Lee County MPO Rail Feasibility Study
Contract 2012-001

Technical Report

Multi-Use Assessment
I-75 Multi-Modal Envelope vs. Rail Corridor

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1. Report Summary

This report presents the findings and conclusions for Task 2.A in the MPO Scope of Services. Under Task 2.A, the DPA team determined if the long-term upgrade and use of the Seminole Gulf (SGLR) corridor is the best option for providing a multi-use corridor through Lee County into northern Collier County.

As agreed in the Memorandum of Understanding, this planning-level review compared the advantages and disadvantages of using the Seminole Gulf (SGLR) corridor versus the advantages and disadvantages of using the I-75 multi-modal envelope as a multi-use 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 multi-use pathway). From these two options, a preferred intraurban, multi-use corridor was selected.

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.

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

2. With 90-113 feet of right-of-way through most of its length, little additional right-of-way would be needed for improvements in the rail corridor. Some stormwater ponds may 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.

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. (This also applies to the vertical clearance of Slater Road over the rail line adjacent to I-75). 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. The vertical clearance (16.3 feet) is also slightly less than the Plans Preparation Manual standard (16.5 feet) for bridges over roadway.

3. The Florida DOT plans to widen 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. 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.

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-model 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/Orlando to Sarasota/Fort Myers/Naples.

Given these conclusions, it is appropriate to evaluate the Seminole Gulf rail corridor further as the best option for providing a multi-use corridor through Lee County and into northern Collier County. This is being done under other tasks in the MPO Scope of Services.

2. Introduction

This report presents the findings and conclusions for Task 2.A in the MPO Scope of Services. Under Task 2.A, the DPA team determined if the long-term upgrade and use of the Seminole Gulf corridor is the best option for providing a multi-use corridor through Lee County into northern Collier County for intraurban passenger service – passenger service within Lee County and northern Collier County. This is different than interurban service or longer distance service, for example, Tampa/Orlando to Sarasota/Fort Myers/Naples.

It was agreed in the Memorandum of Understanding between the MPO and the DPA team that this effort would concentrate on a comparison of the Seminole Gulf and I-75 corridors for potential intraurban, multi-modal use. Using aerial photos and other data collected in Task 1 of this study, 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.

The general characteristics of each corridor were described, 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

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

This was a planning-level review of the advantages and disadvantages of using the rail corridor versus the I-75 multi-modal envelope. The review does not provide detailed engineering, design, quantities or inventories related to the advantages and disadvantages of the two options. Further details regarding the rail corridor are provided under other tasks in the MPO Scope of Services.

Maps from other sources that are referenced in this report are provided in Appendix A.

3. General Characteristics of Rail and I-75 Corridors

The study area for the Rail Feasibility Study is from the Lee/Charlotte County line to the end of the Seminole Gulf Railway just south of the Lee/Collier County line. The general characteristics of the Seminole Gulf rail corridor and the I-75 multi-modal envelope are provided below.

3.1 Seminole Gulf Railway Corridor

The Seminole Gulf rail corridor is approximately 37 1/2 miles long from the end of the line in northern Collier County to the Lee/Charlotte County line, which is the northern limit of the study area. The rail right-of-way varies in width from 45 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.

Seminole Gulf Railway operates the rail service through a lease agreement with CSX Transportation, which owns the land within the right-of-way.

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

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, rather than through this study.

3.2 I-75 Multi-Modal Envelope

The I-75 corridor is of similar length within the study area. The width of the I-75 right-of-way varies considerably.

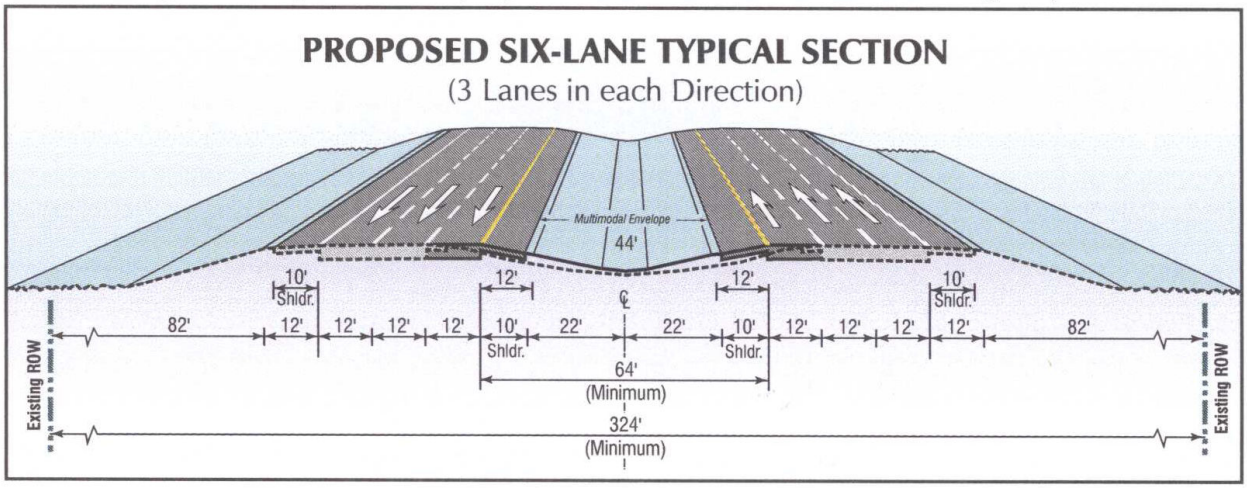
As shown in Exhibits 1.5 and 1.6 in the I-75 Multi-Modal Master Plan (August 1998), the recommended typical sections include a minimum median width of 64 feet, including a transit or multi-modal envelope with a minimum width of 44 feet. Subsequent PD&E Studies and

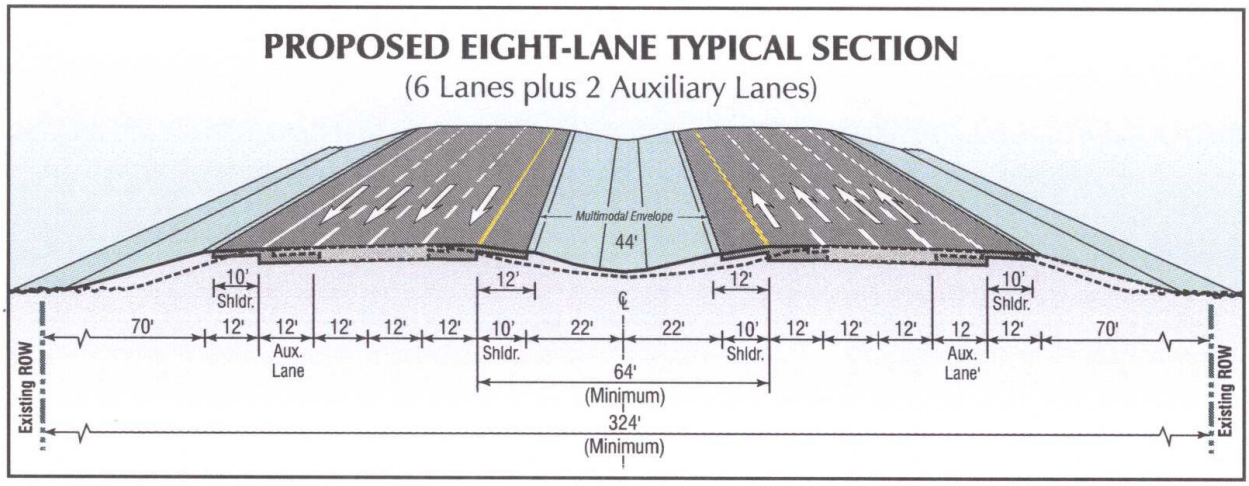
design studies have maintained these minimum widths for the median and multi-modal envelope.

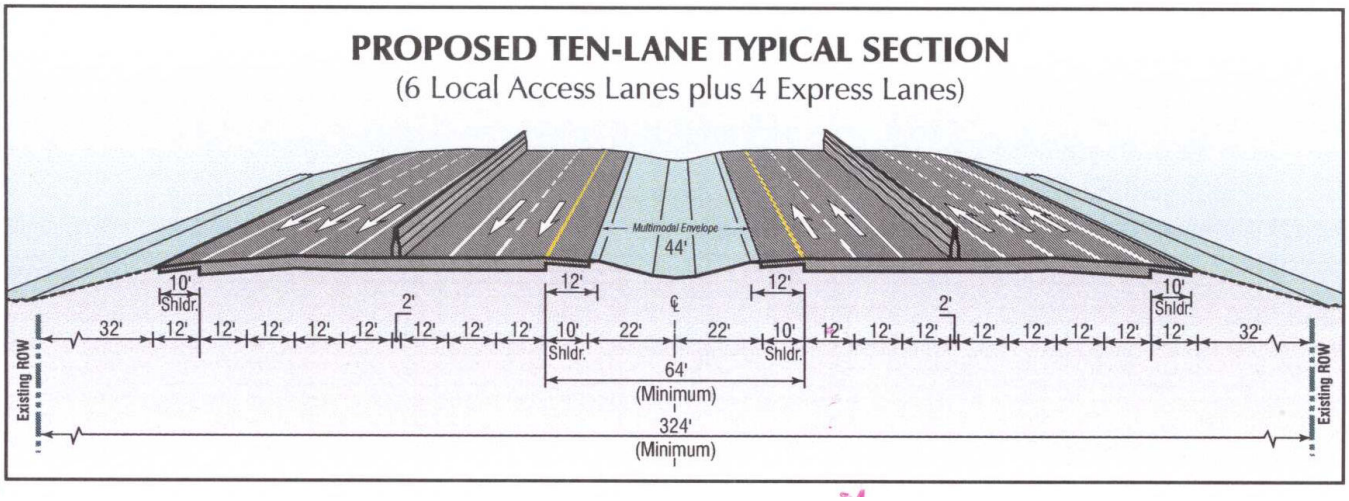
Exhibit 3-1 is an illustration of I-75 cross sections that was distributed by FDOT during an I-75 PD&E Study public workshop in Lee County in October 2002. The illustration shows the minimum median width of 64 feet and minimum multi-modal envelope width of 44 feet for three cross sections: 6 lanes, with 3 lanes in each direction; 6 lanes plus 2 auxiliary lanes; and 6 general use lanes plus 4 express lanes.

Table 2.10.1 in Volume 1 of 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.







Source: FDOT I-75 PD&E Study

dpa	Lee County MPO Rail Feasibility Study	I-75 Multi-Modal Envelope Cross Sections	11575/07A/1112 3-1

4. State Rail Plans

Several State and regional documents were reviewed for this corridor evaluation. The 2002 Southwest Florida Intercity Passenger Rail Program – Tampa to Naples included a proposed Southwest Florida corridor for intercity passenger rail service that utilized the I-75 corridor. However, the more recent 2010 Florida Rail System Plan and the Strategic Intermodal System (SIS) 2040 Multi-Modal Unfunded Needs Plan envision the use of the Seminole Gulf rail corridor, rather than the I-75 corridor, for passenger rail within the study area.

4.1 Southwest Florida Intercity Passenger Rail Program – Tampa to Naples

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 (2002). The study proposed an intercity passenger rail system in the I-75 corridor from the I-4/I-75 junction east of Tampa to Naples.

As explained on page 18 of this study:

> The I-75 alignment was chosen . . . . . over existing freight rail alignments and new construction because the I-75 alignment would require less procurement of right-of-way, would maximize Florida's utilization of existing infrastructure, and would offer better opportunities for higher speeds, increased frequencies, and more reliable service.

Since this system was envisioned for intercity passenger rail service, it would not accommodate intraurban or commuter travel. Only one rail station (near Daniels Parkway) was proposed in Lee County. Other Southwest Florida stations would be in Venice, Port Charlotte and Naples.

The service plan for the Southwest Corridor assumed a robust Tampa-Orlando-Miami service as a base. However, this is unlikely to come to fruition in the foreseeable future.

The Southwest Florida corridor was proposed as a Phase 3 Corridor in Amtrak's Florida Intercity Passenger Rail Service "Vision Plan" (May 2000). The corridor was later incorporated into FDOT's Florida Intercity Passenger Rail "Vision Plan" (August 2006), but as a possible Phase 4 connection.

4.2 The Florida Rail System Plan

The Florida Rail System Plan: Policy Element (March 2009) and The Florida Rail System Plan: Investment Element (December 2010) include several references to 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.

Table 4.10, Detailed Projects and Needs by Railroad, in the Investment Element presents detailed needs as identified by freight stakeholders participating in the 2010 Florida Rail System Plan Update. The table identifies "Passenger Railway in Southwest FL" as a need. The

agency reporting the need is identified as the City of Bonita Springs. The description of this need in Table 4.10 is provided below.

> Rehabilitate Passenger Rail for 95 miles along the CSX line from Old 41 on the Collier-Lee Co. border to Ona, Hardee Co. connecting with CSX line, currently used for freight to Lakeland. This CSX line, proposed for rehab/upgrade to passenger service, passes thru Bonita Springs, Fort Myers, Punta Gorda, Arcadia, to Lakeland. This line should act as a connector with another proposed project reconnecting passenger service between Collier Co. and Tampa, connecting in Punta Gorda with new 8-mile track from Fort Ogden to North Port [locate depot at mile marker 172 on I-75] thru to, Sarasota, picking up TBARTA rail in Sarasota to Tampa. The project between Collier and Hardee Co. is estimated at $70 million. The project between Fort Ogden and Sarasota is estimated at $46 million. All costs include construction of rail, depots, and bridges. All land is rail-banked except for 30-foot ROW of three-quarter-mile for purchase somewhere near mile markers 200-203 on I-75. Land purchase not included in estimate.

This description clearly states that the passenger rail would be "along the CSX line" from Old 41 near the Collier-Lee County line north into Hardee County. So, the passenger rail service would be within the rail corridor through the study area.

The passenger rail needs presented in Table 4.10 were further evaluated using multiple criteria and assigned each need a project priority classification based on its readiness for implementation, coordination with other plans and projects, and potential regional and/or statewide impact. This analysis and project classification will be used by FDOT to guide the Department's future investments and other decisions regarding freight and passenger rail projects.

Table 5.3, Detailed Project Prioritization Criteria, provides the evaluation of each of the proposed performance measures for all 243 projects identified through the rail needs assessment. "Passenger Railway in Southwest FL" is shown as a near-term (1-5 years) project with an estimated cost of $116 million in 2009 dollars. It received a High score for "Supports Intermodal/Multimodal Connectivity". It received Medium scores for "Promotes Transit/TOD", "Reduction in Auto Travel", and "Increase in Passenger Rail Ridership", among other things. However, it received Low scores for "Supported/Endorsed by Relevant Partners", "Status of Application for Funding", "Eligible for Federal Funding", "Eligible for State Funding", and "Statewide Significance".

Table 5.14, Detailed Projects Needs by Priority, also shows the "Passenger Railway in Southwest Florida" project as a near-term (1-5 years) project with an estimated cost of $116 million in 2009 dollars. This project is listed as a Medium priority, with Medium scores for "Funding Status", "State or Regional Significance" and "Eligibility for Federal Grants" and Low scores for other criteria.

Table 4.10 in The Florida Rail System Plan, Investment Plan also includes a number of needed freight-related projects, including:

- Rail Intermodal Yard
- Lee County Intermodal Transfer Terminal
- Seminole Gulf Infrastructure Improvements – Phase 1
- Seminole Gulf Infrastructure Improvements – Phase 2

4.3 SIS 2040 Multi-Modal Unfunded Needs Plan

Passenger rail service utilizing the Seminole Gulf Railway is also included in Florida's Strategic Intermodal System (SIS) 2040 Multi-Modal Unfunded Needs Plan (October 2011). The SIS 2040 Cost Feasible Plan is still under development.

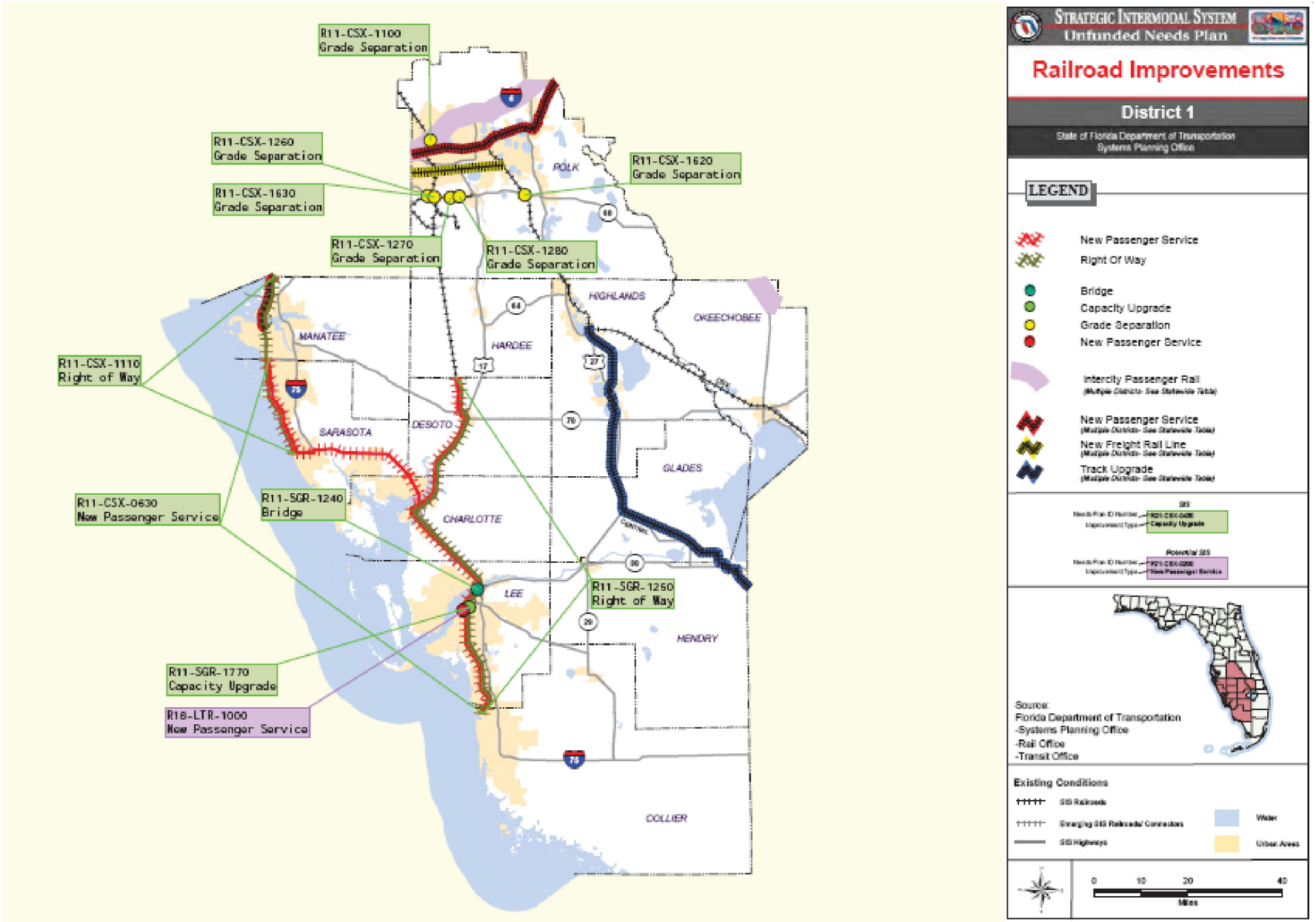
As described on page i of the Appendix to the 2040 Multi-Modal Unfunded Needs Plan:

> The purpose of the Needs Plan is to identify transportation capacity improvements on SIS facilities, that are currently unfunded in the 2010 SIS 1st Five Year Work Program, and not planned in either the 2011 SIS 2nd Five Year Plan or the 2035 SIS Cost Feasible Plan, which combined make up the SIS Funding Strategy. The Needs Plan includes unfunded transportation projects within the context of the statewide and metropolitan planning process, while utilizing the policy guidance from the Florida Transportation Plan and the SIS Strategic Plan. All unfunded transportation projects included in the Needs Plan are unconstrained by cost and funding source or availability. The projects included in the Needs plan may move forward into either local Metropolitan Planning Organization (MPO) Long Range Transportation Plans (LRTP) or the Florida Department of Transportation's (FDOT) SIS Funding Strategy, while other projects may never advance due to high costs, environmental issues, policy direction, etc.

