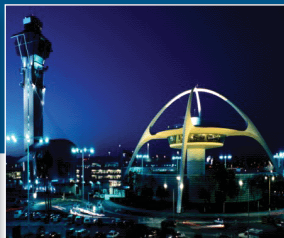


LAX North Airfield

Special Peer Review



Summary Report

March 13-15, 2007

Prepared for Los Angeles World Airports

Prepared by Peer Review Group

**LAX North Airfield
Special Peer Review
March 13-15, 2007**

Summary Report

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Peer Review Group

Facilitator

Mr. William A. Fife P.E.
Corporate VP/Director of Aviation Services
DMJM Harris-AECOM

Mr. James C. DeLong
Former Director of Aviation for the
Louisville Airport, Philadelphia Int'l & Denver
Int'l Airports

Peer Review Group

Mr. Allan A'Hara
VP Aviation Planning
DMJM Aviation-AECOM

Mr. Kenneth Kroll
Former Airport Capacity Analyst
FAA Eastern Region
DY Consultants

Ms. Dianne Walker
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Wayne County Airport Authority

Mr. Rudolph R. Mueller, III A.A.E.
Director of Architecture
Tampa International Airport

Mr. Gary Warren
Director Airport Development
Minneapolis - St. Paul International Airport

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Mr. Drake Poston
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Mr. William J. DeGraaff, P.E.
Former Runway Safety Officer
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Mr. Bruce Drum
Deputy Director-MIA
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Mr. Matt M. Davis
Planning Manager
Atlanta-Jackson Hartsfield
International Airport

Mr. Steve Smith
Deputy Vice President
Office of Engineering
Metropolitan Washington Airports Authority

Introduction and Background

Los Angeles World Airports (LAWA) is assessing a range of options to improve the LAX North Airfield. The LAX Master Plan originally identified several safety, operational and efficiency problems with the current runway and taxiway configuration that required significant redesign to solve. The design solutions were ultimately approved by the Federal Aviation Administration (FAA) and by the Los Angeles City Council. However, the City Council identified the North Airfield project as one that required additional analysis and debate through the LAX Specific Plan Amendment Study process before improvements could move forward. Lawsuits filed and ultimately settled on the LAX Master Plan placed particular emphasis on the LAX North Airfield improvements while also setting a time window for studying and resolving the issues to move forward.

Local controversy over the type and extent of LAX North Airfield improvements has significantly slowed the process for identifying and analyzing the operational and environmental benefits and impacts of these improvements. Local officials have looked to the FAA to provide definitive guidance on the need for improvements to the North Airfield beyond the Airport Layout Plan (ALP) approval and Record of Decision (ROD) on the LAX Master Plan EIS. FAA officials are looking to local officials to provide a range of options that would meet the same objectives as those improvements already approved. The result of this stalemate has left LAWA stuck in the middle between local politics, the need for North Airfield improvements and FAA process and procedures.

In an effort to resolve this matter, LAWA contacted a number of airport industry experts to objectively review the facts of this situation and to provide insight and advice on possible ways of moving the process forward. This report is a summary of the peer review group's findings and recommendations.

Peer Review Process

The Peer Review Group was composed of aviation experts with a combined total of more than two hundred years of highly relevant experience in general management, day-to-day operations and capital improvement planning and development at a number of major U.S. airports. These industry peers included senior airport planning, development and operations managers from Atlanta, Detroit, Denver, Miami, Minneapolis, San Francisco, Tampa and Washington-Dulles. In addition, former Federal Aviation Administration officials who served in senior level positions related to airport planning, airport capacity, airport environmental, federal grant programs and runway safety also participated. Senior airport planners from the Los Angeles based AECOM Technology Corporation rounded out the group to facilitate and document the peer review exercise and to add foreign international airport planning and airfield operations experience.

The 3-day session commenced with the Peer Review Group receiving background presentations. The LAWA staff provided a concise, comprehensive overview of the LAX planning and development process to date, including the various operational efficiency

and safety issues remaining at hand. Following this half-day session, the group was given a thorough bus tour of all elements of the airfield and immediately surrounding areas, followed by extended observation of actual airfield operations from the former airport traffic control tower. This tour provided the peer group with a thorough understanding of LAX airfield operations and allowed first hand witnessing of conflicts between aircraft requiring air traffic control intervention at several of the key locations on the runway / taxiway system. These observations highlighted and reinforced the understandings gained during the initial session.

