Use Measures

Community Land Use Measures include: noise and aviation easements (cities of Alameda and San Leandro); development limits, zoning/land use controls; City of San Leandro general plan; and City of Alameda general plan.

#### Noise Reduction Programs, Studies and Other Commitments

Noise reduction programs, studies and other commitments include: residential sound insulation program (SIP) – Cities of Alameda and San Leandro; school sound insulation program – City of San Leandro; San Leandro sound studies; crosswind runway alignment study; airport tenant orientation program; general aviation VFR aircraft study; preferential runway use agreement for San Leandro; no new runway construction or expansion on North Field; on-going noise abatement work with the FAA; the 20-year master plan; Runway 11/29 length agreement; meet and confer agreement; USPS facilities agreement; and additional noise monitors agreement.

Mr. Red Wetherill (City of Alameda community representative) asked if there were any studies of low frequency annoyance. Mr. Vince Mestre responded that Penn State had done a low frequency study.

#### Noise Contours

There were eight daily Boeing 727 departures in 2004, four during the night (from 10 PM to 7 AM). The Port predicts there will be three total and two during the night in 2010. This decline is a result of the need to phase out the smaller (and noisier) Boeing 727 and phase larger aircraft to accommodate the projected increase in cargo weight (0.7 million annual tons now, going to 0.9 million annual tons in 2010) and rising fuel prices, which are driving airlines to retire less fuel efficient aircraft, like the Boeing 727.

Mr. Dennis Rosucci asked if there was a way to determine the ratio between aircraft operations and noise contours and how much the noise contours will change as older aircraft are replaced by newer aircraft. Ms. Kristi McKenney replied that it is difficult to predict if and when future noise contours (beyond 2010) will exceed the 2010 noise contours, given the uncertainty of future fleet mix and improvements in engine technology and development. Mr. Vince Mestre added that a sensitivity study could be conducted, but that new "greener" aircraft (e.g., the Boeing 787) will be much quieter and therefore will likely not overtake current or future 2010 noise contour levels.

Mr. Dennis Rosucci commented that the CNEL does not appear to adequately capture the problem San Leandro residents are having on Neptune Drive between 12 AM and 6 AM. Ms. Kristi McKenney concurred and indicated that the Port has prepared other metrics, such as Single Event Noise Contours, which taken together with CNEL may address this problem more adequately.

Ms. Carmen Fewless asked if there would be an opportunity for the community to request that any increases in cargo aircraft operations occur during the day. Ms. Kristi McKenney responded that the Port or surrounding cities could make this request, but that the Port has no control over private airline operations. For example, the Port has a standing request with FedEx to reduce the number of nighttime Boeing 727 operations, but FedEx has declined to commit to a phase-out date.

Ms. Kathy Ornelas (City of San Leandro staff representative) commented that she had never heard the term "green aircraft" before and asked when they would be available. Mr. Vince Mestre responded that "green aircraft" are deemed the next generation of aircraft by the American Institute of Aeronautics and Astronautics and represent a standard the aviation industry (mostly in Europe) is striving for. They are being designed to reduce greenhouse gas emissions, toxic pollutants, and reduce noise and will not be available until sometime beyond 2010.

#### Other Environmental Programs

Ms. Renee Dowlin, Airport Environmental Planner, passed out the Other Environmental Programs graphic and reviewed the programs depicted therein, which consist of air quality programs; wetlands management program; water quality program; burrowing owl mitigation program; recycling programs; Terminal 2 extension – Leadership in Energy and Environmental Design (LEED) Certified, and public access. In August, the Port will host the aircraft emissions study with the FAA's center of excellence, NASA, EPA, CARB, and a local university in which three Southwest Airlines aircraft engines will be tested to determine the quality of aircraft engine emissions. The Airport website is being updated to provide basic information on the various airport environmental programs.

#### Master Plan Environmental Screening

Mr. Doug Mansel passed out the Master Plan Preliminary Environmental Screening Matrix which is broken into two parts (1) site planning considerations for all potential development areas and (2) operational planning considerations (irrespective of potential facility development). The table shows potential environmental benefits and constraints by comparing existing conditions to future proposed development area conditions. In general, encroachment on wetlands and wildlife (e.g., burrowing owl areas) would be deemed a potential environmental constraint. In general, existing "built up" areas might have soil contamination issues (i.e., hazardous materials). In general, any new potential development area that requires new paving would be deemed a potential environmental constraint from a hydrology and water quality perspective. Finally, North Field has some historic areas, so there might be an environmental constraint from an aesthetics perspective for potential development areas at North Field. Mr. Doug Mansel indicated that the master plan documentation will explain the table and comparisons in more detail and encouraged the Committee to review and challenge any of the assessments in the matrix.

The Master Plan Preliminary Environmental Matrix shows Aircraft Noise broken down by (1) CNEL and (2) SEL/SENEL. Passenger aircraft operations for CNEL are deemed of no potential environmental benefit or constraint, but are a potential environmental constraint for SEL/SENEL (due to the anticipated increase in operations). Air cargo for CNEL is deemed to have an environmental benefit (due to the anticipated retirement of the hushkited Boeing 727). GA for SEL/SENEL is a potential environmental constraint (due to the anticipated increase in operations in corporate jets and helicopters). Air quality is deemed of unknown benefit/constraint across all categories (passenger aircraft, air cargo and general aviation). Transportation/traffic is deemed a

potential environmental constraint in every category except general aviation, which does not generate much traffic on local roadways.

Mr. Dennis Rosucci asked if there was a connection between the Port's remarks about the environmental impact of transportation/traffic and air quality. Ms. Kristi McKenney explained that other mitigating factors (e.g., the progressively more eco-friendly auto emissions legislation in California) may counteract the assumption that more traffic equals more emissions.

Ms. Debbie Pollart (San Leandro staff representative) asked what the assumptions for determining the criteria (e.g., aesthetics) were. Mr. Doug Mansel responded that more explanation will occur in the master plan document (this matrix is really a summary of the discussion that will occur in the master plan document).

#### Environmental Projects

Mr. Doug Mansel invited the Committee to recommend potential environmental projects.

