

MULTI-MODAL TRANSPORTATION

INTRODUCTION + BACKGROUND

Located in Northeast Florida on Amelia Island, the City of Fernandina Beach is Nassau County's seat of government. The city is bound on the east by the Atlantic Ocean and on the west by the Amelia River and Intracoastal Waterway. Its northern boundary is the Cumberland Sound and to the south is unincorporated Nassau County.

Fernandina Beach is comprised of 7,680.14 acres or just over twelve (12) square miles in area. The City's central business district and surrounding vicinity are laid out in a traditional grid pattern. State Road 200/ A1A (8th Street) serves as the north-south artery connecting the city center to the Shave Bridge. A1A (Atlantic Avenue) serves as the City's northernmost east-west arterial; starting downtown it runs east across the Egans Creek Greenway and terminates at Main Beach. A1A (South Fletcher Avenue) follows the coastline as the easternmost north-south artery along the beach area properties. Sadler Road is the City's primary commercial corridor running east-west from the beach roundabout to 8th Street. 14th Street and Citrona Drive serve as the City's interior arterial roads running north-south from Atlantic Avenue to Sadler Road, with 14th Street extending north to Ft. Clinch State Park property. The Amelia Island Parkway runs through the City's southwest border around the City airport and golf course providing a connection that bypasses commercial activities for both residents and visitors going to the southern end of the island.

With very little vacant land, redevelopment of the City's twelve (12) square mile area will be the most likely source of growth in the future. Off island development, in unincorporated Nassau County/ Yulee is quickly becoming the source of increased traffic within the City. Residents in this area enjoy living in close proximity to Fernandina Beach's downtown historic district and beach area and can easily commute to the greater Jacksonville area for employment. However, the city's largely built-out status makes right-of-way acquisition for roadway expansion extremely difficult, especially along the City's A1A segments.

The City experiences a great deal of truck traffic on a daily basis. Logging and mulch trucks are a common scene on the roadways in Fernandina Beach, with two of the City's major employers, Rock-Tenn (paper packaging products) and Rayonier (performance fibers) hauling trees to support their manufacturing businesses. The Port of Fernandina also generates a great deal of truck traffic on the City's primary corridor along A1A (8th Street) as does supply trucks which support the downtown Central Business District.

The City's 2009 adopted EAR report found a number of shortcomings with the existing Transportation Element. The majority of the policies had either been overlooked or had not been fully implemented. The EAR noted additional recommendations based on the overall Transportation Element's assessment which discussed adding policies or objectives as part of the EAR-based amendments including:

- assessment of all modes of transportation;
- establishing a way-finding (directional) standards for a cohesive signage program to better direct traffic and identify various civic locations throughout the City;
- considering truck traffic routes and revisions;
- developing more compatible and reasonable standards for beach parking and beach access points;
- supporting organizations that further enhance the Amelia Island bicycle trail network; and
- investigating the feasibility of designating the A1A/ Fletcher Avenue corridor as a Florida Scenic Highway and National Scenic Byway.

Changes within the City's Transportation Element are far more than cosmetic; it represents a shift from sole consideration of the automobile speed, congestion and safety to providing additional transportation options in a more integrated transportation system that provides alternatives to single occupancy automobile travel. This is often referred to as multi-modal planning. It considers various modes of transportation (walking, cycling, transit, low-speed alternative vehicles, car and truck, waterborne, and airport) and connections among modes so that each can fill its optimal role in an overall system therefore, changing the name of the element to "Multi-modal Transportation" was appropriate.

A "one size fits all" approach to transportation mitigation does not serve the diverse needs of this community and does not provide meaningful improvements that benefit the City as a whole. Transportation objectives can no longer be evaluated as purely a means of providing roadway capacity; rather, it must be tied to the wide-ranging needs of the community and provide appropriate linkages to the adopted Future Land Use Map. The City's form, geographic location, and patterns of development lend themselves to our consideration of a broad range of transportation possibilities to better provide and assure safe, efficient, and sustainable traffic circulation. Although transportation functionality within the City can be enhanced through a variety of alternatives, the City cannot overlook the need for inter-jurisdictional connectivity and its emergency evacuation needs. Therefore, the City must continue to coordinate with the County, regional and state agencies to address those issues which extend beyond local control.

Land use and transportation systems are highly interdependent; changes in one often have a direct effect on the other. Improvement to the roadway network can serve as an impetus to intensification of the development of adjacent land uses, which in turn can cause the need for further improvements. The Multi-modal Transportation Element should plan for a transportation system that emphasizes the accessibility to goods and services and supports the Future Land Use Element. It should encourage the development of compact, pedestrian-oriented urban areas, promote energy efficient development patterns, reduce vehicle miles traveled and protect air quality.

