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CHAPTER II
MULTIMODAL TRANSPORTATION ELEMENT

A. GOALS, OBJECTIVES AND POLICIES

GOAL 1: To develop a safe, convenient, efficient and coordinated system of motorized and nonmotorized transportation facilities which ensures adequate movement of people and goods through and within the City and which incorporates transportation strategies to address reduction in greenhouse gas emissions from the transportation sector.

Objective 1.1: ***Quality/Level of Service.*** In urban centers transportation cannot be effectively managed and mobility cannot be improved solely through the expansion of roadway capacity. The expansion of roadway capacity is not always physically or financially possible, and a range of transportation alternatives is essential to satisfy mobility needs, reduce congestion, and achieve healthy, vibrant centers. For these reasons, the City shall use Quality/Level of Service (Q/LOS) for monitoring purposes in order to identify where multimodal improvements are needed, for guiding capital improvements facility/operations planning to achieve and maintain mobility, to reduce greenhouse gases, and to assist in determining a fair share that a development should contribute to the achievement of these mobility strategies.

Q/LOS shall not be used for development approvals based on capacity. However, Florida Statutes require the inclusion of local roadway Level of Service standards within local comprehensive plans, even within a Transportation Concurrency Exception Area (TCEA), when roadway level of service is not the measure by which development is approved.

In recognition that the City is in the process of transitioning from a largely single occupant vehicle mode to a multimodal system, mobility within the TCEA will be achieved by the implementation of the strategies and programs identified in this element and through complementary policies throughout the comprehensive plan. If the development requires roadway improvements, emphasis shall be upon intersection improvements to improve safety and reduce conflicts between modes; signalization/Transportation Demand Management improvements (especially those providing transit and pedestrian priority signalization); bicycle facility improvements, and pedestrian crosswalk/median improvements. (Cross Reference: See Future Land Use Element, Goal 6 et seq. and Capital Improvement Element, Policy 1.2.1.a.) (Ord. 2010-18; 10-25-10)

Policy 1.1.1: *Roadway Q/LOS.* Establish minimum Roadway Q/LOS standards, applicable to all TCEA Zones, for monitoring intersection capacity based on annual average daily trips (AADT) and peak hour maximum service volumes, based on the latest edition of the FDOT Generalized LOS Tables, as follows: (Ord. 2010-18; 10-25-10)

- Limited Access Highways D
- Arterials E
- Collectors D

- Local Roads D

Policy 1.1.2: *Transit Q/LOS.* Coordinate with METROPLAN ORLANDO and LYNX to assist the County in maintaining the County's minimum Q/LOS standard for transit applicable to the citywide TCEA, to link urban centers and neighborhoods to nearby LYNX stops and subsequently to commuter rail. Work toward a long range vision of implementing higher capacity transit modes, such as bus rapid transit (BRT) along Seminole Way (SR 417) and between Zones A & B: (Cross Reference: See Multimodal Transportation Element, Objective 1.6 and Policies 1.6.1 through 1.6.7) (Ord. 2010-18; 10-25-10)

Fixed Route Public Transit	*Initial*	*2030*
Link 103 Altamonte Station	15-min. headway (2013)	No Change
Link 434 Crosstown	60-min. headway (2010)	30-min. headway
Seminole Way BRT	N/A	15-min. headway
PickUpLine (PUL) Transit	*Initial*	*2030*
Tuskawilla/Red Bug Lake Rd	N/A	*60-min headway*(2 hr adv)

Policy 1.1.3: *Pedestrian Q/LOS.* The pedestrian Q/LOS shall be the presence of pedestrian paths/sidewalks on both sides of roadways in areas of new development or within ¼ mile of existing schools, parks, or transit fixed service routes and shall be considered a QLOS standard of "B". The Q/LOS is not a standard that is intended to be achieved on an annual basis, but rather as an objective to be achieved by 2030. Many of the older areas of the City, including those within ¼ mile of schools, parks and the new LYNX 434 route, are lacking in sidewalks. A comprehensive inventory of these facilities will be completed as a baseline by July 2011 for use in monitoring improvement. Specific project identification and service gaps shall be utilized for consideration as part of Capital Improvements programming evaluation and for consideration during development review for new and redeveloping projects. (Ord. 2010-18; 10-25-10)

Policy 1.1.4: *Bicycle Q/LOS.* The bicycle Q/LOS shall be the presence of designated bike lanes, bike routes, and/or multi-use paths or trails, which run the length of the City in an east-west, north-south grid pattern at 1-1/2 mile intervals. The provision of this citywide network shall be considered a QLOS standard of "B". The QLOS is not a standard that is intended to be achieved on an annual basis, but rather as an objective to be achieved by 2030. Except for the Cross Seminole Trail, bicycle facilities within Winter Springs are primarily undesignated. A comprehensive inventory of existing roadway facilities will be completed as a baseline by July 2011 for use in monitoring improvement. (Ord. 2010-18; 10-25-10)

Policy 1.1.5: Connectivity Q/LOS. Explore the implications of adopting a connectivity Q/LOS by July 2011 for each of the TCEA Zones. (Ord. 2010-18; 10-25-10)

Policy 1.1.6: *SIS and FIHS Facilities.* Monitor the S.R. 417 roadway and entrance/exit ramp and make all efforts to minimize any potential negative impacts to this facility as the only SIS/FIHS facility within the City. (Ord. 2010-18; 10-25-10)

Policy 1.1.7: Require a Transportation Impact Analysis for all new development generating more than 300 total annual average daily trips (AADT). Such study shall be conducted in accordance with written procedures provided by the City and shall consider the comprehensive transportation impact on all modes of transportation. (Cross Reference: See Multimodal Transportation Element, Policy 1.11.2) (previously Policy 1.1.4; Ord. 2010-18; 10-25-10)

Policy 1.1.8: Annually monitor the Q/LOS status of arterials, collectors, and all state roadways within the City by obtaining from the State and County their most recent traffic counts at points along all roadways that would be affected by development in the City. (previously Policy 1.1.6; Ord. 2010-18; 10-25-10)

Policy 1.1.9: Monitor the functioning of the arterial and collector road system by use of the Florida Standard Urban Transportation Model Structure (FSUTMS) used by FDOT for travel demand forecasting so that collector road improvements may be scheduled according to valid priorities. (previously Policy 1.1.3; Ord. 2010-18; 10-25-10)

Policy 1.1.10: Evaluate proposed development for compliance with mobility strategies described in Multimodal Transportation Element, Policy 1.11.3. (Ord. 2010-18; 10-25-10)

Policy 1.1.11: Continue to use standards and guidelines for permitting the payment of proportionate fair-share contributions to mitigate locally and regionally significant transportation impacts consistent with Subsection 163.3180(16), F.S. Such standards and guidelines shall provide that the City shall not rely on transportation facilities in place or under actual construction more than three years after the issuance of a building permit, except as provided in Subsection 163.3180(16), F.S. (previously Policy 1.1.7; Ord. 2010-18; 10-25-10)

Policy 1.1.12: Coordinate with the Florida Department of Transportation (FDOT) regarding methods by which the pedestrian orientation of the Town Center can be achieved. This coordination may include the possible reclassification of S.R. 434 through the Town Center as a Class II or Class III arterial, the potential designation of the facility between U.S. 17-92 to Vistawilla Drive as one where it would be appropriate to apply a policy constraint prohibiting future widening of the roadway, and/or examining the appropriateness of lowering the speed limit

along a portion of the roadway. (Cross Reference: See Multimodal Transportation Element, Policy 1.9.9 and Intergovernmental Coordination Element, Policy 1.3.1) (previously Policy 1.1.8; Ord. 2010-18; 10-25-10)

Objective 1.2: ***Roadway Network***. To provide an attractive, safe, convenient, and efficient arterial, collector and local roadway system that serves travel demands and reduces greenhouse gas emissions, through establishment of criteria to be enforced during site plan review, concurrency management and access management.

Policy 1.2.1: Require the design and construction of arterial roadways, through cooperation with the FDOT and Seminole County, to support and reflect adjacent land uses and development patterns, while preserving the through traffic carrying capacity of the facility. (Ord. 2010-18; 10-25-10)

Policy 1.2.2: Require joint use access and cross access easements, except where they would be infeasible, to encourage interconnectivity between developments and to reduce congestion on arterials and collector roads. (Cross Reference: See Future Land Use Element, Policy 1.6.1)

Policy 1.2.3: Encourage the interconnection of collector roads on the street network to provide residents with alternative routes and the potential for a reduction in vehicle miles traveled.

Policy 1.2.4: Develop the collector road system according to the Future Transportation Map - 2030 and design standards derived under the auspices of the City, to coordinate the construction of segments of the system by both the public and the private sectors. (previously Policy 1.2.5; Ord. 2010-18; 10-25-10)

Policy 1.2.5: Continue to address through the Future Transportation Map - 2030 and periodic review, these factors: (previously Policy 1.2.6; Ord. 2010-18; 10-25-10)

- Current and projected deficiencies of arterial roads under other jurisdictions; and
- Existing deficiencies of City collector streets.

Policy 1.2.6: Utilize appropriate access management alternative techniques to control arterial road access and reduce congestion. These techniques include but are not limited to the following: (previously Policy 1.2.7; Ord. 2010-18; 10-25-10)

- Limit access to roads by controlling the number and location of site access driveways;
- Cross access easements to adjacent properties where feasible; and
- Use of frontage or back-lot parallel access roads where feasible.

Policy 1.2.7: Design major roadways as complete streets to enable safe, attractive, and comfortable access and travel for all users, to the extent appropriate. Incorporate bicycle and pedestrian facilities and transit features to achieve a true multimodal system while reducing greenhouse gas emissions. As funding becomes available, retrofit existing corridors to accommodate multimodal options. (previously Policy 1.2.8; Ord. 2010-18; 10-25-10)

Policy 1.2.8: Encourage the State, County, and METROPLAN ORLANDO to implement projects that support the City's mobility objectives. (previously Policy 1.2.9; Ord. 2010-18; 10-25-10)

Policy 1.2.9: Cooperate and extensively coordinate with the State, the County and the METROPLAN ORLANDO to ensure that their improvements are implemented by the dates indicated, and as the need develops. Monitor proposed developments within the City to determine if roadway infrastructure will be adequate to service projected demand, and development approvals will be dependent upon these criteria. (previously Policy 1.2.10; Ord. 2010-18; 10-25-10)

Policy 1.2.10: Create intersections of the new City collector roads with arterials where they will coordinate with the functioning of arterials. (previously Policy 1.2.11; Ord. 2010-18; 10-25-10)

Policy 1.2.11: Design and engineer the collector road system to minimize traffic impact on arterial roads. (previously Policy 1.2.12; Ord. 2010-18; 10-25-10)

Policy 1.2.12: Limit individual residential driveway cuts to local roads or alleys. Prohibit new residential driveway cuts onto arterial or collector roadways, unless no other access is available. Prohibit existing lots that have access to local roads from creating new driveway cuts onto arterial and collector roads. However, existing driveway cuts previously permitted on arterial or collector roadways may be redesigned and relocated upon issue of a permit by the City. (previously Policy 1.2.13; Ord. 2010-18; 10-25-10)

Policy 1.2.13: Coordinate with FDOT to appropriately re-classify S.R. 434 within the Winter Springs Town Center Corridor as a Class II or Class III arterial based on the increased density of traffic signals along S.R. 434. (Cross Reference: See Multimodal Transportation Element, Policy 1.1.8) (previously Policy 1.2.14; Ord. 2010-18; 10-25-10)

Policy 1.2.14: Support the widening of S.R. 434 to 4-lanes from S.R. 417 to S.R. 426 in the City of Oviedo. Request that adequate right-of-way is purchased to accommodate bike lanes and sidewalks (Cross Reference: See Intergovernmental Coordination Element, Policy 1.3.1) (previously Policy 1.2.15; Ord. 2010-18; 10-25-10)

Objective 1.3: ***Roadway Connectivity.*** The City shall, through configuration of the City-wide collector road system, create the interaction and cohesiveness that have been lacking among

the residential neighborhoods of Winter Springs, but do so in a manner that does not diminish the quality of life within each neighborhood.

Policy 1.3.1: Utilize design cross-sections for collector and local roads that accommodate narrower rights-of-way and roadway widths within developments that meet the definition of traditional neighborhood development.

