
NORTH SHORE CONNECTOR LRT

INTRODUCTION

The North Connector is comprised of two LRT lines totaling 1.5 miles in length that will extend Port Authority's existing LRT system to the North Shore and Convention Center areas in the City of Pittsburgh. The North Shore Connector, the region's highest priority transit project, would serve Southwestern Pennsylvania's most intensely developed area. The project provides a cost-effective solution to the issue of improving mobility to and within a corridor that has experienced major redevelopment and where major new development continues to occur.

PROJECT CORRIDOR

The Golden Triangle, Pittsburgh's traditional downtown, is Southwestern Pennsylvania's major employment center. It is characterized by dense urban development typical of a center city in a major metropolitan area. There are 133,000 employees in the Golden Triangle and this number is projected to increase to 141,000 by 2025. Half of these workers are transit users.

Across the Allegheny River from the Golden Triangle is the North Shore area which is undergoing extensive development and redevelopment. Currently, there are 23,000 workers in the North Shore and near North Side. This number is projected to increase to 27,000 by 2025. Additionally, there are 7,200 students enrolled at the Community College of Allegheny County (CCAC) and 690,000 annual visitors to the Carnegie Science Center.

Thirteen major developments have occurred in the area served by the project in recent years. Three major projects are currently under construction in the project area, and two more are under design.

PROBLEMS ADDRESSED BY THE NORTH SHORE CONNECTOR

Issue: Traffic Congestion. Separating the Golden Triangle from the North Shore is the Allegheny River. Four highway bridges traverse this physical barrier, one interstate highway bridge and three local bridges. Since the function of the interstate highway bridge is to carry regional traffic over fairly long distances, its ability to serve local travel needs is limited. The three local bridges all operate at level of service (LOS) "F" during AM and PM peak periods. This congestion will continue to impede the flow of buses as well as automobiles. Additional development on both sides of the river will only exacerbate congestion, further reinforcing the physical and psychological "barrier" effect of the Allegheny River between the Golden Triangle and the North Shore.

Benefit: The North Shore Connector will provide quick and convenient LRT service using an exclusive right-of-way, free from interference with automobile and truck traffic. Regardless of traffic conditions during periods of traffic congestion, the LRT service would operate reliably. Riders boarding the LRT system in the Golden Triangle destined to the North Shore are projected to save an average of 27,027 hours of travel annually.

Issue: Connections between Fringe Parking Facilities, North Shore Attractions and Final Destinations. A goal of the City of Pittsburgh, as articulated in its 1998 *Pittsburgh Downtown Plan*, is to encourage longer-term parking (such as commuter parking) to locate in fringe areas of downtown Pittsburgh rather than in the commercial core. Implementing this goal would have the dual effect of (1) utilizing existing parking in the commercial core for short-term parking needs in support of retail establishments and office uses, and (2) allowing for higher and better uses of land in the commercial core than additional parking. A rapid transit link to the Golden Triangle is necessary for the fringe parking facilities to be effective.

Benefit: The destinations of the fringe parkers are scattered throughout the downtown area. The great majority of Golden Triangle destinations are currently served by the existing LRT system.

NORTH SHORE CONNECTOR LRT

Extension of the LRT system to the North Shore and Convention Center/Strip District will assist in linking land use within the North Shore and Golden Triangle, and parking with destinations. Commuters boarding in the North Shore bound for work in the Golden Triangle will save 159,489 hours per year.

The North Shore Connector will connect four major activity centers in Pittsburgh's urban core: Strip District, Golden Triangle, North Shore and Station Square. People enjoying the many cultural attractions, parks, restaurants and night life establishments in these places can use the LRT system to travel quickly and conveniently from place to the other. In particular, persons traveling from Station Square to the North Shore will save 113,454 hours annually.

Issue: Access to the Corridor. In addition to improving access *within* the corridor, another goal is to improve access from various points in the Pittsburgh Region *to* the corridor. Although Port Authority's existing LRT system serves the Golden Triangle, LRT users bound for the North Shore must transfer to a bus which adds to travel times and limits the attractiveness of transit.

Benefit: Riders on the existing LRT system traveling to North Shore and North Side destinations will enjoy the convenience of a direct one-seat ride. Commuters from Pittsburgh's South Hills suburban communities bound to North Shore employment sites will experience a travel time savings of 81,081 hours per year.

Issue: Travel to and from Major Cultural and Sporting Events. The North Shore and the Golden Triangle experience heavy congestion during events at Heinz Field and PNC Park, particularly during post event periods. As development continues to displace North Shore parking, more patrons of the two arenas will park in the Golden Triangle.

Benefit: The North Shore Connector will provide quick and convenient LRT service using an exclusive right-of-way, free from interference with automobile and truck traffic, and major pedestrian flows during event periods. Regardless of traffic conditions during AM and PM peak periods or after major events, the LRT service would operate reliably. The North Shore Connector has the ability to move large numbers of people after events. Event riders would save 25,286 hours annually.

Issue: Access to the Convention Center Area. During the planning phases for this project, improved access to the new 330,000 square foot Convention Center as well as to surrounding areas emerged as one of the project goals. Although several bus routes pass near the Convention Center, they are delayed in traffic, do not provide direct access to many of the major hotels in the Downtown area and the routes are not easily understood by Convention Center users from outside of Pittsburgh.

Benefit: The Convention Center Line will provide a rapid, traffic-free link with the existing LRT system which will not only serve the Convention Center, but nearby attractions such as the Strip District, Amtrak Station and a new Greyhound Terminal and parking facility to be built by the Pittsburgh Parking Authority. As the existing LRT system serves most of the hotels in the Golden Triangle and Station Square, the Convention Center line will provide a rapid, easily understood link for out-of-town visitors to the Convention Center and the Strip District. Annual travel time savings for Convention Center Line users are anticipated to be 8,427 hours.