Ms. Barbara Tuleja (CLASS community representative) expressed concern that impact on air quality for surrounding communities of aircraft emissions has not been sufficiently addressed (except for the study done in Seattle on aircraft emissions and brain cancer). Ms. Kristi McKenney responded that the Airport was one of the first airports to do an exhaustive study, which included a health-risk assessment in the Port's last environmental document. Hazardous air pollutants emitted at an airport are consistent with those emitted by transportation at-large and that what needs to be determined are what air pollutants (e.g., chemical compounds) correlate to cancer and then what industries/activity centers produce them the most.

Ms. Laurel Impett (CLASS staff representative) agrees with Ms. Barbara Tuleja that the health-risk assessment (for cancer and non-cancer-related health risks) supplement to the SEIR needs to be updated. Ms. Kristi McKenney responded that the Port's health-risk assessment was very thorough in that it was based on a 2010 activity-level forecast that is far beyond what is likely to be achieved or is projected in this master plan.

Ms. Kathy Ornelas suggested reviewing a noise barrier wall. Port staff agreed to include it in the master plan and agenda it for the next meeting.

Mr. Dennis Rosucci handed out a letter with five questions about aircraft noise, a potential noise barrier wall, and traffic impacts.

#### Financial Issues

Mr. Doug Mansel passed out the Overview of Airport Finances (which is available on the master plan website). OAK is owned and operated by the Port of Oakland an "independent department" of the City of Oakland. Each airline serving OAK operates under a 10-year Airline Operating Agreement that is cancelable by either party on 30 days written notice; this policy is slightly unusual in the aviation industry, but is becoming more common. A couple of years ago, when airports had longer leases (typically 20 or 30 years), the airlines had veto power over an airport's operating budget and capital improvement program (called Majority-in-interest clauses). This is not the case at OAK, and the Port retains considerable control over the Airport's facilities within the bounds of federal regulations and requirements. Under the Agreement, the airlines must pay various rates and charges established by the Board of Port Commissioners by Ordinance (Port Ordinance No. 3634, as amended). Airlines with a certain number of daily flights are assigned one or more preferential (but not exclusive use) gates. The Port reserves the right to assign another airline to any gate as long as the preferential airline is not using it.

Like most governmental agencies, the Port has an operating budget and capital improvement program. Operating revenues and expenses are collected in seven cost centers. There are two types, residual cost centers and compensatory cost centers. In a residual cost center, the airlines are a part of the cost center and pay the Port for any operating costs incurred minus any non-airline revenue. Rates and charges are based on the expenses incurred in the previous fiscal year. For example, calendar year 2005 airline rates and charges are based on fiscal year 2004 (July 1, 2004 through June 30, 2004) audited data. Terminal, Airfield and Fueling are residual cost centers. IAB, Ground Access and Parking, Leased Area / Cargo / OMC Hangar, and North Field are compensatory cost centers. The largest compensatory cost center is Ground Access and Parking. Table 4 in the paper presents the calculation of airline cost per enplaned passenger, which is approximately \$4.79 at OAK and between \$3 and \$15 nationwide. The Port follows Generally Accepted Accounting Principles (GAAP) and Government Accounting Standards Board (GASB) regulations for audits of its financial statements as well as the FAA regulations of airline rates and charges. The Airport and Airway Improvement Act (AAIA) prohibits revenue diversion. FAA grants require that the Port agree to grant assurances on airport revenues. The FAA ensures compliance by (1) airport self-certification (i.e., in grant applications), (2) audits, and (3) third party complaints.

The Port maintains a Capital Improvement Program (CIP), which is partially funded by Airport Improvement Program (AIP) grants from the Airport and Airway Trust Fund. AIP grants are either entitlement or discretionary. Entitlement funds are awarded based on the number of enplaning passengers and cargo tonnage. Discretionary funds are intended for high priority national airport system needs. The Port's CIP for the Airport is also funded using Passenger Facility Charges (PFCs). PFCs of \$3 to \$4.50 per enplaning passenger can be imposed for a project that (1) preserves or enhances capacity, safety, or security, (2) reduces noise or mitigates noise impacts, or (3) enhances airline competition. Customer Facility Charges (CFCs) can be used to fund rental car projects. The Port can use debt (short-term debt and long-term) to finance capital projects, including revenue bonds and short-term debt, such as commercial paper. The Port may also elect to use tenant or third party financing for capital projects. For example, the Port might lease a parcel at the Airport to a tenant to construct a hangar or cargo facility. The Port can also use cash (internally generated revenues) to undertake capital projects.

Mr. Doug Mansel directed the Committee to the Potential Funding Sources Matrix – Sample Master Plan Projects table, which simply indicates potential funding sources for a sample of potential master plan projects.

Ms. Anne Henny, Aviation Capital Programs directed the Committee to the Master Plan Preliminary Financial Plan – 100% Bonding of PFC Revenue table which is organized by project summary, revenue summary, and debt capacity summary. The project summary shows the rough order of magnitude cost estimates for a new terminal, new high-speed exit taxiway, and Runway 29 access taxiway improvements. (A new hypothetical runway is presented for comparison purposes only.) The aforementioned projects are sample projects, which can be changed, as could the timing, scope, cost estimates, etc. This is a tentative/preliminary list. The analysis is very simplified as it does not take into account all future revenue and Port-wide debt. Primary sources of revenue include: PFCs (bonded), potential airline rates and charges increment (above what they pay today and normal increases) and potential AIP grant funds. The terminal complex, new high-speed exit taxiway, and Runway 29 access improvements appear financially feasible based on the assumptions in the Port's preliminary analysis because net debt service in each year is less than or equal to the Bond Debt Service Revenue Constraint in each year.

