

Attachment: Chapter 5, Transportation Element,
where stricken text is proposed for deletion and
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Chapter 5 TRANSPORTATION ELEMENT

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Acronyms used in this chapter:

AASHTO	American Association of State Highway and Transportation Officials
CGMP	Comprehensive Growth Management Plan
FAA	Federal Aviation Administration
FDOT	Florida Department of Transportation
LOS	Level of Service
LRTP	Long Range Transportation Plan
MPO	Metropolitan Planning Organization
Q/LOS	Quality/Level of Service (handbook)
TCMP	Traffic Congestion Mitigation Program

Section 5.1. Background

5.1.A. *Plan development.* The Martin County Comprehensive Growth Management Plan adopted April 1, 1982 required commencement of a comprehensive transportation study within one year of the Plan's adoption. The planning to complement this objective began in 1983 with the development of the Year 2005 Transportation Plan. It was endorsed by the Martin County Board of County Commissioners in November 1987. The Plan included the following major characteristics:

1. Determination of the traffic capacity and level of service (LOS) of the existing network;
2. Evaluation of the relationship between the transportation network and existing and future land use, using the Simplified Land Use Allocation Model and modeling socioeconomic data into future travel patterns;
3. Recommendations, including cost projections for required improvements to major thoroughfares and bridges emphasizing upgrades to the existing network system.
4. Information to assist policymakers in selecting alternative revenue sources such as impact fees.

Since that time, Martin County has established a Metropolitan Planning Organization (MPO), and following the 2000 U.S. Census the urbanized area of the County became a part of the Port St. Lucie Urbanized Area. As required by federal regulations, the MPO is responsible for developing a **Regional** Long Range Transportation Plan (RLRTP). It is to be based on (1) the future land use categories, including their densities or intensities of use as shown on the future land use map(s), and (2) the projected integrated transportation system. It aims to ensure consistency between existing and proposed population densities, housing and employment patterns, as well as between the land uses and transportation modes and services proposed to serve the areas. The original L RTP, which used 2020 as its planning horizon, is updated every five years by the MPO. The update assesses transportation needs and establishes a long range cost-feasible plan to implement those needs.

Section 5.1 of this element contains background information. Section 5.2 provides information on existing roadway conditions, information about the reporting of crash data, roadway network information and level-of-service information. Section 5.3 provides information on existing public transportation, airport and other transportation facilities, comprised mainly of current facility locations and the extent of service provided. Section 5.4 summarizes the future roadway needs, while Section 5.5 summarizes the other future transportation needs of Martin County. Section 5.6 lists the goals, objectives and policies of the Transportation Element.

5.1.B. *Purpose and intent.* Concern for a safe, efficient and balanced transportation system for both motorized and nonmotorized methods of travel is inherent in this Plan, as is the need for compatibility between the transportation system and adjacent land uses. The transportation network is the "supply" side of the "demand versus supply" equation; land uses represent the "demand" side. As development of vacant land continues, roadways face heavier demand. The ability of the roadway system to provide the proper level of service is therefore linked to the Future Land Use Element. The purpose of the Transportation Element is to establish an acceptable transportation system in Martin County for both future motorized and nonmotorized transportation modes and in accordance with Florida Statutes to plan for a multimodal transportation system.

Martin County's transportation system is a key component of its quality of life. All transportation planning efforts are focused on integrating the Transportation Element with both land use design and environmental concerns. The purpose of this element is to set forth a plan that advances a transportation agenda that is efficient, safe and sensitive to the other elements affected by transportation.

Section 5.2. Existing Roadway Conditions

5.2.A. *Lane geometry and functional classification.* Martin County contains approximately 1,275 miles of roads. The network consists of approximately 58 miles of limited access highways, 133 miles of major arterial roadways and 119 121 miles of minor arterial roadways. Collector and residential streets make up the remaining mileage. The Florida Department of Transportation (FDOT), Martin County and the Martin Metropolitan Planning Organization (MPO) have adopted a map that depicts the functional classification of the roadway network based on the Federal Highway Administration's Highway Functional Classification system. A database identifying the maintenance responsibilities of the road network is maintained by the Martin County Engineering Public Works Department. The Existing Transportation Map series is shown on Figures 5-1 through 5-4; the functional classifications are shown on Figure 5-1A, maintenance responsibilities are shown on Figure 5-1B, and number of lanes are shown on Figure 5-1C.

Editor's note(s)—Figures 5-1A—5-1C are on file in the office of the Martin County Growth Management Department and available on the County's website.

5.2.B. *Daily traffic volumes.* The annual Roadway Level of Service Inventory Report is generated by the Engineering Public Works Department and is used to provide the current traffic volumes and growth rates, which are used to predict what roadway volumes have the potential to exceed the County's adopted LOS thresholds in 5 and 10 years. The reports are on file with the Engineering Public Works Department and available on the County's website. Peak season factors for Martin County have been defined by the FDOT and the County annual count programs.

5.2.C. *Crash summary.* Crash information for all roads is collected by the Florida Highway Patrol, Martin County Sheriff's Office and local police agencies. Martin County utilizes a crash record database. High crash areas are incorporated into the annual update of the Capital Improvements Program for correction of unsafe conditions. Every other year, the Engineering Public Works Department prepares a Crash Surveillance Report that identifies, analyzes and provides recommendations for reducing high-hazard intersections and fatal crashes as well as pedestrian and bicycle crashes. The reports are on file with the Engineering Public Works Department and available on the County's website.

5.2.D. *Levels of service on the existing system.* Level of service, ranked from A to F, defines the operation of a roadway segment. The operational capacities are set with peak hour/peak direction thresholds. For general planning purposes, Martin County uses the qualitative definitions and generalized tables of LOS standards, found in the FDOT's latest Quality/Level of Service (Q/LOS) Handbook. The Handbook contains qualitative descriptions of these LOS targets, which are described below. For specific determinations of roadway level of service, Martin County uses the methods in the Q/LOS Handbook. The roads that carry volumes in excess of the peak hour peak direction LOS are shown on Figure 5-1C.

Editor's note(s)—Figure 5-1C is on file in the office of the Martin County Growth Management Department.

Martin County's CGMP is consistent across elements, as evidenced by the cost-feasible program of capital improvements that maintain adopted permanent and interim levels of service for all roadway and public transportation facilities.

Qualitative Definitions Characterizations of Levels of Service

A	•	Free flow, vehicle speed controlled only by traffic laws, driver may maneuver at will.
	•	Little or no delay at signalized intersections.
	•	Vehicles continue to drive through or slow down prior to passing through the intersection except for signal changes prior to arrival
B	•	Stable flow, slight interference from other vehicles, minimal delays at signalized

		intersections.
	•	Vehicles may have to stop briefly or slow down prior to moving through the intersection except for signal changes prior to arrival.
C	•	Stable flow, vehicle speed lower and maneuverability affected by other vehicles.
	•	Delays at most signalized intersections.
	•	Vehicles stop and then get through the intersection on the first green light. Queues begin to form.
D	•	Approaching unstable flow, slow but tolerable operating speeds, noticeable but tolerable delays at signalized intersections.
	•	Stopped cars are not delayed more than two cycles of the signal.
E	•	Unstable flow, capacity flow conditions with low, variable operating speeds and substantial delays at signalized intersections.
	•	Stopped cars are delayed for more than two cycles.
F	•	Unstable, stop-and-go forced flow
	•	Low speeds that may drop to zero for short time periods.
	•	Major delays at all critical signalized intersections along a roadway corridor.

The most current level of service on all major roadways in the County shall be presented in the annual Roadway Level of Service Inventory Report. LOS for a given roadway segment varies during the day with the volume of traffic using the facility. Usually, the worst portion of the day is the afternoon peak period. The adopted roadway LOS standards for the purposes of this plan are stated in Policy 5.2A.1. Generally, the standards maintain LOS D during the peak season/peak hour/peak direction as the lowest tolerable level of service on arterials in the rural and urban areas. For all roadways on the Strategic Intermodal System (SIS) and those funded in accordance with Section 339-2819, Florida Statutes, the Transportation Regional Incentive Program (TRIP), the adopted LOS standard shall be as designated by the FDOT.

5.2.E. Martin County's Comprehensive Emergency Management Plan (CEMP), prepared by the Emergency Management Division and adopted by the Board of County Commissioners on December 1, 2009, complies with the State requirements for emergency evacuation. The CEMP provides preparedness, evacuation, and post disaster management for the County, including areas east of the Herbert Hoover Dike (Appendix I). This document hereby incorporated into the CGMP by reference.