The Peer Review Group then convened separately to spend the remainder of the session reviewing presented and other historical background information, operational conditions observed, developing required assumptions and evaluating the various airport layout plan alternatives. At the conclusion of a full day and two nights of insightful and thought provoking discussion the group unanimously reached agreement on a series of conclusions and recommendations for moving the master planning process forward to resolution and consensus support for the required program of North Airfield improvements. The peer group summarized the process, findings and recommendations in a presentation to LAWA management and staff to conclude the session on the morning of the third day. The presentation is attached.

North Airfield Evaluation

The Peer Review Group evaluated the North Airfield from the perspective of three important issues:

- 1) ***Operational Safety*** - associated with the geometric layout of the North Airfield runway / taxiway elements and the need for additional clearances to safely accommodate all aircraft operations (including new and future technology aircraft) and eliminate runway incursions.
- 2) ***Balance*** - the critical need for the North Airfield to uniformly and routinely accommodate aircraft landing, takeoff and taxiing operations consistent with the newly improved South Airfield to achieve standardized, balanced use of the airfield and terminal apron/gate complex, and;
- 3) ***Efficiencies*** – currently being compromised and will worsen considerably in the near future as a result of insufficient space and physical clearances for current and future technology aircraft, generating increasing aircraft ground and air delays that will ultimately reduce the practical capacity of LAX and cause adverse air quality impacts.

The peer group reviewed many of the previously introduced airfield improvement alternatives that have been studied as part of the LAX Master Plan and the LAX Specific Plan Amendment Study process. Several of these involved a lateral shift of one of the North Airfield runways in either a north or south direction and at variable distances.

Findings and Conclusions

The session resulted in the following basic findings by the Peer Review Group:

- The present configuration of the North Airfield is the result of outdated geometric standards and air traffic control concepts originally developed for propeller and early turbojet era transport aircraft characteristics. The original standards and concepts are not compatible with current aircraft characteristics and the procedures under which it is being utilized today.
- The North Airfield has inadequate runway lateral separation distance and lacks the appropriate taxiway geometry to safely accommodate aircraft landing, runway exiting and runway crossing operations.
- Safety is a concern because the present North Airfield configuration is prone to runway incursions. This situation was confirmed during real-time airfield observations by the Peer Review Group and an assessment of recorded incursion events to date.
- In the interest of safety, operational efficiency and in order to preserve and maintain current runway capacity, improvements to the North Airfield are needed.
- The existing apron/gate complex, terminal buildings and landside access facilities and infrastructure must be improved to accommodate projected passenger levels, while establishing and maintaining capacity balance between the north and south airfields. Therefore, the North Airfield alternatives that require Runway 6R-24L to shift southward, thus requiring years of extensive and disruptive apron/gate and terminal demolition, are clearly not feasible.
- The North Airfield alternative offering maximum safety, balance, and efficiency advantages shifts Runway 6L-24R 340 ft. northward. This option provides for new large aircraft operations, does not impact the apron/gate and terminal infrastructure, presents fewer construction phasing impacts, and provides for a full-length center taxiway to promote safe and efficient aircraft landing and take-off operations.

Recommendations

The Peer Review Group unanimously concluded LAX is at a crossroads and the timely and successful implementation of the airport development program is vital to the City and Region. In that light, the group offers the following recommendations to LAWA:

- Doing nothing is ***not an option*** – improvements to the North Airfield are needed to avoid adverse impact to existing airport efficiency.
- North Airfield improvement to accommodate new technology aircraft such as the A380, B747-8 and other future new large aircraft is encouraged.
- An objective, quantitative evaluation of all factors should be conducted, including: an assessment of the near term impact of A380 operations, the effectiveness of runway safety enhancements, and the ability to provide balanced airport capacity north and south.
- A comprehensive environmental evaluation under the National Environmental Policy Act (NEPA) guidelines should be conducted and should include ***all*** feasible alternatives.