#### **Wrap-up Items**

Schedule Upcoming Meetings: Thursday, August 11, 2005 (SUBJECT: Airport Land Use Map)  
Sign-in sheet  
Web site

Minutes: Meeting 9  
Page 8 of 9

Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Minutes: Meeting 9  
Page 9 of 9

## AGENDA

### Welcome and introductions

#### Approval of meeting minutes from June 30, 2005

#### Follow-up items from previous meetings and questions/answers (open forum)

- Airline passenger forecasts and focus area for potential terminal development for 2010 to 2012
- Air cargo forecasts and potential air cargo development areas
- General aviation forecasts and potential development areas
- Airfield issues/solutions
- Environmental issues/benefits/constraints/projects
- Environmental Considerations in the Master Plan (on the web site)
- Financial issues/constraints/plan
- Other questions, answers, and discussion

#### Potential environmental project: sound wall

#### Draft land-use plans

- FAA Advisory Circular (AC) No. 150/5070-6A (Airport Master Plans), Chapter 2 (The Planning Process), Section 4 (Master Planning Products), and Chapter 6 (Requirements Analysis and Concepts Development), Section 4 (Land Use Criteria)
- Review of existing land-use map
- Near-term land-use map: 2010/2012 (5-year timeframe)
- Long-term land-use map: 2025 (20 years)

#### Update on terminal planning and programming (Area 2)

#### Update on Runway Safety Area (RSA) studies

#### Wrap-up items

- Schedule next meeting on draft master plan document (beginning of November 2005)



## MINUTES Meeting 10

### Aviation Stakeholder Advisory Committee Oakland International Airport Thursday, August 11, 2005

This meeting was the ninth in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) master plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the master plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

**Attendees:** See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the master plan web site.

#### Handouts:

- Agenda
- Environmental Considerations in the Master Plan (July 2005)
- Potential Takeoff Noise Barrier graphic
- Existing Land-Use Map (updated)
- Near-Term Land-Use Map (2010-2012)
- Long-Term Land-Use Map (2025)

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the June 30, 2005, meeting, agenda, and reviewed the items requested by Committee members from the previous meeting (see second agenda item below).

#### Agenda Item:

#### Approval of meeting minutes from June 30, 2005

Ms. Carole Wedl (Noise Abatement) asked that Renee Ananda be changed to Renee Dowlin on page 6. Port staff agreed to make the change.

#### Follow-up items from the last meeting and open forum

Mr. Doug Mansel invited comments about air cargo forecasts, potential air cargo development areas, general aviation forecasts, potential development areas, airfield issues/solutions, environmental issues/benefits/constraints/projects, and financial issues/constraints. Ms. Debbie Pollart (City of San Leandro staff representative) asked about the FedEx expansion reported on [www.SFgate.com](http://www.SFgate.com) (also in the S.F. Chronicle). Ms. Kristi McKenney, Aviation Planning Manager, responded that the article referred to a solar panel project recently installed by FedEx, as well as projects previously approved through the Airport Development Program (ADP). Mr. Andrew

Thomas (City of Alameda staff representative) asked where he could find more information on the FedEx solar panel project. Ms. Kristi McKenney directed Mr. Thomas to contact Renee Dowlin (Airport environmental planner). Ms. Carole Wedl offered to provide a fact sheet produced by FedEx and the Board of Port Commissioners.

Mr. Doug Mansel passed out the report "Environmental Considerations in the Master Plan" (previously posted to the web site). This report provides an overview of environmental planning efforts the Port is undertaking as part of the master plan process for OAK. It also describes how the master plan complies with the FAA Advisory Circular on master plans (relative to environmental review), as well as the master plans relation to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Mr. Andrew Thomas expressed concern that eliminating the master plan from CEQA review because it is a feasibility study would restrict the Port's ability to use it to environmentally clear future projects. Ms. Kristi McKenney responded that the master plan for OAK is a planning and feasibility document and as such it fulfills the original intent of the master plan as defined in various settlement agreements. Mr. Dennis Rosucci (City of San Leandro community representative) asked if it would be possible to continue the process of community discussion with the Port for future projects. Ms. Kristi McKenney responded that having community involvement in this process has been very beneficial and that depending on the time, nature and legal constraints of a potential project, the Port would like to continue to have community input in some format. Dave (City of Alameda community representative) added that it would be useful to wait until an environmental document is produced or a project becomes a Board of Port Commissioners' agenda item, and suggested that the Port notify a short-list of community representatives when this happens.

Mr. François Gallo (San Leandro Unified School District community representative) asked if the Port used anti-icing agents. Mr. Doug Mansel replied that occasionally de-icing agents are used at OAK. Mr. Richard Sinkoff added that the Port's Department of Environment and Safety was responsible for overseeing aircraft de-icing operations. Mr. François Gallo asked what steps were being taken to protect existing noise abatement procedures and expressed concern that current helicopter procedures might compromise residential protection. Port staff replied that changes to noise abatement procedures were not anticipated as a result of the master plan and that compliance with noise abatement procedures was anticipated in the future. Ms. Kathy Ornelas (City of San Leandro staff representative) suggested it might be useful to include a statement of the Port's intent to monitor noise abatement procedure compliance.

#### Potential environmental project: sound wall

Mr. Doug Mansel passed out the potential takeoff noise barrier hand-out. Mr. Vince Mestre (acoustical engineer) introduced the discussion on sound walls. The graphic shows three columns depicting (1) a noise barrier (on Airport property near the end of Runway 29) for pre-takeoff engine runup and start of ground roll, (2) a noise barrier (located along the backyard of homes on Neptune Drive in San Leandro) near the receiver, and (3) a transparent barrier concept. Noise barriers must break "line of sight" between source and receiver (in this instance, they would need to be 15 feet or higher), are good for high frequency noise (but poor for low frequency noise), and are most effective close to the source or the receiver. The first option (a noise barrier on-Airport) is not a typical application of a barrier and has only been tried at LAX and Long Island. The difficulty with building a noise barrier on Airport property (i.e., the runway) is the Object Free Area required by the Federal Aviation Administration (FAA); this option has significant flanking around the south end and would not provide the desired 5dBA noise reduction (at most 2-3dBA). [SEE UPDATED ANALYSES IN MASTER PLAN.] The second option (a noise barrier along the back of the homes along Neptune Drive) only benefits homes that front San Francisco Bay (this excludes homes across Neptune Drive). Option two would require approval from the San Francisco Bay Conservation Development Commission which, given the inconsistency of a sound wall with their objectives, might be difficult to achieve. Option two could provide 5dBA noise reduction (excluding low

