

5th National Bus Rapid Transit Conference



August 20-22, 2012 Las Vegas, Nevada

Sponsored by Transportation Research Board

WELCOME

On behalf of the Transportation Research Board of the National Academies, we are pleased to welcome you to the TRB Fifth National Bus Rapid Transit (BRT) Conference. Because the state of BRT practice in the U.S. is advancing rapidly, there is a need to capture institutional best practices and lessons learned, identify key trends and innovations that emerge within the industry, and promote the sharing and cross-fertilization of knowledge. This gathering offers an unparalleled opportunity to share your experience and perspectives with others and to learn about the latest developments in BRT research, policy, and practice. More than 20 presentations, a technical tour of the Las Vegas BRT services, and meet-the-author poster sessions will address topics of interest to policy makers, administrators, practitioners, researchers, industry representatives, and elected officials. We are pleased that you are attending, and hope that you will explore all that the TRB Fifth National Bus Rapid Transit Conference has to offer.

Dennis Hinebaugh

Conference Planning Team Chair USF Center for Urban Transportation Research

TRANSPORTATION RESEARCH BOARD

OF THE NATIONAL ACADEMIES

The Transportation Research Board is one of six major divisions of the National Research Council, which serves as an independent adviser to the federal government and others on scientific and technical questions of national importance. The National Research Council is jointly administered by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The mission of the Transportation Research Board is to provide 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 activities 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.



AGENDA AT A GLANCE

| Monday, August 20 | | |
|------------------------|--|-----------------|
| Noon – 5:00 p.m. | Registration | Champagne Foyer |
| 1:30 p.m. – 1:45 p.m. | Opening Remarks | Champagne 2 |
| 1:45 – 3:00 p.m. | Welcome to Las Vegas | Champagne 2 |
| 3:00 p.m. – 3:30 p.m. | Break | Champagne 1 |
| 3:30 p.m. – 5:00 pm. | Planning and Financing BRT in Your Community | Champagne 2 |
| 5:30 p.m. – 7:00 p.m. | Reception and Poster Session | Champagne 1 |
| | Tuesday, August 21 | |
| 7:00 a.m. – 4:00 p.m. | Registration | Champagne Foyer |
| 7:00 a.m. – 8:00 a.m. | Continental Breakfast | Champagne 1 |
| 8:00 a.m. – 11:30 a.m. | Tour of Las Vegas BRT Services and Vehicles (optional) | Champagne Foyer |
| Noon – 1:20 p.m. | Lunch with Speaker – BRT Around the World | Champagne 1 |
| 1:30 p.m. – 3:15 p.m. | BRT Research and Innovation | Champagne 2 |
| 3:15 p.m. – 3:45 p.m. | Break | Champagne 1 |
| 3:45 p.m. – 5:00 p.m. | Moving BRT Forward in your Community | Champagne 2 |
| | Wednesday, August 22 | |
| 7:00 a.m. – 4:00 p.m. | Registration | Champagne Foyer |
| 7:00 a.m. – 8:00 a.m. | Continental Breakfast | Champagne 1 |
| 8:00 a.m. – 9:45 a.m. | BRT Technology Advancements | Champagne 2 |
| 9:45 a.m. – 10:15 a.m. | Break | Champagne 1 |
| 10:15 a.m. – noon. | BRT and Land Use | Champagne 2 |
| Noon – 1:30 p.m. | Lunch with Speaker - Navigating the Politics of Rapid Transit | Champagne 1 |
| 1:30 p.m. – 2:45 p.m. | BRT Vehicles | Champagne 2 |
| 2:45 p.m. – 3:15 p.m. | Break | Champagne 1 |
| 3:15 p.m. – 4:15 p.m. | BRT Service Plans and Runningways | Champagne 2 |
| 4:15 p.m. – 5:00 p.m. | Conference Wrap-up, Research Needs and Future Conference Plans | Champagne 2 |



CONFERENCE AGENDA

Monday, August 20

Noon – 5:00 p.m., Champagne Foyer **Registration**

1:30 p.m. – 1:45 p.m., Champagne 2 **Opening Remarks**

Bus Rapid Transit is no longer a "theory" in North America. Successful BRT systems continue to be implemented and many more are in different stages of planning, design, and construction. After a quick introduction of the conference agenda, we welcome you to the 2012 TRB Bus Rapid Transit Conference.