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The City, with less than 6% vacant developable land, will continue to grow primarily through redevelopment efforts. Additionally, its location on a barrier island and largely built-out corridors results in the need for the City to formulate, adopt, and implement a Mobility Plan and fee in order to better manage and enhance its future growth and development. A mobility plan and fee will diversify transportation options, provide a closer connection with land use and transportation planning and foster a more sustainable and environmentally-conscious urban form.

Revisions to the transportation element now called the “Multi-modal Transportation Element” are intended to provide for safe and energy efficient transportation options through a variety of modes in an effort to reduce Vehicle Miles Traveled and meet the needs of both residents and employers. The Multi-modal Transportation Element contains objectives and policies which serve to further mobility planning efforts, establishment of a multi-modal transportation network consistent with the Future Land Use Map, coordination of land development activities with traffic circulation, protection of rights-of-way, establishment of level of service and quality of service standards, identifies the strategic intermodal system facilities, provides direction for network design and maintenance, and ensures a safe and effective roadway, bicycle, pedestrian and multi-use pathways network. Further, the Element provides direction for waterways and airport planning activities and assures the availability of safe and convenient parking while providing more specific direction for parking strategies within the downtown and beaches areas. Lastly, the Element requires practical and realistic intergovernmental coordination activities.

EXISTING OPERATING CONDITIONS

Regulatory Framework

Federal Regulations

The *United States Department of Transportation* (USDOT) administers the nation’s transportation policy. The agencies within USDOT include the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA) and the Urban Mass Transit Administration (UMTA). The FHWA reviews and approves federally funded highway projects. These projects include primary, secondary and urban system aid, the federal bridge replacement program and the maintenance and widening of federal facilities. Federal highway facilities are operated and maintained by the Florida Department of Transportation (FDOT) as part of the State Highway System. Federal Highway facilities in Nassau County include Interstate 95, U.S. Highway 17, and U.S. Highway 301. The NHTSA shares responsibility with the FHWA for highway safety programs including highway design, construction and maintenance practices.

The Transportation Efficiency Act of 1991 represented landmark Federal legislation, which changed the transportation planning philosophy of the nation. SAFETEA-LU, the successor to the ISTEA legislation, incorporates the same philosophies as its predecessor. These changes figure prominently in a number of arenas: planning for mobility, public participation, and management systems, and planning factors.

SAFETEA-LU requires that all components of transportation be planned as one system. In theory, local governments, through the TPO process, now have more influence on the projects to be federally and State funded and can shift funding from highway projects to other transportation modes, such as transit and bicycle/pedestrian facilities.

While the SAFETEA-LU legislation does not regulate development of local comprehensive plans directly, the LRTP is regulated by SAFETEA-LU. Consistency between the TPO LRTP and the local comprehensive plan is required by SAFETEA-LU.

State and Regional Regulations

Florida’s 1985 “Growth Management Act” and subsequent requires that adequate public facilities are in place concurrent with the impacts of new development have resulted in an unintended effect of urban sprawl. Over the past 60 years, both the US and State of Florida have witnessed an increasing focus on the personal automobile for transportation planning; expanding roadway capacity was seen as the solution to congested and “failing” roadways throughout the state. Like many jurisdictions across the state, provisions related to transportation concurrency requirements and proportionate fair share for new development have not proven successful in providing meaningful, timely transportation improvements for the City of Fernandina Beach. At present, addressing only roadway capacity standards has resulted in overlooking much needed bicycle and pedestrian connections. Further, no emphasis has been placed on the consideration of alternative options to the conventional transportation improvements.

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2009 Legislative Changes

In 2009, the Florida Legislature passed Florida's Community Renewal Act through Senate Bill 360 (SB 360). The Act's intent was to help stimulate the state's struggling economy by supporting development, even on over-capacity roadways. The result is the state's support in seeking more sustainable transportation options and creation of a more multimodal system.

The passage of SB360, had a direct impact on the City of Fernandina Beach by placing a Traffic Concurrency Exemption Area (TCEA) over the entire City and classifying it as a Dense Urban Land Area (DULA.) Provisions of SB 360 removed state mandated transportation concurrency requirements in TCEA's. Local governments that have been defined as a DULA automatically receive this exemption. A local government may choose to continue to apply their existing, previously state-mandated transportation concurrency requirements.

SB 360 provides local transportation planning options in TCEAs. DCA's website identifies the following options regarding transportation concurrency:

1. "Retain and continue to apply the transportation concurrency provisions in existing local comprehensive plans and land development regulations.
2. Amend the existing local comprehensive plan and local land development regulations to delete or modify transportation concurrency requirements for a TCEA or adopt alternatives to transportation concurrency.

