



# Transforming Transportation



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## The WestStart-CALSTART BRT newsLane Newsletter

The **BRT newsLane** is a bi-monthly electronic publication from WestStart-CALSTART, in partnership with, and funded by, the Federal Transit Administration.

The mission of the **BRT newsLane** is to inform stakeholders on the progress and activities of importance to the BRT community, in the U.S. and abroad; to expand the BRT network by connecting stakeholders through strategic partnerships, and to advance the use of clean vehicles and technologies in BRT systems. -- The Editor

# Bus Rapid Transit newsLane

This Week's Feature

## Volvo Buses' Dominance in South American BRT Market Continues

Volvo Buses has long been a main supplier in Latin America's BRT market, and recent major buys indicate the company's presence is as strong, or stronger, than ever. Two of the largest BRT systems in that region - Curitiba in Brazil, and Transmilenio in Bogota, Colombia - have recently placed significant orders with the Swedish-based company.



**Bogota's Transmilenio**

Volvo Buses has received an order for 118 articulated buses from Transmilenio. There are already 432

Volvo buses in Colombia, and Volvo's market share of articulated buses will now exceed 50 percent. The three

*Volvo, continued on page 6*

Comm Line

## New "Small Starts" Rules Expected to Give BRT A Boost

By Cliff Henke, Parsons Brinckerhoff

The interim guidelines that FTA recently issued interpreting the so-called "small starts" program that Congress enacted last fall are expected to encourage cities to deploy BRT projects by streamlining the grants process. However, this year's budget for the Major Capital Investment Program may not include any money for

small starts. The Bush administration did not request any funds because the rules have not been finalized, effectively limiting program access.

Ironically, Congress enacted this small starts idea at the suggestion of administration officials at the FTA. They and their allies in Congress believe that the rules

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Tech Corner

# Wright Group, ISE to Build Advanced Buses for RTC

Wright Group of the United Kingdom, has partnered with ISE Corporation of San Diego, Calif., to build and deliver 50 hybrid-electric, 60-foot articulated rapid transit vehicles to the Regional Transportation Commission of Southern Nevada (RTC). According to the Wright Group, this is the first international order for its StreetCar rapid transit vehicles (RTVs), a streamlined, articulated BRT vehicle, and it is also the largest bus to use the ISE Corp. hybrid drive system.

The vehicles are bound for service in Las Vegas, and will operate on two Metropolitan Area Express (MAX) routes in downtown Las Vegas and to Boulder City. The \$55-million order will provide an advanced transit vehicle, and like the existing Civis vehicles operating on the RTC MAX system, the RTVs will operate with off-board fare collection, multiple door loading, and traffic signal priority in dedicated vehicle lanes.

StreetCar RTV is a further development of the StreetCar concept successfully launched with First Group, Britain's biggest transport group, and with Swedish vehicle specialist Volvo. The RTV is being deployed for the first time with a Diesel Hybrid Drive System using a Cummins ISL engine, developed in conjunction with the ISE Corporation of California and Siemens Energy & Automation in Georgia. The 18.7m (62ft) long articulated vehicles will be similar to those already in service in the UK, but with an interior specification reflecting the three door layout.

The chassis will be supplied by Swiss-based Hess, and all 50 vehicles will be built on a dedicated production line for StreetCar in Ballymena, Ireland.



Wright/ISE Streetcar RTV (artists rendition)

The Las Vegas transit property had previously purchased the Civis, distinguished by its style and advanced technology. Referring to the sleek European vehicle, one rider in Las Vegas noted, "I don't ride the bus, I ride that!" Like the Civis, StreetCar is one of the more exciting concepts in urban public transport, combining the style and technology of light rail vehicle design with the flexibility and affordability of a city bus. StreetCar also captures that elusive "wow" factor - something which was instrumental in RTC's decision-making process.

As Jacob Snow, General Manager of the Regional Transportation Commission of Southern Nevada commented, "The StreetCar provides us with a combination of function and style. The vehicles are attractive so they will appeal to our riders, and the hybrid engines provide the environmental benefits we wanted. The flexibility of the rubber-tire vehicles with the sleek look of light rail is the combination we were looking for." In addition to the initial order for 50 RTVs, the agency has contracted with the Wright Group for two further options, each for an additional 50 vehicles.