The list of "Rail Improvements – District 1" includes several unfunded improvements needed in Southwest Florida, including New Passenger Service.

R11-SGR-1770	CSX/Seminole Gulf Railway; Capacity Upgrade at Lee County Intermodal Transfer Terminal; Short-Term; $3,150,000.
R11-SGR-1250	CSX/Seminole Gulf Railway; Right of Way; Arcadia, DeSoto County to Lee County; Mid-Term; $40,000,000.
R11-SGR-1240	CSX/Seminole Gulf Railway; Bridge at the Caloosahatchee River; Long-Term; $60,165,000.
R11-CSX-0630	CSX Transportation; New Passenger Service in Southwest Florida; Long-Term; $121,800,000.
R18-LTR-1000	LeeTran Intermodal Rail Connection; New Passenger Service, Proposed Connection between Hub and Rail Mainline; $20,000,000.

These needed improvements are illustrated in the District 1 map titled "Railroad Improvements", which is reprinted as Exhibit 4-1. It's important to note that the Unfunded Needs Plan has the new rail passenger service utilizing the Seminole Gulf Railway corridor, rather than the I-75 corridor, within the study area.


R11-CSX-1100
Grade Separation
R11-CSX-1260
Grade Separation
R11-CSX-1630
Grade Separation
R11-CSX-1620
Grade Separation
R11-CSX-1270
Grade Separation
R11-CSX-1280
Grade Separation
R11-CSX-1110
Right of Way
R11-CSX-0630
New Passenger Service
R11-SGR-1240
Bridge
R11-SGR-1250
Right of Way
R11-SGR-1770
Capacity Upgrade
R18-LTR-1000
New Passenger Service
POLK
HIGHLANDS
OKEECHOBEE
MANATEE
HARDEE
SARASOTA
DESOTO
GLADES
CHARLOTTE
LEE
HENDRY
COLLIER
Strategic Intermodal System
Unfunded Needs Plan
Railroad Improvements
District 1
State of Florida Department of Transportation
Systems Planning Office
LEGEND
New Passenger Service
Right Of Way
Bridge
Capacity Upgrade
Grade Separation
New Passenger Service
Intercity Passenger Rail
New Passenger Service
New Freight Rail Line
Track Upgrade
Source:
Florida Department of Transportation
-Systems Planning Office
-Rail Office
-Transit Office
Existing Conditions
SIS Railroads
Emerging SIS Railroads/ Connectors
SIS Highways
Water
Urban Areas
0
10
20
40
Miles

5. Physical Constraints

The general characteristics of the Seminole Gulf railway and the I-75 multi-modal envelope, including the right-of-way available, were described in Section 2 above. The rail right-of-way varies in width from 144 feet to 55 feet in eastern Fort Myers. Through most of its length, however, it is 90-113 feet wide. The I-75 multi-modal envelope in the median of I-75 has a minimum width of 44 feet throughout it's length.

However, it's important to establish whether or not there are any physical constraints that could limit or impede the use of the rail corridor or I-75 multi-modal envelope for various modes of travel. These could be encroachments into the right-of-way, vertical clearance issues, at-grade crossings, and so on.

Exhibit 5-1 shows major elevated bridge structures in the Seminole Gulf corridor and the I-75 corridor. These are highlighted because they could encroach into the right-of-way, result in vertical clearance issues, or lead to expensive bridge construction or replacement. This exhibit does not include small bridges over creeks, canals or culverts.

5.1 Seminole Gulf Railway Encroachment and Vertical Clearance Issues

Within the study area, there are two locations where a cross street crosses over the Seminole Gulf Railway, Exhibit 5-1,

One is where the newly-constructed Michael G. Rippe Parkway (Metro Parkway Extension) crosses over the railway just north of Alico Road. A review of the design plans for the Metro Parkway Extension indicates that the new over-pass does not encroach into the railway right-of-way, and the over-pass vertical clearance meets Plans Preparation Manual standards.

The other is where Slater Road crosses over both the rail line and I-75 in North Fort Myers. Table 4-3 in the I-75 South Sketch Interstate Plan, Existing Conditions Technical Memorandum (dated January 2010) reports that the Slater Road bridge over I-75 has a vertical clearance of only 16.3 feet. Therefore, the clearance over the adjacent rail line would not meet the Plans Preparation Manual minimum vertical clearance of 23'-6" for Roadway over Railroad.

5.2 I-75 Encroachment and Vertical Clearance Issues

On the other hand, as shown in Exhibit 5-1, there are four existing cross streets that cross over I-75.

- Slater Road (built in 1979)
- Tice Street (built in 1977)
- Estero Parkway (built in 2009)
- East Terry Street (built in 1981)

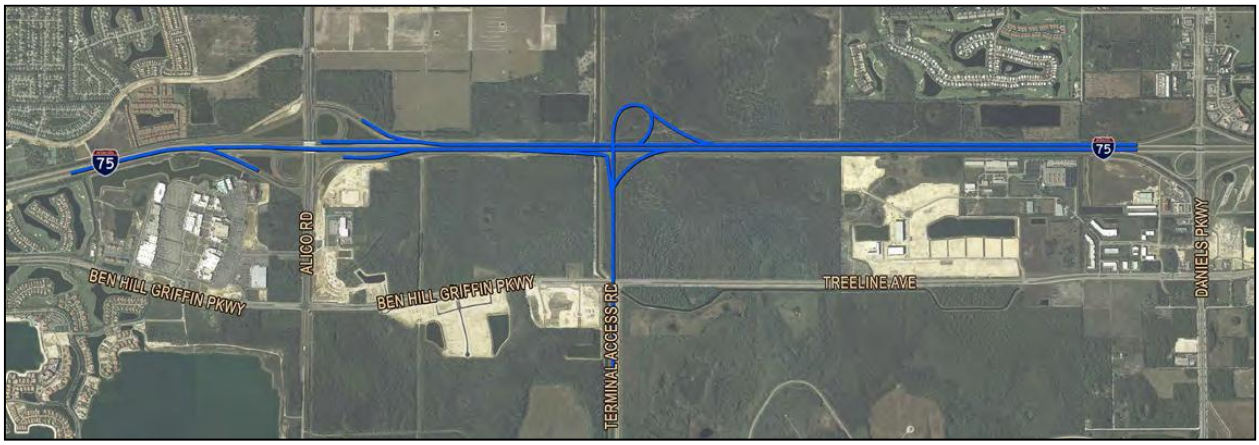
Table 4-3 in the I-75 South Sketch Interstate Plan, Existing Conditions Technical Memorandum (dated January 2010) provides vertical clearances for the three older bridges that cross I-75 at

Slater Road, Tice Street and East Terry Street. (The Estero Parkway bridge is not included in this table, because it was built following the 2008 National Bridge Inventory, which is the source for information in this table.) All three of these bridges have a vertical clearance of 16.3 feet.

The 16.3 foot vertical clearance on these three older bridges is well below the Plans Preparation Manual (PPM) standard of 23.5 feet for Roadway over Railroad and slightly below the PPM standard of 16.5 feet for Roadway over Roadway. The low clearance on these bridges would probably preclude commuter rail transit (CRT), which typically follows freight clearances to accommodate double deck cars, and light rail transit (LRT), which typically has clearances of 16.5–17.5 feet. The bridges would need to be reconstructed to provide greater clearance to accommodate rail passenger service.

The bridge structures for all four of the cross streets include a pier supporting the bridge in the I-75 median and, therefore, in the I-75 multi-modal envelope. As long as they are centered within the envelope, these bridge supports would not preclude use of the I-75 envelope for various modes of travel, but may require that crash walls be constructed to protect the pier and vehicles using the envelope.

In addition, the Florida DOT's I-75 Airport Direct Connect design/build project, which is now underway, will have ramps passing over I-75. The design plans have not yet been completed. However, during a public workshop held on September 25, 2012, the Department's project manager explained that the project will be consistent with the IROX (I-75 Roadway Expansion) project, will not alter the I-75 mainline lanes, and will keep the I-75 multi-modal envelope intact, with the required vertical clearance for the envelope. So, there will be no encroachment or vertical clearance issues.



Finally, the Lee County MPO 2035 Highway Cost Feasible Plan includes a future extension of Hanson Street east to Forum Boulevard, which is east of I-75. This would include an I-75 overpass between SR 82 and Colonial Boulevard. DPA prepared a Preliminary Typical Section (Exhibit 5-2) for the Hanson Street Bridge over I-75 for an earlier corridor study. This preliminary typical section also includes a pier support in the center of the I-75 median and the multi-modal envelope and provides a vertical clearance of 23.5 feet, as required by the FDOT Plans Preparation Manual.

As with the existing over-pass bridges, the pier bridge supports in the median at Hanson Street will need to be considered in planning and designing the use of the I-75 multi-modal envelope for various modes of travel, with appropriate crash walls constructed.

Another form of encroachment in the I-75 multi-modal envelope is the three detention/retention ponds in the I-75 median about 1.5–2.2 miles north of Daniels Parkway. To use the envelope for various modes of travel, the ponds would have to be partially filled in or bridged.

In addition, use of the I-75 envelope through the study area may necessitate redesign of the I-75 storm-water management system and, most likely, the acquisition of additional acreage for detention/retention ponds to accommodate increased storm-water run-off.

Finally, the FDOT Work Program includes a design/build project for widening the I-75 Caloosahatchee River bridge from four lanes to eight lanes, with striping for six lanes, in FY 2013. The width between the northbound and southbound spans of the existing bridge varies from about 70-75 feet.

The I-75 Peace River bridge was widened to the inside. As a result, there is no separation between the northbound and southbound spans and no multi-modal envelope between the spans.

The I-75 Caloosahatchee River bridge is currently being widened to the inside, thus reducing/eliminating the space for the multi-modal envelope.

Furthermore, the curvature of I-75 across the river is not conducive to rail. 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. Due to the grades involved, the transition lengths on the northbound and southbound approaches will be very long. The Department has not yet fully evaluated these transitions and the potential impacts on adjacent interchanges.

5.3 Seminole Gulf Railway Bridges over Caloosahatchee River

The Seminole Gulf Railway passes over a series of long bridges across the Caloosahatchee River, Exhibit 5-1. The bridges across the Caloosahatchee River include a drawbridge, pictured to the right.

Use of the rail line itself for passenger service must consider the condition of these bridges and replacement of the bridges. Recent discussions with rail officials indicated that the movable bridge on the Caloosahatchee River was built in 1978 and is in good condition. The other three bridges across the river need timber piling work. Recent TIGER Grant applications submitted by the Lee County MPO included "the rehabilitation of the railroad bridge over the Caloosahatchee River

including structural improvements and the replacement of depreciated pilings and the painting of the main drawbridge span." These TIGER Grant applications were unsuccessful. As noted previously, the SIS 2040 Multi-Modal Unfunded Needs Plan includes $60,165,000 for the Caloosahatchee River bridge.

Both I-75 and the rail line have issues with the river crossing. However, the I-75 situation appears more difficult and challenging from an engineering and financial standpoint.

5.4 I-75 Bridges over Cross Streets and Caloosahatchee River

As shown in Exhibit 5-1, I-75 passes over several cross streets, including the following:

- SR 78 (Bayshore Road)
- SR 80 (Palm Beach Boulevard)
- Luckett Road
- SR 82 (Dr. Martin Luther King, Jr. Boulevard)
- SR 864 (Colonial Boulevard)
- Daniels Parkway
- Alico Road
- Corkscrew Road
- Bonita Beach Road

Typically, each I-75 over-pass includes a northbound span and a southbound span, with a median in between. In establishing the I-75 multi-modal envelope, the FDOT concluded that a multi-modal system can be constructed within the median and the separation of structures for the full length of I-75. This implies that the use of the I-75 multi-modal envelope for passenger rail, bus lanes or multi-use paths would involve additional bridging in the median over each of these cross streets.

As explained above in Section 5.2, it is uncertain at this time whether the State will widen the I-75 Caloosahatchee River bridge to the inside or the outside. If, as expected, the bridge is widened to the inside, like the I-75 Peace River bridge, there would be no multi-modal envelope between the spans across the Caloosahatchee River. In either case, additional, high cost bridging would be needed to continue the passenger rail, bus lanes or multi-use paths across the river.

5.5 Seminole Gulf Railway At-Grade Crossings

There are over 50 at-grade crossings, where streets cross the Seminole Gulf Railway.

If the rail corridor is used for passenger rail, bus service or multi-use paths, the frequency of trains, buses or other vehicles at these crossings will increase. Consideration will have to be given to improving crossings where needed and maintaining a balance of good operations on both the rail corridor and the cross street.

Of course, there are no at-grade crossings on I-75. So, this is not an issue for use of the I-75 multi-modal envelope.

5.6 Transit Stations in I-75 Median

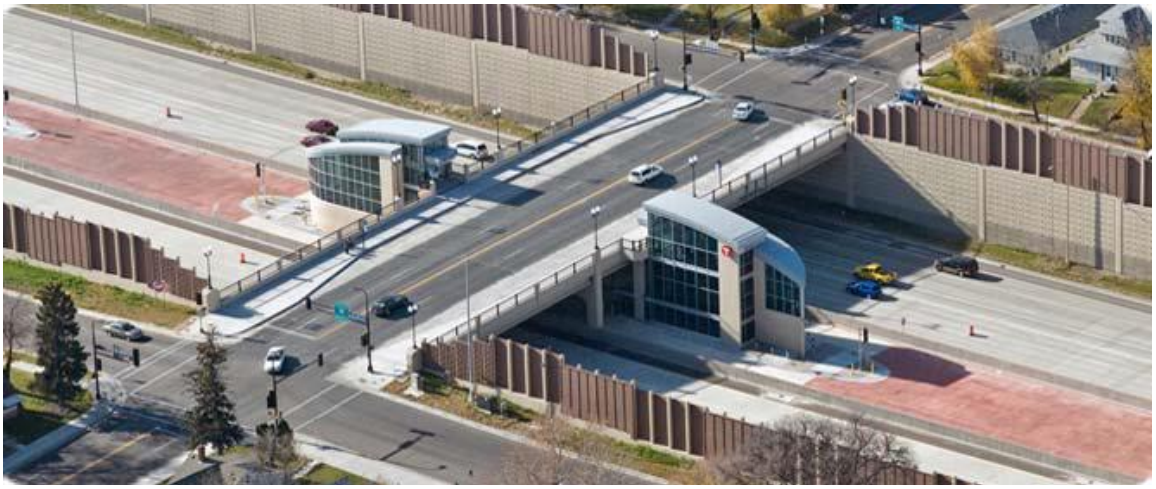
A major constraint with the use of the I-75 multi-modal envelope for either passenger rail service or bus service is the location of transit stations. With the rail passenger service or bus service operating in the I-75 median, the transit station platform will also be located in the median. As explained on page 86 of the Florida State University, Florida Planning and Development Lab document titled Accessing Transit, Design Handbook for Florida Bus Passenger Facilities, Volume II (2008):

> Interstate stations are located within the median when interstate highways are used for rail alignments. Structural sound walls and extended canopies should be provided to ensure security of the stations. Additionally, interstate station platforms are often separated from direct pedestrian access, bus transfer facilities and parking areas, complicating convenient access to the station.

The DPA team researched transit stations in interstate medians, and the first three examples found were BRT or express bus stations located underneath cross street bridges. The lower level served BRT routes on the interstate. The upper level had drop off and pick up points on the cross street bridge.

An example is the I-35W & 46th Street Station in Minneapolis, Minnesota (below), which is part of the MetroTransit system. As described on the MetroTransit website:

> This station is between the northbound and southbound lanes of I-35W, which allows buses to pick up and drop off customers without leaving the freeway. Customers can board express buses on the freeway level or transfer to local buses on the 46th Street bridge. This is the first online station in the Twin Cities region.



Comparable locations in Lee County would be where Slater Road, Tice Street, Estero Parkway and E. Terry Street cross over I-75. But, with the exception of Estero Parkway, these are all, relatively inaccessible, low volume locations that would not facilitate pick-ups and drop-offs for a BRT or passenger rail line using the I-75 multi-modal envelope.

More logical, accessible locations for transit stations would be at major cross streets like Colonial Boulevard and Daniels Parkway. But, they all have major interchanges that would

make a transit station in the median virtually impossible. They are heavily traveled and have been built-out with dual left-turn lanes, turbo "go at all times" lanes, and right-turn lanes beneath the overpass. There would be no place for station features, such as ticket kiosks, drop-off/pick-up points, transfer points, parking areas, and the like. It would be challenging from both an engineering and financial perspective to design a transit station at these interchanges.

With regard to stations between interchanges or cross streets, the space available for station platforms in the median will be constrained. As noted previously, the minimum width of the I-75 median is 64 feet and the multi-modal envelope is 44 feet. While the median width may be greater at some locations, the width will be close to the minimum at many other locations. In either case, the station platform will require a narrow, linear design.

Perhaps even more difficult will be access to the transit station platforms. Access to parking lots, pick up/drop off points, and transfer facilities will be across the mainline or expressway interstate lanes, through pedestrian overpasses, which must meet ADA requirements. According to the Pedestrian and Bicycle Information Center, the cost of pedestrian overpasses/underpasses could range between $750,000 and $4 million each, depending upon site characteristics.

Station design and access may be less of a concern for high speed, intercity rail, where stations are infrequent and widely spaced. For example, the Southwest Florida Intercity Passenger Rail Program – Tampa to Naples recommends only one rail station (near Daniels Parkway) in Lee County. But, this will be a major issue for intraurban commuter rail, light rail or bus service, where stations are more frequent and more closely spaced.

Some BRT routes use interstate shoulders as travel lanes. This would have to be carefully considered, especially at interchanges.

