

CHAPTER 3 TRANSPORTATION ELEMENT

INTRODUCTION

Transportation plays an integral role a community's infrastructure providing the connections between living, working, recreation, and other activities vital to the functioning of the community and quality of life. It also serves as the link the City to other areas within the county, region, state, country, and the world.

The transportation system consists of four separate, but ideally integrated components. These components include the roadway, transit, pedestrian/bicycle, and airport systems. No commercial ports exist within Indian River County and the City, except for recreational marina and support facilities.

As mentioned in Chapter 2, transportation, land use, and housing are interconnected and need to be coordinated. Travel patterns and transportation result from land use patterns. The location and intensity of development determines the number, length, routing of trips, which generate the need for transportation system improvements. In return, the types and scale of these transportation improvements can influence development patterns and, in conjunction with land use patterns, can either adversely and favorably impact housing choices and diversity.

Therefore, it is important that transportation and land use planning is properly coordinated. This coordination is needed to provide efficient and cost-effective transportation system that addresses transportation in a balanced manner that meets the land use and housing needs of the city and its residents.

BACKGROUND ON MPO

The City of Vero Beach is a participant in the Indian River County Metropolitan Planning Organization (MPO) formed in 1993. It is a legislative agency responsible for transportation planning in the urbanized area of Indian River County, which includes the City of Vero Beach. The body consists of twelve voting members representing local governments, two-nonvoting representatives from Florida Department of Transportation (FDOT), and a non-voting representative from the Town of Orchid.

Funding is through a Joint Participation Agreement for Federal Highway Planning. This agreement between FDOT and the MPO provides for pass through of federal and state funds.

The MPO provides the policy framework for on-going transportation planning through its bi-annual Unified Planning Work Program and programming of regional transportation improvements through the annual Transportation Improvement Program. The MPO has developed a calibrated a countywide transportation planning model.

This agency prepares numerous transportation plans and products for the region. These include a Long Range Transportation Plan (updated every five years); a Congestion Management System Plan, a Bicycle-Pedestrian Plan, and a Transit Development Plan. These documents are revised on an annual or multi-year schedule to keep them current. The actions and transportation planning and policy documents prepared and adopted by the MPO serve as a framework for the data and policies in this Transportation Element.

EXISTING CONDITIONS

This section provides a summary of the existing transportation system in the City including the roadway system, transit, bicycle-pedestrian, and aviation systems. This section also briefly discusses railroads and port/intermodal facilities.

The sources of this information are from documents prepared by the MPO, principally the 2040 Long Range Transportation Plan, the 2030 Indian River County Comprehensive Plan, information provided by the Indian River County Traffic Engineering Division, and studies and information prepared for or by the Vero Beach Public Works and Planning and Development Departments.

Traffic Circulation System

Roads and highways are the most important component of the city's transportation system. This system not only accommodates the vast majority of trips within the city, but it also provides access to land uses.

The dependency on the regional and city roadway system and dependency on the motor vehicle as the mode of choice is well illustrated by survey data collected between 2009 and 2013 by the U.S. Bureau of the Census in its *American Community Survey*. According to this survey data, the mean work commute time for city residents was 17.2 minutes. The travel mode of choice was the motor vehicle accounting for 93 percent of trips to work requiring a commute of which 80 percent consisted of single occupancy vehicles. Over 75 percent of all commutes by city residents was less than 20 minutes compared to an Indian River County wide figure of 53 percent.

Inventory and Level of Service. Table 3.1 describes the characteristics of the existing 2014 roadway network. This description provides a comprehensive inventory of all major roadway facilities by segment including the number of lanes, width of right-of-way, road type, existing Level of Service, ownership and functional classification. For planning purposes, a roadway's capacity and level of service are generally based on the number of lanes.

As stated in the Indian River 2030 Comprehensive Plan, "Level of Service (LOS) is a qualitative measure, describing motorist' perceptions of operating conditions within a traffic stream." Capacity of a roadway is a quantitative measure of the ultimate number of motor vehicles which can travel over a particular roadway segment during a particular hourly or daily time period. These conditions are described in terms such as speed and travel time.

Table 3-1, Existing Roadway Characteristics (2014)