Send notices on BRT events to: [gmoscoe@calstart.org](mailto:gmoscoe@calstart.org)

[SUBSCRIBE HERE](#)

## Upcoming Events...

### APTA Annual Meeting.....October 8-11, 2006

APTA's Annual Meeting features general sessions and forums focused on current issues facing the transit industry and also features first-rate professional speakers. San Jose Convention Center, San Jose, CA. For information, visit: [http://www.apta.com/conferences\\_calendar/annual/index.cfm](http://www.apta.com/conferences_calendar/annual/index.cfm)

### Rail-Volution 2006: Building Livable Communities with Transit.....November 5-8, 2006

Rail-Volution brings together a unique cross-section of concerned citizens, business leaders, academics, elected and federal officials, planners, and transit operators. Chicago, IL. For information, visit <http://www.railvolution.com/>

### WestStart Clean Heavy Duty Vehicle Conference 2007.....February 13-15, 2007

Presented by WestStart, the U.S. Army National Automotive Center and the Federal Transit Administration, this is the premiere conference involving clean heavy-duty power trains and clean fuels. For info, visit [www.weststart.org](http://www.weststart.org) or contact Debby Dubose (general), or Monica Alcaraz (exhibits) at (626/744-5600).

# New Starts

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governing federal assistance to smaller projects should be streamlined, to help encourage cost-effective and faster-to-implement investments in transit, like BRT projects.



Congress defined "small starts" as projects that cost less than \$250 million to design and deploy and which seek less than \$75 million in this program. In creating these new category of investments, Congress directed the FTA to come up with rules that make the process for receiving those funds easier by lessening the burdens for demonstrating project cost-effectiveness and financial responsibility. For BRT, it also defined eligible projects under this new category as either ones with a "fixed guideway" (the traditional definition, such as track, a car pool lane or an exclusive bus lane in the street) or some minimum threshold of investments in the corridor, such as upgraded stations or specially designed vehicles.

The new interim guidelines were issued in June to implement this new policy and already they have been encountered a storm of comments. One group of critics believes that the new rules unfairly give BRT an advantage by rewarding projected ridership gains too much and other issues such as economic development generated from a project too little. These critics argue that the program was also designed to fund streetcar and small commuter rail projects as well, which might not generate ridership gains initially but help shape the neighborhoods they serve first, which then support longer-term ridership gains. Another group of critics believe that the "very

small starts" sections of the guidelines have so few requirements that they are not much different from traditional bus service. Very small starts are defined as projects costing less than \$50 million and less than \$3 million per mile (not including the vehicles). They also must be projected to have at least 3,000 passengers per average weekday and not include a new "fixed guideway" such as an exclusive bus lane or, in the case of a low-cost rail project, no new trackage.

Yet another school of thought believes that even with the more streamlined process, small starts suffer from the same competition for scarce federal dollars that their bigger counterparts do, and thus the new rules will provide little relief to project sponsors. In fact, a growing number of both "big" and "small" start cities are "getting out of line" entirely. Instead, they're trying to implement these projects with only formula grants or bus grants from other programs - such as highway grant transfers - or even with nonfederal funding, such as state, local and even private funding sources.

Comments for these new guidelines were due by July 10, but the FTA may consid-



er late filings. A final rule is expected to be issued in early 2008. For more about this interim rule and the small starts program, visit [www.fta.dot.gov/17973\\_18373\\_ENG\\_HTML.htm](http://www.fta.dot.gov/17973_18373_ENG_HTML.htm).

*(Cliff Henke is the Senior Analyst for Bus Rapid Transit and Streetcars at Parsons Brinkerhoff)*

## Cal Gets First Diesel Hybrid Bus!

The San Francisco Municipal Transportation Agency (MUNI) has accepted the first of 56 Orion VII diesel-electric hybrid buses from DaimlerChrysler Commercial Buses North America. According to a MUNI release, it is the state's first series production diesel-electric hybrid transit bus in service, and the beginning of what will be potentially the third-largest hybrid bus fleet in the country. MUNI worked extensively with the California Air Resources Board to obtain changes in regulations based on the transit agency's Alternative Fuel Pilot Program of 2001-2003.