5.7 Transit Stations along Seminole Gulf Railway

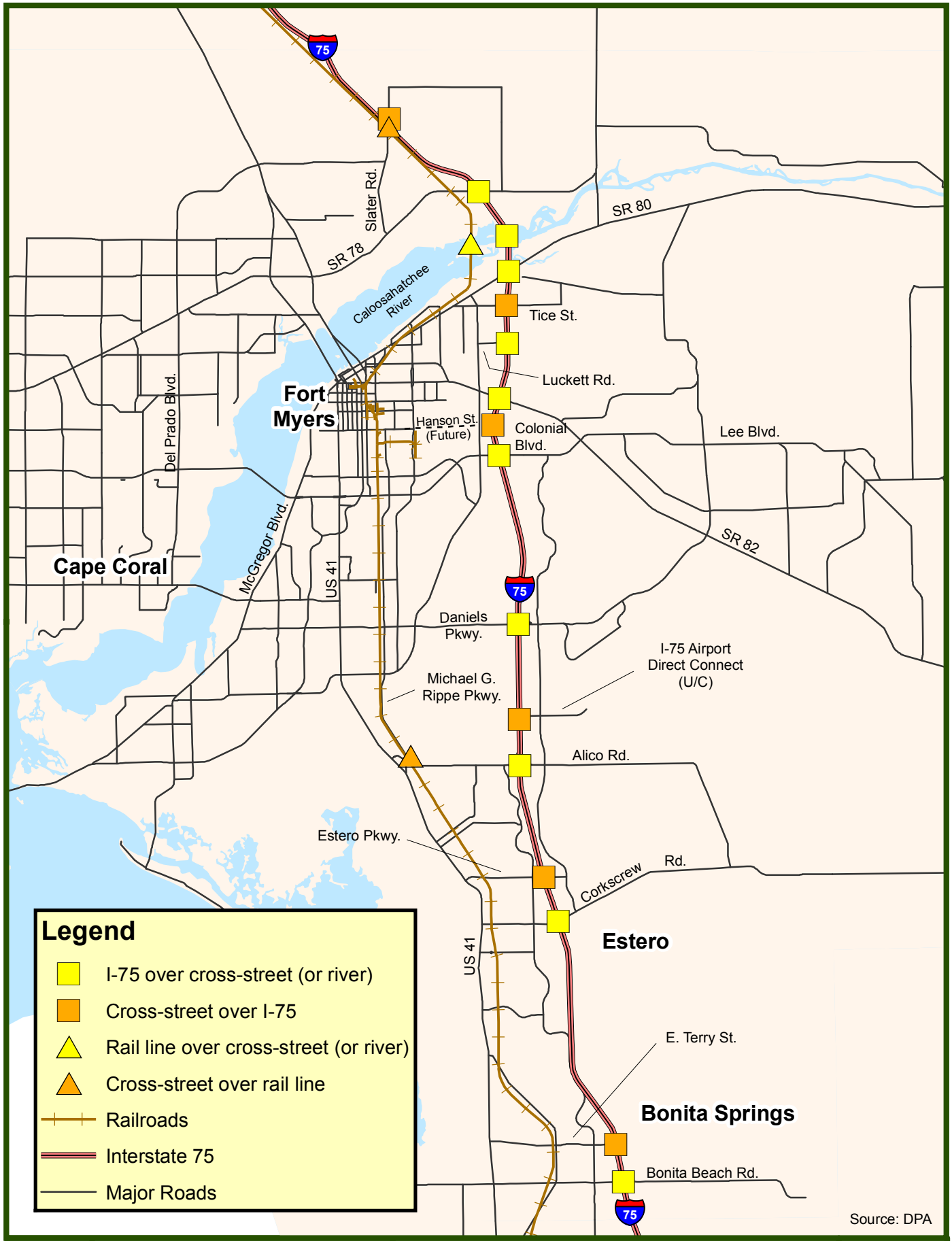
Transit stations along the rail corridor would be much less problematic. Small stations could be built within the existing rail right-of-way. Parking space can also be placed along the railroad right-of-way near the station. Large park-and-ride facilities may require some land acquisition. But, a kiss-and-ride loop may not require much additional land.

5.8 Implementation and Phased Construction

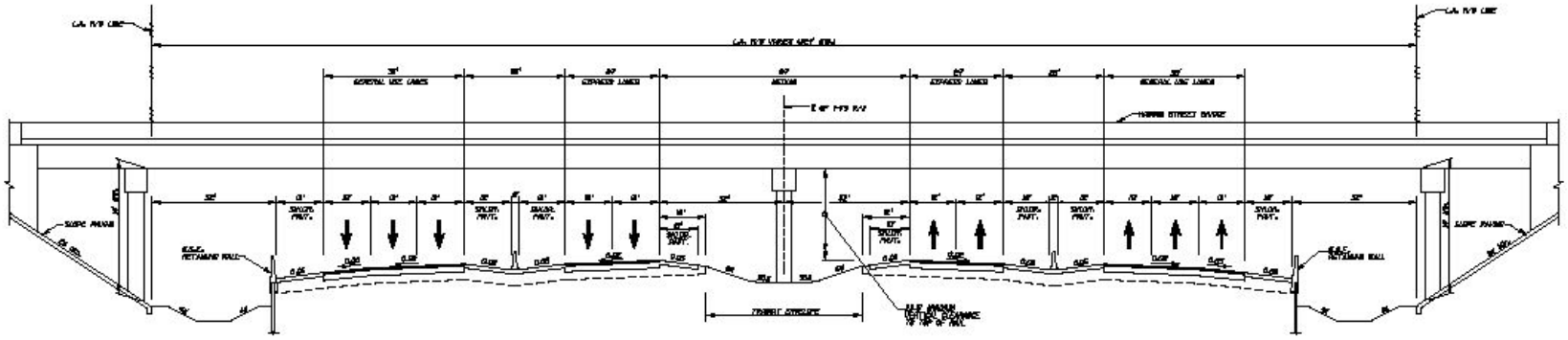
Improvements in the rail corridor would be much easier and less time consuming to implement. Maintenance of traffic would be much more manageable along the rail line, where only cross streets are involved compared to construction in the I-75 median, where mainline interstate traffic must be maintained, along with interchange and cross street traffic.

In addition, 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.

A reasonable approach to staging the improvements and transit service would be to establish several short phases south of the river through the City of Fort Myers and south into northern Collier County, with the river crossing and segments north of the river implemented at a later date. This would get a viable system serving the urban area up and running without having to cross the river in the near future.



dpa	Lee County MPO Rail Feasibility Study	Elevated Bridge Structures	11575/01A/0713 5-1



NOTES:

- THE LOCATION OF THE EXPRESS LANES IS SUBJECT TO CHANGE.
- PLACEMENT OF GUARDRAIL MAY BE REQUIRED IF CLEAR ZONE CRITERIA CANNOT BE MET.
- CRASH WALLS MAY BE REQUIRED FOR THE BRIDGE PIERS IN THE MEDIAN.

dpa	Lee County MPO Rail Feasibility Study	Preliminary Typical Section Hanson Street Bridge Over I-75	11575/09A/1112 5-2

6. Geographic Location

As discussed below, the Seminole Gulf Railway is more centrally located within the Lee County urban area. While the I-75 corridor is within the urban area through most of its length in Lee County, it is often at the eastern edge of the urban area and has frequently defined the eastern edge of the urban area.

6.1 Location within Urbanized Area

Lee County became a Standard Metropolitan Statistical Area (SMSA) after the 1970 Census and has been one of the fastest growing urbanized areas in the country in the following three decades. Despite the recent downturn in the economy, Lee County is expected to double in size from its current population to just over a million residents by year 2035.

As shown on Exhibit 6-1, the Lee County urban area boundary includes Cape Coral, Fort Myers, Lehigh Acres, Estero and Bonita Springs.

6.1.1 Seminole Gulf Railway Corridor

North of the Caloosahatchee River, the Seminole Gulf Railway runs parallel to I-75. After crossing the river approximately one mile west of I-75, the rail line parallels SR 80 (Palm Beach Boulevard) a few blocks to the north until it reaches the eastern edge of Downtown Fort Myers. It then runs parallel to and approximately one mile east of US 41, the primary commercial/business corridor in Lee County, as it passes through Central Fort Myers and South Fort Myers. It continues to run parallel to US 41, but only about a half mile to the east, as it passes through San Carlos Park and Estero. The rail line then runs close to Old 41 as it passes through Bonita Springs into northern Collier County.

This route places the Seminole Gulf rail line close to the center of the City of Fort Myers, South Fort Myers, San Carlos Park, Estero and the City of Bonita Springs.

6.1.2 I-75 Corridor

After crossing the Caloosahatchee River approximately one mile east of the rail line, I-75 runs generally due south into northern Collier County. As it passes through East Fort Myers and South Fort Myers, I-75 is approximately 4-5 miles east of US 41. As it continues south into San Carlos Park and Estero, US 41 and I-75 converge, so that I-75 is generally 2-3 miles east of US 41. In Bonita Springs, it is approximately 4 miles east of US 41.

This route runs along the eastern edge of the urban area north of SR 78, near Luckett Road, near Alico Road, and south of Corkscrew Road.

6.2 Proximity to Major Trip Generators

Exhibit 6-2 shows major trip generators in Lee County. These major trip generators or activity centers represent the potential transit demand, either as points of trip origin or trip destination. There are more major activity centers within close proximity to the Seminole Gulf rail line than to I-75.

6.2.1 Seminole Gulf Railway Corridor

There are several important activity centers that are situated within a half mile of the Seminole Gulf Railway.

- Industrial park adjacent to SGLR rail line near I-75/SR 78 interchange
- U-Save transit terminal
- Terry Park
- City of Fort Myers Downtown
- Harborside Event Center
- Imaginarium (City of Fort Myers)
- Rosa Parks – LeeTran Downtown Terminal (City of Fort Myers)
- City of Palms Park (City of Fort Myers)
- UPS Freight Terminal (City of Fort Myers)
- Lee County Public Education Center (City of Fort Myers)
- Page Field General Aviation Airport (Lee County)
- Chico's national headquarters
- Metro Parkway industrial corridor (City of Fort Myers/Lee County)
- Gulf Coast Hospital and Medical Center (Lee County)
- Lee County Sports Complex
- Arthrex distribution center
- Alico Road industrial corridor at US 41/Metro Parkway Extension (Lee County)
- Koreshan State Park
- Corkscrew Village
- Estero Community Park
- Coconut Point Mall (Estero)
- Bonita Community Health Center (Estero)
- Bonita Springs Industrial Park (City of Bonita Springs)
- Bernwood Business Park/Old 41 industrial corridor (City of Bonita Springs)
- City of Bonita Springs Downtown
- Riverside Park
- Naples Fort Myers Greyhound Track (City of Bonita Springs)

The Harborside Event Center (Downtown Fort Myers), Lee Memorial Hospital (City of Fort Myers), the Edison Mall (City of Fort Myers), the Bell Tower Shops (Lee County) and the Lee County Sports Complex/Hammond Stadium (Lee County) are all within a mile of the Seminole Gulf Railway.

In addition, Lee Plan Map 3I, Public Transit Trip Generators (Appendix A), identifies a number of major commercial/business corridors as public transit trip generators. These include SR 80 (Palm Beach Boulevard) from I-75 to US 41 in Downtown Fort Myers and US 41 from North Fort Myers to San Carlos Park. The Seminole Gulf rail line runs parallel to and in close proximity to both of these public transit trip generators.

Finally, the City of Fort Myers has begun trolley service in Downtown Fort Myers. The trolley could be used to link transit riders in the rail corridor with destinations throughout Downtown Fort Myers.

6.2.2 I-75 Corridor

The major generators along the I-75 corridor are generally suburban activity centers that are within one-half mile of I-75.

- Industrial park adjacent to SGLR rail line near I-75/SR 78 interchange
- Luckett Road/Billy Creek industrial hub (City of Fort Myers)
- Commercial centers near I-75/Colonial Boulevard interchange (City of Fort Myers)
- Jetport Interstate Commerce Park (Lee County)
- Gulf Coast Town Center (Lee County)
- Germain Arena (Estero)
- Miromar Outlet Mall (Estero)
- Bernwood Park of Commerce (City of Bonita Springs)

The Southwest Florida International Airport (Lee County), Florida Gulf Coast University (Lee County), JetBlue Park (Lee County) and the Gateway DRI business park are all within 2-4 miles of I-75.

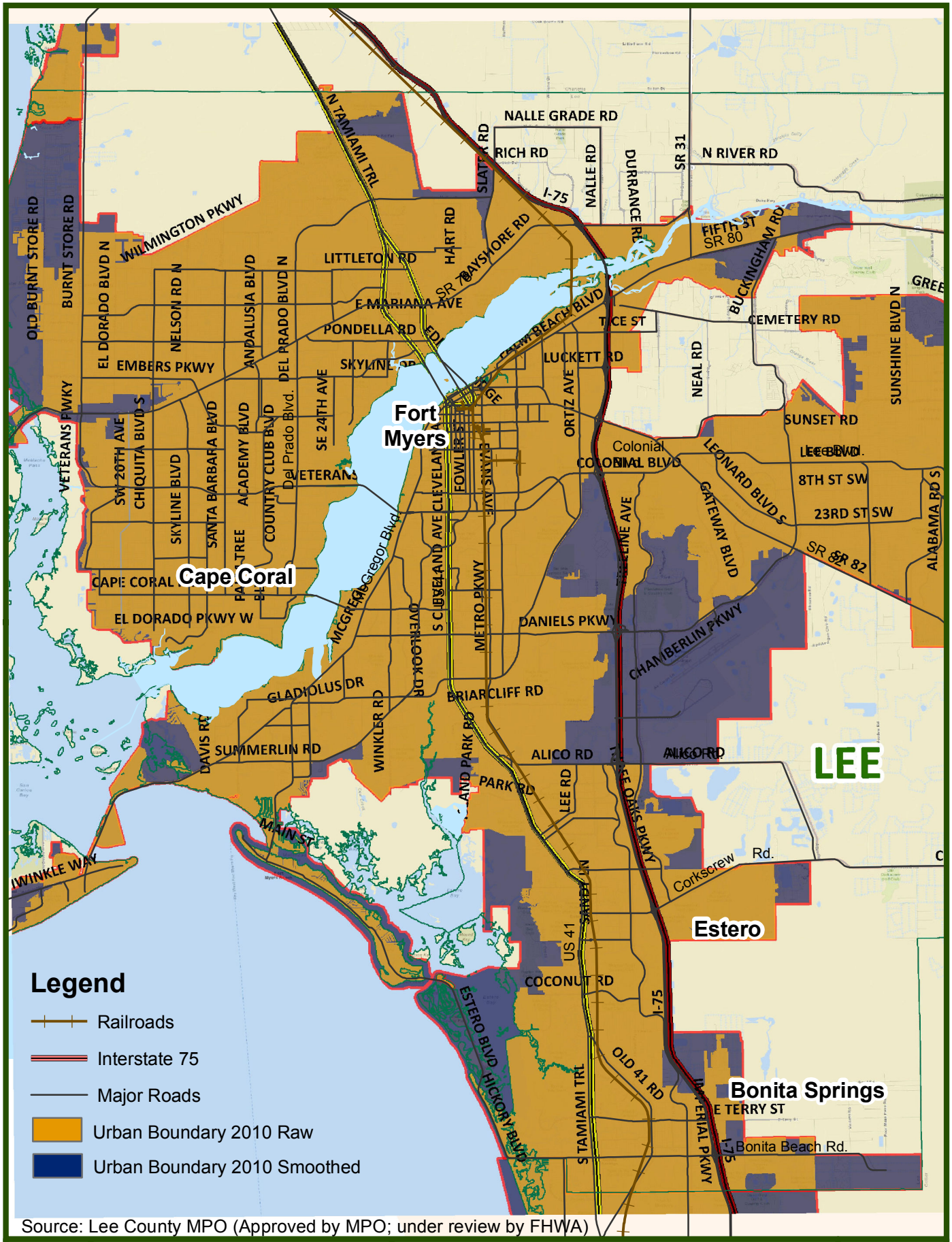
6.3 Projected New Dwelling Units and Employment

As explained in the Technical Report titled Estimates and Projections of Existing and Future Land Uses in Lee County, Spikowski Planning Associates has prepared two maps showing the distributions of existing and new dwelling units and existing and new employees, based on a comparison of traffic analysis zone data for 2007 and 2035 from the Lee County MPO 2035 Long Range Transportation Plan travel model. These are reproduced here in Exhibits 6.3 and 6.4, which also show the locations of the Seminole Gulf rail corridor and I-75.

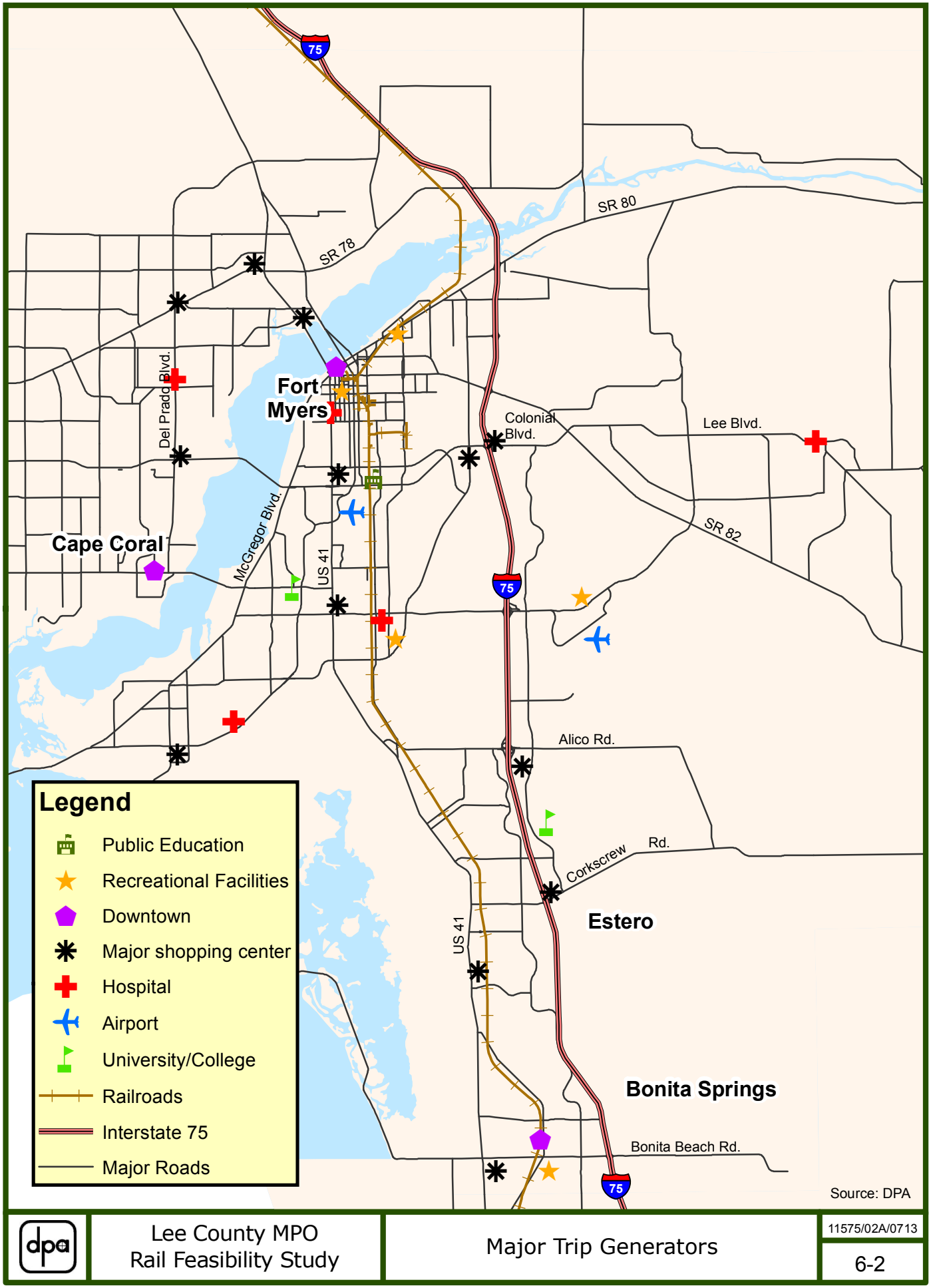
As shown in Exhibit 6-3, existing dwelling units are spread out throughout the urban area, but more heavily west of I-75. New dwelling units are also spread out, but with more east of I-75 and in Cape Coral.

