

Conference
Proceedings
on the Web
26

Public–Private Partnerships

What Are the Lessons Learned?

July 10–11, 2019
Washington, D.C.

CONFERENCE PROCEEDINGS ON THE WEB 26

Public–Private Partnerships What Are the Lessons Learned?

Proceedings of an ACRP Insight Event

Sheri Ernico
Leigh Fisher
Rapporteur

July 10–11, 2019
Keck Center of the
National Academies of Sciences, Engineering, and Medicine
Washington, D.C.

Organized by the
Airport Cooperative Research Program

Sponsored by the
Federal Aviation Administration

The National Academies of
SCIENCES • ENGINEERING • MEDICINE



TRANSPORTATION RESEARCH BOARD
Washington, D.C.
2020

www.TRB.org

Conference Proceedings on the Web 26

Transportation Research Board (TRB) publications are available by ordering individual publications directly from the TRB Business Office, through the Internet at www.TRB.org or national-academies.org/trb, or by annual subscription through organizational or individual affiliation with TRB. Affiliates and library subscribers are eligible for substantial discounts. For further information, contact the Transportation Research Board Business Office, 500 Fifth Street, NW, Washington, DC 20001 (telephone 202-334-3213; fax 202-334-2519; or e-mail TRBSales@nas.edu).

NOTICE: This report has been reviewed by a group other than the authors according to the procedures approved by a Report Review Committee consisting of members of the National Academies of Sciences, Engineering, and Medicine. The members of the committee responsible for the project were chosen for their special competencies and with regard for appropriate balance.

This conference was organized through TRB’s Airport Cooperative Research Program (ACRP) and sponsored by the Federal Aviation Administration. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project.

© 2020 National Academy of Sciences. All rights reserved.

Suggested citation: Transportation Research Board. *Conference Proceedings on the Web 26: Public–Private Partnerships: What Are the Lessons Learned?* Proceedings of an ACRP Insight Event, July 10–11, 2019. Washington, D.C.: The National Academies of Sciences, Engineering, and Medicine, 2020.

The National Academies of SCIENCES • ENGINEERING • MEDICINE

The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, nongovernmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The **National Academy of Engineering** was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. John L. Anderson is president.

The **National Academy of Medicine** (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the **National Academies of Sciences, Engineering, and Medicine** to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The National Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the National Academies of Sciences, Engineering, and Medicine at www.national-academies.org.

The **Transportation Research Board** is one of seven major programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to increase the benefits that transportation contributes to society by providing leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board's varied committees, task forces, and panels annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

Learn more about the Transportation Research Board at www.TRB.org.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Consensus Study Reports published by the National Academies of Sciences, Engineering, and Medicine document the evidence-based consensus on the study’s statement of task by an authoring committee of experts. Reports typically include findings, conclusions, and recommendations based on information gathered by the committee and the committee’s deliberations. Each report has been subjected to a rigorous and independent peer-review process and it represents the position of the National Academies on the statement of task.

Proceedings published by the National Academies of Sciences, Engineering, and Medicine chronicle the presentations and discussions at a workshop, symposium, or other event convened by the National Academies. The statements and opinions contained in proceedings are those of the participants and are not endorsed by other participants, the planning committee, or the National Academies.

For information about other products and activities of the National Academies, please visit www.nationalacademies.org/about/whatwedo.

Planning Committee for the ACRP Insight Event

Peter Kirsch, *Kaplan Kirsch & Rockwell, Chair*

Rhona K. DiCamillo, *DKMG Consulting*

Caitlin Ghoshal, *WSP USA*

Valerie Holt, *Consultant (retired, formerly with Metropolitan Washington Airports Authority)*

Michael J. Minerva, *American Airlines*

Erin O'Donnell, *Chicago Midway International Airport*

Christopher A. Poinsatte, *Dallas/Fort Worth International Airport*

Chunyan Yu, *Embry Riddle Aeronautical University*

Liaisons

Susan Sauer Sloan, *Director, Government–University–Industry Research Roundtable,
The National Academies of Science, Engineering, and Medicine*

Transportation Research Board Staff

Theresa H. Schatz, *Senior Program Officer*

Megan Chamberlain, *Senior Program Assistant*

Publications Staff for Conference Proceedings on the Web 26

Eileen P. Delaney, *Director of Publications*

Natalie Barnes, *Associate Director of Publications*

Janet M. McNaughton, *Senior Editor*

Jennifer Correro, *Assistant Editor*

TRANSPORTATION RESEARCH BOARD 2019 EXECUTIVE COMMITTEE*

OFFICERS

CHAIR: **Victoria A. Arroyo**, *Executive Director, Georgetown Climate Center; Assistant Dean, Centers and Institutes; and Professor and Director, Environmental Law Program, Georgetown University Law Center, Washington, D.C.*

VICE CHAIR: **Carlos M. Braceras**, *Executive Director, Utah Department of Transportation, Salt Lake City*

EXECUTIVE DIRECTOR: **Neil J. Pedersen**, *Transportation Research Board*

MEMBERS

Michael F. Ableson, *CEO, Arrival Automotive–North American, Detroit, MI*

Ginger Evans, *CEO, Reach Airports, Arlington, VA*

Nuria I. Fernandez, *General Manager/CEO, Santa Clara Valley Transportation Authority, San Jose, CA*

Nathaniel P. Ford, Sr., *Executive Director–CEO, Jacksonville Transportation Authority, Jacksonville, FL*

A. Stewart Fotheringham, *Professor, School of Geographical Sciences and Urban Planning, Arizona State University, Tempe*

Diane Gutierrez–Scaccetti, *Commissioner, New Jersey Department of Transportation, Trenton*

Susan Hanson, *Distinguished University Professor Emerita, Graduate School of Geography, Clark University, Worcester, MA*

Stephen W. Hargarten, *Professor, Emergency Medicine, Medical College of Wisconsin, Milwaukee*

Chris T. Hendrickson, *Hamerschlag University Professor of Engineering, Carnegie Mellon University, Pittsburgh, PA*

S. Jack Hu, *Vice President for Research and J. Reid and Polly Anderson Professor of Manufacturing, University of Michigan, Ann Arbor*

Roger B. Huff, *President, HGLC, LLC, Farmington Hills, MI*

Ashby Johnson, *Executive Director, Capital Area Metropolitan Planning Organization (CAMPO), Austin, TX*

Geraldine Knatz, *Professor, Sol Price School of Public Policy, Viterbi School of Engineering, University of Southern California, Los Angeles*

William Kruger, *Vice President, UPS Freight for Fleet Maintenance and Engineering, Richmond, VA*

Julie Lorenz, *Secretary, Kansas Department of Transportation, Topeka*

Michael R. McClellan, *Vice President, Strategic and Network Planning, Norfolk Southern Corporation, Norfolk, VA*

Melinda McGrath, *Executive Director, Mississippi Department of Transportation, Jackson*

Patrick K. McKenna, *Director, Missouri Department of Transportation, Jefferson City*

Brian Ness, *Director, Idaho Transportation Department, Boise*

Susan A. Shaheen, *Adjunct Professor, Co-Director, Transportation Sustainability Research Center, University of California, Berkeley*

James M. Tien, *Distinguished Professor and Dean Emeritus, College of Engineering, University of Miami, Coral Gables, FL*

Shawn Wilson, *Secretary, Louisiana Department of Transportation and Development, Baton Rouge*

EX OFFICIO MEMBERS

Ronald Batory, *Administrator, Federal Railroad Administration, U.S. Department of Transportation*

Michael R. Berube, *Acting Assistant Secretary for Sustainable Transportation, U.S. Department of Energy, Washington, D.C.*

Mark H. Buzby (Rear Admiral, U.S. Navy), *Administrator, Maritime Administration, U.S. Department of Transportation*

Steven Cliff, *Deputy Executive Officer, California Air Resources Board, Sacramento*

Edward N. Comstock, *Independent Naval Architect, Sunbury, MD*

Stephen Dickson, *Administrator, Federal Aviation Administration, Washington, D.C.*

Howard R. Elliott, *Administrator, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation*

Diana Furchtgott–Roth, *Assistant Secretary for Research and Technology, Office of the Secretary of Transportation, Washington, D.C.*

LeRoy Gishi, *Chief, Division of Transportation, Bureau of Indian Affairs, U.S. Department of the Interior, Germantown, MD*

John T. Gray II, *Senior Vice President, Policy and Economics, Association of American Railroads, Washington, D.C.*

Nikola Ivanov, *Director of Operations, Center for Advanced Transportation Technology Laboratory, University of Maryland, College Park, and Chair, TRB Young Members Council*

Raymond Martinez, *Administrator, Federal Motor Carrier Safety Administration, Washington, D.C.*

Nicole Nason, *Administrator, Federal Highway Administration, Washington, D.C.*

James Owens, *Deputy Administrator and Acting Administrator, National Highway Traffic Safety Administration, U.S. Department of Transportation*

Leslie S. Richards, *General Manager, SEPTA, Philadelphia, PA*

Craig A. Rutland, *U.S. Air Force Pavement Engineer, U.S. Air Force Civil Engineer Center, Tyndall Air Force Base, FL*

Karl Schultz (Admiral, U.S. Coast Guard), *Commandant, U.S. Coast Guard, Washington, D.C.*

Karl Simon, *Director, Transportation and Climate Division, U.S. Environmental Protection Agency*

Paul Skoutelas, *President and CEO, American Public Transportation Association, Washington, D.C.*

Scott A. Spellmon (Major General, U.S. Army), *Deputy Commanding General for Civil and Emergency Operations, U.S. Army Corps of Engineers*

Katherine F. Turnbull, *Executive Associate Director and Research Scientist, Texas A&M Transportation Institute, College Station (voting)*

Jim Tymon, *Executive Director, American Association of State Highway and Transportation Officials, Washington, D.C.*

K. Jane Williams, *Acting Administrator, Federal Transit Administration, U.S. Department of Transportation*

* Membership as of November 2019.