LAX North Airfield
Special Peer Review
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Presentation Outline

1. Introductory Remarks
2. Peer Review Process
3. North Airfield Evaluation
4. Need for Improvements
5. Solutions (LAX Re-Study Concepts)
6. Conclusions & Recommendations



Peer Review Participants

Facilitator

Mr. William A. Fife P.E.
Corporate VP/Director of Aviation Services
DMJM Harris

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VP Aviation Planning
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Mr. William J. DeGraaff, P.E.
Former Runway Safety Program Mgr., FAA Eastern
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Mr. Gary Warren
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Senior Vice President
Global Aviation Development
AECOM Technology Corporation

Matt Davis
Planning Manager
Atlanta Jackson-Hartsfield International Airport



Peer Review Process

- Historical Review of LAX Master Plan
- Airfield/Tower Tour - Observed Peak Activity
- Reviewed Conditions/Assumptions
- Developed Findings



North Airfield Evaluation

A. Safety

- Configuration
 - Original Dual Lane Runway Concept
 - Now used as close parallel runways
 - Rwy 24R arrivals hold short for Rwy 24L departures
 - Based on Group IV geometry (i.e. DC-10, B-767)
- Issues
 - Runway separation
 - High Speed Exit locations/direction
 - Runway incursions
 - ✓ Confirmed by observations and records
 - ✓ Safety should be a concern



North Runway Evaluation

➤ Runway Incursion Issues

- Patterns of occurrence
 - ✓ Location and Type
- Six in Four Years
 - ✓ Four of same type
 - ✓ Rwy 24R Arrival crossing 24L w/o Clearance
- Evidence exists to warrant action



North Airfield Evaluation

➤ Problematic Solutions

- Operational
 - ✓ Revert to dual lane runway operations
 - ✓ Significantly reduces capacity
- Reverse Rwy 24R/24L operations
 - ✓ Noise Impacts to the north may result
- Add center taxiway between existing runways
 - ✓ Degrade to Group III operations
 - ✓ Critical reduction in capacity
- High speed taxiway locations
 - ✓ Eliminate the reverse-turn exit
 - ✓ Replace with 90° exits
 - ✓ Reduces capacity and increases Runway Occupancy Time



North Airfield Evaluation

B. Balance

- Current Use
 - North 47% South 53%
 - Heavies: North 20-25% / South 75 – 80% (10 – 15% of total operations)
- When South Airfield is finished
 - Imbalance due to:
 - ✓ Heavies need length of Rwy 25R for departures
 - Lack of standardization between north and south – accommodates high speed exits differently
 - ✓ Center taxiway on south
 - ✓ No center taxiway on north



North Airfield Evaluation

C. Efficiencies

- Increased taxi route to the south
- Air quality impact of airspace and ground delay
- Space does not allow a Group V/VI to hold without tail penetration of Rwy 24R OFZ;
 - ✓ Increases in-trail separations
 - ✓ Reduces capacity
 - ✓ Induces go-arounds



Need for Improvements

- Reduce/eliminate runway incursions
- Maintain existing capacity
- Provide for new age aircraft
- Balanced airfield operations



LAX Re-Study Concepts

Approved ALP

- Shift Runway 24L 340' south
 - Impact on terminal
 - Need for sequential facility/gate relocation
 - Need for additional gates to replace loss
 - Constructability is questionable
 - Long development time frame
 - Modify CTA to accommodate passenger processing facilities



LAX Re-Study Concepts

Advisory Committee Consensus

- **Shift Runway 24L 100' south**
 - **Accommodates Group V**
 - **Does not provide for Group VI**
 - **Requires terminal reconfiguration**
 - **Consistent with South Airfield**



LAX Re-Study Concepts

El Segundo/Inglewood Concept

- **Shift Runway 24R 100' north**
 - **Accommodates Group V**
 - **Does not provide for Group VI**
 - **No terminal impacts**
 - **Consistent with South Airfield**



LAX Re-Study Concepts

LAWA Concept

- **Shift Runway 24R 340' north**
 - **Provides modified Group VI**
 - **No Impact to terminals**
 - **Fewer construction impacts**
 - **Center taxiway maximizes efficiency/safety**



