

TRANSPORT INNOVATOR

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Welcome to *Transport Innovator*, a free newsletter dedicated to sharing information about innovative, cost-effective transportation solutions. We welcome comments and ideas for future stories. Please feel free to contact us – we look forward to hearing from you. Free subscriptions are available at www.gobrt.org

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Editorial

The new federal transportation bill, SAFETEA-LU, was a missed opportunity to begin getting America unstuck from its chronic traffic congestion and growing energy bills. The bill contained over 6,300 "earmarks," which divert resources from important national goals to serve the political needs of individual members of Congress. Little action was taken to promote energy security or efficiency, a shortcoming that is particularly apparent after Hurricanes Katrina and Rita. A number of rail projects, including a proposed extension of Washington's Metrorail system in Northern Virginia, were exempted from cost-effectiveness requirements, making them eligible for federal funding even though they flunk Federal Transit Administration standards.

Lost in the discussion about earmarks and energy security, however, is the failure to reform the "New Starts" program. New Starts allocates federal money to help construct new transit projects. Over \$9 billion is budgeted for this program over the life of SAFETEA-LU, making choice of transit mode a high stakes competition among industry suppliers.

New Starts funds are limited by law to "fixed guideway" systems, which generally means rail. Funds are not allocated based upon performance or cost comparisons among competing fixed guideway and non-fixed guideway technologies.

The result is a set aside for the rail industry that enables high cost projects to receive funding, even if lower cost and better performing options are available. For example, New Starts funding generally is not available for a BRT system operating in mixed traffic. Add rails and steel wheels, however, and the identical project would suddenly qualify, even though it costs more, continues to operate in mixed traffic, and may not perform as well.

The Bush Administration proposed to eliminate the fixed guideway requirement but ultimately backed down under pressure from the rail industry. Instead, a "Small Starts" program was created to fund projects under \$75 million, including BRT and streetcar.

Although a step in the right direction, the Small Starts program falls short of the reforms needed to ensure that transit investments are based upon performance, not industry lobbying. Even under Small Starts, a BRT project must substantially operate in a separate right of way or have other characteristics of a fixed guideway system. A streetcar system operating on the identical route, however, is fully eligible for funding, even if it operates entirely in mixed traffic.

Choice of mode should be made through an objective alternatives analysis that considers performance and cost-effectiveness. It should not be guided by industry language that steers funding to particular technologies.

Transport News from the United States

Federal Transportation Bill authorizes, funds BRT and clean fuel bus projects

The University of South Florida's National Bus Rapid Transit Institute (NBRTI) will receive \$7 million in funding under the recently passed federal transportation bill (SAFETEA-LU). Part of the university's Center for Urban Transportation Research, NBRTI conducts research, provides technical assistance and facilitates information-sharing to promote high-capacity bus service in the United States.

SAFETEA-LU also establishes a Fuel Cell Bus Technology Program to facilitate development of commercially-viable fuel cell bus technology and related infrastructure. Cost-sharing grants will be solicited under the program. The bill allots \$49 million in funding to the program between FY 2006 and FY 2009.

The Clean Fuels Grant Program, which was created under the previous TEA-21 transportation bill, was reauthorized under SAFETEA-LU and will receive \$188.5 million in funding for FY 2006 to FY 2009. Discretionary grants are to be awarded for clean fuel buses, with up to 25 percent of funds awarded for clean diesel buses.

Specific BRT projects authorized or funded under SAFETEA-LU include:

