



Lee County
**RAIL CORRIDOR
FEASIBILITY STUDY**

October 25, 2013



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Lee County MPO Rail Feasibility Study
Contract 2012-001

October 25, 2013

David Plummer & Associates, Inc.
Spikowski Planning Associates
David Douglas Associates, Inc
HDR Engineering, Inc
RMI Midwest



Acknowledgements

Lee County Metropolitan Planning Organization

Florida Department of Transportation

Technical Team

David Plummer & Associates, Inc.

Spikowski Planning Associates

David Douglas Associates, Inc.

HDR Engineering, Inc.

RMI Midwest

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Executive Summary

Report Highlights

This Rail Corridor Feasibility Study analyzes the long-term feasibility of public multi-modal transportation within the existing Seminole Gulf Railway Corridor, while maintaining and possibly expanding freight service. Of particular importance, the study addresses shared use of the rail corridor for public transportation use.

The study addresses four major issues.

1. Existing and expanded freight operations.
2. Potential passenger service.
3. Alternate means of maintaining the corridor for long-term transportation uses.
4. Preservation of the corridor.

The study compares potential passenger service in the rail corridor to future service that had been contemplated in the I-75 median. The conclusion is that the Seminole Gulf Railway corridor, because of its location, is clearly better for shorter distance and intra-urban public transit. The I-75 median is better suited for longer distance, higher-speed travel between major cities.

The most important recommendation is that the intact rail corridor is very important to the future of Lee County and should be preserved. Whether the corridor is eventually used for freight service, passenger transit, multi-use pathways, or a combination of these and other uses, it will remain a unique and irreplaceable asset – a 37-mile-long, north/south corridor through urbanized Lee County.

The corridor passes through all of Lee County into northern Collier County, and through the cities of Fort Myers and Bonita Springs. Preservation of the corridor would be enhanced by all four jurisdictions amending their comprehensive plans to designate the corridor as a strategic regional transportation corridor.

The demand for and viability of passenger service in this rail corridor may be well in the future. With rapidly changing transportation technology, such as autonomous vehicles, it is premature to recommend, at this time, the type of passenger service best suited for this area.

However, three of today's passenger modes (commuter rapid transit – CRT, light rail transit – LRT, and bus rapid transit – BRT) were evaluated in this study. All three modes, with considerable variations in capital and operating costs, are viable alternatives for the rail corridor.

Most existing freight consists of frozen and refrigerated goods, scrap metal, propane, lumber and building materials and newsprint. Freight service has significantly decreased during the economic downturn; about 7,000 carloads of freight were shipped in 2012, down from 14,000 to 15,000 carloads in the recent past, mainly due to steep declines in lumber and building materials.

There have been many efforts to increase rail freight opportunities. However, the outlook for expanded rail freight operations is uncertain at best, since forecasted growth in general freight is expected to be primarily by truck, and the existing condition of the tracks has resulted in speed limitations throughout the corridor.

While the outlook for expanded rail freight operations is uncertain, rail freight remains an important transportation component in Southwest Florida. Although only a limited number of local businesses rely on rail freight, abandoning freight service is difficult due to natural concerns about the future of these community businesses that rely on rail, as well as federal laws and policies that oversee rail systems.

The rail corridor is currently controlled by two private entities: CSX and Seminole Gulf Railway. CSX owns the land within the right-of-way. Seminole Gulf Railway has a long-term lease to operate freight rail service in this corridor (with up to 34 years remaining on the lease). Seminole Gulf Railway owns and maintains the tracks and crossings and operates a dinner train in addition to handling freight.

Because conditions and circumstances change over time, and even with supportive comprehensive plan preservation policies, the public in order to preserve this corridor for potential public uses may find it necessary and / or prudent to purchase an interest in the corridor.

Four general methods could be used. The first method, applicable by itself if the public entity was primarily concerned with continuing freight operations in the short term, would be to purchase the real estate from CSX. This would be similar to buying an office building that was fully leased; the buyer would receive the rent but not be able to occupy the building until the lease expires. The rail corridor would be publicly owned and would convert to public control when the current lease expires.

The second method, combined with the first, would include a negotiated agreement with Seminole Gulf Railway to allow public uses in the corridor in addition to existing services, without renegotiating the lease.

The third method, also combined with the first, would include public purchase of the Seminole Gulf Railway long-term lease, without acquiring the tracks or other physical improvements. A new lease would be negotiated with Seminole Gulf Railway that would provide for continued freight operations and possible future passenger service.

The fourth method, which also requires the first method to be undertaken, would be the public entity purchase of the Seminole Gulf Railway portion of the lease, along with the track improvements. Seminole Gulf Railway would no longer operate in the corridor and the public entity would be able to immediately occupy and use the property.

Findings and Conclusions

Seminole Gulf Railway Corridor / I-75 Corridor:

1. The I-75 corridor was planned and designed with a multi-modal envelope in the median for future passenger rail service. The Seminole Gulf rail corridor could provide passenger service within the same general study area.
2. The rail corridor, given its more urban location, is clearly superior for local, intraurban (intracity) passenger service. The I-75 corridor remains the better alternative for higher speed passenger service between major cities.

Right-of-Way Characteristics:

3. The rail right-of-way, from northern Collier County to the Lee / Charlotte County line, varies from 40' to 200'. The majority of the corridor is wider than 95', but the right-of-way narrows to 40' in the City of Fort Myers east of Downtown. The right-of-way is generally free of encroachments except for an underground fiber optic cable along the majority of the corridor.

Right-of-Way Preservation:

4. The most important recommendation from this study is the preservation of the rail corridor for the future residents of Lee County. This corridor is a unique asset, whether eventually used for freight service, passenger transit, multi-use pathways or a combination of these and other uses. It would be nearly impossible to recreate this corridor today – a 37-mile, unimpeded, north / south corridor in urbanized Lee County.
5. The corridor passes through Lee County into northern Collier County, and through the cities of Fort Myers and Bonita Springs. Preservation of this corridor would be enhanced by all four jurisdictions amending their comprehensive plans to designate the property as a strategic regional transportation corridor. Implementation of this designation requires each of the jurisdictions to adopt policies encouraging the public purchase of the corridor and protection of the public interest in the rail corridor if abandonment is sought.

Freight Service:

6. Most existing freight consists of frozen and refrigerated goods, scrap metal, propane, lumber and building materials and newsprint. Freight service has significantly decreased during the economic downturn; about 7,000 carloads of freight shipped in 2012, down from 14,000 to 15,000 carloads in the recent past, mainly due to steep declines in lumber and building materials.
7. There have been many efforts to increase rail freight opportunities. However, the outlook for expanded rail freight operations is uncertain at best, since forecasted growth in general freight is expected to be primarily by truck.
8. Future growth in rail freight is also limited by the condition of the existing rail and speed limitations placed on the tracks. While there are some locations where the track is maintained to allow a maximum speed of 25 mph, the majority of the corridor is maintained to allow only 10 mph.
9. While the outlook for expanded rail freight operations is uncertain, rail freight remains an important transportation component in Southwest Florida. Although there are only

a limited number of area businesses that rely on rail freight, it would be very difficult to abandon that service. This is due to natural concerns about the future of these community businesses that rely on rail, as well as Federal and State laws and policies that oversee rail systems. Freight service by rail will be an important issue in future studies.

10. Any major improvements to upgrade the existing tracks for rail freight, whether in the short-term or long-term, should be considered and evaluated in conjunction with any proposed initiative to implement passenger service in the corridor.

Passenger Service:

11. The demand and viability for passenger service in the rail corridor may be well in the future. With the rapid changes taking place in the economy and forthcoming in transportation technology, such as autonomous vehicles, it would be premature to conclude the most favorable type of passenger system.
12. To insure that this is a viable corridor for public transportation, three of today's passenger modes (commuter rapid transit – CRT, light rail transit – LRT, and bus rapid transit – BRT) were evaluated. All three modes, with considerable variations in capital and operating costs, are viable alternatives for the rail corridor.
13. The future selection of the travel mode for this corridor will require detailed studies of ridership, vehicle types, station locations, costs, funding, and other similar system features.
14. This is a preliminary feasibility study. Its primary intent is to determine the viability of public transportation alternatives and the steps that would be needed to preserve the railroad corridor for future transportation purposes. This level of analysis is insufficient for precise estimates of the cost of various passenger systems. Examples of elements not yet defined are type and number of transit vehicles, stations, utility relocations, track replacements, and a variety of similar items. This level of study is also insufficient to establish a definitive limit of service, ultimate routes or phasing.
15. However, initial passenger service routes could encompass all or portions of a 32-mile route operated between East Fort Myers and where the rail corridor ends in northern Collier County and then extended along surface streets to the vicinity of Immokalee Road and Goodlette-Frank Road. Due to the expense of upgrading the rail line and bridges across the Caloosahatchee River, an extension of passenger service across the Caloosahatchee River to North Fort Myers would be deferred to a later stage.
16. At this time, the type of passenger system and route(s) are not known. However, it is still important to establish a comparable estimate of the approximate costs to place the three passenger systems in the corridor. This was done by assembling the actual costs of similar projects in the United States. These costs, which are all inclusive, were converted to general order of magnitude costs / mile.

Estimated Capital Costs

<u>System</u>	<u>Cost Estimate per Mile</u>
Commuter Rail (CRT)	\$ 10 million to \$ 20 million
Bus Rapid Transit (BRT)	\$ 20 million to \$ 40 million
Light Rail (LRT)	\$ 80 million to \$120 million

17. There are a wide variety of reasons for such a large difference in the capital costs of these type systems: type of equipment, number of stations, track relocations and the like. However, caution must be used when viewing the difference in these capital costs because the efficiency and cost / benefit of the system are not applied to this analysis.

For example, commuter rail is the lower-cost option, but is also the least flexible and efficient service. These estimates are only a guide and, taken alone, do not reflect the best system for this area.

18. Operating and maintenance (O&M) costs are ultimately an important element in the system selection process. However, similar to capital cost estimates, these costs will not be known until the final system details are identified. As a guideline, the O&M costs for similar systems in the United States are as follows.

Estimated O&M Costs

<u>System</u>	<u>Cost Estimate Per Passenger Trip</u>
Commuter Rail (CRT)	\$ 3.30
Bus Rapid Transit (BRT)	\$ 3.60
Light Rail (LRT)	\$ 10.00

Combined Pedestrian / Bikeway Paths:

19. Multi-use pathways have been envisioned in this corridor for some time. Multi-use pathways could be a viable option through much of the corridor. However, it is likely that, given right-of-way restrictions, there would be some sections of the corridor not suitable for a multi-use pathway. Once the passenger service mode is better defined, studies will determine what sections of the corridor can accommodate pathways, as well as passenger and freight service.

Securing Public Interest in the Corridor:

20. The rail corridor is now controlled by two private entities: CSX and Seminole Gulf Railway. CSX is the present owner of the land within the right-of-way. Seminole Gulf Railway has a long-term lease to operate freight rail service in this corridor (with up to 34 years remaining in the lease). Seminole Gulf Railway owns and maintains the rail improvements and operates a dinner train in addition to handling freight.
21. Because conditions and circumstances change over time, and even with supportive comprehensive plan preservation policies, the public agencies in order to preserve this corridor for potential public uses may find it prudent and / or necessary to purchase an interest in this corridor.
22. This study identified the components of a potential purchase process and placed a range of values on each component. The values reported are for the rail corridor within the limits of the study (from the Lee / Charlotte County line to just south of the Lee / Collier County line).
- a. Securing the CSX Portion of the Lease.
The estimated value of the "leased fee interest," or CSX's interest in the CSX / Seminole Gulf lease, is approximately \$5 to \$15 million. This is the cost to purchase the CSX's portion of the lease. The purchaser, a public entity, would become the "landlord" and receive the annual revenue from the lease. At the end of the lease, the public entity becomes owner of the underlying property. This scenario, by itself, would be undertaken only if the public entity might be content to wait for the end of the lease (up to 34 years) to use the property. It would also be possible, during that time, for the new landlord and Seminole Gulf Railway to negotiate a new lease. The value of the CSX interest increases over time as the duration of the lease is reduced.

- b. Securing the Seminole Gulf Railway Portion of the Lease.
The estimated value of the "leasehold interest," or Seminole Gulf's interest in the lease, without track improvements, is approximately \$65 to \$104 million. Since the public entity would want and may be required to continue the freight operations within the corridor, a new lease would be negotiated with Seminole Gulf Railway or another operator. The new lease could make provisions for continuing freight operations and introducing passenger service in the future. The value of the Seminole Gulf lease diminishes over time as the duration of the lease is reduced.
- c. Securing the Seminole Gulf Portion of the Lease and Track Improvements.
The estimated value of the "leasehold interest" or Seminole Gulf's interest in the lease, along with the track improvements, is approximately \$87 to \$125 million. This investment would be undertaken if the public entity was interested in immediate control of the rail corridor. Seminole Gulf Railway would no longer provide service in the corridor. This value diminishes over time as the duration of the lease is reduced.
23. Again, there are two to three separate components of a purchase. They are summarized as follows.

Purchase Options / Components

<u>Component</u>	<u>Estimated Value</u>
CSX Portion of Lease	\$ 5 million to \$ 15 million
CSX plus Seminole Gulf Portions of Lease	\$ 70 million to \$119 million
CSX plus Seminole Gulf Portions of Lease, With Track Improvements	\$ 92 million to \$140 million

Therefore, the total value if all components are pursued is approximately \$92 million (\$5 + \$87 million) to \$140 million (\$15 + \$125 million).

Recommendations

1. The Florida DOT should purchase the CSXT leased fee interest from where the rail line ends in northern Collier County north to Arcadia.
 - a. The cost of acquiring the leased fee interest in the study area (Lee / Charlotte County line to just south of the Lee / Collier County line) has been estimated to be from approximately \$5.0 to \$15.0 million.
 - b. An assessment of the likely cost to acquire the leased fee interest for the section of the rail line in Charlotte and Desoto Counties (and possibly Sarasota and Manatee Counties from Clark Road to Oneco) should be undertaken. This analysis should be a high priority for the MPO.
 - c. Purchase of the right-of-way by the Florida DOT would not affect continued Seminole Gulf Railway (SGLR) operations under the current lease agreement.
2. The preferred mode of passenger travel should be determined. No specific mode of travel is recommended at this time. However, it has been established that all three major modes of travel (Commuter Rail, Light Rail and Bus Rapid Transit), as well as multi-use pathways, could be implemented in the corridor.
 - a. The MPO should conduct a detailed alternatives analysis that would evaluate the appropriate travel modes, compare the capital and operating costs of each, forecast ridership for each, identify a preferred transit mode, and recommend the timing of implementation of passenger service.
 - b. Preliminary priorities for passenger service should include:
 - 1) Initial Service – North Collier County to Downtown Fort Myers and East Fort Myers
 - 2) Ultimate – Initial Service plus East Fort Myers to North Fort Myers
 - c. Work with Seminole Gulf Railway in exploring arrangements that could integrate public transit with existing and planned freight operations in Lee County.
 - d. LeeTran and the Lee County Transit Task Force should evaluate how a high-capacity transit service along the rail corridor could promote the effectiveness of LeeTran bus service.
3. Freight service should be maintained and improved.
 - a. Current freight operations by SGLR should be maintained and expanded wherever practical.
 - b. After the CSXT interests are acquired, corridor options to upgrade the tracks and beds in a manner consistent with the potential future coexistence of freight and passenger service and a multiuse pathway within the corridor should be considered.
 - c. The Lee County Economic Development Office should work with SGLR to promote and market rail serviced properties for industrial development.
4. The CSXT / Seminole Gulf Railway corridor should be preserved for continued and expanded transportation use through amendments to existing Comprehensive Plans and transportation plans.
 - a. Local, regional and state governments should take actions to protect the corridor for moving freight, while also pursuing other transportation purposes for which the corridor may be suited.
 - b. The MPO should coordinate with local governments to revise their comprehensive plans to include goals, objectives and policies to preserve the rail corridor for future use as a multi-modal corridor.
 - c. The cities of Bonita Springs, Fort Myers, Punta Gorda and Arcadia, (and possibly Sarasota and Bradenton) along with Collier, Lee, Charlotte and DeSoto Counties,

- (and possibly Sarasota and Manatee Counties), should take the following steps in their comprehensive plans.
- 1) Adopt a policy that formally designates the rail corridor as a strategic regional transportation corridor, using the combined authority of the Community Planning Act (F.S. 163.3161 et seq.) and the specific enabling legislation for transportation corridors (F.S. 337.273).
 - 2) To implement this designation, adopt policies that would commit each local government to:
 - i. Encourage Florida DOT to purchase the real estate interests in the entire rail corridor from Arcadia to north Naples from its current owner, CSX Transportation (this action would not affect the existing lease to Seminole Gulf).
 - ii. Explore methods for enhancing freight capability for the corridor and adding capability for commuter rail, light rail, or bus rapid transit.
 - iii. Commit to protecting the public interest in the rail corridor during any abandonment proceedings before the U.S. Surface Transportation Board.
 - iv. Support use of federal rails-to-trails authority to railbank the corridor if the alternative is abandonment of existing and future rail service.
 - 3) Designate the rail corridor on their future transportation maps (F.S. 163.3177(6)(b)(1)).
- d. The cities of Bonita Springs and Fort Myers and Collier and Lee Counties should take the following additional steps.
- 1) Designate the rail corridor on their future land use maps (F.S. 163.3177(6)(a)(1)).
 - 2) Begin the land-use planning process for transit-oriented development (TOD) around future transit stations, beginning with the most probable station locations and extending to other potential stations over time.
5. Each MPO that the Seminole Gulf rail corridor passes through, Collier, Lee, and Charlotte–Punta Gorda (and possibly Sarasota–Manatee), should:
- a. Strongly urge the Florida DOT to purchase outright the real estate interests of CSXT in the Seminole Gulf rail corridor. Florida DOT is the only transportation entity whose area of authority covers the four counties served by the rail corridor. Purchase of the real estate would not affect the current lease to Seminole Gulf, but would allow Florida DOT to replace CSXT as the entity with legal responsibility and become the long-term steward responsible for future uses of the rail corridor.
 - b. Adopt policies and carry out plans that:
 - 1) Explore methods for enhancing freight capability for the corridor and adding capability for commuter rail, light rail, or bus rapid transit.
 - 2) Commit to protecting the public interest in the rail corridor during any abandonment proceedings before the U.S. Surface Transportation Board.
 - 3) Support use of federal rails-to-trails authority to railbank the corridor if the alternative is abandonment of existing and future rail service.
6. The Lee and Collier MPOs and Lee’s Transit Task Force should take these steps:
- a. Because Seminole Gulf Railway’s lease may be too expensive to purchase, the Lee County MPO should take the lead role in exploring with Seminole Gulf officials other voluntary arrangements that could integrate public transit with

- existing and planned freight rail operations in Lee County. These discussions should include potential physical configurations within the rail corridor as well as various legal arrangements including sub-leasing, assignment of the lease with lease-back of freight rights, and renegotiation of the existing lease. The Lee County MPO should also serve as lead agency for further technical analyses required before public transit could be added to the rail corridor.
- b. The Collier County MPO should take the lead in exploring the costs and benefits of extending high-capacity transit that runs along the rail corridor all the way to Immokalee Road into northern Collier County, which is the northern terminus of public transit in Collier County.
 - c. The Lee County Transit Task Force should consider how a high-capacity transit spine along the rail corridor could improve the effectiveness of LeeTran bus service and how the combined system could promote the establishment of an independent transit authority or other entity that could construct and operate the combined system.
7. The MPO should seek legal opinions to address two key issues related to the preservation of the corridor and other issues as they may arise.
- a. The MPO should seek a legal opinion to fully understand all terms of the lease between CSXT and SGLR.
 - b. The MPO should seek legal opinions to establish a contingency plan for protecting the public interest should abandonment of all or a portion of the rail line be proposed.

1. Introduction

This report presents the findings and conclusions of the Lee County Metropolitan Planning Organization (MPO) Rail Feasibility Study of the CSX/Seminole Gulf Railway Corridor. This study has been done to assess the long-term feasibility of implementing public multi-modal transportation within the existing Seminole Gulf Railway Corridor through Lee County, while maintaining and possibly expanding freight service in the corridor.

As Lee County continues to develop, it is becoming increasingly difficult and expensive to build new highway corridors or expand existing corridors. Greater emphasis is now being placed on maximizing multi-modal transportation opportunities in existing corridors. This is reflected in the latest MPO Long Range Transportation Plan (LRTP), which emphasizes multi-modal alternatives to highway travel.

1.1 Study Scope of Services

In 2009, the Lee County MPO staff received County Incentive Grant Program (CIGP) funds from the State for FY 11/12 to conduct a rail feasibility study. The request was made based on questions that were being raised from the TIGER grant application that the MPO submitted for infrastructure improvements to the Seminole Gulf corridor. The MPO staff worked closely with the MPO Committees and interested stakeholders to development a scope of services to assess multi-modal transportation opportunities in the corridor.

The MPO Scope of Services consists of the following.

- Task 1 – Collect Existing Physical Inventory Data
- Task 2 – Explore Potential Options for Passenger Service
(including commuter rail, light rail, bus rapid transit, multi-use pathway)
- Task 3 – Assessment of Existing and Future Freight Issues
- Task 4 – Determination of Current Asset Value
- Task 5 – Identification of Public Use Alternatives
- Task 6 – Public Involvement, Presentations and Preparation of the Final Report

Under this Scope of Services, a consulting team retained by the MPO would explore the long-term feasibility of commuter rail transit, light rail transit, bus rapid transit and/or a multi-use path running from the Charlotte County line through Lee County into northern Collier County, along with continued freight service.

1.2 Consulting Team

In May 2012, the MPO Board selected the consulting team headed by David Plummer & Associates, Inc. (DPA) to conduct this important study. The DPA team consists of a balance of well known local firms and well respected national firms that combine general transportation planning, transit, engineering, and planning expertise with very specific, unique skills and expertise. The team also brings local insight into Lee County and Southwest Florida in general.

Under the leadership of the MPO staff, the study team includes the following:

David Plummer & Associates (DPA) 2149 McGregor Boulevard Fort Myers, FL 33901	Project management, corridor evaluation, passenger service issues, and alternatives.
Spikowski Planning Associates (SPA) 1617 Hendry Street, Suite 416 Fort Myers, FL 33901-2947	Multimodal opportunities, land use policies, comprehensive plans, public use alternatives, and compatibility issues.
David Douglas Associates (DDAI) 1821 Victoria Avenue Fort Myers, FL 33901-3428	Inventories, data collection, and aerial maps.
HDR Engineering (HDR) 315 Robinson Street, Suite 400 Orlando, FL 32801-1949	Passenger service options, freight issues, operating agreements without purchase of right-of-way or lease, and alternatives.
RMI Midwest (RMI) 1200 Central Avenue, Suite 330 Wilmette, Illinois 60091	Right-of-way and lease valuation and public use alternatives.

The DPA team examined existing and projected freight service on the rail line, the width of the right-of-way, and the inventory and condition of the rail bed, track and equipment within this 37.5-mile corridor. The consulting team also explored the feasibility of using the railway corridor for commuter rail, light rail and/or bus rapid transit passenger service and/or a multi-use pathway, while maintaining or expanding freight service.

1.3 Technical Reports

The findings and conclusions of this study have been reported in great detail in a series of technical reports prepared and reviewed by the entire consulting team and reviewed by the MPO staff. These technical reports are listed below.

1. *Multi-Use Assessment: I-75 Multi-Modal Envelope vs. Rail Corridor*
(DPA July 19, 2013)
2. *Railroad Operating Agreements: Without Acquisition of ROW or Lease*
(HDR, July 19, 2013)
3. *Assessment of Potential Options for Passenger Service*
(HDR, July 23, 2013)
4. *Assessment of Existing and Future Freight Issues*
(HDR, July 24, 2013)
5. *Inventory of Existing Seminole Gulf Railway Corridor*
(DDAI, July 29, 2013)
6. *Aerial Maps for Lee County MPO from Collier to Charlotte Co.*
(DDAI, July 29, 2013; 11" x 17" format)
7. *Estimates and Projections of Existing and Future Land Uses in Lee County*
(SPA, August 15, 2013)
8. *Seminole Gulf/CSX Rail Corridor in Southwest Florida Land-Use Plans*
(SPA, August 15, 2013)
9. *Preservation of Rail Corridors: Experience in Other Communities*
(SPA, August 15, 2013)
10. *Regional Corridor Preservation in Florida, With Strategies for SW Florida*
(SPA, August 15, 2013)

11. *Compatibility of Public Transit and Freight Rail Expansion*
(SPA, August 15, 2013)
12. *Preliminary Value of Seminole Gulf/CSX Rail Corridor and Existing Lease*
(RMI, September 25, 2013)

The most essential information from these technical reports has been carried forward into this report, with numerous references to the technical reports that are the source of the information. Further discussions and explanations may be found in the technical reports themselves, which are available from the MPO and can be downloaded from www.leempo.com.

1.4 Final Report

This final report titled *Lee County Rail Corridor Feasibility Study* provides the overall findings and conclusions for the Lee County MPO Rail Feasibility Study.

The report begins with a review of background information regarding the rail corridor, previous studies that envisioned rail passenger service in Southwest Florida, references to the CSX/Seminole Gulf Railway corridor in Southwest Florida land use plans, and possible transit modes under consideration. The next section of the report reviews a comparison of potential multi-modal opportunities in the rail corridor versus the I-75 corridor. The following sections cover an inventory of the Seminole Gulf Railway corridor, potential options for passenger service, existing and future freight issues, the valuation of the rail corridor and CSX/Seminole Gulf Railway lease, public acquisition alternatives, and preservation of the Seminole Gulf Railway corridor. The report ends with study recommendations.

2. Background

This section of the report provides background information regarding the Seminole Gulf Railway corridor, previous studies that envisioned rail passenger service in Southwest Florida, references to the CSX/Seminole Gulf Railway corridor in Southwest Florida land use plans, and possible transit modes under consideration.

The Seminole Gulf rail corridor is multi-jurisdictional and links the most heavily urbanized areas in Southwest Florida. Seminole Gulf Railway operates the rail service through a lease agreement with CSX Transportation, which owns the land within the right-of-way.

Three earlier plans envisioned rail passenger service in Southwest Florida. The *Southwest Florida Intercity Passenger Rail Program* envisioned intercity passenger rail service between Tampa and Naples, using the I-75 corridor. The *Florida Rail System Plan* and *SIS 2040 Multi-Modal Unfunded Needs Plan* envision passenger rail service using the Seminole Gulf rail line.

Several Southwest Florida comprehensive plans, transportation plans and community development plans include goals, policies and/or objectives related to alternative modes of travel, including passenger rail, bus rapid transit and multiuse pathways.

2.1 Seminole Gulf Railway Corridor

The Seminole Gulf Railway (SGLR) corridor extends from Arcadia in Desoto County, where the short line rail meets with CSX, south through Charlotte and Lee Counties and ending in northern Collier County.

The study area for the Rail Feasibility Study, however, is from the Lee/Charlotte County line to the end of the Seminole Gulf Railway corridor just south of the Lee/Collier County line, a distance of approximately 37.5 miles.

The rail right-of-way varies in width from 40 feet to 200 feet. Through most of its length, however, it is more than 95 feet wide.

There are several at-grade crossings, where streets cross the tracks. The railroad crosses the Caloosahatchee River on a series of bridges, including a draw bridge, about a mile long.



Source: Seminole Gulf Railway, Wikipedia.org (cropped)

Seminole Gulf Railway operates the rail service through a lease agreement with CSX Transportation, which owns the land within the right-of-way. Any public use of the railway corridor will require coordination with the Seminole Gulf Railway and/or CSX Transportation. It is assumed for this study that any issues with the Seminole Gulf Railway and/or CSX Transportation can be worked out over time and that these will be addressed in later implementation efforts, rather than through this study.

2.2 Previous Studies

Several State and regional documents were reviewed for this study. A summary of three of these studies was presented in the Technical Report titled *Multi-Use Assessment: I-75 Multi-Modal Corridor vs. Rail Corridor* (May 6, 2013).

Earlier studies envisioned using the I-75 corridor for intercity rail passenger service. More recent studies have envisioned the use of the Seminole Gulf Railway corridor, rather than the I-75 corridor, for passenger rail within the study area.

2.2.1 Southwest Florida Intercity Passenger Rail Program

Amtrak prepared a preliminary planning and feasibility study for the Florida Department of Transportation titled the *Southwest Florida Intercity Passenger Rail Program – Tampa to Naples*. This 2002 study proposed an intercity passenger rail system in the I-75 corridor from the I-4/I-75 junction east of Tampa to Naples.