As shown in Exhibit 6-4, the patterns are more pronounced for existing and new employees. Existing employees are more heavily concentrated in the north-south corridor from west of US 41 to east of the Seminole Gulf rail corridor. New employees appear to be scattered throughout the urban area, including the suburbs and Cape Coral. Exhibit 6-5 shows concentrations of jobs in 2010.

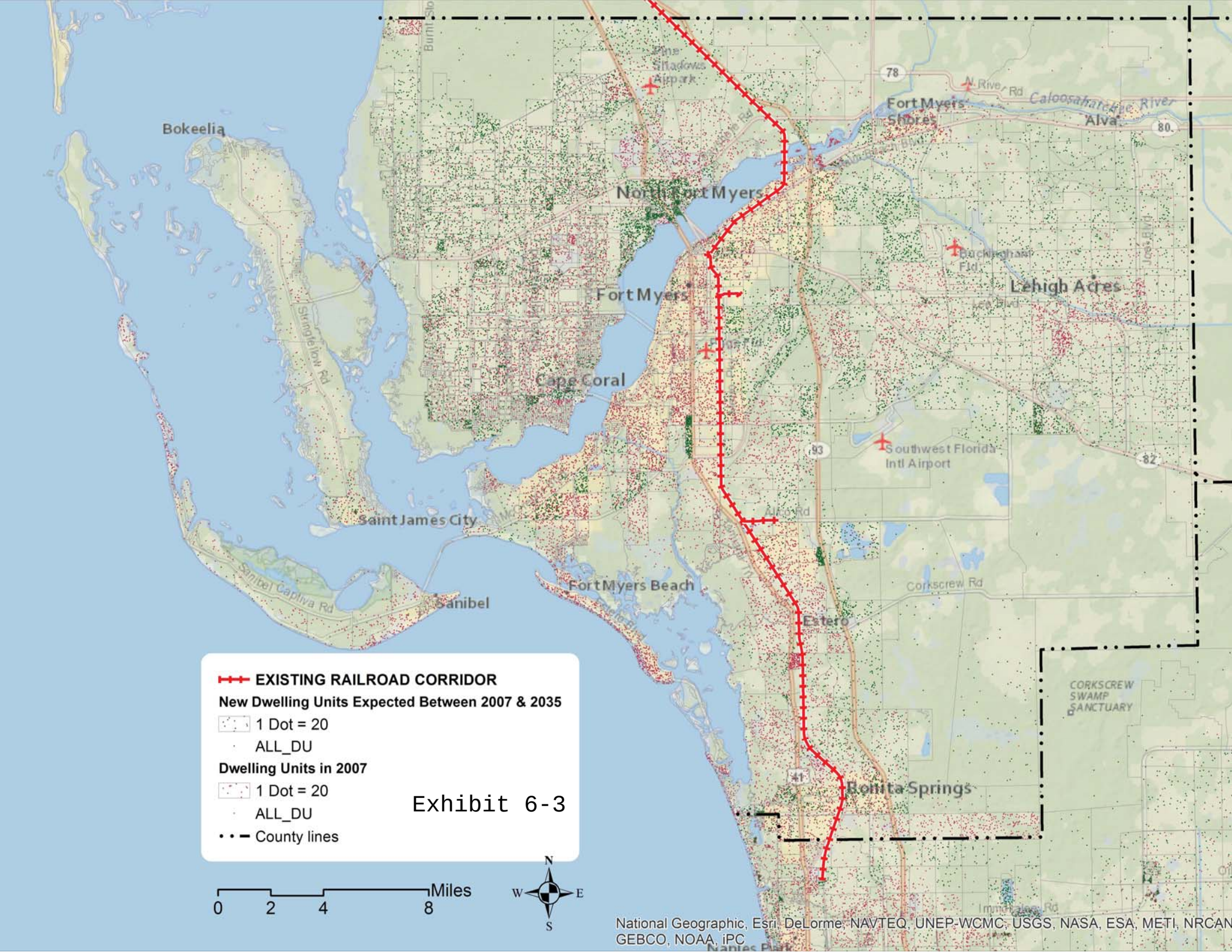
As stated in a recent workshop on Transit Oriented Development sponsored by the Florida DOT, transit ridership is highly correlated to employment. This would suggest that employment patterns are more indicative of potential transit ridership. As noted above, existing employees are more heavily concentrated in the north-south corridor from west of US 41 to east of the Seminole Gulf rail corridor.



dpa	Lee County MPO Rail Feasibility Study	Urban Area Boundary	11575/06B/0713 6-1



dpa	Lee County MPO Rail Feasibility Study	Major Trip Generators	11575/02A/0713 6-2


Bokeelia
Pine Shadows Airport
North Fort Myers
Fort Myers
Fort Myers Shores
Alva
Caloosahatchee River
Lehigh Acres
Buckingham Fld
Cape Coral
Southwest Florida Intl Airport
Saint James City
Fort Myers Beach
Sanibel
Estero
Corkscrew Rd
CORKSCREW SWAMP SANCTUARY
Bonita Springs
Naples Park
EXISTING RAILROAD CORRIDOR
New Dwelling Units Expected Between 2007 & 2035
1 Dot = 20
ALL_DU
Dwelling Units in 2007
1 Dot = 20
ALL_DU
County lines
Exhibit 6-3
Miles
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National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN
GEBCO, NOAA, iPC


EXISTING RAILROAD CORRIDOR
New Employees Expected Between 2007 & 2035
1 Dot = 20
TOT_EMP
Employees in 2007
1 Dot = 20
TOT_EMP
County lines
Exhibit 6-4
Miles
0 2 4 8
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Bokeelia
Pine Shadows Airpark
North Fort Myers
Fort Myers
Cape Coral
Fort Myers Shores
Alva
Buckingham Fld
Lehigh Acres
Southwest Florida Intl Airport
Saint James City
Fort Myers Beach
Sanibel
Estero
Bonita Springs
CORKSCREW SWAMP SANCTUARY
National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN
GEBCO, NOAA, iPC

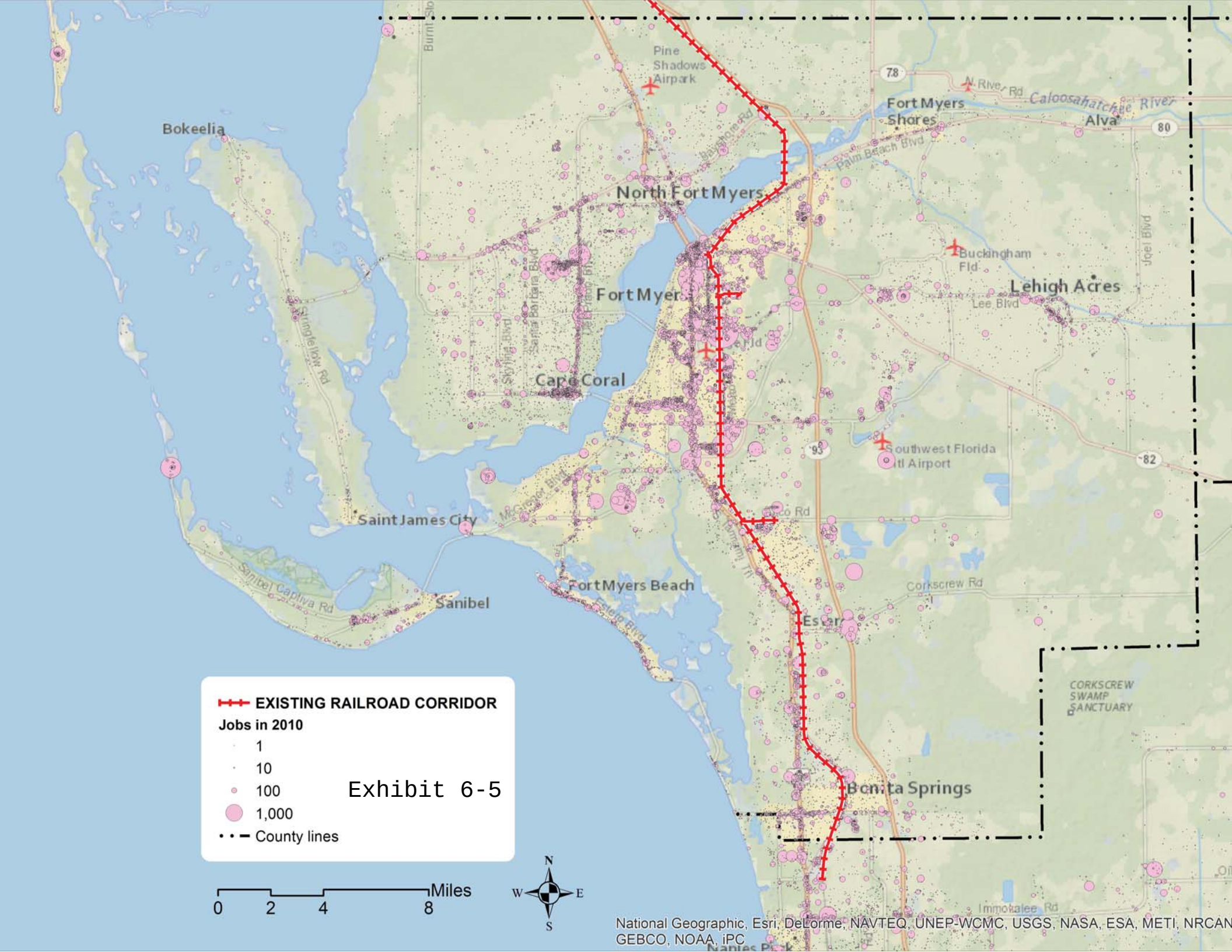
EXISTING RAILROAD CORRIDOR
Jobs in 2010
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Exhibit 6-5
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Pine Shadows Airpark
North Fort Myers
Fort Myers
Cape Coral
Fort Myers Shores
Alva
Caloosahatchee River
Buckingham Fld
Lehigh Acres
Southwest Florida Intl Airport
Saint James City
Fort Myers Beach
Sanibel
Estero
Bonita Springs
CORKSCREW SWAMP SANCTUARY
National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

7. Consistency with Transit Plans

The Seminole Gulf Railway and I-75 corridors were evaluated for consistency with the recently updated LeeTran, MPO and Collier-Lee transit plans. This includes consistency with:

- Transit markets, as per LeeTran TDP
  - Transit Orientation Index (TOI)
  - Population density thresholds
  - Employment density thresholds
- LeeTran TDP, FY 2012-2021, and Vision Plan
- Lee County MPO 2035 LRTP Transit Element
- Lee Bi-County Regional Transportation Network

7.1 Consistency with Transit Markets

When preparing the recent update of the Lee County Transit TDP, LeeTran used various analytical techniques to assess travel demand and mobility needs in Lee County. These are discussed in Section 6 of the Lee County Transit, Transit Development Plan, FY 2012-2021, Final Report (September 2011).

These analytical techniques included the development of a 2010 Transit Orientation Index (TOI) for the traditional transit market and a 2020 Density Threshold Assessment (TDA) for the discretionary transit market. These are discussed in the following sections of this report.

7.1.1 Traditional Market – Transit Orientation Index (TOI)

As explained on page 6-2 of the LeeTran 2012 TDP:

> The traditional transit market refers to population segments that historically have had a higher propensity to use transit and/or are dependent on public transit for their transportation needs. Traditional transit users include the elderly, youth, and households that are low income and/or have no vehicles.

The Transit Orientation Index (TOI) reflects various socio-economic characteristics that indicate a high potential for transit dependency or, in other words, a "captive" transit market. Demographic data from the 2010 Environmental Systems Research Institute were compiled by block group and categorized according to each block group's relative ability to support transit, based on the prevalence of specific characteristics. The characteristics used to produce the index include:

- Population density (persons per square mile)
- Proportion of the population age 60 and over (older adults)
- Proportion of the population under age 16 (youths)
- Proportion of the population below the poverty level
- Proportion of households with no vehicles

Block groups were rated as "Very High," "High," "Medium," or "Low" in their respective levels of transit orientation. "Very High" reflects a very high transit orientation (i.e., a high proportion of transit dependent populations).

The four levels of transit orientation for block groups are shown in Exhibit 7-1, along with the Seminole Gulf rail and I-75 corridors.

The rail corridor passes through or adjacent to several "Medium", "High" or "Very High" transit orientation areas along SR 80 (Palm Beach Boulevard) and US 41. These areas include the Palm Beach Boulevard corridor, Downtown Fort Myers, Central Fort Myers, Page Park, Pine Manor, Jamaica Bay, and parts of Estero and Bonita Springs.

While the I-75 corridor passes adjacent to a few "Medium" transit orientation areas, it does not pass through or adjacent to any "High" or "Very High" transit orientation areas. The only "High" area close to the I-75 corridor is the Florida Gulf Coast University.

7.1.2 Discretionary Market – Density Threshold Assessment (DTA): Population Density

As explained on page 6-1 of the LeeTran 2012 TDP:

> The discretionary market refers to potential riders living in higher density areas of the county that may choose to use transit as a commuting or transportation alternative.

A Density Threshold Assessment (DTA) was conducted based on industry standard relationships to identify those areas of Lee County that will have residential and commercial density levels in 2020 conducive to transit. The DTA utilized Traffic Analysis Zone (TAZ) data obtained from the Lee County MPO.

Three density levels were developed to indicate whether or not an area will have sufficient densities to sustain efficient fixed-route transit operations.

- Very High – Reflects very high population or employment densities that may be able to support higher levels of transit investment than areas that meet the minimum or high density thresholds (i.e., premium transit services, etc.)

- High – Reflects high population or employment densities that may be able to support higher levels of transit investment than areas that meet only the minimum density threshold (i.e., increased frequencies, express bus)

- Minimum – Reflects minimum population or employment densities to consider basic fixed-route transit services (i.e., fixed-route bus service)

The density thresholds for each of the categories are provided in the table below, which was reprinted from page 6-2 of the TDP Final Report.

Table 6-1: Transit Service Density Threshold

Transit Mode	Population Density Threshold[1]	Employment Density Threshold[2]
Minimum	4.5 – 5 dwelling units/acre	4 employees/acre
High	6-7 dwelling units/acre	5-6 employees/acre
Very High	>=8 dwelling units/acre	>=7 employees/acre

[1] TR8, National Research Council, TCRP Report 16, Volume 1 (1996). Transit and Land Use Form, November 2002, MTC Resolution 3434 TOD Policy for Regional Transit Expansion Project.

[2] Based on a review of research on the relationship between transit technology and employment densities.

Source: Lee Tran TDP

Exhibit 7-2 shows the density thresholds for Population Density, along with the Seminole Gulf rail and I-75 corridors. Generally, there are more "High" and "Medium" population density areas close to the rail corridor than to the I-75 corridor. These include Central Fort Myers, Pine Manor and parts of San Carlos Park and Imperial Harbor in Bonita Springs. An exception to this is the "High" population density area in the northeast quadrant of the I-75/SR 80 interchange.

Exhibit 7-3 shows the density thresholds for Employment Density, along with the Seminole Gulf rail and I-75 corridors. There are several "Very High" density employment areas along the rail corridor, including the Downtown Fort Myers, Central Fort Myers, the US 41 commercial corridor, the Metro Parkway industrial corridor, the Six Mile Cypress commercial corridor, the Old US Highway 41 industrial corridor north of Alico Road, and the Old 41 industrial corridor in Bonita Springs.

A couple of "Very High" employment density areas along I-75 are in the northwest quadrant of the I-75/SR 80 interchange and north of Luckett Road on the west side of I-75.

7.2 Consistency with LeeTran TDP and Vision Plan

LeeTran 2012 TDP Map 9-3 (Appendix A) shows recommended premium bus routes and park-and-ride facilities. This map shows that LeeTran's plans for future premium bus routes and facilities are centrally located near the Seminole Gulf rail corridor.

Three premium bus routes run generally parallel to and close to the Seminole Gulf rail corridor.

- US 41 Bus Rapid Transit (BRT) route along US 41 between Six Mile Cypress Parkway and the Rosa Parks Transportation Center in Downtown Fort Myers
- Charlotte Express bus route along SR 80 (Palm Beach Boulevard) from I-75 to the Rosa Parks Transportation Center
- Collier Connector express route along US 41, Bonita Beach Road and Old 41 from Collier County to the Coconut Point town center.

There are no premium bus routes on I-75, except for the continuation of the Charlotte Express route from SR 80 (Palm Beach Boulevard) into Charlotte County.

This map also shows five LeeTran hubs or park-and-ride facilities along the US 41 corridor, within a half mile of the rail line.

- Rosa Parks Transportation Center in Downtown Fort Myers
- Edison Mall transfer station
- Bell Tower Shops transfer station
- LeeTran administrative office near Page Field
- Coconut Point park-and-ride facility

While it's not shown on this map, LeeTran will also soon be constructing a new maintenance and operations facility very close to the rail line south of Hanson Street in Fort Myers.

There are no LeeTran hubs or park-and-ride lots shown near the I-75 corridor.

LeeTran Vision Plan Map 3-1 (Appendix A) shows the expansion of some premium services along the US 41 and SR 80 corridors near the rail line. The Lee-Collier LinC express route is shown as continuing north to Six Mile Cypress Parkway. The Vision Plan also shows a Palm Beach BRT route, rather than an express route, along SR 80 (Palm Beach Boulevard) from I-75 to the Rosa Parks Transportation Center.

There are no BRT or Express routes along the I-75 corridor, except the continuation of the Charlotte Express route from SR 80 (Palm Beach Boulevard) into Charlotte County. However, the Vision Plan includes park-and-ride facilities near two I-75 interchanges, at the I-75/SR 78 interchange and at the I-75/Colonial Boulevard interchange.

7.3 Consistency with Lee County MPO 2035 LRTP Transit Element

Figure 10 (Appendix A) in the Lee County MPO 2035 LRTP Transit Element shows the 2035 Lee County Transit Needs Network. There are many similarities between the Lee Tran TDP and Vision Plan and the MPO Transit Element Needs Network. However, there are also some significant differences.