Policy 1.3.2: Require that roadways be dedicated to the public when there is a compelling public interest for the roadways to connect with existing public roadways.

Policy 1.3.3: Require new development and substantial redevelopment to connect to existing adjacent roadways, bicycle facilities, and sidewalks. In addition, require "stub-out" of transportation systems to adjacent, future development sites, except when such connections would be inappropriate as determined by the City Commission.

Policy 1.3.4: Utilize access management standards to ensure appropriate access to the City's transportation system. Standards may include the requirement of joint-use driveways and/or cross access easements to access sites.

Policy 1.3.5: Preserve the movement function of the major thoroughfare system by requiring development of parallel roads or cross access easements to connect developments as they are permitted along major roads.

Policy 1.3.6: Review through the development review process, all proposed development for consistency with future transportation projects listed in this element, and for the implementation of the planned bicycle and trail system.

Policy 1.3.7: When designing extensions of existing collector roads to their logical arterial connection, choose road designs that naturally slow traffic, so that improved circulation and opportunities for a reduction in vehicle miles traveled is not at the expense of peaceful habitation.

Policy 1.3.8: Prohibit the creation of landlocked parcels. Nonresidential parcels shall be required to have right-of-way frontage or an adequate access easement (such as in out-parcels in shopping centers).

Policy 1.3.9: Require new development and redevelopment to provide adequate emergency access on-site and as necessary to adjacent properties.

Objective 1.4: ***Rights-of-way.*** The City shall coordinate with the County and the State to protect existing rights-of-way, and to prioritize and acquire future rights-of-way needed for imminent roadway, transit, bikeway and pedestrian improvements, realignments and /or modifications in accordance with the Future Transportation Map - 2030. (Ord. 2010-18; 10-25-2010)

Policy 1.4.1: Update the Future Transportation Map - 2030 when appropriate to ensure the protection of future rights-of-way.

Policy 1.4.2: Do not vacate rights-of-way that are needed to maintain an efficient and adequate transportation system.

Policy 1.4.3: Require the provision of adequate setbacks and dedications necessary to implement the Future Transportation Map - 2030.

Policy 1.4.4: Continue requiring the dedication of needed rights-of-way from new development where applicable.

Policy 1.4.5: Amend setback requirements, zoning restrictions and right-of-way protection requirements, if necessary, to make the City's land development regulations consistent with all elements of the Comprehensive Plan.

Policy 1.4.6: Require adequate right-of-way protection for intersections, interchanges and future park-and-ride sites in order to retain flexibility for future growth and expansion.

Policy 1.4.7: Require development in the Town Center to provide the necessary right-of-way dedications for the proposed public street network.

Policy 1.4.8: Ensure that right-of-way acquisition includes the necessary width to accommodate nonmotorized facilities such as sidewalks, multi-use paths, and bicycle lanes. (Ord. 2010-18; 10-25-10)

Policy 1.4.9: Pursue grant opportunities for median landscaping and road beautification.

Policy 1.4.10: Require the dedication of all needed rights-of-way and necessary roadway improvements for all new development, and adopt provisions to protect dedication of roads to the City.

Policy 1.4.11: Acquire rights-of-way for future transportation needs as funds become available.

Policy 1.4.12: Designate U.S. Highway 17-92 as a mass transit corridor.

Objective 1.5: ***Multimodal System.*** The City shall promote alternative modes of transportation to provide a safe and efficient multimodal system.

Policy 1.5.1: Strive to implement a livable transportation system within the City that includes multiple travel choices and the ability to move from one mode of travel to another with ease. (Ord. 2010-18; 10-25-10)

Policy 1.5.2: Develop standards for access to public transit. Such standards shall apply to new development, substantial improvements of existing development, and to road improvements.

Policy 1.5.3: Require both new development and substantial redevelopment to provide adequate safe pedestrian facilities on-site, to adjacent sites as practical, and in adjacent right-of-way. Such facilities shall include a direct link between the public sidewalk network and building entrance, lighted sidewalks along both sides of all internal roadways and, as appropriate, on the development side of adjacent roadways. Additionally, mitigation or elimination of existing pedestrian hazards (e.g. upgrading an intersection) may be required, as needed and dependent upon the magnitude of the development or redevelopment project. (Cross Reference: See Capital Improvements Element, Policy 1.4.5) (Ord. 2010-18; 10-25-10)

Policy 1.5.4: Require both new development and substantial redevelopment to provide adequate safe bicycle facilities on-site, to adjacent sites as practical, and in adjacent right-of-way. Such facilities shall include the provision of bicycle parking, as appropriate. Additionally, mitigation or elimination of existing bicycle hazards (e.g. installing bicycle detectors at signalized intersections) may be required, as needed and dependent upon the magnitude of the development or redevelopment project. (Cross Reference: See Capital Improvements Element, Policy 1.4.5)

Policy 1.5.5: Promote context-sensitive parking design to encourage walking, bicycling, ridesharing, and transit use. Shared parking is encouraged where feasible.

Policy 1.5.6: Require new development to maximize the use of existing transportation facilities by implementing transportation demand management (TDM) programs as a means to address mobility and transportation impacts for employee-intensive developments projected to have more than 50 employees. Developments projected to have less than 50 employees will be encouraged to implement TDM programs. In addition, the City will coordinate with LYNX to disseminate information regarding the commuter services and benefits to the City residents and local businesses. (Ord. 2010-18; 10-25-10)

Policy 1.5.7: Require new development and redevelopment to provide safe, well lit, and efficient on-site motorized and nonmotorized traffic movements, sufficient parking, pedestrian facilities, and, as applicable, connections to adjacent sites and rights-of-way. Encourage increased land use densities and mixed uses, consistent with the Future Land Use Element to enhance the feasibility of transit and promote alternative transportation modes. (Ord. 2010-18; 10-25-10)

Policy 1.5.8: Require that new development be compatible with and further the achievement of the Multimodal Transportation Element. Requirements

for compatibility may include, but are not limited to providing clearly delineated routes through parking lots to safely accommodate pedestrian and bicycle circulation.

Policy 1.5.9: Include landscaping and streetscaping (including lighting) as roadway design components, where appropriate, in order to enhance the function of the road for all users.

Policy 1.5.10: Prepare, adopt and implement a pedestrian circulation plan. Priority will be given to those walkways for which heavy recreational usage is projected, as well as those along roadways between residential areas and schools, which can be implemented concurrently with other roadway improvements.

Policy 1.5.11: Require an effective and safe pedestrian circulation system as a part of any new public or private roadway design and construction. Such a system shall be given major consideration in any substantial road improvement project.

Policy 1.5.12: Require that interconnected, unencumbered sidewalks be constructed concurrently with new development, by the developer. Sidewalks connecting to nearby schools, parks, bus stops, or other activity areas which function as pedestrian generators are to be provided to the extent required by the City's land development code. (Cross Reference: See Capital Improvements Element, Policy 1.4.5)

Policy 1.5.13: Implement bicycle lanes on both sides of arterial and collector streets where feasible, except in the Town Center where travel lanes are also utilized as bicycle lanes. Coordinate with METROPLAN ORLANDO, the County and the State to expand the current bicycle lane system. Implement sidewalks on both sides of all arterial and collector streets.

Policy 1.5.14: Make intersections pedestrian-friendly whenever possible, by limiting the crossing width to the shortest possible distance given the characteristics of the roadway; use of adequate lighting; adequate timing for traffic signals; and the provision of facilities for the handicapped. Coordinate with FDOT and the County to implement this policy.

Policy 1.5.15: Continue to work with Seminole County and other organizations involved in the acquisition and development of trail systems within Seminole County to complete the missing link at Layer Elementary School at S.R. 419 and to add connecting linkages between established neighborhoods (such as the Highlands) and the Cross Seminole Trail. (Ord. 2010-18; 10-25-10)

Policy 1.5.16: Facilitate the integration of BRT or similar transit circulator service into Zone B, by requiring the inclusion of supportive infrastructure, facilities and amenities into the Greeneway Interchange District planning

process. (Cross Reference: See Future Land Use Element, Policy 3.1.4) (Ord. 2010-18; 10-25-10)

Policy 1.5.17: Encourage the implementation of the S.R. 434 Crosstown bus route and linkage to the planned Central Florida Commuter Rail (SunRail). (Cross Reference: See Future Land Use Element, Policy 1.4.6 and Multimodal Transportation Element, Policy 1.6.7)

Policy 1.5.18: Establish a Bicycle and Pedestrian Advisory Committee made up of residents who will work together to pursue the planning and implementation of an interconnected trail, pedestrian and bicycle circulation system, encourage increased use of nonmotorized transportation in the City and make appropriate recommendations to the City Commission. (Ord. 2010-18; 10-25-10)

Policy 1.5.19: Consider the feasibility of a route along S.R. 434 connecting the Town Center and the Greeneway Interchange District, with the proposed facility to be limited to transit, bicycle, and/or pedestrian access. Environmental feasibility and traffic circulation would be the primary effort of the initial consideration. If permitting issues are not found to be insurmountable, a study may be performed to address issues such as potential routes and potential funding sources for capital and operating costs, and additional factors for a transit component such as operating agency, headways, hours of operation, projected ridership, and pricing.

Objective 1.6: ***Public Transit.*** The City shall adopt policies to encourage the implementation and usage of public transit facilities, including LYNX and the planned Central Florida Commuter Rail (SunRail). Public transit provides many benefits, including improved mobility, safety, security, and environmental quality. Public transit also enhances economic opportunity by expanding the labor pool, improving job accessibility, and reducing traffic congestion. The environmental benefits of public transit include items such as improved air quality, reduced greenhouse gas emissions, and reduced stormwater runoff from paved surfaces.

Policy 1.6.1: Encourage land uses and site development that promotes public transit within designated public transportation corridors, with priority given to those projects that will bring the greatest increase in transit ridership and reduction to greenhouse gas emissions, traffic congestion and air pollution.

Policy 1.6.2: Require residential development with greater than 200 units or commercial developments generating over 1500 average daily trips to incorporate a transit shelter, benches, and bicycle parking into their site plan, if located along a transit route, or if not located along a transit route, to construct a transit shelter or equivalent multimodal facility at a location to be determined by the City. Transit ridership to and from such developments along a transit route shall be encouraged and further improved by including elements, such as: (Ord. 2010-18; 10-25-10)

- Clearly delineated, well lit walkways from the building to the transit stop; and
- Commercial buildings placed closer to the street with access and windows directed to the street. (Cross Reference: See Future Land Use Element, Policy 5.2.4)

Policy 1.6.3: Work to ensure that all roads serviced by public transit routes function at a LOS sufficient to support the bus service.

Policy 1.6.4: Notify LYNX of any proposed traffic generators/attractors submitted to the City for review.

Policy 1.6.5: Work with LYNX to improve existing bus stops, and to design new ones to include benches, bicycle parking, signage, lights, and protection from the elements. Bus stops shall also be accessible for the handicapped and elderly passengers.

Policy 1.6.6: Coordinate with LYNX to accommodate riders with special needs.

Policy 1.6.7: Inventory sidewalks within one-quarter to one-half mile of the new LYNX Crosstown bus route to identify missing links in the pedestrian system. Implement new sidewalks where sidewalks do not exist or where sidewalks are in disrepair and are hazardous, as funding becomes available to provide access to transit and promote ridership. (Cross Reference: See Future Land Use Element, Policy 1.4.6 and Multimodal Transportation Element, Policy 1.5.17)

Objective 1.7: ***Land Use Coordination.*** Throughout the planning period, the City shall coordinate the transportation system needs with land use designations, and ensure that existing and proposed population densities, housing and employment patterns, and land uses are consistent with the transportation modes and services proposed for these areas.

Policy 1.7.1: Establish standards that promote the location of affordable housing in proximity to employment opportunities and transit services.

Policy 1.7.2: Continue to adopt and enforce regulations and standards that require that the design and function of the roadway be adequate for the type, size, and location of the land uses they serve.

Policy 1.7.3: Encourage land uses that generate high traffic counts to locate adjacent to arterial roads and mass transit corridors.

Policy 1.7.4: Update the traffic study portion of this Multimodal Transportation Element periodically to reflect the most current population projections.