Since this system was envisioned for intercity passenger rail service, only one rail station (near Daniels Parkway) was proposed in Lee County. Other Southwest Florida stations would be in Venice, Port Charlotte and Naples. These widely-spaced stations were indicative of intercity passenger service, rather than intraurban or commuter travel.

2.2.2 The Florida Rail System Plan

The Florida Rail System Plan: Policy Element (March 2009) and *Investment Element* (December 2010) included several references to the need for a future-oriented, interconnected multi-modal system to enhance interstate and intrastate movement of freight and passengers, with rail playing a critical role, when public benefits can be demonstrated.

The Florida Rail System Plan: Investment Element includes "Passenger Railway in Southwest FL" as a need. This was described as the rehabilitation and upgrade of the CSX rail line in Southwest Florida for passenger service from Old 41 near the Collier-Lee County line through Bonita Springs and Fort Myers to Ona on SR 64 in western Hardee County.

The Plan also envisioned that this line would eventually be connected with the CSX rail corridor in Sarasota through the construction of a new 8-mile track from Fort Ogden to North Port, so there could be passenger service between Collier County and Tampa through Sarasota. However, the southern end of the CSX corridor in Sarasota was sold to Sarasota County, which constructed the Legacy Trail in this 12.5 mile corridor. Rail service could be re-established in this railbanked corridor, but the railroad would have to reacquire the right-of-way from the trail agency. Further information regarding this Sarasota corridor can be found in Section 3.5 in the Technical Report titled *Preservation of Rail Corridors: Experience in Other Communities*.

The Florida Rail System Plan: Investment Element also included a number of needed freight-related projects, including a rail intermodal yard, a Lee County intermodal transfer terminal, and Seminole Gulf infrastructure improvements (Phases 1 and 2).

2.2.3 SIS 2040 Multi-Modal Unfunded Needs Plan

Florida's Strategic Intermodal System (SIS) 2040 *Multi-Modal Unfunded Needs Plan* (October 2011) also includes rail passenger service using the CSX/Seminole Gulf Railway corridor in Southwest Florida. A map in the Appendix shows needed Railroad Improvements in District 1. An excerpt from this map is provided below.



As in *The Florida Rail System Plan*, the SIS 2040 *Multi-Modal Unfunded Needs Plan* shows the need for rail passenger service in the CSX/Seminole Gulf Railway corridor from northern Collier County north to Hardee County. The need is also shown for a new track connecting this corridor with the CSX corridor through Sarasota. As mentioned in the previous section of this report, the southern end of the CSX corridor in Sarasota has been sold to Sarasota County, and the Legacy Trail has been constructed within the corridor.

In addition to new rail passenger service in Southwest Florida in the CSX/Seminole Gulf Railway corridor, the SIS 2040 *Multi-Modal Unfunded Needs Plan* also shows the need for reconstruction of the railway bridge across the Caloosahatchee River, capacity upgrade at the Lee County Intermodal Transfer Terminal, and a LeeTran intermodal rail connection between the LeeTran hub and the rail mainline.

2.2.4 Lee County Freight and Goods Mobility Analysis

The *Lee County Freight and Goods Mobility Analysis* by Cambridge Systematics (August 2009) examined the condition and current activities on the rail corridor and noted the eligibility for

state funding of access and track improvements. The study included recommendations regarding potential rail improvements, including:

- Installation of heavier track between Colonial and Hanson and north of Cranford St.
- Rehabilitation of the bridges over the Caloosahatchee
- Reconstruction of the tracks and ballast from Alico to Colonial
- Improvements, such as double tracking and passing sidings, to respond to increased demand from CSX's intermodal terminal, which is under construction in Winter Haven
- Construction of a rail/truck transfer terminal and a fuel terminal that could accept delivery of bulk fuels by rail
- Consideration of rail connectivity to proposed inland ports in central Florida

2.3 Seminole Gulf Railway in Southwest Florida Land Use Plans

As part of the Lee County MPO Rail Feasibility Study, several Southwest Florida land use plans and documents were reviewed to find references to the Seminole Gulf Railway corridor. These included the following.

- Lee County Comprehensive Plan
- Lee County Greenways Master Plan
- Lee County MPO Long-Range Transportation Plan
- Lee County Freight and Goods Mobility Analysis
- Collier-Lee Bi-County Regional Transportation Network
- Fort Myers Comprehensive Plan
- Dr. Martin Luther King, Jr. & Veronica Shoemaker Boulevards Revitalization Plan
- Fort Myers Parks & Open Space Master Plan
- Fort Myers Bicycle and Pedestrian Plan
- East Fort Myers Revitalization & Redevelopment Plan
- Bonita Springs Comprehensive Plan
- Collier County Comprehensive Plan
- Charlotte County Comprehensive Plan
- Charlotte County – Punta Gorda MPO Long-Range Transportation Plan
- Charlotte County US 17 Area Plan
- DeSoto County Comprehensive Plan
- Florida Rail System Plan
- Florida Greenways and Trails System Plan

The findings from this review are presented in the Technical Report titled *Seminole Gulf/CSX Rail Corridor in Southwest Florida Land-Use Plans*. Key references are summarized below.

2.3.1 References Related to Freight Service

As expected, there are many references to maintaining and improving freight service in the corridor and encouraging industrial development along the corridor.

In the *Lee County Comprehensive Plan*, Lee Plan Map 3E shows the entire corridor on its map of "Airports, Seaports, Railways & Waterways". Goal 46 in the Lee Plan addresses the development of "a coordinated system of railways, aviation, ports, roads and related facilities. . . ." Policy 46.3.2 states that the County will encourage rail providers "to provide rail access to the ports and the Southwest Florida International Airport where feasible", and Policy 46.3.3 states that the County will encourage private investors "to develop and use rail freight facilities

by encouraging construction of connecting rail tracks and seeking the necessary funding to maintain and improve Lee County's rail link".

Lee Plan policies refer to the advantages of rail access to industrial uses. Lee Plan Policy 7.1.1.1.5 includes "access to rail" as one of the criteria for reviewing and evaluating applications for industrial development. Lee Plan Policy 7.1.3 states that industrial land uses must be located in areas appropriate to their special needs, including, among other things, "access by rail".

Objective 1 in the Transportation Element of the *Fort Myers Comprehensive Plan* is to "meet the transportation needs of the incorporated area through a safe, convenient, and energy efficient multi-modal system of roadway, rail, air, boating, public transportation, and bicycle and pedestrian facilities". Action 1.7.1 in the *Fort Myers Comprehensive Plan* is to provide appropriate assistance to "maintain railroad facilities that travel through and are in use within the City", and Action 1.7.2 refers to providing assistance to private railroad companies to "provide for a rail/truck intermodal transfer terminal".

The City's Future Land Use Element identifies rail access as critical for strengthening the city's economic base and future growth. "Rail frontage" is one of the criteria listed for designating industrial areas in the City's land use plan.

Goal 1 in the *Lee County MPO Long-Range Transportation Plan (LRTP)* is "a multi-modal transportation system that is balanced and integrated with all transportation modes to ensure safe and efficient movement of people and goods." Objectives 1.5 and 5.3 are to "improve intermodal connectivity and access to intermodal facilities (e.g. airports, transit centers, Interstate bus system, rail, passenger ferries, etc.) and activity centers". Objective 1.10 is to "maximize transportation network continuity and promote alternative modes of transport (e.g., rail, pipeline and waterways)". Chapter 9 in the LRTP examines the status of the rail corridor, the potential for a rail-to-truck intermodal transfer facility, and the potential for shipping gasoline and aviation fuel by rail and pipeline. Chapter 9 also examines freight and goods movement according to travel mode, considering truck, rail and air. Nine existing and emerging freight activity centers are evaluated, six of which have rail access.

2.3.2 References Related to Passenger Service

There are a number of references to potential rail passenger service in general or specifically in the Seminole Gulf Railway corridor.

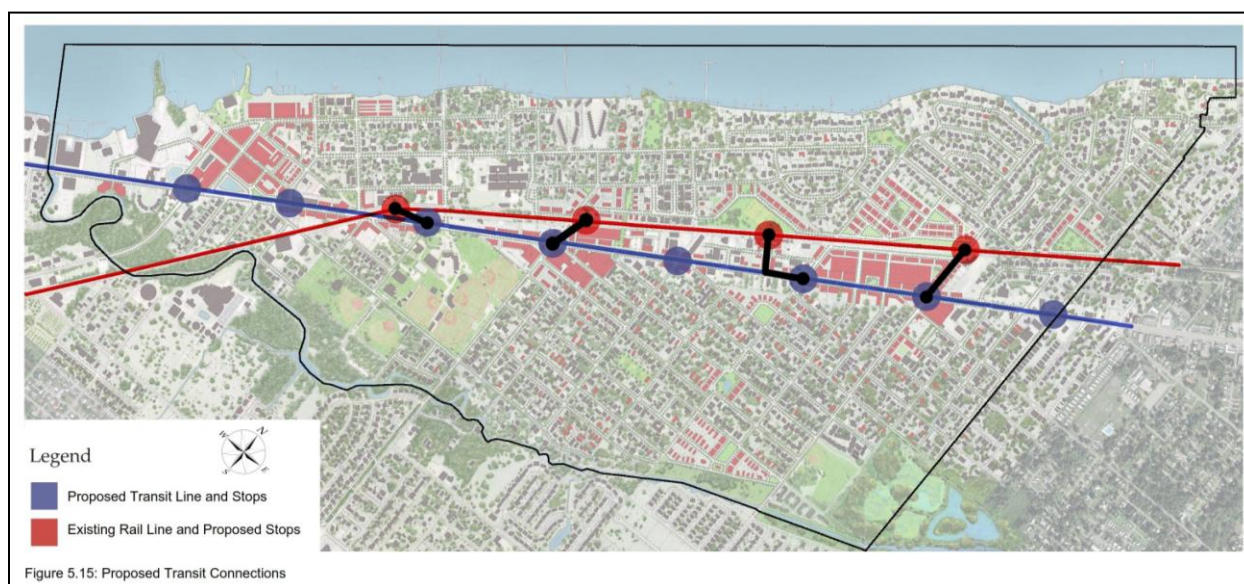
One Lee Plan policy anticipates high-capacity transit systems, without referring to a specific corridor. Lee Plan Policy 44.1.3 is to "develop transit system alternatives to fixed route bus service, such as High Occupancy Vehicle Lanes, Bus Rapid Transit and Light Rail".

Chapter 8 in the *Lee County MPO Long-Range Transportation Plan (LRTP)* describes a potential corridor for bus rapid transit (BRT) that would use part of the rail corridor (from San Carlos Park to North Naples). A north-south BRT corridor previously evaluated by Lee Tran would run along US 41 and end at Sanibel Boulevard in San Carlos Park. The corridor in the LRTP would continue this service 26 miles into Collier County using 11.4 miles of the rail corridor as a dedicated facility and then return to US 41 where the rail corridor ends.

In the City of Fort Myers, two community redevelopment plans anticipate possible future rail passenger service in the Seminole Gulf Railway corridor. The *Dr. Martin Luther King, Jr. & Veronica Shoemaker Boulevards Revitalization Plan* mentions the possibility of a commuter rail

line that would reconnect Downtown Fort Myers with Dunbar and other areas of the City and County. The study also mentions that the Florida DOT is evaluating the purchase of the rail right-of-way, so that in the future it would be available “for bus rapid transit or a commuter rail line that could run from Collier County through Bonita Springs and Fort Myers to Punta Gorda”. The report also says that “Lee Tran will also be studying the possibility of implementing Bus Rapid Transit (BRT) both north-south and east-west in the study area. The north-south routes to be considered are the Seminole Gulf Railway/US 41 corridors”

The *East Fort Myers Revitalization & Redevelopment Plan* includes a recommendation in Chapter 5 stating: “Fort Myers should encourage the MPO and Florida DOT to make long-term arrangements to allow the existing rail line to also be used for passenger service.” The study notes that: “Activation of passenger rail service on the Seaboard Air Line and introduction of transit (technology to be determined in the future) on Palm Beach Boulevard will help to reduce Vehicle Miles Traveled (VMT), allowing for Palm Beach Boulevard’s design to undergo further transformations”. The study also suggests possible locations for future rail stations in East Fort Myers, as shown below, and encourages transit-oriented development (TOD) around these stations.



The Transportation Element of the *City of Bonita Springs Comprehensive Plan* includes the rail corridor on Figure 3, “Future Transit Routes and Other Transportation Facilities.”

2.3.3 References Related to Multi-Use Pathways

There are several references to using the Seminole Gulf Railway corridor and/or the land adjacent to the corridor for multi-use pathways.

Lee Plan Map 22 shows Lee County’s Greenways Multi-Purpose Recreational Trails Master Plan. A north-south trail is shown that would connect to Charlotte and Collier Counties. Part of the route would follow the rail corridor, generally from Dr. Martin Luther King Jr. Boulevard in Fort Myers to just south of Briarcliff Road where the rail corridor curves to the southeast. Policy 85.1.3 references Map 22 and says: “The feasibility of converting canal, railroad, and power

line easements and right-of-ways into linear parks, trails and greenways in accordance with the Lee County Greenways Master Plan will be explored by county staff”.

Lee County’s *Greenways Master Plan* document discusses rail/trail projects: “Rail corridors can be attractive sites for trails because they often provide a direct connection between popular community locations, such as downtown districts and residential areas. . . . Placing trails alongside active rail corridors (rails-with-trails) or along abandoned rail lines (rails-to-trails) can be an excellent method of securing land for safe, popular and effective trail development”.

Action 1.3.4 in the Transportation Element of the *City of Fort Myers Comprehensive Plan* is to: “Identify corridors for off-road bicycle paths such as railroad and drainage canal Right of Ways”.

The Conceptual Bicycle System Master Plan in the *City of Fort Meyers Bicycle and Pedestrian Plan* shows the Seminole Gulf Railway corridor as a “Proposed Bike Greenway”. The Conceptual Parks System Master Plan and the Parks System Conceptual Park Designs and Waterfront Area Connections in the *City’s Parks & Open Space System Master Plan* show the Seminole Gulf Railway corridor as a “Proposed Greenway” and “Potential Rail Trail”, respectively.

Policy 1.2.15 in the *City of Bonita Springs Comprehensive Plan* states: “The City shall investigate railroad and electric power rights-of-way for their potential inclusion in the system of public bike paths and other ancillary recreational uses”.

Appendix E in the *Lee County MPO Long-Range Transportation Plan (LRTP)* presents the *Lee County MPO Bicycle Pedestrian Master Plan*. The entire rail corridor is shown as an off-road trail on the primary bicycle and pedestrian network. This trail is anticipated as a “Rails with Trails” project that would utilize the rail corridor without impeding the potential for future light rail or bus rapid transit service.

The *Lee Bi-County Regional Transportation Network* includes a Pathways Component. This map shows a major north-south pathway that follows the rail corridor, generally from Dr. Martin Luther King Jr. Boulevard in Fort Myers to just south of Briarcliff Road and then continues along the Ten Mile Canal and along US 41 beyond that point. South of Strike Lane in Bonita Springs, the pathway follows US 41 or the rail corridor.

The *Florida Greenways and Trails System Plan* includes a proposed Tamiami Trail Corridor, part of which matches the County’s *Greenways Master Plan* and the MPO’s *Bi-County Pathways Map* by following the rail corridor from Dr. Martin Luther King Jr. Boulevard in Fort Myers to just south of Briarcliff Road. However, north of Dr. Martin Luther King Jr. Boulevard, it stays on the rail corridor through East Fort Myers and across the Caloosahatchee and past Slater Road.

3. Multi-Modal Corridor: I-75 vs. Rail Corridor

A first step in the study was to determine if the long-term upgrade and use of the Seminole Gulf Railway (SGLR) corridor is the best option for providing a multi-modal corridor for passenger service and multiuse pathways through Lee County into northern Collier County. The other possible corridor was the I-75 Multi-Modal Envelope situated between the northbound and southbound lanes of I-75. No other major north-south corridors were considered a viable alternative.

The advantages and disadvantages of using each corridor as a multi-modal corridor were compared. The results of this comparison are reported in the Technical Report titled *Multi-Use Assessment: I-75 Multi-Modal Envelope vs. Rail Corridor*.

It was concluded that the Seminole Gulf Railway corridor would be clearly superior for local, intraurban transit. However, the I-75 Multi-Modal Envelope could still be used in the future for intercity passenger rail service. This is explained below.

3.1 Seminole Gulf Railway Corridor

The Seminole Gulf Railway (SGLR) corridor extends from Arcadia in Desoto County, where the short line rail meets with CSX, south through Charlotte and Lee Counties and ending in northern Collier County. The study area for the Rail Feasibility Study, however, is from the Lee/Charlotte County line to the end of the Seminole Gulf Railway corridor just south of the Lee/Collier County line, a distance of approximately 37.5 miles.

The rail right-of-way varies in width from 40 feet to 200 feet. Through most of its length, however, it is more than 95 feet wide.

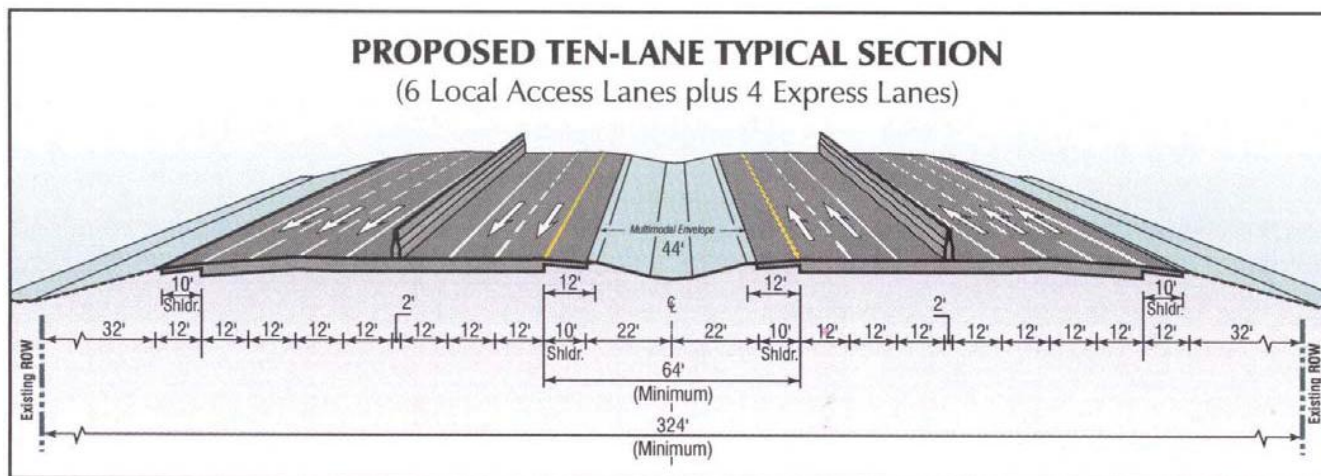
There are several at-grade crossings, where streets cross the tracks. The railroad crosses the Caloosahatchee River on a series of bridges, including a draw bridge, about a mile long. The railroad also crosses much smaller bridges at Billy's Creek, Six Mile Cypress Slough, the Estero River and the Imperial River.

3.2 I-75 Multi-Modal Envelope

The I-75 corridor is of similar length within the study area. I-75 passes over nine major cross-streets, each with an interchange, and the Caloosahatchee River. Four existing cross-streets pass over the interstate, none with an interchange. The I-75 Airport Direct Connect to the Southwest Florida International Airport, which is under construction, and the planned Hanson Street extension also pass over I-75.

The recommended typical sections in the *I-75 Multi-Modal Master Plan* (August 1998), include a minimum median width of 64 feet, including a transit or multi-modal envelope with a minimum width of 44 feet. Subsequent PD&E Studies and design studies have maintained these minimum widths for the median and multi-modal envelope.

Illustrations from the I-75 PD&E Study show the minimum median width of 64 feet and minimum multi-modal envelope width of 44 feet for three different cross sections: 6 lanes, with 3 lanes in each direction; 6 lanes plus 2 auxiliary lanes; and 6 local access lanes plus 4 express lanes. The illustration for the proposed ten-lane section is shown below.



FDOT's *Plans Preparation Manual* establishes minimum vertical clearances for various situations. These include a minimum vertical clearance of 23'-6" for Roadway Over Railroad (from the top of the rails to the overhead structure) and 16'-6" for Roadway Over Roadway. If the I-75 multi-modal envelope is used for rail passenger service, bridges crossing the interstate would require a vertical clearance of 23'-6" to meet the *Plans Preparation Manual* standard. If the envelope is used for Bus Rapid Transit (BRT) or other bus passenger service, then a vertical clearance of 16'-6" would be needed to meet the standard.

Of course, there are no at-grade crossings on the interstate. But, there are several locations where either the interstate crosses over cross-streets or cross-streets pass over the interstate.

3.3 Comparison of I-75 vs. Rail Corridor as Multi-Modal Corridor

This planning-level review compared the advantages and disadvantages of using the Seminole Gulf Railway (SGLR) corridor versus the advantages and disadvantages of using the I-75 multi-modal envelope as a multi-modal corridor serving Lee County, independent of the specific type of passenger service (i.e. commuter rail, light rail, Bus Rapid Transit (BRT) and/or a multiuse pathway). Both corridors were evaluated, so that a preferred intraurban, multi-modal corridor could be identified.

The term "intraurban" transit refers to transit service within the larger Fort Myers/Bonita Springs urban area. In contrast, the term "intercity" transit refers to service between major urban areas, such as Tampa and Naples.

In comparing the two corridors, the general characteristics of each corridor were considered, including the available right of way. Consideration was also given to investments planned in the 2010 Florida Rail System Plan for the rail corridor, such as any long term plans for High Speed Rail and Intercity Rail, and State plans for the I-75 corridor. Other factors that were considered included the following:

Encroachments into the available right-of-way

- Potential vertical clearance issues
- At-grade crossings
- Access to transit stations along the rail corridor or I-75 median
- Location within urban boundaries
- Proximity to major trip generators
- Existing and projected population and employment
- Transit orientation
- Population densities
- Employment densities
- Consistency with transit plans
- Consistency with bicycle-pedestrian plans
- Residential and neighborhood considerations
- Business and economic considerations
- Environmental considerations

Using the maps, aerial photos and other data collected to evaluate these factors, the advantages and disadvantages of using the I-75 multi-modal envelope were weighed against the advantages and disadvantages of using the Seminole Gulf rail corridor. As mentioned above, this was a planning-level review of the advantages and disadvantages of using the rail corridor versus the I-75 multi-modal envelope. This review did not provide detailed engineering, design, quantities or inventories related to the advantages and disadvantages of the two options.

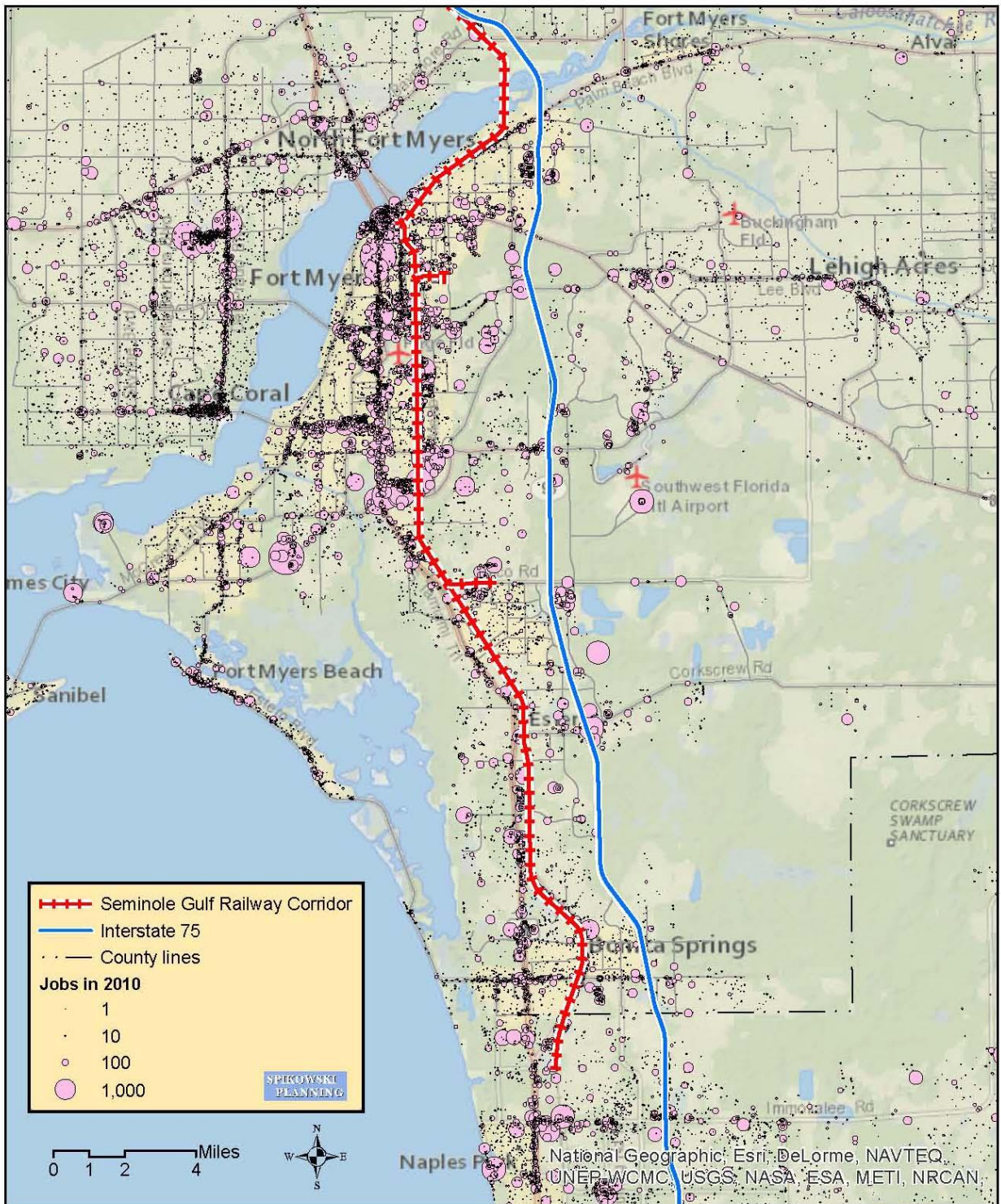
Based on this comparative review, a preferred north-south multi-use corridor for intraurban passenger service was identified from these two options.

3.4 Advantages of Using Rail Corridor

The Seminole Gulf Railway (SGLR) corridor is clearly superior to the I-75 multi-modal envelope for intraurban commuter rail, light rail, Bus Rapid Transit (BRT) and/or multi-use pathways serving Lee and Collier Counties. There are several compelling reasons for this conclusion.

1. The rail line is more centrally located within the urban area, passing through East Fort Myers, Downtown Fort Myers, Central Fort Myers, South Fort Myers, San Carlos Park, Estero and Downtown Bonita Springs. This is beneficial in many ways.
 - The rail line is closer to several major trip generators, including industrial parks, office centers, hospitals and clinics, major shopping centers and major recreational facilities, as well as Downtown Fort Myers and Downtown Bonita Springs. The concentration of jobs near the rail corridor is shown in Exhibit 3-1.
 - The rail line passes through areas planned for redevelopment in both the City of Fort Myers and the City of Bonita Springs.
 - The rail line passes through areas with greater potential as traditional or discretionary transit markets.
 - The rail line runs very close and parallel to the SR 80 and US 41 corridors, where LeeTran envisions future Bus Rapid Transit (BRT) routes. The rail

Exhibit 3-1: Jobs in 2010



corridor could be used instead of or in conjunction with those highways for these BRT routes.

2. With more than 95 feet of right-of-way through most of its length, less additional right-of-way would be needed for improvements in the rail corridor. Additional right of way would be needed where the rail corridor is constrained in East Fort Myers. Some stormwater ponds may also be needed to meet South Florida Water Management District requirements. On the other hand, the I-75 median is used for stormwater management for the interstate. Construction in the median would require re-design of the stormwater management system and acquisition of additional right-of-way for stormwater management ponds. Additional right-of-way may also be needed for transit station parking and access along the interstate.
3. Improvements in the rail corridor would be much easier and less time consuming to implement. Maintenance of traffic would be much more manageable along the rail line, where only cross streets are involved, compared to construction in the I-75 median, where mainline interstate traffic must be managed, along with interchange and cross street traffic.
4. Improvements in the rail corridor can be more easily staged in shorter segments for design, construction and implementation over time. Transit stations can be more closely spaced. With the I-75 corridor, there would be much longer segments between interchanges, and transit stations would be more widely spaced.
5. Use of the rail line would be much more conducive to the development of Transit Oriented Development (TOD) or Transit Ready Development (TRD) than the interstate. TODs and TRDs are walkable communities centered around a transit stop. The at-grade Seminole Gulf corridor, which is relatively narrow compared to the interstate, would allow relatively easy interaction between TOD/TDR development on both sides of the transit line.