frequency noise). [SEE UPDATED ANALYSES IN MASTER PLAN.] To reduce low frequency noise, the sound wall would have to be 30 feet or more high. The third column shows (1) a third hypothetical option, the transparent barrier concept (which would need to be 15 feet high), (2) an existing 12 foot high barrier in Mission Viejo, California and (3) a 20 year old Lexan noise barrier in Newport Beach. The Lexan barrier shows the effect of barrier wear/aging (i.e., frosting). Mr. François Gallo asked what could be done to protect a Lexan noise barrier. Mr. Vince Mestre responded that they must be cleaned and shined regularly. Dave asked how useful a mile-long, 300 foot noise barrier would be. Mr. Vince Mestre responded that given that a 70 to 80 foot noise barrier would produce 20 dBA noise reduction, a 300 foot noise barrier would be extremely useful. Mr. Dennis Rosucci asked if noise cancellation technology (an indoor sound barrier) was an option. Mr. Vince Mestre responded that the technology (like some Bose headphones that measure outside noise levels and create equal/opposite noise amplitudes) was not yet available for large scale applications. Ms. Kathy Ornelas asked what the cost would be for an airport or landside noise barrier. Mr. Vince Mestre replied that the rough estimate was \$1 million/mile (not including habitat restoration, etc.). [ACTUAL COSTS ARE LIKELY TO BE CONSIDERABLY MORE.] Mr. Dennis Rosucci added that unless a specific environmental project was under consideration, the Committee could not provide specific environmental recommendations.

Mr. Andrew Thomas asked if, in light of likely increased traffic through the City of Alameda, there could be a traffic monitoring program. Ms. Kristi McKenney responded that the Port did an environmental review on the ADP and will continue to do them as required by CEQA and NEPA, and that the Port did commit to fund a portion of Airport traffic impacted intersection improvements in the City of Alameda. Ms. Kathy Ornelas commented that there will be a Request for Proposals (RFP) to develop 15,000 feet of Eden Road. Dave commented that the City of Alameda's analysis of the ADP revealed that there was in many cases no options for mitigating traffic impacts, but that Alameda County had the option of prohibiting trucks from driving on bridges and proposed that the Port could make a recommendation to the County to implement this option where traffic congestion is severe. Ms. Kristi McKenney rejoined that traffic mitigation is not in the Port's jurisdiction. Local government agencies are responsible for deciding on improvements to intersections; the Port can only help pay for a portion of any improvements as mitigation under CEQA and/or NEPA. Mr. Red Wetherill (City of Alameda community representative) commented that urban studies have historically shown that easing constrictions at intersections only displaces traffic flow and in fact increases it and that concentrating on the 98<sup>th</sup> Avenue corridor would be a more efficacious strategy for possible traffic mitigation. He also commented that the Port's rental car facilities should be relocated back to South Field. Port staff responded that all rental car and Airport signage relates to the 98<sup>th</sup> Avenue and Hegenberger Road arteries, to direct traffic through these corridors and away from Alameda and San Leandro and that in the long-term the Port would also like to move the rental cars to South Field. Port staff indicated that they would be willing to work with the cities of Alameda and San Leandro on a traffic monitoring study.

#### Draft Land-Use Plans

Mr. Doug Mansel passed out the existing land-use map. The existing land-use map, updated since June 2004, now shows (1) the addition of wetlands, (2) the Alaska Airlines maintenance hangar, which is now vacant, as undesignated land use, and (3) the swap in land use at South Field (cargo vs. passenger facilities) where UPS aircraft parking is now RON aircraft parking and visa versa. Mr. Doug Mansel passed out the near-term land-use map. The map depicts potential airport land uses in the 2010 to 2012 timeframe at OAK. Because the master plan is conceptual in nature, the Port may or may not actually propose any of the uses depicted in the graphic or within the timeframe referenced. Whether any land use will be proposed is subject to a number of factors, including market conditions, availability of funding, environmental constraints, etc. When used on the map, the land-use designators indicate areas changed from the previous land-use map (in the case of the near-term map, changes since existing conditions). The near-term map shows potential terminal development in "Area 2" (east of Taxiway B, west of the existing terminal area, and north of

Taxiway T). It shows replacement passenger facilities (RON aircraft parking), replacement air cargo, and airline related support facilities (e.g., airline provisioning facilities and/or Ground Service Equipment maintenance facilities) north of "Area 2" and south of Ron Cowan Parkway. The map shows PF west of Taxiway B, just south of Ron Cowan Parkway for potential future RON aircraft parking. It also shows PF (in this case, economy passenger and/or employee parking) in the upland area of the Central Basin (off Ron Cowan Parkway). The map also shows potential taxiway improvements as follows: (1) new taxiway parallel to Taxiway B between Taxiways B2 and T (approx.), (2) new high-speed taxiway exit from Runway 29, and (3) improved access to Runway 29 (parallel to Taxiways U and W). Finally, the map shows some potential general aviation (GA) development at North Field near Runway 15-33. The former Alaska Airlines maintenance hangar could be developed into a maintenance base for another airline (ARS), or converted into general aviation hangars (GA), or a small cargo facility (C).

The 2025 land-use map shows only a few changes from the 2010-2012 version. Passenger facilities (PF) are projected to expand just a little around the perimeter of the existing passenger facilities to accommodate modest growth in RON aircraft parking and passenger/employee vehicle parking. After 2010 but by 2025, it is anticipated that FedEx would need to expand their facility farther north (toward Ron Cowan Parkway), primarily for aircraft and truck apron. Finally, some additional GA is shown at North Field, and a small expansion of passenger or employee parking (PF) in the Central Basin may also be required by 2025 timeframe.

Mr. Andrew Thomas asked if the master plan would discuss projected acres of land-use for parking for 2010 and 2025. Mr. Doug Mansel replied that the Port has already done area projections for terminals, RON aircraft parking, general aviation (GA), and hangars, but does not intend to provide detailed calculations for parking. Mr. Red Wetherill commented on the importance of the time necessary to travel to and from passenger parking in planning considerations and asked why planning seemed to be focused exclusively on Doolittle Drive and Ron Cowan Parkway when the golf course seems like a good option for additional vehicle parking. Ms. Kristi McKenney responded that the golf course (Metropolitan Golf Links) is leased for another 60+ years, which places it outside of the timeframe of the master plan.