- Studies authorized for FY 2006 and FY 2007: Lane County, Oregon Phase BRT Phase II corridor (\$500,000); Proven-Orem, Utah BRT (\$500,000); Sevier County, Tennessee BRT (\$500,000)
- Final design and construction under existing full funding grant agreements: Cleveland Euclid Corridor Transportation Project (\$24.8 million for FY 2005 and \$24,774,513 for FY 2006)
- Final design and construction authorized for FY 2005 through FY 2009: Boston, Massachusetts Silver line BRT Phase III; Kansas City, Missouri Southtown BRT
- Preliminary engineering for FY 2005 through FY 2009: Baton Rouge, Louisiana BRT; Boston, Massachusetts Urban Ring BRT; Chicago, Illinois Cermack Road BRT; Jacksonville, Florida East-Southwest BRT and North-Southeast BRT; King County, Washington I-405 Corridor BRT; Lakeville, Minnesota Cedar Avenue Corridor BRT; Las Vegas, Nevada Boulder Highway MAX BRT; New York City, New York BRT; Provo-Orem, Utah BRT; Oakland, California Telegraph Avenue/International Boulevard/East 14th Street BRT; Salt Lake City, Utah West Valley City 3500 South BRT; San Antonio, Texas BRT; San Diego, California First BRT; San Francisco, California Geary Boulevard BRT; Tampa, Florida BRT Improvements; Virginia Beach, Virginia BRT

- **Project Authorizations:** Birmingham, Alabama I-65 South BRT (\$100 million); Boston, Massachusetts Silver Line BRT Phase II (\$20 million); Harrison County, Mississippi HOV/BRT Canal Road Intermodal Connector (\$70 million); Mississippi I-69 HOV/BRT (\$70 million)

For more information [click here](#) (SAFETEA-LU, Title III, Public Transportation)

EmX construction started in Oregon

Construction has begun on Lane Transit District's new EmX (pronounced M-X) BRT system.

The initial route, Franklin EmX, will operate on a four-mile, high ridership corridor running from Eugene to Springfield. A dedicated median transitway will be constructed along 60 percent of the route, with mixed traffic operation planned along the remaining section. Five articulated, low floor, hybrid-electric buses will facilitate level boarding at raised station platforms.

EmX will operate 30 percent faster than current bus service.

The cost of construction along the Franklin EmX corridor is \$23 million. Service will begin by the end of 2006.



A second corridor, Pioneer Parkway EmX, is undergoing environmental assessment. The 6-mile route will operate between downtown Springfield and the Gateway area. Additional EmX routes will be developed incrementally in all major corridors.

Lane Transit anticipates that the new EmX line will increase ridership by 50 percent. Operating costs will be 20 percent lower than traditional bus service.

Source: *The Register-Guard*, 8/29/2005

For more information [click here](#) (*Register-Guard*) or [click here](#) (*Lane Transit*)

Smart cards coming to the Los Angeles transit system

The Los Angeles Metropolitan Transportation Authority (MTA) is installing contactless smart card fare technology on its bus and rail systems. MTA officials believe that these fare cards will make public transit more attractive to area riders. MTA anticipates that all buses and rail lines will be equipped with the technology by February 2006. The cost to implement of the new fare system is \$115 million.

Source: *SecureIDNews*, 9/01/2005 and MTA

For more information [click here](#) (MTA)

Ridership growing on Boston's Silver Line Waterfront-Airport bus route

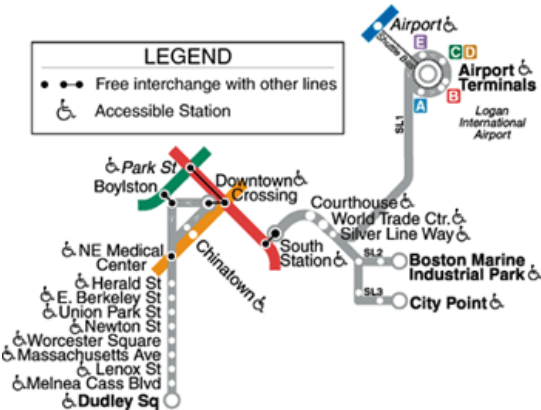
The Massachusetts Bay Transportation Authority (MBTA) recently announced that ridership on its newest line Silver Line Waterfront to Logan airport has grown by 40 percent during the first three months of operation. Service along the new route began in June 2005.

The Waterfront route incorporates a number of innovative BRT features including low emission 40-foot electric and 60-foot dual-mode (electric/diesel electric) articulated vehicles, and construction of a dedicated one-mile tunnel right-of-way from South Station to the South Boston Waterfront. Beyond the Waterfront area, Silver Line buses continue above ground to the Marine Industrial Park and Logan Airport. Headways are 10 minutes peak and 15 minutes off-peak.