Section 5.3. Other Existing Transportation Systems

Florida Statutes requires consideration of all modes of transportation as part of the Transportation Element. An overview of non-vehicular modes of transportation is provided below to show the relationship to the entire transportation network.

5.3.A. Airports.

1. *Plan development.* In 2001, data and analysis for aviation facilities was updated to reflect new information available to Martin County. The Florida Aviation System Plan: Treasure Coast Region, 1992-2010 provided the framework for the 2001 revisions. The Western Martin County General Aviation Airport, Phase I Regional Aviation Needs was prepared for Martin County and the Florida Department of Transportation in April 1992. The purpose of the document was to investigate the general aviation activity in Martin County in fulfillment of the element's original objective 5.3A. In addition, the Master Plan Update for Witham Field was released in August 2001. These documents fulfilled objectives found within the original element and resulted in revisions as well. The Master Plan Update for Witham Field is incorporated by reference as data and analysis.

The service role of Martin County Airport/Witham Field is defined in the Airport Master Plan and the Federal Aviation Administration's National Plan of Integrated Airport Systems (NPIAS). Both the Master Plan and the NPIAS define the airport's service level as General Aviation.

Martin County Airport shall continue its role as a General Aviation Airport and the airport shall not become certificated under Federal Aviation Regulation (FAR) Part 139 and therefore shall not be eligible to accept Scheduled Commercial Airline service operating under Federal Aviation Regulation Part 121.

2. *Airport facilities overview.* There is one publicly owned, public-use airport in Martin County, Witham Field, and one privately-owned public use airport. Witham Field is a ±697-acre county-owned general aviation airport managed by an airport Director. It is located in the Stuart urban area just southeast of Monterey Road and east of Dixie Highway (CR A1A), which provides three points of ingress and egress for surface transportation as shown on Figure 5-9, the Airport Layout Plan, which is on file with the Airport Department.

Editor's note(s)—Figure 5-9 is on file in the office of the Martin County Growth Management Department and on the County's website.

Witham Field has three runways with taxiways. A fourth runway, 02/20, was closed in 1992. Apron and turf parking facilities in the general aviation area are located south of runway 12/30.

Tower records indicate that the vast majority of the general aviation activity involves single-engine and light twin-engine aircraft. However, there is a regular and increasing use of the airport by jet aircraft, especially since some enhancements have been completed on the existing runways and taxiway system. There are two full service fixed based operators (FBO) at Witham Field. These are (1) Stuart Jet Center, and (2) Atlantic Aviation. The fixed based operators provide services per the Minimum Standards for Aeronautical Activities.

Another public-use airport is Indiantown Airport (fka Circle T Ranch). This airport is owned by a private enterprise and has a fixed based operator (FBO) with limited services on-site. The airport has a 6,300' x 300' turf runway. The facility currently has approximately ten based aircraft. The Indiantown Airport currently has no master plan.

There are four other airports in Martin County: Naked Lady Ranch, Cox's Hammock Airport, Tropical Plantation, and Ranch Colony Park (Tailwinds). There are several other unnamed airstrips in the County. There are also heliports at Martin Memorial Hospital, The Medalist and at Sailfish Point. For the purposes of long-range planning, major emphasis shall be given to the two public use airports—Witham Field and Indiantown Airport. The layout of Witham Field Airport is shown on Figure 5-9, the Airport Layout Plan. Additional details on airport zoning districts are provided in the Land Development Regulations.

Editor's note(s)—Figure 5-9 is on file in the office of the Martin County Growth Management Department and on the County's website.

3. *Other airports.* For aviation planning purposes, Martin County is within the Treasure Coast region, which includes Martin, St. Lucie, Okeechobee and Indian River Counties. However, its proximity to Palm Beach County, which is within the South Florida Metropolitan region, provides the County with access to a number of airports. Martin County is located approximately equidistant to two airports in the region. These are the Palm Beach International Airport and the St. Lucie County International Airport. The Treasure Coast region also includes the Vero Beach Municipal Airport and the Sebastian Municipal Airport. Palm Beach International Airport is approximately 40 miles south of Stuart, and is highly accessible Interstate 95 (i.e., within 45 minutes). The Palm Beach International Airport completed a

major expansion and redevelopment project in 1989, has customs facilities, and is served by several commercial carriers.

The St. Lucie County International Airport is less than 30 miles to the north. This airport does not handle the same level of national and international flights as the Palm Beach International Airport. There is customs service, but the airport is currently not serviced by a commercial carrier.

Palm Beach County opened a reliever airport, North County Airport, in the North Palm Beach area in April 1994.

4. *Existing level of service at the public-use airports.* In a fast growing area such as south Florida, the mix of aircraft, operating throughout a range of airspeeds in both visual and instrument conditions, places considerable stress upon the air traffic control system. In the past, this mix has included sport parachute jump activity, helicopters, ultralights, gliders, hot-air balloons, small single- and twin-engine general aviation aircraft, air carriers, corporate jets and turbo props, flight training and a mix of military aircraft.

Witham Field is the only publicly owned public-use facility. There are two fixed based operators (FBOs) at the airport, which provide services to private aircraft owners. The bulk of the cargo in and out of the airport is related to the actual airplane components handled by Vought Aircraft Industries, which are almost always transported in and out by rail freight or truck lines. This is restricted to Vought Aircraft Industries' operations and the figures for the amount of cargo are not available at this time. The only other bulk product provided to this facility would be fuel for the FBOs. There is no cargo terminal at Witham Field and no scheduled commercial flights currently exist or shall be allowed in the future. Activities at Witham Field include general aviation uses, including business/pleasure aviation uses and flight training.

Witham Field has an annual service capacity of 365,000 operations per year. The following table shows the total operations and percentage of annual service capacity:

Years	Total Operations
2012	57,198
2013	69,939
2014	83,298
2015	89,059
2016	92,061

Indiantown Airport has a total annual capacity of 100,000 operations and is experiencing approximately 10,000 operations per year.

In order for an airport to provide acceptable levels of service, adequate surface access by road or rail must be provided along with land based facilities such as terminals, parking and cargo handling areas. The best airport system is ultimately only as good as the land and air access to the system airports. Therefore, these factors are very important in determining deficiencies. The Treasure Coast Regional Aviation System Plan outlined the following circumstances, which have an impact on Martin County:

- a. The Palm Beach International Airport has expanded its capacity. The North Palm Beach General Aviation Reliever Airport has opened. Both of these facilities shall provide additional level of service to Martin County. St. Lucie International has begun planning for new facilities.
- b. Even though the publicly owned public-use airport in Martin County may currently enjoy adequate year-round level of service, the growth in other areas of the Treasure Coast region may lead to more frequent use of Martin County's airport facilities.

- c. Peak periods during weekends, holidays, and the winter tourist season do create some congestion at Witham Field. Currently, there is no congestion at Indiantown Airport.

There are no operational deficiencies at access roads to Witham Field or other airports in Martin County.

5.3.B. *Public transportation.*

1. *Plan development.* Public transportation planning in Martin County is identified in the most recent versions of the county's Transit Development Plan or the MPO's Long Range Transportation Plan or Transportation Disadvantaged Service Plan. The County is required to update the Transit Development Plan by Rule 14-73, Florida Administrative Code, in order to be eligible for grant funds.
2. *Purpose and intent.* Florida Statutes require all local governments with a population of 50,000 or more to include public transportation considerations in their comprehensive plans. The purpose of this section is to ensure that the public transportation needs of all Martin County residents are adequately addressed and realistic plans are developed to meet future needs, based on changing service needs, demographics and traffic patterns.
3. *Existing conditions.* Martin County operates its own public transportation service. It provides fixed-route services in Indiantown and Stuart, and operates along US-1 providing connections between St. Lucie and Palm Beach counties. It provides complementary ADA paratransit services as governed by the Federal Transit Administration to continue receiving federal grant funds.

The Community Transportation Coordinator (CTC) for Martin County arranges transportation for the transportation disadvantaged **individuals** in accordance with the Memorandum of Agreement with the Florida Commission for the Transportation Disadvantaged and in accordance with Chapter 427, Florida Statutes.

The existing Public Transportation System is shown on Figure 5-3.

Editor's note(s)—Figure 5-3 is on file in the office of the Martin County Growth Management Department and available on the County's website.

