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Unique Rail



All photos courtesy of Bombardier

[NJ Transit's River LINE](#) provides a vital connection from Camden to Trenton and, more importantly, a link to the system's larger rail network.



(From left) Patrick McWilliams, superintendent of transportation and service delivery; Robert Campbell, LRV operator; Patrick Gibbons, superintendent of contracts and administration; and [Alfred Fazio](#), general manager.



The River LINE operates on the same rails as Conrail via a temporal separation. While River LINE vehicles are on the tracks, Conrail is not allowed on and vice versa.

By Greg Gormick
Toronto Transportation Writer

The equipment, the operating plan, the public-private partnership that built and operates the system and other aspects of the River LINE represent new and innovative approaches to rail transit service. Combining them all in one package geared to provide the most service at the best price in an area that was previously transit deficient makes the whole project close to revolutionary. The unconventional River LINE offers a number of interesting attributes:

- *a turnkey design-build-operate-maintain (DBOM) approach to construction and on-going operation by a consortium of suppliers, including Bombardier Transportation which now operates and maintains the system;
- *the first low-floor, articulated diesel multiple unit (DMU) light rail cars in the United States;
- *new-build line segments that combine dedicated LRT median running and streetcar- like operation in mixed traffic;
- *time-shared use with Conrail freight trains for much of the route; and
- *an inventive combination of advanced rail traffic control, automatic train stop signaling, and temporal separation that yields maximum safety and track availability for passengers and freight alike.

But underneath the technological and operational innovations, there is something even more vital to the River LINE's success: its people.

"I know it sounds trite," says Bombardier's Al Fazio, general manager of the River LINE. "But it really is the dedication of the people at every level that makes it work."

The fact that the River LINE has turned out to be southern New Jersey's Little Engine That Could has pleased many and surprised others. Typical of all things new and different, the River LINE had a small group of vocal critics who questioned its viability on a continent where the automobile seemed to be king. They weren't convinced that high quality rail transit could change travel habits in the closely spaced communities on its 34-mile route from the NJ Transit Trenton rail station to the Entertainment Center on Camden's Waterfront.

Those concerns have been put to rest. River LINE's multiple innovations and the skilled personnel who make it roll have rail transit thriving along the Route 130/Delaware River corridor. There are real indications that the line serves not only as an alternative to the automobile, but is also helping re-energize the historic communities it links together.

Since its launch on March 14, 2004, River LINE performance and ridership have exceeded projections. The line exceeded its first-year target of 5,900 daily trips. Weekday average ridership today ranges between 7,000 to 8,000 trips and typically jumps to 10,000 to 12,000 trips for major events at entertainment, leisure and cultural venues along its route. On-time performance for the line is consistently above 95 percent.

Joe North, NJ Transit's general manager of light rail operations, says the River LINE's success is all the more impressive if you add in impacts beyond the right-of-way. He points out, "This was new territory for us because it's not just about providing excellent rail transit. Our executive director, George Warrington, declared from the outset that a big part of the River LINE would be positioning it as a catalyst for economic development."

The River LINE story starts in the mid- 1990s, when the late State Senator C. William Haines became the line's first

champion. Haines believed rail transit could ease highway congestion and spur environmentfriendly, transit-oriented "smart growth" in southern New Jersey, just as it does in the northern end of the state.

Since going into operation, the River LINE has given many riders a new transit option. For others who are transit dependent, it has boosted access and mobility. Aiming for maximum connectivity, the line plugs riders into other well-established rail services operated by NJ Transit and Amtrak on the Northeast Corridor, the Port Authority Transit Corporation (PATCO) Speedline service between Camden and Philadelphia, and the many services operated by the Southeastern Pennsylvania Transportation Authority (SEPTA). This interconnected rail grid creates a wide-range of non-automotive travel options throughout the region, the state and the entire Northeast Corridor.

As well, urban and interurban bus riders use a number of NJ Transit, BurLink, South Jersey Transportation Authority and Greyhound services to make direct connections with the River LINE at 15 of its 20 stations. Free parking at most stations, and a total of nearly 1,500 free spaces at three major park-and-ride facilities are positive improvements for people with a desire to trade rubber tires for steel wheels on at least a portion of their journeys.

"It's a difficult service to define because it's a hybrid in so many respects," says Fazio. "Although we call it LRT, it's more like one of the classic interurban lines, such as the Pacific Electric in Los Angeles or the North Shore in Chicago. Our rolling stock is larger and roomier than conventional LRT equipment and is, of course, diesel-powered.

We're operating with main line railroad signaling and on heavy rail that's more typical of a freight railroad than LRT. We're running trains at 60 mph over single track with tightly timed meets at sidings. And we're linking a whole series of towns along an extended corridor. That's an interurban.

If anyone in the North American transit industry is equipped to render such a judgment, it's Fazio. His enthusiasm for and knowledge of precision rail transit, past and present, is striking. Born in Brooklyn, he grew up liking trains and transit "because they got you everywhere you wanted to go in a big city such as New York. When we had nothing to do as kids, we'd go for a joy ride on the subway. It was a passport to freedom. I was also attracted to the engineering side of it even when I was very young."