The initial Silver Line service opened in 2002 using dedicated bus lanes between Dudley Street and downtown. The route doubled ridership in its first year of operation, with 90 percent of riders rating the service as "good to excellent".

Source: Boston Globe, 9/03/2005

For more information [click here](#) (Boston Globe) or [click here](#) (MBTA)



Fuel cell buses to begin service in Oakland

Three new Van Hool A330 hydrogen fuel cell buses will begin serving AC Transit bus routes by the end of 2005. Equipped with a fuel cell-battery hybrid propulsion system, the buses emit no harmful tailpipe pollutants. The 40-foot buses can attain a top speed of 65 mph and have an operating range of 250-300 miles. The buses' life span is anticipated to be 12 years.

Hydrogen fuel will be available at AC Transit's own hydrogen energy stations. The hydrogen will be reformed on-site from natural gas. The larger fueling facility will be able to dispense up to 150 kg of hydrogen a day for the buses. The stations will also provide hydrogen fuel to AC Transit's fleet of Hyundai light-duty fuel cell vehicles.

Source: ISECorp

For more information [click here](#)

Study shows BRT will carry the most riders in Chicago's Mid-City corridor

A recent study of Chicago's Mid-City corridor has found that bus rapid transit would achieve the greatest ridership of the five evaluated transit modes. With a projected 95,280 riders per day, a 22-mile, 35-station BRT system could operate on a segregated busway along a railroad right-of-way. Buses could leave the busway to operate on surface streets, shortening travel times through the use of signal priority.

The second highest ridership was found to be the light rail option, with an estimated 89,980 daily passengers. Commuter rail perform the worst, attracting only 8,500 riders a day. Twenty-six percent of Chicago's population (about 0.75 million) live within 1.25 miles of the busy Mid-City corridor.

Source: Chicago Sun-Times, 8/26/2005

For more information [click here](#)

Southeast Connecticut plans new express bus service

Connecticut's Southeastern Area Transit will receive over \$2.2 million in federal funding to plan a new express bus corridor linking Bradley International Airport in Windsor Locks with southeastern Connecticut. Early plans indicate that the route may connect Bradley, Harford, Norwich, New London and Mystic. High-tech, clean-fueled BRT buses could be operating by 2007, with full system implementation by about 2010. Total cost of the system is estimated at \$28 million. The route is expected to fuel area tourism and gaming operations.

Source: Norwich Bulletin, 8/18/2005

For more information [click here](#)

Virginia Beach BRT delayed indefinitely

The Virginia Beach City Council has voted to postpone further planning of an oceanfront BRT system in order to focus on the potential closing of a local military base and unexpected expenditures that may be required to keep it open.

The original BRT design envisioned new articulated buses operating in dedicated street lanes, traveling between the oceanfront and popular destinations such as the convention center, aquarium, Town Center and a local mall. The project is fully funded, with \$10 million provided by the state and \$11.5 million by Virginia Beach.

Source: HamptonRoads.com/PilotOnline.com, 8/28/2005

For more information [click here](#)

NABI debuts new hybrid BRT bus



North American Bus Industries (NABI) debuted its new 60-BRT Hybrid bus at the APTA Expo in September 2005. The 60-foot, 50-seat, articulated BRT vehicle features five doors--two on the left side, compatible with median or left-side busway stations, and three on the right. It is also available in diesel and CNG-fueled editions. The cost of the 60-BRT hybrid is \$800,000. A three-door, CNG version of the 60-BRT vehicle costs \$640,000. Thirty of the CNG buses have been delivered to Los Angeles' Metropolitan Transportation Authority for use on the soon-to-open Orange Line dedicated busway.

Source: Metro Magazine, 9/28/2005 and NABI

For more information [click here](#) (Metro Magazine) or [click here](#) (NABI)

BRT network planned in suburban Chicago

Chicago's suburban public transportation provider, Pace, will receive federal funding for several projects envisioned under the region's Vision 2020 transit plan. Projects receiving federal funding include transit signal priority on Rand Road (more than \$670,000) and bus rapid transit on Cermak Road (\$1.25 million).