5.3.C. *Non-motorized transportation systems.* The non-motorized transportation system serves bicyclists and pedestrians. The State Transportation Plan requires bicyclists and pedestrians receive full consideration in the planning, design and construction of transportation facilities. Sidewalks and bikeways should be incorporated into state and regional plans along with local transportation plans and programs. The State also requires establishment of bikeways and sidewalks in conjunction with construction, reconstruction or changes in state facilities within five miles of an urban area. Exceptions may be made if consideration of a non-motorized facility is contrary to public safety, cost is disproportionate to need or probable use, or the absence of need or use has been determined.

As part of the Long Range Transportation Plan, the MPO developed and adopted the Multimodal Cost Feasible Plan. This Plan serves as the guiding document Martin County uses to plan for and fund non-motorized transportation facilities and is hereby incorporated as data and analysis by reference.

Pedestrian and bicyclist facilities. The interface of pedestrians and vehicles requires careful design to ensure their safety and movement. Crashes involving pedestrians and bicyclists are included in the Crash Surveillance Report described above. The existing Non-motorized Transportation System is shown on Figure 5-4.

Editor's note(s)—Figure 5-4 is on file in the office of the Martin County Growth Management Department and available on the County's website.

5.3.D. *Railroads/Seaports.*

1. *Railroads.* Martin County has three railroad corridors, two of the Florida East Coast Railway and one of CSX Transportation. None of these corridors has passenger stations or intermodal facilities. Florida East Coast Railway's main corridor carries freight and generally runs parallel to the eastern coastline from St. Lucie County to the Palm Beach County line. A secondary corridor carries freight in the western part of the County and runs north from Belle Glade to SR-710 and then northeasterly toward Fort Pierce. The CSX Transportation corridor carries freight parallel to SR-710 from the Okeechobee County line to the Palm Beach County line. In Palm Beach County, the CSX Transportation corridor is shared with the South Florida Regional Transportation Authority, which operates South Florida's Commuter Rail System, known as Tri-Rail, south to Miami-Dade County. Together, these railroads are integral to freight transport between Jacksonville, Miami and the Tampa area.

The frequency and length of freight trains on the main Florida East Coast Railway corridor are significant physical barriers that impede the level of service on most major roadways. Delays are usually due to long trains and track repairs.

The existing railroad corridors are shown on Figure 5-3.

Editor's note(s)—Figure 5-3 is on file in the office of the Martin County Growth Management Department and available on the County's website.

2. *Seaports.* Martin County has no seaports, but there are two nearby - Port of Fort Pierce and Port of Palm Beach. Due to the proximity of these facilities in adjacent counties, no future needs have been identified. Martin County has a unique location on the Atlantic coastline, allowing it to play a major role in water transportation even without a port terminal or related development. The only cross-Florida east/west waterway in the Treasure Coast region is located in Martin County: the cross-Florida Okeechobee Waterway (i.e., St. Lucie Canal), which connects the City of Stuart and its environs with the western gulf city of Fort Myers. This navigable waterway, developed by the U.S. Army Corps of Engineers, is 156 miles long. It can accommodate both passenger and freight vessels and is fairly well used.

Section 5.4. Future Roadway Needs

5.4.A. *Traffic forecast.* The future transportation network needs of Martin County are based on short term projections and long term projections established through the modeling efforts of the RLRTP, which applies the transportation planning methodologies adopted by the FDOT.

For the short term evaluation, the existing traffic volumes and growth rates from the annual Roadway LOS Inventory Report are used to project potential deficiencies in five and ten years as identified in the Annual Roadway Needs Assessment. The identified deficiencies are then programmed in the County's Capital Improvements Element, either in the five-year Schedule of Capital Improvements or in the ten-year plan, unless otherwise programmed in the FDOT's Five-Year Work Program or the MPO's Transportation Improvement Program.

For the long term evaluation, the existing and future regional road network is modeled using the Florida Standard Urban Transportation Modeling Structure. This travel demand model utilizes base year socioeconomic and transportation network data, as well as forecasted socioeconomic and forecasted multimodal transportation network data. Federal regulations require a 25-year planning horizon, with updates in the LRTP every five years by the Martin MPO. This ensures that existing and proposed population densities, housing and employment patterns, and land uses are consistent with the transportation modes and services proposed to serve the areas. The Future Transportation Map series is shown on Figures 5-5 through 5-8, the Roadway System is shown on Figures 5-5A, 5-5B, and 5-5C.

From the needs assessment, the L RTP identifies and prioritizes a list of transportation projects that can be implemented from revenues projected to be collected during the concurrent 25-year planning horizon. This is formalized in the Cost Feasible Plan. Each year the Martin MPO prioritizes the needed transportation projects that were identified in the most recent Cost Feasible Plan and incorporates these into a five-year Transportation Improvement Program, which contains federal and state funded transportation projects. The County may identify these needed facilities for implementation in its Capital Improvements Plan.

Future right-of-way provisions are provided for in Policy 5.2C.2.

5.4.B. *Analysis and LOS standards.*

Roadway Capacity. LOS standards and generalized LOS tables are essential for transportation planning. These standards incorporate:

1. The correlation between size of the urban area and acceptance of some highway congestion as a trade-off for other urban amenities;
2. The different roles provided by state facilities; and
3. Local flexibility in determining special transportation areas.

The standards also reinforce the growth management concepts of urban infill and infrastructure concurrent with the impact of development.

Equally important as adopting LOS targets is having a user-friendly measurement technique. The FDOT has developed generalized level of service tables based on the Highway Capacity Manual, which it recommends for broad planning applications and as a general guide to determine highway level of service and through-lane requirements on state roadways. The generalized tables are found in the FDOT's latest Q/LOS Handbook and are incorporated herein by reference.

The values shown in the generalized tables are based on the definitions and measurement techniques of the Highway Capacity Manual. It specifies that signalization characteristics (e.g., number of signals per mile, length of green light) are equally important as roadway characteristics (e.g., number of roadway lanes) in determining arterial levels of service. The generalized tables reflect this emphasis. They are also based on actual Florida traffic, roadway and signalization data, making them applicable throughout the State. However, it is recognized that traffic characteristics vary by area and facility. Thus, unlike the operating LOS targets, the generalized tables are not statewide standards; rather, they are guidelines for measuring highway level of service.

FDOT has adopted the LOS targets and generalized LOS tables for use on state highways. These targets represent the state-of-the-art in highway planning applications. Together they implement growth management concepts and emphasize the importance of managing access on the state highway system.

In addition to the generalized tables, the FDOT's latest Q/LOS Handbook provides for conceptual planning to obtain a solid determination of the level of service of a facility and to determine situations when the generalized tables simply are not accurate enough. Florida's LOS software, which includes ARTPLAN, FREEPLAN and HIGHPLAN, Highway Capacity Software is the appropriate tool for conducting these types of analysis. Martin County will use these methods where applicable in updating the Concurrency System analysis.

County traffic analysis techniques. Current County traffic analyses techniques use the FDOT's latest Q/LOS Handbook, which reflects the current version of the Federal Highway Capacity Manual. The next update to the L RTP will also be based on the latest Handbook.

Adopted LOS standard. The LOS standard for all roadways in unincorporated Martin County is LOS D in the peak hour/peak direction. Standards for the State Highway System are guided by FDOT's latest 'LOS Policy'. This standard is formally stated in Policy 5.2A.1.