Fazio entered railroading after naval service and an engineering education. His credentials include stints with Penn Central, Conrail, Amtrak (twice), New York City Transit and Parsons Brinkerhoff. Before he joined Bombardier as general manager of the River LINE in November 2005, Fazio was president of the 21st Century Rail consortium, builder and operator of NJ TRANSIT's other highly regarded turnkey LRT, the electrified Hudson-Bergen Light Rail system.

Through all of this, Fazio says he learned a basic rule he is now applying on the River LINE: "When railroads and transit systems are good, they're run on a divisional basis. You have a strong leadership team with the power to make decisions. That team then involves all the other employees, who put those decisions into effect. It means you work closely with all your people and take the time to get to know them, to sit down over a cup of coffee and listen to what they have to tell you. I really believe most people want to contribute to the places where they work. That translates directly into performance that gains you riders."

Fazio says the River LINE is comparable to watching a good athletic team, where every player understands their role and plays it to the fullest. Above all, he says, you don't reinvent the wheel every day; you practice and perfect your game. The flip side is that he also encourages everyone involved in Bombardier's operation of the River LINE to think not just in terms of what it is, but what it can be. Fazio calls every idea worth considering if it comes from people who take a proprietary interest in "their railroad."

Fazio says team spirit and cooperation are imperative to the River LINE's success, especially because of the numerous unconventional and yet effective practices that have shaped it. First and foremost is the relationship between owner-manager NJ Transit and operator Bombardier Transportation. The latter has been aggressively growing its full range of rail and transit services over the last decade, providing fleet maintenance, materials solutions, complete lifecycle overhauls and everything else right up to the full-service operations and maintenance package it is delivering on the River LINE. The company views this 10-year contract as one of the jewels in its crown.

"It's the type of business where you're only as good as your last rush hour," says Mike Hardt, Bombardier's vice president of services. "If we're going to maintain NJ Transit's faith in us, then we have to make sure every rush hour on the River LINE is a good one. NJ Transit is relying on us to help them deliver on their promises to the commuters of southern New Jersey. I think one of the keys in doing this is to not only have a strong and flexible organizational structure, but to have on-site general managers who have the power to make the decisions they know are best for your customer."

Hardt has a reputation in the transit industry for putting great faith in people who work with him. He says he especially looks for passion in the people on his team. Hardt says he is largely motivated by the fact that "this is a service business in every respect and service means people and relationships. That's what drives me and, I believe, the people on our River LINE team.

"North says Bombardier's dedication and commitment to the light rail operation are well appreciated within NJ Transit. He adds, "DBOM consortiums can be complex organizations to do business with, and I'm sure they feel likewise about NJ Transit. We are a highly engaged, strong-willed owner that takes a hands-on approach to all aspects of operations, maintenance and service delivery on the River LINE. A lesser contractor might sit back and wait for us to tell them what to do, or worse, find our high degree of involvement to be a constant source of conflict. Thankfully, Bombardier and NJ Transit have found productive ways to draw the best out of each other on the River LINE by focusing on our common interests."

The principals now involved in the River LINE clearly believe in it. They somehow hark back to its original champion, the late Senator Haines. In particular, Hardt speaks of how the team is constantly looking for new ways to keep the River LINE growing and improving. Respect for the line is growing in the industry, he says, and that is making it easier to attract more of the talent required to expand and constantly help NJ Transit meet the operational and financial pressures it is under.

Most transit managers yearn for at least one pressure faced by the River LINE — demand for more service. Passengers have requested extended hours of operation right from the start, and that can be a challenge. For 30 of its 34 miles, the River LINE uses the fully rebuilt Bordentown Secondary line, purchased in 1999 from Conrail for \$67.5 million as a cost-effective means of securing a strategic route that minimized right-of-way acquisition and construction. This line traces its roots back to a Pennsylvania Railroad predecessor, the Camden & Amboy, which opened for freight and passengers in 1832 and thereby became New Jersey's first common carrier railroad.

Passenger service on the Bordentown Secondary lasted until the early 1960s. When it faded away, what was left was an extensive and complicated freight operation serving factories that once made this region an industrial breadbasket of America. As the civic slogan says, "Trenton makes, the world takes." And the same goes for numerous other River LINE communities, too.

The freight service remains today and is vital to firms that survived the general industrial decline faced by traditional manufacturing zones of the Eastern seaboard in the post-World War II era. When NJ Transit purchased the track for the River LINE, Conrail retained operating rights to serve on-line shippers on behalf of its joint owners, CSX and Norfolk Southern.

The line is operated under NORAC Rule 261 with an entrance/exit NX logic rail traffic control system, bi-directional wayside signaling, automatic train stop protection for the River LINE trains and electric track derails for the freights, but complications are inherent in time sharing. The River LINE's 20 advanced DMUs are built to lighter European standards than traditional North American main line rail passenger equipment, and they can't be easily operated simultaneously with the heavyweight freight trains.