In addition, of course, the designated DULA local governments must amend their local comprehensive plans to include new mobility planning requirements for the TCEA within two years."

Where TCEAs have been designated, DCA no longer has the authority to review plan amendments for compliance with state-mandated transportation concurrency requirements, including the "*achieve and maintain standard.*" DCA will, however, continue to review plan amendments in designated TCEAs for compliance with all other state-mandated requirements in Chapter 163, Part II, Florida Statutes, and Chapter 9J-5, Florida Administrative Code, including other transportation requirements and for internal consistency. SB 360 imposed new local planning requirements for TCEAs designated pursuant to the legislation. Fernandina Beach falls within this category as an identified DULA and through this document is working to amend its Comprehensive Plan to include "land use and transportation strategies to support and fund mobility within the TCEA, including alternative modes of transportation" within the provided timeframe.

2010 Legislative Changes

Transportation concurrency is a process to ensure that new development does not occur unless adequate transportation facilities are in place to support growth. Local governments must define what constitutes an adequate level of service for the transportation system and measure whether the service needs of new development exceed existing capacity and scheduled improvements for some time period. However, the Florida Department of Transportation establishes the level-of-service standards for roads that are part of the Strategic Intermodal System, which consists of statewide and inter-regionally significant transportation facilities. There are a number of exceptions to transportation concurrency that have been authorized to address the needs of urban areas. These exceptions include transportation concurrency management areas, transportation concurrency exception areas, and long-term transportation concurrency management systems.

2011 Legislative Changes

All of the existing state transportation requirements for concurrency are repealed. The Florida Department of Transportation no longer establishes level of service for the Strategic Intermodal System. If a local government elects to maintain transportation concurrency, then it must adhere to the following new concurrency requirements:

1. Studies and techniques for evaluating and measuring level of service must be professionally accepted.
2. The capital improvements element shall identify facilities necessary to meet adopted levels of service during a five-year period.
3. Consult with the Florida Department of Transportation when proposed amendments affect the Strategic Intermodal System.
4. Exempt public transit facilities from concurrency.
5. Allow an applicant for a DRI development order, rezoning, or other land use development permit to satisfy the transportation concurrency requirements and DRI review requirements, when applicable, if the applicant enters into a binding agreement to pay for or construct its proportionate share of required improvements.

If a local government elects to maintain transportation concurrency, then it is encouraged to develop policies to address potential negative impacts on future development:

1. In urban infill and redevelopment, and urban service areas.
2. With special part-time demands on the transportation system.
3. With de minimus impacts.
4. On community desired types of development, such as redevelopment or job creation projects.

Florida Department of Transportation

The *Florida Department of Transportation* (FDOT) is responsible for the planning, construction, maintenance and access to the state highway system, as well as the State Rail Plan and the Florida Aviation System Plan. The state highway system is established by Florida Statutes, and consists of all State and Federally designated roadways.

FDOT is decentralized in accordance with legislative mandates. Each of the districts is managed by a District Secretary. The districts vary in organizational structure, but in general each has major divisions for Administration, Planning, Production and Operations. District

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Two, in Northeast Florida, is home to more than 1.7 million residents. Its 18 counties, including Nassau County, cover nearly 12,000 square miles. Travelers on the state highway system log more than 40.6 million miles daily. Two major transit authorities, assisted by the FDOT, operate in the district. The area is served by two deep-water ports, three major rail lines, and 144 public and private airports. The District headquarters is located in Lake City (Columbia County) and the District also maintains the Jacksonville Urban Office.

FDOT has adopted The Florida Transportation Plan, which is part of the State Comprehensive Plan and guides major transportation planning for state facilities. Every year, the FDOT develops, with the cooperation of the County Commission, the Five-Year Work Program, which establishes priorities and funding for specific transportation improvement projects. Project priorities are established by the County Commission for all State roadways within the Nassau County boundaries.

FDOT establishes minimum Level of Service (LOS) standards for Strategic Intermodal System (SIS) facilities and participates in Development of Regional Impact (DRI) and other large-scale development reviews.

The *North Florida Transportation Planning Organization* (TPO) develops plans and programs to guide the region's transportation planning process including the Long Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP). Ch. 163, Florida Statutes requires the schedule of capital improvements (SCI) and transportation elements of local comprehensive plan to be consistent with the adopted LRTP.

The TPO also conducts studies and provides a regional forum for identifying and addressing transportation issues. In addition to these planning and programming tasks, the TPO addresses immediate needs by overseeing the delivery of services to the transportation disadvantaged and providing direct services to commuters and employers.