On Street	From Street	To Street	Length (Miles)	No. of Lanes	Exist. ROW	Road Type	Exiting LOS	Jurisdiction	Fun. Class.
S. R. A1A	S.VB City L.	17 th St.	1.30	2	120'	D	C	SR	MA
S.R. A1A	17 th St	S.R. 60	1.50	2	80'	D	D	SR	MA
S.R. A1A	S.R. 60	N.VB City L	1.50	2	50'	D	D	SR	MA
Ind. Riv. Blvd.	12 th St	17 th St	0.50	4	150'	D	C	CR	PA
Ind. Riv. Blvd.	17 th St	20 th St	0.39	4	150'	D	C	CR	PA
Ind. Riv. Blvd.	20 th St	21 st St	0.19	4	150'	D	C	SR	PA
Ind. Riv. Blvd.	21 st St	Royal Palm	0.37	4	150'	D	C	SR	PA
Ind. Riv. Blvd.	Royal Palm	MB Bridge	0.46	4	150'	D	C	SR	PA
Ind. Riv. Blvd.	MB Bridge	37 th St.	0.71	4	150'	D	C	CR	PA
U.S. 1	S.VB City L	17 th St.	0.50	4	80'	D	D	SR	PA
U.S. 1	17 th St	S.R. 60	0.50	4	80'	D	D	SR	PA
U.S. 1	S.R.60	23 rd St	0.50	4	70'	D	D	SR	PA
U.S. 1	23 rd St	26 th St	0.50	4	120'	D	D	SR	PA
U.S. 1	26 th St	Aviation Blvd	0.43	4	120'	D	D	SR	PA
U.S. 1	Aviation Blvd	37 th St	0.64	4	120'	D	C	SR	PA
S.R. 60	58 th Av	43 rd Av	1.00	6	100'	D	C	SR	PA
S.R. 60	43 rd Av	27 th Av	1.00	6	100'	D	C	SR	PA
S.R. 60	27 th Av	20 th Av	0.50	6	100'	D	C	SR	PA
S.R. 60 (EB)	20 th Av	Old Dixie Hwy	0.50	3	70'	O	C	SR	PA
S.R. 60 (EB)	Old Dixie Hy	10 th Av	0.30	3	70'	O	C	SR	PA
S.R. 60 (EB)	10 th Av	U.S. 1	0.30	3	70'	O	C	SR	PA
S.R. 60 (EB)	U.S. 1	6 th Av	0.50	3	70'	O	C	SR	PA
S.R. 60	6 th Av	Indian River Blvd	0.34	4	140'	D	C	SR	PA
S.R. 60	MB Bridge	S.R. A1A	0.50	4	80'	D	C	SR	MA
S.R. 60 (WB)	20 th Av	Old Dixie Hy	0.43	4	70'	O	C	SR	PA
S.R. 60 (WB)	Old Dixie Hy	10 th Av	0.35	4	70'	O	C	SR	PA
S.R. 60 (WB)	10 th Av	U.S. 1	0.25	4	70'	O	C	SR	PA
S.R. 60 (WB)	U.S. 1	6 th Av	0.24	4	70'	O	C	SR	PA
16 th St	43 rd Av	27 th Av	1.00	2	50'	U	D	CR	COL
16 th St	27 th Av	20 th Av	0.50	2	100'	U	D	CR	COL
16 th St	20 th Av	Old Dixie Hy	0.50	2	100'	U	D	CR	COL
16 th St/17 th St	Old Dixie Hy	U.S. 1	0.50	4	100'	D	C	CR	COL
17 th St	U.S.1	Indian River Blvd	0.50	4	100'	D	C	SR	MA
Old Dixie Hy	S. VB City L	16 th St	0.50	2	60'	U	D	CR	MA
Old Dixie Hy	16 th St	S.R. 60	0.50	2	60'	U	C	CR	MA
27 th Av	S. VB City L	16 th St	0.40	2	80'	U	D	CR	MA
27 th Av	16 th St	S.R. 60	0.50	2	80'	U	D	CR	MA
27 th Av	S.R. 60	Atlantic Blvd	0.30	2	80'	U	D	CR	COL
27 th Av	Atlantic Blvd	Aviation Blvd	0.30	2	80'	U	D	CR	COL
6 th Av	S. VB City L	S.R.60	0.50	2	60'	U	D	CR	COL
10 th Av	17 th St	S.R. 60	0.43	2	60'	U	C	VB	COL
10 th Av	S.R. 60	Royal Palm Blvd	0.21	2	60'	U	C	VB	COL
20 th Av	S.VB City L	16 th St	0.50	4	80'	D	C	CR	MA
20 th Av	16 th St	S.R. 60	0.50	4	80'	D	C	CR	MA
20 th Av	S.R. 60	Atlantic Blvd	0.50	2	80'	U	C	CR	COL
43 rd Av	16 th St	S.R. 60	0.50	2	80'	U	D	CR	MA
43 rd Av	S.R. 60	26 th St	0.50	2	80'	U	C	CR	MA
43 rd Av	26 th St	41 st St	2.00	2	80'	U	C	CR	MA
41 st St	58 th Av	43 rd Av	1.00	2	30'	U	C	CR	COL
41 st St	43 rd Av	Old Dixie Hy	3.50	2	30'	U	C	CR	COL
26 th St	58 th Av	43 rd Av	1.00	2	50'	U	C	CR	MA
Aviation Blvd	43 rd Av	27 th Av	1.05	2	50'	U	D	VB	MA
Aviation Blvd	27 th Av	U.S. 1	0.91	2	60'	U	C	VB	MA
Atlantic Blvd	S.R. 60	27 th Av	1.07	2	60'	U	C	VB	COL

Table 3-1 (Cont'd), Existing Roadway Characteristics (2014)

On Street	From Street	To Street	Length (Miles)	No. of Lanes	Exist. ROW	Road Type	Exiting LOS	Jurisdiction	Fun. Class.
Atlantic Blvd	27 th Av	20 th Av	0.50	2	60'	U	C	VB	COL
26 th St	20 th Av	U.S. 1	0.50	2	60'	U	C	VB	COL
Ocean Dr	Greytwig	Beachland	0.44	2	80'	U	C	VB	COL
Ocean Dr	Beachland	Riomar	0.63	2	80'	U	C	VB	COL
21 st St	Ind. River Blvd	U.S. 1	0.52	2	90'	U	C	VB	COL
21 st St	U.S. 1	20 th Av	0.54	2	70'	U	C	VB	COL
23 rd St	20 th Av	U.S.1	0.47	2	70'	U	C	VB	COL
Royal Palm Blvd	U.S. 1	Royal Palm Pl	0.38	2	80'	U	C	VB	COL
Royal Palm Blvd	Royal Palm Pl	Indian River Blvd	1.00	2	80'	U	C	VB	COL
Royal Palm Pl	Roy.Palm Blvd	Indian River Blvd	1.00	2	80'	U	C	VB	COL
14 th Av	Old Dixie Hwy	16 th St	0.31	2	70'	U	C	VB	COL
14 th Av	16 th St	S.R. 60	0.51	2	70'	U	C	VB	COL
14 th Av	S.R. 60	U.S. 1	0.48	2	70'	U	C	VB	COL
Victory Blvd	Atlantic	Cordova	0.30	2	80'	U	C	VB	COL
Victory Blvd	Cordova	20 th Av	0.26	2	80'	U	C	VB	COL
Beachland Blvd	S.R. A1A	Ocean Dr	0.24	4	80'	D	C	VB	COL

Sources: Table 4.7.1 of *2030 Indian River County Comprehensive Plan*
 2014 Annual Traffic Volume Report prepared by Indian River County Traffic Engineering Division
 Vero Beach Planning and Development and Public Works Departments, 2015

Legend and Notes:

1. Road Types-
 - U-Undivided
 - D-Divided
 - O-One-way
2. Jurisdiction-
 - SR-State road
 - CR-County road
 - VB-City road
3. Functional Classification (Fun. Class.)
 - PA-Urban Principal Arterial
 - MA-Urban Minor Arterial
 - COL-Urban Collector
4. Existing Level of Service (LOS) is based on the *2012 FDOT Quality/Level of Service Handbook*.

Levels of Service (LOS) are generally designated by letters A through F, with LOS A representing the best operating conditions (free flow) and LOS F the worst (forced or breakdown flow). For the general planning purposes of the Comprehensive Plan, LOS is determined by comparing the traffic's average annual daily traffic volume to its roadway capacity using the guidelines established in the *2012 FDOT Quality/Level of Service Handbook Tables*. For concurrency purposes in the development review process, tables that provide peak hour and peak direction conditions based on tables in the FDOT handbook are utilized to define capacity and level of service based on annual average peak season/peak hour/peak direction counts.

Except as noted in the next paragraph, LOS “D” is the minimum accepted standard during peak hour, peak season, and peak direction conditions for all arterials and collector roadways. The LOS for local roads is “E.” All roadways within the City of Vero Beach are at Level of Service “D” or better.

The City Council has adopted level of service standards for specific roads, primarily due to constraints on further widening of these facilities. These roadways include the following:

- 27th Avenue from South City Limits to S.R. 60 - LOS “E Plus 20%”
- A1A from S.R. 60 to North City Limits - LOS “D Plus 30%”
- A1A from South City Limits to 17th Street – LOS “D Plus 30%”

It should be further noted that the three roadway segments listed above have been operating at a LOS of “D” or better over that last couple of years. However, traffic projections for the MPO’s 2040 Long Range Transportation Plan (LRTP) indicate that all A1A segments will be operating at a LOS of less than “D.”