Roadways not currently meeting the LOS criteria

1. These types of roads are defined as follows:
 - a) *Constrained facilities*: Roadways that will not be expanded by the addition of two or more through lanes because of physical, environmental or policy constraints. Physical constraints primarily result from intensive development adjacent to the roadway, making the cost of expansion prohibitive. Environmental and policy constraints primarily occur when decisions are made not to expand a road based on environmental, historical, archaeological, aesthetic or social impact considerations.
 - b) *Backlogged facilities*: Roadways that are (1) operating at a level of service below the minimum standards, (2) not programmed for construction in the first three years of the FDOT's adopted work program or the five-year schedule of improvements in the Capital Improvements Element and (3) not a constrained facility, as defined in a) above.
2. Acceptable strategies for addressing these types of roads are:
 - a) *Transportation Concurrency Management Area*: A geographically compact area where intensive development exists or is planned in a manner that will ensure adequate mobility and further achievement of state planning goals and policies. These include discouraging urban sprawl, encouraging revitalization of downtowns, designating redevelopment areas, protecting natural resources, protecting historic resources, maximizing efficient use of public facilities and promoting public transportation, bicycling, walking and other alternatives to the single-occupant automobile.
 - b) *Transportation Concurrency Exception Area*: An urban area where infill and redevelopment are encouraged and exceptions to the transportation concurrency requirement are allowed, provided that alternative modes of transportation, land use mixes, urban design, connectivity and funding are addressed. It is meant to encourage development where infrastructure already exists, thereby reducing urban sprawl. The concurrency exception applies to all land uses, development and types of facilities within the Area.
 - c) *Long Term Transportation Concurrency Management System*: A mechanism that allows development to continue while roadway capacity is planned, designed, and constructed, and funding for this work is accumulated. Such systems are based on an established 10-year program of improvements, identified in the Capital Improvements Element, which will return the backlogged facility to an acceptable level of service. Typically, these systems are accompanied with a temporary variance to the adopted level of service.
 - d) *Multimodal Transportation District*: An area delineated on the future land use map where vehicle mobility is given secondary priority in favor of assuring a safe, comfortable and attractive pedestrian environment with a convenient connection to public transportation. Such districts must incorporate community design features that will reduce automobile trips or vehicle miles of travel and that support an integrated, multimodal transportation system.

5.4.C. *Financing for capital improvements*. The funding for road projects is derived from gas taxes, road impact fees and various other state and federal programs. These funding sources and the funding projections from each source are provided in the Capital Improvements Element. The CGMP is based on the premise that existing and future development will be monitored to alleviate deterioration in the adopted level of service and to upgrade backlog conditions. The balance of the County's transportation trust fund is used for general roadway maintenance and rehabilitation and for matching state and federal funds to reduce backlogs.

Section 5.5. Other Future Transportation Needs

5.5.A. Future aviation and related facilities needs.

1. *Airport needs.* The future aviation needs for Martin County are summarized in the Airport Master Plan Update, August 2001. That study indicated that the County's capacity at Witham Field would be sufficient provided necessary improvements are made.

The Master Plan Update utilized the FAA Aviation Forecast to establish the preliminary baseline forecasts and general aviation operations for Witham Field. The results for Witham Field are shown below:

Airport	Base Year		Forecast*	
	1999	2007	2010	2020
Witham Field (Based Aircraft)	204	234	228	253
Witham Field General Aviation (Operations)	119,533	80,641	146,704	166,609
Witham Field Military (Operations)	582	298	851	966
Witham Field Air Taxi	2,868	6,453	2,479	2,816

Source: Master Plan Update: Witham Field, Martin County, Florida, August 2001, Hoyle, Tanner and Associates. The data in the table above shall be revised following the next Witham Field Master Plan Update.

Airport	Year	Year	Year	Year
	2005	2006	2007	2008
Non-jet operations	88,402*	77,049	67,935	55,909
Jet operations	8,805**	11,458	12,706	10,005
Total	89,207	88,507	80,614	65,914

** Does not include Jan. and Feb. 2005

The 2001 Master Plan Update identified the facility requirements for Martin County Airport/Witham Field.

2. *Future aviation plan (Witham Field).* Witham Field shall not become certified under FAR Part 139 and shall not be eligible to accept Scheduled Commercial Airline service operating under FAR Part 121. The airport needs at Witham Field are outlined in the 2001 Airport Master Plan. The Florida Department of Transportation designated funds for the development of an Airport Master Plan Update for Witham Field. The most recent Master Plan was completed in 2001. Figure 5-9, the Airport Layout Plan, shows the boundary for Witham Field Airport. A FAR Part 150 noise study has been completed by Martin County. Martin County anticipates a Master Plan Update in Fiscal Year 2009.

Editor's note(s)—Figure 5-9 is on file in the office of the Martin County Growth Management Department and available on the County's website.

5.5.B. Future public transportation needs.

Plan requirements. The Transit Development Plan (TDP) is updated every five years. Future plans must keep in mind the County's mandates and recognize that increasing demands and decreasing resources will require the

exploration of funding agreements between the FDOT, incorporated municipalities, and the private sector to share responsibility for public transportation. During development of these plans corridors for public transportation should be designated.

1. A public transportation system in Martin County should be complemented by inter-community linkages with Palm Beach and St. Lucie Counties, and a special "fast-link" system between the City of Port St. Lucie and the Stuart urban area.
2. Future public transportation plans should consider the possible impacts of anticipated street and highway improvements on the public transportation system as well as transportation management programs and designated public transportation corridors.

Future LOS standards. The future LOS standards for public transportation will depend heavily on the funding sources, operating agency and geographic service areas. The Future Public Transportation System is shown on Figure 5-7. LOS standards shall consider the following:

1. Frequency of service: Days per week, times per day and times per hour;
2. Service area coverage: Minimum walking distance/time to bus stops and to final destinations (i.e., major employment, retail or recreational centers);
3. Hours of operation: These should consider the journey to work (morning and afternoon) trip patterns;
4. Costs: These should be reasonable but enough to cover some main operational functions without excessive subsidies. Costs could also vary based on the travel distance between outlying areas and the urbanized area.

Editor's note(s)—Figure 5-7 is on file in the office of the Martin County Growth Management Department and available on the County's website.

Section 5.6. Goals, objectives and policies

Goal 5.1. To develop and implement a transportation network that is coordinated and consistent with municipal, County, state, federal and regional planning programs and planning programs of adjacent jurisdictions.

Objective 5.1A. To prepare an annual report of transportation planning needs and implementation activities to document consistency with the plans of federal, state, regional and local planning programs and provide for adequate private sector input.

Policy 5.1A.1. Assess annual roadway needs. The County shall prepare an annual roadway needs assessment. The annual needs assessment shall rely on the latest available traffic volumes and growth rates to project potential deficiencies in five and ten years, and shall be used to provide input into the FDOT Five-Year Work Program, the Martin County Capital Improvements Plan and the Capital Improvements Element of the CGMP. Changes in roadways shall be included in the annual needs assessment and, where appropriate, added to the Capital Improvements Plan and Capital Improvements Element.

Policy 5.1A.2. Assess other transportation needs. The County shall regularly assess the needs of other transportation systems, including public transportation, rail, sidewalks, bikeways and greenway trails, through updates to the MPO's Long Range Transportation Plan.

Policy 5.1A.3. Establish coordination procedures with municipalities. Martin County shall establish specific coordination procedures with municipalities, Treasure Coast Regional Planning Council and the FDOT to assure ongoing communication. Such communication shall be further assured through regular

meetings with these agencies. The Martin MPO will be used to enhance coordination between the agencies and municipalities named above.

Policy 5.1A.4. Seek public participation in transportation planning. The County shall evaluate public participation in planning and implementing the transportation improvement program and, if necessary, initiate changes to improve opportunities for private sector representatives to provide input.

Policy 5.1A.5. Plan for comprehensive long range transportation needs. The Long Range Transportation Plan, the Transit Development Plan and related annual reports shall consider the State's adopted Five-Year Work Program, Florida Transportation Plan, state land development plan, strategic regional policy plan and applicable roadway plans of local municipalities.

Policy 5.1A.6. Functionally classify all roadways. The County will coordinate with the State in continuing review and evaluation of the State's functional classification system for major roadways.

Policy 5.1A.7. Amend the CGMP to incorporate construction changes. The County will amend the CGMP if construction of any of the transportation improvements identified in the Long Term Concurrency Management System are eliminated, deferred or delayed. The amendment shall specify the default LOS standard, if any, that will be binding for issuance of development orders and permits.

Policy 5.1A.8. Prepare annual peak-hour LOS report. Martin County will develop an annual peak-hour LOS map or report.

Objective 5.1B. To ensure that the Long Range Transportation Plan is consistent with the Future Land Use Element and map and with proposed population densities and housing and employment patterns.

Policy 5.1B.1. Ensure Transportation CGMP amendments are consistent with other elements and plans. All proposed amendments to the Transportation Element will include a comprehensive statement of findings documenting that the proposed modification is consistent with the future land use map, the five-year FDOT Work Program and plans of neighboring jurisdictions (where applicable).

Policy 5.1B.2. Ensure other CGMP amendments are consistent with this Element. All proposed amendments to the Future Land Use Map shall be consistent with this Transportation Element, the FDOT Five-Year Work Program, and transportation plans of neighboring jurisdictions.

Policy 5.1B.3. Review and provide input to the FDOT Work Program. The County and MPO shall provide input and review each subsequent version of the FDOT Five-Year Work Program.