The *Jacksonville Transportation Authority* (JTA) is an independent authority that is charged with providing high quality regional transit services and roadway infrastructure connecting Northeast Florida. Working closely with the Florida Department of Transportation and the City of Jacksonville, JTA develops and implements construction plans to improve traffic flow in the region. JTA manages construction projects on state- and locally-owned roadways (those projects, however, are not maintained by JTA).

Although JTA is not presently involved in any projects in Nassau County, planning has recently begun for a northern extension of the First Coast Outer Beltway. The proposed northern Beltway will loop north of Interstate 10 and Jacksonville International Airport to continue on into Nassau County and connect with Interstate 95, completing a toll road that will eventually encircle Jacksonville. The northern Beltway could generate more economic development in the area by allowing greater access to northern Duval and Nassau Counties. JTA has also undertaken an extensive study that will examine and determine the feasibility of using commuter rail as a transit option here in Northeast Florida. The study includes two possible stations in Nassau County in the Yulee and Hedges areas.

Regional Planning Model

Transportation analysis is performed with the assistance of computerized travel demand models that provide information on current and future transportation system operations. The transportation model used by NEFRC for the analysis is the Northeast Regional Planning Model (NERPM). The NERPM includes all of Nassau, Duval, Clay and St. Johns counties which coincide with North Florida TPO boundary. The transportation modeling and planning community in Florida relies heavily on travel survey data to develop, calibrate, and validate travel demand forecasting models, to evaluate alternatives, assess impacts of policies and multimodal plans, and quantify travel demand by purpose, time, location, and mode. The North Florida TPO and the Florida Department of Transportation (FDOT) District Two have spent considerable resources over the past 10-15 years collecting detailed travel survey data to serve as a basis for developing accurate travel demand forecasting models.

Traffic Analysis Zones (TAZs)

The various levels of data are organized in the model by traffic analysis zones (TAZs). TAZs are geographic boundaries most commonly designed for a conventional transportation planning model. The size of the zones varies; the spatial extent of the zones typically varies based on census block information, natural areas and roadway boundaries. The TAZs include the socio-economic data and generally includes the number of automobiles per household, employment, population and other data sets. The computer model uses the socioeconomic data files (ZDATA) as the basis for estimating traffic volumes on the County roadway network. Map T-22 depicts the Traffic Analysis Zones (TAZs) boundaries and the TAZ numbers for Nassau County.

Long Range Transportation Plan (LRTP)

The North Florida Transportation Planning Organization (TPO) develops regional transportation plans and programs to accommodate mobility needs within the region. Every five years, the North Florida TPO (Transportation Planning Organization) updates the Long Range Transportation Plan (LRTP). This Plan has a 20- to 25-year time horizon and addresses road, transit, freight, bike and pedestrian needs. The 2035 LRTP includes all of Clay, Duval, St. Johns and Nassau Counties. Sec. 163.3177 Florida Statutes requires the City's adopted Schedule of Capital Improvements (SCI) to include transportation improvements included in the adopted Transportation Improvement Program (TIP) (see below) to the extent that such improvements are relied upon to ensure concurrency and financial feasibility. The SCI must also be coordinated with the adopted LRTP.

The 2035 LRTP was a comprehensive analysis of all the elements that affect transportation now and in the future. The Plan provides a guide for the future through the Needs Assessment. The 2035 LRTP Needs Assessment draws on needs identified in the previous Year 2030 LRTP, as well as additional needs brought forward by State and local agencies. Needs were also suggested by the TAC, CAC,

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and the public. These transportation needs were analyzed and augmented by developing alternatives that simulated future traffic conditions, using the Northeast Regional Planning Model (NERPM).

The 2035 Needs Plan consists of the projects identified which are necessary to maintain transportation mobility for the next 25 years. It represents all of the capacity improvement projects necessary for Fernandina Beach to meet vehicle travel and congestion needs in the year 2035. The 2035 Needs Plan from the LRTP was not constrained by the affordability of the system. It instead focused on necessary facility changes that would result in improved mobility and generally benefit the community, taking into account policy constraints. However, Federal regulations require the TPO to ensure that the LRTP is cost feasible. The anticipated financial resources must be sufficient to cover all of the projected capital, operating, and maintenance costs of the total transportation system, including both existing and planned facilities and services through the year 2035. Projects identified in the 2035 Needs Plan within the City are listed in Table MM-1.