3.5 Impediments to Using I-75 Corridor

On the other hand, there are several major impediments to using the I-75 multimodal envelope for intraurban commuter rail, light rail, BRT and/or multi-use pathways. These impediments would be very difficult and expensive to overcome.

1. I-75 passes over nine major cross-streets in Lee County. If the I-75 multi-modal envelope is used, bridges must be constructed over each of these major cross-streets to accommodate the new mode of travel in the median. The approach grades would be much longer for rail transit than for autos, trucks and buses.
2. Three existing bridges that pass over I-75 do not have the required vertical clearance over the multimodal envelope to accommodate commuter rail or light rail. The 16.3 feet vertical clearance at these three existing bridges is far less than the *Plans Preparation Manual* standard of 23.5 feet for bridges over rail. (This also applies to the vertical clearance of Slater Road over the rail line adjacent to I-75).
3. The Florida DOT is currently widening the I-75 bridge across the Caloosahatchee River to the inside of the existing bridge spans to provide 8-10 lanes. This will encroach into the I-75 multi-modal envelope across the Caloosahatchee River. According to the Florida DOT, a rail transit system in the I-75 corridor would probably transition from

the median to the east side of I-75, cross the River, and then transition back to the median.

4. There are three detention/retention ponds inside the I-75 median north of Daniels Parkway. These ponds may have to be partially filled in or bridged to accommodate commuter rail, light rail, BRT or a multi-use pathway, with new detention/retention ponds provided elsewhere. Also, the use of the I-75 multi-modal envelope through the study area would necessitate redesign of the I-75 storm water management system and, most likely, the acquisition of additional acreage for detention/retention ponds.
5. Locating transit stations in the I-75 median would be challenging for designing and constructing station platforms within the median and elevated pedestrian bridges (meeting ADA requirements) across the I-75 mainline lanes to parking lots, pick-up/drop-off points, and transfer stations adjacent to the interstate.
6. With transit in the center of I-75, the potential for TOD/TRD would be dramatically reduced, because: (a) homes and businesses would be much further away from the transit station; (b) the interstate would act as a barrier to cohesive development on both sides of the transit line; and (c) the interstate median is a non-human-friendly environment, with high speed traffic on both sides and accompanying noise and air pollution.

While there are some issues associated with expanded and more frequent use of the rail corridor for multiple modes of travel, they are more manageable than the impediments facing the use of the I-75 corridor. For example, at-grade railroad crossings may need to be improved to accommodate multimodal use of the rail corridor. The costs for making these improvements would be far less than the costs for making improvements needed to address the impediments listed above in the I-75 corridor.

3.6 Conclusions

The Seminole Gulf Railway (SGLR) corridor is clearly superior to the I-75 multi-modal envelope for use as an intraurban multi-modal corridor. Of course, the use of the rail line will require coordination with the Seminole Gulf Railway and/or CSX Transportation. It is assumed for this corridor comparison that any issues with the Seminole Gulf Railway and/or CSX Transportation can be worked out over time and that these will be addressed in later implementation efforts.

The I-75 multi-modal envelope remains a viable alternative for long distance, intercity passenger service, either high-speed or conventional. The State was far-sighted in reserving the I-75 multi-modal envelope for future multi-modal use. The I-75 multi-modal envelope should be retained, to the extent possible, for possible future use for intercity, passenger rail service from Tampa and Orlando to Sarasota, Fort Myers and Naples.

Given these conclusions, it was appropriate to evaluate the Seminole Gulf Railway corridor further as the best option for providing a multi-use corridor through Lee County and into northern Collier County. The results of these further evaluations are discussed in the following sections of this report.

4. Seminole Gulf Railway Corridor

The study area for the Lee County Rail Corridor Feasibility Study extends from the Lee/Charlotte County line to the end of the Seminole Gulf Railway (SGLR) corridor just south of the Lee/Collier County line, a distance of approximately 37.5 miles. Data was collected for the existing physical inventory, rail corridor width, rail bed, and utilities in the SGLR corridor within the study area. Research included coordination with the Seminole Gulf Railway, field inspections at all major traffic crossings at major streets, and participating in a trip to view the entire rail corridor from a Hi-Rail vehicle that runs on the tracks.



To provide more detailed information regarding the SGLR corridor, 11" x 17" aerial plan sheet exhibits were prepared for the entire corridor. Rights-of-Way (ROW) data were compiled from the Lee County Property Appraisers GIS data files and the SGLR Valuation maps. Key elements, such as drainage, utilities, crossings, rail spurs and additional miscellaneous items, were noted and included on the exhibits for reference during the collection of data. These exhibits, which are not intended to be survey accurate, are presented in a separate plan sheet set titled *Rail Feasibility Study – Aerial Maps for Lee County MPO from Collier to Charlotte County*. The Legend for the plan sheet exhibits is provided at the end of this section as a sample of the information provided on the plan sheets.

The results of this data collection and research effort are provided in the Technical Report titled *Inventory of Existing Seminole Gulf Railway Corridor*. The rail right-of-way varies in width from 40 feet to 200 feet. The right of way width narrows to 40-50 feet east of Downtown Fort Myers between SR 80 (Palm Beach Boulevard) and Edison Avenue. Through most of its length, however, it is more than 95 feet wide. The variation in right-of-way width is shown on a two-page map exhibit at the end of this section.

Three major spurs are discussed. These include the Baker Spur along the north side of Alico Road, the House Track Spur in Central Fort Myers south of Hanson Street and the West Stem/News-Press Spur on the south side of Dr. Martin Luther King Jr. Boulevard.

A fiber optic cable is located within the corridor through most of Lee County. The fiber optic cable is located approximately 10 feet from the western edge of the rail track.

4.1 Collection of Existing Physical Inventory Data

Field inspections of the SGLR Rights-of-Way (ROW) were performed for the collection of existing physical inventory data, rail corridor width, existing rail bed and utilities. The data collected, which were not intended to be survey accurate, were drawn on 11" by 17" aerial plan sheet exhibits. The ROW data collected and shown in the plan sheet exhibits have been obtained from the Lee County Property Appraisers GIS inventory and the Valuation Maps supplied by SGLR.

- The study area, as represented in the aerial plan exhibits, included the rail ROW from the Lee/Charlotte County line to approximately 1.5 miles south of the Lee County line in northern Collier County.
- Initial ROW limits were obtained from the Lee County Property Appraisers GIS inventory.
- Valuation Maps were also obtained from SGLR to help ensure the completeness of the rail ROW data.
- A visual inspection of the entire rail corridor was performed on November 27, 2012 through a Hi-Rail trip with representatives of SGLR that viewed the entire rail corridor from south to north. SGLR provided historic information as it pertained to the existing rail corridor.

4.2 Rail Corridor Width

Based on information obtained from the Lee County Property Appraisers GIS and the SGLR Valuation Maps, the Rights-of Way (ROW) for SGLR vary in width throughout the corridor. As shown on the two-page map at the end of this section, the ROW width varies from approximately 40' to 200'.

- South Lee County and Northern Collier County – The ROW in this area is fairly consistent, averaging 130'.
 - This area typically provides adequate distance on either side of the rail bed to provide for a transitway or busway with associated shoulders and swales for drainage. However, this portion of the rail is heavily wooded in some areas and provides for linear drainage infrastructure requiring clearing and/or relocation of the drainage conveyance systems. Additionally, the Imperial River is located within this area, so a bridge structure would be required.
 - The portion of the SGLR mainline for approximately 2,000 linear feet (lf) from south of Old US 41 to the south side of Estero Parkway) also provides adequate distance on either side (east or west) for a transitway or busway with associated shoulders and swales for drainage. Again, due to the rural nature of this area, both the east and west side of the rail bed will need to be cleared for development of a transit system.

- Middle portion of Lee County – Throughout the middle portion of Lee County, the ROW varies between 95' and 159'.
 - North of Estero Parkway, the ROW width is approximately 130 lf. While this provides adequate distance for a transitway or busway, the center line of the rail bed appears to be offset to the east, therefore allowing the west side of the ROW to be utilized. Several minor roadway crossings are within this area, including golf cart crossings at Estero Country Club at the Vines. Also, there is a creek crossing within the Vines Country Club that would need to be addressed on either the east or west side. Additionally, this area is heavily vegetated and will require clearing.
 - North of Alico Road, the ROW is approximately 195 lf for nearly 2,000 lf. This mainly industrial area offers the best opportunity for infrastructure on the west side of the ROW. The ROW on the east side of the rail bed is limited to approximately 60 lf, is wooded and would require a canal/ditch crossing. North of this area, the ROW drops down to 130 lf and then to 97 lf, and then widens to approximately 159 lf and then 155 lf south of Daniels Parkway. This stretch of the rail ROW is again heavily wooded and has several canal crossings.
 - North of Daniels Parkway, the ROW is approximately 152 lf, but quickly drops to 113 lf north of Crystal Drive, and then to 102 lf. This area typically consists of industrial development with several spurs located along the east side.
 - North of Landing View Drive, the ROW is 95-103 lf. The main SGLR yard is located north of this road on the east side. The ROW in this area is cleared. However, there are many spurs providing rail service to the adjacent industrial developments. It should be noted that the ROW increases to 130 lf in width north of Hanson Street to Edison Avenue. In this area, the rail bed is off center to the west, which could impede the development of transit infrastructure on the west side of the tracks. This area is also industrial and includes several crossings for both access to storage yards and city roadways.
 - Where the rail ROW is immediately adjacent to and east of Evans Avenue, from Dr. Martin Luther King Jr. Boulevard to Edison Avenue, the ROW width is approximately 40 lf.
 - North of Dr. Martin Luther King Jr. Boulevard, the rail ROW crosses Palm Beach Boulevard (SR 80), curves to the east to Royal Palm Park Road, and then turns north toward the Caloosahatchee River. The rail ROW from Dr. Martin Luther King Jr. Boulevard to Palm Beach Boulevard (SR 80) is very limited, with 50 lf for most of its length, but with 100 feet near Michigan Avenue. Northeast of Palm Beach Boulevard (SR 80), the ROW is inconsistent. The ROW ranges from approximately 100 lf to 80 lf to 100 lf at Prospect Avenue. The ROW is typically



cleared on both sides of the rail bed. The ROW in this area is bordered primarily by residential structures.

- Northern Portion of Lee County – This ROW is fairly consistent, with the average width being between 100' to 120'.
 - The Northern Portion of the rail system begins on the south side of the Caloosahatchee River. The rail crosses the river through a series of bridges and upland rail on the islands. North of the Caloosahatchee River, the ROW width is approximately 100 lf along Tressel Road and across Bayshore Road past the Bayshore Industrial Park. The ROW is basically cleared and consists of several spurs north and south of Bayshore Road providing service to the Bayshore Industrial Park.
 - North of the Bayshore Industrial Park, the rail ROW continues north at 120 lf through undeveloped land to the Charlotte County line. Most of the land is State owned. This area is heavily vegetated along the east and west side. Finally, there are several water crossings for offsite drainage flows, presumably from the I-75 drainage system, allowing drainage flows to the west.

4.3 Existing Inventory

Throughout the entire corridor, Wyes and turnouts have been identified and superimposed on the aerial plan sheet exhibits per Rail Mile Post references and data obtained from SGLR inspection reports. These reports were used for inspecting the rail corridor in conjunction with the Hi-Rail inspection. The Wyes and turnouts are specifically identified per the inspection reports to remain consistent throughout the report. (A Wye or triangular junction is a triangular shaped arrangement of rail tracks with a switch or set of points at each corner.)

Within the corridor there are three (3) spurs that are of particular importance.

- Alico Road (Baker Spur) – This spur once extended easterly along the northern ROW of Alico Road to the dirt and rock mines east of I-75. At that time, the Baker Spur provided services to many industrial sites along the north and south ROW of Alico Road. This spur now ends west of Lee Road at Domestic Avenue and has been abandoned further east.
- South of Hanson Street (House Track Spur) – The House Track Spur extends easterly into Central Fort Myers. It is anticipated that the proposed Lee County Intermodal Transfer Terminal may be located at the end of this spur near the Hanson Street/Veronica Shoemaker Boulevard intersection.
- South of Dr. Martin Luther King Jr. Boulevard (West Stem / News-Press Spur) – The spur, located south of the intersection of Dr. Martin Luther King Jr. Boulevard, extends to the west along the south side of Dr. Martin Luther King Jr. Boulevard to the News-Press facility. In the past, the spur delivered supplies to the News-Press for printing.

These spurs were not inspected during the referenced Hi-Rail trip.

Field inspections and observations were also performed at all intersection crossings within the corridor to identify the type of rail crossing. The types of crossings were referenced to the

Florida Department of Transportation Railroad Grade Crossings, Design Standards. These crossings have been identified by type on the plan sheet exhibits and typical design sheets.

4.4 Existing Rail Bed

Field inspections were also performed to obtain the general location of the rail bed in relation to the ROW. In general, the location of the rail bed is typically in the center of the rail ROW when the width is fairly consistent. In areas where the ROW varies a substantial amount, the location may be offset to some degree. The location of the rail bed within the ROW has been validated based on field observations, Val Maps and the Lee County Property Appraisers GIS.

A typical section exhibit is included with the aerial plan sheet exhibits in the separate report titled *Rail Feasibility Study – Aerial Maps for Lee County MPO from Collier to Charlotte County*.

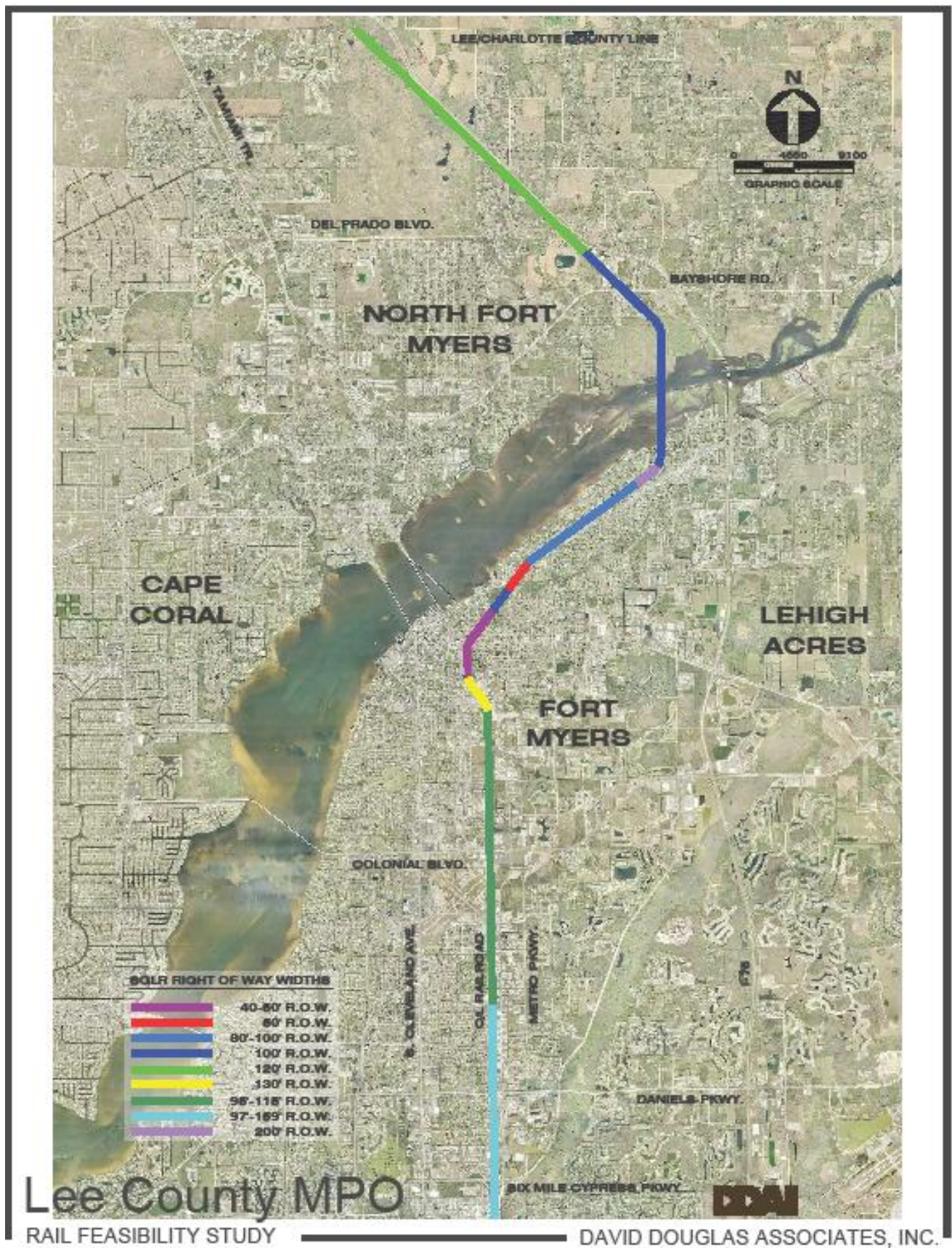
4.5 Utilities

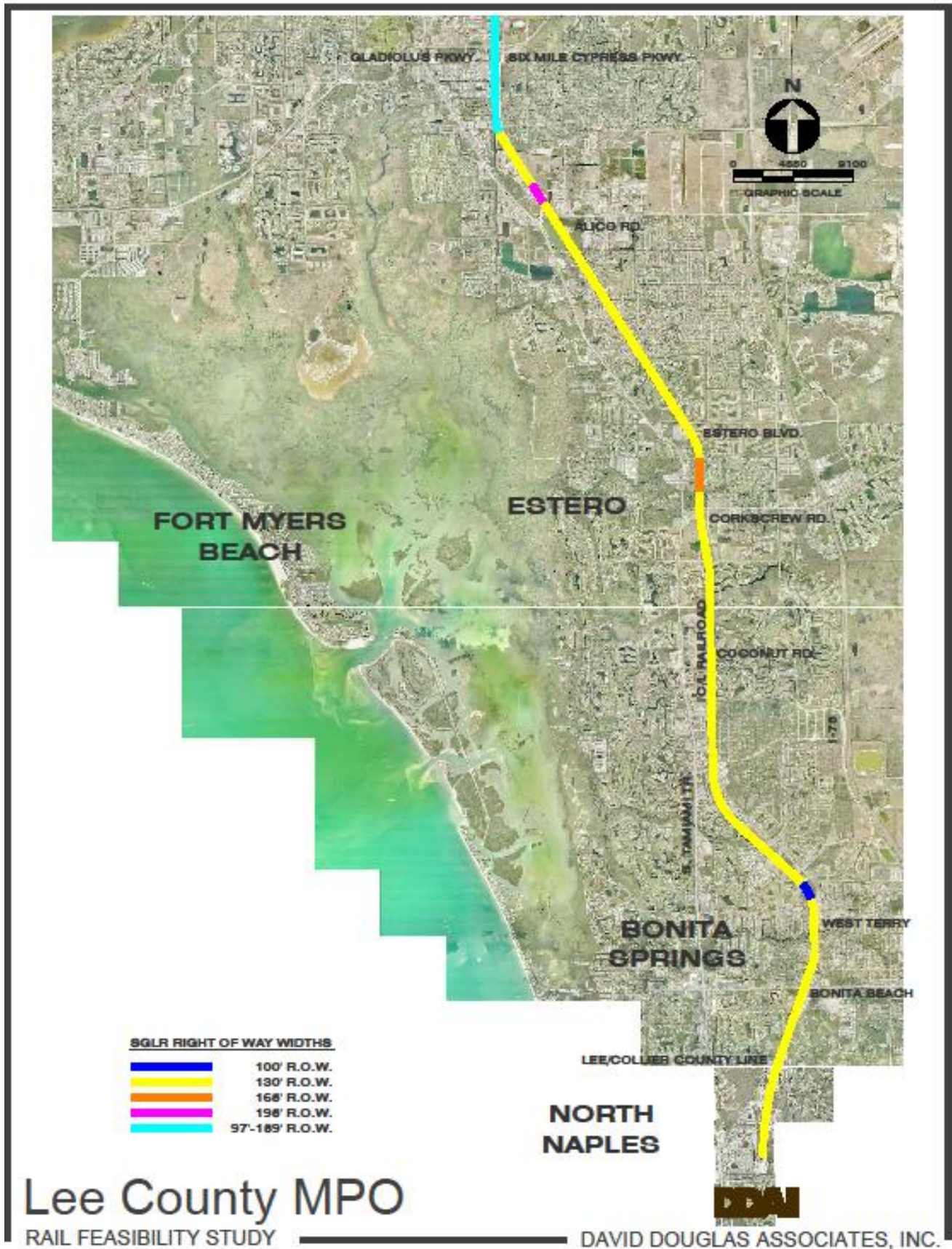
Existing utility information was obtained from Seminole Gulf Railway (SGLR). A fiber optic cable is located within the corridor throughout the majority of Lee County. The fiber optic cable is located approximately 10 feet from the western edge of the rail track.

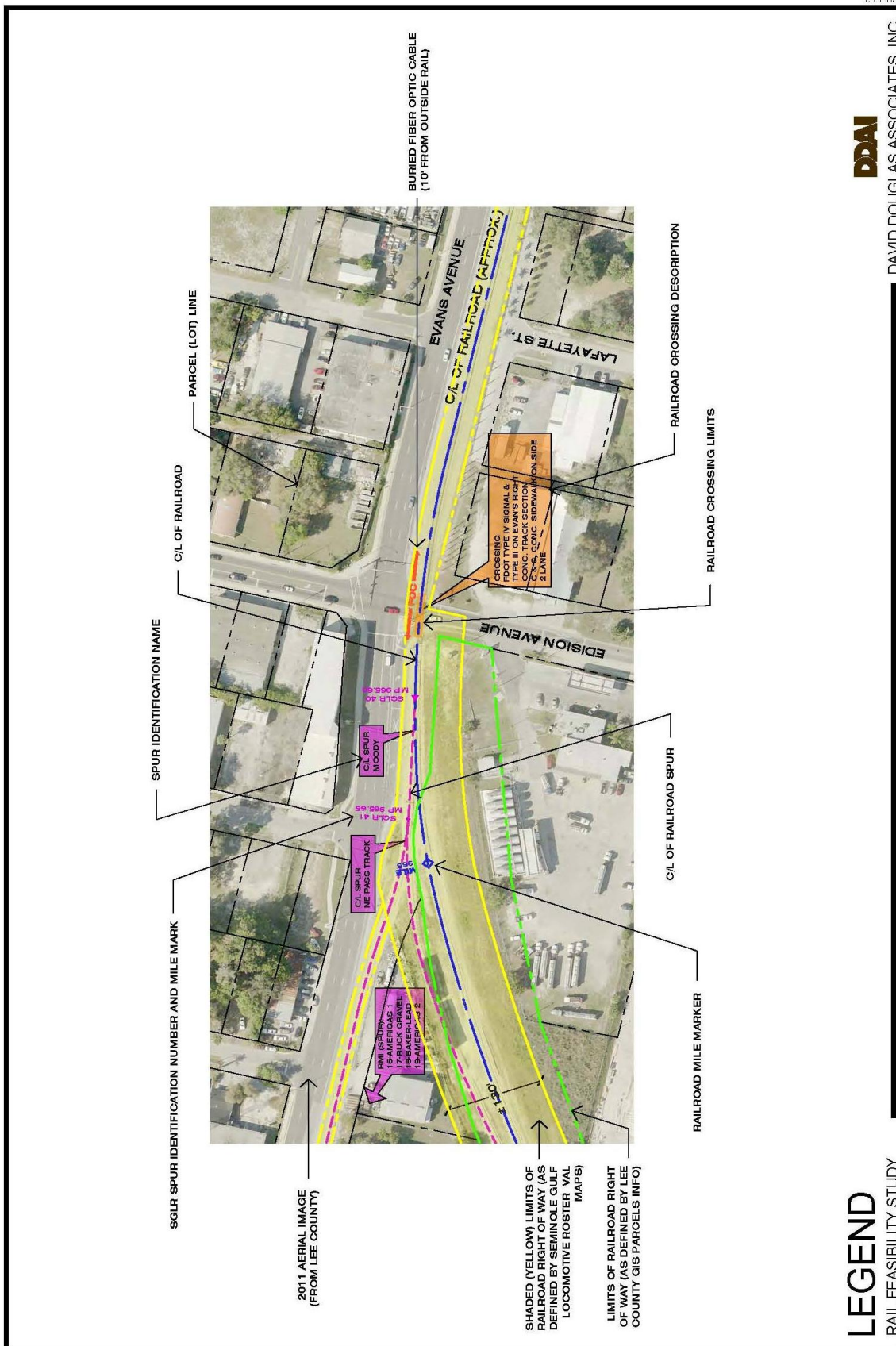
Based on field observations and review of Lee County and City of Fort Myers Electronic As-Built information, it was confirmed that the majority of the intersection crossings (mostly east – west corridors) had typical infrastructure (i.e. water, sewer, electric, drainage, communications) located within the ROW. However, it should be noted that these utilities were within Florida DOT, Lee County or City of Fort Myers ROW.

It should also be noted that, in the southern portion of the SGLR ROW, open drainage conveyance swales exist along the east and west sides of the track. While the majority of these drainage systems directed off-site drainage flows to the north and south, there were several east-west conveyance systems to ultimately direct flow to drainage basins within Lee County. These crossings are noted on the plan sheets. In the middle section of the rail corridor, the drainage conveyance systems consisted of a mix of open and closed systems, with closed drainage systems in the more developed areas. Drainage in the northern portion of the rail corridor was noted to generally be swales and ditches, which ultimately drain into adjacent undeveloped properties.

Finally, based on field observations and the Hi-Rail trip, there are some electric aerial crossings within Lee County. These are generally located within the developed areas.







5. Future Passenger Service Options

As surrounding land urbanizes and builds out, existing rail corridors may be suitable for expanded or shared use to move large volumes of passengers on public transit vehicles. These corridors can sometimes be reconfigured to be compatible with passenger service.

Underutilized freight rail corridors can be useful for passenger service to the extent that they connect places where passengers want to go. The type of passenger service that is viable depends largely on existing and potential urban patterns around stations and on connections that can be provided to other locations via transit, bicycling, and park-and-ride lots.

The feasibility of various passenger service options along the Seminole Gulf Railway (SGLR) corridor was evaluated. The results of this evaluation were reported in the Technical Report titled *Assessment of Potential Options for Passenger Service*. This report discusses different modal options that could be implemented along this rail corridor: Bus Rapid Transit (BRT) in shared or exclusive right of way, Light Rail Transit (LRT) and Commuter Rail Transit (CRT). The report also discusses the feasibility of a Multi-Use Pathway along the corridor.

The engineering assessment is based on the assumption that a recommended passenger service option will need to be based not just on a particular mode of travel but also on the system's ability to attract riders, be cost effective and serve as a tool for economic development. Overall, each mode of travel has its benefits and challenges. This report presents that information.

The SGLR rail corridor is multi-jurisdictional, crosses multiple land uses, and connects with several major trip generators and activity centers along the corridor, providing a unique opportunity for a feasible and successful transit service.

All of the transit modes under consideration are viable and could be implemented within the SGLR corridor. No recommendation is made with regards to the appropriate technology for providing passenger service along the SGLR corridor. The implementation of a particular passenger mode in the corridor will depend on several different factors, such as capital and operating costs, ridership levels, connectivity with existing and planned transit routes, impacts on surrounding land uses, and the like, which need to be evaluated in further detail.

5.1 Potential Passenger Service Options

It was concluded in Section 3 of this report that the SGLR corridor would be clearly superior to I-75 for local, intraurban transit, while the I-75 Multi-Modal Envelope remains a viable option for future intercity passenger service. For this reason, the assessment of future passenger transit modes in the SGLR corridor concentrated on transit modes suitable for local, intraurban transit service, not intercity passenger service. These include Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Commuter Rail Transit (CRT). Consideration is also given to a multi-use pathway in the corridor.

The SGLR corridor generally has sufficient ROW to accommodate an exclusive guideway. However, there are some sections of the corridor, mostly east of Downtown Fort Myers (Section 4.2 above), where the right-of-way narrows to as little as 40 feet. Additional right-of-

way may need to be acquired in these locations, or, for Bus Rapid Transit (BRT), the route could leave the SGLR corridor and use nearby streets for a short distance

A comparison of modal options generally examines a number of evaluation criteria, including the availability of existing right of way (ROW), capital and operating costs, and service characteristics. *Exhibit 5-1* is a comparison of the different transit options that could be implemented along the SGLR corridor. A discussion of the modes and respective service characteristics is provided following *Exhibit 5-1*.