It appears based on the modeling projections used in the 2040 LRTP that the LOS for 27th Avenue is and will be within the acceptable LOS standard of “D.” except for a segment from the South City Limits to 16th Street. Therefore, this standard should be considered for revision in this update to this Comprehensive Plan to reflect both existing and forecast conditions.

Safety. In 2014, 324 vehicle accidents were recorded within the city limits. These accidents involved three fatalities. The highest crash counts were for the intersection of Indian River Boulevard/Merrill Barber Bridge (S.R. 60) with 27; US Highway 1 and 20th Street with 23; Indian River Boulevard and Royal Palm Boulevard/Royal Palm Place with 20; and 20th Place and US Highway 1 with 20. These roadways routinely are the highest accident locations in the City of Vero Beach. However, if the number of accidents per million vehicles entering the intersection is calculated all the major intersections are considered by traffic engineers to be in a low category (less than 2 accidents per one million) for traffic accidents.

Jurisdictional Administration. Public roadways within the city limits are under the jurisdiction of the Florida Department of Transportation, Indian River County, and the City of Vero Beach. Chapter 335, Florida establishes the roadway jurisdictional responsibility existing on July 1, 1995. This statute provides that jurisdictional responsibilities of roadways may be transferred from one jurisdiction to another only by the mutual consent of both jurisdictions.

The primary jurisdictional responsibility is generally for maintaining and improving the facility including maintenance of and regulation of any improvements or uses within the designated right-of-way for that facility. Additionally, through intergovernmental agreements with FDOT, local governments may provide and maintain specific operational equipment such as traffic signals. Figure 3-1 graphically depicts the jurisdictional responsibility for all roads in the network including the number of lanes associated with each road segment.

Functional Classification. Functional classification organizes roads into different categories. Roads are generally classified according to the degree of mobility and accessibility.

Roads with a lower classification provide access to adjacent land uses with low levels of mobility. Roads with a higher functional classification may provide access to land uses, but are intended primarily to allow for high levels of mobility.

Figure 3-2 depicts the functional classification of the roads. The following are the four general classifications for urban streets:

- *Urban principal arterials* provide long distance “trunk-line” continuous routes within and between urban areas. Typically such highways carry high volumes of traffic. Where such facilities are “limited-access,” such as the I-95 Interstate, they also provide for high speeds.
- *Urban minor arterials* form the backbone of the city’s street system. Minor arterials are continuous routes through urban areas. As most trips are on minor arterials, the traffic functions of these facilities is somewhat challenged by their attractiveness as a business address.
- *Urban collector streets* typically provide continuity over short segments (up to one-half mile). They act as tributaries gathering trips from numerous local streets and delivering it to minor arterials and within commercial districts may provide direct access to businesses. These streets are typically not numbered or designated as a touring route.
- *Local streets* include all other streets including private roads not included above. They comprise an overwhelming percentage of street mileage, but carry a significantly small amount of the overall traffic. These streets are generally short in length, with low speeds (20 to 30 mph). These streets have numerous driveways for residences and non-residential uses not requiring visibility to large numbers of passing traffic.

Access Management. The management of access connections to roadways provides measures for preserving capacity and reducing safety hazards due to conflicting traffic patterns and turning movements. Such management includes the number and location of roadways, driveways, median openings, and traffic signals, which are subject to state and locally mandated guidelines.

Unlike FDOT or Indian River County through its Land Development Regulations, the City has never formally adopted specific guidelines or regulations governing access management even though such guidelines are called under existing Objective 4, Traffic Management and supporting policies in this Comprehensive Plan. For those roadways subject to the jurisdiction of FDOT or Indian River County, the City references the standards or guidelines of those respective organizations in the development review process.

The City does apply generally accepted traffic engineering guidelines in addressing access management. These design guidelines include: sight triangle requirements at intersections and access points; provisions for circulation between adjacent parcels where practicable; limiting

the number of driveways to the minimum necessary to adequately accommodate access; requiring driveways on opposite sides of any undivided collector or arterial to be aligned or minimally offset; and ensuring driveways to major traffic generators be located a sufficient distance from intersections based on functional classification, traffic volumes, and type of movements.

Hurricane Evacuation. The City of Vero Beach, as with all coastal localities in Florida, is vulnerable to hurricanes. Hurricane evacuation is an important consideration not only due to the immediate threat to lives, but due to the aftermath of such events that make it difficult to provide emergency, medical and other vital services to stranded residents.

All residents of the City are not required to evacuate in the event of a hurricane; however, those residents living on the barrier island or in mobile homes and residents at risk are required to evacuate even in the event of a Category 1 hurricane. The designated hurricane evacuation routes are shown in Figure 3-3.

Both this Comprehensive Plan and the 2030 Indian River Comprehensive Plan have established a hurricane evacuation time of a maximum of 12 hours for a Category III storm. The specific objective in both of these policy documents does not specify whether this clearance time is out-of-county or in-county clearance time to shelter.

The 2015 out-of-county clearance times range from 14.5 hours for a Category 1 hurricane to 41 hours for a Category 5 hurricane as calculated in the *Statewide Regional Evacuation Study Program* prepared in 2010. These clearance times are based on the simultaneous evacuations of multiple jurisdictions in South Florida, which dramatically effects evacuation times. A detailed discussion of hurricane evacuation is covered under the Coastal Management Element.

Bicycle and Pedestrian System

The City of Vero Beach has an extensive bicycle and pedestrian network composed of sidewalks/bicycle paths and bicycle lanes sharing the road with motor vehicles on arterials and collectors. Existing bicycle lanes and sidewalks/bicycle paths are depicted in Figure 3-4.

Bicycle and pedestrian facilities and infrastructure have an important role in the regional and City transportation system. As documented in the MPO's *Indian River County Bicycle and Pedestrian Plan* adopted in 2015, the "benefits associated with bicycling include the ability to ease traffic congestion, increased personal health/recreation opportunities, environmental benefits, and a reduced need for automobile parking facilities." This policy document provides a detailed review and analysis of the bicycle and pedestrian system in the County and its municipalities.

The City's Land Development Regulations does require that bicycle storage facilities be provided in all development requiring 20 or more off-street parking spaces. The City annually budgets funds of approximately \$20,000 to repair existing sidewalks and curbs. Historically \$100,000 has been budgeted for new sidewalk construction.

Transit

The availability and service coverage of public transit is essential component of a balance transportation system. Not only does public transit reduce vehicular trips on the roadway system that provides environmental benefits and protect public infrastructure investment, but it provides in many cases the only viable transportation alternative for many of the elderly, children, the disabled, low income households, and households without a vehicle. Public transit is a significant asset for the City of Vero Beach where 20.4 % of households are below the Federal poverty line, 27.1 percent of residents are 65 years and older and 16.9 percent are disabled, and 10.1 percent of households have no access to a vehicle.