Policy 5.1B.4. Review local governments' traffic plans. The County and MPO will provide input and review the traffic circulation plans and programs of local municipalities and adjoining counties for compatibility with this element.

Policy 5.1B.5. Notify public of transportation planning activities. The County will establish a mailing list to ensure that all interested agencies are informed of transportation-related activities and improvements via copies of correspondence.

Policy 5.1B.6. Encourage mixed-use developments. Where allowed by law, Martin County shall encourage mixed-use developments, such as traditional neighborhood developments, that minimize trips and maintain traffic-generating attractors within the development. Martin County shall consider establishing Transportation Concurrency Exception Areas, Transportation Concurrency Management Areas or Multimodal Districts to promote non-vehicular mobility, as allowed by law. Chapter 18 designates Martin County Community Redevelopment Areas as Transportation Concurrency Exception Areas.

Goal 5.2. To develop, operate and maintain an efficient and cost-effective roadway network that provides for ease of mobility and meets the adopted LOS standards.

Objective 5.2A. To ensure that no roadways in Martin County operate at a level of service lower than the standard established in Policy 5.2A.1.

Policy 5.2A.1. Establish a base level of service. The LOS standard for all roadways in unincorporated Martin County is LOS D in the peak hour/peak direction. Standards for the State Highway System are guided by FDOT's latest 'LOS Policy'. The methodology for determining roadway facilities' level of service shall adhere to the methodologies identified in the latest FDOTs Q/LOS Handbook.

Policy 5.2A.2. Ensure roadway capacity is available. The County shall pursue implementation of development agreements or planned unit developments and other mechanisms to help ensure that road projects are constructed and adequate roadway capacity is available to accommodate the impacts of new development.

Policy 5.2A.3. Apply a transportation impact fee. All development shall be subject to the applicable transportation impact fee. Impact fees shall continue to be utilized, as appropriate, on state and County transportation networks to make capacity improvements needed to accommodate new development.

Policy 5.2A.4. Provide impact fee credit for improvements not site-related. Developments requiring site plan approval shall be required to dedicate sufficient rights-of-way to meet the minimum widths set forth in Policy 5.2C.2. These developments may be required to construct roadway improvements, not site-related, to meet projected State/County transportation needs. Any roadway construction and/or right-of-way dedication required by a development order and implemented by a developer, other than site-related improvements, shall be credited against road impact fees in accordance with Article 6 of the Land Development Regulations.

Policy 5.2A.5. Review development order proposals. The County shall review master and final site plan applications for consistency with the projects listed in the Capital Improvements Element, for right-of-way needs measured against Policy 5.2C.2 and for impacts on the adopted LOS standards.

Policy 5.2A.6. Require a transportation analysis. A transportation analysis in accordance with Article 5 of the Land Development Regulations shall be provided by all proposed residential and nonresidential developments.

Policy 5.2A.7. Correlate development orders to level of service. Master site plans that reserve capacity and final site plans shall not be approved except in the following circumstances:

- (1) All road links, bridges and intersections affected by the development are operating at or above the base LOS standard. Procedures for analyzing the potential traffic impacts on roadways and the ability of the roadway segments to accommodate the traffic impact and the anticipated traffic volumes are adopted in Article 5 of the Land Development Regulations, including the specification of impact criteria. In all cases, adopted roadway LOS standards throughout the County shall be maintained; or
- (2) If one or more link, bridge and/or intersection affected by the development is operating below the base LOS standard, one of the following conditions applies:
 - (a) The improvements needed to provide the base LOS are under construction; or
 - (b) The improvements needed to provide the base LOS are the subject of a binding, fully executed contract for construction; or

- (c) The improvements needed to provide the base LOS are programmed to start construction no later than the third year of either the FDOT's Five-Year Work Program or Martin County's Capital Improvements Plan, and to complete construction by the fifth year; or
- (d) The improvements needed to provide the base LOS are guaranteed in an enforceable development agreement. Such agreement may include development agreements pursuant to Florida Statutes section 163.3220 or an agreement or development order issued pursuant to Florida Statutes chapter 380, provided that road improvements required by a Development of Regional Impact (DRI) development order shall not be considered for concurrency for property outside the boundaries of the DRI unless either provisions **of Policy** 5.2A.7.(2)(a) or (b) above are satisfied; or
- (e) There is an approved Traffic Congestion Mitigation Plan that will enable the road and bridge system within the affected traffic area or roadways and bridges outside the affected area to meet the LOS standards in this policy. Procedures for analyzing potential traffic impacts on roadways and the ability of roadway segments to accommodate both the traffic impact and anticipated traffic volumes are in Article 5 of the Land Development Regulations, including the specification of impact criteria. In all cases, adopted road LOS standards throughout the County will be maintained; or
- (f) The project has de minimis traffic impacts (defined as an impact that would not affect more than 1 percent of the maximum volume of the affected transportation facility at the adopted level of service). No impact will be de minimis if the sum of the existing roadway volumes and the projected volumes from the approved projects would exceed 110 percent of the maximum volume at the adopted level of service of the affected transportation facility. However, the impact of a single-family home on an existing lot will constitute a de minimis impact on all roadways, regardless of the level of deficiency of the roadway. Further, no impact will be de minimis if it would exceed the adopted level of service of any affected designated hurricane evacuation route.

Policy 5.2A.8. Pursue joint ventures on state roads. The County and the MPO shall pursue joint participation agreements with the FDOT for improvement of state roadway deficiencies identified in this element. As with past and current joint participation ventures between the County and FDOT, the following delineation of responsibilities should be assigned for the following: right-of-way acquisition; design; and construction.

Policy 5.2A.9. Prohibit residential development on Hutchinson Island. All new residential development on Hutchinson Island served by the Evans Crary Bridge shall be limited to single-family residences at a density of two units per gross upland acre.

Policy 5.2A.10. Plan and implement traffic congestion mitigation. The County shall increase the efficiency of the existing thoroughfare system and reduce peak hour/peak season congestion by developing traffic congestion mitigation plans using accepted and innovative transportation system management techniques.

Policy 5.2A.11. Investigate strategies to enhance transportation network. Martin County shall investigate the various transportation management strategies, as appropriate, to improve system efficiency and enhance safety.

Policy 5.2A.12. Promote "Complete Streets". To the extent feasible, the County shall promote and implement the concept of "Complete Streets" that accommodate all users, including motorized vehicles, bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities.

- COMPREHENSIVE GROWTH MANAGEMENT PLAN
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Policy 5.2A.13. Require connectivity of new commercial development. The County shall enhance the efficiency of the major roadway network by requiring new adjacent commercial developments, located along or accessed by arterial and collector roadways, to provide for circulation between sites and to maintain connectivity of the street network consistent with Article 4 of Division 19 of the Land Development Regulations.

Policy 5.2A.14. Require connectivity between residential and nonresidential development. The County shall encourage new residential developments to provide for interconnectivity with non-residential developments to promote overall mobility.

Policy 5.2A.15. Require connectivity among existing nonresidential development. Where possible, the County shall require and initiate interconnectivity among existing adjacent non-residential developments, while minimizing negative impacts to existing residential developments.

Objective 5.2B. To strive to make the levels of service on the Strategic Intermodal System consistent with the level of service D adopted for the County roadway system.

Policy 5.2B.1. Seek strategies to shift traffic from SIS. Martin County will analyze and identify financially feasible strategies to facilitate the movement of local traffic from roadways that are part of the Strategic Intermodal System onto roadways that are not part of these systems.

Objective 5.2C. To protect existing and future rights-of-way from building encroachment.

Policy 5.2C.1. Establish building setbacks for future transportation needs. Building setbacks, as established in the County's Land Development Regulations shall reserve sufficient space for future traffic circulation and reduce the undesirable and adverse impacts of noise, congestion and related safety hazards associated with intensified future land uses.

Policy 5.2C.2 Establish minimum right-of-way widths. Minimum right-of-way widths, as established in the County's Land Development Regulations shall reserve sufficient space for future traffic circulation and reduce the undesirable and adverse impacts of noise, congestion and related safety hazards associated with intensified future land uses. The following minimum right-of-way widths are adopted for all applicable roadways:

Minimum Mid-Block Right-of-Way Requirements

Roadway Classification	Minimum Right-of-Way Width	
	Swale Drainage	Curb and Gutter
Major arterial		
— 4 lane divided	180 feet	130 feet
— 6 lane divided	200 feet	160 feet
Minor arterial	130 feet	115 feet
Collector	100 feet	80 feet
Minor collector	100 feet	80 feet
Local/residential	60 feet	50 feet

These widths may be adjusted by the County Engineer for specific roadways to meet intersection right-of-way needs of Martin County or FDOT, and to permit: a) water detention and filtration for stormwater runoff management, b) adequate landscaping, and c) bikeways and sidewalk construction.