Exhibit 5-1: Comparison of Transit Modes

Attributes	Transit Modes				
	Bus Rapid Transit (Exclusive ROW*)	Bus Rapid Transit (Shared ROW**)	Light Rail Transit (Exclusive ROW*)	Light Rail Transit (Shared ROW**)	Commuter Rail Transit
Capital Cost per mile	\$20-40 million	\$5-15 million	\$80-120 million	\$40-80+ million	\$10-20 million***
Capacity (seats/vehicle)	40-60	40-60	225	225	Over 250
Service Range	Up to 20 miles	Up to 15 miles	Up to 20 miles	Up to 15 miles	Up to 50 miles
Impact on Land Use	Moderate	Limited	Strong	Strong	Strong
Station Spacing	1/4 to 2 miles	1/4 to 1 mile	1/2 to 2 mile	1/2 to 1 mile	1-4 miles
Maximum Speed	35-55 mph	35-55 mph	45-65 mph	45-55 mph	Up to 60 mph
Average Speed	25-30 mph	15-25 mph	30-35 mph	15-25 mph	40 mph
Frequency of Service	5-15 minutes	5-15 minutes	5-15 minutes	5-15 minutes	30 minutes
Operating cost	\$80-120/bus-hour	\$80-120/bus-hour	\$200-400/train-hour	\$200-400/train-hour	\$1,500-2,500/train-hour
Cost of vehicles	Low	Low	Medium	Medium	High
Life of Vehicle (years)	12	12	25	25	25
Residents + Jobs per acre	10 to 25	10 to 25	More than 40	More than 40	More than 40
Examples of Applications	Eugene, Orlando, Boston, Cleveland, Pittsburgh, Salt Lake City, Los Angeles	Albuquerque, Ottawa, Los Angeles, Kansas City, Miami, Minneapolis, Pittsburgh Busways	Baltimore, San Diego, San Jose, Portland, Dallas, Phoenix, Charlotte, Sacramento, St Louis.		Nashville, Dallas, Salt Lake City, Washington DC, Miami, Orlando (under construction)

Source: HDR Engineering Inc.

* BRT/LRT (Exclusive ROW) refers to BRT/LRT operating in dedicated lanes (such as within the SGLR corridor).

** BRT/LRT (Shared ROW) refers to BRT/LRT operating in mixed traffic as opposed to an exclusive right of way (within the SGLR corridor).

*** This is a range of capital costs for Commuter Rail along a shared corridor.

5.1.1 Bus Rapid Transit (BRT)

BRT is defined by the Federal Transit Administration (FTA) as "a rapid mode of transportation that can provide the quality of rail transit and the flexibility of buses". The system is advantageous in that it combines the travel time savings associated with Light Rail Transit (LRT) with the flexibility of buses. BRT can operate in bus-only lanes and offer high-frequency

bus operation with reliable headways. BRT vehicles use rubber tires, but the service is more like “light rail” service, with characteristics such as:

- Frequent service (10- to 15-minute frequency).
- Less frequent stops than traditional buses (stops may be located about 1 mile apart).
- Level boarding (step on or off the bus without contending with steps, ramps, or lifts).
- Amenities at stops (such as real-time bus schedules).
- Signal prioritization (buses will have the ability to shorten red or lengthen green traffic signals).
- Fare prepayment (save time by paying fares before boarding).
- Local bus feeder network (circulators take passengers to BRT stops faster to reduce overall travel time).



BRT relies on a combination of limited-stop service and advanced technology to help speed up travel times and improve service reliability. BRT service can be designed to operate in exclusive transitways or busways, such as the SGLR corridor, as well as in mixed-traffic on expressways or arterial streets.

Technological enhancements commonly incorporated into new BRT projects include transit signal priority, off-board fare collection, enhanced passenger amenities and real-time passenger information. BRT is an integrated system of physical and operating components which exhibits a distinct identity and a high quality image. BRT service is typically viewed as a premium service; however, many service providers charge a standard bus fare.

An exclusive BRT guideway usually consists of two 11-ft lanes. However, BRT systems that operate at 30 mph or less can be reduced to 10-ft lanes.

The National Bus Rapid Transit Institute (NBRTI) estimates that about 30 U.S. cities have adopted some form of BRT (www.nbrti.org). Many new BRT systems, however, have only some of the BRT characteristics, reducing the initial cost but also reducing the benefits correspondingly.

Based on information in the *FDOT Transit Facility Handbook*¹, *Exhibit 5-2* explains the primary advantages of BRT while *Exhibit 5-3* presents the challenges of BRT projects.

¹ Florida Department of Transportation Districts One and Seven Transit Facility Handbook; Gannett Fleming, Inc.; October 11, 2007

Exhibit 5-2: Benefits of BRT

Benefits of BRT	Description
Reduced Travel Time	<ul style="list-style-type: none"> • Faster boarding than conventional buses • Smarter roadway configurations • Technology • Fare prepayment
More Reliability	<ul style="list-style-type: none"> • Reduction or elimination of: <ul style="list-style-type: none"> ○ Traffic delays at congested intersections ○ Traffic signal stops • Responsive transit management
Greater System Capacity	<ul style="list-style-type: none"> • Larger vehicles than conventional buses • Shorter headways
Lower Risk	<ul style="list-style-type: none"> • Cost is lower than rail due to: <ul style="list-style-type: none"> ○ Less investment in ROW, vehicles and construction ○ Shorter implementation time ○ Greater vehicle flexibility
Increased Comfort	<ul style="list-style-type: none"> • Added amenities compared to conventional buses • Attractive facilities • Vehicles (inside and out) • Passenger information systems
Improved Safety	<ul style="list-style-type: none"> • Added lighting • Security systems • Removing dangers • Additional ridership

Exhibit 5-3: Challenges of BRT

Challenges of BRT	Description
Capacity	<ul style="list-style-type: none"> • Does not carry as many people as LRT or CRT
Service Range	<ul style="list-style-type: none"> • In most cases, BRT services, especially in shared right of way, do not travel as far as LRT and certainly not as far out as CRT
Speed	<ul style="list-style-type: none"> • Because most BRT services operate in mixed traffic, speed is not as high as what can be obtained for LRT services
Economic Development	<ul style="list-style-type: none"> • Compared to LRT and CRT, there are very few demonstrated examples of BRT projects in the United States with impact on economic development along its corridor.
Identity	<ul style="list-style-type: none"> • Depending on unique branding scheme, a new BRT service may confuse transit riders since it still appears like a conventional bus.

BRT is a very feasible option along the SGLR corridor. From an operating standpoint, it can run in an exclusive guideway, have minimal disruptions to vehicular and pedestrian traffic and can

fairly easily connect commuters to key job centers, downtown employments and other major trip generators along the corridor.

5.1.2 Light Rail Transit (LRT)

LRT operates singly or in short, usually 2-4 car trains, on fixed rails. LRT operates in exclusive lanes or in its own dedicated ROW, and can operate in mixed traffic if needed to pass through downtowns. LRT vehicles are typically driven electrically with power being drawn from an overhead electric line, but new systems are in development that will allow the LRT vehicle to draw its power wirelessly from the guideway.



Light rail vehicles usually run on their own tracks, although there are several exceptions, including parts of the San Diego Trolley where freight trains formerly shared the tracks but now use them only at night after passenger service has ended. Light rail vehicles can also exit from dedicated rail corridors to travel through downtowns or other intensely developed areas. They become, in effect, streetcars, and are served by raised platforms in medians or adjoining sidewalks. Recent examples are in downtown Denver, San Diego, and Minneapolis.

LRT is often used to serve regional transit needs in cities that cannot support or afford heavy rail transit, where all grade crossings are eliminated. LRT is also less invasive than heavy rail because its power supply is overhead, thus allowing the vehicles to interface with vehicle and/or pedestrian traffic when necessary.

Exhibits 5-4 and 5-5 present the benefits and challenges of an LRT system, respectively.

Exhibit 5-4: Benefits of LRT

Benefits of LRT	Description
Passenger Capacity	<ul style="list-style-type: none"> Serves moderate to high passenger volume
Vehicle Speed	<ul style="list-style-type: none"> Operates at low to medium speed (depending on exclusivity of ROW and distance between stops)
Distance Served	<ul style="list-style-type: none"> Serves short to long distance trips
Stations	<ul style="list-style-type: none"> Has station spacing from 0.5 to 1 mile in shared ROW and 0.5 to 2 miles in exclusive ROW May use low platforms, high platforms or both May have elaborate or simple stations
Vehicles	<ul style="list-style-type: none"> Uses overhead power collection Operate as a single vehicle or in trains of up for four vehicles

Benefits of LRT	Description
Runningways/Guideways	<ul style="list-style-type: none"> • May operate in mixed traffic, with cross-traffic, or on exclusive ROW • Can negotiate steep grades (generally up to 5 percent) and small radius curves
Costs	<ul style="list-style-type: none"> • Has moderate operating and maintenance costs compared to commuter or heavy rail

Source: HDR Engineering Inc. (2013)

Exhibit 5-5: Challenges of LRT

Limitations of LRT	Description
Station Spacing	<ul style="list-style-type: none"> • Outside the CBD, stations are spaced farther apart than a BRT system and as such may impact potential riders
Costs	<ul style="list-style-type: none"> • Capital and operating costs of a new LRT system is higher than a BRT system
Impact on Real Estate	<ul style="list-style-type: none"> • May involve substantial property acquisition along its right of way for tracks, maintenance facilities, etc.
Utilities/Infrastructure	<ul style="list-style-type: none"> • Impact on utilities cost is higher than BRT system

Source: HDR Engineering Inc. (2013)

LRT is also a feasible option along the SGLR corridor as it can share the existing right of way with minimal impacts to vehicular and pedestrian traffic and can serve downtown areas along the route effectively.

5.1.3 Commuter Rail Transit (CRT)

Commuter rail service uses locomotives and cars similar to intercity (Amtrak) service, but covers shorter distances with more frequent service. Service is often concentrated during peak commuting hours from stations spaced four to eight miles apart, whereas light rail service operates all day and into the evening with stations spaced closer together.



A typical commuter rail system uses a fixed rail corridor to provide commuter service between the suburbs and the central business district. This is often the most practical and efficient method to get commuters traveling long distances to and from an urban core. They are usually home-based trips and therefore dependent on jobs in the urban core.

There are, however, a few exceptions to this typical standard of commuter rail operations, for example, RailRunner Express, Tri-Rail and SunRail, which are discussed in the Technical Report titled *Preservation of Rail Corridors: Experience in Other Communities*. These exceptions are especially relevant in areas where there are more than a single location for concentration of employment, thereby necessitating more than point-to-point stops between central city and

suburbs. Commuter trains can be configured traditionally using locomotives and coach cars, or passenger cars equipped with their own individual motors (Diesel Multiple Unit/Electric Multiple Unit). Most of the commuter rail systems in the U.S. use diesel locomotives. However, some legacy electric systems are still in service. Most systems operate in freight railroad corridors and share track with freight trains. However, some systems with high frequency service have track dedicated solely to commuter rail.

Exhibits 5-6 and 5-7 present the benefits and challenges of a Commuter Rail Transit system.

Exhibit 5-6: Benefits of CRT

Benefits of CRT	Description
Passenger Capacity	<ul style="list-style-type: none"> Serves high passenger volumes during commuting periods
Vehicle Speed	<ul style="list-style-type: none"> Operates medium to high speed (depending on number of stops and distance between stops)
Distance Served	<ul style="list-style-type: none"> Serves long distance trips connecting people who live in the suburbs with job opportunities in the urban core
Stations	<ul style="list-style-type: none"> Has station spacing from 1 to 4 miles May use low platforms, high platforms or both Improved station appearance
Vehicles	<ul style="list-style-type: none"> Uses diesel multiple units, third rails or overhead lines (electric multiple units) Typically operates as multiple units in single or double level, with cab controls at both ends for short turn around time.
Runningways/Guideways	<ul style="list-style-type: none"> Operates on exclusive ROW but could share tracks with freight service
Economic Benefits	<ul style="list-style-type: none"> Increased economic activities around commuter rail stations

Source: HDR Engineering, Inc. (2013)

Exhibit 5-7: Challenges of CRT

Limitations of CRT	Description
Frequency	<ul style="list-style-type: none"> CRT services are less frequent than LRT and BRT and sometimes has no weekend off-peak trips
Utilities/Infrastructure	<ul style="list-style-type: none"> Impact on utilities/infrastructure is higher

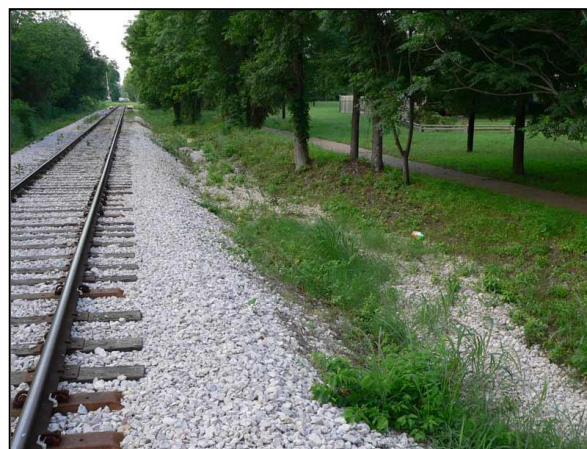
<p>Corridor</p>	<ul style="list-style-type: none"> • Sharing a rail corridor with a freight operator can impose operating limitations on schedule making and schedule adherence by both freight and passenger operators. If the commuter rail operator is not the rail property owner, the freight operator traditionally provides dispatching and determines train movement priorities. • The use of an existing railroad may impose labor costs and work rules that limit the ability to control costs and management options to achieve a cost-effective operation. Thus what is saved in initial capital cost may be eroded by the costs of traditional railroad operating practices.
<p>Railroad Regulations</p>	<ul style="list-style-type: none"> • Railroad regulation in the United States does not permit the simultaneous operation of light rail derivative diesel multiple unit (DMU) equipment and conventional railroad equipment on shared track. Unless time separation can be arranged, rail new starts using active railroad infrastructure as a foundation must use vehicles that comply with Federal Railroad Administration (FRA) rules and thus that are larger and more costly than lightweight types. This also limits the ability to integrate CRT and LRT services.

Source: HDR Engineering Inc. (2013)

As indicated for the other modal options evaluated in this report, CRT service is also feasible along the SGLR corridor. It can provide convenient travel for suburban residents who work downtown or at employment centers along the route using the existing freight rail tracks, where possible.

5.1.4 Multi-Use Pathways

The implementation of a multi-use path along the corridor, as envisioned in several pathway plans (Section 2.3.3 above), needs further evaluation to determine possible constraints along the corridor. Considering that the corridor is currently utilized for a freight service, offers a potential for passenger rail service, and has right-of-way width constraints in some places, it is likely that there would be some sections of the corridor not suitable for a multi-use pathway.



The Federal Highway Administration (FHWA) in its *Best Practices Design Guide* (May 2012) identifies Rail Trails as examples of shared-use paths created in the right-of-way of abandoned railroad lines. However, the SGLR is an active railroad corridor. Safety and liability are often the greatest concern, when integrating a bike/pedestrian trail with freight and passenger rail service along the corridor.

The minimum width required along the corridor to be able to add a pathway in conjunction with a transit mode will depend upon a number of factors, such as the type of transit mode and right-of-way constraints along the corridor, among others. Further studies will identify sections along the corridor where the ROW width can accommodate pathways, as well as passenger and freight service.

Generally, experience shows that the success of transit projects increases with the integration of a multi-use system of transit, trails and parks/open space. This corridor provides a rare opportunity for a multi-use system of transit, trails and parks, because it connects different land uses, employment centers and residential neighborhoods. By utilizing the corridor for transit, trails and parks/open spaces, the value of the corridor increases, ridership potential increases, and the ability of the project to attract funding for implementation is enhanced.

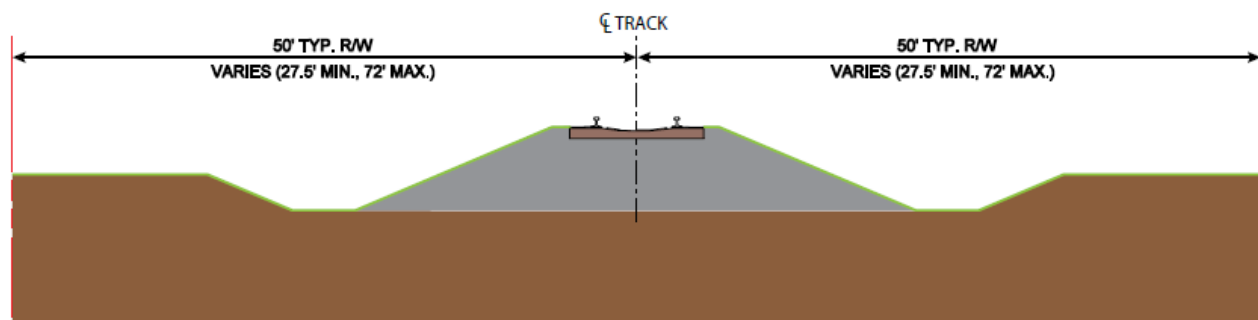
5.2 Cross Sections by Mode

The following typical cross-sections demonstrate that the SGLR corridor could accommodate all of the transit modes described above, as well as a multi-use pathway, for much of the corridor. However, there are some sections of the corridor, mostly east of Downtown Fort Myers (Section 4.2 above), where the right-of-way narrows to 40-50 feet. Additional right-of-way may need to be acquired in these locations, or, for Bus Rapid Transit (BRT), the route could leave the SGLR corridor and use nearby streets for a short distance.

5.2.1 Existing Cross Section

As shown in *Exhibit 5-8*, the existing SGLR right-of-way consists of a single track. The existing ROW width varies from 40 feet to 200 feet, with the majority of the ROW width being more than 95 feet. Typically, there are no other features within the ROW except open drainage swales and a Fiber Optic Cable. While this is generally sufficient to accommodate a passenger transit service operating within the right-of-way, acquisition of some right-of-way may be required where the ROW narrows and for park-and-ride lots, station areas and possibly storm-water treatment ponds.

Exhibit 5-8: Existing ROW



EXISTING RAILROAD TYPICAL SECTION

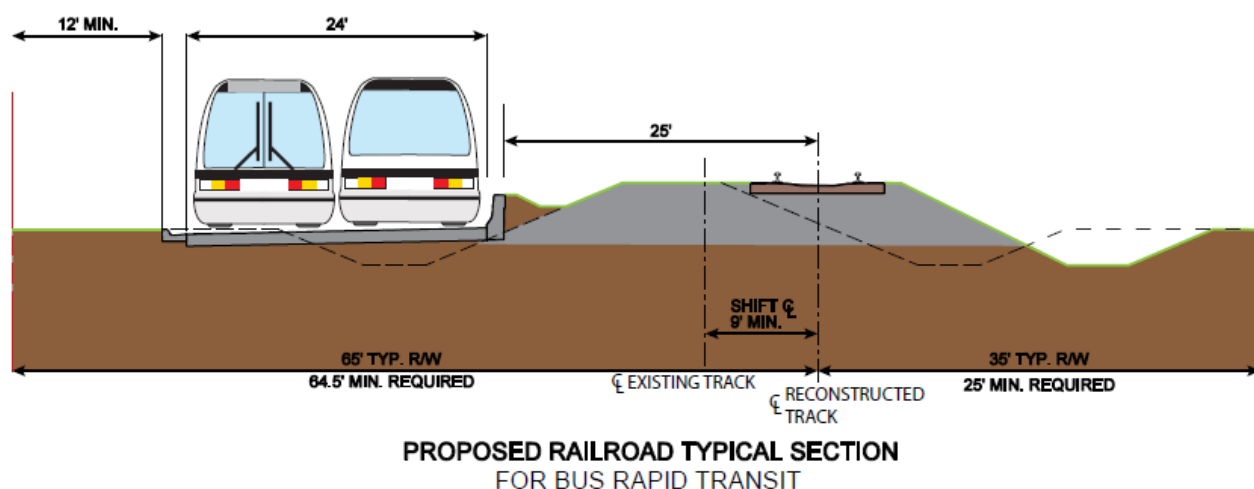
Note:

SGLR ROW varies between 40 and 200 feet. An average 100-foot cross-section is shown.

5.2.2 BRT Cross Section

Exhibit 5-9 shows how a BRT system could operate in the right of-way, while sharing the corridor with the existing rail service. A two-way, divided guideway is shown for the operations of the BRT system, typically requiring 24 feet of pavement separated from the centerline of the existing rail track by a minimum of 25 feet on one side, which could require relocating the existing rail line as much as nine feet. The BRT guideway would require a barrier wall and an urban drainage system to reduce ROW impacts, but would still require a minimum of 90 feet of ROW for the entire length of the corridor. Additional ROW would need to be acquired outside of the SGLR corridor for storm-water treatment ponds.

Exhibit 5-9: BRT Cross Section

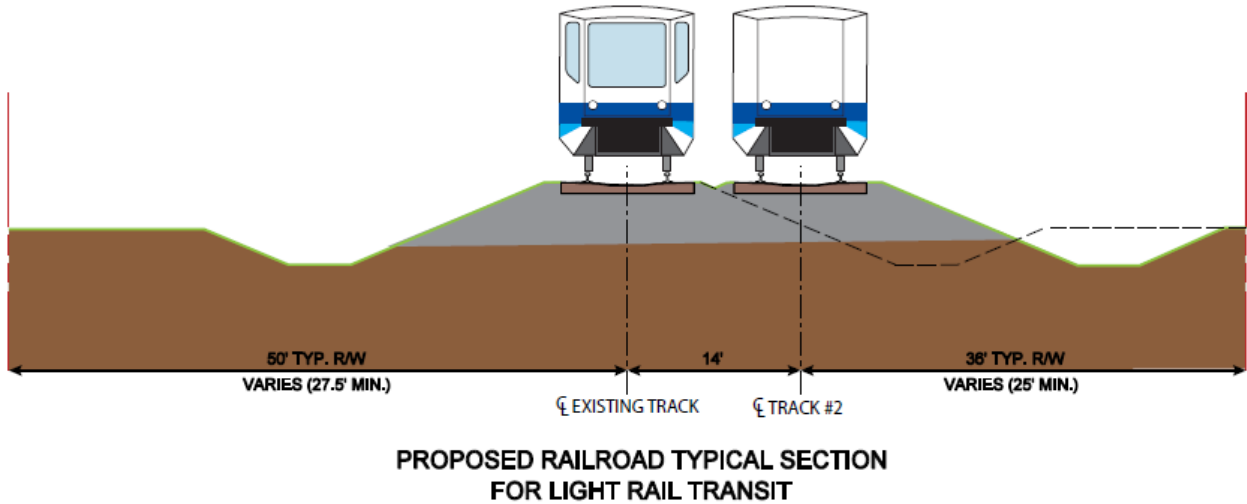


5.2.3 LRT Cross Section

Exhibit 5-10 depicts how the corridor could be utilized for LRT operations. It is likely that LRT would be a double-track operation with the tracks spaced 14 feet apart on-centers. Sharing the tracks with the existing rail service as shown would require temporal separation, i.e., restrictions as to when freight operations can use the tracks. If temporal separation cannot be achieved, the construction of a third track for freight operations offset 25 feet from the LRT tracks would be required.

If LRT operations share track usage with freight, it would require that freight operations occur when LRT is not operating, because LRT service preferably should not commingle with freight trains on the same tracks. It is not known if SGLR would consider running their freight trains in the evening to allow unimpeded LRT operations during the day (such as the case with the San Diego Trolley). The overhead catenary system would need to be of sufficient height to provide vertical clearance for freight cars. The existing track would need to be upgraded to accommodate frequent use by an LRT service at a higher speed than freight trains. An operational analysis would need to be performed to determine the need for passing sidings and/or double track for LRT. Since the use of LRT within the corridor would likely recommend double-track for the length of the corridor, this would require ROW outside of the existing SGLR ROW in areas where the existing ROW is less than 65 feet in width.

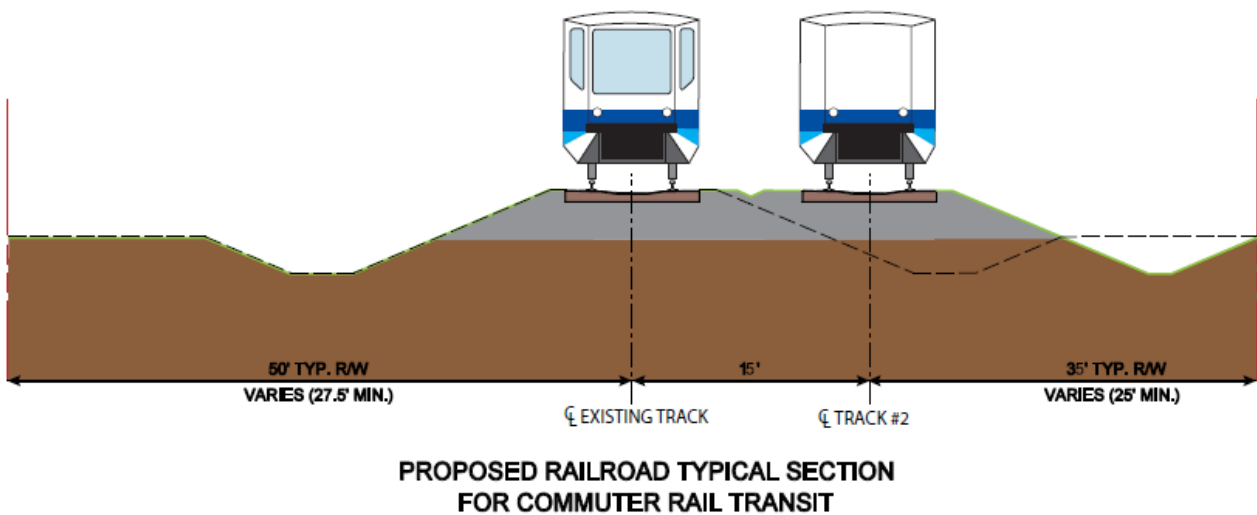
Exhibit 5-10: LRT Cross Section



5.2.4 CRT Cross Section

Exhibit 5-11 shows the operations of a commuter rail service along the SGLR as a double-track system, sharing the track with the existing service. Unlike LRT, commuter rail and freight rail could be scheduled to commingle on the same tracks. The existing track would need to be upgraded to accommodate frequent use of a CRT train service at a higher speed than freight trains. Passing sidings, or double track, would be constructed using minimum 15' track centers. The addition of a second track in the corridor would likely require additional ROW in the areas where the existing ROW is less than 67.5 feet in width.

Exhibit 5-11: CRT Cross Section



5.3 Evaluation

Evaluation measures are usually defined to compare how well each alternative meets the goals and objectives defined for a transportation improvement in a corridor. Developing a preliminary set of evaluation criteria during the planning phase ensures that the study generates the data and information used to support decision-making for local policymakers to pursue the ultimately selected transit alternative.

For comparison purposes within this feasibility analysis, the following evaluation measures were established to address the common categories of goals, objectives and evaluation measures identified by the Federal Transit Administration (FTA). Other evaluation measures such as population density, employment density, consistency with regional/local plans, major activity centers, land use consistency and right-of-way constraints were not included since these items are consistent along the corridor and across all mode options.

- Travel Demand – Measured by ability to attract new ridership.
- Development/Land Use Impact – Measured by ability to influence and attract new development, and/or support high-density, sustainable development in accordance with County’s Comprehensive Plan.
- Roadway Congestion – Measured by potential to reduce congestion through auto trip reduction and/or infrastructure improvements.
- Capital Costs – Measured by total capital costs associated with implementing scenario.
- Operating Costs – Measured by total operating and maintenance costs associated with implementing scenario.

Exhibit 5-12 presents the results of the screening of alternatives based on meeting the evaluation criteria.

Exhibit 5-12: Summary of Evaluation Measures

Alternative	BRT (Exclusive ROW)	*BRT (Shared ROW)	Light Rail Transit	Commuter Rail Transit
Travel Demand				
Development/Land Use Impact				
Roadway Congestion Impact				
Capital Costs				
Operating Costs				

- = Ranks highest (best) in comparison to other alternatives.
- = Ranks well in comparison to other alternatives.
- = Ranks lowest in comparison to other alternatives.

*Note: BRT (Shared ROW) refers to BRT operating in mixed traffic as opposed to an exclusive right of way (within the SGLR corridor).

From this feasibility-level comparison, it is apparent that each of the different transit modes can potentially be operated successfully within the SGLR corridor for several reasons:

- They all have the capacity to attract significantly higher ridership than a regular bus system will do.