Mr. Dennis Rosucci asked if Stage IV aircraft might be available by 2025. Mr. Vince Mestre responded that all aircraft manufactured today meet Stage IV noise requirements, and almost all aircraft flying out of OAK today meet Stage IV noise requirements (except the hushkited 727s, which are legally Stage III). Mr. Dennis Rosucci commented that in order to see a significant noise reduction, aircraft would need to be upgraded to Stage V noise requirements. Mr. Vince Mestre concurred and indicated that the aircraft industry has a design goal of a 10dBA or greater noise reduction than the Stage IV requirement. Mr. Dennis Rosucci asked if it were possible that by 2025, 10% of the aircraft fleet would be at Stage V. Mr. Vince Mestre responded that by 2025 all airplanes currently 15 years or older will likely be retired; therefore, aircraft that meet current manufacturing standards (which are Stage IV or better) will be the only aircraft in use. In addition, international regulations, which are rapidly advancing towards the "green airplane," will force domestic aircraft manufacturers to build aircraft that exceed domestic requirements much sooner. In terms of economics, airlines with fuel-efficient fleets are doing better, but it remains difficult to say when the older, noisier aircraft will be retired.

Mr. Doug Mansel stated that the next step would be writing the master plan and asked the Committee to provide any remaining comments by the end of the month. Dave asked if the changes to taxiways to Runway 29 involved wetlands encroachment and if the Port anticipated a serious problem funding these developments. Mr. Doug Mansel responded that both Runway 29 taxiway improvements take wetlands, which will always be costly, and that some elements may be eliminated due to cost. Dave asked for financial considerations to be included in the master plan. Port staff agreed to include them in the master plan.

#### Update on terminal planning and programming (Area 2)

Mr. Doug Mansel handed out three graphics that showed three possible terminal configurations in Area 2. The first graphic showed a simple unit terminal with 20 aircraft gates. Ms. Kathy Ornelas commented that the terminals were not connected. Mr. Doug Mansel responded that these are unit, or stand alone, terminals and therefore not connected, as were all of OAK's terminals until 1995 when Terminals 1 and 2 were connected on the secure-side. The second graphic showed a 20-gate terminal contiguous with existing Terminal 1. Mr. Mansel pointed out that in order to keep ticketing centrally located, it might be desirable to flip the normal terminal arrangement so that baggage claim would be first along the curbside, then ticketing, then existing Terminal 1 ticketing, then existing Terminal 1 baggage claim. The third graphic showed a unit terminal a bit farther north. The Port anticipates that any new terminal with about 20 aircraft gates to be about 500,000 sq. feet and will not encroach on any wetlands.

#### Update on Runway Safety Area (RSA) studies

Mr. Doug Mansel passed around the RSA studies handout. The Federal Aviation Administration (FAA) has established the Runway Safety Area Program, which requires RSAs at all airports certificated under Code 14 of Federal Regulations (CFR) Part 139, including OAK, to meet current FAA standards for RSAs. The FAA seeks to ensure aircraft land safely and to prevent aircraft damage from occurring in the event of an over run (excursion). All of the RSAs at OAK are deficient in some way. Improvement of sub-standard RSAs is a national, high-priority goal for the FAA. The FAA has requested the Port of Oakland conduct RSA studies to identify and investigate practicable solutions to bring sub-standard RSAs at OAK into compliance with current FAA RSA standards. Possible solutions to correct and/or improve sub-standard RSAs are summarized below. These possible solutions are presented in the order of most preferred to least preferred from the perspective of the FAA, as outlined in FAA Orders 5200 and 5200.9. That is, if the most preferred solution is not practicable (e.g., financially, environmentally, etc.), then the next solution on the list is the most preferred; if this solution is not practicable, then the process continues down the list of possible solutions until a practicable solution is achieved. The possible solutions are:

- 1) Create standard RSAs (create an earth platform in San Francisco Bay, relocate roadways, fill wetlands, where necessary, etc.)
- 2) Create standard RSAs by shifting runways (and fill wetlands, where necessary)
- 3) Install standard Engineered Materials Arresting System (EMAS) (and fill wetlands, where necessary)
- 4) Install non-standard EMAS (and fill wetlands, where necessary)
- 5) Displace runway thresholds and implement declared distances
- 6) Maximize existing RSAs not meeting full dimensional standards (eliminate non-complying items, such as wetlands, where necessary, but do not relocate roadways, etc.)

Based on the Port and URS' evaluations of potential solutions for each new runway at OAK which encompassed economic, planning, environmental, stakeholder, construction, maintenance, and other criteria, the Port and URS recommend that the FAA make a determination that the following are the most practicable solutions for correcting and/or improving sub-standard RSAs at OAK:

- 1) Install non-standard EMAS (and fill wetlands, where necessary) in the approach to Runway 29
- 2) Maximize existing RSAs (fill wetlands, where necessary, grade, and treat soft soils) around Runway 9R-27L and Runway 9L-27R.
- 3) Create standard RSAs by shifting Runway 15-33

### Wrap-up Items

The Port will brief the Aviation Committee of the Board of Port Commissioners between now and November 2005 and the Committee is welcome to attend. Port staff will also be briefing the Oakland and San Leandro city councils and Committee members are welcome to attend. A public meeting will be scheduled after the master plan is released to the Committee. It is anticipated that the master plan will be adopted by the Board of Port Commissioners in early 2006.

Port staff invited Committee members to think about ways this group might continue after the master plan document is complete. Port staff and Committee members discussed that the cities of Alameda and San Leandro might want to have this document considered at their respective Airport committees or by their city councils prior to the Board of Port Commissioners adopting it. Port staff said that they would work with the cities if they want to pursue this process.

#### Schedule Upcoming Meetings:

Thursday, November 10, 2005 (SUBJECT: Draft Master Plan Document) – postponed until December 8, 2005

Sign-in sheet

Web site

Transportation (parking and AirBART)

These meetings are scheduled in Terminal 1, 2nd Fl., Rear Conference Room.