Contents

Preface	1
Abbreviations	2
Introduction	3
Session 1: The Landscape of P3s	5
<i>Peter Kirsch, Kaplan Kirsch & Rockwell; Stephen Van Beek, Steer</i>	
Session 2a: Pre-Procurement	8
<i>Brett Simon, LeighFisher; David Narefsky, Mayer Brown; Clay McCoy, PJ SOLOMON; Li Pei Wang, Port Authority of New York and New Jersey; Jay DeWitt, City of Phoenix</i>	
Keynote Session: The Federal Environment Around P3s	13
<i>Morteza Farajian, Build America Bureau, U.S. Department of Transportation</i>	
Session 2b: Pre-Procurement	15
<i>Sheri Ernico, LeighFisher; Steve Sisneros, Southwest Airlines; Galen Beaufort, City of Kansas City; Dan Reimer, Denver International Airport; Roger Johnson, Jacobs</i>	
Session 3: Procurement	18
<i>Caitlin Ghoshal, WSP; Lysa Scully, Port Authority of New York and New Jersey; Bo Kemp, Faegre Baker Daniels Consulting</i>	
Session 4: Political Risks and Opportunities for Approving P3s	22
<i>Peter Kirsch, Kaplan Kirsch & Rockwell; Susana Carbajal, Austin–Bergstrom International Airport; Lois Scott, Epoch Advisors</i>	
Session 5: After Financial Close	25
<i>Valerie Holt, Consultant; Arif Ghouse, Paine Field/Snohomish County Airport; Shane Harbinson, City of Austin, Texas; Jorge Hernandez, Aerostar</i>	
Session 6: Lessons Learned	29
<i>Sheri Ernico, LeighFisher; Peter Kirsch, Kaplan Kirsch & Rockwell; Stephen Van Beek, Steer; David Narefsky, Mayer Brown; Geoff Stricker, Edgemoor</i>	
Appendix A: Program Agenda	33
Appendix B: Survey Summary	35
Appendix C: List of Attendees	37

Preface

“Public–Private Partnerships: What Are the Lessons Learned?” (ACRP Project 11-08/16-04), held July 10–11, 2019, at the Keck Center of the National Academies of Sciences, Engineering, and Medicine (the National Academies) in Washington, D.C., brought together senior airport executives; representatives from federal, state, and local government; and representatives from the financial, consulting, and legal fields to discuss the opportunities and challenges of implementing public–private partnerships at airports. The Transportation Research Board’s (TRB’s) Airport Cooperative Research Program (ACRP) organized the event as part of its series of convening activities titled “ACRP Insight Events.”

These proceedings, prepared by rapporteur Sheri Ernico of LeighFisher, Inc., are a compilation of the presentations and a factual summary of the ensuing discussions at the event. The planning committee for “Public–Private Partnerships: What Are the Lessons Learned?” was solely responsible for organizing the event, identifying speakers, and coordinating activities during the event. The views contained in these proceedings are those of individual ACRP Insight Event participants and do not necessarily represent the views of all participants, the planning committee, TRB, or the National Academies.

This document was reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise. The purposes of this independent review are to provide candid and critical comments that will assist the National Academies in making the published proceedings as sound as possible and to ensure that the document meets institutional standards for clarity, objectivity, and responsiveness to the project charge. The review comments and draft manuscript remain confidential to protect the integrity of the process.

TRB thanks the following individuals for their review of the proceedings: Jennifer Cohen, Health and Medicine Division, National Academies of Sciences, Engineering, and Medicine, Washington, D.C.; Rhona DiCamillo, DKMG Consulting LLC, Wilmette, Illinois; and Lynn Hampton, Lynn Hampton Associates, Louisville, Kentucky.

Although the reviewers listed above provided many constructive comments and suggestions, they did not see the final draft of the proceedings before their release. The review of the proceedings was overseen by Chris Hendrickson, Carnegie Mellon University. He was responsible for making certain that an independent examination of the proceedings was performed in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content rests entirely with the author and the institution.

Abbreviations

ACRP	Airport Cooperative Research Program
AIPP	Airport Investment Partnership Program
APM	automated people mover
CBA	community benefit agreement
CONRAC	consolidated rental car facility
DB	design–build
DBFOM	design–build–finance–operate–maintain
DOT	Department of Transportation
FAA	Federal Aviation Administration
IP	intellectual property
LAWA	Los Angeles World Airports
O&M	operations and maintenance
P3	public–private partnership
PANYNJ	Port Authority of New York and New Jersey
RFI	request for information
RFP	request for proposal
RFQ	request for qualifications
TIFIA	Transportation Infrastructure Finance and Innovation Act
TRB	Transportation Research Board
TSA	Transportation Security Administration
VFM	value for money

Introduction

“Public–Private Partnerships: What Are the Lessons Learned?” (ACRP Project 11-08/16-04) was organized by the Transportation Research Board’s (TRB’s) Airport Cooperative Research Program (ACRP) as part of its series of convening activities, “ACRP Insight Events.” This event focused on the extent to which public–private partnerships (P3s) have been used in the airport industry and lessons learned from these experiences. The event also identified opportunities for further application of P3 arrangements in the industry. “Public–Private Partnerships: What Are the Lessons Learned?” sought to bring together senior airport executives, representatives from federal and local government, and other experts engaged in airport industry finance and operations. The program agenda for the event is provided in Appendix A, and the results of a survey distributed to attendees after the event are provided in Appendix B.

Preparations for this ACRP Insight Event included a thorough literature review, which served to define the state of understanding of P3s and their application in the airport industry and to identify notable thought leaders and practitioners in the industry. Several of these thought leaders and practitioners were then selected to serve on the planning committee for the event.

“Public–Private Partnerships: What Are the Lessons Learned?” took place on July 10–11, 2019, at the Keck Center of the National Academies of Sciences, Engineering, and Medicine (the National Academies) in Washington, D.C. More than 80 people registered for the event. The registrants’ professional affiliations included airports, airlines, federal and local government, consulting, law, finance, and more. The full list of attendees is provided in Appendix C.

The event led off with an overview of P3s in the airport industry and was followed by a series of panel discussions structured according to the key phases in the P3 procurement process, a keynote address, and observations on lessons learned highlighted throughout the event.

Presentations from “Public–Private Partnerships: What Are the Lessons Learned?” are available on the ACRP Insight Event web page at <http://www.trb.org/ACRP/ACRP-Insight-Events.aspx>. The literature review prepared for the event is also available on the event web page. Readers who are interested in more information can e-mail the ACRP senior program officer for the event, Sia Schatz, at TSchatz@nas.edu.

ACRP is an industry-driven, applied research program that develops near-term, practical solutions to problems faced by airport operators. ACRP is managed by TRB, a part of the National Academies, and is sponsored by the Federal Aviation Administration (FAA). ACRP Insight Events are forums that foster dialogue among professionals across sectors, institutions, and industries. ACRP Insight Events convene airport industry leaders and subject matter experts in various fields to encourage discussion and promote broader and

deeper insight on topics of significance to airport operators. These in-depth, face-to-face gatherings are designed to promote communication and collaboration, foster innovation, and help identify areas of future interest and research, especially for topics of emerging importance.

SESSION 1

The Landscape of P3s

Peter Kirsch, *Kaplan Kirsch & Rockwell*, Presenter

Stephen Van Beek, *Steer*, Presenter

Peter Kirsch and **Stephen Van Beek** highlighted the landscape of P3s at U.S. airports. **Kirsch** noted that over the past 2 years, there has been recognition of the need for infrastructure investment at U.S. airports and new models for delivering financing for those investments. He added that the idea of valuing airport assets is also new in the United States.

Van Beek stated that the past 10 years of growth in the aviation industry is unprecedented, and the country's largest airports are facing capacity challenges. While revenue comes incrementally, costs are growing exponentially. There are precedents for airport privatization and P3s internationally (e.g., in Australia), but the United States has been slow to adopt those models. Van Beek noted that P3s come in many different forms for different types of assets. He added that, compared with 25 to 30 years ago, there is significantly more capital available now for investments in lower-risk projects, such as those at airports.

Kirsch provided two definitions for P3s:

- An arrangement by which one or more services or projects that traditionally have been provided or performed by a public sponsor are instead provided or performed by a private-sector entity.
- An arrangement through which a private-sector partner will exercise greater control, have greater responsibility, and/or make a greater financial investment than would customarily be the case with respect to a particular type of airport contract, service, or project.

Van Beek added that with P3s, the lease with the commercial entity becomes a key governing document for the airport.

Kirsch stated that, historically, there have been very clear definitions of the roles of the federal government, local government, and private sector at airports, which is not the case at airports internationally. **Van Beek** noted that these roles are beginning to change with the increased use of private capital and role of private entities in managing certain airport functions.

Kirsch stated that there are very few domestic private commercial airports, but many publicly owned general aviation airports. He noted that the public and private sectors have always been very connected, although the dynamic between public- and private-sector stakeholders can vary significantly across airports and across airport transactions (e.g., a rental car facility versus terminal construction). Kirsch noted that state legal frameworks

for P3s have also changed significantly within the past several years, with states becoming more amenable to private-sector involvement in owning, operating, and funding infrastructure.