- They all have the ability to generate fairly positive impacts on land use along the corridor.
- LRT and CRT can move faster and ultimately become the north-south “spine” that would connect the existing and future systems at specific locations to the rest of the region.
- LRTs have several demonstrated examples of serving as a tool for economic development through transit-oriented developments within a half-mile radius of its stations.
- CRTs can utilize the existing freight rail tracks, but tracks may have to be upgraded.
- CRTs have moderate economic development potential, but a broader catchment area than LRTs and BRTs, because it can travel further out, linking the urban core with the suburbs.
- BRTs can offer the same service as LRTs, in terms of frequencies and distance traveled, at lower costs. However, in efforts to reduce costs, most BRT systems in the United States do not offer the same service as LRTs. The capital costs of implementing a BRT system and the operating costs of running it could be less than LRT or CRT along this corridor.
- Although experiences with transit-oriented development (TOD) associated with BRT systems in the United States is fairly new and examples are limited, the successful Euclid Corridor project (in Cleveland, OH) has demonstrated that substantial investment in BRTs can also result in the mode serving as economic engines of growth. Since the initial phase of building the HealthLine, the public and private sectors are reported to have built or planned \$4.7 billion in real estate developments within walking distance of Euclid Avenue.² A BRT system along SGLR can serve as a catalyst for development along the corridor in a way that conventional bus service cannot match.
- An LRT or BRT service along this corridor could provide faster access to suburban employers and schools and Downtown Fort Myers similar to the 12.3-mile Minneapolis’ Hiawatha Line (or Blue Line) LRT which runs in an exclusive guideway, linking Downtown Minneapolis with the Mall of America and connecting commuters to jobs along the route. In addition to providing connectivity to jobs, the line has also proven to be a powerful catalyst for development in a corridor that once had large tracts of vacant and underutilized land. According to Minneapolis Metro Council (August 2011 Newsletter), since 2000, nearly 7,700 new housing units have been built along the line, with another 6,750 units planned.
- Depending on how it is designed and how a transit system is operated along the SGLR, it appears that pedestrian and bicycle trails could potentially be integrated along the corridor, regardless of the transit mode implemented.

5.4 Characteristics of a Transit Service along SGLR

The Technical Report titled *Assessment of Potential Options for Passenger Service* goes into detail regarding the characteristics of a high capacity transit service along the SGLR. Depending upon the modal choice selected for implementation along this corridor, these characteristics are subject to further refinement and will be tailored to the specific type of modal option to be implemented.

Interested readers are referred to this Technical Report for further information regarding:

- Elements and Operating Characteristics
- Recommended Operating & Maintenance Plan
- Vehicle Capacity and Passenger Load Standards

² *Developing the Next Frontier: Capitalizing on Bus Rapid Transit to Build Community.* Urban Land Institute, 2011.

- Vehicle Performance
- Average Intersection Delay
- Run Time Estimates
- End-of-Line Layovers
- Cycle Times
- Maintenance Spare Ratio
- Peak and Fleet Vehicle Requirements
- Operating Concerns

5.5 Initial Passenger Service

Initially, a 31.8-mile passenger service could be operated between Prospect Avenue to the north in East Fort Myers and Immokalee Road to the south in Collier County. This service would run along approximately 27.7 miles of the SGLR corridor from Prospect Avenue to just south of Bonita Beach Road and then extend along 4.1 miles of surface streets to reach the intersection of Immokalee Road and Goodlette-Frank Road.

An obvious terminus in the north would be Downtown Fort Myers. However, the transit line could be extended as far east as Prospect Avenue in East Fort Myers, without extraordinary additional cost. This extension could be part of the initial transit corridor or added as part of a later phase.

Due to the expense of upgrading the rail line and bridges across the Caloosahatchee River, the extension of this passenger service across the river into North Fort Myers is not recommended for this initial stage. This does not preclude the extension of the passenger service across the river whenever the demand for this service warrants this additional expense.

Although the SGLR corridor does not extend south to Immokalee Road, passenger service could continue south to the intersection of Immokalee Road and Goodlette-Frank Road, which is a logical terminus for an efficient high capacity transit service. LeeTran's LinC route connects south Lee County to this location, which also serves as a northern terminus for Collier's transit service. In addition, there are other trip generators located near this intersection that could provide ridership for a transit service: Naples Park, North Naples Hospital, and Creekside Commerce Center, a growing industrial and commercial park.

5.6 Transit Stations and Locations

The Technical Report titled *Assessment of Potential Options for Passenger Service* also examines potential locations for transit stations. Station locations are critical elements of passenger services because they impact travel time and provide opportunities for maximizing existing and potential land use development, as well as ridership.

Preliminary, conceptual station locations were identified based on the following criteria:

- To integrate with existing transit routes (thereby sustaining existing transit ridership), including the Downtown Fort Myers Trolley bus service.
- To maximize potential ridership within a half-mile radius of the corridor.



- To minimize frequent stops.
- To ensure savings in travel time.
- To maximize existing land uses within a ¼ to ½ mile radius of the stations (the SGLR corridor operates primarily through residential areas and areas of high employment density).
- To ensure regional connectivity by locating some stations in conjunction with existing transit transfer centers.
- To create “places” which will provide access points to current or planned transit services, as well as the network of major roadways.

The eighteen (18) preliminary station locations shown *Exhibit 5-13* are conceptual and subject to refinement once a mode is selected.

Exhibit 5-13: Conceptual Station Locations



These station locations may require land acquisition adjacent to the rail line to ensure that stations are convenient for passengers and provide sufficient space for drop-offs and pick-ups and for parking for transit users. However, some of the space needed for parking could be within the rail ROW, depending upon the cross section used and station layout and agreements reached with the rail operators.

5.7 Cost Estimates

The planning, implementation and operation of any major capital investment in a transit project requires a sound estimation of capital and operating and maintenance (O&M) costs to fully understand feasibility and funding needs. The estimation process and methodology for cost estimation varies, depending upon the phase of project development. For initial feasibility studies such as this, project cost estimates are usually based on general unit costs, derived primarily from recent projects similar in scope and transit mode. As projects advance into more detailed planning and engineering, cost estimate structure and approaches will need to be developed.

Using a range of cost per mile estimates is the most reasonable means to provide cost information for the various modes at this time. More detailed cost estimates for the project would require a number of specifics that have not yet been defined, but would be defined in subsequent studies, including:

- The extent of double tracking for rail operations over the corridor;
- The number of type of rail vehicles given potential for Federal Railroad Administration (FRA) crash-worthiness of vehicles;
- The size of the maintenance facility including vehicle parking;
- The parking demands at each station;
- Potential need for grade separations of major roadways during peak hour rail operations;
- Potential need for grade separated access to center stations in a rail corridor; and
- Size and location of an operations control center.

5.7.1 Capital Cost Estimates

Because the elements listed above are yet undefined, a set of assumptions were made in order to be able to develop planning level capital costs for the transit modes. These include:

- The guideway and track elements will be calculated for the entire length of the corridor (32 miles).
- The number of stations for BRT and LRT is 18 stations and 9 stations for CRT.
- The sitework consisting of track rehabilitation, utilities relocation, and bridge crossings rehabilitation will be performed for the 32-mile corridor where necessary.
- A total of 50 traffic signal priorities are assumed due to the existing 50 at-grade crossings along the SGLR.
- Park-and-ride lots are assumed at the two end-of-the-line stations and areas with employment and major TOD opportunities for a total of 9 lots.
- The number of vehicles (16) assumes 1-car sets at 10 minute headways at 35 mph with a total fleet including peak vehicle requirement and 20% spare ratio.
- Costs for additional ROW are included.
- The modal costs for CRT and LRT were based on a review of projects in engineering or construction, or recently constructed in the United States. These are:
 - LRT: Minneapolis Central Corridor, Portland Milwaukie Extension.
 - Commuter rail: UTA Frontrunner, Denver Eagle P3, Minnesota Northstar.

Based on a review of projects in engineering or construction, or recently constructed, the ranges of costs for each mode are estimated to be as shown below.

- CRT: \$10m to \$20m per mile
- LRT: \$80m to \$120m per mile
- BRT Exclusive ROW: \$20m to \$40m per mile

The CRT cost per mile estimates reflect the following general assumptions.

- CRT would use the existing rail line, but the rail bed and tracks would be upgraded for passenger service.
- Double-tracking would not be required due to the infrequent freight service.
- Freight and passenger service would be commingled.
- Nine passenger stations were assumed.
- CRT would use exclusive ROW for 28 miles and BRT or some other bus service on shared ROW for the southernmost 4 miles.

The LRT cost per mile estimates reflect the following general assumptions.

- The existing rail line would be used, but the rail bed and tracks would be upgraded for passenger service.
- Double tracking would be necessary.
- Electrification of the two rail lines would be required.
- With double tracking, major upgrades would be needed at 51 at-grade crossings.
- With double tracking, the water management system would need to be upgraded.
- Eighteen passenger stations were assumed.
- Additional ROW might be needed in some areas where the SGLR ROW narrows east of Downtown Fort Myers.
- LRT would use exclusive ROW for 28 miles and BRT or some other bus service on shared ROW for the southernmost 4 miles.

The BRT cost per mile estimates reflect the following general assumptions.

- The existing rail line would not be used; the rail bed and tracks would be reconstructed to one side.
- A two-lane, two-direction busway would be constructed for the BRT vehicles.
- With both the rail line and the busway, major upgrades would be needed at at-grade crossings.
- With both the rail line and the busway, the water management system would need to be upgraded.
- Eighteen passenger stations were assumed.
- Additional ROW might be needed in some areas where the SGLR ROW narrows east of Downtown Fort Myers or, as an alternative, the BRT route could leave the SGLR ROW and use shared ROW for a couple of miles.
- BRT would use exclusive ROW for 28 miles and shared ROW for the southernmost 4 miles.

These are planning level, order of magnitude capital cost estimates. As the project is developed and the scope becomes better refined and more defined, the cost estimates would be developed to reflect current information. These costs should be based on a scope that includes facilities, structures (bridges), property acquisition, park and ride lots, environmental mitigation, and vehicles. As more detailed engineering is done and information emerges with

regards to utilities, drainage, and the like, costs can be better defined in subsequent studies for the corridor.

The above figures indicate that the cost of implementing CRT along the SGLR corridor is less than the cost of implementing a BRT service along the same corridor. The reasons for these are because:

- A CRT system could utilize the existing tracks along the corridor, but the track and rail bed would have to be upgraded.
- The relocation of the existing tracks to accommodate a BRT alignment is an added expense.
- The cost of upgrading/rehabilitating the existing tracks is not expected to be as high as the cost of building a separate alignment for a BRT system within corridor right of way.
- A CRT system would have fewer stations, compared to a BRT system.

These costs need to be refined further. The next step in developing more detailed capital cost estimates would be to develop the Federal Transit Administration's (FTA) Standard Cost Categories (SCC) worksheets assuming that the project will pursue federal funding through the FTA. Any project pursuing (or potentially pursuing) federal funding through FTA must organize project costs according to the SCC structure, which contains the following categories:

- SCC Category 10 - Guideway and Track Elements
- SCC Category 20 - Stations, Stops, Terminals, Intermodal
- SCC Category 30 - Support Facilities: Yards, Shops, Administration Buildings
- SCC Category 40 - Sitework and Special Conditions
- SCC Category 50 - Systems
- SCC Category 60 - Right of Way, Land, Existing Improvements
- SCC Category 70 - Vehicles
- SCC Category 80 - Professional Services
- SCC Category 90 - Unallocated Contingency
- SCC Category 100 - Finance Charges

5.7.2 Operating and Maintenance Cost Estimates

O&M cost estimates were also estimated for the project based on average unit cost per hour in current year dollars. For the same reasons that specific capital costs could not be developed for the project at this time, O&M cost estimates cannot accurately be developed until information such as mode of service, service frequency, number of vehicles in fleet, actual distance to be traveled, and the like, are known and analyzed. The FTA publishes the National Transit Database (NTD) as the primary source for information and statistics on the transit systems in the United States. Information such as fare revenue, capital expense, passenger miles traveled, and operating expenses are reported annually.

In order to determine planning-level, order of magnitude O&M costs for modal options, operating costs per unlinked passenger trip were estimated.

- CRT: \$3.30 per passenger trip
- LRT: \$10.00 per passenger trip
- Bus (BRT): \$3.60 per passenger trip

*Source: 2010 National Transit Database Profile for all transit agencies.
NTD does not show separate cost for BRT.

It is recommended that a more detailed O&M cost model be developed in future planning efforts for the preferred mode of passenger service. This would include developing operating plans and requirements for phased implementation of the system, which can further identify and break-out on-going costs to operate and maintain the service on an annual basis by operating function (vehicle operation, vehicle maintenance, maintenance of way, and general administration). The O&M model and cost estimation methodology, structure and inputs should be consistent with the Federal Transit Administration (FTA) guidelines.

5.8 Federal Funding; MAP-21 Legislation

Implementation of a high capacity transit service along this corridor will depend on a combination of various funding sources, including federal, state, regional and local, both public and private. It is most likely that proponents for this project will seek substantial federal funding participation to implement this service. Federal funding is highly competitive and typically constitutes a larger share of the funding combination and requires considerable commitment from the project sponsor.

The recently enacted Moving Ahead for Progress in the 21st Century (MAP-21) legislation has altered the funding landscape for transit projects requiring federal funding contribution. MAP-21 has a 2-year authorization through September 30, 2014 and maintains comparable program funding levels for the New Starts and Small Starts programs.

MAP-21 defines the federal transportation programs and funding levels for federal fiscal year (FFY) 2013 and FFY 2014. As a project moves through the local planning process, and the required project development and implementation process, it will be necessary to track and evaluate future surface transportation legislation for any changes to the federal funding programs as well as to evaluate potential opportunities for any new programs.

Over the last several years, the U.S. Department of Transportation has issued notices regarding the availability of competitive grants, including four rounds of Transportation Investment Generating Economic Recovery (TIGER) grants, Urban Circulator grants, Bus and Bus Livability grants, and State of Good Repair grants. While MAP-21 includes only one competitive grant program (Projects of National and Regional Significance) for FY 2013 and FY 2014, there are indications that additional competitive grants may be considered in the future.

5.9 Implementation of Passenger Service

The timing for implementation of passenger service in the SGLR corridor is uncertain. Implementation will depend on a number of factors, including coordination with the owners and operators of the SGLR corridor, local and regional planning processes, funding opportunities, the funding process, and fulfillment of the various requirements for project implementation.

As mentioned earlier, the operation (as well as timing) of passenger service along the SGLR corridor will require coordination with the Seminole Gulf Railway and/or CSX Transportation. It is assumed that this can be accomplished so that the project can take advantage of future federal funding opportunities to implement the project.

5.9.1 Area of Service

This report assumes that the service coverage area will be similar to the current LeeTran service area, but with an opportunity to attract ridership over an expanded area because of the high capacity nature of the proposed transit system. Lee Tran currently provides service to a 121 square mile area with a service area population of 443,696 (2011 National Transit Database). A north-south passenger service along the SGLR corridor will act as a transit spine for future connectivity east and west of the corridor and a catalyst for transit expansion.

5.9.2 Impact on Transit Service

Currently, LeeTran routes 5, 15, 20, 50, 60, 100 and 110 are cross-town services connecting the east and west sides of the SGLR corridor. Routes 140, 80 and LinC 600 (commuter service) provide parallel services to the corridor. With the integration of these current and planned routes, the potential exists to improve service frequencies of specific routes and create more opportunities for regional connections, thus increasing ridership on a high capacity transit service along the SGLR corridor, as well as on individual bus routes.

The rail line runs very close and parallel to SR 80 (Palm Beach Blvd.) and US 41 where LeeTran envisions future implementation of BRT services. Palm Beach Blvd is an opportunity for an east-west connection, while US 41 offers an opportunity for a north-south BRT service. LeeTran has identified both as candidate corridors for this premium service.

Currently, in the LeeTran transit system, service along the US 41 corridor (Route 140) has the highest ridership in the LeeTran fixed route system: it operates every 20 minutes with 1,209,936 riders annually (FY 2012, LeeTran). It makes connections to several major transfer hubs throughout the county, and much of the corridor is developed with medium- to low-density urban commercial development, with increasing intensities found near Downtown Fort Myers. The Palm Beach Boulevard corridor exhibits above average transit performance, runs through urban, medium-density commercial development in the Fort Myers area and provides direct access into Downtown Fort Myers and into the Rosa Parks Transportation Center.

5.9.3 Impact on Surrounding Roadway Network

Public transit plays a critical role in the transportation system of an urban area and its performance is often affected by general traffic conditions and signal timing at intersections especially along congested corridors. When transit services can operate in exclusive right of way, away from city streets, it can operate with premium efficiency. The SGLR corridor provides such an opportunity. Utilizing the corridor for public transit has the potential to divert traffic away from US 41, reducing traffic congestion and improving traffic conditions along the roadway and at key intersections.

However, there are potential traffic issues along the SGLR corridor, primarily because there are more than 50 at-grade crossings along the corridor, where existing streets cross the tracks. Transit vehicles crossing these cross-streets will affect the traffic on these roads.

In order to minimize the impacts on vehicular movements and transit travel time, different options have to be considered, including: improvements of specific crossings, and the installation of technology that would facilitate the movement of transit vehicles in the most effective way, without major disruption to vehicular movements. Additionally, implementation

of a transit service on the SGLR will have the positive benefit of diverting some traffic off of adjacent roadways as transit ridership increases.

If a mode such as LRT is implemented along the corridor, it is possible that it could transition into a form of urban circulator (such as a streetcar) as it travels through downtown Fort Myers or Bonita Springs. Downtown Denver, San Diego and Minneapolis are examples of this.

5.9.4 Compatibility with Adjacent Land Uses and Neighborhoods

For much of the SGLR corridor, the land uses immediately adjacent to the SGLR corridor are industrial and commercial. These uses are generally compatible with the current use of the rail corridor. There are also some areas in East Fort Myers, San Carlos Park, Estero and Bonita Springs where the rail line passes through predominantly residential areas. A future high capacity transit service in the corridor would provide a transit alternative for residents living near the corridor to travel to and from employment and shopping centers in the corridor.

Where the rail line passes near major trip generators, such as industrial centers, shopping centers, transit centers, medical facilities, recreational centers and Downtown areas, the rail line provides the opportunity for transit stations to spur development that can be located within close proximity of the corridor. A high capacity transit service along the corridor should promote mixed-use development, including transit-ready or transit-oriented development.

The Technical Report titled *Compatibility of Public Transit and Freight Rail Expansion* examined the impact of different factors associated with rail passenger service, such as noise, vibration, pollution, and physical and aesthetics effects, on land uses along the corridor.

Noise from public transit comes from several sources:

- The type of propulsion determines one source of noise: a whine from the electric motors that power light-rail vehicles, or the diesel-engine exhaust noise from bus rapid transit and commuter rail vehicles.
- Another noise source is the interaction of wheels/tires with their running surfaces. Tire noise from rubber-tired vehicles is significant at normal operating speeds. Steel wheels on rails generate three types of noise: normal rolling noise, impact noise when a wheel meets a discontinuity in the rail, and squeal generated by friction on tight curves.
- Transit vehicles are equipped with horns and bells for use in emergencies and as a warning to track workers, pedestrians, and motorists at street crossings.
- Diesel engines are often left idling in stations or storage yards.

Ground-borne vibration can occasionally be a concern for nearby neighbors of a transit route if buildings shake or rattle or if rumbling sounds can be heard. Vibration can be caused by trains or by buses on rough roads.

The effect of these factors on surrounding land uses and neighborhoods will largely depend on the type of passenger transit mode operated along the corridor. For example the level of noise generated by a BRT or LRT service along this corridor will be less than the level of noise generated by a CRT service along the corridor. Similarly, the level of vibration generated by BRT or LRT service would be considerably less than that generated by freight trains, depending on the type of vehicles in operations.

The effects of a high capacity transit service in this corridor on adjacent land uses will be studied in more detail during the environmental review process, as the project moves forward.

5.10 Conclusions

Lee County Comprehensive Plan (Lee Plan) Policy 44.1.3 states the intent of the County to: *“Develop transit system alternatives to fixed route bus service, such as High Occupancy Vehicle Lanes, Bus Rapid Transit and Light Rail.”* The SGLR corridor provides such an opportunity to introduce a high capacity transit system into the transit options available to residents of Lee County in the foreseeable future.

The corridor is centrally located within the urban area and passes through major cities and hubs of activities. Furthermore, the corridor is close to several major trip generators, including industrial parks, office centers, hospitals and clinics, major shopping centers and recreational facilities. There are redevelopment opportunities along the corridor, creating the potential for transit supportive developments, which should expand future transit ridership. Although the corridor is within close proximity to SR 80 and US 41, where LeeTran envisions future BRT routes, the corridor provides another option for high capacity transit service in the County.

Different high capacity transit service options have been evaluated, including Bus Rapid Transit (BRT) in shared and exclusive lanes, Light Rail Transit (LRT) and Commuter Rail Transit (CRT). The integration of a multi-use pathway along the corridor has also been considered.

The report concludes that passenger rail service is feasible along the SGLR corridor. Previous studies have recommended the implementation of BRT along the SGLR corridor without any analysis conducted regarding ridership or suitability of such a service. While it is possible that BRT service could be operated along this corridor, the relatively low cost of operating CRT along the corridor makes that mode equally attractive. Further, the potential presented by both CRT and LRT to attract transit-oriented development along the corridor in contrast to a BRT system also makes a rail option feasible along this corridor.

The concept of bus service utilizing freight rail right-of-way may be unprecedented in the United States, although it could be considered along this corridor, subject to a future Alternatives Analysis and environmental study that could determine its feasibility and applicability. However, there are a few examples of BRT sharing paved LRT tracks and corridors in the United States: South Pittsburg Busway and Seattle Downtown Tunnel are two examples. CTRAN in Vancouver, WA, is undergoing an Alternatives Analysis that evaluates the possibility of operating a BRT service on a short segment of paved LRT tracks in Downtown Vancouver.

It is important that these passenger service modal options be evaluated further to determine a preferred passenger service option for the corridor. This analysis would evaluate, among other things, the intent of the service, the market being served, the locations of transit stations, ridership forecasts, the specific capital and O&M costs of the mode, and the level of operations.

6. Existing and Future Freight

The results of an evaluation of existing and future freight service on the Seminole Gulf Railway (SGLR) corridor are presented in the Technical Report titled *Assessment of Existing and Future Freight Issues*. This includes an evaluation of issues related to the freight rail service that SGLR currently provides through Lee County into northern Collier County. The condition of the existing rail corridor and current and future freight traffic levels are addressed.

The SGLR corridor in its entirety extends approximately 79 miles from a connection with CSX Transportation (CSXT) in Arcadia through Desoto, Charlotte, and Lee Counties to the end of track in northern Collier County. Approximately 37.5 miles of the route are located in Lee and northern Collier County. SGLR leases the corridor from CSXT who still owns the right-of-way.

The project team met with SGLR on October 12, 2012, to discuss this project and to obtain information regarding SGLR operations and infrastructure. The team participated in a Hi-Rail inspection trip with SGLR on November 27, 2012. Some of the information in this report was obtained from the meeting discussion and observations during the Hi-Rail trip. Discussions of freight issues that have been found in various other earlier reports were also considered.

This report concludes that, while there are numerous proposals and possible ventures to increase freight opportunities and it is certainly reasonable to assume that the lumber and building materials shipments will increase as the economy improves, the outlook for expanded freight operations in the future is uncertain at best. Forecasts are that overall freight growth will increase. However, that increase is anticipated to be mostly by highway truck traffic. In fact, freight tonnage by rail in Florida DOT District 1 is projected to decline both in percentage and in absolute tonnage by year 2035. Although indicators point towards reduced market share by rail, a nominal positive growth rate would be considered a conservative projection.

Many of the growing technology industries and business services that Lee County would like to attract require frequent, reliable and fast parcel deliveries to maintain competitiveness. Their requirements are time sensitive. However, future growth in freight service is limited by the condition of the tracks and speed limitations placed on the tracks due to their condition. With declining volume and uncertain future projections, there is little justification for the expense of improving the track. Improvements needed for freight traffic increases should be considered in conjunction with any proposed initiative to implement passenger service on the corridor.

6.1 Existing Rail Freight Service in Lee County

Due to its location close to the southern tip of the Florida peninsula, Lee County's freight movements are led by origin and destination traffic, though some freight is through-traffic bound for Collier County and Southeast Florida. Current SGLR freight traffic consists largely of frozen and refrigerated goods, scrap metal products, propane, lumber and newsprint.

The region's historically strong population growth, combined with a substantial tourism industry, stimulate freight movements related to construction materials and consumer goods, while growing technology industries and business services require frequent and reliable parcel deliveries to maintain competitiveness. Although tourism and services now dominate Lee County's economy, especially as the traditionally large construction sector declines, Southwest

Florida's economic legacy is tied to agriculture. This industry continues to ship large volumes of perishable vegetables and fruits, as well as nursery plants, to locations throughout the United States. The majority of this traffic is shipped by truck.

The SGLR rail operations are based in Fort Myers. The SGLR rail corridor within the study limits extends from the Charlotte-Lee County line at about Milepost (MP) AX-952.6 to the end of track in northern Collier County at about MP AX-990.1. *Exhibit 6-1* on the next page shows the limits of the SGLR corridor that have been considered for this study.

At the present time, the SGLR interchanges freight cars with CSXT in Arcadia two or three times per week, depending on freight car volumes. The SGLR also runs a dinner train five evenings per week year round from Fort Myers north to a point in southern Charlotte County.

Based on discussions with SGLR, SGLR expected to move about 7,000 carloads of freight in 2012 across the entire SGLR corridor. This volume is down from about 14,000-15,000 in the recent past. SGLR formerly handled about 30 carloads per week to North Naples/northern Collier County. Most of this former traffic consisted of lumber and other building materials. This traffic does not exist at the present time, but this traffic could return if and when there is an upturn in building construction in the area.

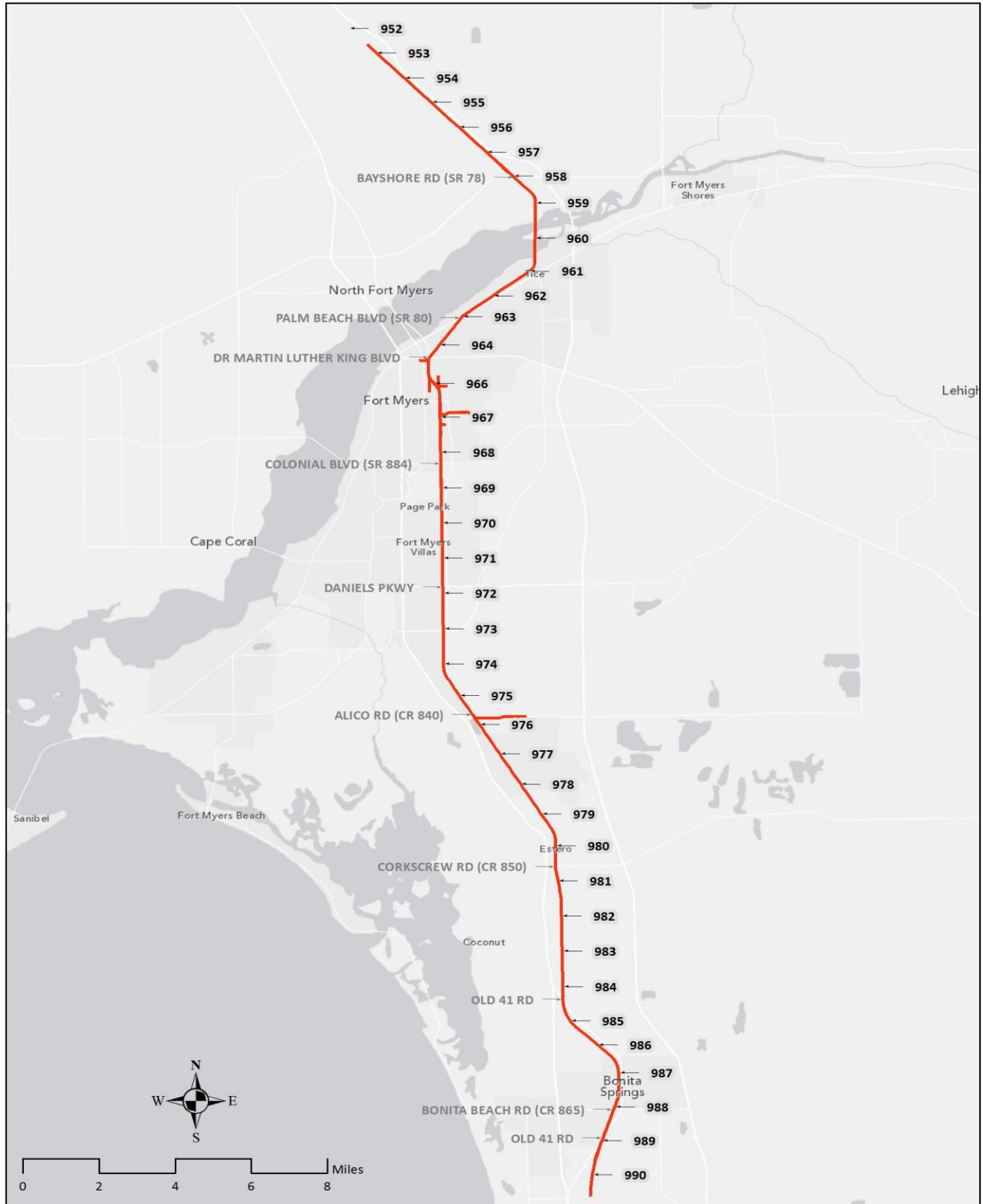
Current freight traffic consists of frozen and refrigerated goods that are shipped by rail to Florida Freezer in North Fort Myers. These goods are then shipped out by truck for distribution in the local area. Scrap metal products are loaded and unloaded by two separate companies at two rail-served locations in Fort Myers. Propane, lumber and newsprint are also moved by rail on the SGLR in Lee County.