Since 2007, the Senior Resources Associates (SRA) has operated a fixed route transit service throughout Indian River County and the City of Vero Beach under the name GoLine. As Community Transportation Coordinator, SRA has provided and coordinated demand-response paratransit services to the eligible transportation disadvantaged since 1990.

This door-to-door demand-response service is available Monday through Friday from 5:30 a.m. to 6:30 a.m. and meets numerous transportation needs, including access to adult day care, congregate meal sites, nutrition sites, medical facilities and social, employment and recreational appointments. In addition, through contracted transportation provides, services are available 24/7 for eligible households.

GoLine operates from 6:00 a.m. through 7:00 p.m. on weekdays over 16 routes. On weekends, it provides fixed-route bus service on 12 routes from 9:00 a.m. to 3:00 p.m. on Saturdays. A special beachside circulator (Route 16) operates between 5:40 a.m. to 6:00 p.m. seven days-a-week.

Service is free to passengers, which is subsidized by federal and state grants, gas taxes, and local private/public donations. Ridership has increased from over 708,000 passengers in 2010 to over 1.13 million passengers in 2015.

The GoLine fixed-route transit system serves all the significant trip attraction and production locations within the city limits. The only areas with little or no service (no transit stop within 500-750 feet) include the South Beach area of the barrier island and isolated neighborhoods on the mainland located generally north of State Route 60.

With the relocation in 2016 of GoLine's main transit hub, currently located at the Vero Beach Regional Airport, to a parcel of land owned by the City of Vero Beach on 16th Street further adjustments will have to be made to the transit's route system to maintain the headway standard of one-hour.

Aviation Facilities

The 1660-acre Vero Beach Regional Airport provides general aviation and charter services, and flight training facilities. In December 2015, regularly scheduled commercial air service between Vero Beach and Newark (NJ) Liberty International Airport was initiated.

The airport is a vital component in the City's and region's economy. A recent FDOT statewide economic impact study updated in 2014, showed that the airport through direct and indirect economic impacts contributes \$188 million the region's economy and supports approximately 3,500 jobs.

The airport is fully funded through a variety of federal and state grants, and revenues from leasing of airport property. As required by FAA, all revenue generated at the airport must be market-based and must accrue to the airport for its maintenance and improvements. Unlike other proprietary funds, no revenues are transferred from the Airport Fund to the City's General Fund.

The existing airfield at the Vero Beach Regional Airport has three runways. The primary runway (12R-30L) is 7,314 feet in length; Runway 12L-30R is 3,504 feet in length; and Runway 4-22 is 4,974 feet in length. The airport has the capability to handle high performance military aircraft and large civilian aircraft such as the Boeing 737-800W or Airbus 320.

In FY 2013 (ended September 30, 2013), the airport accommodated over 185,000 aircraft operations of which 98 percent were general aviation aircraft operations. Based on the forecast of aircraft operations in the draft *Airport master Plan Update* for the Vero Beach Regional Airport, it is projected that total operations will increase from over 185,000 in FY 2013 to 249,500 in FY 2033.

The 65 decibel Day-Night Average Sound Level (DNL) noise contour as adopted in the latest FAR Part 150 Noise Study does not extend beyond airport property. Noise sensitive uses such as schools and residential uses are not allowed within this contour. Projections of the 65 DNL contour based on forecast airport operations through the 2035 planning horizon of this Comprehensive Plan indicate that the noise contour will continue to remain on airport property.

In 2011, the Comprehensive Plan was amended to include Objective 11 and supporting policies in the Land Use Element related to the planning and regulations of uses surrounding the airport to ensure future uses are compatible with Vero Beach Regional Airport operations in order to promote public health, safety, and welfare. The supporting policies are based on Federal Aviation Administration Advisories and Chapter 333, Florida Statutes.

In addition to the objective and policies in the Comprehensive Plan, Chapter 68 of the Land Development Regulations prohibits incompatible land uses, activities, or construction within airport runway protections zones (RPZ). Chapter 68 establishes an airport noise impact zone that extends from the edge of the pavement of each runway, a distance equal to one-half the length of the longest runway. Within the noise impact zone, regulations require that either soundproofing is installed to achieve an outdoor to indoor noise reduction of 25 decibels or grant an aviation easement to the City.

Railroads

No rail yards or rail terminals exist within the City of Vero Beach and Indian River County. However, passenger and freight rail service is an important local issue based on efforts to attract

passenger rail service and the recent proposed All Aboard Florida high speed passenger rail project.

The Florida East Coast (FEC) Railroad right-of-way and track paralleling U.S. Highway 1 to the west runs for approximately 1.9 miles bisecting the City of Vero Beach. Eight closely located railroad crossings over the FEC tracks are located with the municipal boundaries. FEC provides freight service through the City. No passenger rail service is currently provided to the City.

Over the last 20 years, the City has explored in conjunction with the State, Treasure Coast Regional Planning Council, and other municipalities the possible of reinstating passenger rail service between Jacksonville and Miami without any positive results. In 2012, All Aboard Florida (now called "Brightline"), a subsidiary of Florida East Coast Industries, announced its intention to establish high speed passenger rail service between Miami and Orlando utilizing the FEC rail system.

The passenger rail service, which would have no stop in the City of Vero Beach, would involve running 32-passenger trains a day through Vero Beach at speeds reaching 110 miles per hour. Additionally, improvements to the FEC rail system made in conjunction with the rail service would increase the number of freight trains running through the city from 14 to 20 trains per day.

The funding of the proposed project would be through multiple federal and state mechanisms and private sources. The request for a loan from the Federal Railway Administration resulted in the need to prepare a Draft Environmental Impact Statement (EIS).

The City of Vero Beach along with Indian River County and other municipalities submitted specific comments on the draft EIS regarding the potential adverse impacts of the project passenger rail project on the City of Vero Beach. In addition to concerns about impacts on emergency response times and vehicular traffic backups, the City Council by resolution raised concerns on adverse land use impacts including impacts on historic buildings in the downtown and residential neighborhoods, the Vero Man Historic/Archeological Zone, and Pocahontas Park.

Included in the resolution was a major request to federal and state agencies involved with financing and regulating the proposed project, to require All Aboard Florida to pay for all the costs of the project including the design, construction, and maintenance of upgraded rail crossing safety enhancements to meet high speed rail and quiet zone requirements.

The comments from the City of Beach, Indian River County, and other governing bodies and interest groups had little impact on the final Environmental Impact Statement issued in August, 2015. However, subsequently the City of Vero Beach and other local governments have been notified by the Federal Rail Administration that required improvements to rail crossings to allow high speed rail service will be borne by the project not local governments.