Van Beek noted that unlike elsewhere in the world, U.S. airports are heavily regulated to ensure safety, security, and environmental protection. **Kirsch** added that this is important because so much private investment comes from international sources, and investors must be educated on how U.S. airports are owned, operated, and regulated and understand the limitations this imposes. Kirsch noted that airline lease agreements may be new to foreign investors.

Kirsch described FAA's Airport Investment Partnership Program (AIPP), which is designed to provide an offer to private capital that FAA can control. He added that domestically, airports are valued for the indirect benefits they bring to a community or region, not direct economic benefits such as economic returns to stakeholders. Kirsch noted that while it is not impossible to align direct and indirect benefits, a deal with a private investor must ensure that community goals also meet investors' goals, and vice versa.

Van Beek noted reasons for examining new financing alternatives, including accessing traditional and nontraditional sources of capital, new partners, and global expertise. He stated that the key issues regarding P3s include who takes on what risks, how much those risks cost, what the alternatives are, and how to obtain the best deal.

Kirsch reviewed sources of capital funding for airports, including the AIPP, private capital, general airport revenue bonds, and passenger facility charges. **Van Beek** noted that these sources come with either grant assurances, passenger facility charges, or a bond covenant and that the challenge for airports is to decide which source of funds pays for what, and when, and to put the funding package together.

Kirsch noted the continuum of private-sector engagement, including advisory services to product or service sales; service contracts; management contracts; developer financing and operations; full privatization; and full airport development by the private sector. He observed that the latter is very uncommon and will likely remain so and that there are different iterations within the developer financing operation category, including design-build (DB), design-build-transfer, design-build-operate-maintain, design-build-finance, and design-build-finance-operate-maintain (DBFOM). He stated that understanding how to shift control from the public to the private sector becomes an important factor in deciding where to obtain funding from.

Van Beek stated that *ACRP Report 66: Considering and Evaluating Airport Privatization*¹ is an excellent resource on the spectrum of public- and private-sector involvements in airports.

¹ Ernico, S., B. Boudreau, D. Reimer, and S. Van Beek. *ACRP Report 66: Considering and Evaluating Airport Privatization*. Transportation Research Board, Washington, D.C., 2012.

Kirsch stated that the basic concepts behind privatization are not the same as those behind P3s; privatization involves taking a municipal asset and monetizing it.

Van Beek noted that renewed interest in P3s in today’s market is being driven by public-sector challenges, including growth (in particular, passenger growth, which is swamping operational growth), increased efficiency, limited revenue sources, and the need for additional capacity in ground transport systems and elsewhere. He stated that the airport sector is attractive to investors who may be backing pension funds but may appear riskier to real estate investors.

Kirsch stated that there is no standard airport P3 contract; deal structures are complex and unique, and risk is allocated differently at each airport.

Van Beek noted five key factors for determining transaction type: market or traffic risk, cost, revenue, rights and obligations or service, and term. He added that it is important not to overspecify the terms of the deal up front.

Van Beek noted that in the business planning stage, investors will want to look at airport traffic, commercial revenues, aeronautical revenues and regulation, operating expenditures, and capital expenditures and develop forecasts. He stated that investors need to look across the entire airport operation and identify how to create additional value in the airport’s business plan. Van Beek stated that to make a deal more attractive, airports should protect their goals for the transaction, conduct advanced homework (e.g., develop a shadow bid), talk with investors, encourage innovative solutions, provide ideas to investors to be integrated into the bid, and solicit competition from at least three interested firms.

SESSION 2A

Pre-Procurement

Brett Simon, *LeighFisher*, Moderator

Panelists

David Narefsky, *Mayer Brown*

Clay McCoy, *PJ SOLOMON*

Li Pei Wang, *Port Authority of New York and New Jersey*

Jay DeWitt, *City of Phoenix*

Brett Simon introduced the panelists and stated that one of the most challenging aspects of P3s is getting started.

David Narefsky reviewed the legal and regulatory considerations associated with the pre-procurement process. He stated that grant assurances—in particular, requirements regarding revenue diversion—are essential in terms of compliance with federal requirements, regardless of the type of P3.

Narefsky highlighted AIPP statutory requirements and noted several key recent changes in the AIPP. These changes included removing limits on participating airports and allowing government owners to take the proceeds of the lease and use them off-airport, independent of the grant assurance program, provided they receive approval of 65% of the airlines serving the airport (by landed weight or number). He also highlighted issues related to P3s and grant assurances and noted that private parties are still subject to compliance with grant assurances on how airlines are treated with regard to rates and charges.

Narefsky highlighted the applicability of local laws and regulations and noted the diversity of rules and governing agreements across the country. He stated that in recent years, state legislatures generally have been more favorable to legislation authorizing P3s, although requirements are still very inconsistent and may not apply to airports. He added that state and local laws also are very important for term length, performance security, right-of-way responsibility, data protection, and actions or authority that must remain with the government agency.

Narefsky highlighted other relevant public policy considerations such as open records laws, competitive bidding, noncompete requirements and restrictions, and state and local taxes to which the P3 counterparty may be subject.

Narefsky stated there are several key considerations that regularly arise with P3 procurement methods, including transparency, the selection criteria and methodology, the degree of risk transfer, financing options, and funding sources. He noted that workforce policy considerations such as the prevailing wage, local hiring, labor agreements and protections, and other requirements generally have limited impact on the implementation of P3 projects.

Simon asked how changes to the AIPP align with local rules and regulations. **Narefsky** responded that the intent was that local airport owners and government might be more favorable to considering P3s if they could retain equity interest in the asset. He added that some local governments can legally be investors and some cannot; these new flexibilities must be reconciled with state and local constitutional provisions regarding government ownership. He added that it is possible that some of the same benefits that partial privatization provides could be accomplished by a combination of ongoing revenue sharing and terms and provisions in transaction documents, which give government owners similar types of control, rights and protection, and benefits.

Simon asked whether the examples of unsolicited bids that have ultimately not resulted in a project or deal would stop other investors from developing unsolicited bids. **Narefsky** responded that unsolicited bids are episodic, and developers make judgments on the context in which they make sense. He added that it is hard in general for unsolicited proposals to proceed, and that this is particularly true for airports because of their inherently public nature.

Clay McCoy highlighted the universe of airport investors and noted that in 2017 and 2018, more than \$150 billion was raised globally. He added that because the U.S. airport investment market is developing more slowly, transactions are often spurred by unsolicited proposals that lead to a procurement process.

McCoy stated that it is important for investors to see that there is broad stakeholder buy-in for private investment before moving forward. He noted that airports have historically launched requests for proposals (RFPs) or requests for qualifications (RFQs) that do not close or change form, or they make changes at the RFP or RFQ stage around which investors cannot adjust.

McCoy noted that “industry days” can be very helpful for bringing the public and private sectors together to leverage ideas and experience. He noted that these conversations should happen before an RFQ, to help inform the transaction and determine what private-sector expertise is needed to understand the available options. Once internal stakeholders are aligned on what is important to them and what they want out of the project, marketing to private investors can begin. Through the RFQ process, the public sector can look at the ideas and experience of potential partners.

McCoy stated that it is important to ensure that specific stakeholder concerns are addressed in the best way possible and that any restrictions or requirements included in

legal documents should be reflected in the financial offer. He added that private partners will look at two key variables: allocation of risk and long-term alignment of interests.

McCoy described the valuation process, during which bidders develop a detailed financial model for the term of the lease and run a discounted cash flow analysis; develop forecasts for airport operations; and project cash flows.

Roger Johnson asked why risk allocation shifts from bidder to bidder. **McCoy** responded that within a standard RFP process, the public authority puts out a lease agreement or a use agreement P3 contract that is essentially a wish list for risk allocation. Throughout the RFP process, the bidder will mark up that agreement or contract on the basis of what it is willing to accept.

In response to a question about obtaining buy-in from local political leaders, McCoy stated that investors try to meet with as many decision-makers as possible to determine whether there is sufficient buy-in and good intent to justify investing time and resources in further negotiations.

Narefsky stated that in the case of P3s, the public sector will often provide a stipend to short-listed bidders to offset the resources the investors expend throughout the process.

In response to a comment on the continuous turnover that can happen in local government, Narefsky stated that it is important to look beyond the political landscape. There are other important considerations, such as the asset in question and who makes the decisions about it. **McCoy** added that if there is broader buy-in for the project among local residents and businesses, it is possible to overcome political turnover.

Li Pei Wang highlighted the pre-procurement process for the ongoing LaGuardia Terminal B project. He noted that the Port Authority of New York and New Jersey (PANYNJ) spent a tremendous amount of time on pre-procurement. Technical efforts included coming up with a design that balances airside, terminal, and landside resources and engaging design consultants to identify a way to implement the plan on paper, including evaluating constructability and logistics phasing. Wang stated that pre-procurement survey efforts covered environmental, building, and lease agreements. PANYNJ also considered financial operations and maintenance (O&M) requirements and conducted interviews, studies of value for money (VFM), and risk assessments for all permutations from P3, DB, and DBFOM.

Wang stated that PANYNJ considered whether to modernize or redevelop the existing terminal but that, ultimately, it decided that a new terminal was needed to correct existing deficiencies and accommodate future forecasted demand.