- The US 41 BRT route extends along US 41 from North Tamiami Trail south to Sanibel Boulevard in San Carlos Park. The BRT route then shifts over to the Seminole Gulf rail line and runs along the rail line from Sanibel Boulevard south into Collier County, where it shifts back to US 41 via Old 41. The southern portion of the route in Lee County is described as a "Busway in existing CSX Corridor".
- Express bus service is shown on I-75 from SR 82 south into Collier County.
- While the TDP shows the Charlotte Express has service from SR 80 north into Charlotte County on I-75, the MPO plan shows this service on US 41.
- The Palm Beach BRT route extends from Monroe Street east to Kingston Drive. The rest of the corridor is Express Bus to Buckingham Road.

Generally, the same hubs are shown along the US 41 corridor, as shown in the LeeTran TDP and Vision Plan. However, there are two differences:

- The Coconut Point facility is shown as a transfer center, rather than a park-and-ride facility.
- A park-and-ride facility is shown in San Carlos Park, near where the BRT line shifts from US 41 to the Seminole Gulf rail line.

Figure 10 shows "Proposed Transit Routes" along I-75 from SR 82 south into Collier County. Figure 10 does not show the park-and-ride facilities near the I-75/SR 78 and I-75/Colonial

Boulevard interchanges that are shown in the LeeTran Vision Plan. But, it shows park-and-ride facilities near the I-75/Corkscrew Road and I-75/Bonita Beach Road interchanges, as well as a park-and-ride facility near the Daniels Parkway/Treeline Avenue intersection, about a half mile east of I-75.

7.4 Consistency with Collier County MPO 2035 LRTP Transit Element

Figure 8-1 (Appendix A) in the Collier County MPO 2035 LRTP Multi-Modal Transportation Element shows the 2035 Collier County Transit Needs Network. There are many similarities between the Collier County Transit Needs Network and the Lee County Transit Needs Network. Most importantly, the Collier County Transit Needs Network also shows a BRT line running along the Seminole Gulf rail line through South Lee County into northern Collier County.

- The US 41 BRT route in Lee County runs along the Seminole Gulf rail line from Sanibel Boulevard through Bonita Springs and south into Collier County, where it shifts back to US 41 via Old 41.

Figure 8-1 also shows a "New Bus Route by 2020" along I-75 through South Lee County into Collier County and south to CR 951. This is similar to the "Proposed Transit Routes" along I-75 described in the preceding section of this report.

As shown in Figure 8-1, the Collier County Transit Needs Network does not show any Transit Centers or hubs in northern Collier County. But, it does show four Transit Park and Ride Lots:

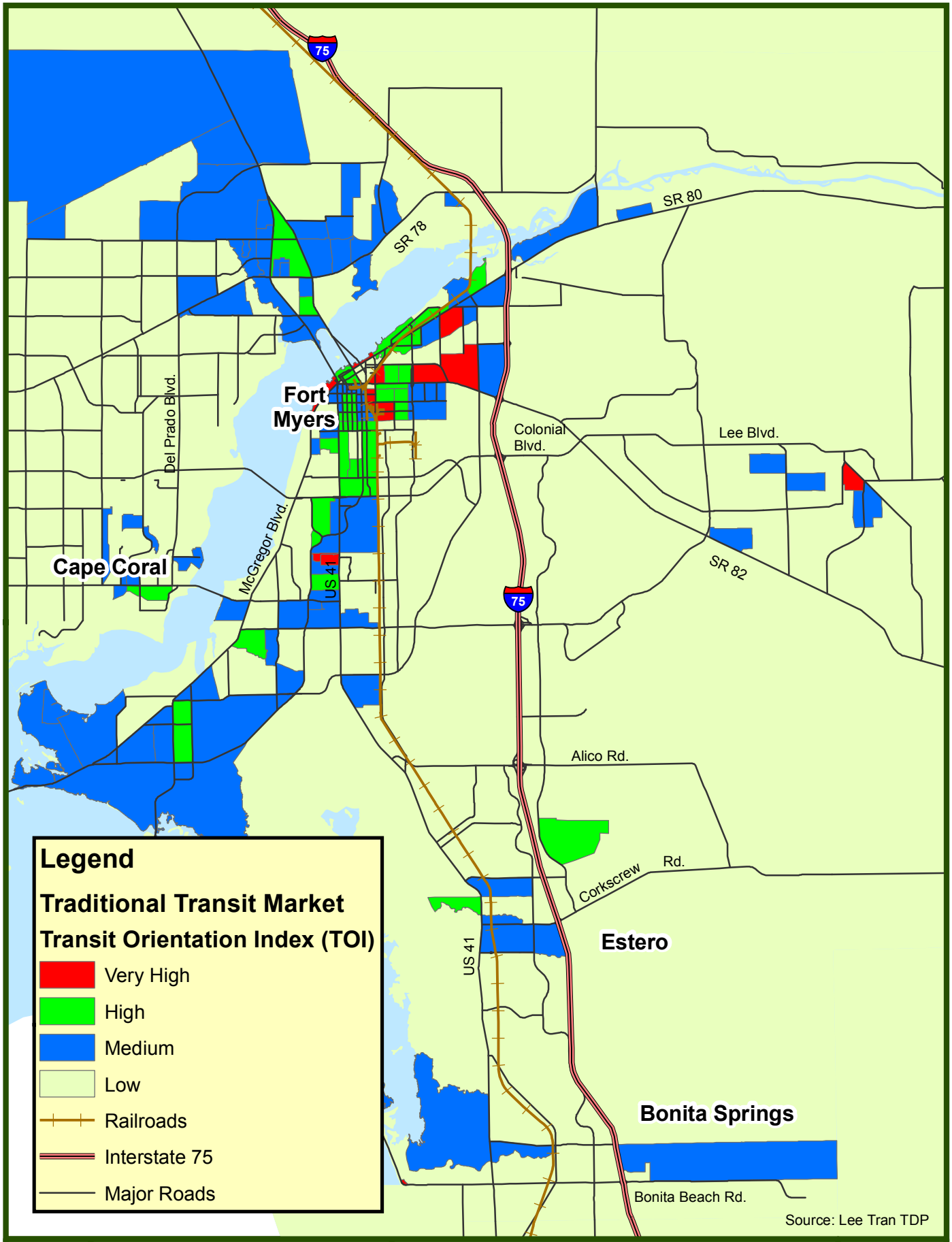
- Lee Connector I-75 Park and Ride near I-75/Bonita Beach Road interchange (in Lee County)
- Beach Park and Ride off Bluebill Avenue
- Lee Connector US 41 Park and Ride near US 41/Immokalee Road intersection
- Collier Boulevard Park and Ride near Immokalee Road/Collier Boulevard intersection

7.5 Consistency with Collier-Lee Bi-County Regional Transportation Network

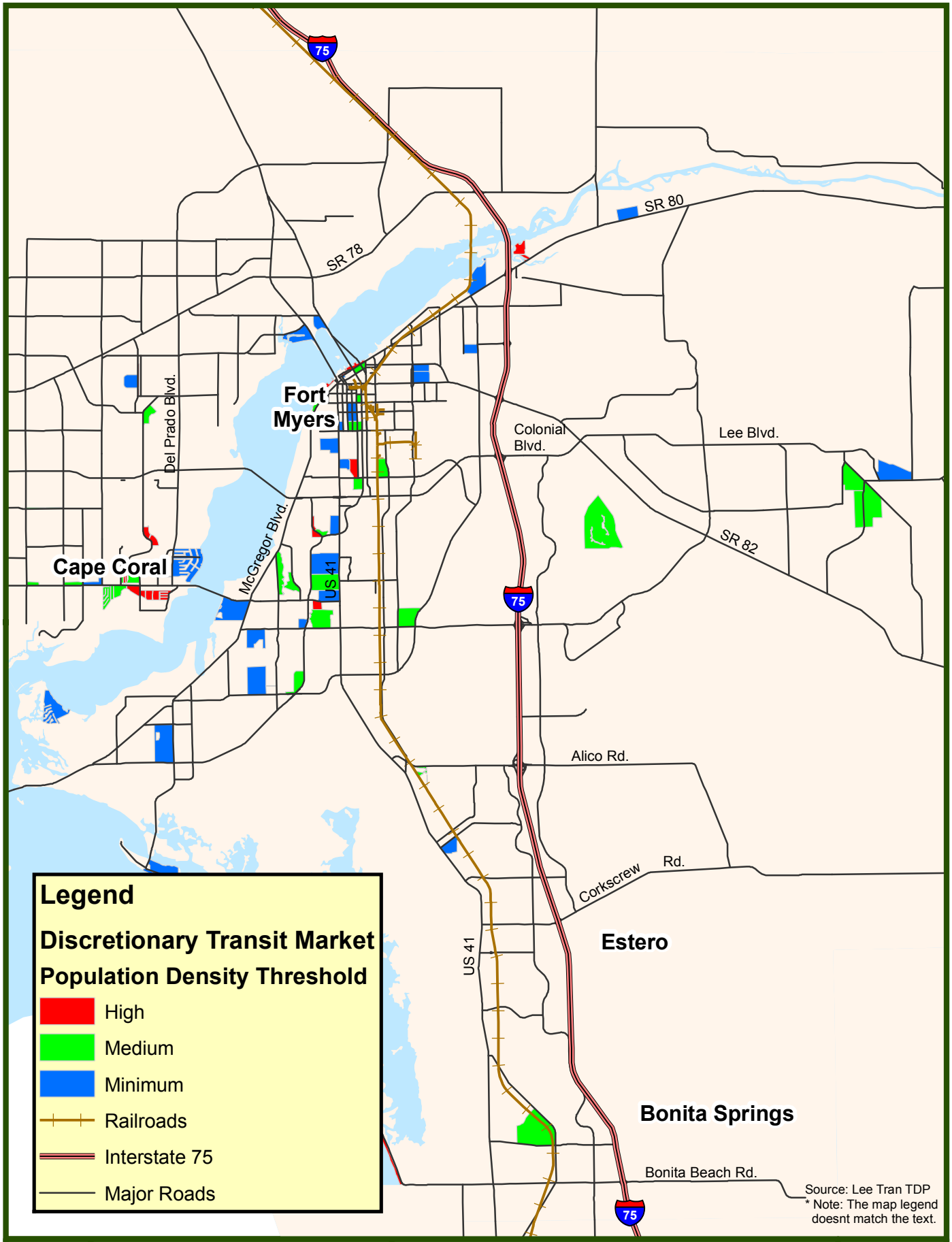
The bi-county Regional Transportation Network was adopted on October 21, 2011. The map identifies one network that is common to both highway and transit modes.

Regional Transportation Network Criteria were also adopted to establish criteria for the inclusion of facilities in this network. These criteria refer to existing and proposed transit service and automatically include all premium services identified in the MPO Plan.

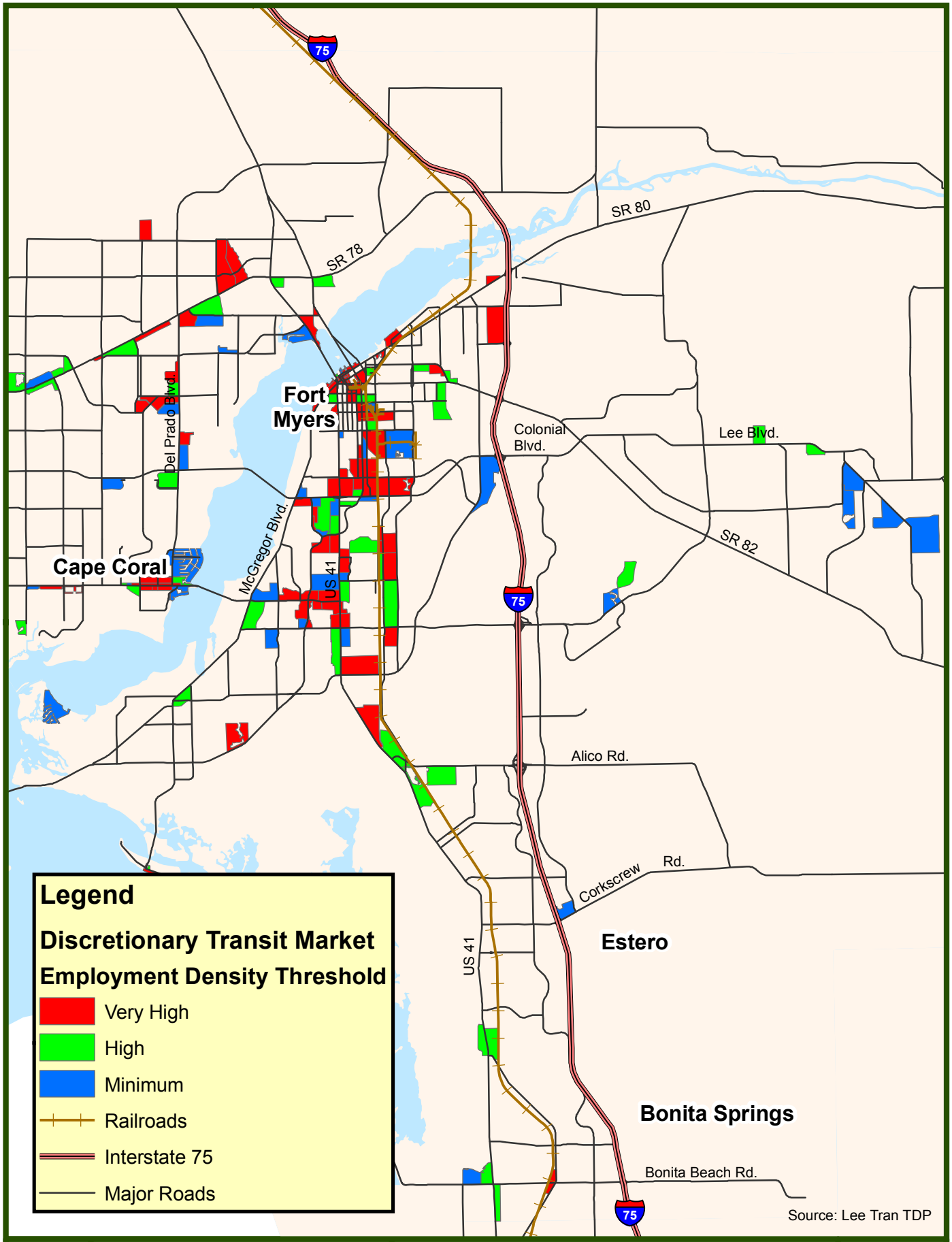
Both the US 41 corridor and I-75 corridor are included in the Network as Existing Regional Facilities. The Metro Parkway / Michael G. Rippe Parkway corridor is included as an Existing Regional Facility from SR 82 to Six Mile Cypress Parkway and as a Programmed Regional Facility from Six Mile Cypress Parkway to Alico Road. Of course, this corridor closely parallels the rail line. In Bonita Springs, the Old 41 corridor is shown as an Existing Regional Facility. This also closely parallels the rail line.



dpa	Lee County MPO Rail Feasibility Study	2010 Transit Orientation Index	11575/03A/0713 7-1



dpa	Lee County MPO Rail Feasibility Study	2020 Density Threshold Assessment: Population Density	11575/04A/0713 7-2



dpa	Lee County MPO Rail Feasibility Study	2020 Density Threshold Assessment: Employment Density	11575/05A/0713 7-3

8. Consistency with Bicycle-Pedestrian Plans

The Seminole Gulf Railway and I-75 corridors were evaluated for consistency with the various MPO, Lee County and City bicycle and pedestrian plans, in terms of possible use for multi-use pathways. Although there aren't proposed short-term improvements utilizing either the rail line or I-75 corridor, there are a number of documents that propose long-term use of the rail line for an off-road trail.

8.1 Consistency with Lee County MPO Bicycle and Pedestrian Plans

There is a statement in the Executive Summary of the Lee County MPO Bicycle & Pedestrian Master Plan regarding possible use of the Seminole Gulf rail line for a cross-county, off-road trail:

> Rails with Trails Opportunity – The Seminole Rail Line right-of-way presents an opportunity to develop a cross-county, off-road trail that could provide significant recreation, tourism and economic benefits. However, a Rails with Trails projects requires significant planning, cooperation, and funding to become a reality.

This is discussed further on page 75 of the Master Plan:

> In addition to demonstration projects, other non-gap needs were identified. These needs include **. . . . . .** the opportunity for a cross-county "Rails with Trails" project that would utilize existing Seminole Rail Line ROW without impeding the potential for future light rail and Bus Rapid Transit . . . . . .

Also, Exhibit VV (Appendix A) in the Master Plan identifies the Primary and Secondary Bicycle and Pedestrian Network. This map shows the Seminole Gulf rail line as a facility in the Primary Network, which runs from the Charlotte County line south to the Collier County line. However, there are no improvements within the rail corridor listed as a Pedestrian Priority Need (Exhibit ZZ) or a Bicycle Priority Need (Exhibit AAA). There are no plans for bicycle or pedestrian facilities in the I-75 corridor, which is a limited access freeway.

The Lee County Bicycle Facilities Map (Appendix A) is currently being updated with a 3rd Edition. While this map shows facilities, such as the John Yarbrough Linear Park, which is adjacent to the rail line from Colonial Boulevard to Six Mile Cypress Parkway, the draft Bicycle Facilities Map does not include facilities on the rail line itself or in the I-75 corridor.

8.2 Consistency with Lee County Bicycle and Pedestrian Plans

Similarly, Lee Plan Map 3D-1 (Appendix A), which shows Planned Facilities in the Unincorporated Lee County State/County Maintained Facilities Bikeways/Walkways Facility Plan, doesn't show facilities on the rail line or in the I-75 corridor.

Lee Plan Map 22, Lee County Greenways Multi-Purpose Recreational Trails Master Plan (Appendix A), includes the Charlotte-Lee-Collier Trail, which extends north and south from the

John Yarbrough Linear Park adjacent to the rail line, but doesn't appear to use the rail line itself.

8.3 Consistency with Fort Myers Bicycle and Pedestrian Plan

The Conceptual Bicycle System Master Plan in the City of Fort Myers Bicycle and Pedestrian Plan shows the Seminole Rail corridor as a "Proposed Bike Greenway". The City's Conceptual Parks System Master Plan and Parks System Conceptual Park Designs and Waterfront Area Connections in the City's Parks & Open Space System Master Plan shows the Seminole Rail corridor as a "Proposed Greenway" and "Potential Rail Trail", respectively.

8.4 Consistency with Bonita Springs Future Bikeways/Walkways Plan

Figure 4 (Appendix A) in the City of Bonita Springs Comprehensive Plan Transportation Element shows Future Bikeways/Walkways. The map does not show any bicycle/pedestrian facilities on either the rail line or the I-75 corridor. It does, however, show a paved shoulder/bike lane on Old 41 from Cockleshell Drive to Bonita Beach Road and sidewalks on Old 41 from Rosemary Drive Street to Bonita Beach Road. Old 41 is a couple of blocks east of the rail line.

8.5 Consistency with Collier-Lee Bi-County Pathways Component

As on Lee County's Greenways Master Plan, the Collier-Lee Bi-County Regional Transportation Network, Pathways Component (Adopted 3/18/11) and the Office of Greenways and Trails Land Trails Opportunity Map includes the Charlotte-Lee-Collier Trail, which extends north and south from the John Yarbrough Linear Park adjacent to the rail line. South of the John Yarbrough Linear Park, a pathway has just been completed on the west side of the Michael G. Rippe Parkway south to Alico Road.