Dennis Hinebaugh - Chair, TRB Bus Transit Systems Committee and Program Chair, Director, National Bus Rapid Transit Institute (NBRTI) at the Center for Urban Transportation Research

Jennifer Rosales - Senior Program Officer, Transportation Research Board of the National Academies

1:45 – 3:00 p.m., Champagne 2 Welcome to Las Vegas

Moving employees from where they live to where they work is a critical part of improving mobility. The Regional Transportation Commission of Southern Nevada has launched six new rapid transit routes over the last three years that are designed to do just that.

Welcome Attendees

Commissioner Larry Brown - Chairman of the RTC Board and Clark County Commissioner

Local Transit System and the MAX and Sahara Express BRT Services

Tina Quigley - General manager of the Regional Transportation Commission of Southern Nevada.

Innovative Features and Modern Design of Vehicles

David Barnett - The Wright Group - Founded in 1946 the Wright Group pioneered low floor buses in the UK, and has earned a reputation for producing vehicles, which are stylish, durable, high in quality and packed with innovative features.

3:00 p.m. – 3:30 p.m., Champagne 1 **Break**

3:30 p.m. – 5:00 pm., Champagne 2

Planning and Financing BRT in Your Community

Moderator: Cliff Henke – Parsons Brinckerhoff

The enactment of MAP-21 has resulted in some significant policy changes for BRT, including how projects will be evaluated in the Small Starts program as well as changes to environmental regulations and other funding policy changes. Art Guzzetti, APTA's vice president for policy development, will explain the new landscape and potential implications for BRT as the new law is implemented through new rulemaking likely to follow soon. Then join us for a lively discussion moderated by Parsons Brinckerhoff's Cliff Henke as we discuss what it will all mean for BRT project sponsors and private industry.



Presentations

Understanding the new program elements for BRT in the MAP-21 legislation, and where additional consideration may still be required. Discuss the growing phenomenon of HOT lanes, and synergies for transit and toll roads to work together.

Arthur L. Guzzetti - American Public Transportation Association (APTA)

5:30 p.m. – 7:00 p.m., Champagne 1 **Reception**

Poster session

Tuesday, August 21

7:00 a.m. – 4:00 p.m., Champagne Foyer **Registration**

7:00 a.m. - 8:00 a.m., Champagne 1

Continental Breakfast

8:00 a.m. - 11:30 a.m., Champagne Foyer

Tour of Las Vegas BRT Services and Vehicles (optional)

TRB Bus Rapid Transit Tour Leaving from the Paris Hotel

The Regional Transportation Commission of Southern Nevada (RTC) has two world-class transit options on the Las Vegas Strip. The iconic Deuce double-deck buses provide a view of the Las Vegas Strip, with a comfortable ride no matter what the temperature outside. The Strip & Downtown Express service offers limited-stop service on the Strip, and both services connect the Strip to Downtown Las Vegas. Join us for a tour of the transportation services in Las Vegas as well as the RTC's new state-of-the-art Bonneville Transit Terminal.

Noon – 1:20 p.m., Champagne 1

Lunch with Speaker - BRT Around the World

BRT systems have been in operation around the world for many years, and have achieved great success. Learn about international BRT experiences while enjoying lunch.

Speaker

Focusing on a number of case studies and synthesis in Lagos, Jo Berg, Delhi, Ahmadabad and Jakarta, there are lessons for North American cities to gain knowledge as they implement BRT in their communities. Will also discuss the "rush to rail" taking place in some South American BRT cities.

Sam Zimmerman - World Bank

1:30 p.m. – 3:15 p.m., Champagne 2

BRT Research and Innovation

Moderator: Dennis Hinebaugh

Research and innovative programs help keep the industry fresh with ideas and knowledge of recent activities. University and privately based research organizations will highlight the latest programs and topics in BRT research.



Speakers

Since the creation of FTA's BRT Vehicle Development Working Group in the mid-2000s, domestic vehicle manufacturers have responded with more advanced vehicles, although many cities still desire more advancement. What are the main research and development challenges that remain? Is a reconstituted Vehicle Working Group needed?