Issue: Access to and from the North Side. The North Side is the location of residential neighborhoods, the Allegheny Center office and apartment complex, the National Aviary, West Park and the Community College of Allegheny County. North Side residents and institutions see an opportunity for enhanced access because of the close proximity of the North Shore Connector stations.

Benefit: South Hills residents traveling to the Community College of Allegheny County and other North Side destinations will experience faster service. They will save 2,970 hours per year.

NORTH SHORE CONNECTOR LRT

TOTAL BENEFITS

The North Shore Connector is projected to carry 15,800 weekday riders (4,678,000 annual riders) in 2025. These riders are comprised of commuters, students and shoppers. Another 652,000 people would use the new line to attend Pittsburgh Pirates baseball games at PNC Park and Pittsburgh Steelers and University of Pittsburgh Panthers at Heinz Field. Other major events include Light-up Night, the Three Rivers Regatta and Fourth-of-July fireworks.

The diversity of markets described above in a relatively short corridor is a major factor in this project's cost-effectiveness. North Shore Connector riders would save 4,142 hours of travel time daily (including events). Total annual travel time savings (including time savings for travel to and from events) are projected to be 1,230,000 hours compared to the Baseline Alternative. Using the most current SPC travel demand projections for the year 2025 and FTA's SUMMIT software, the North Shore Connector Cost-Effectiveness Index is \$21.72 per hour of user benefit.

COMPARISON TO THE BASELINE ALTERNATIVE

The Baseline Alternative involves increased bus service between the Golden Triangle and the North Shore and greater frequency of LRT operation on the Penn Park Line. While the improved bus service would attract some additional riders, speed and reliability would be limited by heavy traffic congestion. Users of the existing LRT system would be forced to transfer in the Golden Triangle to access destinations served by the North Shore Connector. The need to move large numbers of people during events cannot be effectively accommodated by buses alone.

In comparison to the attractions served by the Convention Center Line, the Penn Park Line only serves the Amtrak Station and Greyhound Terminal. It does not provide access to the Convention Center or the Strip District. Moreover, existing development and topography makes it very difficult to locate new development at Penn Park LRT Station.

The North Shore Connector is superior to the Baseline Alternative because it offers fast, frequent, direct, traffic-free, easily understood service in the corridor. The superiority of the project to the Baseline bus service is evidenced by the fact that commuters traveling from the North Shore to the Golden Triangle will save an average of 10.9 minutes of travel time per trip. The North Shore Connector increases the utility of the original LRT investment by extending to locations not currently served by the LRT system. In addition to serving older, recent and on-going development, both the North Shore and Convention Center lines have stations near sites of potential new development and redevelopment.

LAND USE AND ECONOMIC DEVELOPMENT ISSUES ADDRESSED BY THE PROJECT

Since the 1990's, over \$1.5 billion has been invested in new development in the Golden Triangle, the North Shore and immediate surrounding areas. Another \$54 million is under construction, and \$1.5 billion worth of development is either under contract or in the planning phase of project development. About 60 percent of this development was or will be financed through private sources. The most recent of these involves Continental Realty beginning construction of a 1.2 million square-foot development in the North Shore.

An efficient and effective transit system is necessary to facilitate this \$3.1 billion in investment in a highly developed urban area. To keep pace with much of the new development which is slated for the North Shore and the Convention Center areas, it is necessary to expand the LRT system to these

NORTH SHORE CONNECTOR LRT

respective areas. The proposed extensions of LRT service would more effectively meet the increased travel demand generated by the new development than would an increase in street capacity to accommodate additional private vehicles.

Port Authority has closely coordinated with the City of Pittsburgh, the Sports & Exhibition Authority and developers to ensure that the design of the North Shore Connector is compatible with and supportive of the new development. These efforts combined with the City of Pittsburgh's strategy of pursuing transit-supportive development in the study corridor were major factors in FTA's "Medium-High" New Starts Criteria rating for Land Use.

FUTURE EXTENSIONS

During the planning for the North Shore Connector, many elected officials, residents, business groups, transit advocates, institutions and other stakeholders supported the North Shore Connector as a first phase towards future extensions to the Pittsburgh International Airport, the North Side and North Hills and the Allegheny Valley and eastern communities in the City of Pittsburgh and Allegheny County. Such extensions were considered at a sketch planning level in the Strategic Regional Transit Visioning Study and in further detail in the Airport Multimodal Corridor and Eastern Corridor Transit studies. These studies were conducted by Port Authority in partnership with other local and regional agencies. The North Shore Connector has been designed to permit such extensions and thus position Port Authority to develop a truly regional LRT system.

CONCLUSION

The North Shore Connector is a project that has received widespread local and regional support throughout the planning, environmental and design phases. It will reinforce the tightly-knit transit oriented urban form of the Golden Triangle of Pittsburgh and will support similar-type high-density office, commercial, cultural and residential development on the North Shore. Equally important, the North Shore Connector will physically and psychologically link the North Shore with the Golden Triangle. It will provide a quick and convenient link for commuters both traveling by car to fringe parking on the North Shore and via transit from the South Hills and Golden Triangle traveling to destinations in the North Shore. Additionally, the North Shore Connector will serve travelers destined to and from the cultural, recreational, educational and sporting facilities in the North Shore and near North Side as well as residential areas in both neighborhoods. Finally, this project positions Port Authority to extend its LRT system further to the west, north and east.