Wang reviewed the time frame for the redevelopment procurement. The effort began in 2009, and the request for information (RFI) was issued in 2012. He noted that there was uncertainty as to whether the marketplace would be willing to take on a project that was so big and complex. Therefore, PANYNJ used the pre-procurement process to determine interest, which was overwhelming.

Wang stated that developing a project briefing book was very helpful for the RFQ stage. The book was a signal to developers that the project was moving forward and included potential design guidelines. PANYNJ included stringent submission requirements in the RFQ and used a very prescriptive form to limit the total number of responses. Wang noted that, at the end of the RFQ process, a P3 was still an option. PANYNJ then moved forward with developing the RFP, which took 9 months.

Margaret McKeough noted that it took a long time to get to the RFI phase and asked whether that time frame could have been shortened. **Lysa Scully** responded that in the early stages, there was a vision for the project, but no advocate or champion for it, and there were many other competing priorities. She added that 2011 was the year in which PANYNJ decided to pursue a P3. **Wang** added that, given the complexity of the project, the time spent in Phase 1 was necessary and fruitful.

In response to a question from **Sheri Ernico**, **Scully** stated that PANYNJ paid a stipend to the three final proponents while working with the preferred proponents. PANYNJ held at least 80 collaborative dialog meetings with proponents over the course of 9 months; the stipend was a demonstration of commitment and recognition of the time and resources the proponents committed to the bidding process.

Jay DeWitt highlighted the pre-procurement process for and status of the City of Phoenix's P3 deal for airport parking operations, which is still in process. He stated that Phoenix's population growth has been among the highest in the nation in recent years, and the airport is hundreds of miles from any other large hub airports. Origin and destination traffic is growing approximately 5% to 7% annually, which leads to parking revenues. DeWitt noted that parking generates close to 25% of airport revenues, but the rapid adoption of transportation network companies and growth in outside parking operator business have limited the increases in parking revenue.

DeWitt stated that investors have expressed an interest in airport operations for the past several years and that parking was identified as underperforming expectations, with the potential for an additional 20% in revenue that is not being realized. He stated that the deal in process is a 30-year lease DBFOM arrangement, with a lessee preference for a longer term. The deal includes an up-front payment and an annual revenue share percentage and portion of transportation network company trip fees above an established threshold. The investor preferred a higher up-front payment and lower annual payments, but the city negotiated a compromise between the two. The investment will fund a new parking garage near a future Sky Train station and replace two existing parking areas. Ownership reverts back to the airport at the end of the lease. The positive differential in net present value over base case pro forma is approximately 20%.

DeWitt noted that the up-front payment reduces future debt requirements and shifts the market risk to the private-sector partner. The deal also offers the airport a parking revenue guarantee and provides more competitive parking products and better customer services to customers. He added that the city council sets a limit to parking fee increases.

DeWitt stated that the city began with an RFI, followed by an RFQ and RFP, all of which were preceded by outreach efforts and data gathering.

In response to a question from **Valerie Holt** as to why the revenue stream was undervalued, **DeWitt** stated that historically, there had been no competition, and the city had done no advertising and had not implemented variable rates, yield management practices, or other measures to improve revenue. A 2016 increase in parking rates was the first one in 10 years.

In response to a question from **Holt** on the lessee’s flexibility in raising rates, **DeWitt** stated that the lessee has considerable flexibility, but the city will likely implement a cap that will increase with inflation on an annual basis.

An audience member asked whether there were any requirements over the 30-year lease term that allow the city to control how the lessee manages customers. DeWitt responded that there are some limits and requirements on keeping facilities in good repair, all of which will be included in the RFP.

In response to an audience member question, DeWitt stated that there is existing debt on the parking garage that will be reduced by payments.

Louis Wolinetz stated that airports are generally reluctant to give up revenue. **DeWitt** stated that the driver for the deal is that the city will see increased revenues.

In response to a question from **Simon**, **DeWitt** clarified that the city did pay the proponents a stipend, which was essential for keeping them engaged throughout the protracted process. The terms of the stipend allow the city to retain intellectual property (IP) rights to all proposals.

Narefsky asked whether the deal included any noncompete considerations (e.g., restricting the city from licensing additional off-airport parking facilities). **DeWitt** responded that the lessee would like the city to not build additional parking facilities that would compete with airport parking, but that the city had made no guarantees or representations accordingly.

In response to a question from **Simon**, **DeWitt** confirmed that the airlines and FAA had been involved in and informed of the planned transaction.

In response to an audience member question on whether the city had right of first refusal should the investor sell the agreement, DeWitt responded the city would take the portion of the proceeds above and beyond the value of the agreement today and has the right to approve the party to the sale.

KEYNOTE SESSION

The Federal Environment Around P3s

Morteza Farajian, *Build America Bureau, U.S. Department of Transportation*,
Keynote Speaker

Morteza Farajian described the background and purpose of the U.S. Department of Transportation (DOT) Build America Bureau. The bureau was created by Congress to address innovative project finance and delivery and can help stakeholders identify which individuals in the U.S. DOT to talk with about grant and credit financing. Farajian added that the bureau talks to and educates different stakeholders about U.S. DOT products and state and private-sector best practices.

Farajian described the financial tools that the U.S. DOT offers, including the Transportation Infrastructure Finance and Innovation Act (TIFIA) and the Railroad Rehabilitation and Improvement Financing program. He noted that TIFIA is a very powerful program and that the U.S. DOT is currently discussing how to integrate airports into the TIFIA program to help address an estimated \$128 billion needed in airport investments for the period from 2019 to 2023.

Farajian stated that the private sector can provide innovation, passenger experience management, and cost and other efficiencies. He noted that there are many different models for private investment that airports should evaluate on the basis of advantages, limitations, and costs and benefits. When working with the Virginia DOT, Farajian led evaluations of P3 options that involved looking at the project on its own merits, bringing stakeholders together to discuss options and align goals, and documenting how the decision was made to ensure transparency.

The bureau is seeking to compile best practices and other educational material related to airports and would like to provide technical assistance and conduct peer exchange sessions. Farajian asked what the roadblocks to greater private investment in the airport sector are.

An audience member asked how airports could participate in the TIFIA program, as the enabling legislation refers to surface transportation projects. Farajian responded that the U.S. DOT is looking to identify what improvements would qualify and noted that any airport with transit access could have eligible projects related to, for example, parking garages or car rental facilities.

An audience member noted the challenge of having to speak with many different offices or individuals within the U.S. DOT to get a project funded and approved. Farajian responded that there are still many policy issues and inefficiencies to address, but the bureau can

serve as a champion and guide to help interested parties navigate the process and speak with all key parties in the U.S. DOT.

In response to a question from **Lynn Hampton**, Farajian clarified that TIFIA assistance is limited to 33% of the total eligible project costs, or up to 49% of eligible costs for smaller or rural projects. He noted that private activity bonds are taxable, which makes them more expensive in the market. The U.S. DOT can allocate tax-exempt status to eligible projects so that entities can issue tax-exempt bonds—another very attractive tool that private companies use a lot.

SESSION 2B

Pre-Procurement

Sheri Ernico, *LeighFisher*, Moderator

Panelists

Steve Sisneros, *Southwest Airlines*

Galen Beaufort, *City of Kansas City*

Dan Reimer, *Denver International Airport*

Roger Johnson, *Jacobs*

Steve Sisneros stated that airline-led P3s are one of the most successful examples of airport P3s. Southwest has led four projects, with one still underway, including a new \$500 million terminal and \$200 million garage in Dallas, a concourse expansion in Fort Lauderdale, and a \$500 million project at Los Angeles International Airport, among others. He noted that Los Angeles World Airports (LAWA) is one of the leaders in airline-led projects.

Sisneros noted that airlines generally work hard to build relationships with domestic airport partners and are treated as valued stakeholders, which is not always the case internationally. He added that the earlier an airport is involved in projects and planning, the more likely the airport is to get what it needs.

Galen Beaufort stated that the City of Kansas City aviation department worked with stakeholders, including airlines, to evaluate whether to renovate the existing facility or build a new one. The topic was contentious for several years, but the city was able to get an agreement in place for construction of a new terminal. Beaufort stated that the idea came to the city council as a sole source contract from a local firm partnered with local financiers, but the city council passed an ordinance requiring voter approval of the demolition of the terminal or construction of a new terminal or both. Beaufort stated that convincing the voting public that new construction and demolition of the old terminal was a good idea became part of the pre-procurement process. Accepting a sole source bid ultimately became very difficult, for political reasons, and the city council decided to pursue an RFQ process.

Beaufort stated that the development agreement included a two-step decision-making process. The city established a project management committee that included representatives from the airlines, developers, and city managers to make decisions about design and scope. A steering oversight committee to which issues could be elevated included the director of aviation and an airline representative. Beaufort noted that one lesson learned was to spend more time educating elected officials and the citizenry on what a P3 is and what its advantages and disadvantages are.

Dan Reimer provided background on the Denver International Airport's Great Hall Project to renovate the main landside terminal. The goal of the project was to consolidate the ticketing operation and expand the Transportation Security Administration (TSA) checkpoint, and the procurement process took approximately 3 years, from 2014 to 2017.

Reimer stated that the airport held an outreach event in December 2014 and offered to have one-on-one meetings with interested bidders, at which point 18 entities expressed interest. An RFQ was issued in spring 2015, after which four out of five respondents were short-listed and one-on-one communications were held with each short-listed bidder. The RFP reflected both bidders' and owners' priorities. Reimer stated that after the RFP was issued, the airport entered into a year-long negotiation phase and then executed the agreement in 2016. The project is currently in the design and construction phase.