The Orion VII buses are powered by BAE Systems' HybriDrive series drivetrain, which has proven emissions reduction and increased fuel efficiency performance based on more than 10 million miles logged in major cities such as New York and Toronto. These results were demonstrated in an independent study by the National Renewable Energy Laboratory (NREL) confirming a 35-percent improvement in fuel efficiency compared to conventional diesel buses, and reductions of up to 90 percent in particulates, 40 percent of NOx, and 30 percent of greenhouse gases. Drivers and passengers also enjoy the benefits of faster, smoother acceleration and quieter rides.

Earlier this year, a consortium consisting of 11 transit agencies in California, Nevada and New Mexico has awarded a contract for the purchase of up to 157 diesel-electric hybrid buses. According to a General Motors release, the buses will be delivered by Gillig Corp. and powered by General Motors' advanced hybrid propulsion system.

For more information on BAE's HybriDrive, visit the company web site at [www.hybridrive.com](http://www.hybridrive.com).

In The News...

# Economic Development and BRT: Fact or Fiction?

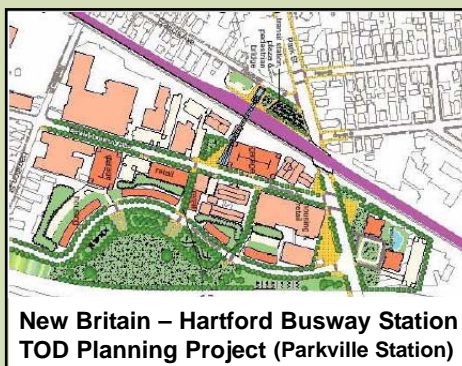
Economic development along rail corridors has been thriving across the US for years. For a variety of reasons, including a return of home owners to urban areas, federal grants toward transit-oriented development, and the incredible increase in the cost of housing over the past 10 years, development along rail stations has boomed. Studies have shown increased real estate values near rail stops that were far greater on average than relative housing located further away from transit. The City of St. Louis has seen approximately \$1 billion in development along its light rail stations since its opening in 1993. Portland has experienced \$3 billion in development along its MAX light rail stations since the early 1970's. Charlotte, NC is expecting \$400 million in investment in anticipation of its CATS line opening in 2006. Houston officials hope to generate \$1 billion along its METRORail.

However, while rail-oriented development is thriving in the US, there is a question as to the quality of bus-oriented economic development. Will it be at the level as that of rail-oriented development? After all, the two have historically pulled from different economic classes and while rail requires permanent infrastructure, BRT does not. The truth is, it's still too early to tell. BRT is brand new to this country. In fact, there isn't one "heavy BRT" line any where in the US as of yet. Without that commitment to fixed infrastructure, developers are generally leery of investing in bus-oriented TOD. But this should change soon, and here's why.

A Transportation Research Board report from 1989 found there is no reason to think that attractiveness to development is inherent to modal specificity. As long as the number of riders is equal, there should be equivalent development potential. The variables are the economic power of the demographic and the commitment to permanent transit infrastructure. Financiers will not invest in developments where they feel the economics don't make sense. Yet, even then, there are examples why this old model is changing.

Curitiba, Brazil has one of the oldest and most developed BRT lines in the world, serving hundreds of thousands of riders a day. Years ago, the city government, buried under an influx of poor rural migrants to the city core, realized the need to reshape the city around bus transit. The government up-zoned the areas lying along the transit corridors that were lower-density and gave

those owners transfer-of-right capability. This allowed the developers to buy development rights from other land owners in other parts of the city so they could develop the tall buildings they desired along the corridor, which catered to transit effectiveness. Of course, this strategy required holistic city planning, which is rare in the US. Still, the success can't be argued with. The result is a city whose transit system is the envy of the world, a city whose land use has been carefully designed to accommodate growth along the appropriate corridors, and a city that has consistently won awards for being the most business-compatible urban area in the entire country.