The improvements to the crossings to allow high speed rail will meet federal quiet zone standards, so local governments will be able to apply to the Federal Rail Administration for designation of quiet zones in their respective municipalities. However, costs for the maintenance of these rail crossings borne by local governments will most likely increase.

Ports and Intermodal Facilities

No commercial seaports exist in the City of Vero Beach or Indian River County. In coordination with Indian River County Metropolitan Planning Organization (MPO) and GoLine, efforts have been made to link transit for intermodal transfer of passengers, at such points as the Vero Beach Regional Airport terminal and the City's marina on the barrier island. The City has participated with the MPO in preparation of the Indian River County Bicycle and Pedestrian Master Plan and Central Greenway Plans that provide guidance and plans for linking pedestrian and bicycle travel with other travel modes.

ANALYSIS

Except for "ports and intermodal facilities," each component of the transportation system is evaluated as briefly described in this paragraph. As appropriate, specific capital improvements and their costs required to maintain or meet transportation needs over the next five and ten year period will be identified.

Traffic Circulation System

Into the future, the traffic circulation system will continue to be by far the most significant component of the City's transportation system for accommodating all manner of trips by private motor vehicles. This section relies heavily on the analysis of travel demand, road capacity, level of service, and recommended highway improvements based on the adopted MPO 2040 Long Range Transportation Plan Update (LRTP). This analysis is supplemented with specific projects and issues of importance to the City of Vero Beach over the 20-year planning horizon.

MPO 2040 LRTP. In December, 2015, the MPO completed and adopted its 2040 LRTP. This plan included specific objectives, policies, and performance standards for the regional network. The major processes and components of the LRTP as it pertains to traffic circulation are described in the following sections.

Trip Generation and Distribution for Development of the Plan: As part of the development of this plan, travel demand was forecast to the year 2040 using the Treasure Coast Regional Planning Model (TCRPM). As noted under Existing Conditions, no highway segment within the city limits has an existing Level of Service of less than the "D" standard. To identify future deficiencies, projected travel demand was distributed on the Existing plus Committed highway network, which assumes no capacity-producing improvements would be implemented beyond those projects that are programmed for construction within the MPO's 5-year Transportation Improvements Program (TIP). Volume to capacity (V/C) ratios were examined to identify roadway deficiencies resulting from roadways that fell below the overall Level of Service Standard of "D."

2040 Deficiencies: Within the City of Vero Beach, the following road segments were identified as being deficient during the 25-year planning period of the LRTP:

- Aviation Boulevard -From U.S. Highway 1 to 43rd Avenue.

- 43rd Avenue -From the South City Limits to 26th Street/Aviation Boulevard.
- U.S Highway 1-From the North City Limits to 26th Street.
- Indian River Boulevard-From the North City Limits to the South City Limits.
- S.R. A1A-From the North City Limits to the South City Limits.

In the MPO's Adopted Needs Plan the following road segments with the Vero Beach city limits were deleted:

- S.R. A1A was dropped from further consideration due to the environmental concerns and limited right-of-way. It should be noted that the north segment of S.R. A1A from North City Limits to Beachland Boulevard and the south segment of S.R. A1A from 17th Street to the South City Limits both have a Level of Service Standard of "D plus 30%."
- U.S. Highway 1 segment was dropped due to limited right-of-way and high costs for acquisition of developed properties.

Road Costs and Revenue Forecasts: The MPO prepared base year (2015) cost estimates for road projects identified in the Adopted Needs Plan. These costs were adjusted for the year of expenditure. The construction costs of the Final Needs Projects, detailed in Table 2 of the Long Range Transportation 2040 Update shows costs grouped by eligible funding categories. With inflation the project construction costs increases from \$571 million in 2015 to \$1.09 billion in 2040.

The MPO prepared revenue forecasts for funding the various capital highway projects. In addition to State and Federal grants, local funding sources include:

- 6-Cent Local Option Gas Tax
- Constitutional Gas Tax
- County Gas Tax
- Traffic Impact Fees
- 1-Cent Local Option Sales Tax (with assumption that the voter referendum would pass to extend the tax beyond 2019 as recommended by the MPO Board)

Without the extension of the local option sales tax, it was shown that many needed projects, including Aviation Boulevard, could not be built or would have to be severely delayed. If approved by voters, this tax is expected to account for 48% of total revenues and 63% of all local revenues over the period from 2021 to 2040. In adopting the 2040 LRTP, the MPO recommended approval of the extension of the tax.

Roadway Project Priorities: In identifying priorities of projects to move forward for implementation, the 7 major projects were identified by the MPO in its Priority Projects Report. The top rated project was a new interchange at Oslo Road and I-95. None of the priority projects are located in the City of Vero Beach or its immediate vicinity. Additional projects, including a couple within the City of Vero Beach, were identified for inclusion in the Cost

Feasible Plan using a set of criteria evaluating traffic volumes, connectivity, and potential impacts.

Roadway Cost Feasible Plan: The above processes resulted in the preparation of a Cost Feasible Plan that considers roadway deficiencies, Needs Plan, financial resources, and goals and objectives by organizing proposed transportation improvements necessary to maintain satisfactory mobility conditions to the year 2040.

The plan is intentionally prepared to be fiscally constrained based on transportation revenues anticipated to be available through 2040. Projects are grouped into five-year timeframes starting with 2021, which excludes projects were are already programmed for implementation by 2020.

The total estimated costs to implement the improvements in the Cost Feasible Plan (in 2015 dollars) are estimated at \$375 million. Local funds account for over 75% of total revenue sources for these projects. It is assumed that the referendum on the One Percent sales tax will be passed by voters in 2019.

Table 3-2 presents those projects in proximity or within the City of Vero Beach identified in the 2040 Cost Feasible Roadway Projects List. These projects are funded within local funds, except for 43rd Avenue widening from 26th Street to 16th Street, which is to be funded with both local and Other Arterials funds.

Table 3-2. MPO 2040 Cost Feasible Roadway Projects in City of Vero Beach

Facility	From	To	Improvement	Cost* (2015 \$\$)	Implementation Timeframe
43 rd Avenue	26 th Street	16 th Street	Widen from 2L to 4L	\$2.9 million	2026 -2030
43 rd Avenue	16 th Street	Oslo Road	Widen from 2L to 4L	\$48.2 million	2031-2040
26 th Street / Aviation Blvd.	66 th Avenue	U.S. 1	Widen from 2L to 4L	\$39.2 million	2026-2030

Source: MPO 2014 Long Range Transportation Plan Update

City of Vero Beach Roadway Plans. The City of Vero Beach’s Public Works and Planning and Development Departments have identified specific projects to improve the City’s traffic circulation system that are deemed needed or desirable over the next 10 or more years in addition to the projects shown on the MPO 2014 LRTP.