Policy 1.7.5: Ensure that development in the Town Center consists of pedestrian-sized blocks with preferred block lengths of 300-500 feet. Travel distance is influenced by street connectivity, which has a big impact on whether a

person will choose to walk. (Cross Reference: See Future Land Use Element, Policy 2.2.1) (Ord. 2010-18; 10-25-10)

Objective 1.8: ***Environment.*** The City should conserve the natural environment and augment open space as functions of road development.

Policy 1.8.1: Choose rights-of-way for the City's collector road system, where valid options are available, distant enough from natural drainage features and upland habitats to allow coexistence with these natural areas.

Policy 1.8.2: Allow the incursion of a roadway through natural drainage features and upland habitats only when its public benefit outweighs other concerns.

Policy 1.8.3: Include in all new road and trail plans, adequate right-of-way for potential landscaping, where feasible, and provide adequate funds for maintenance in the annual budget of the City.

Policy 1.8.4: Maintain trees on City-controlled property according to published American National Standards Institute (ANSI) A-300 standards and Florida Institute of Food and Agricultural Sciences (IFAS) guidelines to preserve existing vegetation and canopy, as much as possible. (Cross Reference: See Conservation Element, Policy 1.1.5)

Objective 1.9: ***Intergovernmental Coordination.*** Traffic circulation planning will be coordinated with METROPLAN ORLANDO, FDOT, Seminole County, neighboring jurisdictions and other transportation related agencies.

Policy 1.9.1: Monitor the schedules for improvements and ongoing policies of all jurisdictions whose transportation responsibilities within the City limits affect the quality of life and the LOS on which Winter Springs' citizens depend.

Policy 1.9.2: Review subsequent versions of the FDOT Five-Year Transportation Plan, in order to update or modify this element, as necessary.

Policy 1.9.3: Keep abreast and review updates to the Transportation Element of the Seminole County Comprehensive Plan, in order to update or modify this element, as necessary.

Policy 1.9.4: Promote a comprehensive transportation planning process that coordinates state, regional, and local transportation plans.

Policy 1.9.5: Support the State and the County on the establishment of alternative transportation systems, including high speed, commuter, and/or light rail line systems connecting Seminole County with other areas in Florida.

Policy 1.9.6: Work with FDOT and Seminole County to make low speed urban street design the normal, default practice for street construction,

reconstruction, or modification within the Town Center. These urban street design features shall include, but not be limited to, wide, unencumbered sidewalks, narrow motor-vehicle lanes, street trees, prominent crosswalks, tight turning radii, and very limited use of turn lanes. The City shall encourage the same policy be adopted and implemented by these entities for their roadway segments within the Town Center.

Policy 1.9.7: Coordinate development of all property in the City adjacent to Tuskawilla Road with County requirements for laneage and intersection improvements to lessen development impact until the road is improved.

Policy 1.9.8: Coordinate with the Florida Department of Transportation regarding a reduction in the speed limit on S.R. 434 in the Town Center, when warranted, to better reflect the pedestrian-friendly environment being created in the Town Center. (Cross Reference: See Transportation Element, Policy 1.1.8 and Intergovernmental Coordination Element, Policy 1.3.1)

Policy 1.9.9: Discourage the widening of S.R. 434 between U.S. 17-92 and Vistawilla Drive. (Cross Reference: See Transportation Element, Policy 1.1.8 and Intergovernmental Coordination Element, Policy 1.3.1)

Policy 1.9.10: Coordinate with the FDOT and the City of Oviedo to establish a long term concurrency management system to address potential roadway deficiencies along S.R. 434 (east of S.R. 417), and prioritize roadway improvements for this corridor within a time frame of up to ten years. The long term concurrency management system will be coordinated with the Capital Improvements Element and will include periodic monitoring of LOS conditions and funding status. (Ord. 2010-18; 10-25-10)

Objective 1.10: ***Transportation Management Systems.*** The City shall evaluate the need and feasibility of implementing transportation management systems.

Policy 1.10.1: Consider adopting and/or promoting Transportation System Management (TSM) or Transportation Demand Management (TDM) strategies to enhance traffic capacity, movement and safety, if needed. Consider additional TSM/TDM strategies, such as staggered work hours, transit, trail, ridesharing/carpooling incentives, guaranteed ride home and other TSM/TDM measures.

Objective 1.11: ***Concurrency Management System.*** The City shall maintain a Concurrency Management System to ensure that transportation facilities and services needed to support development and redevelopment are available concurrent with the impacts of such development.

Policy 1.11.1: *Transportation Concurrency Exception Area (TCEA).* Consider the City in its entirety as being effectively established as a TCEA on July 8, 2009 by Senate Bill 360. This designation provides an exemption to transportation level of service requirements in an effort to support

urban infill, development, redevelopment and the achievement of the City's redevelopment goals by addressing mobility, urban design, land use mix, and network connections. Transportation concurrency requirements are modified within the citywide TCEA to include integration and coordination among the various modes of transportation. Q/LOS shall be used for monitoring purposes, in order to identify where multimodal improvements are needed, and not for development approvals based on capacity. (Cross Reference: See Future Land Use Element, Goal 6 et seq.) (Ord. 2010-18; 10-25-10)

Policy 1.11.2: *TCEA Zones*. Implement the Winter Springs' TCEA as five (5) distinct Zones, designated as A, B, C, D & E, based on geographic location in relation to the City's existing transportation network, land use, transit readiness, and future mobility needs. (Ord. 2010-18; 10-25-10)

ZONE A

Zone A is identified as the Central Mobility Hub and is generally located at the heart of the City at the intersection of State Road 434 and Tuskawilla Rd. and coincides generally with the Town Center/Urban Central Business District, which is roughly bounded by Tuscawilla Office Park to the south, Central Winds Park to the west, by Lake Jesup to the north, and by the Cross Seminole Trail pedestrian bridge to the East as shown on the TCEA Zone Map. Zone A includes major public facilities such as City Hall, Winter Springs High School, U.S. Post Office, Veteran's Memorial, Magnolia Park, and Central Winds Park. Zone A has an interconnected network of streets which connect into State Road 434 and Tuskawilla Rd, and it is also directly accessed by the Cross-Seminole Trail and by a LYNX fixed route (SR 434 Crosstown route). A future local circulator or BRT route is planned to connect Zone A and B. The goals of Zone A are fully described in the Future Land Use Element under Goal 2 (Town Center) and Goal 5 (Urban Central Business District) and the associated objectives and policies of each. This area encourages higher intensity development subject to the Town Center District Code, along with integration of multimodal transportation options. Zone A contains both built-up properties and vacant land suitable for new development. Public facilities and services are available, such as sanitary sewer, potable water, roads, and recreation areas. (Ord. 2012-05)

ZONE B

Zone B is identified as the Seminole Way Hub and coincides generally with the Greeneway Interchange District roughly bounded by Zone C (Corridor Zone) to the south, Zone A (Central Mobility Hub) to the west, Lake St. to the north, and just beyond SR 417 to the East as shown on the TCEA Zone Map and also includes the Oviedo Market Place area.

The area is centered around the Seminole Way Interchange at SR 434 and also includes the Oviedo MarketPlace area located in the vicinity of the Seminole Way interchange at Red Bug Lake Rd.

The Zone is distinguished by its proximity to SR 417 (a Strategic Intermodal System or SIS), also known as Seminole Way and is expected to be heavily served by transit. A future local circulator or BRT route is planned to connect Zone B and A. The area contains primarily vacant land.

The goals of Zone B are fully described in the Future Land Use Element under Goal 3 (Greeneway Interchange District) and Goal 4 (Mixed Use) and the associated objectives and policies of each. The Zone is highly market-driven, oriented to certain target industries for the purpose of creating primarily an employment-oriented mixed use development. This area supports high intensity, and vertical integration of uses, along with integration of multimodal transportation options.

Both Zone A & Zone B contain important job-generating economic features with a need for a supportive future land use pattern and mobility facilities in proximity to those economic assets.

ZONE C

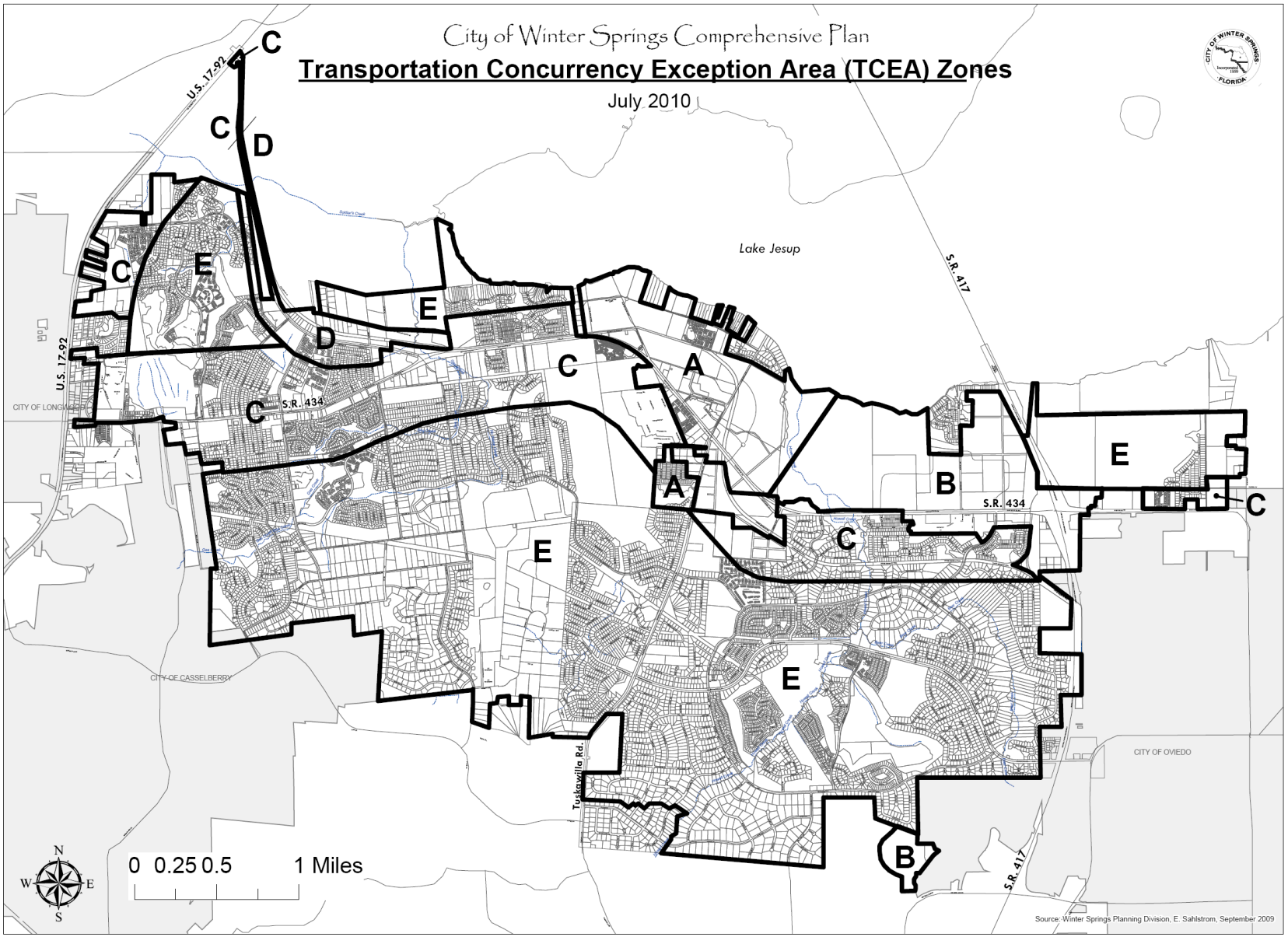
Zone C is identified as the Corridor Zone. The corridor includes properties within ½ mile (2640 feet) of the centerline of State Road 434, extending from the western City boundary to the eastern City boundary, exclusive of those parcels included within Zone A or B and properties within ½ mile (2640 feet) of the centerline of U.S. 17-92, extending from the northern most City boundary to the southernmost City boundary. Zone C contains both built-up properties, properties suitable for redevelopment and some vacant parcels. Public facilities and services are available, such as sanitary sewer, potable water, roads, and recreation areas. In 2009, a LYNX route began servicing the City and now provides direct access to the University of Central Florida. Ridership has exceeded expectations. This route is at the heart of the City's mobility strategies, as it is the "mobility artery" that pedestrian and bicycle feeders will link into and which will in turn will provide the City with connectivity to SunRail. However, older areas of Zone C have no sidewalks. The provision of sidewalks within a 1/4 mile of the LYNX fixed route has been identified as one of the major components of the City's pedestrian Q/LOS.