During the November 27, 2012 Hi-Rail trip, multiple side tracks were observed to have active freight cars at various customer locations throughout Lee County. Active scrap metal loading and unloading were observed at the SGLR facility just south of Hanson Street and at the former Wye track area near MLK Boulevard and Evans Avenue. A north-south spur track breaks off the SGLR main line near Edison Avenue and runs south parallel to Evans Avenue. Tank cars were observed at a propane gas company on this spur track near Franklin Street. No other industries located along this spur track appear to be active rail customers. A lumber car was observed being unloaded on a side track south of Crystal Drive.

There are numerous industries that are capable of receiving freight rail service in the Kennesaw Industrial Park north of Hunter Street. Many of the industries in this area had active rail service at one time, but many are now vacant, and none were observed to have active rail car loading or unloading. An intermodal transfer terminal that has been proposed to be located in this area is discussed in Section 6.5 below. Another industrial complex south of Hunter Street is capable of receiving rail service but no active rail cars were observed. Both of these areas could be potential locations for new rail served industries.

The industrial parks along Alico Road could also potentially attract new rail customers. The former Baker Mine spur south of Fort Myers that runs along Alico Road served a rock quarry at one time, but new mines have been opened that are much further east of the current end of track. Rock shipment from these newer mines is handled by trucks and it is not anticipated that there will be any shipment of this rock by rail in the foreseeable future. A rail-served facility for trans-loading and storing petroleum products transported by rail in this area has been proposed and is discussed in Section 6.5 below.

Exhibit 6-1: SGLR Corridor with Mileposts



South of Alico Road, the housing density along the corridor could hamper future industrial development. Industrial parks along Old 41 in Bonita Springs and northern Collier County could potentially attract new industries. There is also potential for rail business for building materials to return to northern Collier County if there is an upturn in building construction.

At the time that this report was prepared, SGLR was not aware of any other planned new industries or expansions of existing industries that would lead to increases in future freight rail service in Lee County. SGLR identified inbound aggregate, especially granite, as a possible future commodity for track ballast and for asphalt.

6.2 Opportunities for Expanded Freight Service

The freight forecast analysis for the rail feasibility study focused on evaluating recent population and freight data and data indicators for future rail freight in Lee County. The primary purpose for the analysis was to estimate the potential for increased freight rail demand for the corridor and determine if rail improvements will be needed to support the potential increase in freight rail traffic.

The forecast analysis considered future total freight flows for the County and estimated volumes of bulk and containerized shipments for the SGLR using existing available data sources combined with rail operator interviews. Many of the existing data sources pre-dated Florida's economic recession or don't reflect the effects of the economic downturn that began in 2007. Therefore, multiple sources were consulted to assess future rail freight traffic. In any case, the data reviewed and summarized in this analysis is general in nature, and frequently based on small sample sizes or on larger geographic areas than Lee County. It should be noted that the data used in freight predictions was typically based on past and anticipated performance, and like most forecasts can be influenced, positively or negatively, by unanticipated changes in development within the area.

The primary data sources for this assessment are listed in *Exhibit 6-2*. The assessment is discussed further in the Technical Report titled *Assessment of Existing and Future Freight Issues*.

Exhibit 6-2: Primary Data Sources

Source	Data
Lee County Freight And Goods Mobility Analysis, August 2009	Physical and geographic assessment of the Lee County freight infrastructure and insight towards future freight demand for the region
Federal Railroad Administration (FRA) Database	Train flows reported for at-grade rail crossings through study area
Bureau of Economic and Business Research (BEBR)	County population forecasts
Federal Highway Administration (FHWA) Freight Analysis	Highway freight volumes and forecasts through 2040
Surface Transportation Board,	Sample carload and commodity flows to/from Lee County BEA Economic Area. Evaluate types of

Public Use Waybill Data, 2011	commodities by rail for growth opportunities, i.e. building materials.
Florida Trade & Logistics Study Technical Report, April 2011	District level freight forecast by mode and commodity
SGLR Interviews	Current and expected volumes, key industries

All of the data and forecasts reviewed indicate that, while growth in Southwest Florida is still anticipated, the forecasted rate of growth has slowed. For rail freight traffic, it appears that nominal or negative growth might be reasonably anticipated. Overall, national freight growth (in tonnage) is anticipated to be 1.5 to 2% per year. The Federal Highway Administration freight analysis framework (FAF 3.3) that tracks highway truck tonnage projects a 1.6% per year increase in Lee County, which is within this national range. Although indicators point towards reduced market share by rail, a nominal positive growth rate would be considered a conservative projection.

Expanded freight rail service will be in response to market-driven demand, where the rail provides a cost competitive advantage over other modes of freight transport. Currently, rail freight within the counties that form FDOT District 1 constitutes approximately 12% of all freight tonnage in the district, but is projected to decline both in percentage and in absolute tonnage by year 2035, losing market share to highway truck freight.

There are potential opportunities to increase rail freight service that have been identified in other studies. For example, the Investment Element of the *2010 Florida Rail System Plan* identified two potential projects. An intermodal transfer facility has been proposed on SGLR-owned property near the intersection of Hanson Street and Veronica Shoemaker Parkway. This proposed intermodal transfer facility is discussed in Section 6.5 below.



In addition, a rail intermodal/trans-loading facility has been proposed in the vicinity of Southwest Florida International Airport off Alico Road for trans-loading and storing petroleum products, such as gasoline, diesel fuel, and aviation kerosene type jet fuel transported by rail. This project would also include the delivery of jet fuel from the rail yard to the airport fuel farm by pipeline. This proposed intermodal/trans-loading facility is discussed in Section 6.5 below.

6.3 Constraints to Expanded Freight Service

The 2003 Transearch data indicated that rail freight constitutes only 0.2% of all freight movement within and through Lee County. The options to utilize rail for existing or future freight are dependent upon many factors, some of which are external to Lee County, including their dependence upon CSXT to bring freight down to the SGLR.

Based on freight stakeholder interviews conducted across 6 Central Florida counties, other issues facing rail freight utilization include concerns that: (a) rail is not reliable enough to

meet the time sensitive needs of most freight-dependent customers; (b) rail does not provide the door-to-door service that trucks are able to provide, so it typically requires another truck move from the train to the end destination, if the long haul is by rail; and, (c) without a significant backhaul opportunity, it is difficult to get service or competitive pricing from the railroads – this is a statewide problem in most markets.

SGLR rail freight service in Lee County has both geographic and market-based constraints. Its geographic location on the peninsula makes the County less suited for through freight traffic as opposed to origin and destination traffic. As a largely consumer market, rail freight has a significant disadvantage of lacking a backhaul (outbound rail) opportunity which puts rail at a disadvantage to provide competitive pricing to potential rail customers. Truck freight overcomes this disadvantage with the flexibility to seek backhaul freight opportunities outside of the region and even elsewhere in Florida.

The likely result is that there will be limited growth in freight movement by rail in Lee County. It is likely that the SGLR will have sufficient capacity to accommodate either more train cars or additional freight operations if they were needed.

The relocation of the CSXT intermodal facility from Taft near Orlando to an integrated logistics center near Winter Haven may also undermine some of the competitive advantages that the SGLR provides. Inbound CSXT containerized freight will be offloaded to trucks at this facility and is a shorter distance to Lee County than previously provided from Orlando.

Also limiting freight opportunities is the condition of the track. While there are some locations where the SGLR track is maintained at a level to allow maximum freight train speeds of 25 mph, the majority of the corridor is maintained to allow maximum freight train speeds of 10 mph. The current track condition is adequate for the current low density SGLR freight operations. SGLR is very interested in attracting additional customers who would boost freight traffic volumes. Such increases in train volumes would require future investment in the track and bridge infrastructure which simply cannot be justified at the present time. Improvements needed for freight traffic increases would need to be considered in conjunction with any proposed initiatives to implement a passenger service on the SGLR corridor.

6.4 Assessment of Condition of Existing SGLR Infrastructure

The current condition of the SGLR trackage is reviewed in this section of the report. Potential track improvements projects that have already been identified will also be discussed.

6.4.1 Existing Track and Bridge Conditions

The Federal Railroad Administration (FRA) has established track safety standards that identify nine specific classes of track (Class 1 through 9), as well as a category referred to as Excepted Track. The difference between each track class is based on progressively more demanding standards for track structure, track geometry and inspection intervals. Each track class has a corresponding maximum allowable speed associated with it: the higher the track class, the higher the allowable speed. Each railroad makes the determination as to which track class they will maintain their track, based on their operational and maintenance needs. Once these designations are made, the FRA and FDOT hold the railroads accountable for maintaining their track to the standards for each particular track class.

There are some locations where the SGLR track is maintained to FRA Class 2 track safety standards which allow maximum freight train speeds of 25 mph. However, the majority of the corridor in Lee County is maintained to Class 1 standards which allow maximum freight train speeds of 10 mph. SGLR did not provide the limits of which track segments are maintained to Class 1 standards and which are maintained to Class 2 standards.

The current track condition is adequate for the current low density SGLR operations. The dinner train operates at a maximum speed of 10 mph between the Colonial Boulevard station at MP 968.2 and MP 946 in southern Charlotte County. South of the SGLR yard and maintenance facility at MP 969, the track is classified as "Excepted Track" which requires inspection prior to use and allows maximum freight train speeds of 10 mph. Passenger trains are not permitted to operate on Excepted Track.

For heavy tonnage freight railroads, the industry standard is to use 136# welded rail. Rail size is measured by weight: one yard length of "136# rail" weighs 136 pounds. Heavy tonnage rail lines typically include the use of welded rail which means that the ends of each individual length of rail are welded together with no joints. Jointed rail, where each individual length of rail is connected by joint bars on each end, requires more maintenance attention. The use of 136# welded rail provides for longer rail life and decreased maintenance costs.

The use of 115# rail is generally adequate and preferred on lower density freight lines, as well as on some transit lines and passenger railroads. Longer rail life and reduced maintenance costs can be achieved with both welded and jointed 115# rail for these types of applications.

For freight rail lines that historically have had low tonnage, the use of 100# jointed rail and smaller is generally adequate for the rather limited operations. New rail with sizes of 100# and smaller are no longer readily available, hence 100# rail and smaller that is still in service is usually older and more susceptible to breaking. Such 100# rail is typically jointed which also requires more maintenance attention.

North of Cranford Avenue at about MP 964.5, the rail is predominantly jointed 100#. From Cranford Avenue south to Hanson Street at about MP 966.5, the rail is welded 110# and 115#, which was installed as part of the Evans Avenue highway project. South of Hanson Street, jointed 100# rail is in place to Colonial Boulevard at about MP 968.2. South of Colonial Boulevard, the rail is jointed 85#. These are general limits for the rail sizes, and it should be noted that there are scattered locations where the rail has different rail sizes.

There are approximately 65 turnouts on the SGLR within the study limits. The majority of the turnouts are 100# rail, but 13 turnouts were observed to have 85# rail. One turnout has 115# rail. There are 51 at-grade crossings on the SGLR in Lee County.

There are a total of 21 bridges within the study limits. The types of bridges include:

- 9 Timber Trestles with Open Deck
- 6 Timber Trestles with Ballasted Deck
- 3 Concrete Trestles with Ballasted Deck
- 1 Steel Deck Plate Girder with Open Deck
- 1 Deck Plate Girder/Through Plate Girder Combination with Open Deck
- 1 Movable Bridge with Open Deck (Caloosahatchee River)

SGLR would not share bridge condition or inspection reports for this study. SGLR has advised that all bridges are capable of supporting rail cars weighing 286,000 pounds, which is the

national standard car weight. The bridges are generally maintained in fair to good condition, which is adequate to support current train operations and comply with FRA requirements.

As part of on-going maintenance, SGLR typically replaces approximately 30,000 wood cross ties per year. SGLR uses their employees and equipment to do tie replacement work. SGLR does not have any current plans to upgrade the rail within the corridor. This level of routine maintenance is adequate to support current freight traffic levels.

The smaller, jointed rail that is prevalent on the SGLR generally limits the amount of tonnage and speeds for freight. Due to the age and size of the existing rail, the rail should be considered for upgrading to 115# at selected locations, especially on curves. Should freight traffic increase dramatically with a desired increase in freight train speeds, a capital maintenance program would be required to replace ties and upgrade rail throughout the corridor. Various timber trestles would also need to have rehabilitation work done, and some may need to be replaced with concrete trestles with ballasted decks.

The SGLR will continue to maintain their track and bridges to a level that meets their on-going freight traffic needs. The need for freight upgrades should be considered independently from any initiative to implement a passenger service on the SGLR corridor.

Typical costs for upgrading rail and ties for a freight-only railroad like the SGLR will vary between approximately \$200,000 and \$500,000 per mile, depending on the level and percentages of renewal. Using this cost per mile range, plus a cost estimate of \$60.2 million to upgrade the Caloosahatchee River bridge from Florida's *SIS Multi-Modal Unfunded Needs Plan*, it's been estimated that it would cost approximately \$70-\$75 million to upgrade the rail corridor for expanded freight service within the study area.

The cost of upgrades to improve freight rail service that are discussed in this section of the report should not be confused with the extensive capital costs that would be needed for the implementation of a passenger service that would require relocation and/or complete reconstruction of the existing SGLR track. Freight and passenger traffic could both potentially operate on the same track with either temporal separation or in a mixed-traffic setting, depending on the mode selected. Capital costs for various passenger modes have been discussed in a separate section. These costs would be refined after a specific mode is selected. A detailed inventory of the SGLR track, bridge and crossing warning systems would need to be made to identify what existing infrastructure components would need to be replaced, upgraded, or retained for use for the selected mode. The costs to implement a passenger service would also include the costs to provide an enhanced infrastructure for freight service.

6.4.2 Potential Freight Rail Improvement Projects

In 2009, the Lee County MPO submitted a TIGER Grant application for a number of projects involving the SGLR rail infrastructure. Unfortunately, this application for funding was not approved. The application requested funding for:

- Installation of 115# rail between Colonial Boulevard and Hanson Street and between Cranford Street and the Lee-Charlotte County line for a length of 14 miles.
- Rehabilitation and structural improvements of the movable railroad bridge over the Caloosahatchee River to include replacement of depreciated pilings and the painting of the main drawbridge span.
- Reconstruction of the track to include rail, crossties, tie plates and ballast between Alico Road and Colonial Boulevard for a length of 8 miles. The 100# rail removed from the section between Colonial Boulevard and Hanson Street would be reused in this section.

- Construction of an intermodal rail/truck transfer terminal on a parcel owned by SGLR southwest of the intersection of Hanson Street and Veronica Shoemaker Boulevard.
- Rail corridor right-of-way acquisition from CSXT from northern Collier County to the Lee/Charlotte County line for a length of about 38 miles.

This TIGER grant would have allowed the SGLR to upgrade the track condition, which could result in higher freight train speeds and lower track and bridge maintenance and repair costs.

Various public agencies and private entities were asked to provide input to the Florida Department of Transportation during development of the *2010 Florida Rail System Plan (FRSP)*. The Lee County MPO acted as the "Agency Reporting Need" for two projects that could affect the SGLR infrastructure in Lee County. These two projects are listed in the FRSP Investment Element, but no funding sources have been identified to date for either project.

Project 287 in the FRSP identifies "Seminole Gulf Infrastructure Improvements - Phase 1" as follows: "The Phase 1 project will renew sections of the SGLR railroad bridge that spans the Caloosahatchee River. The project will replace fully depreciated sections and make structural improvements; replace fully depreciated pilings and other structural members, paint main drawbridge span. The project will also upgrade SGLR track structure between Colonial Boulevard and Hanson Street and between Cranford Street and Lee County line, a total distance of 14 miles. Improvements to this section include installing new 115-pound continuous welded rail, long-life crossties and related tie plates, track fastening systems and installing new ballast. The project also includes rehabilitating SGLR track structure between Alico Road and Colonial Boulevard, a distance of 8 miles."

This Phase 1 work is identified with a "mid-term" timeframe of six to 10 years at an estimated cost of \$7.3 million in 2009 dollars. Funding of this Phase 1 project would allow SGLR to implement the minimum improvements needed to increase freight traffic, accommodate higher freight train speeds, reduce track and bridge maintenance and repair costs.

Project 291 in the FRSP identifies "Seminole Gulf Infrastructure Improvements - Phase 2" as follows: "Phase 2 is a project to continue upgrading and expanding the rail infrastructure in Lee County by appropriate investments in track maintenance and capacity upgrades, track and crossing signals and railroad crossings in addition to building additional tracks to connect the railroad to key markets in Manatee, Glades, Hendry, Charlotte, Collier and Lee. Furthermore this project will look into investing in new rail technology such as double-stacking, rail cars, etc., and expanding rail capacity through double tracking, passing sidings etc., which could be needed in response to the proposed Winter Haven Intermodal Logistics Center (ILC)."

This Phase 2 work is identified with a "mid-to-long-term" timeframe of 11 to 20 years at an estimated cost of \$50 million in 2009 dollars. The Phase 1 improvements must be completed before considering Phase 2. Funding of Phase 2 would allow SGLR to prepare for increases in freight traffic that could result from the new CSXT Winter Haven intermodal logistics center.

6.5 Existing and Potential Freight Terminal Facilities

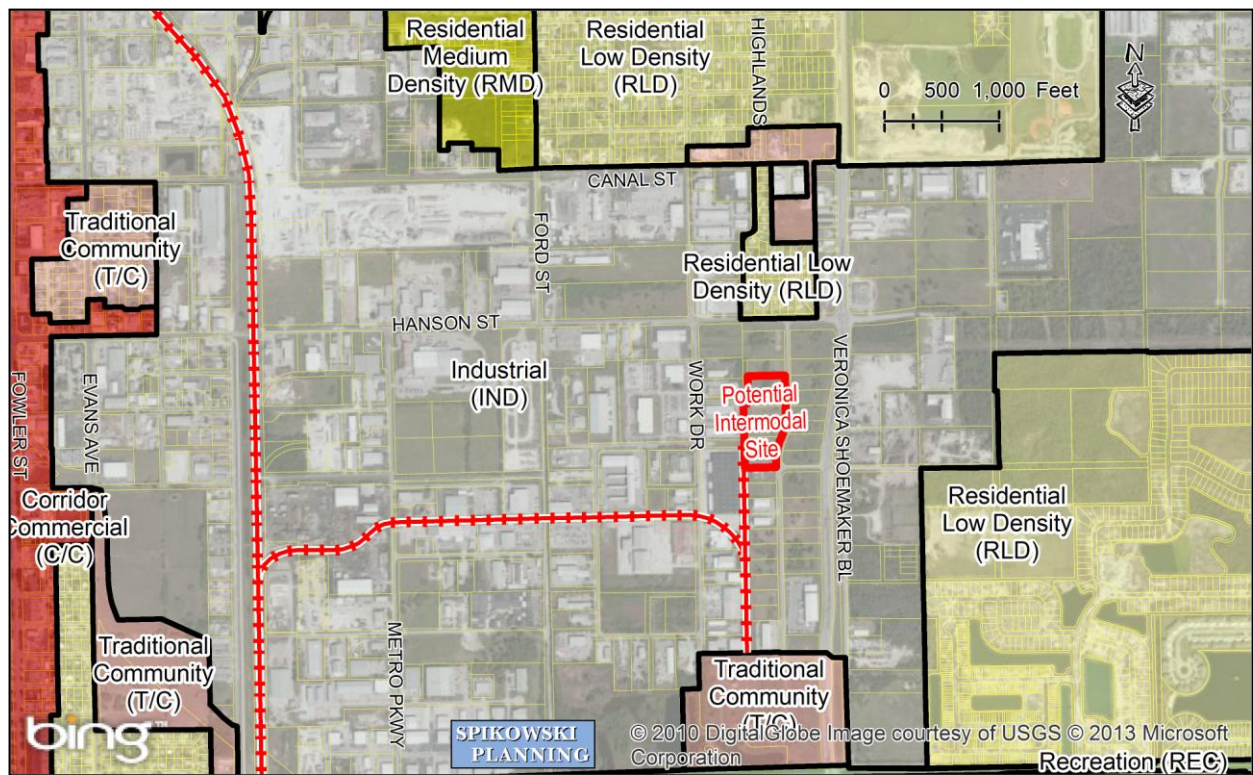
The SGLR does not operate any bulk transfer or intermodal facilities on their route at the present time. SGLR provides rail service to individual industrial rail customers who deal with their specific commodity types at their respective facilities. Exceptions to this would be the two locations where scrap metal loading on SGLR is handled by outside parties.

The Lee County MPO acted as the “Agency Reporting Need” for two potential terminal facilities that are listed in the FRSP. No funding sources have been identified to date for either project.

Project 288 in the FRSP identifies the “Lee County Intermodal Transfer Terminal” project as follows: “Design and construct an intermodal transfer terminal that will facilitate centralized rail car-truck transloading, including both trailer on flat car/container on flat car (TOFC/COFC) and non containerized “team track” operations. An intermodal terminal will boost the local economy. The site is located close to the intersection of Hanson Street and Veronica Shoemaker Parkway. Alternative locations are also available which would require site acquisition and development costs, and may require environmental assessments.” This project has a “near-term” timeframe of 1 to 5 years at an estimated cost of \$3 million in 2009 dollars.

A vacant site near Hanson Street and Veronica Shoemaker Parkway, which is owned by SGLR, is the preferred site. This site was included in the MPO 2035 Long Range Transportation Plan (LRTP). An intermodal facility at this location would be compatible with existing industrial site usage in the area. As shown in *Exhibit 6-3*, SGLR industrial trackage already comes close to the site. Extending the trackage to serve this new facility would be relatively simple.

Exhibit 6-3: Preferred Location of Proposed Intermodal Transfer Terminal



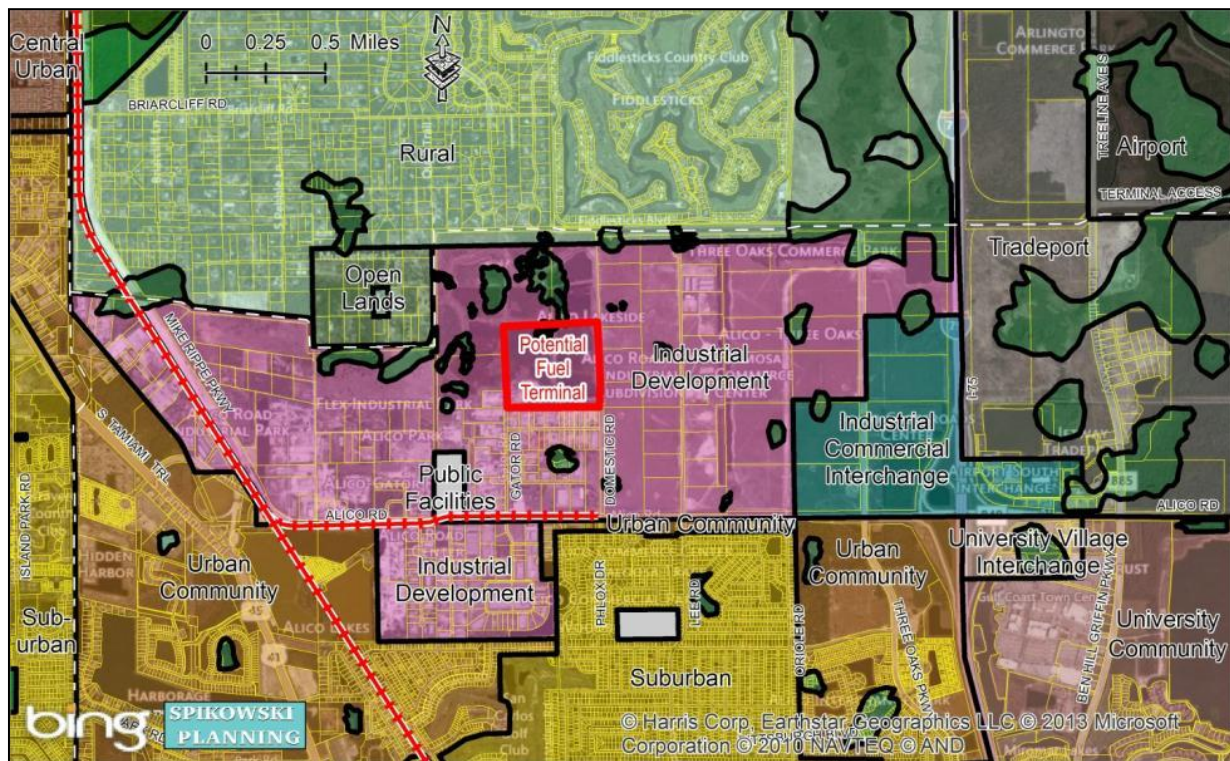
Prior to constructing this intermodal facility, the FRSP Phase 1 and potentially some Phase 2 SGLR track and bridge infrastructure improvements would need to be constructed. For such a facility to be viable in Fort Myers, increased train speeds and an upgraded, reliable track and bridge infrastructure would be necessary. This intermodal facility on the SGLR in Fort Myers would have to compete with the proposed CSXT Winter Haven ILC. CSXT envisions this Winter Haven facility as a major intermodal and automotive distribution point for the Tampa and

Orlando areas. The site will also be able to serve as a distribution point to other locations in Southwest Florida, including Lee County.

Project 289 in the FRSP identifies the “Rail Intermodal Yard” project as follows: “A rail intermodal yard in the vicinity of SW Florida International Airport and off Alico Road for transloading and storing petroleum products such as gasoline, diesel fuel, and aviation kerosene type jet fuel (Jet A Fuel) transported by rail. The project will also include the delivery of jet fuel to the airport fuel farm from the rail yard by pipeline. Project includes site development, environmental assessment, design, and construction.” This project is identified with a “near-term” timeframe of 1 to 5 years at an estimated cost of \$8 million in 2009 dollars.

The terminal would handle loaded rail cars of gasoline and diesel fuel that would be trans-loaded to trucks for distribution in the Fort Myers area. The terminal would also have a pipeline to transport jet fuel to the airport’s fuel farm. This project is included in the 2035 LRTP. As shown in *Exhibit 6-4*, this proposed bulk transfer facility would be served from the SGLR Baker Spur, which currently extends as far east as Domestic Avenue. SGLR has acknowledged that, prior to constructing such a facility, the FRSP Phase 1 and potentially some Phase 2 SGLR track and bridge infrastructure improvements would need to be constructed.

Exhibit 6-4: Potential Site Location for Intermodal Fuel Trans-loading Facility



6.6 Conclusions

The SGLR rail operations are based in Fort Myers. At the present time, the SGLR interchanges freight cars with CSXT in Arcadia two or three times per week, depending on freight car volumes. 2003 Transearch data indicated that rail freight constitutes only 0.2% of all freight

movement within and through Lee County. The SGLR also runs a dinner train five evenings per week year round from Fort Myers north to a point in southern Charlotte County.

All of the data and forecasts reviewed indicate that while freight growth in Southwest Florida is still anticipated, the forecasted rate of growth has slowed. For rail freight traffic, it appears that nominal or negative growth might be reasonably anticipated. Overall, national freight growth (in tonnage) is anticipated to be 1.5 to 2% per year. The FAF 3.3 (highway truck tonnage) projects a 1.6% per year increase in Lee County, which is within this national range. Although indicators point towards reduced market share by rail, a nominal positive growth rate would be considered a conservative projection.

Lee County's location in Southwest Florida does not lend itself to attracting significant new industrial development that would require expanded rail service. The SGLR will continue to operate as a low density freight railroad unless significant new freight customers are identified. Continuation of low density freight operations will allow the SGLR corridor to be viable for potential use as a passenger corridor. The costs for track and bridge improvements will vary widely based on the levels of expanded train operations that would need to be supported. But, with rail freight traffic expected to experience only nominal growth, significant improvements to SGLR infrastructure simply cannot be justified at the present time without public investment. The *2010 Florida State Rail Plan* has identified projects that would require public investment for track and bridge improvements and for two potential new intermodal terminals.