Table MM-1 2035 LRTP Needs Plan, Fernandina Beach Projects

ID	Corridor	From	To	County	Project Description
Transit Projects					
H	Commuter Rail North Ext.	Yulee	Fernandina Beach	Nassau	Limited Service (CSX)

Source: North Florida TPO

Since funding is not available for all projects in the unconstrained Needs Plan, candidate projects were prioritized to determine which would be recommended for inclusion in the Cost Feasible Plan. Development of the Cost Feasible Plan included the development of costs for all projects listed in the Needs Plan; scoring of the projects based on the adopted evaluation criteria; and then ranking projects by categories to identify prioritized projects. Project categorization is on the basis of available revenue sources. A draft Cost Feasible Plan was developed by allocating funds to fully or partially finance prioritized transportation projects. The draft Cost Feasible Plan was then amended to ensure a reasonable level of geographic equity in the LRTP, based on input from the LRTP Steering Committee and the public.

Transportation Improvement Program (TIP)

The North Florida TPO Transportation Improvement Program (TIP) is developed annually and is the short range transportation plan for the TPO. As mentioned previously all local government projects (non-federally funded) that are included in the TIP must be part of a local government's adopted capital improvement program.

Local Regulations

The Fernandina Beach Streets Department is responsible for the maintenance of the City's roadway system, which consists of minor and major collector roads and local roads.

Roadway Functional Classification

Roadways are formally categorized by the Florida Department of Transportation (FDOT) through a statewide, cooperative process with county and local jurisdictions. This ongoing process, known as Functional Classification, is used primarily to assign governmental responsibility for maintenance and roadway improvement funding. More recently, a host of additional FDOT policy definitions have also been linked to the State's functional classification system.

Arterial roadways can be broadly defined as those facilities which carry relatively heavy volumes of traffic for activities such as shopping, employment and the movement of goods and services. Arterial roadways provide for regional movement; for travel to destinations outside of Nassau County; or for non-locally-oriented traffic to travel through Nassau County to other destinations within the region. Collector facilities serve an intermediate function to collect/distribute traffic between regional arterial facilities and local roadways. Local streets, in turn, serve as site-specific terminal routes for each end of a trip. Specific definitions for each classification are detailed below:

Principal Arterial - A major highway designed for the movement of large volumes of traffic over relatively long distances. This type of facility carries the major portion of trips through the urban areas of the county, as well as many trips not destined or originating within the county. This facility class does not exclude access to property, though its primary function is to facilitate longer distance movement. Access to adjacent properties should thus be controlled to the maximum extent possible.

Minor Arterial - Similar in function to a major arterial, this facility class is designed to carry moderate volumes of traffic between urban areas and to connect with the principal arterial system. A main function is to provide an intermediate connection between the major arterial system and streets within the local area. This facility allows more access to adjacent properties than the previous types of facilities.

Major Collector - Roadways which serve the internal traffic movement within a given geographic sub-area and connect the sub-area to the arterial system. This type of facility is not intended to serve long, through trips, but mainly short to moderate length trips. Collector roadways carry a moderate volume of traffic at moderate speeds. Property access is an appropriate function of this facility, provided it does not inhibit local traffic movement.

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Minor Collector - Similar in function to that of a major collector, a minor collector is intended to serve a smaller geographic area. It often connects to major collectors and arterial roadways. Property access is generally a significant function of this facility.

Local - A roadway or street having the primary purpose of providing access to adjacent property. Mobility is a secondary function. Average speeds and volumes are low; trips are usually of short duration with a purpose of connecting with a higher order facility. A local road should not carry through traffic. The trip being served should originate or be destined for the immediate surrounding area.

Strategic Intermodal System (SIS)

State legislation enacted in 2004 created a Strategic Intermodal System (SIS). The SIS is a statewide network of high-priority transportation facilities, including the State's largest and most significant commercial service airports, spaceport, deep-water seaports, freight rail terminals, passenger rail and intercity bus terminals, rail corridors, waterways and highways. These facilities are the workhorses of Florida's transportation system, carrying more than 99 percent of all commercial air passengers and cargo, virtually all waterborne freight and cruise passengers, almost all rail freight, 89 percent of all interregional rail and bus passengers and more than 70 percent of all truck traffic and 55 percent of total traffic on the State Highway System.

Prior to the 2011 legislative session, Rule 9J-5.019, FAC, required the FDOT level of service standard to be applied to SIS/FIHS roads and requires the establishment of strategies to facilitate local traffic use of alternatives to the SIS/FIHS. Table MM-2 lists those City roadways on the identified as part of or emerging to be included in the Strategic Intermodal System.