A major feature of the Vision 2020 plan is a 480-mile, 23 corridor BRT network featuring arterial and shoulder lane highway BRT. Travel speeds will be improved through the use of signal priority and queue jump lanes, with shoulder BRT employing queue jumps in conjunction with ramp metering to provide buses fast and easy access to the highway. Satellite-based intelligent bus systems will be used to track buses, collect data and improve communications (including traffic signal priority, automatic vehicle locator, active transit station signs, electronic fare collection and on-board next stop annunciators). In addition to BRT, Pace will implement express bus routes and improve existing demand-response, circulators, flexible bus and fixed-bus route community-based transit services.

Pace has already begun to improve passenger amenities and information systems on standard bus routes. Conveniences include the Transit Television Network, delivering free passenger entertainment and real-time bus schedule information via the Internet, mobile communication devices and kiosks and signs located at malls and transit centers.

Source: Chicago Sun-Times, 8/26/2005

For more information [click here](#)

MAX rapid bus service commences in Kansas City

Kansas City, Missouri's MAX (Metro Area Express) rapid bus line initiated service in late July 2005. During peak hours, buses operate in exclusive bus lanes for a portion of the route, using dedicated northbound lanes during the morning rush hour and dedicated southbound lanes during the evening rush.



Twelve new Gillig, 41-foot, low floor buses were purchased for the route, each with a capacity of up to 40 passengers. The Kansas City Area Transportation Authority (KCATA) worked closely with Gillig to develop a unique style for this newly-introduced model.



Bus shelter design was also updated and each stop is now equipped with a 17-foot marker sign providing real-time bus arrival information.

Travel time savings of up to 25% are expected. The capital cost was \$21 million.

Source: KCATA

For more information [click here](#)

New Report Explores BRT Potential on High Occupancy Toll Lanes

A new report by the Breakthrough Technologies Institute and Environmental Defense explores the potential for using bus rapid transit (BRT) on high occupancy toll (HOT) lanes now being considered for the Capital Beltway and I-95/395 south of Washington, DC. The report found that a BRT system operating on HOT lanes in Northern Virginia could attract 23,000 new daily transit riders, with 80 percent of new transit commuters drawn from single occupant vehicles. The report offers concepts for serving this market, including concepts for passenger stations, vehicles, and system operations.

The report also suggests ways that current proposals should be improved, such as providing guaranteed funding for new transit services and ensuring that land use planning is conducted in a way that supports this investment.

The report is available at www.gobrt.org and www.environmentaldefense.org/go/dctrffic.

Transport News from Around the World

Israel to introduce BRT in Jerusalem, Haifa

Israel's Ministry of Transport announced that new investment will be made in the country's public transport system over the next five years, including NIS 10 billion devoted to the development of bus rapid transit systems in both Jerusalem and Haifa. Jerusalem's new BRT system is expected to be operational in 2008.

The Ministries of Finance and Transport also are studying the potential of implementing tolls on private vehicles entering Tel Aviv during peak travel hours. The tolls would be used to discourage car use in favor of public transit. A Ministry of Transport official noted that tolls would not be implemented in Tel Aviv prior to the establishment of a public transport alternative to driving.

Source: Globes online, 9/22/2005

China plans to implement BRT nationwide

A China transport official has announced plans to build a number of bus rapid transit systems that will address traffic congestion and reduce the growing demand for oil.

Zhao Jie, vice-director of the Urban Transport Centre at the Ministry of Construction, says that success of the first seven or eight pilot programs will lead to implementation of BRT throughout the country. Plans will include the use of exclusive bus lanes and pre-boarding fare collection.

Beijing's first BRT corridor will be fully operational by the end of 2005, with six BRT lines to be completed in time for the 2008 Olympic Games. A pilot section of the first BRT corridor is already in service. Xian, Chongqing and Chengdu are also planning BRT lines.