Policy 5.2C.4. Adopt a thoroughfare right-of-way plan. Within one year after adoption of a Long Range Transportation Plan update, the County shall evaluate the Needs Assessment plan to determine whether new or existing corridors will require right-of-way in addition to the minimum width set forth in Policy 5.2C.2 Land Development Regulations. Should such corridors exist, the County shall adopt

and/or update a Thoroughfare Right-of-Way Plan to reflect the need and purpose for each designated corridor.

Policy 5.2C.5. Coordinate with municipalities. Martin County shall coordinate with the City of Stuart and other jurisdictions on potential corridors subject to Policy 5.2C.6. in conjunction with the analysis for updates to the Long Range Transportation Plan. Martin County shall continue to coordinate with the City of Stuart, and the Towns of Sewall's Point, Ocean Breeze Park, and Jupiter Island, and the Village of Indiantown to protect rights-of-way on state and county roads in municipal jurisdictions.

Policy 5.2C.6. Earmark funds for right-of-way acquisition. The County shall include in its annual Capital Improvements Element a minimum of \$100,000.00 earmarked for an advanced right-of-way acquisition program.

Goal 5.3. To establish an integrated transportation system consistent with future development plans.

Objective 5.3A. To consider safety, aesthetics, socioeconomic impacts (i.e., neighborhood disruption) and adequate neighborhood circulation when implementing transportation improvement projects.

Policy 5.3A.1. Apply design criteria for gateways. The County shall apply the adopted design criteria for landscaping and signage along new and existing roadways designated as gateways to the community. It shall also implement an annual program to landscape and maintain median strips and rights-of-way in coordination with the FDOT, where appropriate.

Policy 5.3A.2. Provide for landscape buffers. The County's minimum right-of-way requirements for roadways shall provide for linear landscape buffers.

Policy 5.3A.3. Promote safe roadway designs. The County shall promote roadway designs that are safe and efficient by:

- (1) Requiring adequate storage and areas for merging;
- (2) Prohibiting hazardous access from driveways and traffic lanes by using safe systems of ingress and egress (i.e. turn lane policies);
- (3) Requiring acceleration and deceleration lanes, turning lanes or parallel access lanes, where appropriate;
- (4) Minimizing conflicts between roadway, pedestrian, bicyclist and rail traffic; and
- (5) Providing adequate capacity for emergency evacuation and emergency response vehicles.

Policy 5.3A.4. Separate vehicles from pedestrians. Traffic flow systems shall be designed to achieve reasonable separation of vehicles and pedestrians, particularly in areas where children are concentrated, including schools, parks and residential areas.

Policy 5.3A.5. Prepare Crash Surveillance Report. Martin County shall continue to refine the crash reporting system to produce crash rate information for applicable road links and intersections and incorporate this information into priority setting for improvements for the five-year road program. Every other year, the Engineering-Public Works Department prepares a Crash Surveillance Report that identifies, analyzes and provides recommendations for reducing high-hazard intersections and fatal crashes as well as pedestrian and bicycle crashes.

Policy 5.3A.6. Maintain file of traffic studies. The County shall maintain a current file of all traffic studies transmitted in support of proposed private developments. These studies shall use the data requirements and analysis techniques required by Article 5 of the Land Development Regulations.

Policy 5.3A.7. Monitor traffic flow. The County shall regularly monitor traffic flow and shall undertake special traffic studies to develop specific local programs to:

- (1) Assure that the County's traffic counting programs are coordinated with and provide data to the City of Stuart and the FDOT;
- (2) Resolve existing or anticipated traffic circulation problems and issues;
- (3) Support special grant programs;
- (4) Respond to specific policies of the federal or state government or other regional or local public agencies.

Policy 5.3A.8. Protect neighborhoods. The County will ensure that development of major transportation routes (rail or roadway) discourages neighborhood displacement and protects community and neighborhood integrity.

Policy 5.3A.9. Encourage neighborhood circulation. In reviewing proposed developments, the County shall encourage adequate neighborhood circulation and multiple access points from neighborhoods to the arterial/collector system. Safe and convenient on-site traffic flow and parking shall be required for all development. Facilities shall be designed with efficient internal circulation.

Policy 5.3A.10. Manage access. Driveways and medians shall be designed to meet appropriate County and FDOT standards. Driveways and medians shall be coordinated with on-site standards, on-site traffic operations and parallel access roads. To maximize roadway capacity and safety, the number of driveway connections should be minimized while their spacing should be maximized.

Policy 5.3A.11. Limit access connections on SW Citrus Boulevard. Driveway and side street connections on CR-726 (SW Citrus Boulevard) will be spaced a minimum of 660 feet apart between the Troupe Indiantown Drainage District canal crossing and CR-76A (SW 96th Avenue).

Policy 5.3A.12. Restrict parking on arterials and collectors. The County shall restrict on-street parking on all arterial and collector roads based on criteria set forth in the Land Development Regulations.

Policy 5.3A.13. Plan for off-road travel. The County shall continue to work with the East Coast Greenway Alliance to plan a north-south and east-west trail system for off-road, non-motorized travel, extending the full length of the County. The County shall maximize use of the trails listed in Table 9-1 and ensure consistency with Policy 9.1J.3.

Objective 5.3B. To plan and develop a transportation system that preserves environmentally sensitive areas; conserves energy and natural resources; reduces greenhouse gases and carbon emissions; and minimizes adverse environmental impacts.

Policy 5.3B.1. Avoid improvements in hazardous and sensitive areas. The County shall avoid transportation improvements that encourage or subsidize increased development in coastal high-hazard areas or environmentally sensitive areas identified in the Coastal Management and the Conservation and Open Space Elements.

Policy 5.3B.2. Avoid access to sensitive areas. To prevent undue pressure for the development of sensitive areas, interchanges and other road/rail improvements shall not be placed or constructed in a manner that would provide access to environmentally protected or sensitive areas or other areas to be conserved.

Policy 5.3B.3. Limit facilities in sensitive areas. If no feasible alternative exists, needed transportation facilities may traverse environmentally protected or sensitive lands or conservation areas. However,

such access shall be limited and shall incorporate design techniques that minimize negative impacts on natural systems, such as:

- Utilizing bridges, box culverts, and other means to elevate facilities over environmentally sensitive lands or conservation areas to allow for continued wildlife migration and to maintain a consistent rate and volume of water flow; and
- Installing fences along non-elevated facilities in a manner that encourages wildlife migration under the elevated facilities rather than across those non-elevated (at-grade) facilities.

Policy 5.3B.4. Replace bascule span bridges. Where feasible, bascule span bridges (drawbridges) shall either be replaced with fixed span bridges or modified in order to reduce environmental impacts and potential traffic circulation problems.

Policy 5.3B.5. Prevent erosion in road/rail routes. New roadways or rail routes shall be designed to prevent and control soil erosion; minimize clearing and grubbing operations; minimize stormwater runoff; and avoid unnecessary changes in drainage patterns.

Policy 5.3B.6. Support energy-efficient transportation. The County shall pursue and support transportation systems (e.g. express buses, high-occupancy vehicles, bikeways) that reduce air quality degradation and help conserve energy.

Policy 5.3B.7. Seek opportunities for intermodal facilities The County shall seek opportunities for land-based and water-based intermodal logistics facilities as a means of increasing transportation efficiency and reducing vehicular travel.

Goal 5.4. To establish the County as friendly to pedestrians and bicyclists by developing a safe bicycle and pedestrian transportation system accessible to all major public and private facilities.

Objective 5.4A. To improve the transportation system to appropriately accommodate bicycle and pedestrian design and facility requirements.

Policy 5.4A.1. Report crashes involving bicyclists and pedestrians. The County shall develop a bicycle and pedestrian crash reporting program to identify road segments and intersections having frequent bicyclist- and pedestrian-related crashes, with particular attention given to hazards, bottlenecks and barriers.

Policy 5.4A.2. Construct sidewalks and bicycle facilities in state projects. The County shall request construction of sidewalks and bicycle facilities in conjunction with the construction, reconstruction or change in any state facility within five miles of an urban area.

