



MIAMI-DADE
METROPOLITAN
PLANNING
ORGANIZATION

CSX East-West Rail Feasibility Study



Phase 1 - Interim Findings - Initial Starter Service Executive Summary

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Introduction

Traffic congestion along The Dolphin Expressway (SR-836) continues to plague Miami-Dade County. Today more than 200,000 vehicles traverse this corridor on a daily basis and projections indicate greater volumes in years to come. This ongoing congestion has spurred interest by local officials, stakeholder agencies, and the Miami Dade Metropolitan Planning Organization (MPO) to evaluate the potential of developing a passenger service along the CSX East-West Lehigh rail spur. The service would run parallel to the Dolphin Expressway from the Miami Intermodal Center (MIC) near the Miami International Airport west to Florida's Turnpike and beyond.



Study Purpose

The objective of this study is to evaluate and assess the feasibility of implementing premium passenger rail service primarily along the existing CSX corridor's east-west segment (Lehigh Spur) to serve the western portions of Miami-Dade County.

Study Boundaries

The principal study area stretches from the NW 37th Avenue to NW 137th Avenue centered along the CSX tracks which mostly parallel NW 12th Street (Figure 1). The eastern portion of the rail corridor is owned by the Florida Department of Transportation (FDOT), while the western segment is owned privately by CSX. At the MIC, the proposed service will provide a direct connection to Metrorail, Tri-Rail, Amtrak, Metrobus routes, and other transportation services.

The 11-mile rail line runs west from the MIC served by Miami Dade Metrorail service, Tri-Rail regional rail service and Amtrak intercity rail service as well as numerous domestic and international air carriers. The line skirts the eastern and southern fringe of Miami's International Airport paralleling the often congested SR 836 toll road known as the Dolphin Expressway, westward to Florida's Turnpike and to the vicinity of NW 137th Avenue.



Alternatives Considered

To evaluate the costs and benefits of implementing passenger rail service in the corridor three concepts were developed to meet the objectives of the initial starter service, including:

- MIC to 137th Avenue
- MIC to 132nd Avenue
- MIC to Dolphin Station

Concept #1 – MIC to 137th Avenue



Concept #2 – MIC to 132nd Avenue



Concept #3 – MIC to Dolphin Station



The following assumptions were used in the development of all Initial Starter Service Concepts:

- Access to CSX-owned right-of-way for passenger rail operations can be achieved,
- CSX continues to serve freight customers accessed from the line,
- Starter service uses surplus conventional locomotive hauled push-pull trainsets from Tri-Rail,
- No more than two train sets in peak service,
- No changes to existing Metrorail schedules,
- At least six minutes allowed for transfer at MIC, and
- At least eight minutes to turn a train at the end of its one way trip for schedule reliability.



Starter service evaluated in this report assumes use of surplus conventional locomotive hauled push-pull trainsets from Tri-Rail.

Alternatives Comparison

A summary of the features of each Initial Starter Service Concepts is presented in the following table.

Table 1
Summary of Initial Starter Service Concepts

	Length	Stations	Travel Time (MIC to Terminus)	Capital Costs (2015 \$s)	O&M Costs (2015 \$s)
Concept #1: MIC to 137 th Avenue	11.1 miles	5	22 minutes	\$102.4 million	\$8.9 million
Concept #2: MIC to 132 nd Avenue	10.5 miles	5	21 minutes	\$100.0 million	\$8.6 million
Concept #3: MIC to Dolphin Station	9.4 miles	4	18 minutes	\$87.0 million	\$8.2 million

Source: Jacobs Engineering, 2015.



Concept #1 with a terminus at NW 137th Avenue results in a running time that is very tight on an overall operations plan and provides little cushion in the event of any form of delay. A benefit of the 137th terminus is its accessibility to the commuter market residing south of the corridor and its location on the regional roadway network.

Concept #2 with a terminus at NW 132nd Avenue offers a more accessible location and more attractive path of access to the residential neighborhood nearby yet does not have good regional access. This alignment provides more recovery time in the operations plan to account for minor delays.

Concept #3 having a terminus at the proposed Dolphin Station (NW 122nd Ave) affords good regional access while being very scalable in terms of future expansion. This location as startup service terminus allows for the expansion to occur at a later time without final decisions being made as to the ultimate westerly extent of service. Future service to NW 132nd, NW 137th or even as far as Krome could still be accomplished with this early action decision.

While the capital and O&M costs are lower the shorter the alignment the difference between the three concepts is significant enough to use as a real differentiator.

Items Requiring Further Refinement

While this feasibility study has articulated the potential benefits and costs of implementing passenger rail service within the CSX East-West Corridor, the study is limited in scope and schedule, and as such, there are a number of items that will require further evaluation in order for stakeholders to fully understand the implications and costs of formalizing a passenger rail operation in the corridor.

This interim report sets forth several potential operating scenarios for the rail service and identifies many of the costs associated with implementation of such service; however, the following items have been identified as items requiring further time to evaluate clearly:

Right-of-Way Ownership

As noted earlier in this report, a large portion of the existing rail right-of-way is owned by CSX Corporation, a private railroad. Key to implementing passenger service in the corridor is gaining access to this transportation corridor. Some form of agreement between the project sponsor(s) and CSX would have to be executed for the implementation to occur. There are various ways of gaining such access range an outright purchase of the right-of-way, a lease agreement to an operating arrangement. CSX, through their involvement in the Study Advisory Committee and correspondence, has indicated a willingness to discuss options related to the potential purchase of the right-of-way yet they have indicated that this may involve the entire Homestead Branch and not just the Lehigh Spur. Discussions need to be advanced between the project sponsor's and CSX to better understand any financial or operating considerations that need to be factored into the decision making. It should be noted however that all three alignment scenarios presented herein likely have similar if not identical challenges related to CSX ownership.



Utilities

The presence of underground utilities running within the rail right-of-way or crossing the railroad has an ability to impact overall capital costs. Depending on the type and nature of the utility and associated agreements the impact upon the projects budget and schedule can vary greatly. While it is unlikely that potential issues vary greatly among the alternatives additional utility investigations are warranted in the next phase of the project implementation.

Grade Crossings

There are 11 grade crossings located in this portion of the right-of-way. While there is grade crossing protection equipment in place the upgrading/replacement of such equipment would be required for implementation of passenger rail service. Additionally the impact of more train service within the corridor on the roadway system needs to be further analyzed. In particular, the crossing at Lejeune Road needs to be closely evaluated to determine what if any measurable roadway delay warranting traffic mitigation is the result of additional gate downtime.

Implementation

Should the regions stakeholders determine one the aforementioned alternatives is worthy of advancing Figure 5 below depicts the steps needed to be undertaken in order to implement new passenger rail service in the corridor.

**Figure 5
Implementation Process**