LAX Re-Study Concepts

ARSAC/Westchester Concept

- **No Improvement to North Airfield**



LAX Re-Study Concepts

Moving Forward

- Encourage airport upgrade to Group VI standards
- Encourage capacity / delay analysis
 - Impact of Group VI
 - Safety enhancements
 - 79 MAP with a balanced capacity airport
- Comprehensive NEPA evaluation
- Priority for AIP / PFC participation



Conclusions and Recommendations

- LAX is at crossroads
- Doing nothing is not an option
- Need North Airfield improvements
- Environmental leadership opportunity
- Massive terminal demolition not feasible
- Study and compare all concepts
- Objective, quantitative evaluation needed
- Success vital to future of City and Region



Peer Review Participants – Profile

FACILITATOR

William A. Fife, P.E.

Vice President and Director of Aviation Services

DMJM Harris/AECOM

Mr. Fife serves in a leadership role for DMJM Harris' Aviation business line. Prior to joining DMJM Harris, Bill was the General Manager of Aviation Planning and Technical Services for the Port Authority of New York & New Jersey. He also served as the Deputy General Manager of John F. Kennedy International Airport and as Chief Planner for the Port Authority's Aviation Department.

Bill has been the Chair of TRB's Airport Aircraft Compatibility Committee for the past ten years. He has served as the ACI-NA representative on the ICAO NLA Working Group and chaired the White House Weekly New Large Aircraft Conference.

For the past twenty years, he has chaired a Peer Review Group of airports in the U.S. and Canada that includes Boston, Washington National, Dulles, Miami, Toronto, Montreal, Las Vegas that has saved airports and airlines millions of dollars.



Peer Review Participants – Profile

Allan R. A'Hara

Vice President, Aviation Planning

DMJM Aviation / AECOM

Allan A'Hara has twenty-five years of airport planning and project management experience with DMJM Aviation I AECOM. His expertise encompasses the general management of airport master plans; airfield development programs, terminal and landside facilities design; airport system plans; FAR Part 150 noise studies, and environmental reports. He is accomplished in the analysis, coordination and presentation of materials related to airport capital development programs.

Allan has served for much of the last 10 years as an airport planning and capital development advisor to the City of Philadelphia Division of Aviation at Philadelphia International Airport. He is presently the Project Director for the on-going Philadelphia International Airport Master Plan and Airfield Capacity Enhancement Program.

As a Project Director, Allan is also responsible for orchestrating agency, community and public participation programs, in response to environmental and other public concerns, as part of major airport development projects across North America.



Peer Review Participants – Profile

Dianne Walker
Director – Airfield Operations
Wayne County Airport Authority
Detroit Metropolitan Airport

Ms. Walker has over seventeen (17) years of experience as an Airport Operations professional working for the Wayne County Department of Airports and currently for the Wayne County Airport Authority. Her work experience includes two airports, Willow Run Airport and Detroit Metropolitan Airport.

After receiving her Bachelor's Degree in Public Affairs Management from Michigan State University, she started her career at Detroit Metropolitan Airport working in Operations before being assigned to Willow Run Airport, the reliever airport for DTW. Her work experience at Willow Run Airport included positions as an Airport Operations Supervisor and Manager before being appointed to the position of Deputy Director of the Airport. Ms. Walker was involved in the \$14 million Capital Improvement Program which included runway rehabilitation and various upgrades to an aging facility. In 1999, at the FAA Great Lakes Region Conference, the airport received an Airport Improvement Award for Safety.

In 2002, the Wayne County Airport Authority was established under Senate Bill 690. Under the Authority, Ms. Walker was promoted to Deputy Director of Airfield Operations at Detroit Metro Airport and in 2005 accepted the appointment to Director of Airfield Operations.

Currently, the airport is in the midst of the Airport Master Plan update, rehabilitation work for runway 21L/3R and the new North Terminal Development project which is slated to open in the summer of 2008.

Federal Aviation Administration the development of a structural garage for 650+ parking spaces for Rental Car pickup and modifications to the existing Service Building to accommodate the relocation of the rental car check in counters from the red side baggage claim area.