9. Residential and Neighborhood Considerations

There are long stretches of the Seminole Gulf rail corridor that pass through industrial and/or commercial areas: for example, in East Fort Myers, Central Fort Myers, the Metro Parkway corridor, the Alico Road area, and along Old 41 in Bonita Springs. For these areas, expanded or more frequent use of the rail corridor should not present compatibility issues. However, the potential impacts of expanded or more frequent use of the rail line on adjacent or near-by residential communities must be considered.

There would be less potential for such issues in the I-75 corridor, since the adverse impacts are already there. Use of the multi-modal envelope within the I-75 median for passenger rail, bus lanes or multi-use pathways would not be as noticeable, given the existing impacts of the current mainline lanes or future impacts of widening of the interstate to 8-10 lanes.

9.1 Neighborhood Compatibility

Certainly, the potential impacts of expanded or more frequent use of the Seminole Gulf rail line would depend upon whether commuter rail, light rail or bus service is envisioned. Commuter or light rail would potentially involve larger, heavier vehicles, greater noise impacts, and longer passing times across local streets. Bus lanes would involve smaller, lighter vehicles, fewer noise impacts, and shorter passing times across local streets.

Measures will need to be taken to mitigate for expanded or more frequent use of the rail line. For example, where needed, vehicle and bicycle-pedestrian crossings should be upgraded. Particular attention should be given to upgrading crossings on routes between homes and schools. In addition, the days and times of operations must carefully consider the potential impacts on the neighborhood.

9.2 Neighborhood Accessibility

While there may be compatibility issues that need to be addressed, use of the rail line for passenger rail or bus transit would improve accessibility to these neighborhoods.

Residents of East Fort Myers, Downtown Fort Myers, Central Fort Myers, Page Park, The Villas, San Carlos Park, Estero and Bonita Springs would have transit that is readily accessible at a short distance from their homes. Residents from these neighborhoods could reach many commercial and employment destinations along the Palm Beach Boulevard, US 41, Metro Parkway and Old 41 corridors.

Transit service along the rail line could become an amenity for these neighborhoods, which would now have an alternative to the automobile for commuting or reaching commercial destinations. This could also help enhance prospects for the success for the transit service.

Similarly, a multi-use pathway within or adjacent to the railway, such as the John Yarbrough Linear Park, would help address neighborhood accessibility.

10. Business and Economic Considerations

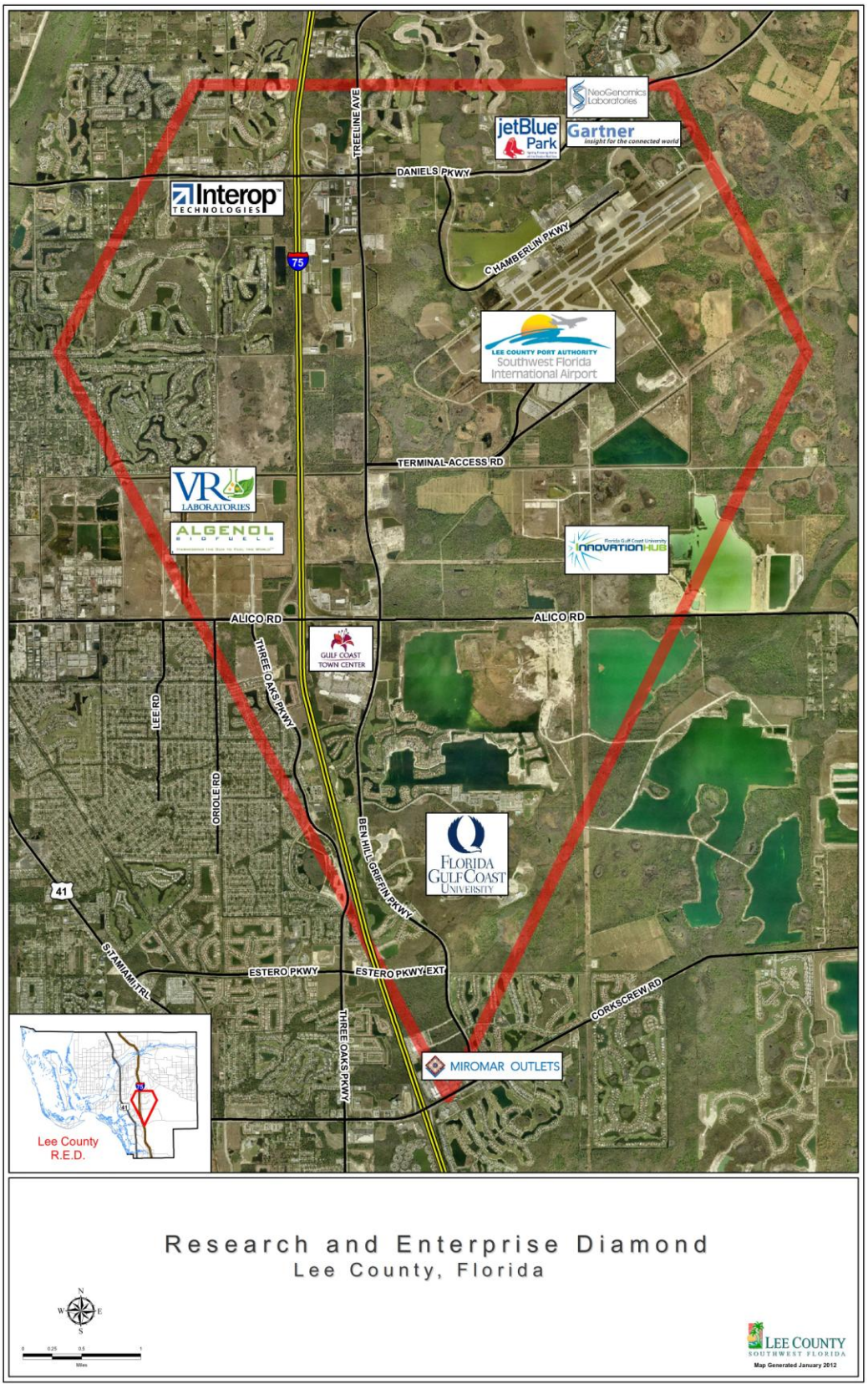
As noted above, the Seminole Gulf (SGLR) rail corridor passes through several industrial and/or commercial areas, including the industrial park adjacent to SGLR rail line near I-75/SR 78 interchange, East Fort Myers, Central Fort Myers, the Metro Parkway corridor, the Alico Road area, and along Old 41 in Bonita Springs. Businesses in these areas would be enhanced by expanded or more frequent use of the rail corridor, and these areas may become more attractive for redevelopment.

Similarly, I-75 passes through areas with commercial and industrial development, such as the industrial park adjacent to SGLR rail line near I-75/SR 78 interchange, the Luckett Road/Billy Creek industrial hub off I-75, Jetport Interstate Commerce Park, and the Bernwood Park of Commerce. Use of the I-75 multi-modal envelope for passenger rail or bus service could support new development in these areas.

10.1 New Development

One area that could benefit from use of the I-75 multi-modal envelope for passenger rail or bus service is the "Research and Enterprise Diamond" under development east of I-75. This 40 square mile area generally extends from north of Daniels Parkway to Corkscrew Road and from west of I-75 to east of the Airport. The area includes key attractors, such as the Southwest Florida International Airport, the Florida Gulf Coast University, and JetBlue Park. Commercial centers in the area include the Gulf Coast Town Center and Miromar Outlets.

As described on Lee County's website, the County considers this to be "a prime location for creating synergies among research and renewable energy, enterprise and clean economic growth". The County is actively encouraging development in the area by providing incentives for growth, including improved infrastructure. Several businesses have expressed interest in locating in this area, including Algenol Biofuels, VR Laboratories, Interop Technologies, NeoGenomics Laboratories, Gartner and Premier Airport Park and the FGCU Innovation Hub.


NeoGenomics Laboratories
jetBlue Park
Gartner
TREELINE AVE
DANIELS PKWY
Interop TECHNOLOGIES
75
CHAMBERLIN PKWY
LEE COUNTY PORT AUTHORITY
Southwest Florida International Airport
TERMINAL ACCESS RD
VR LABORATORIES
ALGENOL BIOFUELS
INNOVATION HUB
ALICO RD
ALICO RD
GULF COAST TOWN CENTER
THREE OAKS PKWY
LEE RD
ORIOLE RD
BEN HILL GRIFFIN PKWY
FLORIDA GULF COAST UNIVERSITY
41
STAMIAMI TRL
ESTERO PKWY
ESTERO PKWY EXT
CORKSCREW RD
THREE OAKS PKWY
MIROMAR OUTLETS
Lee County R.E.D.
Research and Enterprise Diamond
Lee County, Florida
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W
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S
LEE COUNTY
SOUTHWEST FLORIDA
Map Generated January 2012

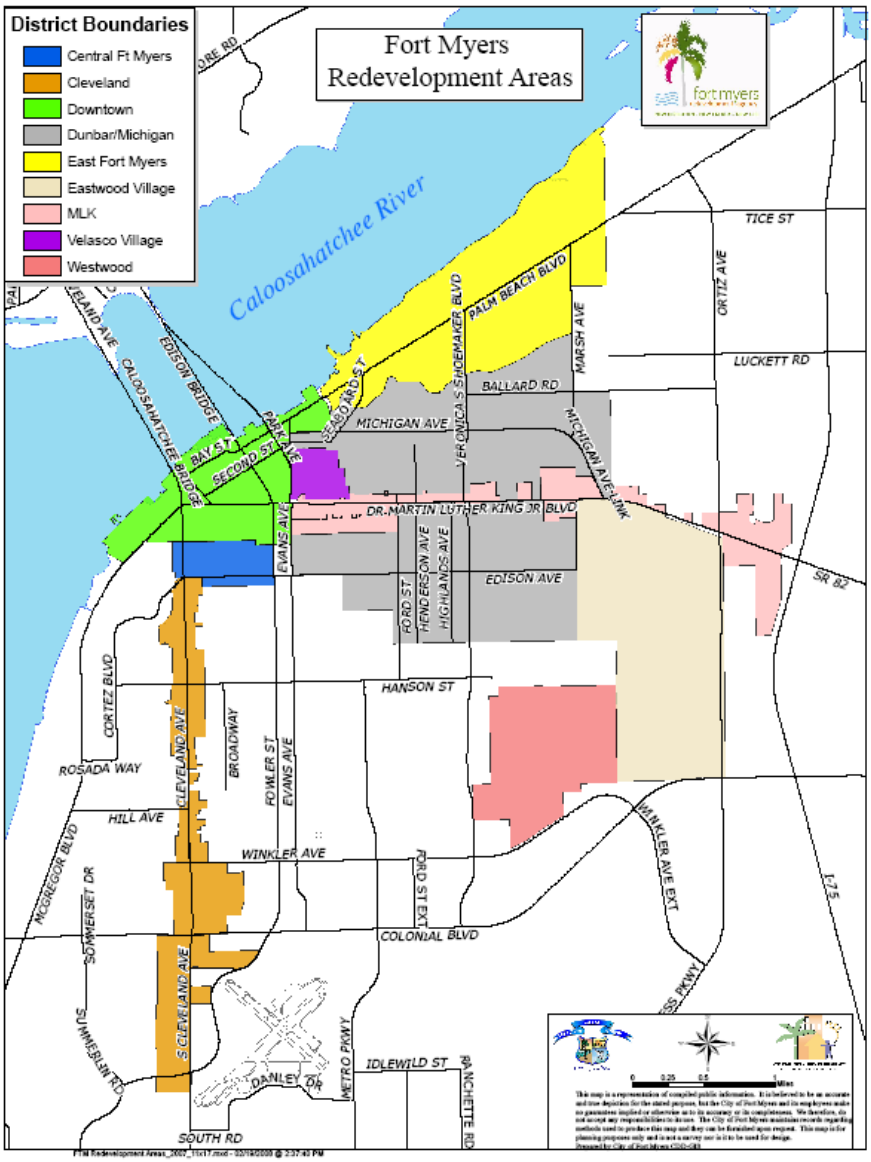
10.2 Redevelopment

Use of the Seminole Gulf rail corridor for passenger rail, BRT and/or multi-use pathways would help the City of Fort Myers and the City of Bonita Springs realize their redevelopment plans.

Use of the rail line would clearly benefit seven redevelopment districts in the City of Fort Myers:

- East Fort Myers
- Dunbar/Michigan
- Downtown Fort Myers
- Velasco Village
- Dr. Martin Luther King Jr.
- Central Fort Myers
- Cleveland Avenue

Much of this area is included in the City of Fort Myers Enterprise Zone, which is an area targeted for revitalization, within which there are incentives for new businesses to develop. Also, both the City of Fort Myers and Lee County have identified an Urban Infill Area north and south of Dr. Martin Luther King Jr. Boulevard from Evans Avenue east to Michigan Avenue Link. The Urban Infill Area is shown in Map E-1 (Appendix A) in the City's Comprehensive Plan Land Use Element and in Lee Plan Map 15 (Appendix A). Both the Enterprise Zone and Urban Infill Area would benefit from use of the rail corridor.



The "Old 41" redevelopment area in the City of Bonita Springs, which is shown in Figure 9 (Appendix A) in the City's

Comprehensive Plan Future Land Use Element, would also benefit from use of the rail corridor. The rail line runs along the western edge of this redevelopment area.

10.3 Transit Oriented Development/Transit Ready Development

The use of the rail line for transit would also provide opportunities for Transit Oriented Development (TOD) or Transit Ready Development (TRD) along the corridor.

The Florida DOT describes transit-oriented development (TOD) as "moderate to high density, mixed-use, and walk-able developments designed to facilitate transit and accommodate multiple modes of transportation." The Department further explains that the "transit core" is within 1/4 mile of a station, and "transit neighborhoods" are from 1/4 to 1/2 mile from a station. TODs are typically built around light rail stops, but could also be built around BRT, streetcars, or perhaps even express bus stops.

TODs have proven popular across the country with young adults and empty-nester couples. This is a development market that has been overlooked in southwest Florida. It has considerable promise if potential sites are identified in advance as nodes in a future transit system.

The middle ground that communities could promote right now is "transit-ready development" (TRD), which are walk-able concentrations of development (with housing and jobs) that are designed to accommodate transit when it becomes available. This development form is designed initially with surface parking, but laid out so that the parking can be reduced or converted into parking structures as transit arrives and the mix of uses reduces the necessity for so many vehicles.

If the rail corridor proves suitable for BRT or light rail service, redevelopment along this corridor would present many opportunities for TODs or TRDs. The East Fort Myers Revitalization & Redevelopment Plan (May 2009) has several references to TODs and TRDs along Palm Beach Boulevard and the Seminole Gulf rail corridor east of downtown.

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.

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-pedestrian-friendly environment, with high speed traffic on both sides. TOD/TDR development would probably be on one side of the interstate or the other.

10.4 Access to Regional Activity Centers

The I-75 multi-modal envelope is closer than the rail line to two important regional activity centers in South Lee County: the Southwest Florida International Airport (SWFIA) and Florida Gulf Coast University (FGCU).

The SWFIA terminal is located approximately 3.2 miles east of I-75. Access to the Airport will be improved with the completion of the I-75 Airport Direct Connect project, which will provide direct access to the Airport through collector distributor lanes from I-75 to the Terminal Access Road.

The FGCU campus is approximately one-half mile due east of I-75, but 2.2 miles from I-75 via the Alico Road interchange and Ben Hill Griffin Parkway.

On the other hand, the Seminole Gulf rail line passes alongside the eastern boundary of Page Field, Lee County's primary general aviation airport. Use of the rail line for passenger rail or bus service would enhance access to this airport.

11. Environmental Considerations

The potential environmental impacts associated with use of either the Seminole Gulf rail line or the I-75 multi-modal corridor must also be considered. Both corridors are existing facilities. So, their environmental impacts have presumably already been addressed to a large extent.

11.1 Caloosahatchee River Crossing

The primary environmental issue related to use of either the Seminole Gulf rail line or the I-75 multi-modal envelope is the crossing of the Caloosahatchee River. The railroad crosses the Caloosahatchee River on a series of bridges, including a draw bridge. A review of aerial photography indicates that the four bridges and their approaches through wetland areas are approximately 1.9 miles long. The high elevation I-75 bridge and its approaches are approximately 1.6 miles long.

The potential environmental impacts of expanding or reconstructing the rail or I-75 bridges across the Caloosahatchee River to accommodate passenger rail or bus service must be carefully considered, along with the mitigation costs that may be involved. Also, the construction costs would be very high. For example, as pointed out previously, Florida's Strategic Intermodal System (SIS) 2040 Multi-Modal Unfunded Needs Plan (October 2011) estimated that the cost for the railroad bridge would be approximately $60,165,000.

11.2 Other Wetland Crossings

The Seminole Gulf rail line also crosses much smaller bridges at Billy's Creek, Six Mile Cypress Slough, the Estero River, Spring Creek and the Imperial River and passes through wetlands between the Coconut Point and The Brooks. I-75 also crosses wetlands at Six Mile Cypress Slough, Estero River tributaries, on the east side of I-75 south of Corkscrew Road, and the Imperial River.

Both the rail line and the I-75 corridor pass through wetlands in North Fort Myers.

The potential environmental impacts and associated mitigation costs must be considered.

12. Conclusions

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

2. With 90-113 feet or more of right-of-way through most of its length, little additional right-of-way would be needed for improvements in the rail corridor. Some storm-water ponds may 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.

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. (This also applies to the vertical clearance of Slater Road over the rail line adjacent to I-75.) 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. The vertical clearance (16.3 feet) is also slightly less than the Plans Preparation Manual standard (16.5 feet) for bridges over roadway.

3. The Florida DOT plans to widen 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. 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.

Or 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-model 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/Orlando to Sarasota/Fort Myers/Naples.