Table MM-2 Strategic Intermodal System Facilities, Fernandina Beach

Facility Name	SIS Designation	Facility Sub-type	Mode
Atlantic Intracoastal Waterway, Fernandina to St. Johns River	SIS	Waterway	Water
Port of Fernandina	EMERGING SIS	Seaport	Water
Port of Fernandina channels and turning basins connecting to Atlantic Intracoastal Waterway	SIS	Connector - Freight/Passenger	Water
Port of Fernandina To I95	SIS	Connector - Freight	Highway
SR A1A From Lime Street to Fletcher Ave.	EMERGING SIS	Highway	Highway

Source: FDOT- D2

Transportation Level of Service (LOS)

Roadway level of service standards have long been used in systems planning and traffic operations. The roadway level of service (LOS) standard is a qualitative assessment of the road user's perception of the quality of flow of traffic. The LOS standards are represented by letters A through F, with A representing the most favorable conditions and F representing the least favorable. The LOS is measured by dividing the number of vehicle trips (i.e., volume) on the facility by the capacity of that facility. The six levels of service as described by the Transportation Research Board's *Highway Capacity Manual*. They are:

LOS A – This represents a condition of free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Traffic volumes are low and speeds are high, and drivers have complete freedom in selecting their speeds and may change lanes at will. The motorists experience a high level of driving comfort. Stopped delays at signalized intersections are minimal.

LOS B – With this level of service, operating speeds are beginning to be restricted somewhat by traffic conditions, although drivers still have reasonable freedom in choosing their speeds and travel lanes. Flow is stable and average operating speeds are only slightly lower. The general level of motorist comfort is still high.

LOS C – Traffic flow is still stable at this level of service, but most drivers are restricted in their choice of speeds and maneuverability. Traffic conditions are still tolerable for most drivers and operating speeds are not unsatisfactory. Traffic flows are such that small increases in flow will result in a substantial deterioration in service. Motorists will experience an increase in tension due to the increased attention needed for safe operation.

LOS D – This level of service represents high traffic volumes. Although speeds may still be maintained, delays may begin to occur frequently due to high traffic volumes. Drivers have little freedom to choose their own speeds or lanes of operation, and their comfort and convenience are low. Small increases in traffic flow will generally cause operational problems at this level.

LOS E – This level of service describes a roadway that is operating near or at capacity. Speeds are low and there are virtually no gaps in the traffic stream. There is very little driver independence with regard to speed choice and lane choice. Small increases in volume or minor disturbances within the traffic stream will cause a breakdown in traffic flow.

LOS F – This describes a forced flow situation. Vehicle density is beyond the optimum for maximum volume; therefore, traffic volume has dropped below that of level of service E. Frequent and prolonged stoppages may occur, and average travel speeds are very low, as

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is driver comfort. Vehicles may progress at reasonable speeds for several hundred feet or more, and then be required to stop in a cyclic fashion. It is to the point at which arrival flow exceeds discharge flow that causes a queue to form.

The adopted LOS for County arterials and collector roads are described in Table MM-3 below. Local roads will be maintained at LOS C.

MM-3 Transportation Level of Service (LOS) Standards applicable in Fernandina Beach

Authority	Road Type	Minimum LOS Standard
City	Major Arterial, Minor Arterial, Collector and Local	C
County	Major Arterial, Minor Arterial, Collector	D

Source: Fernandina Beach Planning Department, EAR based Comprehensive Plan Amendments

LOS standards for roadways on the Strategic Intermodal System (SIS) are set by FDOT. The Strategic Intermodal System (SIS), described above, is a statewide system of modal facilities of the greatest economic importance to Florida. Previously, Rule 9J-5.0055(2) (c), FAC, required local governments to adopt the LOS standards established by the Florida Department of Transportation by rule for facilities on the Strategic Intermodal System.

Table MM-4 Level of Service (LOS) Standards for SIS Facilities

	SIS And FIHS Facilities		TRIP Funded Facilities & Other State Roads	
	Limited Access Highway (Freeway)	Controlled Access Highway	Other Multilane	Two-Lane
Rural Areas	B	B1	B	C
Transitioning Urbanized Areas, Urban Areas, or Communities	C	C	C	C
Urbanized Areas Under 500,000	C(D)	C	D	D
Urbanized Areas Over 500,000	D(E)	D	D	D
Roadways Parallel to Exclusive Transit Facilities	E	E	E	E
Inside TCMA's	D(E)	E	--	--
Inside TCEAs and MMTDs	--	--	--	--

Source FDOT, 2010

The boundaries between levels of service are quantitatively described by volume of traffic. The actual numerical value corresponding to the upper boundary of each level of service (service volume) depends on the roadway's functional classification, engineering characteristics, traffic characteristics and control characteristics. Typically, roadways are said to reach capacity when traffic volume is equivalent to the service volume at the boundary between LOS E and LOS F. Capacity does not mean the highest number of vehicles that can physically occupy a road (jam density), but the greatest volume at which traffic is still flowing in a reasonably predictable and stable manner.