Peer Review Participants – Profile

Gary G. Warren, PE

Director Airport Development

Metropolitan Airports Commission

Minneapolis-St. Paul, MN

Mr. Warren serves as the Metropolitan Airports Commission's (MAC) Director of Airport Development. He is responsible for managing the Capital Improvement Program for the entire MAC system of airports which includes 6 Reliever airports and Minneapolis-St. Paul International.

He received his Bachelor of Science from the University of Wisconsin, Madison, and his Master of Science, Civil Engineering, from Marquette University, Milwaukee, Wisconsin. He is a registered engineer in the state of Minnesota and a private pilot. He has managed a large variety of airport improvement projects while at MAC from constructing a floodwall around the Downtown St. Paul airport to planning and constructing a recently commissioned 8,000' runway at MSP which had a total program cost of over \$785 million. The capital program that Mr. Warren has helped implement over the past 10 years at MAC has totaled over \$3.2 billion in airfield and terminal and landside improvements.

In addition to his other duties, Mr. Warren presently serves on a National Academies, Transportation Research Board Committee investigating alternative runway arresting systems for civil aircraft.



Peer Review Participants – Profile

Mr. R. Drake Poston

**Manager Operations Services - Airfield
San Francisco International Airport**

Drake Poston has over 17 years experience in Airport Management. His work experience includes two airports, Burbank-Glendale-Pasadena Airport and San Francisco International Airport.

After receiving his Bachelor's Degree in Aviation Management from the California State University at Los Angeles, he started his career at Burbank Airport working in Operations both in the Noise Abatement/Environmental Planning office and then as Supervisor-Airport Operations.

His experience at San Francisco International Airport includes working as an Airport Operations Supervisor before becoming the Airport Operation's Construction Coordinator. In the late 90's into early 2000, while working on his Masters in Public Administration from San Francisco State University, he oversaw all operational aspects of SFO's Master Plan Development Project, which produced the International Terminal Complex, opened in 2001.

After substantial completion of the Airport Master Plan development, he took over the day to day operations as Assistant Manager of Airfield Operations. In 2004 he moved into his current position as Manager of Airfield Operations.



Peer Review Participants – Profile

Mr. Bruce R. Drum

Deputy Aviation Director

Miami-Dade Aviation Department,

Bruce R. Drum, Deputy Aviation Director for Operations, joined the Aviation Department, Airside Operations Division in 1976. In 1996, he took charge of Airside Operations at the Airport, as well as the three general aviation airports and one training airport.

Mr. Drum is responsible for Airside Operations, Landside Operations, Terminal Operations, Noise Abatement, Facilities Management, Facilities Contracts, Security Initiatives and Communications, and the Airport's Fire Division. Mr. Drum holds a Bachelor's Degree in Political Science and Business from Oglethorpe University.



Peer Review Participants – Profile

Stephan G. Smith

Deputy Vice President for Engineering

Metropolitan Washington Airports Authority

Mr. Smith serves as the Metropolitan Washington Airports Authority as Deputy Vice President for Engineering, Office of Engineering. He is responsible for managing the Capital Construction Programs at both Ronald Reagan Washington National and Washington Dulles International Airports.

He received his Bachelor of Science at the United State Military Academy, West Point, and his Master of Science, Civil Engineering, at Iowa State University.

He served on active duty with Army Corps of Engineers with involvement in heavy construction and management of construction programs for engineer districts and the Defense Nuclear Agency. His career in aviation has included design and construction management of capital projects for Continental and Northwest Airlines; Deputy Director for Planning Design and Construction for the Houston Airport System; technical representative of the Hartsfield air carriers in the Hartsfield Development Program; and Program Manager for the O'Hare Modernization Program.



Peer Review Participants – Profile

Mr. James C. DeLong

Former Director of Aviation for the Louisville Airport Authority, Philadelphia International Airport & Denver International Airport

James C. DeLong, a veteran airport management professional, has managed airports for over thirty three years. Prior to entering the airport management arena, he was employed as a management trainee in the Research and Development Group of Hughes Aircraft, Culver City, California, and then served for seven years as a pilot in the United States Air Force. His most recent airport employment was as Director of Aviation for the Louisville Airport Authority, home of UPS's largest cargo operation (air & ground) world wide. He currently provides consulting services to a number of companies and airports.