Reimer outlined the terms of the agreement, which is a 34-year agreement with a 4-year design and construction period and 30-year O&M period. The developer has a license to build the project and manage the program on behalf of the city and county for 30 years. There is a \$1.8 billion maximum contract liability, including a \$650 million fixed price for design and construction and a \$120 million contingency.

Roger Johnson stated that while he has been retired for a year, he previously ran LAWA's landside access modernization program, which was designed to address significant traffic and other terminal access challenges. The \$6.5 billion program included construction of an automated people mover (APM), six stations, a consolidated rental car facility (CONRAC), terminal interfaces, garages, and roads. The largest components, the APM and CONRAC, were both financed through a P3, and the \$5 billion APM contract was the largest ever awarded by the City of Los Angeles.

Johnson noted that there were many reasons for pursuing P3s for these projects, and that financing was not the primary motivation. Broad objectives included controlling capital costs; minimizing finance costs; expediting delivery; capturing economies of scale; and minimizing the impact on existing operations. He stated that using a DBFOM approach for the APM and CONRAC achieved all but one of those objectives (minimizing finance costs).

Johnson noted that the APM is the only one LAWA will ever build and will be a critical facility. Minimizing the risk to LAWA for operating that facility was cited as being very important.

In response to a question from **Sheri Ernico**, **Reimer** stated that Denver selected a P3 delivery model on the basis of a traditional VFM analysis. He added that Denver had prior experience with P3s and was open to experimenting further with similar models. The appeal is less with the financing and more with the expertise and innovation that the private sector provides and the ability to shift the construction and financial risk to the private operator.

In response to a question from **Benjamin DeCosta**, **Reimer** clarified that the predevelopment agreement did not have to be approved by the city council, although the contract did. Denver paid the developer for the IP generated through the predevelopment

agreement process. He added that there was a competitive selection process from RFQ to RFP and that one of three bidders was selected to enter into exclusive negotiations.

Sisneros added that the key question for evaluating P3s is whether a private developer can bring the project to market sooner. From a purely financial perspective, a P3 will never show greater benefits.

Ernico asked Sisneros and Beaufort how community benefit agreements (CBAs) have affected P3 deals. **Beaufort** responded that in Kansas City, the genesis of the CBA concept began with community members who wanted some of the funding going to private developers to be invested in distressed areas. After several months and many conversations with council members, the airport was able to pass a modified agreement that satisfied FAA and the airlines. All programs in the final CBA are directly related to terminal construction, such as bus transportation for workers to the site, extended childcare hours for workers, and an apprentice program for workers on site. **Sisneros** responded that airlines want to be good stewards and partners to local communities, but that there is a challenge when CBA components are not related to the specific airport project and affect airline rates and charges.

Valerie Holt asked whether Denver's licensing agreement was developed specifically for the Great Hall project. **Reimer** responded that the two primary reasons for the licensing agreement were because it avoided conveying interest in real property (which would have conveyed possessory interest tax) and avoided creation of a buffer or barrier between the city and county and its airline partners.

In response to a question from **Simon**, **Sisneros** stated that under new accounting rules, Southwest's terminal investments are on the airline's books during construction and then drop off once the asset is acquired by the airport. He noted that in the case of the LAWA project, the goal was to have no capital expenditure or cash flow impact on the company. For that project, Southwest did not do a specific return on investment analysis but based the decision on a commercial plan looking forward 10 years. He added that Southwest is looking at ways to take on more projects without jeopardizing the airline's credit ratings.

Beaufort noted that it is also helpful to build into the RFQ and RFP that the city will negotiate with the preferred bidder but retains the option to keep the procurement open and negotiate with other bidders if needed or until the contract is signed.

SESSION 3

Procurement

Caitlin Ghoshal, *WSP*, Moderator

Panelists

Lysa Scully, *Port Authority of New York and New Jersey*
Bo Kemp, *Faegre Baker Daniels Consulting*

Caitlin Ghoshal introduced the panelists and noted that the nature of the P3 can change the procurement process significantly.

Lysa Scully stated that LaGuardia Airport is in the midst of replacing all three main airport terminals; building a 6-mile roadway network; and constructing bridges, a parking garage, and airfields, among other efforts. Eighty five percent of the program is due to be complete by 2022.

The project was under review as early as 2008, and a \$35 million program management agreement was put in place to evaluate design. Scully stated that the decision was made to move forward in three phases: Terminal B, then Terminal C, and then the AirTrain. In 2012, PANYNJ decided to pursue a P3. Scully noted that the governor of New York was a strong advocate for enhancing the airport and that this helped PANYNJ to recruit local champions.

Scully noted that before securing funding, PANYNJ conducted a VFM exercise. She added that doing Stage 1 design was essential to setting the standard for what a developer would be constructing and designing to and the obstacles and impediments it would face. PANYNJ considered many factors, including acceleration of the project, spreading risk, O&M upkeep, making sure that any agreement would include parameters for fair and reasonable costs for airlines and other partners, and a cap on increased costs to them.

Scully reviewed the procurement process, beginning with an RFI and followed by an RFQ, which produced a short list of bidders. PANYNJ drafted an RFP and then engaged with the short-listed firms through many collaborative meetings to refine the RFP. Scully noted that the approach to the meetings was, in hindsight, too siloed, and there was not as much back-and-forth dialog as there should have been. However, everyone involved was under tremendous scrutiny, and it was critical to ensure that there was no undue influence on the decision-making process.

Sheri Ernico asked whether PANYNJ used performance penalties to ensure the project could be executed on schedule. **Scully** responded that there are liquidated damages and performance penalties in the contract for both PANYNJ and the developer, as well as a guaranteed maximum price.

Margaret McKeough asked how the process was staffed while day-to-day operations were maintained. **Scully** responded that the procurement process was not as intensive as the post-procurement process and project delivery.

Bo Kemp highlighted the process of putting a P3 in place for the Gary/Chicago International Airport. In 2011, the City of Gary was on the brink of financial disaster and was under control of the State of Indiana. Mayor Karen Freeman-Wilson came into office as control was given back to the city and had to determine how to improve financial stability and jobs. At the time, the airport had no commercial passenger operations. Kemp stated that Mayor Freeman-Wilson was open to any possible options along the P3 continuum.

Kemp described the structure of the P3 deal, including 80% of incremental profit from airport development going to the airport and 20% to the developer, and the opposite for land development. The city sought a developer with development, design, and airport management experience that would be integrated and aligned with the city's desired outcomes.

Kemp noted the importance of communicating to the public in a way that does not deter the developer from working with the city and of communicating the city's options for getting out of the deal if it is not working to the public's advantage. The city put in place a 10-year airport management contract that will be reassessed every 5 years thereafter and a 5-year land management deal that is also reassessed every 5 years thereafter.

Kemp stated that the city created an ad hoc committee with public and private individuals representing the public, the city, the region, and the airport board, among other stakeholders. The first job of the committee was to determine whether to pursue a P3 and to report back to the public on the findings and the successes and failures of other P3s. The second job was to determine for the airport what a P3 should look like. After the findings were presented to the public, the committee was sanctioned to move forward and issue an RFI to obtain more information on what an RFP should look like. Kemp noted that through the RFI process, the city engaged with financial advisors, designers, architects, and others, and ultimately selected two proponents, one of whom was awarded the contract in January 2014. Kemp described the deal, which involves a \$100 million investment over 40 years, including \$25 million in the first 36 months, \$2.5 million in new development, \$15,000 in the first 3 months for workforce/community development, and \$300,000 in workforce development over 3 years.

Kemp noted that the amount of undeveloped space surrounding the airport and access to Class I rail, ports, and highways within 1.5 to 2 miles of the airport were very appealing to developers. He stated that airport performance has been increasing and that the airport has opened a customs facility.

Ghoshal asked what determined the structure of the project. **Kemp** responded that the city had a vision of pairing economic investment and workforce development from the start. The public cared about passenger service and jobs, and the investment needed a tie-in to development to be appealing.

Ghoshal noted that the mandate for the ad hoc committee was significant and asked whether staff were added to support the effort. **Kemp** responded that cities are chronically understaffed and may lack the right skill sets for P3 decision-making. He stated that it was critical to bring in advisors, including experts on airline space, lawyers, bankers, Port Authority members, and others. Kemp added that when dealing with distressed communities, a significant level of communication is required to overcome public skepticism. The city held 28 community meetings to talk through the issues. It was also cited as important that the ad hoc committee represented and reflected the make-up of the community and that the committee meetings were open.

Scully stated that PANYNJ relied on advisors, lawyers, program managers, and others. It is not possible to staff up permanently for these projects, because those staff would eventually have to be let go. She added that the project design phase led to requirements and provisions for work, which led to development of O&M and design manuals. This allowed for alternative designs to the original concept and a shorter project time frame. She noted that all experts who supported the project had moved on to different projects and that career employees are critical for successfully getting through a transition.

Ghoshal asked how stakeholders were engaged in the LaGuardia process. **Scully** responded that PANYNJ was very focused on keeping stakeholders, including regulators, involved and advised. She noted that her predecessor had been engaging with community residents about the need for a project as early as 2007 and that by the environmental assessment phase, no one spoke publicly on record against the project. LaGuardia has six community teams whose members attended 12 evening community meetings per quarter. **Kemp** added that the city had to work individually with stakeholders to get their support.