ZONE D

Zone D is identified as the State Road 419 Corridor. The corridor includes properties within 600 feet of the centerline of U.S. 17-92, extending from the northern most City boundary, exclusive of those parcels included within Zone C. Zone D contains both primarily built-up properties and parcels suitable for redevelopment. Public facilities and services are available, such as sanitary sewer, potable water, roads, and recreation areas. Much of this area has an industrial component. The Cross Seminole Trail extends through a portion of Zone D. Industrial businesses within this area might be receptive to TDM.

ZONE E

Zone E is identified as the Suburban Development District and includes the remaining area of the City, not previously included within any other zone. The area is mostly built-out and primarily includes established single family neighborhoods. The area is not expected to undergo any redevelopment or transition to higher density within the foreseeable future. The provision of a bicycle network spaced at intervals of 1-1/2 miles apart east-west and north-south across the City will have the greatest impact on Zone E, particularly if an east-west multiuse path or trail "midtown" can be established within the FP&L easement. This easement runs mostly parallel to SR 434 and approximately 1-1/2 miles to the south of it. Additionally, a trail connector should be established at the north western part of the City and Southeastern part of the City which together with the "midtown' trail could provide regional connectivity citywide.


City of Winter Springs Comprehensive Plan
Transportation Concurrency Exception Area (TCEA) Zones
July 2010
U.S. 17-92
S.R. 434
S.R. 417
Lake Jesup
CITY OF LONGWOOD
CITY OF CASSELBERRY
CITY OF OVIEDO
Tuskawilla Rd.
0 0.25 0.5 1 Miles
N
W
E
S
Source: Winter Springs Planning Division, E. Sahlstrom, September 2009

Policy 1.11.3: (Ord. 2010-18; 10-25-10)

a) *On-site Mobility Strategies for All Development.* The City shall require development to implement mobility strategies to mitigate the respective transportation impacts and to improve mobility within the City. All new development or redevelopment shall provide onsite or access improvements as indicated below, based upon the Zone in which the project is located, as indicated in the column on the right.

	TCEA Zones & Appropriate On-site Mobility Strategies for All Development	Zone A Central Mobility Hub	Zone B Seminole Way Hub	Zone C Corridor Zone	Zone D SR 419 Corridor	Zone E Suburban Devlpmt District
1	Developer shall build public sidewalks in accordance with City standards along developed property frontage and convey the land or provide easements for these sidewalks. Connect development to existing or planned sidewalks within 1/8 of a mile;	X	X	X	X	X
2	Provide easement and build cross-access connections between adjacent properties along arterials and utilize shared driveways, except when infeasible;	X	X	X	X	
3	Closing of existing, excessive, duplicative, or unsafe curb cuts or narrowing of overly wide curb cuts at the development site;			X		X
4	Deeding of land or conveyance of required easements within the property, as needed, for the addition or extension of a non-motorized multi-use trail, in accordance with the City's adopted Master Plan;		X			
5	Safe and convenient on-site pedestrian circulation such as sidewalks and ADA crosswalks connecting buildings and parking area at the development site;	X	X	X	X	X
6	Streetscaping/landscaping on the development frontage side of public rights-of-way adjacent to the property and within the project site;	X	X	X	X	X
7	Sidewalk lighting on the development frontage side of public rights-of-way adjacent to the property and within the project site;	X	X	X	X	X
8	Deeding of land or conveyance of required easements within the property, as needed, for future bus rapid transit or other local circulator, in accordance with the City's adopted Master Plan;	X	X			
9	Compact mix of uses which are pedestrian friendly and are accessible without the use of the automobile ;	X	X	X		
10	Roadways, bikeways, and pedestrian systems shall encourage travel between neighborhoods and access to transit without requiring the use of arterial roadways;	X	X	X	X	X
11	Deeding of land or conveyance of required easements along the developed property frontage to the City, as required, and the construction of on-street parking. Not required if it would render the property unusable for development;	X				
12	Through streets in new development areas spaced no more than 1/2 mile apart;	X	X	X		
13	Provision of bus shelter and associated amenities provided for developments with greater than 200 residential units or commercial developments projected to generate more than 1500 ADT.	X	X	X	X	X

b) *Net, New Average Daily Trip Generation Mitigation Requirements.* In addition to those items specified in Policy 1.11.3a, ensure continued mobility within the City, by requiring proposed development or redevelopment to also provide mobility mitigation credits (for all project phases), based upon the net, new average daily trip generation projected by the project:

Criteria Level	Net New Average Daily Trip Generation	Required Number of Mitigation Credits
Level 0	Less than 300	No requirement
Level 1	300 to 999	1 Mobility Credit
Level 2	1,000 to 1,999	2 Mobility Credits
Level 3	2,000 to 2,999	3 Mobility Credits
Level 4	3,000 to 4,999	8 Mobility Credits
Level 5	Over 5,000	12 Mobility Credits

The developer may sign a development agreement or contract with the City for the provision of the required standards. The mitigation projects listed below and proposed by the developer to satisfy the required mitigation credits shall be subject to final approval by the City. The City may authorize mitigation projects to satisfy the requirements for transportation facilities that are not directly impacted by the proposed development but are deemed priorities of the City's transportation system and which contribute to the City's overall mobility strategy.

In recognition that the mitigation project costs will vary substantially, the City shall adopt a methodology into the land development code that establishes a proportionate and equitable relationship between the cost of the mitigation projects and the number of credits required for mitigation.

c) *Mobility Mitigation Project Opportunities.*

	AADT Mitigation Opportunities	Zone A Central Mobility Hub	Zone B Seminole Way Hub	Zone C Corridor Zone	Zone D SR 419 Corridor	Zone E Suburban Devlpmt District
14	Public sidewalks in priority areas as identified by the City, where no sidewalks exist, particularly within 1/2 mile of attractors including fixed transit lines or Widening of existing public sidewalks in priority areas to increase pedestrian mobility and safety;	X	X	X	X	X
15	Additional bicycle facilities over the minimum required by the land development code. Additional bicycle parking may be used to substitute for required motorized vehicle parking if lockers/showers provided;	X	X	X	X	X
16	Deeding of land or conveyance of required easements, for new multi-use path/trail or added connector to existing Cross-Seminole Trail;		X			X
17	Deeding of land or conveyance of required easements for the addition of bicycle lanes;			X		X
18	Land acquisition for expansion or better connectivity of the trail system;					X
19	Deeding of land or conveyance of required easements for dedicated Bus Rapid Transit or Local Ccirculator corridor;	X	X			
20	Construction of Seminole Way Intermodal Transit Facility in coordination with LYNX and the Expressway Authority;		X			
21	Deeding of land or land acquisition for the use of a park and ride lot in priority areas as identified by the City;		X	X		
22	Construction of park and ride facility with a minimum of 100 spaces including transfer station and restrooms/info center;		X	X		
23	Payments for the capital and operating costs associated with a Bus Rapid Transit or similar transit circulator service for Winter Springs or increased service frequency for existing fixed route;	X	X	X	X	X
24	Funding of roadway capacity or safety projects in priority areas;	X	X	X	X	X
25	Intersection and/or signalized modifications;			X	X	
26	Funding of additional streetscaping/landscaping in priority areas, on public rights-of-way or medians, as identified by the City;			X	X	X
27	Funding of pedestrian scale lighting in previously developed, priority areas identified by the City;			X	X	X
28	Business operations with limited or no peak hour roadway impact;	X	X	X	X	X

	AADT Mitigation Opportunities	Zone A Central Mobility Hub	Zone B Seminole Way Hub	Zone C Corridor Zone	Zone D SR 419 Corridor	Zone E Suburban Devlpmt District
29	Funding of design or construction studies/plans for projects such as planned roundabouts, road connections, sidewalk systems, and/or bike trails;	X	X	X	X	X
30	Provision of matching funds for transit or other transportation mobility related grants;	X	X	X	X	X
31	Bike facilities (such as lockers and showers) at trail entry points or connecting transit lines;	X	X	X	X	X
32	Trail amenities or safety systems;					X
33	Transportation Demand Management program participation for 50+ employees (such as bus pass program or ride sharing/van pooling program);	X	X	X	X	
34	Innovative transportation-related modification or standard acceptable and approved by the City;	X	X	X	X	X
35	Deeding of land or conveyance of required easements along the property frontage to the City, as needed, for the construction of bus turn-out facilities and/or bus shelters. A transit facility license agreement (executed by the property owner and the City) for the placement of a bus shelter and related facilities on private property may be used in lieu of deeding or conveyance of easements, if agreeable to the City. The license term shall be for a minimum of ten years;	X	X	X	X	X
36	Develop project at or near maximum densities/intensities with inclusion of transit supportive building and site design;	X	X	X		

Policy 1.11.4: Revise the land development code related to concurrency administration and proportionate fair share contributions to include funding of mobility strategies within the TCEA in concert with the long term strategies for achieving and funding mobility adopted by Seminole County. (previously Policy 1.11.1; Ord. 2010-18; 10-25-10)

Policy 1.11.5: Require that all developments anticipated to generate 300 or more annual average daily trips (AADT) be required to submit a Transportation Impact Analysis. (Cross Reference: See Multimodal Transportation Element, Policy 1.1.6) (previously Policy 1.11.2; Ord. 2010-18; 10-25-10)

Policy 1.11.6: Require new development, regardless of size, to provide operational improvements to the City's transportation system to mitigate their impacts on the system, to ensure smooth traffic flow, and to aid in the elimination of hazards. Improvements may include, but are not limited to: providing added connectivity, the addition of turn lanes, deceleration lanes, signage, signals and pavement markings, and contributions to the City's multimodal system. (previously Policy 1.11.3; Ord. 2010-18; 10-25-10)

Policy 1.11.7: Require that transportation facilities needed to serve new development are in place, or under actual construction, within 3 years after the approval of a building permit, or its functional equivalent that results in traffic generation. The only exceptions to this policy are those

described in Subsection 163.3180, F.S. (previously Policy 1.11.4; Ord. 2010-18; 10-25-10)

Policy 1.11.8: Maintain records to determine whether any 110% de minimis transportation impact threshold is reached, pursuant to Subsection 163.3180(6), F.S. A summary of these records shall be submitted with the annual Capital Improvements Element update. (previously Policy 1.11.5; Ord. 2010-18; 10-25-10)

Policy 1.11.9: *Mobility Monitoring*. Monitor development activity and implementation of mobility strategies. The monitoring will include analysis and/or information for the following: (Ord. 2010-18; 10-25-10)

a) The amount of development/redevelopment as a function of density, FAR, and percentage of mixed use. Other site planning performance criteria may be used as part of the evaluation such as building placement, parking location and number of spaces, connection to adjacent properties, proximity to transit stops/shelters, connection to adjacent sidewalk network, and provision of pedestrian, bicycle, and transit amenities.

b) The implementation of mobility strategies, programs, and policies as detailed below:

Mobility Strategy	Performance Measure*	Target*
Transportation Demand Management	Persons participating in ridesharing or vanpooling programs	3% annual increase of participants
	Number of businesses/employers offering flexible work schedules	5% annual increase of participants
	Number of improved and/or new bus shelters on LYNX routes	1 improved and/or new shelter each year
Transportation System Management	Number of intersections and/or signal improvements	1 per project generating greater than 5,000 net new daily trips
	Optimize signal synchronization	Annually coordinated with County
	Number of joint driveways and/or cross accesses or combined driveways	1 per redevelopment / development project
Pedestrian (Sidewalk) Enhancements	Amount of sidewalks added and/or expanded to the network	500 linear feet of sidewalk per year
	Linear feet of streetscaping/landscaping which enhances the pedestrian environment	500 linear feet per year
Bicycle Facilities Enhancement	Number of bicycle racks/lockers	1 bicycle rack/locker for every 20 vehicle parking spaces provided within the Town Center and GID
	Linear feet of bicycle lanes and related facilities	Bicycle lanes and related facilities including bicycle provisions at inersections as part of programmed street resurfacing and/or rehabilitation (where feasible)