These proposed roadway projects, including those identified in the 2040 LRTP, are shown on Table 3-3. Unless a project has been budgeted in the currently adopted *Five Year Capital Program, Fiscal Years Ending 2016-2020*, the time frame for implementation is after 2020. The estimated costs for each project are based on current dollars adjusted to the time frame shown for implementation.

Only significant projects intended to maintain or improve the existing capacity of the road network or to meet specific land use and other public policy objectives are presented in Table 3-3 below and depicted in Figure 3-5. The proposed time frame for implementation of individual projects doesn't preclude a project being advanced if funding becomes available. The time frames for implementation are based on priorities recommended by staff for each proposed project.

Table 3-3, City of Vero Beach 2035 Roadway Projects

Facility	From	To	Improvement	Cost ¹ (\$1,000)	Implementation Time Frame
Airport Dr.	Atlantic Blvd	Cherokee Dr.	34th Ave. Bridge Replacement, etc.	\$ 4,200	2015-2016
“Twin Pairs” S.R. 60 (E/W)	20 th Ave	FEC RR	Reduce to 2L with parking both E and W Bound	\$1,130 to \$1,509	2021-2025
17 th – SR AIA Intersection	N/A	N/A	Add additional left turn lane and extend right turn lane	\$1,270	2021-2025
Fifth Av. Extension	21 st Street (Miracle Mile)	Royal Palm Boulevard	New 2L facility and ROW acquisition	\$571	2021-2025
Aviation Blvd.	U.S. 1	43 rd Ave.	Widen from 2L to 4L	\$20,000 ²	2026-2030

Sources: City of Vero Beach Public Works and Planning and Development Departments, December, 2015.

Notes: 1. Present day (2015) dollars based on the timeframe to be implemented.

2. This figure represents an estimate of the project costs for that portion of the improvements to be completed within the City of Vero Beach.

Not included in the list of above projects is the possible connection of Aviation Boulevard across U.S. 1 to connect with 37th Street through 15th Avenue near the Indian River Medical Complex. Such a connection would provide an additional east-west connection to allow traffic to bypass S.R. 60. It could open for development other lands both within and outside of city limits that currently have little or marginal highway access. Costs to complete the project would need to be estimated as it would involve both construction of the facility and acquisition of ROW. If any redevelopment is proposed for the mixed use 34th Street neighborhood identified in the Land Use Element, consideration should be given to studying the feasibility of this project in conjunction with any redevelopment of the area.

The City Public Works Department has identified the need for an increase in the length of the southbound right turn lane on SR AIA at the intersection of Beachland Boulevard to ease congestion and traffic conflicts. No design or costs estimates have been prepared for this potential project.

The following is a description of the five projects in Table 3-3, including possible funding sources for their implementation:

Airport Drive: This project was approved for inclusion in the current fiscal year Five Year Capital Program. Funding for the project is from a \$3.345 million FDOT grant, \$840,000 in borrowed funds, and \$30,000 from the Airport Fund. This project replaces the obsolete 50-year old 34th Avenue Bridge and includes drainage, resurfacing, sidewalk, new traffic signal and landscaping.

“Twin Pairs:” The need for this project has been identified for at least 15 or more years by the City of Vero Beach. As discussed in the Land Use Element, this 3 and 2-lane pair of one-way road segments bisects the historic downtown. It has been identified as a major impediment to the development of the downtown as a pedestrian friendly mixed-use destination with boutique shops, entertainment, cafes and restaurants, and art galleries. As configured the “Twin Pairs” has had an adverse impact on pedestrian safety, community appearance, and the vitality of the downtown.

With funding from the Indian River County MPO, a traffic calming feasibility study was prepared in 2013 by the traffic engineering consultant that demonstrated that both the west bound and east bound segments of S.R. 60 through the downtown between the FEC railroad and 20th Avenue could be eliminated without any adverse impacts on existing or future traffic or hurricane evacuation capacity through 2035.¹ The elimination of these lanes would allow on-street parking and other improvements to make these roadways much more pedestrian friendly.

The study identified the following three options that could be considered to implement the “traffic diet” or “calming” program for the facility:

- Alternative 1- Restriping only (milling and resurfacing) with striping of on-street parking -\$680,000.
- Alternative 2-Restriping (with milling resurfacing) with delineation of parking spaces with stamped asphalt -\$890,000.
- Alternative 3-Restriping (with milling and resurfacing) with delineation of parking spaces with stamped asphalt, and landscaping knuckles at 14th Avenue, 16th Avenue, and 18th Avenue - \$1.09 million.

The study results were approved by the City Council and the Indian River County MPO. The FDOT’s District Planning and Environmental Engineer stated in a letter to the City Engineer that the “Department is receptive to the land elimination concept.” To move forward, the City would need to submit an application to FDOT requesting a permit for the lane reduction.

City staff recommended that a traffic engineering firm be hired to prepare and submit the permit application that would contain details on design, operations, local support documentation, and a funding/implementation plan for the concept. The City Council approved funds for such a

¹ SR 60 “Twin Pairs” Traffic Calming Feasibility Study, Vero Beach, Florida, prepared for Indian River County MPO and City of Vero Beach by Kimley-Horn and Associates, Inc., March, 2013.

consultant in the City's FY 2015-2016 Budget. If approved and issued by FDOT, the permit will remain in effect for a number of years.

The barrier to implementing this project is funding. Funding through the MPO process is not a viable option as the MPO has identified more regional transportation needs than funding is available. As FDOT normally does resurfacing and milling of its highways every seven to ten years, waiting for FDOT to resurface the road would eliminate the \$680,000 costs for restriping. The City Council decided several years ago to wait until FDOT resurfaces S.R. 60 before moving forward with the project.

The additional costs for the alternative preferred by the City (Alternative #3) would have to be borne by local or other funding sources as the FDOT does not pay for such enhancements as stamped colorized parking spaces or landscaping knuckles. Such local funding sources may include, but not be limited to general fund revenues, special assessment of downtown property owners, or revenues from the Historic Vero Beach Downtown Economic Development Zone's tax increment trust fund.

The Comprehensive Plan should consider a specific policy or policies to provide guidance in the eventual funding and completion of this project vital to the historic downtown's renaissance.

17th Street/AIA Intersection: The MPO had programmed a project to improve the intersection of 17th Street/East Causeway Boulevard and SR A1A in early 2000's. The scope of the project was to acquire additional ROW and construct another dedicated left turn lane and extend the existing dedicated right hand turn lane along with new traffic signals.

Funding of the project through impact fees was withdrawn for the project in 2012. Prior to and subsequent to the withdrawal of the impact fees, right-of-way was acquired and new traffic signals installed; however, no funds were available for construction of intersection and turning lane improvements. During season, the traffic backups continue to worsen as development continues in the unincorporated Indian River area south of the Vero Beach city limits and with the consolidation of students from the Upper St. Edward's School to Lower St. Edwards School.