Policy 5.4A.3. Include bicycle lanes on new/resurfaced collectors and arterials. The County shall mandate bicycle lanes or paved shoulders (or the equivalent) on all new or resurfaced collector or arterial roadways that are not physically or financially constrained.

Policy 5.4A.4. Construct sidewalks on collectors and arterials. The County shall provide a sidewalk along both sides of all arterials and collectors.

Policy 5.4A.5. Develop a sidewalk and bicycle facilities improvement program. The County shall develop an improvement and maintenance program for sidewalks and bicycle facilities that establishes a committee to review bicycle facilities and recommend improvements.

Policy 5.4A.6. Prioritize needed sidewalks and bicycle facilities. The County shall identify and prioritize sidewalks and bicycle facilities intended to connect or complete both existing and proposed facilities in a manner that provides a complete pedestrian and bicyclist circulation system. The County shall consider such improvements in the Capital Improvements Plan.

Policy 5.4A.7. Identify and seek funding for sidewalks and bicycle facilities. The County shall identify and seek funding sources for sidewalks and bicycle facilities improvements and maintenance programs.

Policy 5.4A.8. Require pedestrian displays at traffic signals. Where appropriate and in conjunction with the FDOT, the County shall require or provide pedestrian displays at the time of traffic signal installation and modification, and shall pursue signal coordination with the State.

Policy 5.4A.9. Meet the needs of bicyclists and pedestrians in developments. The County shall require developers to provide bicycle facilities and sidewalks in proposed developments in accordance with acceptable engineering standards. The County shall encourage the development of communities that foster nonvehicular travel.

Policy 5.4A.10. Inform public of bicycle facility and sidewalk standards. The County shall inform public and private sector planning/engineering and development agencies of the most recent standards for sidewalks and bicycle facilities from the FDOT and American Association of State Highway and Transportation Officials (AASHTO).

Objective 5.4B. To develop a pedestrian and bicycle transportation system that connects all major travel destinations to population concentrations.

Policy 5.4B.1. Establish pedestrian and bicycle facilities around schools. In accordance with guidelines from the AASHTO and the FDOT, the County shall establish pedestrian and bicycle facilities around schools, with emphasis on areas not serviced by school buses.

Policy 5.4B.2. Provide bicyclists and pedestrians access to retirement and handicapped residence centers. In accordance with AASHTO or FDOT guidelines, the County shall provide for bicycle access in areas encompassing retirement and handicapped residence centers, as well as public, commercial and service buildings. This should include bicycle parking at these locations.

Policy 5.4B.3. Develop sidewalks and bicycle facilities in public areas. The County shall work with local municipalities, neighboring counties and the Florida Department of Environmental Protection to develop sidewalks and bicycle facilities in beach access areas, community, regional, and state parks, and other facilities, such as off-roadway travel corridors and drainage canal, railroad and utility rights-of-way.

Policy 5.4B.4. Provide sidewalks and bicycle facilities at County facilities. The County shall assure that all County facilities, which are accessible to the public (such as libraries, community centers, and administrative offices), address the needs of bicyclists and pedestrians. Where sidewalks and bicycle facilities are needed, the County shall incorporate the current FDOT design standards.

Goal 5.5. To ensure the coordination and continuation of an efficient and economical system of public transportation to benefit all County residents, in an effort to reduce the reliance on single-occupancy vehicles and fuels that emit high levels of carbon, thereby reducing greenhouse gases.

Objective 5.5A. To provide efficient public transportation services based on existing and proposed major trip generators and attractors; safe and convenient public transportation terminals; land uses; and accommodation of the special needs of the transportation disadvantaged.

Policy 5.5A.1. Provide financial support for public transportation. The County shall provide local financial support towards the public transportation system, as required by federal or state grants, including the required match and operations deficit. The County shall encourage provision of public transportation services by qualified public and private agencies.

Policy 5.5A.2. Fund the needs of the transportation disadvantaged. The County shall continue to maintain the current level of service provided through its funding contribution to meet the needs of the transportation disadvantaged.

Policy 5.5A.3. Plan for a regional public transportation authority. The County shall assist the Martin MPO in long range planning and development of strategies for the creation of a regional public transportation authority.

Policy 5.5A.4. Provide transportation service to the elderly and disadvantaged. The County shall support the designated transportation coordinator's top priority of providing safe and convenient transportation to accommodate the special needs of the physically, socially and economically disadvantaged riders of all ages.

Policy 5.5A.5. Support the paratransit system. The County shall continue to support a paratransit system (i.e., van pool) and shall educate the public concerning alternative transportation services.

Policy 5.5A.6. Encourage additional funding to the transportation provider. The County shall investigate and encourage additional funding sources available to the transportation provider.

Policy 5.5A.7. Encourage employers to promote public transportation. The County shall assist the FDOT to encourage and/or require major employers in the County to use innovative means of providing access to public transportation to their employees while recognizing the availability of public transportation alternatives and constrained roadways. Examples of potential programs include flexible work hours and, sponsored car/van pool programs.

Policy 5.5A.8. Require major industrial development to incorporate access to public transportation. Any new major industrial development within one-half mile of a public transportation corridor, as designated through the adoption of the Transit Development Plan, shall incorporate at least one public transportation stop (such as a bus bay or loop).

Policy 5.5A.9. Strive to expand the fixed-route public transportation system. The Indiantown to Stuart shuttle, the Stuart shuttle, and the Treasure Coast Connector routes should be expanded to provide access to the community centers in each of the Community Redevelopment Areas, transit centers with access to rail, regional and community parks, and other major shopping centers.

To collaborate with the FEC, CSX and the potential service providers to develop a plan to coordinate potential freight rail access routes to outside the urban corridor of the County.

Objective 5.5B. To continue to protect existing public transportation rights-of-way.

Policy 5.5B.1. Establish minimum lane widths to support public transportation. The County's minimum right-of-way requirements for roadways shall ensure that lanes are wide enough to accommodate public transportation vehicles.

Objective 5.5C. To continue to protect future public transportation rights-of-way and exclusive public transportation corridors, as appropriate, as part of the long range planning process.

Policy 5.5C.1. Accommodate curbside pick-up and bus movement. The designation of rights-of-way and construction/reconstruction of arterial and collector roadways and residential streets shall allow for adequate curbside pick-up and bus turning in appropriate areas.

Policy 5.5C.2. Designate public transportation corridors. In coordination with the master public transportation plan being developed by the MPO and the FDOT, exclusive public transportation corridors shall be designated as needed. Implementation of this policy shall improve levels of service on the roadways as people reduce vehicle use in favor of mass transport.

Objective 5.5D. To establish transit within Martin County to connect to nearby major regional hubs such as Port St. Lucie, Palm Beach County and points beyond.

Policy 5.5D.1. Encourage transit-friendly neighborhoods. The County shall establish transit corridors and transit neighborhood centers that provide for specific design features to encourage and support the use of transit.

Goal 5.6. To provide for an airport transportation system consistent with the planning programs of Martin County, state, federal, regional and local jurisdictions.

Objective 5.6A. To coordinate land use and transportation planning and implementation at Witham Field with the development of aviation facilities. This shall be a continuing objective.

Policy 5.6A.1. Require development within boundary consistent with the County Code. All development or redevelopment on the airport property shall be consistent with the Future Land Use Map series and Martin County Land Development Regulations. No expansion of Witham Field shall occur outside the boundaries shown on Figure 5-9, the Airport Plan without an amendment to the CGMP.

Editor's note(s)—Figure 5-9 is on file in the office of the Martin County Growth Management Department and available on the County's website.

Policy 5.6A.2. Operate as an integral part of the state aviation system. The airport shall operate as an integral part of the Florida Aviation system as administered by the FDOT.

Policy 5.6A.3. Operate in conformance with state and federal regulations. Martin County shall operate all airport facilities in conformance with applicable state and federal regulations.

Policy 5.6A.4. Operate and construct airport facilities consistent with the County Code. In constructing or operating airport-related facilities, the County, lessee or any agent responsible for providing services at airport facilities shall abide by the CGMP of the County and the City of Stuart (where appropriate), especially the coastal management, land use, conservation, aviation and traffic circulation elements.

Policy 5.6A.5. Coordinate road improvements and development. The Airport Department shall coordinate all related roadway improvements and development activities at the airport with the Growth Management Department, all involved agencies and concerned members of the public.