* Performance measures and targets may be subject to further consideration (i.e. if these performance measures and targets cannot be supported by reasonable available data or additional measures are identified that may also be appropriate). The facilities and infrastructure for several of the targets are contingent upon development/redevelopment activity and associated developer contributions.

c) The effects of the mobility strategies, programs, and policies in accomplishing the objective of improved mobility for the multimodal transportation system with the City shall be monitored by the following performance measures, including, but not limited to:

Performance Measure*	Target*
Change in ridership, including boardings/alightings for LYNX routes	1% annual increase
Change in headways for LYNX routes	10-minute headway decrease every 5 years
Pick up Line Transit (change inridership will be reported in subsequent years after the implementation of the service)	Achieve 1st year ridership projections with a 3% annual increase
Proposed trip generation from redevelopment/new developments (based on mobility CMS application and TIAs) versus actual traffic counts on adjacent roadways	Achieve a 5% reduction in actual traffic counts versus trip generation projections
Change in daily and peak hour traffic volumes on SR 434 and SR 417	Achieve less than 1% annual increase
Change in traffic counts and queue length at the ramps SR 417	Achieve less than 1% annual increase in traffic counts and queue lengths

Policy 1.11.10: *Detail Traffic Analysis.* A detailed traffic analysis will be conducted every seven years in conjunction with the TCEA Monitoring Report as part of the City's EAR to provide information to the City and FDOT to evaluate the effectiveness of the City's mobility strategies. (Ord. 2010-18; 10-25-10)

Objective 1.12: ***Transportation Funding.*** Transportation improvements and services will be funded from a mix of local, regional, and State agency road, pedestrian, bicycle, and transit programs by coordinating with these various agencies. (Ord. 2010-18; 10-25-10)

Policy 1.12.1: *FDOT Work Program and MPO Five-Year Transportation Improvement Plan (TIP).* Seek funds from the Metropolitan Planning Organization (METROPLAN ORLANDO) or any similar agency to finance improvements to deficient roadways by programming eligible projects within the FDOT Work Program and MPO Five-Year TIP. (Ord. 2010-18; 10-25-10)

Policy 1.12.2: *Seminole County Coordination.* Continue to jointly fund projects with Seminole County and where appropriate, consider advance funding or projects. (Ord. 2010-18; 10-25-10)

Policy 1.12.3: *MPO Coordination.* Continue to participate in METROPLAN ORLANDO and its Transportation Technical Committee, Bicycle & Pedestrian Advisory Committee, and the Citizens Advisory Committee in order to include City-related improvements in the Metropolitan Orlando Urban Area Transportation Plan. (Ord. 2010-18; 10-25-10)

Policy 1.12.4: LYNX Coordination. The City will continue to coordinate with LYNX regarding bus, bus rapid transit, and regional transit service to the adjacent cities of Longwood and Casselberry. (Ord. 2010-18; 10-25-10)

Objective 1.13: ***Financing Strategies.*** User-based financing strategies are the preferred means to fund new transportation (including transit) improvements and programs, and will utilize new funding mechanisms, as they become available. (Ord. 2010-18; 10-25-10)

Policy 1.13.1: *Impact Fees.* Continue to collect transportation impact fees for County and City facilities. The City shall periodically evaluate its impact fee program to determine whether fees appropriately represent improvement costs demanded by the impacts generated from new development. (Ord. 2010-18; 10-25-10)

Policy 1.13.2: *Tax Increment Financing*. Use revenue from the tax increment finance district to fund needed multimodal transportation improvements within that district. (Ord. 2010-18; 10-25-10)

Policy 1.13.3: *State Funds for Improvements and Services.* The City shall support changes to state legislation that enable local and regional governments to increase the revenue base for transportation improvements and services, including transit and pedestrian programs. (Ord. 2010-18; 10-25-10)

Policy 1.13.4: *Federal and State Funds.* Coordinate with federal and state transportation and transit agencies to identify potential federal and state funds that may be eligible for transportation improvements and programs within Winter Springs. (Ord. 2010-18; 10-25-10)

Policy 1.13.5: *Evaluate Alternative Funding Sources to Supplement Transit Funds.* Evaluate the feasibility of establishing special assessment districts, impact fees, or other alternative methods to fund ongoing operating, management and capital costs for transit serving Winter Springs. Any special City transit funding source is intended to augment but not supplant funds provided by LYNX, Seminole County, and other governments served by the same sub-regional transit systems. (Ord. 2010-18; 10-25-10)

Policy 1.13.6: *Pursue Transportation Grants*: Coordinate annually with the Florida Department of Transportation (FDOT), METROPLAN ORLANDO, Seminole County, LYNX, the Federal Highway Administration (FHA) and the Federal Transit Authority (FTA) to identify federal and state transportation grant programs may be eligible to the City as a means to implement and advance improvements or programs proposed in the City's Multi-Modal Transportation Plan. (Ord. 2010-18; 10-25-10)

B. INTRODUCTION

The City is located within an urbanized portion of a Metropolitan Planning Organization (METROPLAN ORLANDO). Therefore, the City is required by the State to adopt a Transportation Element, as opposed to a Traffic Circulation Element, and to coordinate the element with the long-range transportation plan of METROPLAN ORLANDO.

The purpose of the Transportation Element is to plan for a multimodal transportation system that emphasizes accessibility by placing emphasis on public transportation systems; encourages the development of compact, pedestrian-oriented urban areas; promotes energy efficient development patterns; and protects air quality.

An essential base for planning a transportation system is the Future Land Use Element. The Future Land Use Map - 2030 will determine where new or improved transportation facilities may be needed. The Transportation Element will assess the condition and capacity of the existing transportation facilities, project future needs, set Levels of Service (LOS) standards for roads and determine future system improvements. Roadway LOS standards will be established to ensure that adequate facility capacity for future development is concurrently sufficient with the issuance of development orders and permits. These standards will be established for each roadway link consistent with the facility type, and current Florida Department of Transportation (FDOT) LOS guidelines.

The transportation planning process in Seminole County is a joint effort among various federal, state, regional, county and municipal agencies working together with METROPLAN ORLANDO. This agency ensures that highways, public transit, bicycle, pedestrian, and other transportation facilities are coordinated and planned consistent with planned development in the urbanized area.

In September 2004, METROPLAN ORLANDO adopted the 2025 Long Range Transportation Plan for the Orlando Urban Area, a 20-year multimodal plan for guiding transportation improvements in the Orlando urban area (Orange, Osceola, and Seminole counties). The plan is based on regional needs identified through the process of forecasting future travel demand, evaluating system alternatives, and selecting those options which best meet the mobility needs of the region. The plan recommends road, highway, beltway, rail, and transit system improvements to be implemented by 2025. The plan represents the best combination of financial resources and improvements to meet the goals and objectives of the study.

C. INVENTORY

An efficient transportation system should provide access to various land uses through alternative transportation modes. The overview of the existing multimodal transportation system within the City provides the basis for analyzing existing transportation deficiencies and needs within the City.

This section will identify existing roadway and transit facilities, availability of public parking facilities, airport and rail line systems, availability of bicycle and pedestrian facilities and other ancillary services and programs.

1. Road System

- This section describes the major roadway facilities within the City, their jurisdictional responsibility, and their relative function to the City's circulation system. Historically, the City has been an automobile dependent, suburban community served by one major north-south County road, Tuskawilla Road, and one major east-west route, S.R. 434, which is primarily a 4-lane arterial highway. Other major roads in the City and vicinity are S.R. 417 (Seminole Expressway), S.R. 419, U.S. 17-92, Red Bug Lake Road, and East Lake Drive. The City's roadway network is displayed on Map II-1. This network of roads serves not only the residents and employees of Winter Springs, but also neighboring municipalities. *S.R. 417 (Seminole Expressway):* A north-south four-lane divided limited access expressway located along the eastern boundary of the City, which provides access to Sanford to the north and Orange County to the south.

- *U.S. 17-92:* A federal north-south principal arterial located along the west boundary of the City. It connects with Sanford to the north and Orange County to the south. The route passes through Orlando, Winter Park, Maitland, Casselberry, Longwood, Winter Springs, Lake Mary and Sanford. It is currently a six-lane undivided facility where adjacent to the City, and four lanes north of Shepard Road.

- *S.R. 434:* A state principal arterial that runs from south of Altamonte Springs north to Longwood, then east through the center of Winter Springs to Oviedo, then south past the University of Central Florida to S.R. 50 east of Orlando. S.R. 434 within the City is primarily a four-lane facility, with a portion of the road east of S.R. 417 consisting of a two-lane segment. S.R. 434 passes through the Town Center, the City's concentrated mixed-use downtown urban center. Because the Town Center is a pedestrian-oriented environment, the posted speed of 45 miles per hour on S.R. 434 poses safety and other issues for pedestrian crossings.

- *S.R. 419:* A state minor arterial that runs from S.R. 434 in Winter Springs to U.S. 17-92 near Lake Mary. Within the City, it is a two-lane undivided facility.

- *Tuskawilla Road:* A four-lane county minor arterial that runs from S.R. 434 in Winter Springs to S.R. 426 near the Orange County line.

- *Red Bug Lake Road:* A four-lane county principal arterial that runs from S.R. 436 in Casselberry east to S.R. 426 in Oviedo where it turns into Mitchell Hammock Road.

- *East Lake Drive:* A realignment and widening of this facility was completed in 2008. It presently functions as a four-lane county minor arterial that runs from Tuskawilla Road west to Seminola Boulevard which provides easy access to U.S. 17-92. The recent improvements to the facility provide a convenient alternative for many trips that would otherwise utilize S.R. 434.

a. Jurisdiction and Maintenance Responsibility

The jurisdictional responsibility of each roadway is described above. In summary, the City's road system includes one limited access facility (S.R. 417), three state arterials (U.S. 17-92, S.R. 434 and S.R. 419) and two County arterials, Tuskawilla Road and East Lake Drive. There is also one County collector (a portion of

Shepard Road), nineteen (19) City collectors, and three local roads included in the classification.

b. Functional Classification

Table II-1, Table II-2 and Map II-1A show the functional classification of major roads in the City. The functional classification of public roads in this element is based on FDOT criteria, which consider quantitative and qualitative factors such as jurisdiction, land access, route length, and trip lengths. A road hierarchy is used to identify relative importance of roads within the system, provide guidance for LOS and design standards, aid in establishing improvement priorities, identify maintenance responsibility, and assist in determining funding and financing policies. The hierarchy used in this element includes:

(1) *Limited Access Facilities:* Designed to provide regional mobility via uninterrupted flow at high travel speeds for regional trips. Access spacing is generally on the order of one mile or more, and average travel speeds are above 40 miles per hour. There is no direct land access, and urban freeways are multi-lane, divided facilities. Lane access is always via ramps to major arterials or frontage roads. S.R. 417 (Seminole Expressway) is part of the Florida Intrastate Highway System (FIHS) and the only limited access facility within the City.

(2) *Arterials:* Provide regional mobility via both uninterrupted flow and interrupted flow segments. Arterials provide mobility around and through urban and community cores, and accommodate relatively long trip lengths as opposed to providing access to adjacent properties. Arterials are sometimes further classified for performance as Class I, II, and III based on the number of signals per mile, access controls, geometric cross sections, and speed limits.