Cliff Henke - Parsons Brinckerhoff

BRT continues its strong growth in Latin America in 2012. Mexico City expanded its network through its historic downtown. Rio de Janeiro opened its first full BRT corridor, the first installment of a 150 km network to be ready before the summer Olympics in 2016. Bogotá opened sections of TransMilenio Phase III, which will expand the system to 104 km by the end of 2012. This presentation will discuss particular aspects of each system, showing the evolution of BRT design concepts, as well as some challenges.

Dario Hidalgo - EMBARQ, The WRI Center for Sustainable Transport

This presentation will introduce value chain research on BRT and provide a demonstration of the interactive web tool for identifying high-quality BRT features and the firms providing the associated planning, vehicles and technology.

Marcy Lowe - Duke University, Center on Globalization, Governance & Competitiveness

3:15 p.m. – 3:45 p.m., Champagne 1 **Break**

* Poster session*

3:45 p.m. – 5:00 p.m., Champagne 2

Moving BRT Forward in your Community

Moderator: Jack Gonsalves - Parsons Brinckerhoff

Listen to practitioners from around North America talk about how they worked with their community, developed relationships, and branded their systems as they implemented Bus Rapid Transit.

Speakers

Framing Reno's BRT in terms of both the partnerships formed but also BRT as a tactical means to save money while increasing service, Reno developed its BRT concept with the idea of using CMAQ funds to help bridge operating costs to save local sales tax funds at the height of the recession. The result has been that they were able to operate the service using CMAQ; stave off general service cuts across the system and watch the ridership on the BRT grow dramatically as they tapped into the latent demand generated a number of positive and negative economic forces. Today, they are looking at supplementing their BRT service with the new Proterra electric bus. With the potential of obtaining the substantial cost savings, this new technology may help substantially reduce their fuel bill and continue to maintain service levels.

Lee G. Gibson - Regional Transportation Commission of Washoe County (RTC), Reno, NV

In an effort to improve transit service in one of the busiest transit corridors in Salt Lake County, the first bus rapid transit (BRT) line in the state of Utah was implemented along 3500 South, located in West Valley City. This presentation will discuss the elements of the transit corridor, operational characteristics, construction components, future system improvements, and the evaluation of successful system performance.

Hal Johnson - Utah Transit Authority



Everett, Washington's Swift BRT line serves a 17-mile stretch of urban arterial between Shoreline and Everett north of Seattle. Swift opened in November 2009 and has shown continued ridership growth ever since. Project director June DeVoll, who also led the implementation of Las Vegas' first BRT project, will discuss the partnerships that were critical in Swift's successful implementation, results to date and future plans for the Swift network.

June DeVoll - SWIFT

Wednesday, August 22

7:00 a.m. – 4:00 p.m., Champagne Foyer **Registration**

7:00 a.m. – 8:00 a.m., Champagne 1 Continental Breakfast

8:00 a.m. - 9:45 a.m., Champagne 2

BRT Technology Advancements

Moderator: John Duesing - Cambridge Systematics

Advanced technologies can enhance the operation of BRT systems and further improve customer satisfaction. Learn about select applications of ITS and communications technologies, off board fare payment policies, and other technologies being deployed for BRT.

Speakers

The RTC Transit and FAST (Freeway and Arterial System of Transportation) departments have collaborated on BRT and premium transit service during deployment of ITS and communications technologies. It is easy for specialized groups such as ITS and Transit to become focused on their own needs that they lose sight of the big picture which is to safely and efficiently operate a multi-modal transportation system. This presentation will highlight inter-department collaboration before, during and after the high profile launch of the new Sahara service. Performance measures from the ITS and Transit perspective will also be presented. **Brian C. Hoeft** - Regional Transportation Commission of Southern Nevada

Bus guidance and precision docking technologies support narrow lane operation and rail-like station operation. Hear a report on the progress of an on-going effort sponsored by FTA and Caltrans involving the development and field operational test of a lane guidance and precision docking system for BRT operation in Eugene, Oregon.

Ching-yao Chan - California Partners for Advanced Transit and Highways (PATH)

In Europe, there is a wide spectrum of high quality bus rapid transit, collectively referred to as Bus with High Level of Service (BHLS). ITS and other technologies are used to provide operations management, customer-facing services and support services. This presentation describes current ITS practice in European BHLS, with focus on operations management (AVM), passenger information, fare collection and security applications.