7. Preliminary Value of CXS/Seminole Gulf Lease and Leasehold and Public Acquisition Options

As part of this study, estimates were prepared for the value of the real estate owned by CSX Transportation (CSX) in Lee and northern Collier Counties and the value of the Seminole Gulf Railway (SGLR) leasehold, including the rail bed and tracks. The values estimated in this appraisal consulting assignment are preliminary and do not represent an appraisal or market value.

The results of the preliminary valuations are summarized in this section of the report. Further details can be found in the report titled *Preliminary Value of the Seminole Gulf / CSX Rail Corridor and Existing Lease*.

The value of the leased fee interest or CSX's interest in the property leased by Seminole Gulf is approximately \$5 to \$15 million. This is the approximate cost of taking over the CSX portion of the lease. The value of the leasehold interest or Seminole Gulf's interest in the lease is approximately \$65 to \$104 million. Finally, the estimated value of the leasehold interest including track improvements, or the value of the Seminole Gulf lease and its track improvements, is approximately \$87 to \$125 million.

Therefore, the cost estimate to purchase the rail corridor, including the CSX property, the Seminole Gulf lease and track improvements, could be approximately \$92 to \$140 million. The cost to buy just the CSX portion of the lease and thereby replace CSX as the "landlord" is estimated to be approximately \$5 to \$15 million. This is the amount one would expect to pay CSX to acquire its interest in the underlying property within the right-of-way.

The lease agreement between CSX and the Seminole Gulf Railway was analyzed and options for the purchase of the leased fee and/or leasehold interest of the subject property were formulated. The results of this analysis are summarized below and presented in greater detail in the Technical Report titled *Preliminary Value of the Seminole Gulf / CSX Rail Corridor and Existing Lease*.

Seven options are presented for consideration.

- Option 1 – Voluntary Agreements without Purchase of Lease or Leasehold
- Option 2 – Purchase of Leased Fee Interest
- Option 3 – Purchase of Lessee
- Option 4 – Purchase of Leasehold Interest
- Option 5 – Purchase of Both Leased Fee and Leasehold
- Option 6 – Purchase Entire Corridor by New Regional Transportation Authority
- Option 7 – Purchase Entire Corridor by Florida DOT

Railroad operating agreements that do not involve acquisition of the right-of-way or lease were also reviewed. The results are summarized below and discussed in more detail in the Technical Report titled *Railroad Operating Agreements Without Acquisition of Right-of-Way or Lease*.

7.1 Highest and Best Use of the Subject Property

Highest and best use, a necessary element of market value, is the physically possible and legally permissible use recognized by the subject market area that results in the highest value of the subject property. Therefore, the four criteria the highest and best use of a property must meet are physical possibility, legal permissibility, financial feasibility and maximum productivity. A property cannot be valued until its highest and best use is determined, because the selection of comparable sales and market information is dependent on its highest and best use.

The maximally productive use is the physically possible, legally permissible, and financially feasible use that results in the highest value. Based on the analysis of the highest and best use, the maximally productive use of the subject property as of the date of preliminary value (and, therefore, its highest and best use) is for continued freight rail service, with the possibility of coexisting passenger transportation uses, recreational trail use, and utility/communications occupancies.

7.2 General Approach to Preliminary Valuations

The general approach used to estimate the value of the real estate owned by CSX in Lee and northern Collier Counties and to estimate the value of the Seminole Gulf Railway (SGLR) leasehold, including the rail bed and tracks, is explained below. Further details regarding the methodologies used to estimate the value of the real estate owned by CSX in Lee and northern Collier Counties can be found in the report titled *Preliminary Value of the Seminole Gulf / CSX Rail Corridor and Existing Lease*.

7.2.1 Preliminary Valuation of Real Estate

The values estimated in this appraisal consulting assignment are preliminary and do not represent an appraisal or market value. The values were estimated using the most appropriate methodology within the scope of this study.

In this case, the values were estimated using the corridor valuation methodology, where across-the-fence (ATF) values are multiplied by a corridor factor. The ATF value is the value based upon a comparison with adjacent lands across-the-fence. The ATF value accounts for location and market conditions. The ATF value was estimated based upon applying a sales ratio to the land assessed value of the across-the-fence parcels. No across-the-fence comparable sales were analyzed for this assignment.

7.2.2 Preliminary Valuation of Leasehold

A copy of the 1987 lease agreement between CSX Transportation and Seminole Gulf Railway, which was obtained through a public records request, was analyzed. It was assumed that the lease is in full effect and its terms remain the same. Additionally, the 1987 bill of sale between CSX Transportation and Seminole Gulf Railway was analyzed. It transferred all track and other subject improvements in existence in 1987, as well as other properties acquired or leased by SGLR, to Seminole Gulf Railway.

The centerline of the tracks within the subject property boundaries was digitized using high-quality digital imagery. All turnouts and road crossings were also digitized. Track improvement

inventory and inspection data were compiled and used to roughly estimate rail weight, roll dates, and condition; tie spacing and condition; ballast condition; turnout size, weight, and condition; and at-grade road crossing equipment.

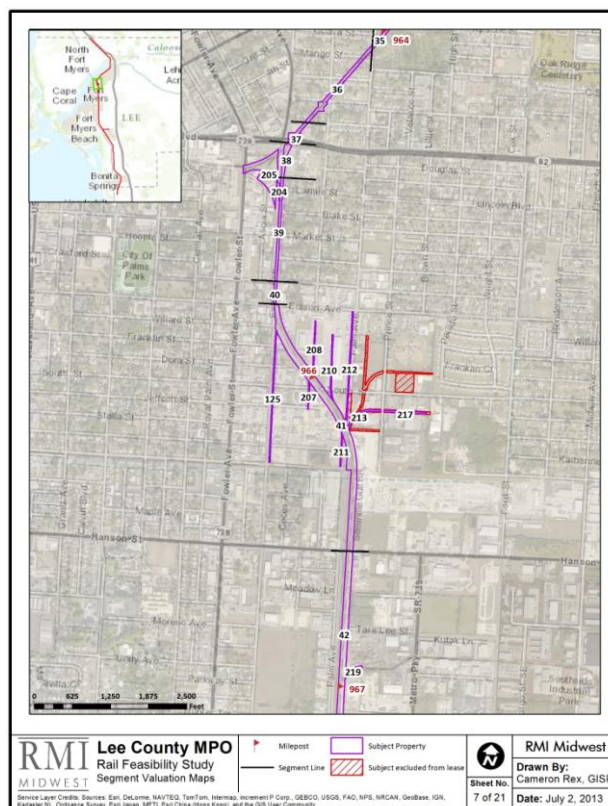
The cost approach was used to value the track improvements. The reproduction / replacement unit costs for track improvements from other comparable projects were used and supplemented by costs provided by the consulting team. These unit costs were applied to the quantities estimated in the consultant's inventory. The estimate of physical deterioration was based on rough estimates of the condition of the components and their age, as well as with the use of depreciation studies filed with the Surface Transportation Board by Class I railroads. These studies have been used to estimate the average life of the components. The Iowa Survivor Curves that correlate with the empirical data gathered in the study were used to estimate the remaining life of each component. Comparable corridor sales that included track improvements support this approach. The preliminary value of the track improvements estimated as part of this task is their value in-place. Their net salvage value, or value removed from the corridor, is beyond the scope of this assignment.

Based upon the terms of the lease, a value of CSX's leased fee interest was estimated using the preliminary fee value of the land less parcels excluded in the lease agreement. A discounted cash flow analysis was developed to estimate a present value of CSX's income from rent and the future reversion at the end of the lease term. Seminole Gulf's leasehold interest is estimated using the residual of the preliminary fee value of the land less parcels excluded in the lease agreement and CSX's leased fee value. The preliminary value of the track improvements was then added to Seminole Gulf's leasehold interest to arrive at the total value of Seminole Gulf's interest.

7.4 Summary of Preliminary Value Conclusions

The preliminary value conclusions are summarized below. These order of magnitude estimates are explained in further detail in the report titled *Preliminary Value of the Seminole Gulf / CSX Rail Corridor and Existing Lease*.

Five valuation scenarios are presented in this report. The first two (the fee simple value of all CSX ownership and the fee simple value of leased property) can be considered somewhat hypothetical values since the CSX ownership is subject to the Seminole Gulf/CSX lease. Nevertheless, these values were estimated at approximately \$80.6 to \$109.1 million for the fee simple value of all CSX ownership and \$80.0 to \$108.2 million for the CSX property leased



by the Seminole Gulf Railway. These values were used as input values in determining the leased fee interest and the leasehold interest.

7.4.1 Fee Simple Value of All CSX Ownership

This value range is the preliminary fee simple value of the CSX property, including those portions that are not included within the property covered by the lease agreement, without consideration of the SGLR/CSX lease. This is a hypothetical value, in that CSX does not own the fee simple estate, because it is a leased property. Additionally, this value does not include the value of the track improvements. The preliminary range of values, as of February 28, 2013, is \$80,606,000 to \$109,055,000.

7.4.2 Fee Simple Value of SGLR Leased Property

This value range is the preliminary fee simple value of the CSX property that is leased by Seminole Gulf Railway without consideration of the SGLR/CSX lease. This is a hypothetical value because CSX's ownership is subject to the SGLR/CSX lease. Additionally, this value does not include the value of the track improvements. The preliminary range of values, as of February 28, 2013, is \$79,994,000 to \$108,227,000.

The difference between the fee simple value of all CSX ownership and the fee simple value of SGLR leased property is CSX owns more property than was leased to Seminole Gulf.

7.4.3 Value of the Leased Fee Interest (CSX)

This value range is the preliminary leased fee value of CSX's interest in the property leased by Seminole Gulf Railway. It represents the amount one would expect to pay CSX to acquire its interest in the underlying property within the right-of-way. The preliminary range of values, as of February 28, 2013, is \$4,750,000 to \$14,750,000. This is the value of the CSX ownership, subject to the lease.

The owner of the leased fee interest retains the utility and communications occupancies (such as fiber option cable, pipes and perhaps aerial rights) while the lease is in effect.

The value of the leased fee interest increases over time as it gets closer to the limits of the lease (if real estate values stay level). At this time, the lease will remain in effect for approximately another 35 years. At the end of the 35 years, the owner of the leased fee interest will have complete ownership of the land within the right-of-way.

7.4.4 Value of the Leasehold Interest (SGLR)

This value range is the preliminary leasehold value of SGLR's interest in the property leased by Seminole Gulf Railway. It represents the amount one would expect to pay SGLR to acquire its interest in the property before consideration of the track improvements. The preliminary range of values, as of February 28, 2013, is \$65,244,000 to \$103,477,000.

In effect, SGLR owns use of the land for approximately the next 35 years, except for utility and communications occupancies. The value of the leasehold interest diminishes over time as it gets closer to the limits of the lease (if real estate values stay level).

7.4.5 Value of the Leasehold Interest including Track Improvements (SGLR)

This value range is the preliminary value of SGLR's leasehold plus the value of track improvements owned by SGLR. This value includes the estimated value of the track improvements of \$21,290,000. It represents the total amount one would expect to pay SGLR to acquire its entire interest in the property and track improvements. The preliminary range of values, as of February 28, 2013, is \$86,534,000 to \$124,767,000.

As explained above, the value of the SGLR leasehold interest diminishes over time. So, that would affect this value as well. The value of the track improvements could also diminish over the next 35 years.

7.5.5 Summary of Value Conclusions

Exhibit 7-1 summarizes the ranges of value conclusions described above.

Exhibit 7-1: Summary of Preliminary Value Conclusions

	Low	High
Fee simple value of all CSX ownership	\$ 80,606,000	\$ 109,055,000
Fee simple value of subject leased property	\$ 79,994,000	\$ 108,227,000
Value of the Leased fee interest	\$ 4,750,000	\$ 14,750,000
Value of the Leasehold interest	\$ 65,244,000	\$ 103,477,000
Value of the Leasehold + Track Improvements	\$ 86,534,000	\$ 124,767,000

Therefore, the cost estimate to purchase the rail corridor, including the CSX property, the Seminole Gulf lease, and track improvements, is approximately \$92 to \$140 million. The cost to buy just the CSX portion of the lease and thereby replace CSX as the "landlord", is estimated to be approximately \$5 to \$15 million. This represents the amount one would expect to pay CSX to acquire its interest in the underlying property within the right-of-way.

7.5 Public Acquisition Options

Options for the purchase of the CSX right-of-way, subject to the terms and agreements of the existing lease, (the leased fee) were reviewed, and options related to the purchase of the current lease (the leasehold) were identified.

These options were introduced as "Enterprise Strategies" in the Technical Report titled *Regional Corridor Preservation in Florida, With Strategies for Southwest Florida* and further refined as "Options" in the Technical Report titled *Preliminary Value of the Seminole Gulf / CSX Rail Corridor and Existing Lease*.

7.5.1 Option 1: Voluntary Agreements without Purchase of Leased Fee or Leasehold

This strategy would be to pursue voluntary agreements with CSX and/or Seminole Gulf Railway that would leave the current land ownership and leasehold interests in place.

Examples of such agreements could be:

- Planning and preliminary design agreements to identify how the rail corridor, in full or in part, could accommodate public transportation facilities without displacing freight service.
- Capital upgrade agreements that would maintain or improve the corridor's ability to handle freight, while also accommodating public transportation and other public infrastructure needs.
- CSX and/or Seminole Gulf Railway could lease or sub-lease the rail corridor to a public agency.

It is unlikely that CSX or Seminole Gulf Railway would agree to voluntary agreements without compensation. Their fiduciary responsibilities to their investors require that they obtain a fair return on assets that are used by others.

Because this option does not consider any type of purchase, no cost is estimated.

7.5.2 Option 2: Purchase of Leased Fee Interest

Under this option, a public agency, such as the Florida DOT, would purchase the leased fee of the underlying right-of-way from CSX. The long-term lease with Seminole Gulf Railway would continue under its present terms (or could be renegotiated if parties were to agree).

The public agency would take over CSX's current responsibilities as landowner, including liability protection and reserving the right-of-way for the restoration of passenger rail service. The CSX reservations for fiber optics may or may not be part of this option.

This strategy could relieve the liability concerns that private railroad companies have when sharing corridors with passenger trains and could remove other impediments that might block expanded use of the rail corridor for public transportation.

This option would likely still require an agreement or modification of the existing lease with Seminole Gulf Railway to allow for use of all or part of the corridor for some type of passenger service. Such agreement or modification may require compensation to Seminole Gulf Railway.

The cost of this option is estimated to be \$4.8 million to \$14.8 million within the study area.

7.5.3 Option 3: Purchase of Lessee

Under this strategy, a public agency would purchase Seminole Gulf Railway (the company), should it become available for sale. This purchase would have to be considered independent of SGLR's commonly owned affiliated company, the Bay Colony Railroad Corp., which operates in Massachusetts. The freight and dinner theater businesses would be spun off, remaining as strictly private enterprises that operate through long-term leases with the public agency.

It is beyond the scope of this project to estimate the value of the Seminole Gulf Railway as an entirety.

7.5.4 Option 4: Purchase of Leasehold Interest

This strategy is similar to Option 3, except that only the long-term lease would be acquired from Seminole Gulf Railway. As part of this acquisition, a new agreement could be reached with Seminole Gulf Railway to retain its right to provide freight service on the rail corridor and continue operating the dinner theater, subject to potential shared use of the corridor for public transit. This option would still likely require the purchase of rights from CSX, including passenger rights and portions of the leased fee in order to use the property for purposes other than freight rail purposes.

The cost of this option is likely to be the value of SGLR's leasehold interest, which ranges from \$65.2 to \$103.5 million within the study area.

7.5.5 Option 5: Purchase of Both Leased Fee and Leasehold

This strategy would be to purchase both the leased fee from CSX and the leasehold from Seminole Gulf Railway. A new lease agreement could then be negotiated with Seminole Gulf Railway for continued operation of freight service, while allowing for some type of passenger service to be operated within the corridor. The likely cost of this option would be the values of both the leased fee and leasehold. The new agreement with Seminole Gulf would include annual compensation for the use of the subject property.

This option would allow complete control of the corridor for development of passenger service. The cost of this option has been estimated to range from \$70.0 to \$118.2 million within the study area.

7.5.6 Option 6: Purchase Entire Corridor by New Regional Transportation Authority

Under this strategy, a new regional entity would be established to pursue any or all of the options for the entire rail corridor, from Arcadia to north Naples. This entity could be structured as a regional transportation authority, like the Tampa Bay Area Regional Transportation Authority (TBARTA), which was established under Chapter 343 of the Florida Statutes.

This option would require additional study of the entire corridor, as it extends beyond the northern extent of this study. The cost would likely be the value of the leased fee and leasehold of the entire corridor from Arcadia to north Naples. Like in Option 5, this option could include negotiating a new agreement with Seminole Gulf Railway to operate the freight service and would include annual compensation.

The cost of this option has been estimated to be \$91.3 to \$139.5 million within the study area.

7.5.7 Option 7: Purchase Entire Corridor by Florida DOT

This strategy is similar to Option 5, except that Florida DOT would pursue any or all of the options for the entire rail corridor from Arcadia to north Naples. A new regional entity would not be needed. The common carrier obligation would need to be preserved with an entity to fulfill this function. The SunRail agreement could be used as a model.

This option would require additional study of the entire corridor, as it extends beyond the northern extent of this study. The cost would likely be the value of the leased fee and leasehold of the entire corridor from Arcadia to north Naples. Like in Option 5, this option could include negotiating a new agreement with Seminole Gulf Railway to operate the freight service and would include annual compensation.

The cost of this option has been estimated to be \$91.3 to \$139.5 million within the study area.

7.5.8 Comparative Evaluation of Public Acquisition Options

The evaluation matrix shown in Exhibit 7-2 at the end of this section addresses the seven potential public acquisition options explained above. These strategies are not mutually exclusive. They contain various alternative approaches that may be useful if the most promising strategies cannot be pursued or are pursued without success.

This evaluation of the options was considered carefully in developing the study recommendations outlined in Section 9 later in this report.

7.6 Railroad Operating Agreements Without Acquisition of Right-of-Way or Lease

Railroad operating agreements that do not involve acquisition of the right-of-way or lease were reviewed. The results are summarized below and presented in greater detail in the Technical Report titled *Railroad Operating Agreements Without Acquisition of Right-of-Way or Lease*. This Technical Report presents a general discussion of the various issues relative to shared-use operating agreements between public agencies and freight railroads that allow an agency to implement a passenger service on a freight railroad.

7.6.1 Shared Use Operating Agreement

A shared-use operating agreement defines the requirements to allow a public agency to operate a passenger service by sharing tracks with a freight railroad. For purposes of this discussion, the Seminole Gulf Railway/CSX Transportation (SGLR/CSXT), as the operator/owner of the freight rail corridor, is referred to as the "host railroad". Lee County, the Florida DOT or a Transit Authority, as the public agency that would potentially operate the passenger rail service over the corridor, is referred to as the "tenant railroad" or "passenger agency."

Many different scenarios for such sharing of trackage exist. Two examples of sharing scenarios that could be appropriate for Lee County include:

- Commingling of SGLR freight and Lee County passenger traffic on same track. This arrangement is one of the most common and could be a scenario for Lee County to implement a CRT passenger service on the SGLR. LRT service generally should not commingle with freight trains on the same tracks, because, unlike CRT vehicles, light rail vehicles are not built to the same heavy-duty standards as freight trains.
- Time-separated shared-track freight service with diesel or electric light rail services that would use non-Federal Railroad Administration (FRA)-compliant vehicles. This could also be a scenario for Lee County to implement a CRT or LRT passenger service on the

SGLR. Temporal separation of passenger and freight operations could be a viable option given the low density of freight train operations.

Considerable effort is being put into identifying safe methods that could allow freight rail tracks to be shared with light rail vehicles even though they do not meet FRA crashworthiness standards. Some ideas under consideration include:

- Varieties of rigid temporal separation, such as used in San Diego, where all freight activities can be conducted overnight.
- Concurrent operations where some freight operations take place during the day, protected by fail-safe train separation techniques that would override operator errors.

7.6.2 Planning Process for Shared-Use Operating Agreement

Discussions between the passenger agency and the host railroad should be initiated early in the planning process for a proposed passenger service on a freight railroad. Once it is agreed that the host railroad will consider the proposed service, it is typical for both parties to execute a Memorandum of Understanding (MOU), which would document the roles and responsibilities of each party through the planning process. The ultimate goal will be to successfully negotiate the details of an operating agreement.

The building blocks for successful negotiations and ultimate passenger service implementation include a number of steps prior to completing an operating agreement.

- A long-term plan that looks 20 to 25 years into the future for the proposed service.
- A thorough feasibility study appropriate to the scale of the proposed service.
- A clear description of expectations at each stage of development.
- Secured funding or a politically feasible plan to assemble capital and operating funds for the proposed service.
- A preliminary description of the services desired from the host railroad.

7.6.3 Access Agreements

The first issue that the passenger agency will need to negotiate with the host railroad is the basic access arrangement for the corridor being considered. The SGLR/CSX rail corridor is a privately-owned facility, and Lee County as the tenant proposing the passenger rail service must negotiate an access agreement with the host railroad that specifies access terms and payments.

Access agreements are unique for each proposed passenger service. Several access models exist, which depend greatly on the individual local situation. Approaches for securing access include accessing existing track or acquiring space on the existing right-of-way to build parallel tracks. Infrastructure improvements and associated costs will need to consider the planned passenger service and projected freight growth.

Passenger station requirements raise a number of unique issues for infrastructure investments and train operations. The passenger agency will likely need to purchase or lease land from the host railroad for station buildings and parking areas. Stations will need vehicular and pedestrian access, which may involve crossing active tracks.

Other factors to consider include station safety, liability issues, and Positive Train Control (PTC). PTC is almost certain to be required by the FRA if the passenger operation is commingled with freight operations.

7.6.4 Project Costs

Many technical issues relate to estimating capital and operating costs and how they should be shared between the host railroad and the passenger service. Capital costs are for infrastructure improvements to add capacity to a rail corridor and to upgrade track and signal systems to support the desired passenger service performance.

Project costs for infrastructure improvements will generally be borne by the passenger agency. The host railroad may be more willing to consider contributing a share of the investment cost, if the proposed project provides tangible benefits to its freight operations costs. Host railroads will seek to ensure that they bear no costs for operating the passenger service, unless they are able to profit from the service.

7.6.5 Passenger Car Safety Standards

Passenger car safety standards have been issued by the Federal Railroad Administration (FRA). Rail passenger car safety technology continues to advance. Further development of passenger car safety standards can be expected, in response to research results and the findings of accident investigations.

Issues regarding whether or not and how to potentially permit non-FRA-compliant passenger rail vehicles to operate on the general railroad network have arisen regularly over the past two decades. Since a proposed CRT or LRT service on the SGLR could potentially involve the use of non-FRA-compliant passenger vehicles, it is important to understand what is meant by "non-FRA-compliant" passenger rail vehicles.

A non-FRA-compliant passenger vehicle is one that does not fully meet all current FRA safety regulations applicable to passenger rail vehicles operating on the general rail network. The primary area of non-compliance has been the regulations and standards for the crashworthiness and hence strength of passenger car structures, which can have a major bearing on the safety of rail passenger cars in collisions.

There have been substantial changes to the regulatory landscape over the past 15 years. Applicable FRA safety regulation issues and efforts to introduce and use non-FRA-compliant passenger rail vehicles on the general railroad network are discussed in the Technical Report titled *Railroad Operating Agreements: Without Acquisition of Right-of-Way or Lease*.

FRA passenger car standards are relevant for the proposed Lee County service. If Lee County decides to progress the implementation of a CRT service on shared trackage with SGLR with commingled freight and passenger operations, the passenger trainsets would have to meet the FRA passenger car safety standards. A proposed Lee County CRT or LRT service could potentially involve the use of non-FRA-compliant passenger train sets on shared trackage. Temporal separation of passenger and freight operations could be a viable option.

EXHIBIT 7-2 EVALUATION OF PUBLIC ACQUISITION OPTIONS

	ADVANTAGES	DISADVANTAGES	PRIORITY
Voluntary agreements <i>(Option 1)</i>	<p>CSX could grant rights not previously leased to SGLR through a voluntary agreement.</p> <p>SGLR could sub-lease rights it now holds through a voluntary agreement.</p> <p>Exploratory pursuit of voluntary agreements would have modest costs.</p>	<p>Private companies may have little interest in investing effort to explore voluntary agreements.</p> <p>Terms of a voluntary agreement may favor freight more than public transit.</p>	<p><i>High for Seminole Gulf;</i></p> <p><i>Fallback for CSX</i></p>
Acquire ROW from CSX <i>(Option 2)</i>	<p>The public could control the right-of-way should freight service be discontinued.</p> <p>Could resolve liability issues that arise when public transit ROWs are owned by a private entity.</p>	<p>Up-front cost with little immediate payoff.</p>	<p><i>Highest</i></p>
Purchase Seminole Gulf <i>(Option 3)</i>	<p>Should the owners of Seminole Gulf wish to sell the entire company, this arrangement could be attractive to them; possible favorable tax consequences.</p>	<p>Public agencies are not comfortable owning private companies, even for short periods.</p>	<p><i>Fallback</i></p>
Acquire lease from Seminole Gulf <i>(Option 4)</i>	<p>The public could control the lease on the corridor, allowing public transit to be the primary use of the corridor (coexisting with but not subservient to freight).</p>	<p>Seminole Gulf may not wish to sell the lease because of potential interference with its freight operations.</p> <p>Acquisition appears prohibitively expensive.</p>	<p><i>Fallback</i></p>
Acquire both ROW from CSX and lease from Seminole Gulf <i>(Option 5)</i>	<p>The public could control the right-of-way.</p> <p>Could resolve liability issues.</p> <p>Public use could become primary use of corridor.</p>	<p>Up front cost with little immediate payoff.</p> <p>Seminole Gulf may not wish to sell lease.</p> <p>Acquisition appears prohibitively expensive.</p>	<p><i>Lowest</i></p>

<p>Establish regional transit authority <i>(Option 6)</i></p>	<p>Would involve all affected counties in protecting a regional asset.</p>	<p>Other counties may not share Lee County's interest in public transit on the rail corridor.</p> <p>The establishment of a regional transit authority would delay progress in securing the rail corridor for public transit purposes.</p>	<p><i>Medium</i></p>
<p>FDOT to act as regional transit authority <i>(Option 7)</i></p>	<p>Involving a state agency could eliminate the need for a new regional transit authority.</p>	<p>FDOT typically hands off transit operations to regional or local entities.</p>	<p><i>Fallback</i></p>

8. Preservation of the CSX/Seminole Gulf Corridor

The Seminole Gulf rail corridor is presently used solely for moving freight. Local, regional, and state governments should take actions to protect the corridor for this essential purpose, while also pursuing other transportation purposes for which the corridor may be suited.

The Seminole Gulf rail corridor traverses four cities (Bonita Springs, Fort Myers, Punta Gorda, and Arcadia) and four counties (Collier, Lee, Charlotte, and DeSoto). The corridor's value to each of these jurisdictions would be greatly reduced if any part of the corridor is lost.

In-depth research was conducted on corridor preservation efforts around the nation and in the State of Florida. The results of this research were reported in two Technical Reports.

The Technical Report titled *Preservation of Rail Corridors: Experience in Other Communities* researched the experience of various communities in preserving rail corridors, with a focus on reusing rail corridors for high-capacity public transit, including CRT, LRT and BRT, as well as multi-use pathways. This research is summarized in Appendix A of this report.

The Technical Report titled *Regional Corridor Preservation, With Strategies for Southwest Florida* begins with a summary of court rulings that affect efforts to preserve transportation corridors in Florida and continues with an evaluation of current Florida Statutes and other state-level corridor protection programs. Then, potential preservation strategies for the Seminole Gulf rail corridor in Southwest Florida are outlined, including planning/regulatory strategies. Although a number of distinct strategies are identified, many of them could be combined to create a comprehensive corridor management strategy for the entire rail corridor.

8.1 Florida Court Rulings on Corridor Preservation

The protection of future transportation corridors has been a fundamental goal of urban planning for generations. Comprehensive plans back to the 1920s routinely contained thoroughfare plans that identified future road corridors. The 1985 Growth Management Act required all local governments to adopt a map showing future major road corridors.

The legal status of these measures has occasionally been challenged. In 1990, the Florida Supreme Court rejected a state official map statute as unconstitutional.¹ That statute prohibited local governments from issuing development permits within mapped right-of-way once Florida DOT recorded an official map for the state highway system.