Mr. DeLong was Director of Aviation at Denver International Airport from March 1993 until he relocated to Louisville. Prior to Denver, he served as Director of Aviation at Philadelphia (1987-1993); as Chief Operating Officer for the Houston's five airports (1974-1987); and as Airport Manager for Wichita Mid Continent Airport from 1970 until 1974. Each airport system brought with it, unique experiences and challenges.

Collectively, he has been responsible for over six billion dollars in airport construction projects, including multi billion dollar programs in Houston, Philadelphia, and Denver. Financing, operations, program management, and execution of each of these disciplines have been his primary strengths.

His educational background includes an undergraduate degree in Economics from the University of Colgate and a Master's in Aviation Management & Aerodynamics from the University of Southern California having graduated first in his class. Additionally, he is typed rated in a number of aircraft including the Boeing 707-320, has logged over 6000 hours of flight time, and holds a Certified Flight Instructor Rating from the FAA.

He has served as Chairman of Airports Council International-North America, and previously served on the Board of Directors of ACI-World. He is an active member of the American Association of Airport Executives, and is a past president of AAAE's Northeast and South Central chapters. He is a former board member of the Executive Committee of the Transportation Research Board (Academy of Sciences). He has also chaired the ACI Technical Committee, and the ACI Information Systems Committee. He recently served on the FAA's Research and Development Advisory Committee, and chaired the FAA's Sub Committee on Environment. Finally, Mr. DeLong was selected to chair the Cooperative Research Feasibility Committee, and was instrumental in developing and presenting federal legislation for implementation of this important R&D program.

He was recently honored by the Airport Consultant's Council by being named "Airport Manager of the Year" for 2005", and most recently, (2006), ACI-NA selected Mr. DeLong as the recipient of the prestigious Downs' Award for outstanding service in the airport industry.



Peer Review Participants – Profile

Mr. Kenneth Kroll

DY Consultants

Former Airport Capacity Analyst, FAA Eastern Region

1990 – 2000, Federal Aviation Administration, JFK Airport, NY

Airport Capacity Analyst, FAA Eastern Region

Regional airport capacity expert for the Airport Capacity Branch coordinating efforts of all FAA operating divisions to monitor and reduce delay at the Regions eight large hub airports. Served as chairman on several airport Capacity Enhancement Task Forces, including Philadelphia Int'l, Newark Int'l and JFK. Also during this period, began the ongoing effort for a regional air service study to assess the capacity relief capability of the regions satellite airports.

1998 – 2003, Federal Aviation Administration, JFK Airport, NY

Team Leader for Airport Improvement Program, (AIP), and Passenger Facility Charge Program, (PFC)

Responsible for administration and coordination of Regions annual AIP grants with the regions four Airport District Offices, especially the distribution of AIP Discretionary funds. Also responsible for administration and coordination of Regions Passenger Facility Charge Program, including review and approval of PFC applications and amendments. Additional duties in this position included acting as a clearing point for all Runway Safety Area, (RSA), Determinations to guide practical investments of AIP grant funds for RSA projects. During this period I also served as acting manager of the FAA Airport District Office in Harrisburg PA for approximately five months.

2003 – 2005, Federal Aviation Administration, JFK Airport, NY

FAA planning and capacity representative for Capacity Enhancement Program at Philadelphia International Airport (PHL)

Represented FAA on the Environmental Impact Statement team for the extension of Runway 17-35 and the Capacity Enhancement Program for PHL. Primary responsibilities were for the application, review and approval of capacity simulation modeling. This modeling is required to establish the "Purpose and Need" of these capacity improvements satisfactory to the requirements of the National Environmental Policy Act, (NEPA).

Mr. Kroll holds a BSME and MCE from Manhattan College.



Peer Review Participants – Profile

Mr. Rudolph R. Mueller, III A.A.E.
Director of Architecture
Tampa International Airport

Mr. Mueller is responsible for directing and supervising the management of project design consultants, contractors, design/builders and Authority Staff related to the design and construction of all capital projects at the Authority's airports.

Mr. Mueller directs the design and construction of airport facilities pertaining to the development, improvement and expansion of the Authority's airport system, coordinates the design and construction with Authority staff and tenants (as may be required) and supervises the preparation of Contract Documents for construction. Mr. Mueller administers design contracts including the selection, contract negotiation and preparation of professional design and design/build contracts. Mr. Mueller also administers the competitive bidding or selection and award of related construction projects.