It is the staff's opinion, that this project should still be reconsidered for inclusion in the MPO's Transportation Improvements Program and funded through sources available in that regional transportation planning process. The project is needed to maintain and enhance the capacity of the road network serving the barrier and hurricane evacuation and is the intersection of two urban minor arterials in the State highway system.

Fifth Avenue Extension: The staff has identified the extension of 5th Avenue as a measure to reduce congestion management tool to reduce traffic congestion and conflicts on Indian River Boulevard and Miracle Mile (21st Street). This proposed 0.2 mile facility would link existing 5th Avenue intersecting Miracle Mile to the segment of 5th Avenue north of 23rd Street ROW. As proposed the roadway would be a 2-lane undivided facility with 60-foot right-of-way (ROW of existing 5th Avenue), 8-foot multi-purpose path, and street trees. It would

allow traffic to return to Indian River Boulevard without entering the Miracle Mile and the Miracle Mile/Indian River Boulevard intersection.

The entire length of Indian River Boulevard through the City of Vero Beach was identified on the list of 2040 Final Roadway Needs Projects. To address this capacity deficiency, Indian River Boulevard would be expanded to 6 lanes; however, the lack of available revenues to fund such a project eliminated the proposed improvement from the 2040 Cost Feasible Projects list. The staff is concerned that further expansion of the roadway capacity will not necessarily improve traffic conditions and safety issues due to the numerous driveways, intersections, and close spacing of signalized intersections.

The proposed 5th Avenue Extension may not necessarily address the capacity issues with Indian River Boulevard. However, it would help relieve the congestion and improve vehicular and pedestrian safety on both that Indian River Boulevard and Miracle Mile. It may at least delay the need to expand the lanes on Indian River Boulevard. However, the anticipated benefits of the proposed facility need to be further evaluated.

The staff has requested the MPO to consider funding a transportation engineering consultant study to evaluate the impacts of the proposed facility on Indian River Boulevard. The MPO has approved this request as one of several proposed studies in its Corridor Studies element in the 2014-2016 Unified Planning Work Program.

No potential funding has been identified for implementation of this project. Even if the engineering study were to demonstrate specific congestion management benefits of the project, it is not certain that it would be funded through the MPO process. If not, all funding would have to be from local City of Vero Beach sources. Excluding a general ad valorem tax increase, the project could be funded under various options or combination of options. These options could included special assessment of benefiting properties, contributions from development projects to address off-site impacts, proffers made by developers, or public-private partnerships supplemented with federal or state grant funds.

Aviation Boulevard: Improvements to Aviation Boulevard between US 1 and 43rd Avenue have been in the works for more than a decade including the preparation of engineering design and plans for the facility. The project had been programmed for implementation in the MPO's 2010-2015 Transportation Improvements Plan (TIP); however, it was deleted by the MPO in its 2011-2016 TIP much to the consternation of City staff.

The project is included for implementation in the 2026-2030 implementation time frame of the MPO 2040 LRTP; however, its inclusion in the plan doesn't guarantee that the project won't be further delayed beyond the time frame, eliminated due to other MPO priorities, or that the City will be required to come up with City revenues to fund the project.

It is the staff's professional opinion that this project is needs to be implemented in the next few years, not in a decade or more. With the redevelopment of commercial area at the Vero Beach Regional Airport and potential development of the 333-acre Heritage Reserve project on

26th Street west of 43rd Avenue, the need for the project is very apparent. Delaying the project until the 2026 time frame will only double the cost of the project.

To ensure that this project is moved forward in an expeditious and timely manner, the staff recommends including specific policies supporting the need and construction of this project in the Transportation Element as part of the update to the Comprehensive Plan.

Roadway Maintenance Costs. A major issue is the need to maintain existing local roads through resurfacing and rehabilitation. The current trend in the condition of roads in the network, particularly considering the age and condition of many roads, make traditional asphalt overlay or preservation treatments no longer a viable option raising the costs maintaining the City's roads.

In May, 2016, the JG3 Consulting prepared a report for the Public Works Department that evaluated the current condition trends in the maintenance and rehabilitation of the City's paved roads and identified road network maintenance and budgetary needs over the next four fiscal years.² This report recommended a proposed annual budget of \$625,000 over the next four years to maintain the current condition of the road network.

As pointed out in the report, the City has only been able to budget for pavement maintenance and rehabilitation \$50,000 annually through 2017 with an increase to \$100,000 in 2018 and then to \$150,000 in 2019. The report concludes that this will lead to a further deterioration of overall pavement conditions.

Traffic Circulation GOPs. The existing goals, objectives, and policies (GOPs) related to traffic circulation and road network need to be re-evaluated in the update of the Comprehensive Plan. In addition to the recommendations mentioned previously, the following warrant special attention in the updating of the existing GOPs:

- GOPs should be amended to be consistent with pertinent objectives and policies of the MPO 2040 LRTP unless specific policy concerns warrant otherwise;
- Existing Objective 1 of this element needs to be revised to more recognizes the balance between land or recognizes the interaction of land use and roadways;
- Specific policies are needed related to funding of for needed roadway improvements and City involvement with MPO process in identifying and programming improvements;
- More emphasis needs to be given to traffic calming and protection of neighborhoods from high volume through traffic; and
- Specific policies that set forth guidelines for street layout and specifications in the subdivision regulations should be considered.

² *Maintenance and Planning Report*, prepared by JG3 Consulting, LLC for City of Vero Beach, May 12, 2016.

Bicycle and Pedestrian System

The bike and pedestrian system is an important component of the transportation network and should be further enhanced. Bicycle and pedestrian improvements may be implemented as part of roadway projects, such as suggested for the 5th Avenue Extension, or standalone projects. All roadway projects in both the MPO 2040 Cost Feasible Road projects and City 2035 Roadway Improvement Projects assume construction of sidewalks and bike lanes.

The analysis of the bicycle and pedestrian system includes a review of bicycle and pedestrian facility improvements identified in the MPO's planning process and projects identified by the City Public Works Department for possible implementation over the next ten years are identified.

The MPO identified bicycle and pedestrian facilities in its 2040 LRTP based on the Indian River County's Bicycle and Pedestrian Master Plan updated in 2015. The Bicycle and Pedestrian Master Plan contained specific goals, objectives and policies along with recommendations for amendments to the Indian River County Comprehensive Plan.

This master plan set priorities for needed projects based on (a) level of service for walking and bicycling conditions; (b) latent pedestrian and bicycle demand; (c) public input; and (d) construction cost. These projects were organized into different tiers (priority levels) with only Tier 1 projects meeting the final grade for incorporation into the 2040 LRTP.