Brendon Finn - ETTS, Ltd

9:45 a.m. - 10:15 a.m., Champagne 1

Break



10:15 a.m. - noon., Champagne 2

BRT and Land Use

Moderator: Jeff Hiott - American Public Transportation Association

With the increasing presence of BRT systems in the U.S., an important question pertains to the land use impacts of the mode. As many communities consider transit investments, it is critical to have the most relevant and up-to-date information on alternative modes. This session will present the latest research on the development and property value impacts of BRT and will also include specific transit agency experiences with BRT and economic development.

Speakers

Opened in October 2008, the HealthLine BRT has generated over \$5 billion of reinvestment along the 7.1-mile corridor. The presentation will discuss the extensive community and stakeholder coordination that occurred during the planning, design, and construction phases of the project. It will focus on the resulting changes to Master Plans, Zoning and the nature of proposed redevelopment along the corridor, and the neighborhood by neighborhood reinvestment that has occurred.

Michael Schipper - Greater Cleveland RTA

With the increasing presence of BRT systems in the U.S., an important question pertains to the land use impacts of the mode. As many communities consider transit investments, it is critical to have the most relevant and up-to-date information on alternative modes. This session will present the latest research on the development and property value impacts of BRT and will also include specific transit agency experiences with BRT and economic development.

Victoria Perk - National Bus Rapid Transit Institute

Reshaping our Community, The viva Experience - For most communities the primary objective of introducing BRT is to improve overall transportation. Within a clearly defined transportation need, BRT is commonly selected as the most appropriate solution. Twenty years ago York Region was a rural community consisting of a series of discreet agricultural communities that, over a relatively short period, transformed itself into a bedroom community with one of the most congested road networks in North America. While there was an identified transportation need, that on its own would not be the solution. Significant structural changes were necessary that would change the way the communities were laid out. The viva BRT project is the catalyst for "reshaping" this region; providing a framework upon which these major land-use changes are being made.

Graham Carey - AECOM

Noon – 1:30 p.m., Champagne 1

Lunch with Speaker - Navigating the Politics of Rapid Transit

RTC Commissioner Debra March (Councilwoman from the City of Henderson), RTC General Manager Tina Quigley, and Jorge Cervantes, Public Works Director with the City of Las Vegas, will discuss navigating the politics of bus rapid transit. The Regional Transportation Commission of Southern Nevada has launched six new rapid transit lines in the last three years, thanks in large part to champions like Councilwoman Debra March. Councilwoman March serves on the RTC's Board of Commissioners as a representative of the City of Henderson. She'll provide an overview of the community and stakeholder outreach, funding, and leadership efforts needed to launch a successful rapid transit system. The success of those new services is due to the political support of champions like Councilwoman March and the successful partnership with the other RTC members, including the City of Las Vegas.



1:30 p.m. - 2:45 p.m., Champagne 2

BRT Vehicles

Moderator: Cliff Henke - Parsons Brinckerhoff

BRT vehicles have a direct impact on speed, capacity, environmental friendliness, and comfort, both actual and perceived. It is also a major component of the branding and attractiveness of the system. This session will highlight the latest innovations in vehicle design and sophistication, propulsion options, and the branding of the system.

Speakers

If transit is to attract discretionary riders, it must not only offer high-quality service, but also be complimented by an attractive image. Unfortunately, bus-based public transit in the U.S. suffers from an image problem and many within the industry feel that only rail can convey the image of premium service. This presentation summarizes the results of a research project that examines the question of whether BRT can replicate the high-quality image and ridership attraction benefits associated with rail. Overall, findings show that Full-Service BRT can replicate both the functionality standards and image qualities normally associated with rail, and that even a lower-investment BRT-Lite service performs remarkably well in terms of overall

rating achieved per investment dollar.

Jennifer Flynn - National Bus Rapid Transit Institute

Through the APTA's Standards Development Program, BRT operators, consultants and other industry professionals came together to assimilate best practices for BRT. Seven documents have been published including topics such as branding, imaging and marketing. The published documents will be discussed to show how they can help you as well as what lies ahead with future APTA Standards work.