Oakland International Airport  
Aviation Stakeholder Advisory Committee  
Meeting 11  
December 8, 2005

### AGENDA

#### Welcome, introductions, and lunch

#### Approval of meeting minutes from August 11, 2005

#### Follow-up items from previous meetings and questions/answers (open forum)

- Airline passenger forecasts and focus area for potential terminal development for 2010 to 2012
- Air cargo forecasts and potential air cargo development areas
- General aviation forecasts and potential development areas
- Airfield issues/solutions
- Environmental issues/benefits/constraints/projects
- Financial issues/constraints/plan
- Other questions, answers, and discussion
- Comment letters from San Leandro and Alameda stakeholder groups (draft land-use maps)
- S.F. Chronicle article on October 23, 2005 (Business section): "Oakland airport in a growth spurt"

#### Draft master plan overview

- Review Executive Summary
- Table 4.3: corrected calculation error (general aviation land area requirements)
- Page 4-7: added discussion of potential general aviation development at South Field
- Table 6.1: highlighted cells with changes from prior version (preliminary environmental screening matrix)
- Page 6-20 through 6-23: expanded discussion and analysis of potential noise barrier
- Page 7-7: deleted complicated calculation table from Financial Plan
- Review Section 8.3 (Summary of Near-Term Master Plan Projects Recommended for Further Study)
- Discuss adding North Field noise abatement compliance study to Section 8.3 (Alameda request)

- Review Section 8.4 (Other Anticipated Near-Term Projects)
- Figure 8.3: added BART Connector to land-use map
- Figure 8.3: propose deleting PF area north of Taxiway W and east of Taxiway U

#### Wrap-up items

- Schedule another meeting on draft master plan (beginning of January 2006)?
- Meeting with Neptune Drive neighborhood on potential noise barrier (Thursday, December 5, 2005, 7:00 PM)
- Public meeting / open house (mid-January 2005)
- Final comments on master plan due January 9, 2006
- Master plan approval: Aviation Committee on February 27, 2006, and Board of Port Commissioners on March 7, 2006
- Sign-in sheet
- Web site
- Transportation (parking and AirBART validation)

#### Questions / comments / happy holidays!



**MINUTES**  
**Meeting 11**

**Aviation Stakeholder Advisory Committee**  
**Oakland International Airport**  
**Thursday, December 8, 2005**

This meeting was the eleventh in a series of planned meetings of the Aviation Stakeholder Advisory Committee (the Committee) for the Oakland International Airport (OAK) Master Plan. These minutes correspond to an Agenda that was distributed at the meeting; a copy of the Agenda is provided on the Master Plan web site. New postings to the web site will be accompanied by email notices to Committee members. The web site address is [www.oaklandairport.com/masterplan](http://www.oaklandairport.com/masterplan).

Attendees: See sign-in sheet (to be used as distribution list); a copy of the sign-in sheet is provided on the Master Plan web site.

Handouts:

- Agenda

Following introductions, Mr. Doug Mansel, Master Plan Project Manager, distributed the minutes from the previous meeting, agenda, and reviewed the items requested by Committee members from the previous meetings (see second agenda item below).

Agenda Item:

**Approval of meeting minutes from August 8, 2005**

Ms. Carmen Fewless (City of San Leandro community representative) asked if the Port would consider Mr. Dennis Rosucci's comments (City of San Leandro community representative) as official comments for the Port to respond. Port staff agreed to include those comments.

**Follow-up items from the last meeting and open forum**

The Port received comment letters from the City of San Leandro and the City of Alameda stakeholder group and a CLASS addendum to that letter on the draft land-use plans. Ms. Kathy Ornelas (City of San Leandro staff representative) indicated that the City of San Leandro comment letter should include the official correspondence which listed five questions and requested that those questions be addressed in the master plan and included in the appendices. Port staff agreed to include the letter in the appendix and to write a response. Dave (City of Alameda community representative) made the same request for the City of Alameda draft land-use plan comment letter. Port staff agreed to include this letter in the appendix and address their questions in the master plan.

Mr. Doug Mansel referred to an article in the October 23, 2005 San Francisco Chronicle entitled "Oakland Airport in a Growth Spurt," which talked about the master plan. The article did not accurately depict the master plan. It suggested the Port was focused on new runway development at South Field and not terminal development, which is the opposite of the recommendations in the master plan.

Dave commented that the City of Alameda and CLASS received some irate calls in response to that article. Both groups are scheduling meetings with the Port to ensure the information they relay to the public is consistent with what the Port is disclosing to the public.

**Draft master plan overview**

Mr. Doug Mansel introduced the discussion on the draft master plan document. As a working draft (not normally disseminated to the public), it gives the Committee an insider's view of the master plan drafting process. The appendices to be included in the final version of the master plan are listed on its last page. Appendix A will list Stakeholder Advisory Committee member names. Appendix B will include the Stakeholder Advisory Committee meeting agendas and meeting minutes. Appendix C will consist of comment letters and comment cards from the Port's public open houses. Appendix D will include Aviation Committee staff reports that Port staff provided to the Aviation Committee.

The reports are available on the Airport and master plan web sites. The Airline Passenger Market Analysis has been distributed to the Committee and is posted on the web site (Appendix E). The 2010 planning day flight schedule, which lists aircraft by type and by arrival and departure times, was used by the Port to simulate the airfield (Appendix F). Port staff offered to distribute this document electronically to interested Committee members. Mr. Doug Mansel is editing the ATAC/HNTB Airfield Simulation Technical, which has not been distributed yet (Appendix G). The Runway 11-29 capacity and delay memo has been disseminated to the Committee and is on the master plan web site (Appendix H). The environmental considerations memo has been distributed to the Committee and is on the master plan web site (Appendix I).

Ms. Kathy Ornelas expressed a desire to have the master plan appendices available to the public. Port staff indicated that most are available to Committee members for download from the master plan web site.

Mr. Doug Mansel stated that the purpose of the meeting was to walk through the document that has resulted from the master planning process over the past 18 months and invited the Committee to provide any comments about the draft master plan document.