China's first dedicated bus lanes are located in Kunming, which implemented median bus lane service in 1999. By 2004, the city had constructed 20 km of dedicated busways. Officials are planning a significant expansion of the system.

Source: CHINAdaily, 9/05/2005
For more information [click here](#)



Kunming busway



Beijing BRT station

Calgary Transit vehicles operating at capacity

Many Calgary Transit buses are frequently filled to capacity, unable to accommodate passenger demand at some stops. Overall bus ridership has increased by 50 percent over the past 10 years.

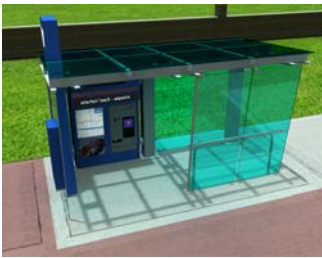
To accommodate the growth in transit demand the vehicle fleet was expanded by 30 new buses this year and will increase by an additional 42 buses in 2006. Forty-eight articulated buses will be introduced when the city debuts its BRT system in 2007.

Source: CFCN, 9/22/2005

For more information [click here](#)

Viva debuts in York Region, Canada

York Region, Canada (part of the greater Toronto area) launched Phase I of its new Viva rapid bus rapid transit network in September 2005. Viva is being introduced in four stages between September 2005 and January 2006.



The Phase I system features queue jumps and signal priority. Headways are 5-10 minutes peak and 15 minute off-peak. Phase II will establish dedicated busways.

Viva employs articulated, low floor Van Hool buses equipped with work tables, flat screen televisions, and eventually, Internet access. Newly constructed bus stations feature real-time bus arrival info, ticket vending machine and electronic ticket validators.

The Viva bus system is anticipated to increase transit ridership by 30 percent and remove up to 7,000 cars per day from major arterial roads.

Source: Toronto Star, 9/09/2005

For more information [click here](#) (Toronto Star) or [click here](#) (VIVA)

BRT to replace rail in several of Bangkok's planned transit corridors

Bangkok's Transport Ministry, which had promised to expand the city's 21 km subway system to a 287 km transit network, has announced that it is scaling back the rail plan by 100 km. Many of the subway routes are being shortened or may be replaced entirely with plans to implement bus rapid transit. The lower-cost bus rapid transit system will save the government 200 million. The money will be redirected to fight chronic drought and flooding problems.

Source: Bangkok Post, 8/31/2005 and 9/1/2005

BRT planned for Ahmedabad, India

Officials in Ahmedabad, India are attempting to induce a shift from private vehicle travel to public transit. Planners believe that a quality bus service will recover some of a lost market for public transit and improve traffic flow.

A BRT planning and design study has been completed and an exclusive, closed system BRT was recommended in several corridors. Final design is due in Spring 2006. The initial BRT corridor is expected to begin service in late 2006 or early 2007. Development of other corridors is scheduled in four phases.

For more information [click here](#) (Gujarat Infrastructure Development Board)

Bi-modal fuel cell bus under development in Korea



The Korea Railroad Research Institute (KRI) announced that it is developing an articulated, low floor, fuel cell-powered bus for use in bus rapid transit systems. The vehicle will be capable of operating on typical roadways and specially-built magnetic railways--a system less costly to develop than an underground subway network. A portion of the funding and technology has been provided by Hyundai Motor and Daewoo Bus. The Korean national government is planning to contribute more than \$28 million to the project. On-the-road testing is anticipated to begin in 2009.

Source: KBS World Radio, 8/23/2005

For more information [click here](#)

Amman, Jordan expands and upgrades bus system

Jordan's Public Transport Regulatory Commission (PRTC) Director General has announced a plan to upgrade the bus system in the capital city of Amman. The goal is to move people out of their cars and into public transport

The Commission plans to introduce 240 new buses in early 2006. Amman currently has 222 buses serving 180,000 passengers a day. The new buses are anticipated to carry an additional 120,000 daily passengers on both new and established bus routes. A pre-paid smart card fare collection system is also planned.

Source: MENAFN, 9/05/2005

For more information [click here](#)