In 1993, the Florida Supreme Court considered whether Palm Beach County's thoroughfare plan map was the same as the map of reservation that had been declared unconstitutional by the Florida Supreme Court in the Joint Ventures case. The thoroughfare plan map had been adopted as part of an approved comprehensive plan, under the requirements of the Growth Management Act, and was used to reserve corridors needed for transportation facilities. Any land use activities in the mapped corridors that would impede the development of the future transportation network were prohibited by the comprehensive plan. The Supreme Court

¹ *Joint Ventures v. Dept. of Transportation*, 563 So.2d at 625, 626 (Fla. 1990)

affirmed the constitutionality of the thoroughfare plan map², distinguishing it from the state official map in Joint Ventures for several reasons. The Court noted that providing adequate transportation facilities was necessary to achieving the concurrency requirements of Florida growth management law, avoiding the need to curtail development and thereby benefitting affected property owners. The Court also strongly emphasized the map's foundation in the comprehensive plan.

In light of this Supreme Court ruling, in 1995, the Florida legislature established a new direction for corridor management in Florida by promoting an expanded local role using comprehensive plans, as described in the next section of this report.

8.2 Florida Statutes and Programs Relevant to Corridor Preservation

Florida Statutes and Florida DOT programs related to corridor preservation are summarized in this section of the report.

8.2.1 Corridor Management

The 1995 statutory language authorizes local governments to designate transportation corridors in their comprehensive plans (see F.S. 337.273). Through this statute, Florida's policy emphasis shifted from "corridor protection" to "corridor management," the new term emphasizing compatible development along designated corridors, as opposed to strictly limiting development.

The statute seems to anticipate these transportation corridors becoming future highways, but no provisions disallow the designation of a rail corridor under this statute. Florida DOT has already designated the Seminole Gulf rail corridor as an emerging corridor on the Strategic Intermodal System (SIS), along with certain state highways and most airports.

This statute anticipates direct acquisition of corridor right-of-way. The state's power of eminent domain over active rail corridors is subservient to federal law, so the ultimate effectiveness of this statute for managing a rail corridor is unclear. This statute's actual use for rail corridor protection is apparently untested.

8.2.2 Other Statutory Provisions

The Florida Statutes have several other provisions that could become relevant to rail corridor preservation in Lee County.

FS Section 341.0532 designates eight statewide transportation corridors. Each corridor includes a major state highway or expressway, but the corridor is defined to include railways adjacent to the highway and roadway links to transportation terminals and intermodal service centers. One corridor passes through Southwest Florida: the Central Florida/North-South Corridor, from the state line to Naples and Fort Lauderdale/Miami, including I-75. A new Southwest Florida Corridor could be designated from Punta Gorda to Naples to include U.S. 41 and the Seminole Gulf rail corridor. This would require an amendment to F.S. 341.0532.

² *Palm Beach County v. Wright*, 612 So.2d 709 (Fla. 4th DCA 1993)

Chapter 343 designates four regional transportation authorities (RTA): the South Florida RTA, the Central Florida RTA, the Northwest Florida Transportation Corridor Authority, and the Tampa Bay RTA. Three of these have a commuter rail component. A Southwest Florida regional transportation authority could be created through an amendment to Chapter 343.

FS Section 341.053 calls for an intermodal development plan to connect Florida's airports, seaports, passenger and freight rail systems, and major intermodal connectors to the state's Strategic Intermodal System highway corridors. Major capital investments are anticipated for fixed-guideway transportation systems and multi-modal terminals to move people and goods.

8.2.3 Florida DOT Programs

Florida DOT has formally designated an intermodal transportation system. The Strategic Intermodal System (SIS) is a network that includes the state's largest and most significant highways, rail corridors, airports, seaports, freight rail terminals, passenger rail and intercity bus terminals, and waterways. The Seminole Gulf rail corridor from Arcadia to the Lee/Collier border (but not beyond) is designated as an "emerging" SIS rail corridor.

The Florida Transportation Plan (FTP) is the state's long-range transportation plan, including local, regional, and private partners responsible for transportation planning and funding. The recent 2060 FTP calls for a fundamental change in how and where Florida invests in transportation, including strategies to make Florida's communities more livable and the environment more sustainable. FTP objectives now include:

- Develop and operate a statewide high-speed and intercity passenger rail system connecting all regions of the state and linking to public transportation systems. . . .
- Expand and integrate regional public transit systems in Florida's urban areas.
- Integrate modal infrastructure, technologies, and payment systems to provide seamless connectivity for passenger and freight trips from origin to destination.

Florida DOT is directed by FS 341.041(1) to regularly update a statewide strategic plan for public transit. The most recent plan is *Transit 2020*, a policy plan that does not specifically address rail transit or paratransit, instead focusing on fixed-route urban transit systems.

Florida DOT is required by F.S. 341.302(3) to update a statewide rail system plan every five years. The most recent rail plan, which addresses both passenger and freight service, is the *Florida Rail System Plan*. The *Florida Rail System Plan*, which has a 2009 Policy Element and a 2010 Investment Element, identifies priorities and funding needed to meet statewide needs and to maximize the use of existing facilities and integrate them with other travel modes.

8.3 Corridor Preservation Strategies for Southwest Florida

The remainder of this section of the report describes potential rail corridor preservation strategies for Southwest Florida and evaluates those strategies relative to each other.

8.3.1 Potential Corridor Preservation Strategies

The first planning/regulatory strategy outlined below would use the 1995 provisions of the Florida Statutes regarding transportation corridors, even though the Seminole Gulf rail corridor already exists under unified ownership.

The second, third, and fourth planning/regulatory strategies would use the general authority granted to local governments and Metropolitan Planning Organizations, without relying on any of the 1995 statutory provisions.

Other strategies, termed "enterprise strategies", were addressed in the discussion of potential public acquisition options in the preceding section of this report. They differ from these planning/regulatory strategies in that they would require units of local government to go beyond their traditional planning and regulatory authority and pursue property interests and/or operating agreements in the rail corridor (or in the companies that now control the corridor).

8.3.1.1 Planning/Regulatory Strategy #1: Designate "Transportation Corridor"

Under this strategy, Lee County and the cities of Fort Myers and Bonita Springs would designate in their comprehensive plans the rail corridor as it passes through their jurisdiction as a "transportation corridor", pursuant to F.S. 337.273.

The following local governments outside Lee County could be requested to pursue this same designation: Collier, Charlotte and DeSoto Counties and the cities of Punta Gorda and Arcadia.

The main advantage of this approach may be that it is a simple and statutorily approved method for local governments to jointly signal their desire to see the rail corridor preserved in its entirety. This could be effective if supplemented by additional substantive measures toward preservation. It would not be an effective approach by itself.

8.3.1.2 Planning/Regulatory Strategy #2: Designate Rail Corridor in Comprehensive Plan

Under this strategy, the county and cities would designate the rail corridor in their comprehensive plans without relying on the "transportation corridor" provisions in Florida Statutes.

There are a number of approaches that could be used, either by themselves or in combination:

- Each jurisdiction could declare the rail corridor to be a "Strategic Regional Transportation Corridor." This could be done by reference to the CSX ownership or the CSX/Seminole Gulf lease, or it could be accomplished through a new designation on the Future Land Use Map that precisely maps the extent of the rail corridor as it passes through each jurisdiction.
- Formal policies could be adopted for the rail corridor that would commit each local government to:
 - (1) Explore methods for enhancing freight capability for the corridor and adding capability for commuter rail, light rail, or bus rapid transit.

- (2) Commit to protecting the public interest in the rail corridor during any abandonment proceedings before the U.S. Surface Transportation Board.
 - (3) Support use of federal rails-to-trails authority to railbank the corridor if abandonment ever succeeds, in order to preserve the corridor for possible future rail service.
- Affected local governments could enter into inter-local agreements to adopt designations and policies like those just described and to commit to not changing those designations and policies without advance approval of the other jurisdictions.

8.3.1.3 Planning/Regulatory Strategy #3: Create Vision Plan

Under this strategy, once potential high-capacity transit stations are defined, each local government would commit to creating a vision or master plan for transit-oriented development and redevelopment around each station. Each plan would graphically illustrate the intended physical character of the area, taking into account the expected transit mode, anticipated ridership, existing physical conditions, the potential for intensification and diversification of land uses around the station, and any phasing that would aid in an orderly transformation toward transit-oriented development (TOD).

If park-and-ride facilities are proposed, the master plan would identify whether they are temporary or permanent and ensure that the placement and design of parking facilities would not unnecessarily interfere with transit-oriented development around the station.

These master plans would provide sufficient urban design detail to use as the basis for future rezoning of each station area into form-based zoning districts of varying intensities. These actions would ensure the predictable creation, over time, of a pedestrian-friendly street and block structure and complementary zoning regulations that would carry out the master plan's land use and transportation strategies, while providing superior access to the transit station from the surrounding area. This approach is being recommended by the Florida DOT in its recent guidebook for transit-oriented development, *Florida TOD Guidebook*, which can be found at www.fltod.com/fl_tod_guidebook.htm.

8.3.1.4 Planning / Regulatory Strategy #4: Designate Rail Corridor in LRTP

The Lee County, Charlotte County, and Collier County MPOs could all declare the rail corridor to be a "Strategic Regional Transportation Corridor" in their Long-Range Transportation Plans (LRTP) and could all adopt a series of similar policies that would commit them to the same positions as the affected local governments:

- (1) Explore methods for enhancing freight capability for the corridor and adding capability for commuter rail, light rail, or bus rapid transit.
- (2) Commit to protecting the public interest in the rail corridor during any abandonment proceedings before the U.S. Surface Transportation Board.
- (3) Support use of federal rails-to-trails authority to railbank the corridor if abandonment ever succeeds.

8.3.2 Comparative Evaluation of Corridor Preservation Strategies

The comparative evaluation matrix shown in Exhibit 8-1 addresses the four potential planning/regulatory strategies. The first two strategies were conceived as alternative choices, but each has merit and the two strategies can be combined. The third and fourth strategies should be considered separately because they do not depend on the first two.

EXHIBIT 8-1 EVALUATION OF PRESERVATION STRATEGIES			
	ADVANTAGES	DISADVANTAGES	PRIORITY
Transportation Corridor Designation per 337.273 F.S. <i>(Planning/Regulatory Strategy #1)</i>	Would use existing statutory procedure to identify this corridor as a priority for state acquisition of the right-of-way.	Statute could get repealed, or modified to preclude its use for rail corridors. Statute anticipates eminent domain rather than a negotiated purchase.	<i>Fallback</i>
Local Transportation Corridor Designation <i>(Planning/Regulatory Strategy #2)</i>	Similar to statutory designation, but could be more customized to the local situation. Could be combined with statutory designation to obtain the advantages of both approaches.	May lose legal protections afforded to a statutory designation (unless a local designation also met state requirements).	<i>Highest</i>
Plan for T.O.D. around stations <i>(Planning/Regulatory Strategy #3)</i>	Most station areas are suitable for higher-intensity development, but may be zoned otherwise. Would ensure that land-use planning is directly coordinated with transportation planning.	Station locations are still in conceptual stage. Some stations may be moved, added, or dropped.	<i>Medium</i>
All MPOs designate rail corridor <i>(Planning/Regulatory Strategy #4)</i>	Would indicate support for preservation of the rail corridor by all regional transportation agencies.	None.	<i>High</i>

8.4.3 Composite Recommendations for Rail Corridor Preservation

The Technical Report titled *Regional Corridor Preservation, With Strategies for Southwest Florida* includes a section on "Composite Recommendations for Rail Corridor Preservation". These recommendations have become an integral part of the recommendations for this study. They are, therefore, addressed in the next section of this report.

Also, the Appendix at the end of the *Regional Corridor Preservation* Technical Report provides sample language for policies that could be included in the Future Land Use Element and Transportation Element of the Lee Plan to preserve the Seminole Gulf rail corridor. Of course, similar language could be included in the Comprehensive Plans of other jurisdictions traversed by the Seminole Gulf corridor.

9. Recommendations

9.1 Overview

This report provides the findings and conclusions of the Lee County MPO Rail Feasibility Study.

The comparison of the rail corridor to the I-75 multi-modal envelope as a multi-modal corridor concluded that the Seminole Gulf rail corridor is clearly better for intraurban public transit, while I-75 is better suited for intercity passenger service.

The study concludes that all three modes of passenger service considered, including commuter rail, light rail and bus rapid transit, along with a multi-use pathway, are viable alternatives for the rail corridor. The actual mode of service, along with ridership estimates, station locations, transit support services, detailed cost estimates, vehicle type, funding, implementation and other features, will be subject to more detailed future studies.

The study also concludes that the outlook for expanded and viable freight operations is very uncertain. This is due to forecasts of declining freight tonnage served by rail, the condition of the existing track, and the time-sensitive nature of freight dependent customers. Therefore, the recommended priority is to maintain current freight operations and, in the long term, to continue to explore opportunities to upgrade the tracks and rail beds and promote and market rail service for freight.

Given the uncertainty of freight operations and the long term nature of future passenger service options, the most important recommendation of this study is that the public sector should take steps to preserve the rail corridor for continued and expanded transportation use. The Seminole Gulf rail corridor is unique in that it's multi-jurisdictional, links our most heavily urbanized areas, and passes in close proximity to several major trip generators and activity centers, thus providing a unique opportunity for successful transit service, continued freight service, and multiuse pathways.

Preservation of the corridor can be enhanced through amendments to local comprehensive plans establishing preservation policies, developing contingency plans in the event of any future abandonment proposals, and eventually public acquisition of the CSX leased fee interest putting ownership of the rail corridor right-of-way and the existing Seminole Gulf Railway lease in the hands of the public sector.

There are precedents for the Florida DOT to acquire rail right-of-way for passenger rail projects.

- FDOT bought the CSX corridor that became Tri-Rail. Amtrak and freight trains still use the corridor.
- FDOT bought the FEC corridor that became the southern portion of Metrorail, plus the exclusive busway and trail south of Dadeland.
- FDOT bought the CSX corridor that is becoming SunRail. Amtrak and some freight trains will still use the corridor.

9.2 Recommendations

1. The Florida DOT should purchase the CSXT leased fee interest from where the rail line ends in northern Collier County north to Arcadia.
 - a. The cost of acquiring the leased fee interest in the study area (Lee / Charlotte County line to just south of the Lee / Collier County line) has been estimated to be from approximately \$5.0 to \$15.0 million.
 - b. An assessment of the likely cost to acquire the leased fee interest for the section of the rail line in Charlotte and Desoto Counties (and possibly Sarasota and Manatee Counties from Clark Road to Oneco) should be undertaken. This analysis should be a high priority for the MPO.
 - c. Purchase of the right-of-way by the Florida DOT would not affect continued Seminole Gulf Railway (SGLR) operations under the current lease agreement.
2. The preferred mode of passenger travel should be determined. No specific mode of travel is recommended at this time. However, it has been established that all three major modes of travel (Commuter Rail, Light Rail and Bus Rapid Transit), as well as multi-use pathways, could be implemented in the corridor.
 - a. The MPO should conduct a detailed alternatives analysis that would evaluate the appropriate travel modes, compare the capital and operating costs of each, forecast ridership for each, identify a preferred transit mode, and recommend the timing of implementation of passenger service.
 - b. Preliminary priorities for passenger service should include:
 - 1) Initial Service – North Collier County to Downtown Fort Myers and East Fort Myers
 - 2) Ultimate – Initial Service plus East Fort Myers to North Fort Myers
 - c. Work with Seminole Gulf Railway in exploring arrangements that could integrate public transit with existing and planned freight operations in Lee County.
 - d. LeeTran and the Lee County Transit Task Force should evaluate how a high-capacity transit service along the rail corridor could promote the effectiveness of LeeTran bus service.
3. Freight service should be maintained and improved.
 - a. Current freight operations by SGLR should be maintained and expanded wherever practical.
 - b. After the CSXT interests are acquired, corridor options to upgrade the tracks and beds in a manner consistent with the potential future coexistence of freight and passenger service and a multiuse pathway within the corridor should be considered.
 - c. The Lee County Economic Development Office should work with SGLR to promote and market rail serviced properties for industrial development.
4. The CSXT / Seminole Gulf Railway corridor should be preserved for continued and expanded transportation use through amendments to existing Comprehensive Plans and transportation plans.
 - a. Local, regional and state governments should take actions to protect the corridor for moving freight, while also pursuing other transportation purposes for which the corridor may be suited.
 - b. The MPO should coordinate with local governments to revise their comprehensive plans to include goals, objectives and policies to preserve the rail corridor for future use as a multi-modal corridor.
 - c. The cities of Bonita Springs, Fort Myers, Punta Gorda and Arcadia, (and possibly Sarasota and Bradenton) along with Collier, Lee, Charlotte and DeSoto Counties, (and possibly Sarasota and Manatee Counties), should take the following steps in their comprehensive plans.

- 1) Adopt a policy that formally designates the rail corridor as a strategic regional transportation corridor, using the combined authority of the Community Planning Act (F.S. 163.3161 et seq.) and the specific enabling legislation for transportation corridors (F.S. 337.273).
- 2) To implement this designation, adopt policies that would commit each local government to:
 - i. Encourage Florida DOT to purchase the real estate interests in the entire rail corridor from Arcadia to north Naples from its current owner, CSX Transportation (this action would not affect the existing lease to Seminole Gulf).
 - ii. Explore methods for enhancing freight capability for the corridor and adding capability for commuter rail, light rail, or bus rapid transit.
 - iii. Commit to protecting the public interest in the rail corridor during any abandonment proceedings before the U.S. Surface Transportation Board.
 - iv. Support use of federal rails-to-trails authority to railbank the corridor if the alternative is abandonment of existing and future rail service.
- 3) Designate the rail corridor on their future transportation maps (F.S. 163.3177(6)(b)(1)).
- d. The cities of Bonita Springs and Fort Myers and Collier and Lee Counties should take the following additional steps.
 - 1) Designate the rail corridor on their future land use maps (F.S. 163.3177(6)(a)(1)).
 - 2) Begin the land-use planning process for transit-oriented development (TOD) around future transit stations, beginning with the most probable station locations and extending to other potential stations over time.
5. Each MPO that the Seminole Gulf rail corridor passes through (Collier, Lee, and Charlotte–Punta Gorda) should:
 - a. Strongly urge the Florida DOT to purchase outright the real estate interests of CSXT in the Seminole Gulf rail corridor. Florida DOT is the only transportation entity whose area of authority covers the four counties served by the rail corridor. Purchase of the real estate would not affect the current lease to Seminole Gulf but would allow Florida DOT to replace CSXT as the entity with legal responsibility and become the long-term steward responsible for future uses of the rail corridor.
 - b. Adopt policies and carry out plans that:
 - 1) Explore methods for enhancing freight capability for the corridor and adding capability for commuter rail, light rail, or bus rapid transit.
 - 2) Commit to protecting the public interest in the rail corridor during any abandonment proceedings before the U.S. Surface Transportation Board.
 - 3) Support use of federal rails-to-trails authority to railbank the corridor if the alternative is abandonment of existing and future rail service.
6. The Lee and Collier MPOs and Lee’s Transit Task Force should take these steps:
 - a. Because Seminole Gulf Railway’s lease would be too expensive to purchase, the Lee County MPO should take the lead role in exploring with Seminole Gulf officials other voluntary arrangements that could integrate public transit with existing and planned freight rail operations in Lee County. These discussions should include potential physical configurations within the rail corridor as well as

various legal arrangements including sub-leasing, assignment of the lease with lease-back of freight rights, and renegotiation of the existing lease. The Lee County MPO should also serve as lead agency for further technical analyses required before public transit could be added to the rail corridor.

- b. The Collier County MPO should take the lead in exploring the costs and benefits of extending high-capacity transit that runs along the rail corridor all the way to Immokalee Road into northern Collier County, which is the northern terminus of public transit in Collier County.
 - c. The Lee County Transit Task Force should consider how a high-capacity transit spine along the rail corridor could improve the effectiveness of LeeTran bus service and how the combined system could promote the establishment of an independent transit authority or other entity that could construct and operate the combined system.
7. The MPO should seek legal opinions to address two key issues related to the preservation of the corridor and other issues as they may arise.
- a. The MPO should seek a legal opinion to fully understand all terms of the lease between CSXT and SGLR.
 - b. The MPO should seek legal opinions to establish a contingency plan for protecting the public interest should abandonment of all or a portion of the rail line be proposed.

Appendix A

Experience of Other Communities Reusing Rail Corridors

The Technical Report titled *Preservation of Rail Corridors: Experience in Other Communities* researched the experience of various communities in preserving rail corridors, with a focus on reusing rail corridors for high-capacity public transit, including CRT, LRT and BRT, as well as multi-use pathways. This research is summarized in this appendix.

A.1 Los Angeles

Despite its reputation as the epicenter of car culture, Los Angeles has a dense public transit network that includes every mode, including regular buses, express buses, bus rapid transit, light rail, subway, commuter rail and intercity rail.

The Orange Line in the San Fernando Valley is a new BRT line that was designed to mimic and function within Los Angeles' expanding Metro Rail system. In 1991, the county transit agency purchased the Southern Pacific right-of-way, which runs east-west from Hollywood to Warner Center, with the intent of using it for a Metro Rail line. After years of delay and debate, the Orange Line was constructed as bus rapid transit instead of light rail.



A.2 Santa Fe/Albuquerque

New Mexico's RailRunner Express is a linear commuter rail line that runs 97 miles from Santa Fe through Albuquerque to Belen. Beginning in 2006, diesel-powered trains have served commuters and others traveling to or from Albuquerque or Santa Fe.

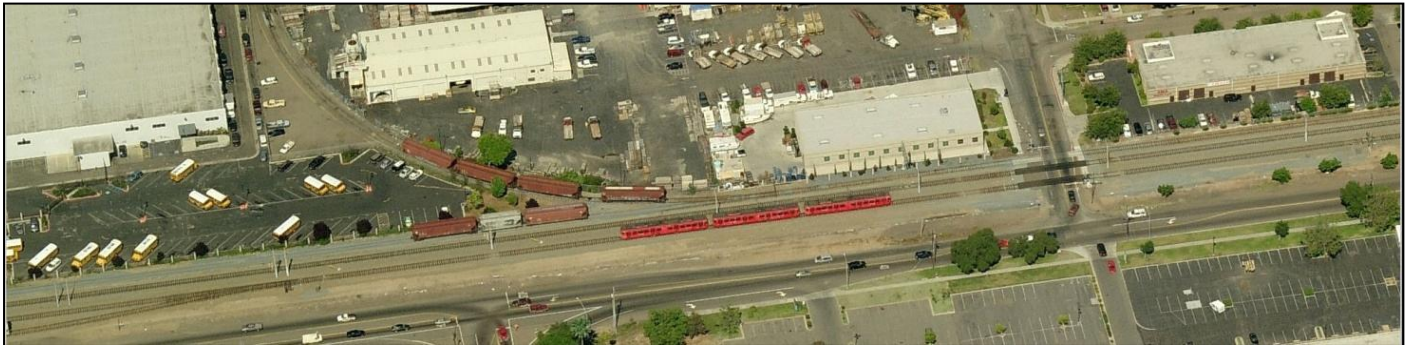
Much of this route uses rail right-of-way purchased from Burlington Northern Santa Fe (BNSF), which continues to run freight trains when they won't interfere with commuter trains. Because RailRunner Express is a commuter rail service, its trains can share the tracks with freight trains, whereas electrified light rail vehicles generally require separate tracks.

A.3 San Diego

The San Diego Trolley (despite the name, a light-rail service) has the sixth highest light-rail ridership in the nation. The San Diego system includes three separate routes, all of which operate primarily on former freight rail lines. Through downtown, the light rail vehicles operate like streetcars.

Two San Diego Trolley routes have a distinguishing characteristic that could be relevant to Southwest Florida: light rail vehicles share tracks with freight trains. This form of track-sharing is normally not permissible under federal regulations, because, unlike commuter rail vehicles, light rail vehicles are not built to the same heavy-duty standards as freight trains. Light rail trains often share a right-of-way with freight trains by using their own tracks, or they operate on an adjoining right-of-way.

The San Diego blue and orange lines, however, share the same tracks. Since passenger service is not provided overnight, freight trains use the tracks during that period. All track-sharing terms have required waivers from the Federal Railroad Administration (FRA).



San Diego Trolley (three bright red vehicles), with freight cars on adjoining sidings.

A.4 Sarasota/Venice

When Seminole Gulf Railway leased the CSX rail corridor from Arcadia to northern Collier County in 1987, the lease included a second rail corridor that ran from Oneco south through Sarasota to Venice.

Seminole Gulf continues to operate freight service from Oneco to Clark Road in southern Sarasota. However, after a decade of planning, the southern end of this rail corridor was sold to Sarasota County for \$11.75 million through a partnership with The Trust for Public Land (TPL). This corridor begins at Culverhouse Nature Park and is nearly 12.5 miles long and 100 feet wide, extending south through the Oscar Scherer State Park to Center Road in Venice.

The multi-use Legacy Trail was constructed on 10 miles of the rail corridor and opened in 2008. Sarasota County had previously purchased and restored the Venice Train Depot, which now serves as a history museum, transit hub, and southern trailhead for the Legacy Trail.

In 2004, the federal Surface Transportation Board allowed Seminole Gulf to “rail bank” the portion of their rail line that became the Legacy Trail. Railbanking is a voluntary agreement between a railroad and a trail agency to use an out-of-service rail corridor as a trail until a railroad might need the corridor again for rail service. Because a railbanked corridor is not considered abandoned, it can be sold, leased or donated to a trail manager. Should a railroad decide to re-establish rail service on a railbanked corridor, the railroad would have to reacquire the right-of-way from the trail agency.

A.5 West Palm Beach/Fort Lauderdale/Miami

Tri-Rail is a commuter rail line linking Miami, Fort Lauderdale, and West Palm Beach. This 72-mile system has 18 stations and includes direct links to Amtrak and to Miami’s Metrorail.

Tri-Rail was begun in 1989 by the Florida Department of Transportation to provide temporary commuter rail service during the widening of I-95. Tri-Rail outlasted its temporary status due to higher than expected ridership and is now operated by the South Florida Regional Transportation Authority (SFRTA).

Tri-Rail currently uses CSX tracks, which it shares with Amtrak passenger trains and CSX freight trains. Florida DOT purchased the railroad corridor from CSX in 1989. Under the terms of the agreement, CSX continued to provide dispatch services and track maintenance. SFRTA will take over both functions after current modernization efforts are complete.

A.6 Orlando Area

FDOT bought the CSX corridor that is becoming SunRail. SunRail is a commuter rail system under construction in the Orlando area. The first phase will connect DeBary to Sand Lake Road in Orange County. The second phase will extend the line north to DeLand and south to Poinciana.

The SunRail system is being financed by the affected counties (Volusia, Seminole, Orange, and Osceola), the city of Orlando, the state, and the federal government. SunRail is expected to be complete by 2016, with the first phase operating as early as 2014.

SunRail will run for 62 miles with 17 stations along the CSX tracks. Many stations will have park-and-ride lots; others will serve downtowns and major hospitals. Service will be primarily during commuting hours. CSX will provide limited freight service at night, but most freight traffic will be rerouted to the west.

Fifty percent of construction funding is to come from a federal transit "New Starts" grant. The local partners are responsible for 25 percent of the cost and another 25 percent is to be paid by the state. This includes the cost of track improvements, construction of train stations, and purchase of rail cars.

Sunrail

Phase 1 - 2014
Phase 2 - 2016



A.7 Miami-Dade County

In the late 1970s, freight rail service was abandoned south of Miami. This service had been provided by the Florida East Coast Railway (FEC) on a corridor that ran immediately parallel to overcrowded US 1. This corridor was then purchased from FEC for public transit purposes.

This corridor now serves several functions. From downtown Miami south to Dadeland, Miami-Dade Transit operates the southern line of Florida's only "heavy rail" local passenger service, now known as Metrorail. This service uses a pair of elevated tracks that allow trains to avoid all grade crossings. A paved multi-use path (M-Path) runs on the ground below. Metrorail connects to Metromover, a free automated "people mover" service that runs throughout downtown Miami, and to Tri-Rail, the commuter rail line that runs to West Palm Beach. In 2012, Metrorail was extended to provide direct service to Miami International Airport.



Metrorail, looking northeast from Dadeland. South Dixie Highway (US 1) is to the far right.

South of Dadeland, Miami-Dade Transit operates seven city bus routes that use an exclusive busway that Florida DOT constructed to Florida City. The paved South Dade Trail continues south to Florida City for walkers and cyclists.

David Plummer & Associates

2149 McGregor Boulevard

Fort Myers, Florida 33901

(239) 332-2617 (Telephone)

(239) 332-2645 (Fax)

www.dplummer.com