Jeff Hiott - American Public Transportation Association (APTA)

Christopher Ziemann - Chicago Bus Rapid Transit

2:45 p.m. – 3:15 p.m., Champagne 1 **Break**

3:15 p.m. – 4:15 p.m., Champagne 2 BRT Service Plans and Runningways Moderator: Graham Carey – AECOM

The operations of Bus Rapid Transit systems are dependent upon a number of characteristics, including the service plans and the runningways on which the system operates. Runningways are the most critical element in determining the speed and reliability of the service. Route length, span of service, frequency, station spacing and other operational characteristics have a huge impact on the quality, efficiency and flexibility of the service. Listen to the experiences of other agencies as they share information regarding the design and operation of their BRT services.

Speakers

Creating BRT Priority and Image in Limited Right-of-Way. A common issue for arterial BRT projects is how best to achieve adequate transit priority and create a distinct BRT image while minimizing impact on auto capacity, right-of-way, and business access. A creative solution to this was developed for a BRT project in Vancouver, Washington, using a median-running, mixed-traffic BRT design.

Stefano Viggiano - Parsons Brinckerhoff



BRT in Brisbane, Australia, Frequency + Reliability + Great Infrastructure = Exceptional Growth. **Alan Warren** - Brisbane Transport

4:15 p.m. - 5:00 p.m., Champagne 2

Conference Wrap-up, Research Needs and Future Conference Plans

Dennis Hinebaugh - Conference Chair **Cliff Henke** - Parsons Brinckerhoff **Art Guzzett***i* - APTA



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International Transportation Research Information Access
September 12-13, 2012
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Contact: Jennifer Rosales at JRosales@nas.edu Visit: http://www.cvent.com/d/lcqqxh



Transportation Research Board 92nd Annual Meeting

January 13–17, 2013 • Washington, D.C.

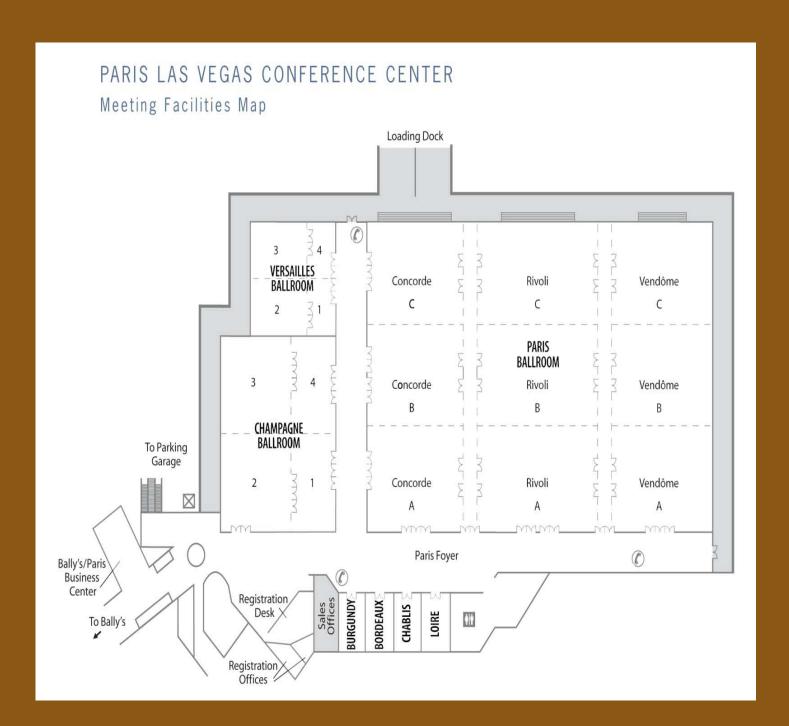
The Transportation Research Board (TRB) 92nd Annual Meeting will be held in Washington, D.C. at the Washington Marriott Wardman Park, Omni Shoreham, and Washington Hilton hotels. The information-packed program will attract more than 11,000 transportation professionals from around the world to Washington, D.C., January 13-17, 2013.

The TRB Annual Meeting program covers all transportation modes, with more than 4,000 presentations in nearly 650 sessions and workshops addressing topics of interest to all attendees—policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions. A number of sessions and workshops will address the spotlight theme for 2013: **Deploying Transportation Research - Doing Things Smarter, Better, Faster.**

Paper Peer Review

This site is **OPEN** for Reviewers.

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