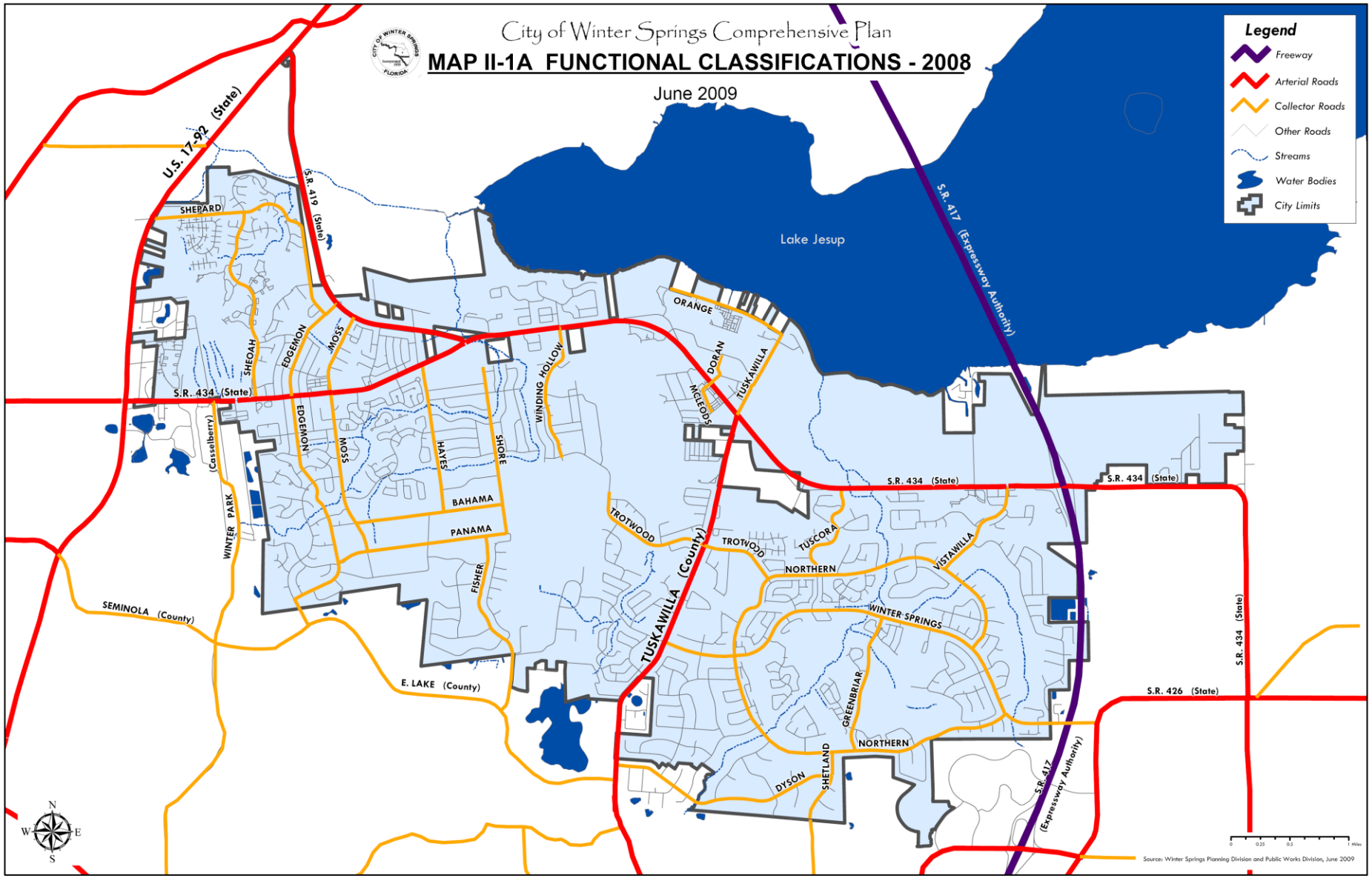
(3) *Collectors:* Provide for movement between local streets and the arterial network. Collectors serve residential, commercial and industrial areas.

(4) *Local Roads:* Provide direct access to abutting properties. Local roads accommodate traffic originating in or traveling to properties within a neighborhood, commercial or industrial development. Local roads are not considered part of the major thoroughfare system.

c. Constrained Facilities

Subsection 339.155, F.S., makes governmental police powers available to preserve and protect property necessary for transportation corridors and recommends that needed rights-of-way be acquired as far in advance of construction as possible. FDOT requests that local governments identify constrained roadways in their comprehensive plans to ensure maintenance of the operating conditions, so that significant degradation in the LOS does not occur. A constrained roadway is one in which adding two or more through lanes to meet current or future needs is not possible due to physical, environmental or policy barriers.

Map II - 1A: Functional Classifications – 2008



Map II – 1B: Existing Number of Lanes – 2008

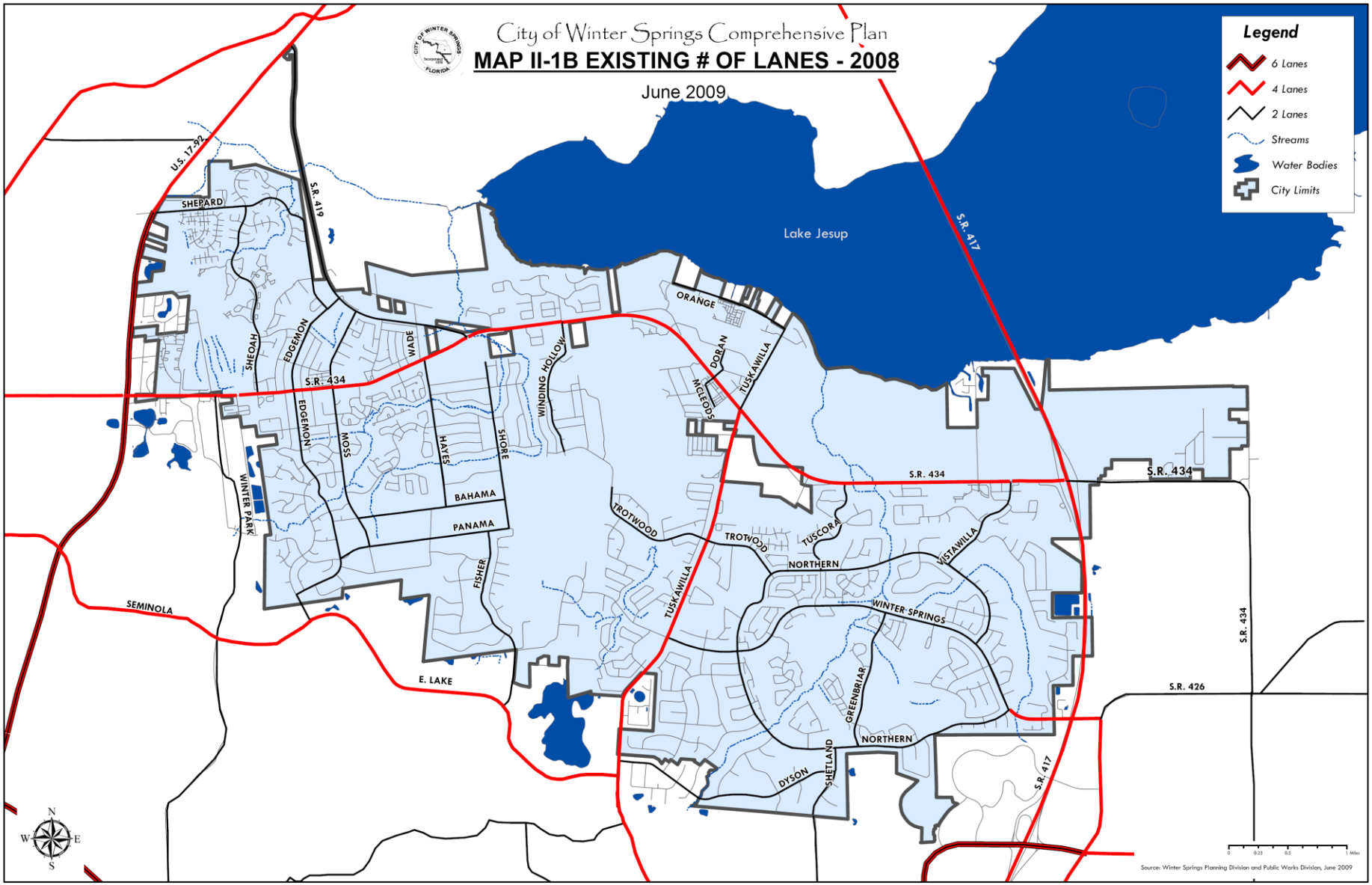


Table II - 1: Historic Daily Volumes and Year 2008 Roadway Link Levels of Service (LOS)

ROADWAY	FROM	TO	NO. OF LANES	ROADWAY CLASS	LOS D* DAILY VOLUME	DAILY VOLUME 2008	DAILY VOLUME 2004	DAILY VOLUME 2001	V/C RATIO 2008	DAILY LOS 2008
U.S. 17-92*	S.R. 419	S.R. 434	4/6***	ARTERIAL	35,700	33,832	39,579	36,959	0.95	F*/C
U.S. 17-92*	S.R. 434	SEMINOLA BLVD	6	ARTERIAL	53,500	47,429	51,190	36,959	0.89	C
S.R. 434**	U.S. 17-92	MOSS AVE	4	ARTERIAL	35,700	35,370	25,731	24,988	0.99	D
S.R. 434	MOSS AVE	S.R. 419	4	ARTERIAL	35,700	27,726	24,410	23,788	0.78	B
S.R. 434	S.R. 419	WINDING HOLLOW	4	ARTERIAL	35,700	36,952	29,983	32,418	1.04	F
S.R. 434	TUSKAWILLA RD	SPRING AVE**	4	ARTERIAL	35,700	26,130	21,008	18,720	0.73	B
S.R. 434	SPRING AVE**	S.R. 417*	4	ARTERIAL	35,700	22,743	22,091	19,394	0.64	B
S.R. 434	S.R. 417	DELEON ST	2	ARTERIAL	16,400	19,500	NA	NA	1.19	F*
S.R. 419	U.S. 17-92	EDGEMON AVE	2	ARTERIAL	16,400	17,085	19,265	21,090	1.04	D
S.R. 419	EDGEMON AVE	S.R. 434	2	ARTERIAL	16,400	15,995	16,888	18,417	0.98	D
TUSKAWILLA RD	S.R. 434	TROTWOOD BLVD	4	ARTERIAL	35,700	19,582	20,294	13,822	0.55	B
TUSKAWILLA RD	TROTWOOD BLVD	WINTER SPRGS BLVD	4	ARTERIAL	35,700	19,183	23,044	14,226	0.54	B
TUSKAWILLA RD	WINTER SPRGS BLVD	DYSON DR	4	ARTERIAL	35,700	20,155	NA	NA	0.56	B
TUSKAWILLA RD	DYSON DR	E. LAKE DR	4	ARTERIAL	35,700	26,256	NA	NA	0.74	B
TUSKAWILLA RD	E. LAKE DR	EAGLE BLVD*	4	ARTERIAL	35,700	31,517	30,532	27,844	0.88	C
TUSKAWILLA RD*	EAGLE BLVD*	RED BUG LAKE RD*	4	ARTERIAL	35,700	34,237	31,981	27,583	0.96	C
E. LAKE DR*	SEMINOLA BLVD*	PARK DR*	4	COLLECTOR	31,100	12,441	NA	NA	0.40	C
E. LAKE DR*	PARK DR*	STERLING OAKS DR*	4	COLLECTOR	31,100	13,140	NA	NA	0.42	C
E. LAKE DR*	STERLING OAKS DR*	AZALEA RD*	4	COLLECTOR	31,100	10,809	NA	NA	0.35	C
E. LAKE DR*	AZALEA RD*	TUSKAWILLA RD**	4	COLLECTOR	31,100	14,362	NA	NA	0.46	C
SHEPARD RD	U.S. 17-92*	SHEOAH BLVD	2	COLLECTOR	10,000	4,542	NA	5,226	0.45	C

*Roadway not within the City.

**Portion of the Roadway not within the City.

***US 17-92: SR 434 to Shepard is 6 lanes; Shepard to Lake Mary is 4 lanes. Collection point is north of Shephard.

NA= Direct comparison not available for segment.

Note 1: A realigment and widening of East Lake Drive to 4 lanes was completed in 2008. 2008 traffic counts for this roadway are not yet available, so the recent data in the table are 2007 counts when the roadway was 2 lanes. Level of Service shown in this Table is based on a 2-lane segment. The Number of Lanes column reflects that the roadway is now 4 lanes, and the Roadway Class column reflects that the roadway is now functioning as an Arterial.

Note 2: 2008 daily volumes are based on Seminole County traffic counts for the first quarter of 2008.

SOURCE: Seminole County Traffic Engineering, City of Winter Springs, CPH Engineering, Sievers & Associates LLC.