Policy 5.6A.6. Include costs and responsible entity for all improvements in CIE. The appropriate costs and responsible agency for all improvements in the Airport Master Plan and the FDOT Five-Year Work Program shall be reflected in the Capital Improvements Element.

Policy 5.6A.7. Require all permits prior to construction. No construction or related activities shall commence at the airport until all required permits and leases are obtained.

Policy 5.6A.8. Utilize professional expertise of available resources. Martin County shall utilize the professional expertise and advice of planning and administrative staff of the County, City of Stuart, Treasure Coast Regional Planning Council, FDOT, Florida Department of Environmental Protection, and the FAA.

Policy 5.6A.9. Encourage support for funding. Through the County's legislative and congressional delegations, the County Commission shall encourage support for funding applications recommended by Martin County.

Goal 5.7. To make all feasible and safe efforts to increase the capacity of navigation and weather reporting facilities at Witham Field to meet current and projected needs of County residents while recognizing the limitations imposed by existing surrounding residential areas.

Objective 5.7A. To keep taxiways and transient ramps in an acceptable state of repair and maintenance to ensure optimum use of all available capacity.

Policy 5.7A.1. Keep one crosswind runway lit. Martin County shall ensure that one crosswind runway is kept lit.

Policy 5.7A.2. Coordinate surface transportation to ensure access. Martin County shall coordinate existing and proposed surface transportation to ensure adequate access to the airport.

Objective 5.7B. To ensure Witham Field Airport is developed as directed by Martin County, in accordance with the existing Airport Facilities and Layout Plan, the Regional Comprehensive Policy Plan, and the Continuing Florida Aviation System Planning Process and FAA Master Plan.

Policy 5.7B.1. Develop a runway improvement plan. A program for adequate pavement, lighting and directional aid improvements to selected runways shall be developed for a five-year period.

Policy 5.7B.2. Develop parking, taxiways, and blast pad improvement plan. Adequate additional parking (vehicular and aircraft), taxiways and blast pads shall be developed in accordance with the existing plan and annual updates of the FDOT Work Program and FAA Master Plan.

Policy 5.7B.3 Provide additional service upgrades by the FBOs. Additional service upgrades shall be provided by the fixed base operators at Witham Field in accordance with the existing fixed base operator standards and any updates.

Goal 5.8. The County shall limit the expansion of runways and taxiways.

Objective 5.8A. To update the Martin County Airport/Witham Field Airport Master Plan as necessary to comply with the FAA's National Plan of Integrated Airport Systems.

Policy 5.8A.1. Limit role to General Aviation Airport. The Martin County Airport shall continue its role as a General Aviation Airport. The airport shall not become certified under Federal Aviation Regulation (FAR) Part 139 and therefore shall not be eligible to accept scheduled commercial airline service operating under Federal Aviation Regulation Part 121.

Policy 5.8A.2. Require CGMP amendment for runway extension(s). Extension or expansion of the runway distances listed below shall require an amendment to the CGMP.

Runway	TORA	TODA	ASDA	LDA
12	5826	5826	5826	5366
30	5826	5826	5826	5826
16	5000	5000	4120	3790
34	5000	5000	4750	3870
7	4646	4646	4646	4646
25	4646	4646	4646	4646

- Take Off Run Available (TORA): Start of take-off run to 200 feet before the beginning of the runway protection zone.
- Take Off Distance Available (TODA): Equal to the total amount of usable pavement.
- Accelerate Stop Distance Available (ASDA): Usable pavement after providing for a standard (1,000-foot) safety area (600-foot safety area if an Engineered Materials Arresting System, EMAS is used).
- Landing distance available (LDA): Usable pavement from landing threshold to beginning of standard safety area.

Policy 5.8A.3. Restrict service capacity. The Board of County Commissioners shall not approve any Capital Improvements Element amendment that would expand the Witham Field annual service capacity.

Policy 5.8A.4. Require lessee or facility acquirer to pay cost of benefits. Any plan for lease or acquisition of airport facilities shall be based on an economic study that assures that those benefiting shall pay the cost, and that acquisition and improvements shall not increase ad valorem taxes.

Policy 5.8A.5. Include assessment of effects in study of airport expansion or relocation. The study of any airport expansion and/or a new airport location shall include an assessment of all positive and negative effects on the surrounding community.

Policy 5.8A.6. Coordinate other types of transportation with future needs. Martin County shall coordinate roadway and transit service improvements with the future needs of seaports, airports and other related transportation facilities.

Goal 5.9. To provide aviation facilities that efficiently and safely meet the needs of the citizens of Martin County.

Objective 5.9A. To ensure that airport operations in Witham Field's clear zones, approach surfaces, transition surfaces, horizontal surfaces or conical surfaces are not obstructed.

Policy 5.9A.1. Adhere to height restrictions. Height restrictions adopted by the County shall be adhered to.

Policy 5.9A.2. Prohibit structures that interfere with airport operations. All municipalities in the County shall enact ordinances prohibiting structures or obstructions that affect takeoff and landing at airports.

Objective 5.9B. To ensure Witham Field's airport safety record continues and to enhance operational safety.

Measure: Facilities are regularly inspected and problem areas are corrected.

Policy 5.9B.1. Maintain security systems, parking areas, taxiways and runways. Airport security systems, parking areas, taxiways and runways shall be maintained to ensure optimum safety at all times.

Policy 5.9B.2. Provide 500-foot wide safety area or EMAS. Each runway should have a 500-foot wide safety area of maintained graded turf. The Board of County Commissioners has voted to install EMAS at the ends of runways 12 and 30. When installed, the EMAS shall replace the graded turf requirement for these runways.

Objective 5.9C. To maintain and improve aviation facilities at Witham Field.

Measure: An annual inventory of facilities is conducted prior to assignment in the annual Transportation Improvement Program.

Policy 5.9C.1. Annually inventory all infrastructure. All infrastructure, such as the drainage system, safety fencing, taxiways, pavement marking and aprons shall be inventoried and assigned to an annually updated maintenance program by airport management in coordination with Martin County.

Policy 5.9C.2. Provide adequate restroom and storage facilities and water outlets. All restroom facilities shall be adequate, water outlets (for aircraft cleaning) shall be provided and storage facilities shall be upgraded at Witham Field.

Objective 5.9D. To encourage the continued public use of Indiantown Airport and investigate its long term potential as a recreation airport.

Policy 5.9D.1. Support community efforts to continue public use and operation of Indiantown Airport. Martin County shall cooperate with the Indiantown community in its efforts to ensure that the Indiantown Airport continues to operate for the public.

Goal 5.10. To ensure that provisions for future aviation transportation facilities are developed in a manner that minimizes adverse environmental impacts.

Objective 5.10A. To ensure improvements at any airport facility are in accordance with the County's Land Development Regulations.

Policy 5.10A.1. Site new or expanded facilities on least environmentally sensitive lands. New or expanded airport/aviation facilities shall be sited on the least environmentally sensitive lands, and shall be consistent with the Conservation and Open Space Element.

Policy 5.10A.2. Restrict future land plan to compatible airport uses. The future land use plan of any airport facility shall be restricted to those uses compatible with the airport and its environs.

Policy 5.10A.3. Identify methods to protect natural resource. Prior to expansion of existing airport/aviation facilities or siting of new aviation facilities, methods for protection of natural resources shall be identified.

Policy 5.10A.4. Preserve native or endangered species of fauna and flora. Improvement of the airport shall be in accordance with the County's conservation and open space policies regarding the preservation of native or endangered species of fauna and flora.

Policy 5.10A.5. Retain additional surface water runoff. Additional surface water runoff caused by airport expansion shall be retained on-site.

Objective 5.10B. To minimize noise created by airport operations by following the accepted FAA standards for similar general aviation airports.

Measure: A comprehensive noise abatement plan for Witham Field has been developed as part of the Airport's FAR Part 150 Study.

Policy 5.10B.1. Require takeoffs and landings to comply with federal standards. To minimize noise impacts beyond the boundaries of the airport, the takeoff or landing of aircraft shall comply with federal standards.

Policy 5.10B.2. Implement measures to reduce potential noise impacts. The Martin County Board of County Commissioners shall continue to implement measures to reduce potential noise impacts from aviation activities at publicly-owned public-use airports.

Policy 5.10B.3. Monitor progress of noise compatibility program. The Martin County Board of County Commissioners shall continue to monitor the progress of the airport's noise compatibility program.