Mr. Doug Mansel introduced the discussion of the Executive Summary of the master plan. The primary products of the master plan are the near and long-term Airport land-use maps. The primary focus of the master plan is on near-term projects. The plan discusses the airline passenger activity forecasts, terminal planning activities, and air cargo growth. Throughout the master plan process, the Port presented three cargo forecasts (high, medium and low), and of those three, the Port recommends focusing on growth at the existing air cargo carriers, which will continue to grow with the growth of the Bay Area, but at a low rate. The Port recommends focusing on airline passenger growth. The Port is not recommending any projects to accommodate the long-term forecast, as it is very speculative. The Port is specifically not recommending a new air carrier runway in the long-term; therefore, the Port does not foresee achieving the unconstrained passenger forecast of 30 MAP at OAK. One consideration is that runway capacity should not be discussed in terms of airline passengers, but aircraft operations, since runway capacity can only be a function of aircraft operations. However, assuming the aircraft fleet mix remains constant, OAK cannot accommodate 30 MAP on the present air carrier runway (Runway 11-29 at South Field).

Dave requested that the Executive Summary: (1) clarify “unconstrained,” (2) replace the “\*” with a notation to this effect “Note: this is unconstrained which means ...”, and (3) include narrative which indicates the results or achievements derived from the participation of Committee members (e.g., impact of suggestions on various propositions) to the master plan process. Dave also requested that referenced drawings indicate which page number they are located on. A Committee member requested that whenever tables continue onto subsequent pages their headers rollover onto those subsequent pages. Port staff agreed to make these adjustments and indicated that the final master plan document will be easier to read from a page numbering and table layout perspective.

The outline of the master plan document follows the Stakeholder meeting topics: forecast summary, potential airline passenger development (16 to 21 aircraft gates), potential air cargo development, potential general aviation (GA) development, airfield development, airline-related support, airport ground access, environmental considerations summary, financial considerations summary and land-use maps.

Mr. François Gallo (San Leandro Unified School District community representative) observed that the master plan provides estimated forecasts for air cargo weight and airline passengers for 2025, but that these are not translated into daily aircraft operations. Port staff agreed to explain why daily operations were not provided for 2025.

Dave requested that helicopter operations be mentioned in potential GA development. Dave observed that the figures for average queue delay have no context with which to measure whether the time indicated is good or bad and asked that current numbers be given so as to provide a basis for comparison in the future. On Page E.5, Dave requested to include a discussion of the possible effects of single event noise (similar to CNEL discussion). Port staff responded that the analysis has been done and that it can be included in the Executive Summary. Mr. Doug Mansel offered to include a paragraph that talks about community requested projects/studies (e.g. the noise barrier).

Mr. François Gallo asked if there were any Committee comments on GA development. Port staff responded that there were no official comments on GA. Mr. François Gallo asked if there were any questions regarding aircraft fleet mix. Mr. Doug Mansel responded that the aircraft fleet mix will be in the appendices by aircraft type and that the master plan GA forecast for 2010 shows GA jets going from about 45 to 55 daily operations. Mr. François Gallo asked if the Committee had any input in a potential takeover of GA development by a third-party developer. Mr. Doug Mansel responded that the Port recommends continuing this group in some way and that if that were to be proposed GA development, it would be discussed with this new group. Ms. Kristi McKenney, Aviation Planning Manager, added that there are no projects for a third-party to take over, and that it was more likely that a new developer may propose building something at OAK, in which case it would still undergo the same environmental review (CEQA and NEPA) review process as any other project at OAK.

Ms. Barbara Tuleja (CLASS community representative) asked if there shouldn't be some comment in the master plan about the FAA's project to upgrade VOR at North Field and the lack of sufficient funding for that project.

Mr. Larry Berlin (North Field Administration) responded that this project does not involve the Port's equipment and is not a Port of Oakland project, but rather an FAA project. Ms. Kristi McKenney added that it would not be a bad idea to add some comment about this to the master plan but to keep in mind that there will continue to be FAA navigational equipment projects at OAK which do not involve the Port.

Dave suggested mentioning the effect of Committee member input on master plan recommendations on Page 1-2. Port staff agreed with Dave's suggestion.

Mr. François Gallo recommended the Port not market to cargo airlines that operate 24 hours per day. Ms. Kathy Ornelas suggested Mr. François Gallo submit his request in writing to the Port. Port staff indicated that the Port cannot (by federal law) implement a curfew for cargo airlines, and that the comment in the master plan that the Port is not pursuing greater air cargo growth in effect meets his request.

Dave asked if the settlement agreement could be mentioned on Page 1-3. Port staff indicated that they will include this comment.

Ms. Kathy Ornelas noted an error on Page 1-3: “10,000 runway.” Port staff will correct this error.

Mr. Doug Mansel pointed out a calculation error (general aviation land area requirements) on Table 4.3, Column D, which has been corrected.

Mr. Red Wetherill, (City of Alameda community representative) asked that the tables be made more visually user friendly, which Port staff agreed to do.

Mr. Doug Mansel indicated that there is a new discussion starting on Page 4-7 that presents the possibility of locating new GA facilities at South Field (instead of North Field). Port staff are not recommending this potential GA development strategy because the mixing of smaller (slower) GA aircraft with the larger (faster) aircraft flown by the airlines could present a potential runway capacity issue.

Ms. Kathy Ornelas asked if there were a way to express the converse scenario in the master plan (i.e., this same reason is a good one not to have airlines using North Field). Port staff agreed to express the impracticality of mixing GA aircraft and airline aircraft in the master plan.

Table 6.1 depicts a preliminary environmental screening matrix; highlighted cells indicate changes from the previous version.

Mr. Vince Mestre (Port Acoustical Engineer Consultant) introduced the discussion on noise barriers (pages 6-20 through 6-23) in the master plan and directed the Committee to a new aerial photograph, Figure 6.7-2. After last meeting's discussion on noise barriers, there were sufficient questions about their feasibility to justify producing a more detailed analysis of what a noise barrier would and would not do for various aircraft. Five aircraft positions were considered. The analysis considered the effect of a barrier (located on the Airport on top of the dyke/levee) on residents sitting in the backyards of the homes on Neptune Drive (on the Bay side). At positions A and B, the noise level would be lower. At aircraft position C, a higher thrust setting was used. In position D, the aircraft would accelerate from idle to full thrust power. In position E, the aircraft would be at full power. Position D is a concern because a barrier cannot penetrate the 400 foot setback for safety reasons and “leakage” around the end of the wall occurs. Aircraft at position A would be at 58 dbA. Aircraft at position B would be at 53 dbA. Aircraft at positions C and D would be at about 73 dbA.