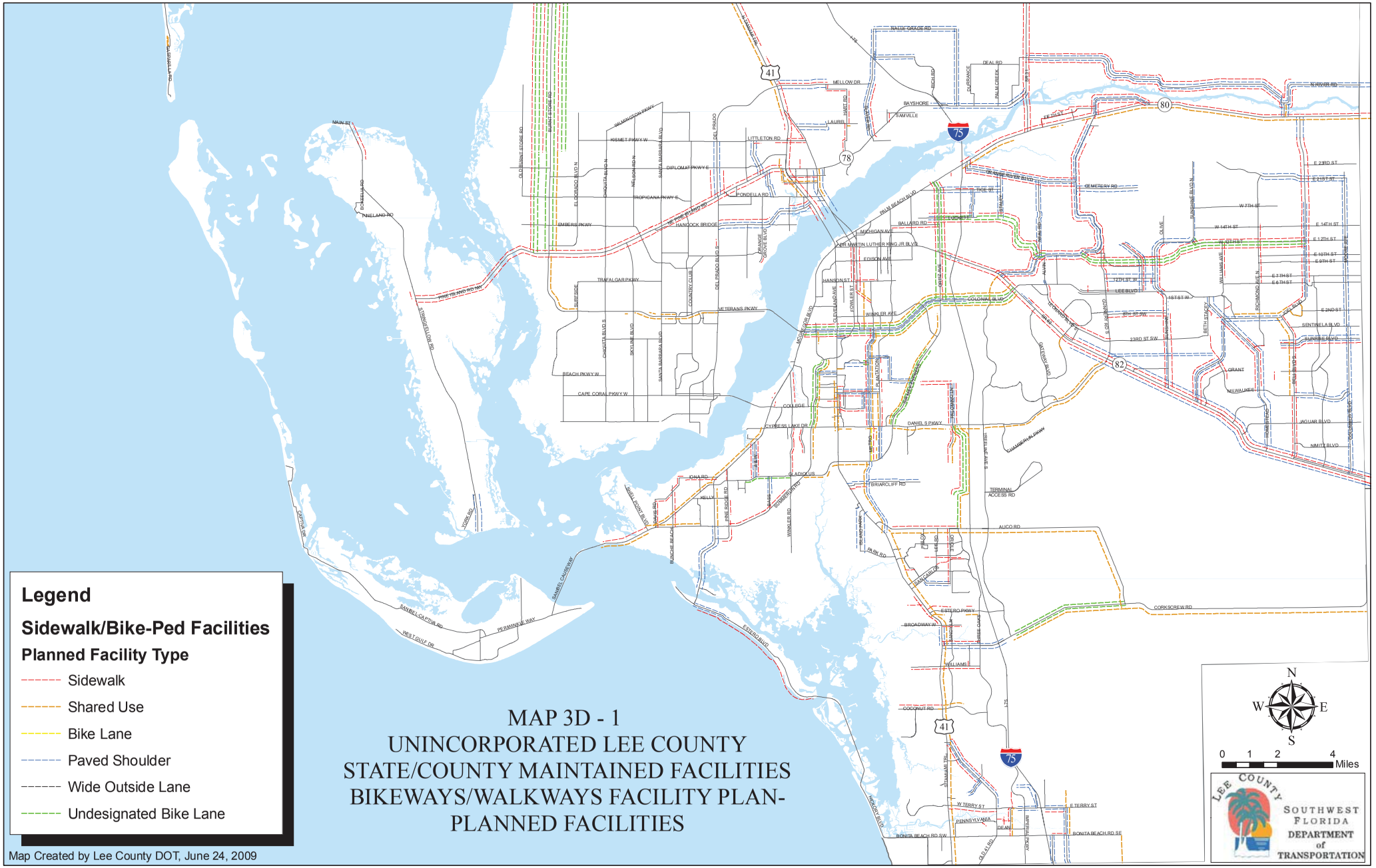
Given these conclusions, it is appropriate to evaluate the Seminole Gulf rail corridor further as the best option for providing a multi-use corridor through Lee County and into northern Collier County. This is being done under other tasks in the MPO Scope of Services.

APPENDIX A

REFERENCED MAPS FROM OTHER SOURCES

Referenced LeePlan Maps

Map 3D-1 -	**Bikeways / Walkways Facility Plan – Planned Facilities**
Map 3I -	**Public Transit Trip Generators**
Map 15 -	**Urban Infill Map**
Map 22 -	**Lee County Greenways Multi-Purpose Recreational Trails Master Plan**


Legend
Sidewalk/Bike-Ped Facilities
Planned Facility Type
Sidewalk
Shared Use
Bike Lane
Paved Shoulder
Wide Outside Lane
Undesignated Bike Lane
MAP 3D - 1
UNINCORPORATED LEE COUNTY
STATE/COUNTY MAINTAINED FACILITIES
BIKEWAYS/WALKWAYS FACILITY PLAN-
PLANNED FACILITIES
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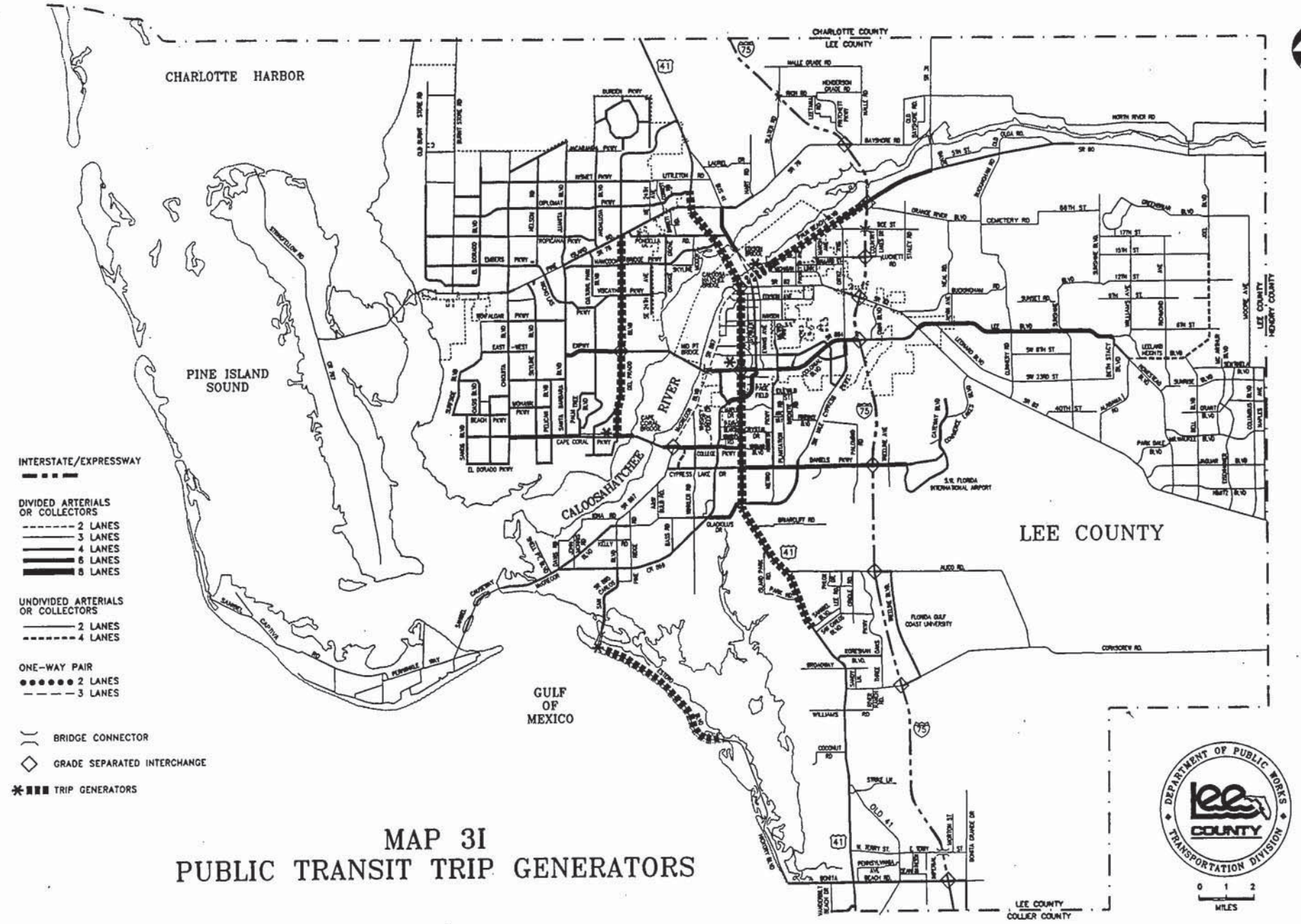
LEE COUNTY
SOUTHWEST FLORIDA DEPARTMENT of TRANSPORTATION
Map Created by Lee County DOT, June 24, 2009



MAP 3I
PUBLIC TRANSIT TRIP GENERATORS

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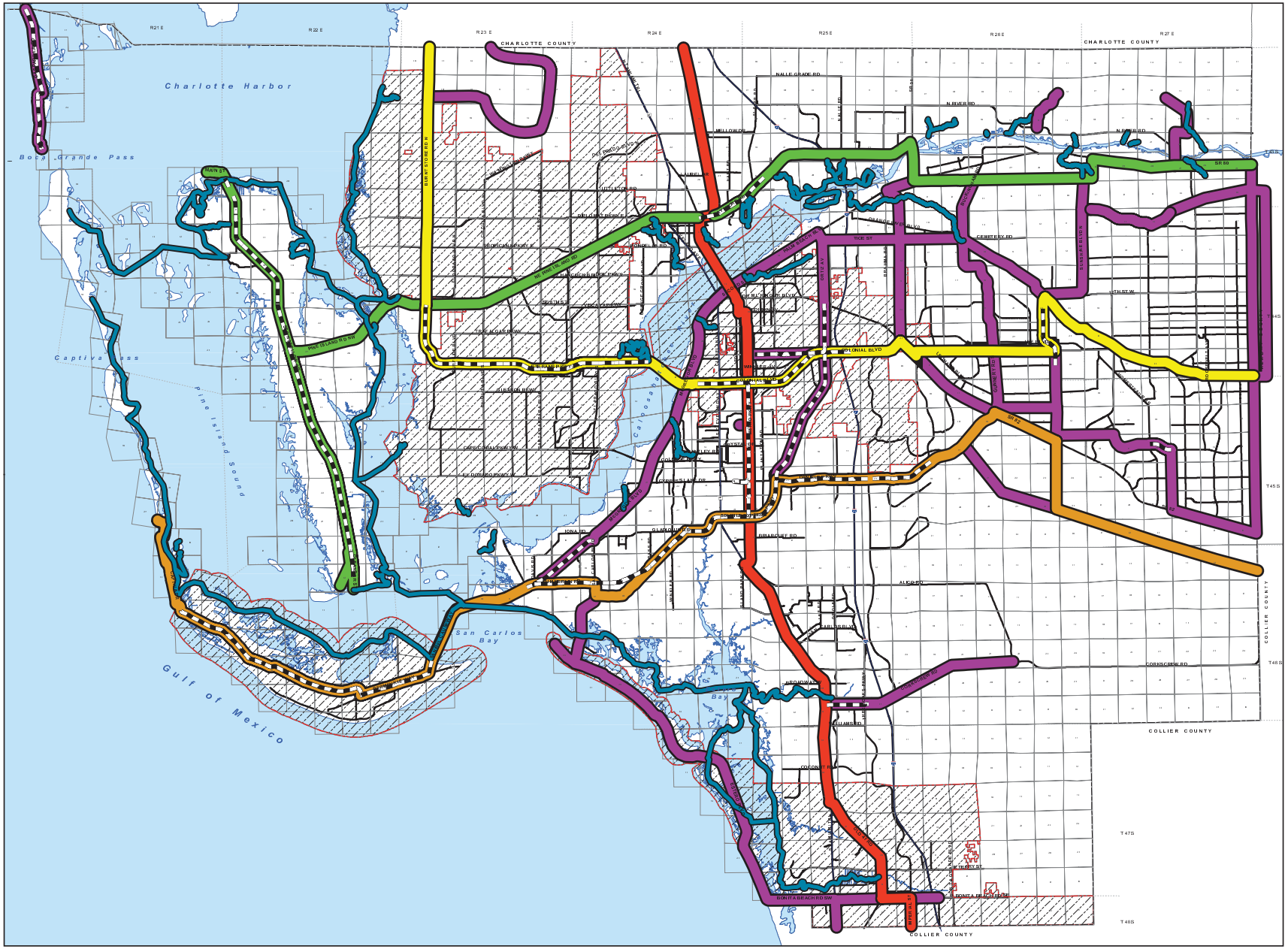
LEE COUNTY
URBAN INFILL MAP
(Lee Plan Map 15)



LEE COUNTY GREENWAYS MULTI-PURPOSE RECREATIONAL TRAILS MASTER PLAN

- Completed Greenways
- Charlotte-Lee-Collier Trail
- Captiva-Hendry-Collier Trail
- Pine Island-Hendry Trail
- Charlotte-Lee-Hendry Trail
- Connector Trails
- Great Calusa Blueway
- City Limits

LEE COUNTY PARKS AND RECREATION
WWW.LEEPARKS.ORG

LEE COUNTY SOUTHWEST FLORIDA
DIVISION OF PLANNING

N W E S

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Miles

Map Generated: July 2010
City Limits current to date of map generation

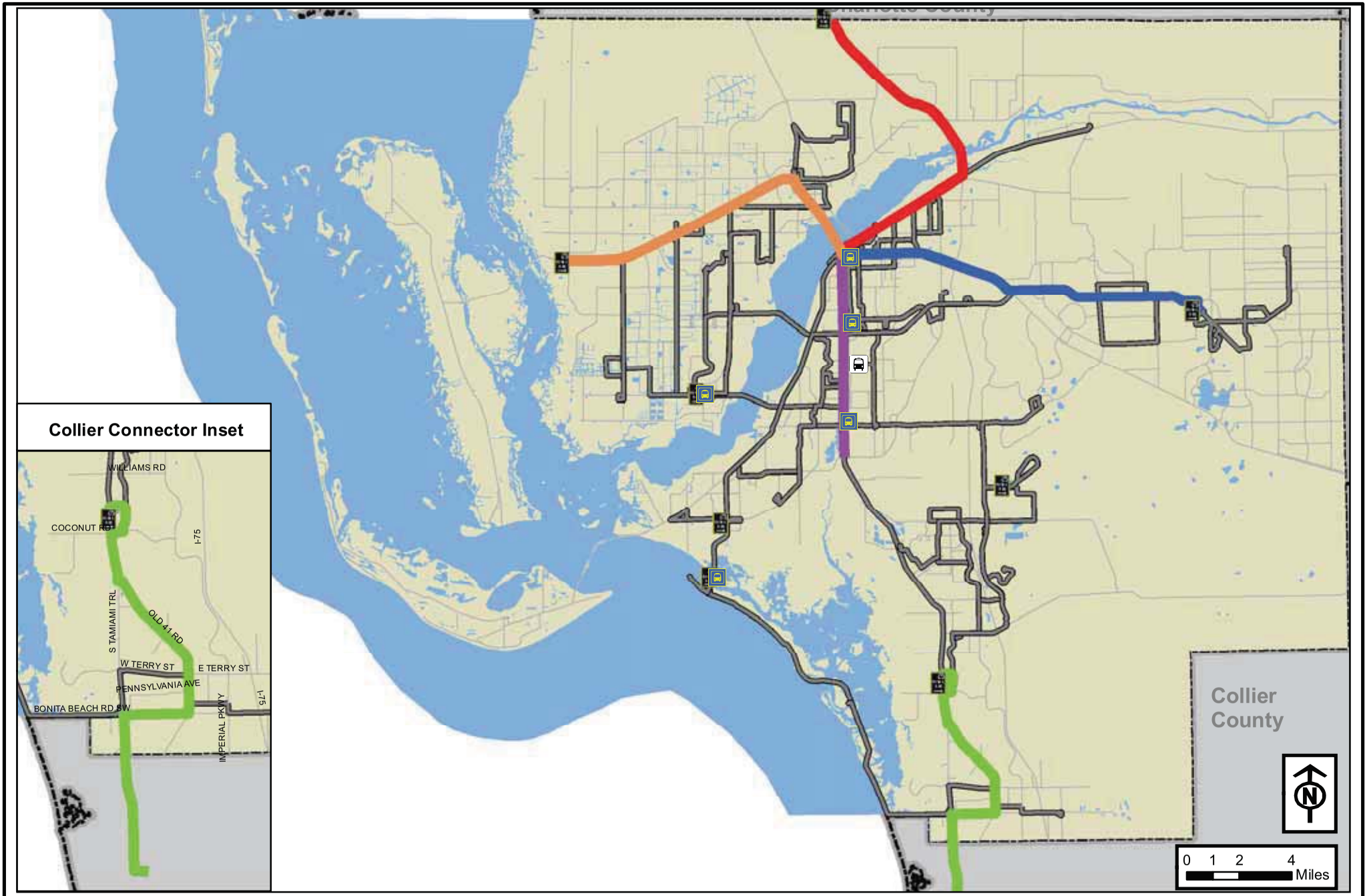
Adopted May 16, 2007
Adopted by Ordinance No. 07-09

Amended by Ordinance No. 10-18
March 3, 2010
Effective June 2, 2010

Lee Plan Map 22

Referenced LeeTran TDP / Vision Plan Maps

Map 9-3 - **Premium Bus Routes and Park-and-Ride Facilities**
Map 3-1 - **LeeTran Vision Premium Bus Service Network**



LeeTran 2012 Transit Development Plan

Legend

LeeTran Hubs

Administrative Office

Park-and-Ride Facility

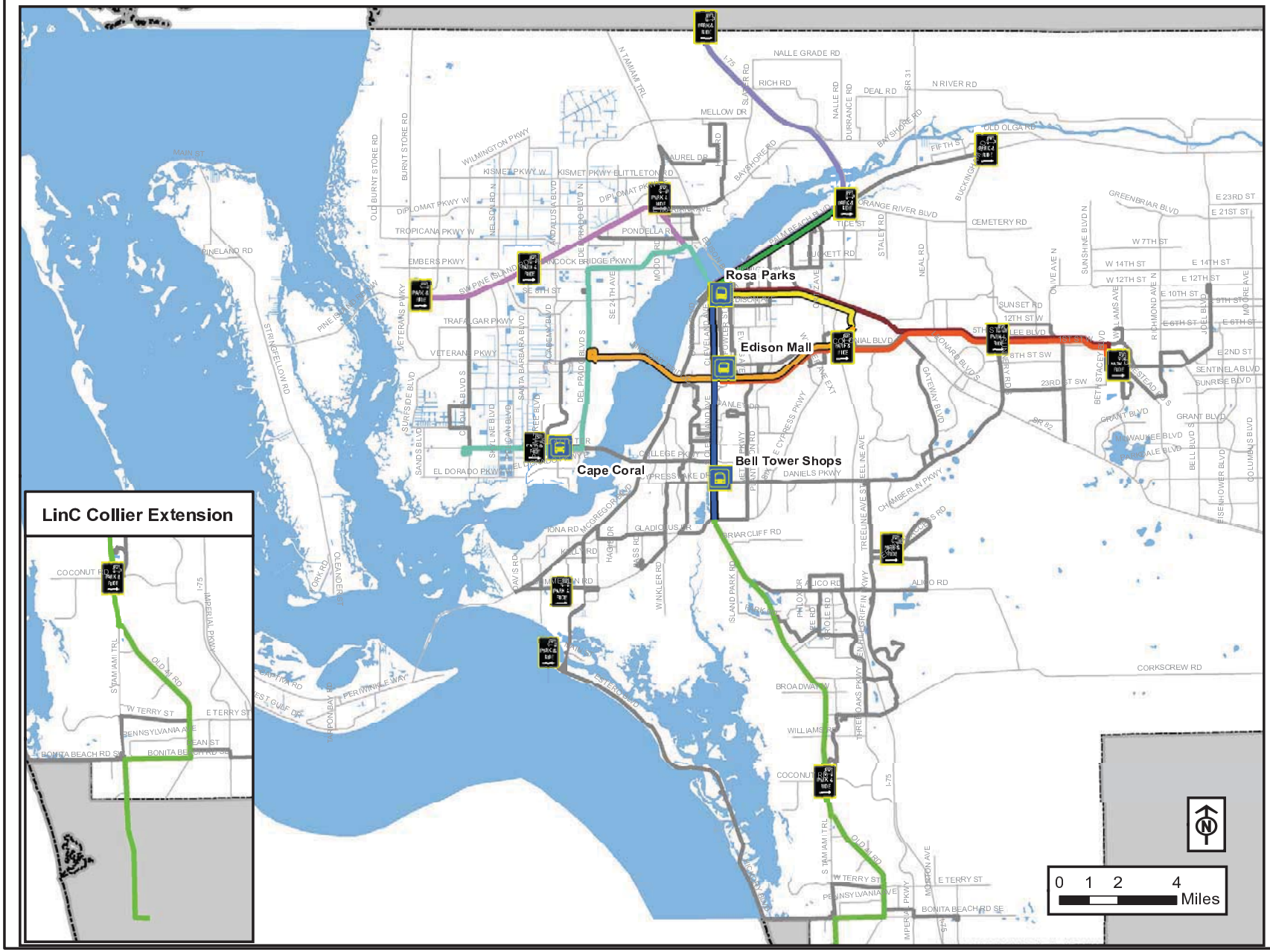
Express Service
- Charlotte Express
- Collier Connector
- Lehigh Express
- Pine Island Rd