It's obvious from the example of Curitiba and others like it that bus-oriented development is possible. So, while transit agencies in the US are only now reaching the point of implementing BRT heavy lines, others countries have been doing so for years. In the US, some cities are already beginning to see BRT-oriented development. In Pittsburgh, there has been nearly \$400 million invested along its

BRT line. The Houston developer mentioned above is looking to attach development to bus facilities, such as major stops and park-and-ride lots. In Cleveland, a community group in the Midtown Corridor has come up with a new development plan and had it pushed through the city council TWO YEARS before the Euclid BRT line has even been unveiled. In Dade County, the Joint Development Program, which has already been successful at fostering TOD around Miami-Dade Transit's rail stations, is gathering public input to create BRT TOD. And Stamford, Connecticut is in the final steps of evaluating from a BRT TOD design competition. Boston has already seen over \$1 billion in new construction invested along its Silver Line. Those are just a few examples.

The keys to successful BRT-oriented development at this nascent stage will be a focused approach and an extra level of leadership. A transit line will not generate development on its own, but where there are market forces supporting development, transit will enhance the value of the land. It will require support from land use policies, including the appropriate zoning regulations and smart growth incentives, but once the American public sees a few solid, well-established examples of BRT-oriented development, it should prosper.

## Clean Vehicle Connection

# Orange Line Continues to Lead!

Earlier this year, Los Angeles Mayor Antonio Villaraigosa touted the success of Los Angeles Metro's Orange Line bus rapid transit corridor at a local press conference.

The Orange Line was the Valley's answer to a subway or light rail that had been promised but never materialized due to neighborhood battles and reduced funds for transportation. But once the Orange Line opened in October, 2005, it started attracting both veteran bus riders and those "new-to-transit" riders valued by transit agencies.

Despite some early problems - a three month construction delay due to community legal action, and a rash of minor collisions at crossings after the October, 2005 launch - the dedicated bus-lane crossing the San Fernando Valley has been, and continues to be successful.

In fact, the Orange Line was a large part of the reason Los Angeles County's Metro was cited as the nation's 2006 Outstanding Public Transportation System by the American Transportation Associations (ATA).

According to a Metro release, the agency earned the annual 2006 Outstanding Public Transportation System award for large transit properties for the success of the Orange Line in the San Fernando Valley; commencement of tunneling for the underground portion of the Eastside Extension light-rail project linking the Pasadena-to-Union Station Metro Gold Line with Little Tokyo, the Arts District, Boyle Heights and East Los Angeles; and the expansion of the Metro Rapid system the Metro fleet of 2,000 clean-air compressed natural gas (CNG) buses, targeted for a 100 percent CNG fleet by 2008.

According to a Metro spokesperson, the Orange Line also won both Project of the Year and Transit Project of the Year at the California Transportation Foundation (CTF) TRANNY awards. These are just the latest accolades for the Orange Line, which recently reached 21,828 boardings in May 2006, a milestone that Metro originally predicted wouldn't be reached until 2020.

After years of debate over bringing mass transit to the San Fernando Valley, residents embraced the opening of the Metro Orange Line as a welcome alternative to traffic-packed freeways and slower city buses.

The first attempt to determine if the new Orange Line busway has eased rush-hour traffic early this year found an improvement in the morning commute on the 101 Freeway. The study, conducted by UC Berkeley researchers for the *Los Angeles Times*, determined that traffic through the south San Fernando Valley from 7 a.m. to 10 a.m. has sped up about 7 percent - from an average 43 mph to 46 mph. And since the 14-mile busway opened Oct. 29, the amount of time that morning commuters waste being stuck in congestion - defined as traffic slower than 35 mph - has declined about 14 percent. The researchers were quick to point out that these changes are only shaving a few minutes off a commute, but they concluded that traffic on the freeway has improved because of the Orange Line. Researchers said that saving even a minute or two a day adds up over time and results in less smog and a significant saving in gasoline.