The third column shows noise reduction for a barrier located at the Airport, which would be 6 dbA reduction. Position D, shows a 3 dbA noise reduction. A 5 to 10 dbA noise reduction would be required for normal human perception. Noise levels aren't very high to begin with. At positions A through C, it is unlikely residents would hear the difference as the noise reduction is insignificant. The analysis provided on this page is for the FedEx Boeing 727 aircraft. At position D, the noise level is 70 dbA with the noise barrier and 73 dbA without it. At position E, the noise level would be 67 dbA. The five considerations do not represent five different noise events, but different phases of one noise event. The next figure shows time history for a Boeing 727 beginning at position D. From 0 seconds to 9 seconds, the aircraft will throttle up, but won't move. After 9 to 10 seconds the aircraft begins to roll. At position E, the noise level decreases and continues to do so as the

aircraft continues moving down the runway. The maximum noise level will only be reduced by about 3 dbA. There will be some benefit, but it is important to keep expectations realistic.

Ms. Kristi McKenney pointed out that there are many intersecting variables that have to be considered such as, the type of aircraft engine, the time of day, whether the air is "calm" or not, and where a resident is physically located (inside or outside their home). Mr. Vince Mestre noted that there was no low-frequency noise reduction in any of the five positions.

Mr. Red Wetherill asked at what frequency these numbers would apply. Mr. Vince Mestre responded at 500 hertz and above.

Dave wondered if showing 0 dbA on the analysis would give the noise reduction the proper context.

The next page shows the MD-11 / DC-10 aircraft. Because of its third engine, no noise reduction occurs until around 12 seconds into the noise event. The last chart shows the Boeing 737 new generation. This aircraft is so quiet as to render this analysis irrelevant. A 15-foot high noise barrier on Neptune Drive produces a 12 dbA noise reduction throughout its noise event. At 15-foot high noise barrier at Neptune is much more effective than an Airport barrier. The ultimate recommendation for treating homes on Neptune Drive without mitigation would be sound insulation (which does take care of low frequency sound).

Mr. Doug Mansel noted that San Leandro will host a meeting with the residents of Neptune Drive and the Port.

A Committee member observed the need for unanimous consent among the neighbors on Neptune Drive to erect a noise barrier.

Doug Mansel directed the Committee to the Financial Analysis Summary. Section 7.1 is the introduction to Airport finances overview, Section 7.2 is the overview and Section 7.3 distills in narrative form the master plan preliminary financial plan. The cost for a new 20-gate terminal in Area 2 was revised from about \$500 million to about \$1 billion.

Ms. Kathy Ornelas asked if there was any discussion of the garage, if it was still part of the Airport Development Program (ADP).

Ms. Kristi Mckenney responded that the garage is included in the ADP and the cost estimate is included in the above estimate for the new terminal in Area 2. Parking is discussed in the ground access section of the master plan. Ms. Kristi Mckenney added that it is important to emphasize that the master plan is not meant to be mutually exclusive of the projects in the ADP.

Mr. Doug Mansel directed the Committee to Page 8-2, Section 8.3, which shows a hand-dashed in BART Connector on the 2025 land-use map. The left column highlights potential near-term projects stemming from the master plan that are recommended for continued study, environmental review, and financial analysis. The projects include: a 17 to 21 gate terminal in Area 2, the cargo building relocation, a new taxiway parallel to Taxiway Bravo, taxiway access improvements to Runway 11-29, a new high-speed exit from Runway 11-29, and remote airline passenger remain overnight (RON) parking.

Mr. Andrew Thomas (City of Alameda staff representative) suggested that the projects be segregated showing which ones are dependent on other ones and which ones are independent. Port staff agreed to make this change in the final master plan document.

The Port will make four recommendations in the master plan, three of which are (1) that the Stakeholder Advisory Committee continue in some form as the Port moves through project development, 2) that the Port conduct an Airport ground traffic study with cities of Alameda and San Leandro, and 3) that the Port continues to work with San Leandro on a potential noise barrier.

Ms. Kristi McKenney emphasized the need to be clear that there may not be a universal 12dbA noise reduction along Neptune Drive with a sound barrier.

Dave recommended an annual analysis of the noise barrier's impact. Dave commented that a number of general aviation jet pilots persist in using North Field instead of Runway 11-29, which is a nuisance, and that the common excuse appears to be that pilots cannot access Runway 11-29 due to taxiway congestion or closures. Dave suggested doing a study to determine the causes of the deviation.

In response, Mr. Larry Berlin suggested that, in general, pilots accessing North Field are piloting transient aircraft and that sending a letter to advise pilots that this is unacceptable does deter this behavior. Port staff agreed to include a recommendation that the Port and City of Alameda jointly undertake a study to determine the causes of the "deviations."

Section 8.4 lists other anticipated near-term projects such as repaving aprons at north field, FAA navaid projects, and the infield roadway at North Field. On Figure 8.3, the Port proposes deleting PF area north of Taxiway W and east of Taxiway U where the Port had considered placing remain overnight (RON) aircraft parking. Due to airspace restrictions, this area is probably not suitable for RON.

A Committee member suggested that, in Section 8.3, it would help if the overlap between the ADP and the near-term master plan projects were expressed and asked if the BART Connector project should be recommended in the master plan. Ms. Kristi McKenney responded that although the Port does support the BART Connector project, it is not a Port project.

Mr. Andrew Thomas recommended reorganizing Chapter 8 of the master plan so that the text on the long-term land-use map was adjacent to the actual map (at the end of the document).

Kristi stated that the Port would expect to receive Stakeholder Advisory Committee comments on this master plan document within two weeks of this meeting, in order to incorporate them into the document, and added that the Port is receptive to receiving comments up until and through the Board of Port Commissioners meeting on March 7, 2006.

Port staff agreed to extend the deadline for comments until January 13, 2006.

#### Wrap-up Items

The Committee agreed that there does not need to be any further Stakeholder Advisory Committee meetings before the mater plan document is considered by the Board of Port Commissioners.  
Meeting with Neptune Drive neighborhood on potential noise barrier (January 5, 2006)  
Public Meeting/Open House (January 31, 2006)  
Sign-in sheet  
Web site  
Transportation (parking and AirBART)