Roadway level of service standards define the maximum traffic volume a particular roadway should carry. Level of service standards are established, in part, to ensure that adequate facility capacity will be provided for future development and for purposes of issuing development orders and permits. Levels of service standards are set for each individual facility or facility type and not on a system-wide basis.

Appendix C, depicts the, number of lanes, functional classification, and maximum service volumes for all road network segments within the City or immediately adjacent to the municipal boundaries.

Evacuation Routes

Evacuation routes, as defined by the Statewide Regional Evacuation Study Program (SRESP), includes roadways designated by county emergency management officials, in coordination with FDOT and NEFRPC as official regional evacuation routes; roadways and roadway segments identified by the SRESP as routes used to interconnect county designated evacuations routes: or routes used to interconnect evacuation routes between study regions. This includes major highways that are part of the regional and statewide network including primary (interstates and turnpikes), secondary (major arterials), and certain local roadways (minor arterials) which provide significant evacuation transportation capacity to move vulnerable populations to "points of safety". The Evacuation Routes Map contained in **Appendix A** indicates designated evacuation routes in Nassau County, the City of Fernandina Beach and the surrounding region.

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Transit/Public Transportation Services

The only available public transit in Nassau County is under the Transportation Disadvantaged Program (see below). The Transportation Disadvantaged (TD) program started in 1989 under the auspices of the Florida Commission for Transportation Disadvantaged. TD serves residents with physical disabilities, those aged 60 and older, children at risk, qualified low-income residents, and those living in rural areas. These riders make reservations at least 24 hours in advance for trips for life-sustaining activities such as congregating dining, medical appointments, and grocery stores. The Nassau County Board of County Commissioners designated the Nassau County Council on Aging (NCCOA) as the Community Transportation Coordinator (CTC) for Nassau County. The NCCOA has served in this capacity since that time and is the sole source provider of TD services within Nassau County.

Nassau County completed a Transit Study in the year 2000. The study considered transit options for four planning districts countywide focused around the Planning Districts (i.e.: Amelia Island, Yulee, Hilliard, and Callahan.) The Study included identification of major generators and potential service centers. The City will continue to support transit options and coordinate future efforts of the JTA and the North Florida TPO, as appropriate, with reference to this and other regional transit studies such as the JTA Commuter Rail Feasibility Study.

The provision of public transit is important for a number of reasons. Public transit facilitates the mobility of elderly and low income individuals, reduces traffic congestion, lowers levels of air and noise pollution, and increases connectivity between communities. For all of these reasons, the County will continue to work with other municipal and regional governments in the area toward the development of a regional transit system.

Bicycle and Pedestrian Facilities

The provision of acceptable mobility involves several aspects. Adding new facilities to improve bicycle and pedestrian mobility is yet another aspect of providing an acceptable transportation network. It is anticipated that sidewalks and bike paths serve a primary function of connecting traffic generators and attractors with a secondary function of recreation. Recreational trails are envisioned as serving principally aesthetic/scenic/ recreation functions with a secondary function of connectivity. Emphasis should be placed on gaps in the existing system, with the intent of highlighting the need for a connected bicycle and pedestrian system within the City.

While a complete inventory of sidewalk coverage within the City has not been completed at this time there are significant and recognizable gaps in areas where the potential for pedestrian activity exists, such as areas adjacent to neighborhoods, schools, parks, and commercial areas. Although it is important that these types of land uses have direct access to sidewalks, it is equally important that the sidewalk system be well connected to ensure pedestrian activity is possible between uses as well as to and from residential areas. Furthermore, many subdivisions in Fernandina Beach have limited access such that pedestrian travel between other subdivisions, schools, shopping, etc. is not possible. This lack of pedestrian interconnectivity on non-roadways is another example of gaps in the existing transportation system. Objectives contained as part of this Element provide for the City to establish guidelines regarding bicycle and pedestrian ways connecting residential areas with other areas as an integral aspect of its multi-modal network. The City is lacking a comprehensive bicycle and pedestrian facilities master plan and its need is reflected within the objectives contained as part of this Element.

Airport Facilities

The nearest airport to Fernandina Beach which schedules commercial airline services is in Jacksonville International Airport. The Fernandina Beach Municipal Airport is a city-owned public use airport located south of the central business district of Fernandina Beach. It is designated as a reliever airport for Jacksonville International Airport. Initially, this airport was developed as a training facility during World War II; the airport was transferred to the City in 1946 and designated as general aviation reliever airport for Jacksonville International Airport. Covering approximately 602 acres, the airport has three paved runways.