Ghoshal asked how political champions were identified and fostered. **Scully** responded that timing worked in favor of the LaGuardia project. The year 2014 was an election year, and the decline and disinvestment in airports was a high-priority topic at the time. She added that the airport has always been very involved in the community and has authorization for funds to invest in the community (e.g., for labor force development and scholarships at a local aviation college). There is also a requirement for 30% minority/women-owned business enterprises for all projects on the employment and services/contract side. LaGuardia is exceeding this requirement and thereby further fostering goodwill in the community.

Kemp noted that many communities cannot meet such standards for minority/women-owned business enterprises. He stated that it is important to be very thoughtful about this issue, especially when bringing in a nonlocal vendor to meet those requirements.

Roger Johnson stated that LAWA established requirements for inclusivity, the workforce, and enhanced apprenticeship in P3 agreements, scored them as part of the evaluation process, and included them in performance requirements (applying penalties if the requirements were not met). LAWA also established workforce requirements in the zip codes around the airports.

Ghoshal asked when and how the evaluation and selection processes were designed.

Scully responded that for the LaGuardia projects, these processes were structured before the RFP was released and that the technical evaluation was conducted before the cost evaluation. She added that with the paid stipend, PANYNJ retained IP rights to the proposals.

Kemp responded that the City of Gary laid out the evaluation structure as part of the RFI and leading into the RFP. He added that the city leveraged the negotiation process to filter out bidders who were not suitable and that having a secondary group of candidates to go back to (i.e., using one bidder’s idea as leverage with another) was a key part of the negotiation process.

SESSION 4

Political Risks and Opportunities for Approving P3s

Peter Kirsch, *Kaplan Kirsch & Rockwell*, Moderator

Panelists

Susana Carbajal, *Austin–Bergstrom International Airport*

Lois Scott, *Epoch Advisors*

Peter Kirsch introduced the panelists and stated that the purpose of the session was to discuss how to convince elected officials to consider a P3 and educate them on the benefits and challenges of P3s, particularly as political turnover occurs in the community.

Susana Carbajal provided highlights of the Austin South Terminal rehabilitation project, which was prompted by dramatic airport growth and demand from the airport and airlines for additional service and gates. In 2015, the airport began talking to third-party investors interested in renovating and reactivating low-cost terminals to accommodate low-cost carriers.

Carbajal stated that political support for the transaction was due in part to the completion of a previous P3 project. The airport also had built a strong relationship with the Airport Advisory Commission, which was made up of citizens, and the Austin Chamber of Commerce.

Lois Scott stated that she was the Chief Financial Officer for the City of Chicago in 2011, when Mayor Rahm Emmanuel came into office. A live bid for a P3 at Midway Airport ended in 2008 after the financial recession, and there was general distrust of P3s after a highly unpopular P3 concession agreement for the city’s parking meters several years earlier. She noted that Mayor Emmanuel was interested in looking at long-term, financially sustainable solutions to infrastructure challenges.

Carbajal stated that for Austin, political pushback was felt from the airlines—legacy carriers in particular. The airlines were seeking additional capacity in the main terminal to grow service and did not want additional competition from low-cost carriers. She noted that the airport’s engagement with the commission, mayor, and council to justify the South Terminal expansion and increased competition helped maintain support for the project.

In response to a question from **Kirsch**, **Scott** noted that the impact of the parking meter P3 cannot be overstated. The city had to renegotiate what was a 99-year contract. She noted that there was significant political resistance to even evaluating P3s as an option for Midway. The city created and published a “Traveler’s Bill of Rights” with six major categories that established how the city would be held accountable to the traveling public.

The city also created an advisory panel with representation from labor interests, parking experts, civic leaders, and city council members. Scott noted that she attended public meetings to explain what the city was doing and why, and most negotiation was done in a public setting. Ultimately, the city decided not to move forward with a P3 for Midway.

Carbajal noted that the airport worked with a private entity to develop the main terms of a deal before taking it to the public and political leadership to get support—the same process used for previous deals. She noted that there is a long tradition of trust between the airport, mayor, and city council.

Scott stated that she was answering to both elected officials and finance experts, which created a much stronger process. She added that the advisory council was charged with addressing three questions: Was there a fair and transparent process from start to finish? Was the city receiving fair value for what was being exchanged? and Was a P3 the right option? The city publicly posted the proposed terms being considered.

Scott noted the importance of avoiding finance jargon when communicating about P3s. The public does not care about concepts like VFM and financial modeling; it cares about whether enough scrutiny has been applied to ensure that all terms are acceptable. She added that the chairperson of the advisory council was the transportation lead for the Metropolitan Planning Council, which is highly trusted in the city. He helped to translate the information about the process to the public.

Carbajal stated that the previous airport director was able to speak eloquently about the P3 deals with the advisory panel and city council and present the terms of the deal in a simple way. Additionally, an Allegiant Air representative spoke publicly and very authentically about the benefits of the project.

Scott noted that it is important to be clear with investors up front regarding expectations and rules of engagement. However, it can be challenging for the investors to get the clarity they want from local government. She stated that the shortlisted bidders were frustrated when the city shut the process down.

Carbajal stated that the New York–based private firm involved in the South Terminal deal hired a local lobbyist, who was able to translate its approach to local elected officials. She added that it would have been helpful to engage the local business community earlier in the process. **Scott** noted that Chicago required bidders to disclose their lobbyists.

Benjamin DeCosta asked to what extent the airlines helped shape the deals. **Carbajal** responded that it was important to ensure that no costs associated with the South Terminal project were charged to the legacy carriers in the main terminal, especially if the contract with the private developer had to be terminated. **Scott** responded that the city had an excellent relationship with Midway’s airlines, who were kept informed throughout the process and pledged to remain neutral regardless of the outcome.

In response to a question from **David Hopkins**, **Scott** clarified that the city ended the bidding process primarily because the number of bids at the final stage was insufficient.

She added that it would have been very difficult to demonstrate to the public that it was receiving a fair value without multiple bidders at the final stage.

Scott noted the importance of articulating goals on how to treat labor in P3 transactions up front. **Carbajal** noted the importance of transparency and information.

Carbajal stated that the legacy carriers in the main terminal ultimately benefitted from the South Terminal project, as they were able to increase capacity in the main terminal.

SESSION 5

After Financial Close

Valerie Holt, *Consultant (retired, formerly with Metropolitan Washington Airports Authority)*, Moderator

Panelists

Arif Ghouse, *Paine Field/Snohomish County Airport*

Shane Harbinson, *City of Austin, Texas*

Jorge Hernandez, *Aerostar*

Arif Ghouse described the process for bringing commercial service to Paine Field. Historically, there has been resistance in the community and support on the business side, but capacity and traffic challenges at Sea-Tac Airport spurred broader support for the project. Following an unsolicited bid, the county approved a P3 deal in 2015. The arrangement is a 30-year land lease with two 10-year options. The investor pays the county \$54,000 per month in rent. The revenue share is 2.5% for the first 4 years, and 5% from years 5 to 50. Construction began in 2017, and the first commercial flights began in March 2019. The airport is expecting 1 million passengers per year in the early years and 1.2 million by 2024.

Ghouse noted that the investor has invested close to \$50 million in the airport to date. The airport owns, operates, invests in, and maintains runways, ramps, and infrastructure. The airport had to add staff and increase security to accommodate commercial flights and is working closely with the terminal owner and airlines to coordinate daily operations. Ghouse added that key stakeholders include FAA, TSA, the state DOT, the county sheriff's office, county planning and development services, and the Federal Bureau of Investigation.

Shane Harbinson highlighted the Austin South Terminal project, which revitalized a three-gate terminal served by ultra-low-cost carriers. He noted that adding capacity was critical to keeping the airport operational. The project was approximately \$12 million, and the agreement has a 30-year term with two, 5-year extensions. Airlines operating out of the terminal have an agreement with the city to pay published landing fees, and an agreement with the developer to pay terminal fees based on enplanement and activity.

Harbinson stated that key priorities for the project were affordability and reflecting Austin's culture with the terminal. The airport is currently working to improve wayfinding, as many passengers are still going to the main terminal. The airport has had to lease four transit buses to shuttle passengers between terminals, which is costing it \$1.5 million. Additional parking capacity is needed.

Harbinson noted that key challenges with a P3 are the extended negotiations period, sharing utilities, agreeing on airport value and value of airport services, and determining the level and allocation of human resources.

Jorge Hernandez highlighted Aerostar’s agreement as holder and sponsor of the San Juan, Puerto Rico, airport. He noted that Aerostar is a joint venture between two airport management firms and is responsible for everything in the airport. San Juan is the first airport to successfully obtain funding through the AIPP.

Aerostar has 34 years remaining on a 40-year lease to maintain and upgrade the airport, with a projected investment of close to \$1.4 billion in capital improvements over the course of the lease. In September 2017, Hurricane Maria led to a nearly 30% decrease in passenger traffic, but that is normalizing again.

Hernandez stated that critical challenges included not having enough people to manage operations post-close and the discovery of many issues not identified during inspections and due diligence. Aerostar offered an open hiring process, but very few of the 900-plus employees assigned to the airport under the Puerto Rico Ports Authority wanted to work for a private operator.

Hernandez stated that in the past 6 years, Aerostar has created a central checkpoint, reconfigured ticketing areas, installed systems for bag inspection behind ticket counters, replaced boarding bridges, and more. Another \$200 million will be invested in the next 5 years and will be focused on airfield infrastructure.