Table II - 2: Roadway Link Levels of Service with Existing Network (City Streets)

ROADWAY	FROM	TO	NO. OF LANES	ROADWAY CLASS	YEAR	LOS D* DAILY VOLUME	DAILY VOLUME	V/C RATIO	DAILY LOS
SHEOAH BLVD	S.R. 434	SHEPARD RD	2	COLLECTOR	2004	10,000	2,676	0.27	C
MOSS RD	S.R. 434	PANAMA RD	2	COLLECTOR	2004	10,000	3,932	0.39	C
MOSS RD**	S.R. 419	S.R. 434	2	COLLECTOR	2004	10,000	2,594	0.26	C
NORTHERN WY-N	WINTER SPGS BLVD	TROTWOOD BLVD	2	COLLECTOR	2001	10,000	2,761	0.28	C
NORTHERN WY-N	TROTWOOD BLVD	VISTAWILLA DR	2	COLLECTOR	2001	10,000	2,942	0.29	C
NORTHERN WY-S	WINTER SPGS BLVD	GREENBRIAR LN	2	COLLECTOR	2001	10,000	3,012	0.3	C
NORTHERN WY-S	GREENBRIAR LN	WINTER SPGS BLVD	2	COLLECTOR	2001	10,000	2,713	0.27	C
TROTWOOD BLVD	ODAY DR	TUSKAWILLA RD	2	COLLECTOR	2001	10,000	1,647	0.16	C
TROTWOOD BLVD	TUSKAWILLA RD	NORTHERN WY-N	2	COLLECTOR	2001	10,000	4,190	0.42	C
WINTER SPGS BLVD	TUSKAWILLA RD	NORTHERN WY-N	2	COLLECTOR	2001	10,000	7,647	0.76	D
WINTER SPGS BLVD	NORTHERN WY-N	GREENBRIAR LN	2	COLLECTOR	2001	10,000	5,280	0.53	D
WINTER SPGS BLVD	GREENBRIAR LN	NORTHERN WY-S	2	COLLECTOR	2001	10,000	7,647	0.76	D
WINTER SPGS BLVD	NORTHERN WY-S	S.R. 426	4	COLLECTOR	2001	22,600	11,152	0.5	C
SHORE RD	TEMPLE WY	PANAMA RD	2	COLLECTOR	2001	10,000	436	0.04	C
PANAMA RD	EDGEMON AVE	MOSS RD	2	COLLECTOR	2001	10,000	9,947	0.99	D
PANAMA RD	MOSS RD	SHORE RD	2	COLLECTOR	2001	10,000	1,421	0.14	C
HAYES RD	S.R. 434	BAHAMA RD	2	COLLECTOR	2001	10,000	5,671	0.57	D
FISHER RD	PANAMA RD	E LAKE DR	2	COLLECTOR	2001	10,000	944	0.09	C
TUSCORA DR	S.R. 434	NORTHERN WY-N	2	COLLECTOR	2001	10,000	2,242	0.22	C
VISTAWILLA DR	S.R. 434	NORTHERN WY-N	2	COLLECTOR	2001	10,000	3,840	0.38	C
GREENBRIAR LN	WINTER SPGS BLVD	NORTHERN WY-S	2	COLLECTOR	2001	10,000	1,569	0.16	C
DYSON DR	TUSKAWILLA RD	SHETLAND AVE	2	COLLECTOR	2001	10,000	1,221	0.12	C
SHETLAND AVE	NORTHERN WY-S	CITRUS RD*	2	COLLECTOR	2001	10,000	5,575	0.56	C
EDGEMON AVE	S.R. 419**	SHEPARD RD	2	COLLECTOR	2001	10,000	3,281	0.33	C
EDGEMON AVE	S.R. 434	PANAMA RD	2	COLLECTOR	2001	10,000	2,930	0.29	C
EDGEMON AVE	PANAMA RD	SEMINOLA BLVD*	2	COLLECTOR	2001	10,000	3,250	0.33	C
DORAN DR	WS HIGH SCHOOL	S.R. 434	2	COLLECTOR	2005	10,000	1,270	0.13	C
TUSKAWILLA RD	ORANGE AVE	S.R. 434	2	COLLECTOR	2006	10,000	5,178	NA	D

*Updated to 2002 LOS Values; ** Turn Lanes Included

SOURCE: CPH Engineering and City of Winter Springs.

With the development of the Town Center and its pedestrian orientation, the conflicts and potential conflicts between vehicles and pedestrians continue to increase. To assist in maintaining the pedestrian orientation of the Town Center, the City of Winter Springs will coordinate with the Florida Department of Transportation to see if a variance to Rule 14-94, F.A.C. can be obtained.

d. Crash Locations

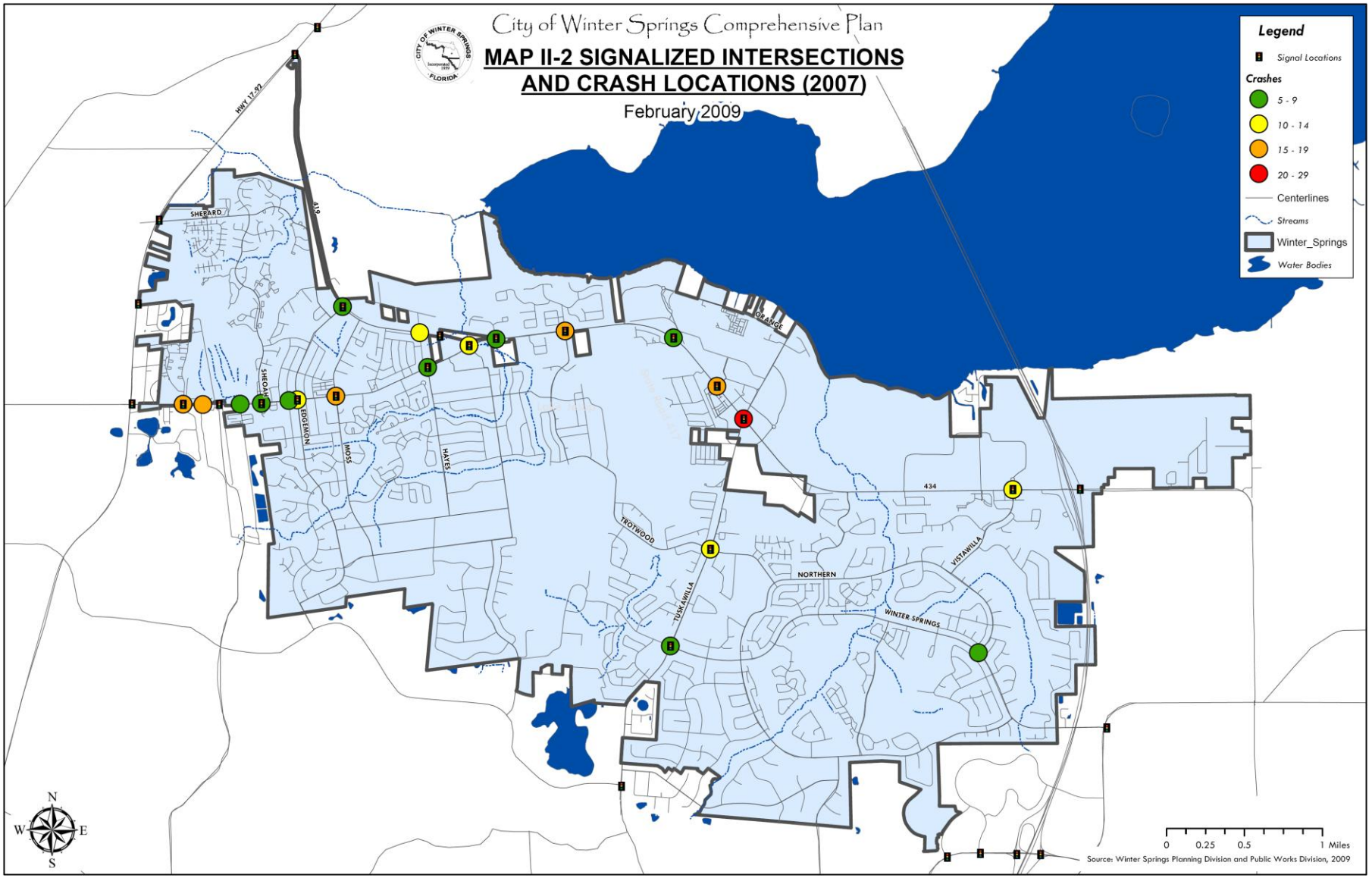
Crash analysis is critical because it provides a tool for City and state officials to recommend appropriate safety measures. Crash frequency along with roadway performance can be used to prioritize future roadway needs. Table II-3 shows crash data for 2007, compiled by Seminole County Traffic Engineering from reports provided by the Winter Springs Police Department. It shows those road segments with 5 crashes or more during that year, and Map II-2 visually depicts those areas. The road segment with the largest number of incidents was S.R. 434 at Tuskawilla Road with 29 crashes.

Table II - 3: Crash Locations with Greater than Five Crashes, 2007

Number of Crashes	Intersection	Fatalities	Injuries
29	S.R. 434 @ Tuskawilla Rd.	0	5
19	S.R. 434 @ Fountain Tree Dr.	0	2
18	S.R. 434 @ Timberlane Tr.	0	5
17	S.R. 434 @ Parkstone Blvd.	0	8
17	S.R. 434 @ Doran Dr.	0	5
15	S.R. 434 @ Moss Rd.	0	2
13	S.R. 419 @ Wade St.	0	5
10	S.R. 434 @ Vistawilla Dr.	0	7
10	Tuskawilla Rd. @ Trotwood Blvd.	0	5
10	S.R. 434 @ Edgemon Ave.	0	3
10	S.R. 434 @ S.R. 419	0	3
9	Tuskawilla Rd. @ Winter Springs Blvd.	0	0
8	S.R. 434 @ Hayes Rd.	0	4
8	S.R. 419 @ Edgemon Ave.	0	3
7	S.R. 434 @ Central Winds Dr.	0	1
6	S.R. 434 @ Cortez Ave.	0	3
5	S.R. 434 @ Consolidated Service	0	4
5	S.R. 434 @ Belle Ave.	0	3
5	S.R. 434 @ Sheoah Blvd.	0	0
5	Winter Springs Blvd. @ Northern Way	0	0

Note: The crashes listed above were crashes that the City's Police Department responded to in 2007.
SOURCE: Seminole County Traffic Engineering, Sievers & Associates LLC

Map II - 2: Signalized Intersections and Crash Locations, 2007



e. Signalized Intersections

The location of signalized intersections is shown on Map II-2. Most of the intersections in the City use stop signs rather than traffic signals. Traffic lights are located mainly along S.R. 434, S.R. 419, and Tuskawilla Road.

f. Evacuation Routes

The City adopted the *Peace Time Emergency Plan* in 1997. The plan outlines responsibilities for all departments in the City in the case of a man-made or natural disaster of local scale. For large-scale disasters, the City follows the County's Comprehensive Emergency Plan. This plan does not identify evacuation routes, as Seminole County is a "receiving area," but lists the shelters available. All schools in the City can serve as shelter sites.

2. Public Transit System

The fixed route bus transit system in Seminole County is operated by LYNX, which focuses its service on Orange, Seminole, and Osceola counties, with some service to Polk, Volusia and Lake Counties (see Map II-3). Table II-4 shows the public transit characteristics and ridership figures for 2003 through the first three quarters of 2008.