Sea Port Facilities

The Port of Fernandina is a natural deep water port situated on the west side of Amelia Island about 2.2 miles from the mouth of the Amelia River. It provides terminal service to pulp and a paper producer located throughout Florida and the Southeast; and also supports a number of independent container lines serving Latin America and the Caribbean. The berth consists of one 1,200 linear foot marginal wharf. Draft alongside the berth is maintained at a depth of 36 feet mean low water (MLW). All berths can handle container or conventional cargo working vessels. The adjoining marshaling area can accommodate 3,200 TEU including 50 electrical hookups for refrigerated containers. A chassis depot is located near the port with parking for 500 chassis.

The Ocean Highway and Port Authority of Nassau County serves as the governing body for the Port of Fernandina., and are responsible for preparing the Port Facilities Element and a Port Master Plan for the City of Fernandina Beach Comprehensive Plan.

Rail Facilities

The railway network within the City consists of railway lines, signals, and terminals. It includes tracks and associated facilities owned and operated by CSX and short-line operator First Coast Railroad (FCRD), which provides rail service to the Port of Fernandina (see above).

MULTI-MODAL TRANSPORTATION

MULTI-MODAL TRANSPORTATION OPTIONS

Transportation Demand /System Management (TDM)/ TSM

There are certain cases in which the widening of a road may prove infeasible because of right-of way restrictions, impacts on adjacent land use, or community concerns. In those situations, Transportation Demand Management (TDM)/Transportation System Management (TSM) projects were proposed as alternatives to road widening. TDM/TSM strategies could include access management, intersection and signalization improvements, and Intelligent Transportation Systems (ITS) projects.

Transportation system management includes data collection and analysis systems to address issues that are critical to the capital improvement programming process. These issues include highway pavement and bridge condition, safety, review of alternative methods to address congestion problems, public transportation, and inter-modal facilities. These management systems will result in the preservation of existing facilities, lower life-cycle costs, and lower overall costs to the community, as well as effective use of limited transportation dollars.

Mobility Planning

In order to implement multimodal planning, an assessment of the existing facilities including automobile/ truck, bicycle, pedestrian and other modes of transportation must be conducted. This assessment shall consist of an existing conditions level of service analysis of the city's facilities for each transportation mode. The analysis will establish the base conditions for the various modes of transportation and will serve as the starting point for the projection of future conditions and needed mobility infrastructure improvements through the 2030 horizon year. Mobility infrastructure improvements include any capital improvement that facilitates or provides for the transport of goods, services or people to get to their destinations safely, quickly and reliably. The City of Fernandina Beach is in an ideal position for achievement of a true multi-modal transportation network.

Multi-modal transportation is defined as having or involving several travel modes, including automobile, truck, freight, public transit, bicycle, pedestrian, terminals, car/vanpools, and High Occupancy Vehicle (HOV) lanes. Another term used in transportation planning is inter-modal, which is defined as a transportation system interconnecting, and including, different modes of transportation. An example would be a transit station that accommodates auto passenger drop-off and pick-up, as well as bike and pedestrian connections. Federal transportation legislation requires that TPO's develop a LRTP that is multi-modal, with inter-modal connections. The Florida Department of Transportation defines "mobility" as "the ease with which people and goods move throughout their community, state, and world." These definitions describe mobility from the user's perspective.

Mobility infrastructure includes any capital improvement that facilitates or provides for the transport of goods, services, or people. The City must conduct a study to assess the mobility needs of Fernandina Beach, including auto/truck, bicycle, pedestrian, and transit transportation modes. The multi-modal approach to mobility planning consists of location-based, design-based, and land use policies so as to promote future development that will integrate with and support multi-modal mobility planning. *Policy 2.01.01* requires that the City create a Mobility Plan and begin to implement its strategies by December 2012.

As the City continues to grow and experience more urban growth patterns, the elements of its transportation system begin to change and people begin using more urban modes of travel rather than solely relying on the automobile. Continued improvements and enhancements are necessary to the roadway network in order to provide short-term relief to safety and congestion problems, however other modes must be explored and developed to provide travel choices for the long term.

Roadways alone will never be capable of satisfying all the transportation needs of the City's population. However, it is doubtful that contemporary American society's dependence and infatuation with the automobile will significantly decline in the foreseeable future. That being said, the impacts of long-term rising fuel costs and lengthy commutes may make alternative transportation modes more appealing and, particularly in urban areas such as Fernandina Beach so, timely alternatives to the single occupant vehicle must be pursued to encourage the use of alternative travel modes to reduce dependence on the automobile. Ultimately, a successful multi-modal designed transportation system will offer more than one option to the general public.

Implementation of mobility strategies requires emphasis on the connection between land use and transportation planning. Strategies may include: connecting land use and transportation through location; funding mobility; including alternative modes of transportation and demonstrating how these modes will be provided; and developing and/or maintaining mobility-friendly communities.