Valerie Holt asked the panelists what the most significant post-procurement challenge was. Harbinson responded that once South Terminal operations started, all systems, particularly power supplies, were stressed. The city had to broker deals for temporary fixes with Austin Energy while the terminal operator made permanent fixes. There are monthly management meetings that have been very helpful in determining where to make adjustments and who will pay for it.

Ghouse stated there have only been minor issues at Paine Field, including lack of parking in the beginning and staffing issues. There is a Boeing test facility next to the airport, and the airport worked with TSA to ensure that Boeing employees could use their badges to access the airport and airfield, which Boeing uses for test flights.

Hernandez stated that staffing hundreds of positions in a very short amount of time while also addressing ongoing maintenance, infrastructure, security, and other issues was very challenging. Aerostar hired external firms to help recruit employees.

Ghouse stated that the airport added 25 staff and brought on certain positions—including O&M, fire, and police—early, despite the financial impact of doing so, to ensure it would be ready when commercial operations began.

Harbinson stated that the airport’s strategy was to not hire more staff for the South Terminal. There is only one airport liaison dedicated to the terminal who handles communication between the city and terminal management.

Holt asked what strategies have been helpful for meeting financial monitoring and reporting requirements. **Hernandez** responded that it was critical to understand the different requirements for internal reporting for stockholders and sponsors, requirements for bondholders, and requirements for local and federal government. Creating a reporting structure is critical. He added that theirs is the first airport to report to FAA every year on AIPP audits, which is a very different process. It took months of discussions between the auditor, FAA, attorneys, and another firm to define the requirements. Hernandez stated that the level of scrutiny for Aerostar is much greater than when the Ports Authority was in charge of the airport.

Ghouse stated that because the airport is only 4 months into operations, no reporting has occurred yet, but noted that the bigger issue is the arrangement the airport has with Boeing. Boeing pays the airport to keep the runway available for testing planes, and there is an agreement outlining how Boeing will contribute financially to ensure the airfield is maintained. Boeing pays the airport to keep a runway available, formulated on the basis of the percentage of weight landed. As commercial air traffic increases, the fee that Boeing pays will go down. Ghouse noted that Boeing has been outstanding to work with.

Harbinson stated that it is important for Austin to document financials and costs associated with the South Terminal because the legacy carriers in the main terminal do not want to pay for any of it. He added that once the airlines in the South Terminal hit more milestones, the airport will collect more revenue from them.

Gloria Bender asked **Hernandez** whether there is anything that could be done before closing to avoid unexpected surprises after financial close. Hernandez responded that more time in due diligence to really understand the status of the airport infrastructure would be helpful, but due diligence is often time constrained. He stated that it is important to focus on airfield infrastructure, which can be very costly, and to prioritize from outside in to mitigate the biggest exposures from a cost perspective. He added that negotiating full access to the airport during the process is key.

Harbinson stated that it is important to conduct feasibility studies on facilities and what improvements need to be made.

Li Pei Wang asked the panelists whether they would have implemented any aspects of the process differently or retained different staffing or expertise. He noted that in hindsight, it would have been helpful for LaGuardia to retain outside legal counsel for another 6 months.

Hernandez stated that they have also had good surprises, such as a dramatic increase in parking revenue after they took over parking operations. He added that, overall, Aerostar’s performance has been slightly ahead of what was anticipated.

Harbinson noted that having the flexibility to make changes in the agreement with legal counsel is helpful, as there will always be surprises. He added that regular meetings have been very helpful, but noted that the people who are most involved after the agreement is in place are not the people who are most involved during the negotiations.

Ghouse stated that Paine Field had engaged economists and legal counsel before signing the lease agreement and noted that it is helpful to be as explicit as possible in contracts to avoid different interpretations of requirements.

SESSION 6

Lessons Learned

Sheri Ernico, *LeighFisher*, Co-Moderator
Peter Kirsch, *Kaplan Kirsch & Rockwell*, Co-Moderator

Panelists

Stephen Van Beek, *Steer*
David Narefsky, *Mayer Brown*
Geoff Stricker, *Edgemoor*

Sheri Ernico and **Peter Kirsch** introduced the panelists and asked them to give their perspective on the previous panel discussions and keynote address.

Stephen Van Beek stated that he was pleased to hear discussions about VFM and spending significant time pre-procurement to evaluate options. He noted that the delineation regarding VFM for the sponsor and establishing goals for the public, as Chicago did with its Traveler’s Bill of Rights, is very helpful.

David Narefsky stated that he was heartened by how much time is being devoted to stakeholder participation.

Geoff Stricker noted that his company is developing the new terminal in Kansas City, Missouri, and that the project became significantly more political than originally expected. It is important to recognize the range of stakeholders going into a transaction and the potential impacts of competition between airlines.

Kirsch asked how the airport P3 market differs from other P3 markets. **Stricker** responded that in other sectors, there is usually a single stakeholder, while in aviation there are many stakeholders with different priorities. He noted that the appeal of P3s for airports is the various revenue streams that airports generate.

Narefsky stated that across the transportation sector, airport P3s are consistently the most complicated to implement successfully. He noted that local citizens have a strong connection to the airport compared with other transportation infrastructure.

Ernico asked how developers manage competing interests between the airport and airlines.

Stricker responded that the airlines have been involved in the planning and design process from the start. When Edgemoor was awarded the project, it was provided an older program and went through a program validation process to ensure that the program was still in line with what was best for the airlines and the city. He stated that material changes emerged

from that process, including more gates, a larger building, and slightly more parking. However, there are still conflicts between the city’s desires and the airlines’ desires—for example, the city’s desire for aesthetic amenities versus the airlines’ desire to limit costs. The contract sets up a governance structure under which such issues are vetted through a program management committee and, above a certain dollar threshold, a steering committee.

Stricker clarified that the Kansas City structure is a design–build–finance project, and Edgemoor is arranging and structuring tax-exempt bond financing. He stated that as developers and owners of the assets, Edgemoor is very sensitive to operating costs of project for the firm and clients. Long-term capital repair and replacement costs and O&M costs drive the costs of these projects.

Van Beek stated that the common perception is that commercial providers want to drive down the cost of capital expenditures. He noted that modeling usually showed that O&M costs are the greatest expense, so the focus is in fact on driving down O&M costs and making capital expenditures that help limit long-term O&M costs. He added that even for airports that are not pursuing a P3, bringing in advisors with a commercial mind-set to develop a business plan for airport facilities can be helpful and provides a very different perspective than the status quo. **Narefsky** stated that much of how Midway operates today derives from the insights it gained during the P3 procurement process, even though it was never executed.

Van Beek stated that before going out to investors, airports should bring in an independent financial advisor to understand how much the airport is worth and what the value drivers are.

Kirsch asked what the impediments are to operating an airport like a private enterprise. **Van Beek** responded that there are political barriers at any airport, and it is important to know what they are and limit them.

Stricker stated that there are best practices that are intuitive to the private sector, but less so to the public. Certain ways of operating can be rethought.

Narefsky noted that one key threshold consideration for P3s is the education process for airports and their level of comfort with P3s. He noted that the airline education process has generally been successful.

Lynn Hampton stated that financial reporting requirements and access to less expensive capital are two key reasons why P3s are not as widespread in the United States. **Van Beek** added that he believes that in the United States, the airlines have an oversized influence and impact and more regulatory protection than in the rest of the world, particularly as the large carriers have consolidated.

Stricker stated that to justify a P3, it is important to look at the financial premium being paid versus the risk being shed. He noted that understanding risk transfer and the costs associated with carrying risks is a challenge for the public sector.

In response to a question from **Ernico**, Stricker stated that Edgemoor has been flexible on financing and design. In Kansas City, Edgemoor held multiple design open houses across the city, took feedback, prepared a report, and shared with the city council what was important to the community. He noted that many ideas dovetailed with what was important to the city and the airlines, but other new ideas emerged.

In response to a question from **Kirsch** on the best time to engage potential private partners, **Narefsky** stated that, in general, the earlier one can get private-sector input, the better off the public sector will be for shaping the process. However, the procurement process may hinder that.

Van Beek stated that the idea of using a stipend was raised several times in other panels, and that it was not clear when to use stipends or who paid the losing bidders for IP rights. **Narefsky** added that it can be hard to get a stipend approved if specific appropriations are needed for the stipend. **Stricker** noted that, as a developer, Edgemoor supports stipends and sees them as a commitment of the public sector to a serious procurement process. He added that paying a stipend gives the public sector ownership of the IP of any bidders receiving a stipend. **Narefsky** responded that a stipend may also eliminate or significantly reduce the possibility of a protest.

Stricker stated that stipends are also common outside of P3 work (e.g., for large general contractors).

Kirsch noted that panelists and meeting participants had talked very little about FAA, which historically has played a smaller role in discussions about P3s. **Narefsky** responded that the FAA's role will expand if use of the AIPP becomes more widespread. He added that in any P3 transaction, it is helpful to have a dialog with FAA about grant assurance requirements.

Van Beek stated that with regard to many of the largest airports, ground transport to the airport is one of the biggest challenges for FAA and U.S. DOT, one for which they need clearer policies and greater engagement. He added that as there are more P3s with terminals, and aeronautical charges constitute a larger portion of airport revenue, rates and charges policies may become an issue, particularly if the airport is negotiating agreements to which the airlines have not consented.

Danielle Rinsler stated that the Office of Airports is working on a policy guidance letter on the AIPP.

Louis Wolinetz asked what airports can do to shorten the time and reduce the costs of P3 transactions. **Van Beek** responded that airports should plan carefully before entering the process, without overspecifying the transaction. **Narefsky** agreed.