Mr. Mueller represents the Authority in the administrative and operational detail of ongoing design and construction activities. It is the duty of his position to insure that the designs and construction of all projects are proceeding in accordance with the project goals and objectives and are in accordance with the requirements of the Authority.



Peer Review Participants – Profile

George P. Vittas, P.E., M. ASCE
Senior Vice President
Global Aviation Development
AECOM Technology Corporation

George Vittas' career spans 40 years of achievement in air transportation planning and in the development and improvement of airport terminal and airfield facilities. He is a past chairman of the Air Transport Division of the American Society of Civil Engineers and recently was appointed to serve on the National Academy of Sciences/TRB Committee, chaired by James C. DeLong, which developed the concept for the Airport Cooperative Research Program.

His experience includes 18 years with American Airlines where he served in positions of increasing responsibility for system-wide planning, design and construction of airport terminal and airfield facilities, specializing in airport compatibility of American's aircraft fleet additions during the 1970s and 1980s. He was instrumental in pioneering the use of computer simulation techniques for the determination of airfield capacity and delay and represented the industry in collaborations with Airport Operators, ICAO, IATA, the FAA and aircraft manufacturers in the adoption of planning and design criteria for the development and improvement of airfield facilities.

In the past 20 years since joining AECOM he has lead major airport planning and development projects in the North American, European and Asia Pacific regions. He is currently based in London serving as Global Aviation Director for AECOM projects in the U.K., Europe, ANZ, Hong Kong/China and the Middle East.



Peer Review Participants – Profile

William DeGraaff, P.E.

Director of Technical Services

DY Consultants

Former FAA Regional Runway Safety Program Manager

Bill's background includes an impressive 30+ years of experience in aviation engineering, the majority of which has been with the FAA Airports Division.

Bill has held numerous managerial positions while in the Airports Division, including Deputy Division Manager and Acting Division Manager. He was also the Regional Runway Safety Program Manager for 5 years. He is very knowledgeable in airport design and construction standards as well as airport safety issues and with the many FAA Advisory Circulars that cover these topics. His contribution to engineering projects and airport planning is greatly enhanced, as a result of his thorough understanding of FAA Standards and protocols.

Bill is considered an expert in airport paving and airport safety. He has made numerous presentations on these topics at conferences throughout the country.



Peer Review Participants – Profile

Matt Davis

Senior Aviation Planning Manager (Airfield/Airspace)

City of Atlanta – Department of Aviation

Hartsfield-Jackson International Airport

Mr. Davis has 20+ years of experience in airport planning and master planning. Mr. Davis has focused much of his career on airfield and airspace planning issues.

Matt was responsible for the coordination of ATL's end around taxiway (Taxiway V) which led to the establishment of a national standard for end around/perimeter taxiways. Matt has also been responsible for managing the planning activities associated with the airport's airfield pavement replacement projects (Runway 8R/26L, Taxiways E, F & L, Ramps 1 & 3) and improvements to the Runway Safety Areas (Runways 9L/27R, 9R/27L, 8L/26R, and 8R/26L) at ATL over the last five years. The airfield portion of the current Airport Development program which Matt is responsible for overseeing the planning for is approximately \$500 million. Currently, Matt is overseeing the planning for the development of the proposed South Gate Complex which will add approximately 40 new gates, five new taxiways (including a second end around taxiway), and an automated people mover system that is currently estimated to cost \$1.5 Billion.

Prior to assuming his current position Matt worked for the Broward County Aviation Department, where he was responsible for coordinating development projects with the FAA, maintained the airport's CIP and Renewal and Replacement Plans, and coordinated completion of the initial EIS for the extension of Runway 9R/27L.

Before joining the Broward County Aviation Department Mr. Davis worked for 13 years as an aviation consultant providing planning services to large hub airports across the United States. Among the projects he worked on as a consultant are: Minneapolis-Saint Paul International, Miami International, Chicago-O'Hare International, Indianapolis International, San Antonio International, and Milwaukee-General Mitchell International.