US 41 BRT

Other Service

Map 9-3

Premium Bus Routes and Park-and-Ride Facilities



LeeTran Vision Plan

Legend

Bus Rapid Transit

- US 41 BRT (Priority)
- Colonial Blvd BRT
- Palm Beach BRT
- MLK BRT

Express

- Cape Coral Express
- Charlotte Express
- Colonial Express
- Lee-Collier LinC
- Lehigh Express
- Pine Island Express

LeeTran Transfer Hub

Park-and-Ride (General Location)

Other Fixed-Route Services

Map 3-1

LeeTran Vision
Premium Bus Service Network

Referenced Lee County MPO Maps

Figure 10 - **2035 Lee County Transit Needs Network (Alternative 2)**
Exhibit VV - **Primary and Secondary Bicycle and Pedestrian Network**

Lee County Bicycle Facility Map

Figure 10: 2035 Lee County Transit Needs Network (Alternative 2)

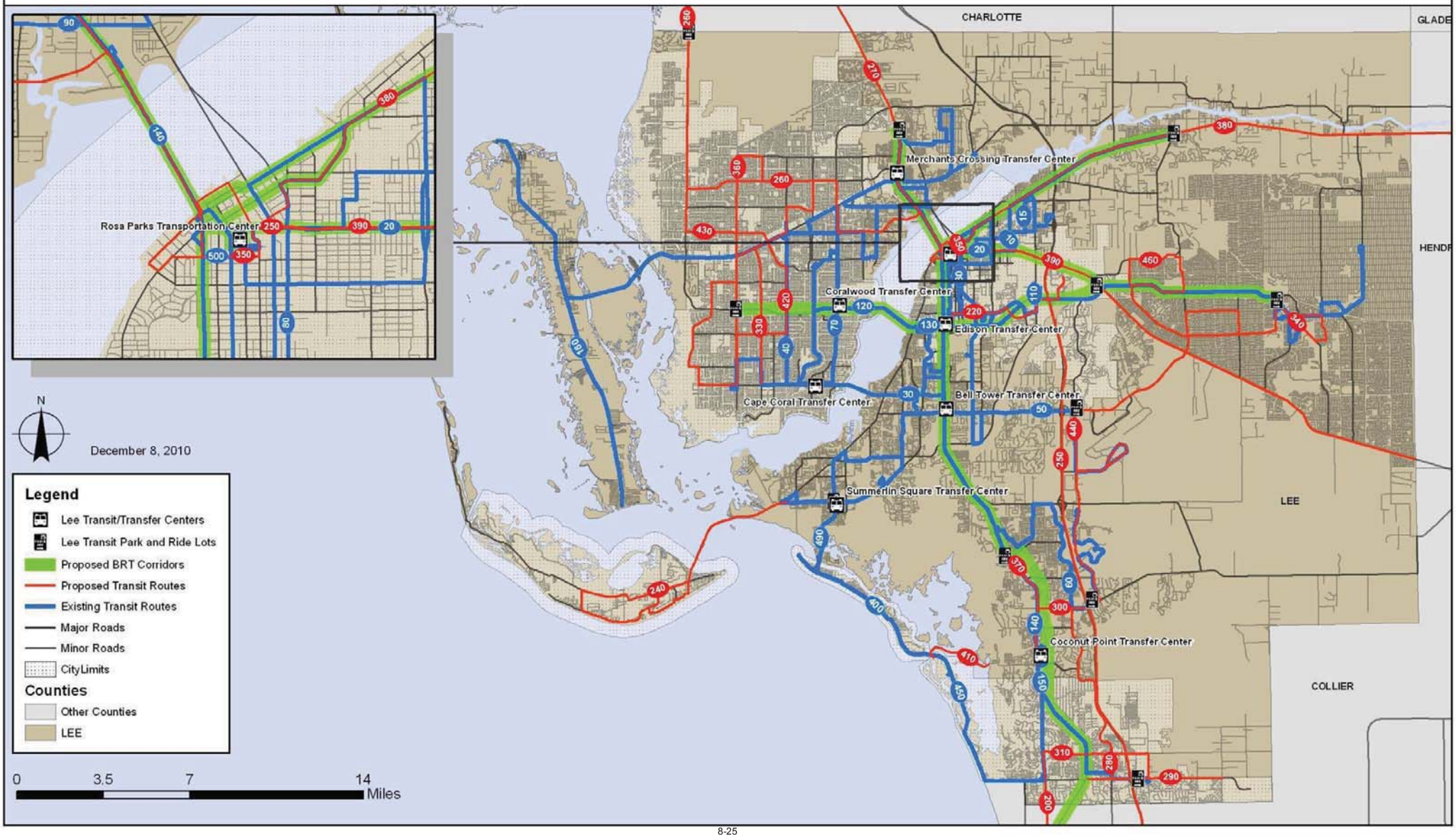


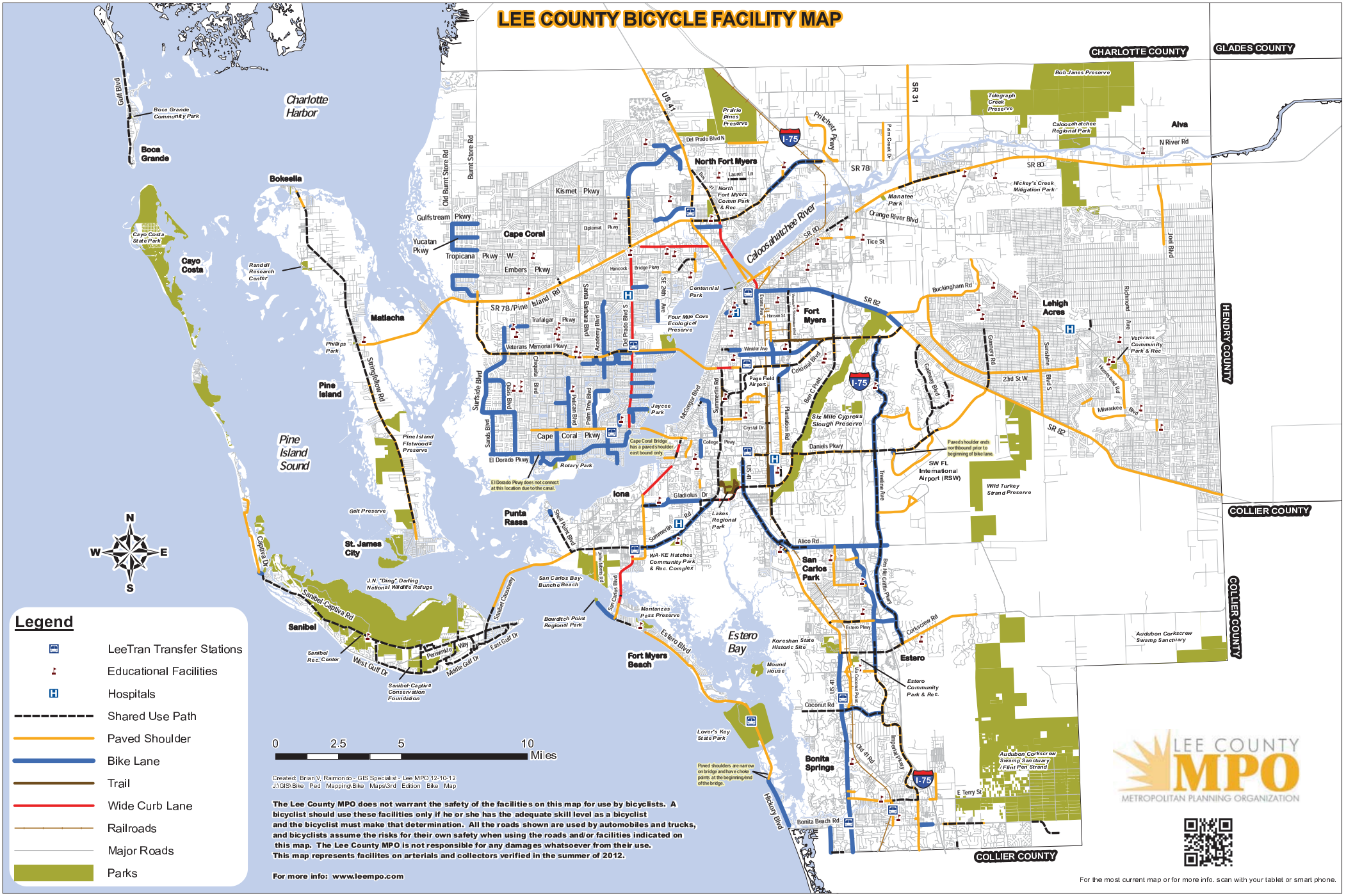
Exhibit VV:

PRIMARY AND SECONDARY BICYCLE AND PEDESTRIAN NETWORK

LEE COUNTY MPO

LEE COUNTY MPO BICYCLE PEDESTRIAN MASTER PLAN

LEE COUNTY BICYCLE FACILITY MAP



Referenced Collier County MPO Maps

Map 8-1 - 2035 Collier County Transit Needs Network

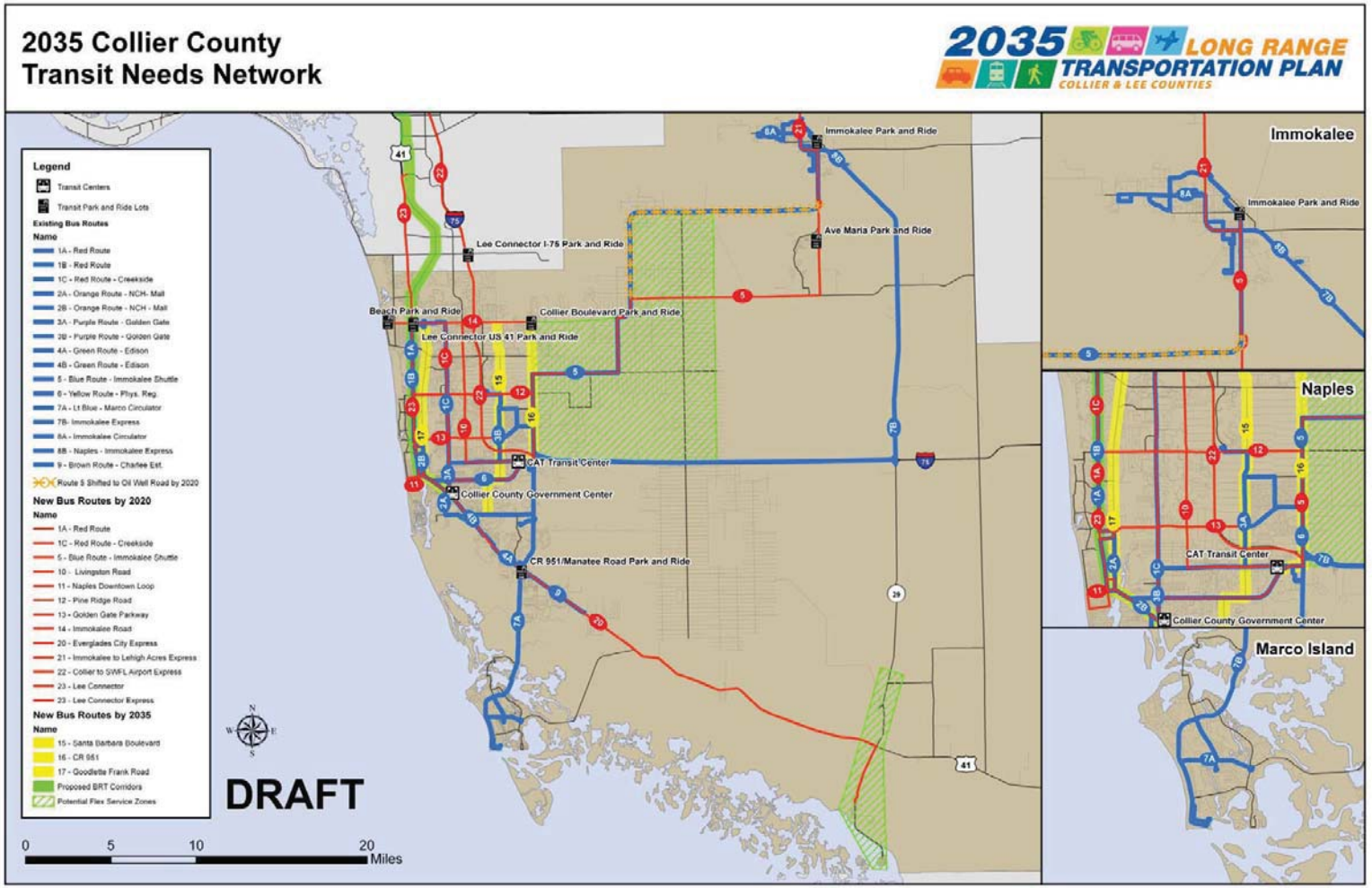
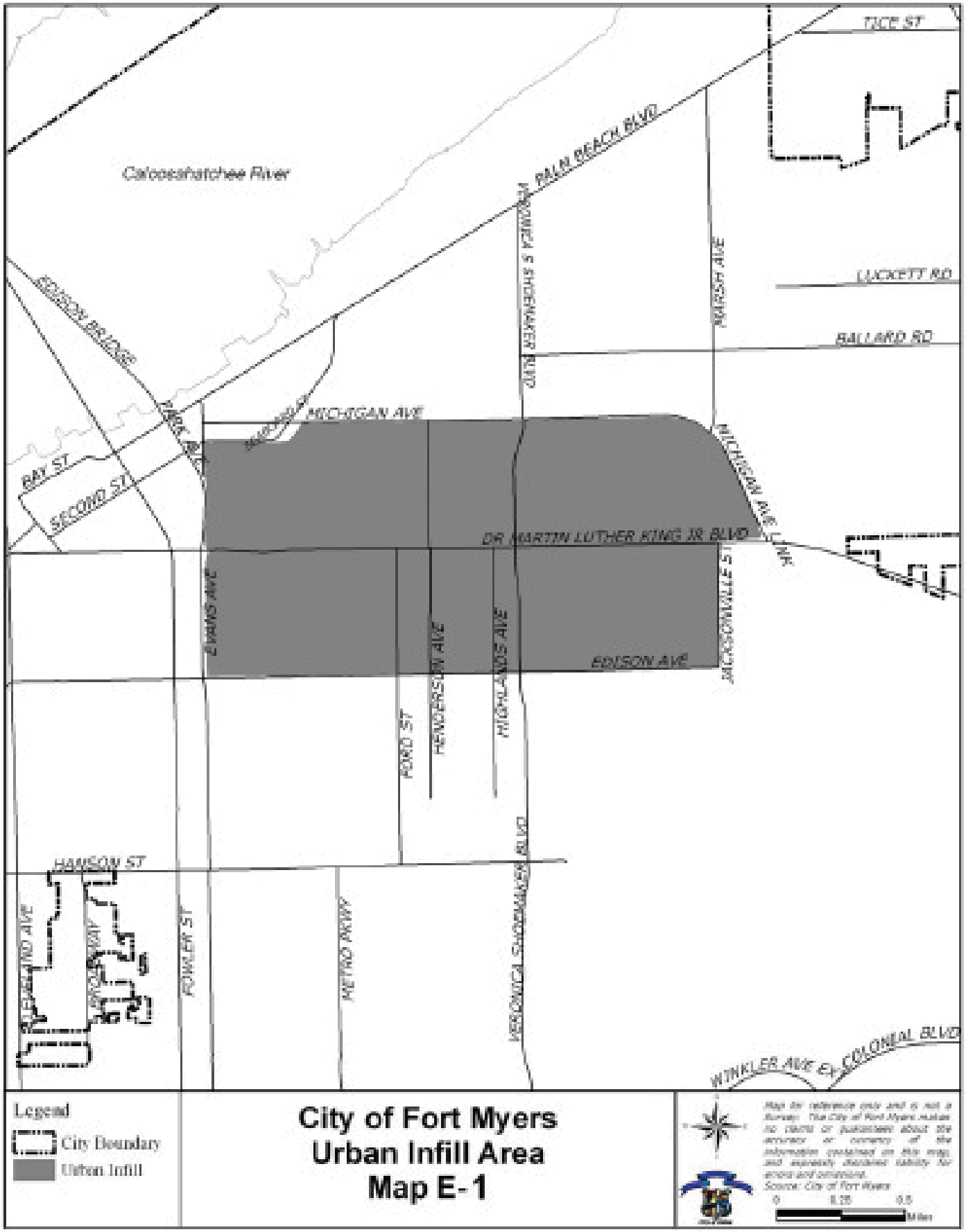


Figure 8-1
2035 Transit Needs Network

Referenced City of Fort Myers Comprehensive Plan Maps

Map E-1 - City of Fort Myers Urban Infill Area


TICE ST
Caloosahatchee River
PALM BEACH BLVD
EDISON BRIDGE
MARSH AVE
LUCKETT RD
BALLARD RD
MICHIGAN AVE
PARK BLVD
BAY ST
SECOND ST
DR MARTIN LUTHER KING JR BLVD
MICHIGAN AVE LINK
EDISON AVE
JACKSONVILLE ST
EVANS AVE
HENDERSON AVE
HIGHLANDS AVE
FORD ST
HAMSON ST
FOWLER ST
METRO PKWY
VETERANS MEMORIAL BLVD
WINKLER AVE EX COLONIAL BLVD
Legend
City Boundary
Urban Infill
City of Fort Myers
Urban Infill Area
Map E-1
Map for reference only and is not a Survey. The City of Fort Myers makes no claims or guarantees about the accuracy or currency of the information contained on this map, and expressly disclaims liability for errors and omissions.
Source: City of Fort Myers
0
0.25
0.5
Miles

Referenced City of Bonita Springs Comprehensive Plan Figures

Figure 4 - Future Bikeway / Walkways
Figure 9 - Preliminary Delineation of Potential TCEA and Potential "Old 41" Redevelopment Overlay Area

FIGURE 4
FUTURE BIKEWAYS/WALKWAYS

SOURCE: City of Bonita Springs, Bikeways/Walkways Facilities Plan (draft), Lee County Transportation Dept.

FIGURE 9
PRELIMINARY DELINEATION OF POTENTIAL
TRANSPORTATION CONCURRENCY AREA (TCEA)
(Not adopted)
AND "OLD 41" REDEVELOPMENT OVERLAY AREA