Stricker stated that because all P3s are different, the process has to start from scratch, and negotiation is necessary every time. This adds time and money to the process.

Clay McCoy stated that in other sectors, particularly toll roads, the time frame and cost are reduced and contracts get more precise, which results in more P3 transactions by the public sector.

Li Pei Wang stated that it would be helpful to have a checklist that walks airports through the process of evaluating their preparedness for pursuing a P3.

Sabrina Johnson asked for clarification on the concept of P3s covering social infrastructure and whether there are more formal ways for community stakeholders to be involved in the P3 process. **Narefsky** responded that social infrastructure generally covers buildings that are not revenue-generating assets, such as schools, universities, and student housing. He stated that every community has a different history of public involvement in infrastructure projects, and the stakeholder process is very jurisdiction specific.

APPENDIX A

Program Agenda

Wednesday, July 10, 2019	
7:30 a.m. – 9:00 a.m.	REGISTRATION
7:45 a.m. – 9:00 a.m.	BREAKFAST
9:00 a.m. – 9:15 a.m.	Opening Remarks Welcome → Theresia Schatz, ACRP/TRB → Neil Pedersen, TRB → Margaret McKeough, Paslay Management Group
9:15 a.m. – 10:15 a.m.	Session 1: The Landscape of P3s Speakers → Peter Kirsch, Kaplan Kirsch & Rockwell → Steve Van Beek, Steer
10:15 a.m. – 10:30 a.m.	COFFEE BREAK
10:30 a.m. – 12:00 p.m.	Session 2a: Pre-procurement Moderator → Brett Simon, LeighFisher Speakers → Jay DeWitt, City of Phoenix → Li Pei Wang, Port Authority of New York and New Jersey → David Narefsky, Mayer Brown → Clay McCoy, PJ SOLOMON
12:00 p.m. – 1:00 p.m.	Lunch and Keynote Session: The Federal Environment Around P3s Speaker → Morteza Farajlan, Executive Director of the Build America Bureau, Department of Transportation
1:00 p.m. – 2:00 p.m.	Session 2b: Pre-procurement (continued) Moderator → Sheri Emico, LeighFisher Speakers → Dan Reimer, Denver International Airport → Roger Johnson, Jacobs → Steve Sisneros, Southwest Airlines → Galen Beaufort, City of Kansas City
2:00 p.m. – 3:00 p.m.	Session 3: Procurement Moderator → Caitlin Ghoshal, WSP USA, Inc. Speakers → Bo Kemp, Faegre Baker Daniels Consulting → Lysa Scully, Port Authority of New York and New Jersey

The National Academies of
 SCIENCES · ENGINEERING · MEDICINE

 **NRC**

TRANSPORTATION RESEARCH BOARD

1

JULY 10-11, 2019

AGENDA

Wednesday, July 10, 2019 <i>(continued)</i>	
3:00 p.m. – 3:15 p.m.	COFFEE BREAK
3:15 p.m. – 3:45 p.m.	Update on ACRP Project 03-46, Implementing Airport Privatization: Guidance for Airport Decision Makers Speakers → Lou Wollnetz, WSP USA, Inc. → Caitlin Ghoshal, WSP USA, Inc.
3:45 p.m. – 4:15 p.m.	WRAP-UP

Thursday, July 11, 2019	
8:00 a.m. – 8:30 a.m.	REGISTRATION
8:30 a.m. – 9:30 a.m.	Session 4: Political Risks and Opportunities for Approving P3s Moderator → Peter Kirsch, Kaplan Kirsch & Rockwell Speakers → Lois Scott, Epoch Advisors → Susana Carbajal, Austin-Bergstrom International Airport
9:30 a.m. – 10:45 a.m.	Session 5: After Financial Close Moderator → Valerie Holt, Consultant Speakers → Arif R. Ghouse, Paine Field/Snohomish County Airport → Shane Harbinson, City of Austin → Jorge Hernandez, Aerostar
10:45 a.m. – 11:00 a.m.	COFFEE BREAK
11:00 a.m. – 12:00 p.m.	Session 6: Lessons Learned Moderators → Peter Kirsch, LeighFisher → Sheri Emico, LeighFisher Speakers → Geoff Stricker, Edgemoor → Steve Van Beek, Steer → David Narefsky, Mayer Brown
12:00 p.m. – 12:30 p.m.	Concluding Remarks <i>Boxed lunch to be provided.</i>

APPENDIX B

Survey Summary

Following the event, a participant survey with seven questions or prompts was distributed to attendees. Twelve attendees submitted responses. The survey questions and prompts were as follows:

1. Attending the Insight Event was a valuable use of my time.
2. I had an adequate opportunity to network during the Insight Event.
3. Limiting the attendance and participation of vendors and service partners enhanced the program and contributed to an atmosphere favoring open and honest exchanges.
4. What program elements were valuable to me?
5. Before attending the Insight Event, how would you describe your level of familiarity with ACRP and its products?
6. Based on my experience at the Insight Event, I plan on engaging with ACRP and/or using ACRP products in the future.
7. Based on what you learned and experienced at this event, please suggest a research idea or problem statement for ACRP to consider.

Key insights gathered from the survey included the following:

- 90% of participants strongly agreed or agreed that the Insight Event was a valuable use of time. 10% of survey participants were neutral.
- 83% of participants strongly agreed or agreed they had adequate time to network during the event.
- 100% of participants strongly agreed or agreed that limiting the attendance and participation of vendors resulted in honest exchanges.
- Survey respondents thought the most valuable program elements were panel presentations and networking breaks. The least valuable program element was the wrap-up.
- 92% of survey respondents were at least somewhat familiar with ACRP and its products.
- 100% of participants strongly agreed or agreed they would use ACRP products in the future.

Problem statements suggested to ACRP by survey participants included the following:

- How to handle the total cost associated with owning airport facilities, beyond agreements drafted by consultants and lawyers;
- A survey of P3 aviation-related projects;
- A synthesis of P3 structures and outcomes at U.S. airports;
- A guidebook for appraising airport property;

- Effective program/project delivery methods for airport projects; and
- Strategic airport capital planning and how to access capital resources.

Other feedback from survey participants included the following:

- Having a separate session with only airport professionals in attendance,
- Discouraging consultants from using the forum to highlight their experience, and
- Having a broader audience of airport professionals for a program like the ACRP P3 Insight Event.

APPENDIX C

List of Attendees

Eduardo Angeles
Los Angeles City Attorney’s Office
(LAWA)

Paul Aussendorf
U.S. Government Accountability Office

Brad Bak
City of Philadelphia, Law Department

Galen Beaufort
City of Kansas City

Gloria Bender
TransSolutions, LLC

Tracy Borda
Philadelphia International Airport

Susana Carbajal
Austin–Bergstrom International Airport

Dale Cottrill
Allegheny County Airport Authority

Benjamin DeCosta
DeCosta Consulting, LLC.

Jay DeWitt
City of Phoenix, Arizona

Rhona K. DiCamillo
DKMG Consulting LLC

Sheri Ernico
LeighFisher, Inc.

Morteza Farajian
Build America Bureau
U.S. Department of Transportation

Caitlin Ghoshal
WSP USA

Arif Ghouse
Paine Field/Snohomish County Airport

Carolyn Gillette
Eastern Research Group, Inc.

Marci Greenberger
Airport Cooperative Research Program
Transportation Research Board

Lynn Hampton
Lynn Hampton Associates

Shane Harbinson
City of Austin, Texas

Joseph Hebert
LeighFisher, Inc.

Jorge Hernandez
Aerostar

Valerie Holt
Consultant (retired, formerly with
Metropolitan Washington Airports
Authority)

David Hopkins
New York City Economic Development
Corp.

Roger Johnson
Los Angeles International Airport

Sabrina Johnson
U.S. Environmental Protection Agency

Bo Kemp
Faegre Baker Daniels Consulting

Peter Kirsch
Kaplan Kirsch & Rockwell

Clay McCoy
PJ SOLOMON

Laura McKee
Airlines for America

Margaret McKeough
Paslay Management Group

Michael J. Minerva
American Airlines

Joseph Moratella
Cincinnati/Northern Kentucky
International Airport

David Narefsky
Mayer Brown

Joe Navarrete
Airport Cooperative Research Program
Transportation Research Board

Brian Ostler
Los Angeles City Attorney's Office
(LAWA)

Neil Pederson
Transportation Research Board

Christopher A. Poinatte
Dallas/Fort Worth International Airport

Dan Reimer
Denver International Airport

Danielle Rinsler
Federal Aviation Administration
U.S. Department of Transportation

Melissa Sabatine
American Association of Airport
Executives

Theresa H. Schatz
Airport Cooperative Research Program
Transportation Research Board

T. J. Schultz
Airport Consultants Council

Lois Scott
Epoch Advisors

Lysa Scully
Port Authority of New York and New
Jersey

Brett Simon
LeighFisher, Inc.

Steve Sisneros
Southwest Airlines

Susan Sauer Sloan
Government-University-Industry
Research Roundtable
The National Academies of Sciences,
Engineering, and Medicine

Dave Somers
Snohomish County, Washington

Eric Sprys
Allegheny County Airport Authority

Geoff Stricker
Edgemoor

Ian Todreas
Eastern Research Group, Inc.

Stephen Van Beek
Steer

Li Pei Wang
Port Authority of New York and New
Jersey

Louis Wolinetz
WSP USA Inc.