Photo Courtesy of The Transit Coalition

The vehicle, NABI's 60-BRT, has been part of the success story as well. In March, NABI received an order for 96 additional 60-BRT buses from Los Angeles Metro, options exercised by Metro pursuant to an earlier contract with Metro for an initial quantity of 200 buses. Most of the original 200 base buses have been delivered and placed into operation, with the first 30 operating on the Orange Line, a 14-mile dedicated BRT corridor in L.A.'s busy San Fernando Valley. The rest are deployed on high volume corridors of the Metro Rapid System.

The Orange Line draws capacity crowds of daily riders on the 14-mile route across the Valley, where the distinctive articulated buses travel in dedicated lanes and stop every mile between North Hollywood and Warner Center.

As noted in *The Los Angeles Daily News* in May of this year, one in seven riders of the Orange Line are converts from single-passenger automobiles and most passengers say the Orange Line is faster than their previous way of travel, be it car or bus. Coupled with the success of the Metro "Rapid Bus" corridors that are being rapidly deployed, bus rapid transit is starting to make a meaningful contribution in the battle against gridlock and pollution, putting a new face on public transit in Los Angeles.

# Hybrids

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operators - Conexion Movil, Express del Futuro and Metrobus - ordered the buses, which are equipped with Volvo's mid-mounted, 12-liter, 340-hp Euro 3 D12D engine. Bus chassis kits are being sent from the Volvo Buses

with separate bus lanes. Volvo Buses has supplied all of the high-capacity buses to the system in Curitiba. The first 33 bi-articulated buses were put into service in Curitiba in 1992. Today, 163 of Volvo's bi-articulated buses operate in the city. *Forty of the new buses ordered are Volvo's 25-meter bi-articulated buses with space for 270 passengers.*



The company has also received an order for 24 Volvo B12M, 18.5-meter, articulated buses with the same engine. The bus chassis will be manufactured in Volvo Buses'

plant in Curitiba, Brazil and assembled by the company's importer in Colombia, GM Colmotores. The bodies are built by two coach manufacturers in Colombia, Superpolo and Busscar. Deliveries from Curitiba have already commenced and are anticipated to continue through October.

The bus bodies will be manufactured by Induscar/Caio in Botucatu, Brazil. Production will take place in May and June and the new buses are scheduled to be put into service at the end of July.

Meanwhile, the transit organization in Curitiba has ordered 64 new Volvo buses. Curitiba in Brazil was the first city in the world to introduce a BRT system at the end of the 1970s. Since then, the system has been expanded and currently comprises five corridors

While high technology and low-floor construction are preferred in North America for BRT, Volvo has established without question that quality design and construction, and reliability in service are more than enough to provide the service and capacities needed to run a successful BRT system. Visit [www.volvo.com](http://www.volvo.com) for more info.

## NewsLinks

**2006-0-21 : APTA Report: Transit Ridership Grows in First Quarter**  
DESCRIPTION - APTA says ridership of public transportation in the United States grew by 4.25 percent in the first quarter of 2006...

**2006-07-10 : King County BRT Plans Seeks Voter Okay**  
DESCRIPTION - Proposal would add the service on five corridors, including three in Seattle, as part of his \$50-million-a-year "Transit Now" proposal...

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## FYI...

### Important Updates of BRT Tools and Documents -



We've added several new tools with a real added value for outreach and education, including:

*The Case for Hybrids in Transit Buses* was prepared for the Hybrid Truck Users Forum (HTUF) Bus Working Group.

An updated *BRT Vehicle Compendium*

*Issues and Technologies in Level Boarding for BRT 2006-2007* - A preliminary white paper on level boarding and precision docking.

BRT videos from...

- *The Surface Transportation Project/ Tides Center*
- *The Breakthrough Technologies Institute*
- *WRI with EMBARQ/ CTS on BRT in Mexico City*

*(Videos are on the CD Version. Contact [gmoscoe@calstart.org](mailto:gmoscoe@calstart.org) for more information.)*

## WestStart-CALSTART Bus Rapid Transit newsLane credits

Gregg Moscoe, Editor

Direct questions, or story suggestions for the **BRT newsLane**, to the editor, Gregg Moscoe, at [gmoscoe@calstart.org](mailto:gmoscoe@calstart.org)

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