As well, the line is largely single-track with passing sidings. Mixing a 15-minute peak/30-minute off-peak transit service with the time variables of freight switching could be an operational nightmare for both parties. But it's not.

Under a Federal Railroad Administration waiver, temporal separation can take care of the issue, giving River LINE DMUs exclusive occupancy during the day and Conrail access at night. When it was first inaugurated, the River LINE's window of operation was 6 a.m. to 10 p.m. Sunday through Friday, all of Saturday night and Sunday morning. Conrail trains would scurry out to do their work after the last DMUs retired to the two end-of-the-line lay-up yards. A third yard, mid-line at Burlington, has been added to stretch the operating window over part of the route.

To meet the public requests for earlier and later service, NJ Transit, Bombardier and Conrail have worked to progressively expand the River LINE's schedule. The task was tackled cooperatively in a manner that is safe but doesn't disrupt the flow of freight service, which is growing. Service expansion on the River LINE has included:

- *an increase from 30-minute to 15-minute peak service in June 2004;
- *early morning service to Trenton from Florence and Roebling in September 2004, enabling customers to make earlier connections to Northeast Corridor trains;
- *early morning service from Cinnaminson to Camden in January 2005;
- *late-night service in June 2006 that extended the 9:30 p.m. trip from Camden to 36th Street to the

Pennsauken/Route 73 Park & Ride; and

- *early-morning and later evening service from Burlington City to Camden and Trenton in September 2006.

A \$1.3 million signal enhancement project will allow even more late-night service between Camden and the Pennsauken/Route 73 Park & Ride by May 2007. The project will enable the River LINE to operate between the two stations until midnight every night. Trips that currently operate only between Camden's Entertainment Center and 36th Street between 10 p.m. and midnight will be extended to the Pennsauken/Route 73 Park & Ride, located close to Route 73, Route 130, the New Jersey Turnpike and I-295.

"We have an excellent relationship with them [Conrail] and we absolutely have to," says Fazio. "We could hurt each other very badly if we didn't understand each other's needs and pressures. Although we share the line, we control it from our Camden Operations Center, and we have to be sensitive to Conrail, too. Rail and transit are very tight circles; you don't accomplish anything by fighting.

"It's important to recognize Conrail's need to grow its business just as much as they recognize ours. The more traffic they've got, the better for them and their shippers. Those local industries that depend on this freight service create some of the jobs that lead to more passengers for us."

The ability of the key players to forge working partnerships runs through virtually everything the line has achieved since Day One. Extra service to cater to events has meant extra business for everyone. Cooperative promotion has been the norm — whether it's in relation to once-a-year events such as the Liberty Grand Prix Power Boat Race at the Battleship New Jersey in Camden or ongoing attractions such as walking tours of the architecture-rich historical districts that dot the route.

"We knew right from the start that we'd have to do a lot more than just run a good light rail service," says North. "George Warrington said we would need every tool we could think of to promote it and integrate it into the mainstream of life throughout this corridor. Well, I think that's what has happened. That's most evident in the Burlington County Office of Economic Development's finding that the River LINE has played a significant role in \$1 billion of area investment since we opened."

Community partnerships have arrived in the form of transit-oriented development, too. Restaurants started popping up close to stations and proposals for building conversions and brownfield developments began to take shape. Sure enough, new and existing businesses, such as restaurants and stores reported growing business soon after opening day, leading one local newspaper to very quickly ask, "Could it be that the River LINE will be a success?"

Key indicators would suggest that the answer is "yes." There is major activity visible now all along the corridor. A perfect example is the agreement Riverside Township recently signed with developers to transform the industrial area known as the Golden Triangle into a \$200 million transit-oriented, mixed-use development. The centerpiece of the 32-acre brownfield is Keystone Watchcase Tower, a classic 1908 building that's been vacant for more than 50 years and is located directly opposite the River LINE station. The seven-story tower, listed on the National Register of Historic Places, will have commercial space on the ground level and 120 two-story lofts above. Two hundred new condominiums and 66 townhouses will flank this adaptive reuse development.

Riverside Township has also approved the redevelopment of a former hosiery mill that will produce 250 condominiums in two seven-story towers. The developer cited the location near the River LINE station as a major factor in purchasing the 1.5-acre property.

Further down the line, a developer has invested \$50,000 to retrofit the Cinnaminson River LINE station to improve access to its Villages at Cinnaminson Harbour, a new 911-unit subdivision that will include townhouses, carriage homes, condos, villas, shops and a marina on the Delaware River. Developer-funded improvements to the River LINE station include pedestrian crossings of the tracks and the River Road (Highway 543), sidewalks, a handicap ramp and additional lighting.

The River LINE seems to be making the impact originally envisioned by its champions, but no one is willing to rest on existing laurels. Service improvement plans are evolving constantly. Bombardier's Hardt says this is the only way such a service can reach its full potential and satisfy all the players, from owner to operator to passenger. "No one is willing to accept mediocrity or the status quo. We're all coming up with new ways to do it better, to learn from our experience. NJ Transit has been outstanding in seeing the benefits and funding them."

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