The cost of needed sidewalk and bike lane projects, excluding the projects anticipated to be implemented in conjunction with cost feasible highway projects, totaled \$10 million and \$15 million respectively in current dollars. Indian River County allocates a portion of gas tax (approximately \$500,000 annually) to construct standalone bicycle and pedestrian facilities. Additionally, the MPO receives approximately \$400,000 each year in Transportation Alternatives Program funds for such facilities.

The City has not adopted a formal plan for the identification and funding of the construction of new pedestrian and bicycle facilities. However, the Public Works Department routinely monitors and evaluates the need for bicycle and pedestrian facility improvements, including requests from business and neighborhood groups.

As part of this process, the Public Works Department has identified needed pedestrian and combined pedestrian-bicycle facilities beyond those identified in the MPO process. Most of these projects are targeted for areas where existing pedestrian-bicycle activity exists or the potential exists.

Table 3-4 lists bicycle and pedestrian facilities within the corporate limits of Vero Beach identified as needed in the MPO 2040 LRTP and other projects identified by the Vero Beach Public Works Department. This table does not list those pedestrian and bicycle facilities to be constructed in coordination with major roadway projects or five bike lane re-stripping projects estimated to cost under \$10k identified in the 2040 LRTP.

Table 3-4, Pedestrian and Bicycle Facilities, City of Vero Beach

Roadway	From	To	Type	Length (Miles)	Cost (\$000) ¹
10 th Ave.	Royal Palm Blvd.	S.R. 60	SW	0.3	25.2
Victory Blvd.	Atlantic Blvd.	20 th Ave.	SW	0.6	132.9
Indian River Blvd.	Royal Palm Blvd.	M. Bridge	SW	0.4	154.0
Ocean Drive	Riomar Dr.	Gay Feather Ln.	SW	0.3	62.4
Live Oak Rd. (VB)	Greytwig Rd.	Mockingbird. Dr.	SW	0.7	149.6
24 th Ave. (VB)	Charles Park	18 th St.	SW	0.4	75.8 ²
Greytwig Rd.	SR AIA	Ocean Drive	SW	0.2	34.4
Greytwig Rd. (VB)	Indian River Dr. E.	Mockingbird Dr.	SW	0.2	46.8
18 th St. (VB)	U.S. 1	Indian River Blvd.	SW	0.5	108.0
Atlantic Blvd. (VB)	20 th Ave.	27 th Ave.	SW	0.6	127.0
Seminole Ave. (VB)	Old Dixie Hwy.	16 th St.	SW	0.3	63.0
Buena Vista (VB)	Atlantic Blvd.	SR. 60	BL	0.6	NA
Old Dixie Highway	S. VB City Limits	16 th /17 th Streets	BL	0.3	26.0
20 th Ave.	S. VB City Limits	16 th Street	BL	0.3	10.4
Old Dixie Highway	16 th /17 th Streets	S.R. 60 (EB)	BL	0.4	43.0
16 th Street	27 th Avenue	20 th Avenue	BL	0.5	87.5
21 st Street	U.S. 1	Indian River Blvd.	BL	0.6	22.8

Sources: Tables 8 and 9, *Long Range Transportation Plan 2040 Update*, Indian River County MPO and City of Vero Beach Public Works Department, 2015.

Legend: (VB) - City projects not identified in 2040 LRTP.
 SW - Sidewalk project
 BL – Bicycle lane project

Notes; 1. Cost estimates are in 2015 dollars.
 2. Does not include estimated costs for a bridge over 16th Street drainage canal.

Existing Comprehensive Plan Policy 3.3 of this element calls for through the City’s Land Development Regulations a requirement that all new non-residential development provide sidewalks along roadways. The City has yet to amend its Land Development Regulations to incorporate this requirement, but has required applicants to provide such sidewalks through the development approval process. However, this requirement should be incorporated in the regulations. Further policy guidance should considered for incorporation in this Comprehensive Plan to ensure such requirements are equitably applied and the “rational nexus” test is met based on recent case law.

It is strongly suggested by staff that the existing GOPs for pedestrian and bicycle facilities in this Comprehensive Plan be reviewed with consideration of the following:

- Incorporation of pertinent goals, objectives, and policies in the *Indian River Bicycle and Pedestrian Master Plan* that provided the basis for projects in the 2040 LRTP unless policy concerns warrant otherwise.

- Provision of a policy framework for identifying and moving forward with needed pedestrian and bicycle facilities including funding sources.
- Provision of policy guidance and implementation schedule in the preparation of amendments to the Land Development Regulations related to bicycle and pedestrian facilities and specification required as a condition of development approval.

Transit

Indian River County's *Transit Development Plan 2014* (TDP) was a basis for the preparation of the transit component of the MPO 2040 LRTP. The *Strategic Service Plan* outlined in the TDP identifies transit improvements to meet needs over a ten-year period. As part of the ten-year plan is the on-going effort to install bus shelters on the GoLine routes and make fleet upgrades and expansion.

The most significant short-term improvements proposed include (1) extending weekday and Saturday operations to provide service over a longer portion of the day; and (2) implementing Sunday service. The longer term projects that affect the City of Vero Beach include increasing headways on four major routes to every 30 minutes and a new route on AIA from the Village Beach Market in Vero Beach to CR 510 Causeway.

The only area of the City not identified for future fixed-route service includes most of the low density and affluent residential areas on the barrier island. These areas are not considered viable for any fixed transit service in the foreseeable future. The Senior Resources Association also provides door-to-door paratransit service throughout the County and City.

The current annual operating cost of the fixed transit system is approximately \$2.5 million and approximately \$1 million for paratransit service. The operational cost for implementing the proposed operational improvements in the 10-year transit needs plan is approximately \$3.0 million,

The funding sources for transit improvement include Federal Transit Administration grants, FDOT Service Development Grants, local funding, and private sector sources. The estimated federal and state funding for transit between 2021 and 2040 is approximately \$65 million in year of expenditures and \$26 million in local funds in year of expenditures. Present day dollars the total is \$40 million and \$16 million for these revenue sources.

The existing GOPs of this element regarding transit should be reviewed and amendments made to reflect updated conditions and to stress intergovernmental planning and coordination of services with the Indian River County MPO and GoLine.

Aviation Facilities

As discussed under Existing Conditions, an update of the Vero Beach Airport Master Plan is fully underway. This plan is outlining specific proposed improvements both to airside facilities and to other development on the airport property to create a viable commercial center to support maintenance and enhancement of the airport. It is anticipated that the recommendations from

this plan may require further amendments to the Future Land Use and Zoning Maps and Land Development Regulations in the near future to implement proposed development strategies in the master plan when adopted.

Railroad

As stated under Existing Conditions, a major concern of the City and the region relates to the proposed high-speed rail service and additional freight service that is expected to occur in the next few years. Specific GOPs need to be included in this update that addresses this issue and measures to mitigate its adverse impacts on the City. Furthermore, specific guidance on future passenger rail service to serve the City should be considered in the update.