Table II - 4: Public Transit Characteristics

Route #	Service Area	Days	Frequency	Hours
103	U.S. 17-92 (Casselberry to Sanford)	Mon. to Sat.	30 min.	5:00 AM to 9:00 PM
		Sunday	60 min.	5:30 AM to 8:00 PM
434	S.R. 434	Mon. to Sat.	60 min.	5:30 AM to 9: 35 PM
47	Oviedo - UCF	Mon. to Sat.	60 min.	5:00 AM to 9:53 PM

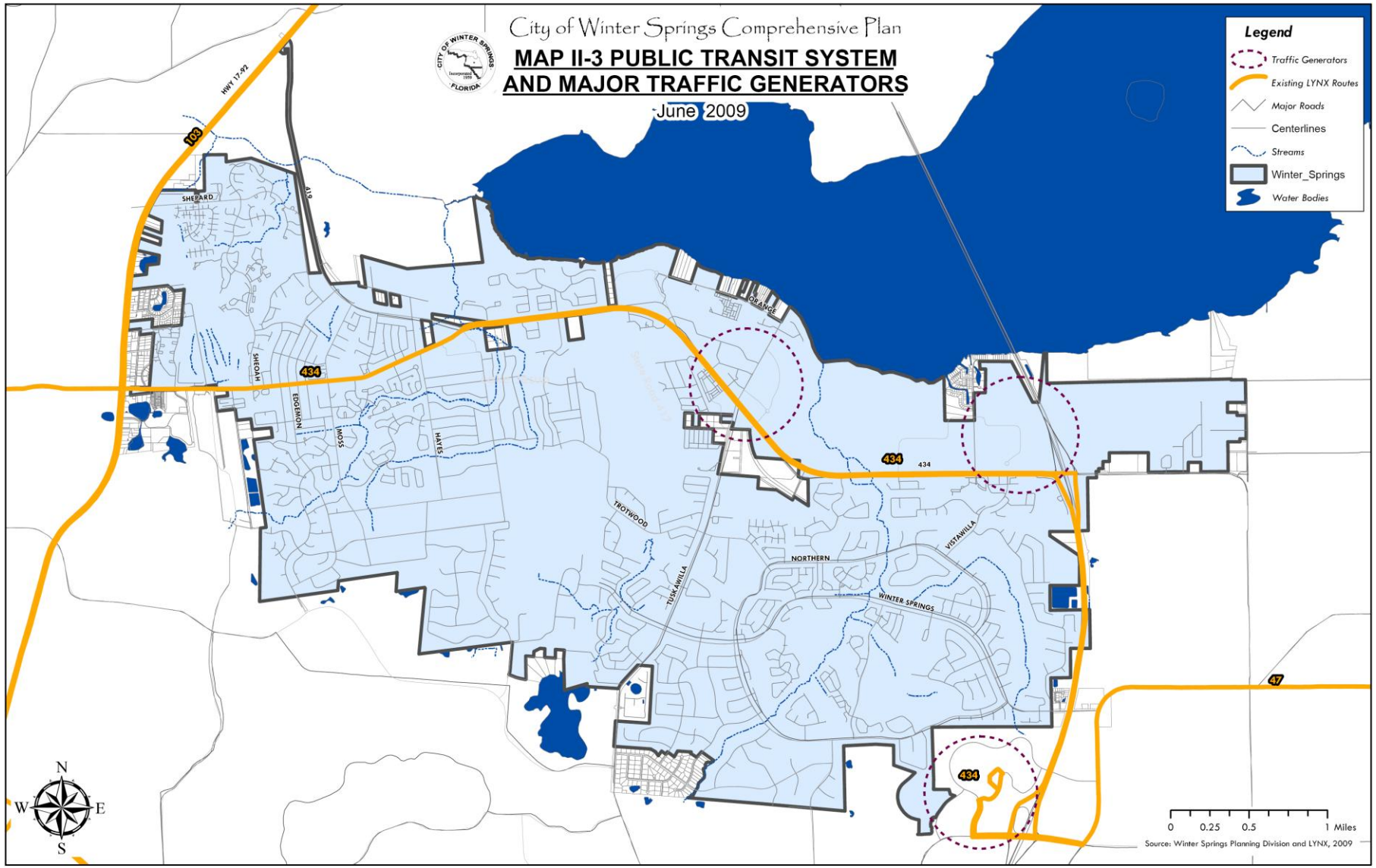
SOURCE: LYNX Website, October 2008 and LYNX personnel.

Year	Ridership*		
	Route 39	Route 103	Route 47
2003	652,765		52,081
2004	698,917		45,786
2005	739,886		46,946
2006	736,273		52,618
2007	765,245		50,049
2008 (Jan - Sep) **	488,623	48,178	38,534

* Does not include S.R.434 Crosstown route #434, which did not become operational until April 2009.
** In mid-August 2008, Route 39 was split into two. The northern portion of the old Route 39 is now Route 103 which follows the same path from Casselberry to Sanford.

SOURCE: LYNX

Map II - 3: Public Transit System and Major Traffic Generators/Attractors



Presently, LYNX buses serve two routes adjacent to the City. Route 103 generally follows the U.S. 17-92 corridor from Sanford to Casselberry. Route 47 primarily serves Oviedo from the University of Central Florida to Oviedo Marketplace. Neither link provides any service on S.R. 434 in the vicinity of the Town Center.

A new east-west route (Link 434), also known as the S.R. 434 Crosstown, connects Routes 103 and 47. The Crosstown service begins at Oviedo Marketplace, and runs along S.R. 417 to S.R. 434, then follows the S.R. 434 corridor through Longwood and Altamonte Springs terminating at the Rosemont Superstop in northwest Orlando. This service, funded by FDOT and Seminole County, is to be a 2-year demonstration project beginning in April 2009. It will provide the City with a much needed bus route to the City's major traffic generators. The route will be a feeder route, providing connecting service to the planned Longwood Commuter Rail (SunRail) Station. SunRail is scheduled to begin service in 2011.

As public transit service is implemented, the City will coordinate with METROPLAN ORLANDO and LYNX to assist in maintaining the County's adopted LOS of 1.03 revenue miles per capita per year.

3. Parking System

At this time, the City does not have any significant public parking facilities. Major events which demand additional public parking are accommodated by a coordinated and cooperative effort between the City and private landowners.

4. Bicycle System

The FDEP's Office of Greenways and Trails owns, and has sub-leased to Seminole County, the Cross Seminole Trail, a portion of which is located in the City. The Seminole County Parks and Recreation Department is in charge of maintaining the trail. An Interlocal Agreement exists between the City and Seminole County regarding use and maintenance of the Cross Seminole Trail. The City's Parks and Recreation Department assisted with the design of the restroom facility located at the Black Hammock trailhead, located within the jurisdictional limits of the City, and is responsible for the maintenance and cleaning of the restroom facility. A 1.8-mile section of the trail corridor along S.R. 426 (south of Red Bug Lake Road) is owned by FDOT.

The Cross Seminole Trail currently runs from Layer Elementary School in Winter Springs to the intersection of S.R. 434 and S.R. 426 in downtown Oviedo. Other built sections of the trail (located in Seminole County) include from CR 46A south to Greenway Boulevard in Lake Mary and from Mikler Road to the Orange County Line. The Cross Seminole Trail connects with the Seminole Wekiva Trail via the I-4 Pedestrian Bridge in Lake Mary. Upon completion, the Cross Seminole Trail will be a 34.5- mile long continuous trail linking Altamonte Springs, Longwood, Lake Mary, Winter Springs, and Oviedo and connecting to the Cady Way Trail and the Orange County Trail System. The trail will run from Spring Hammock Preserve in Winter Springs to Howell Branch Road at the Orange County Line and will connect several parks including: Central Winds Park, Soldier's Creek Park, Big Tree Park, Greenwood Lakes Park, Sweetwater Creek Park, Torcaso Park, Lawton House Park, and Spring Hammock. The trail will also connect seven schools: Layer Elementary, Winter Springs High School, Indian Trails Middle School, Keeth Elementary, Trinity Preparatory School, Oviedo High School, and Lawton Elementary.

The trail is currently under construction from the Oviedo Mall to S.R. 434. Design is complete on the segment from Mikler to Red Bug Lake Road and construction is scheduled to begin in late 2008. A pedestrian overpass is programmed to be constructed over Red Bug Lake Road beginning in the fall 2008, with a connection to S.R. 426 near the Oviedo Mall. The trail will also be realigned by the FDOT S.R. 426 widening project. The trail will cross at the signalized intersection of Marketplace Blvd & S.R. 426 and connect with the trail corridor along Aulin Avenue. Existing and future portions of the Cross Seminole Trail are depicted in the Recreation and Open Space Element.

The Conceptual City Trails Network Map, located in the Recreation and Open Space Element, identifies opportunities for increased bicycle and pedestrian connectivity in the City. The City has had recent success in securing funding for bicycle and pedestrian amenities through FDOT grants and the "Safe Routes to School" program. The City should continue to explore opportunities for implementing additional interconnecting bike routes and trails.

As the Town Center and GID develop, there may be an opportunity to provide shorter and easier bicycle and pedestrian connectivity between these activity centers. The configuration of the Cross Seminole Trail will take the trail from the Town Center south across S.R. 434 via an overpass, then east to the Black Hammock Trailhead where a second S.R. 434 crossing would be necessary to provide access to the GID to the north. Options for a more direct bicycle/pedestrian route north of S.R. 434 linking the two centers could be considered by the City, but is should be noted that a wetland crossing would be required and undeveloped property might need to be purchased. The City could explore provision of pedestrian and/or bicycle accommodations along S.R. 434 that would provide a less direct route, but would likely minimize additional right-of-way needs. As noted above, the corridor could be shared with local transit service linking the Town Center and the GID.

5. Pedestrian System

The analysis of existing pedestrian conditions found that the City was well served by sidewalks, but encouraged identification of missing links and prioritization of improvements to enhance pedestrian connectivity. The Cross Seminole Trail discussed in the Recreation and Open Space Element offers alternate pedestrian and bicycle paths into the heart of the Town Center and equestrian / hiking trails around the periphery. The City has coordinated with the FDOT regarding various issues concerning S.R. 434 and general agreement has been reached on resolving many of the issues such as access involving the pedestrian-oriented Town Center area. However, the issue of posted roadway speed limits on S.R. 434 through the Town Center has not yet been resolved. FDOT will require a detailed engineering study to justify the City's request for a lower speed limit, in accordance with the applicable Florida Statutes. A speed study for S.R. 434 was conducted by FDOT in 2008 which resulted in reducing the posted speed limit from 50 mph to 45 mph from Central Winds Parkway to Tuskawilla Road. Further reductions may be achievable in conjunction with development of the Town Center.

Approximately 1.5 miles of S.R. 434 passes through the area designated on the Future Land Use Map - 2030 as Town Center. Presently, this portion of the highway is part of a segment considered a Class I arterial with less than two signalized intersections per mile. At least one additional traffic signal within the Town Center area is planned at Michael

Blake Blvd., which would result in more than two intersections per mile. As the Town Center continues to develop, it will be appropriate to readdress how the Town Center area is viewed in terms of roadway class and to work with FDOT to determine if the Town Center segment's characteristics should result in the segment being designated a Class II arterial with 2 to 4.5 signals per mile.

The designation of the segment as a Class II arterial would allow for a change in the speed limit (currently 45 mph) to as low as 35 mph according to FDOT's generalized characteristics of arterial classes. A reduction of vehicle speeds on S.R. 434 through the Town Center would result in an environment much more conducive to the high levels of pedestrian activity anticipated for the Town Center at build-out. Such a reduction in vehicle speeds would be supported by FDOT's mission, the four key components of which are safety, mobility, economic prosperity, and the quality of the environment and communities.

Although the Class II arterial designation would be based on an approximately 1.5 mile segment (FDOT guidelines for arterial facility analysis have a general recommended length of at least one mile), it might be appropriate to have a reduced speed limit only in the core of the downtown area. The City has identified the key corridor as being a 0.6 mile segment from Doran Drive to the Cross Seminole Trail Bridge. It should be noted that a 35 mph speed limit is currently in effect on S.R. 434 for an approximately 0.3 mile distance in downtown Longwood.

To create a central core downtown pedestrian-friendly district in the Town Center, retrofits to S.R. 434 will be essential to the existing streetscape. Coordination will be necessary with the Florida Department of Transportation to address proposed hardscape and landscaping alternatives including the narrowing of vehicular travel lanes, the demarcation of bicycle lanes, the addition of landscaped medians, on-street parking, and pedestrian crosswalks. Coordination with FDOT will also be required to determine if a policy constraint to prohibit the widening of S.R. 434 in the Town Center area is appropriate.

6. Intermodal Facilities

Intermodal facilities are those transportation elements that accommodate and interconnect different modes of transportation and serve interstate, intrastate and international movement of people and goods. Some facilities considered intermodal include ports, airports, bus stations and train terminals. The Intermodal Surface Efficiency Act (ISTEA) legislation encourages the provision of efficient access to these intermodal facilities.

There are no public airports within the City limits. The closest public airport is Orlando Sanford International Airport in Sanford. In late 2008, the facility was served by five airlines with regularly scheduled service along with several charter airlines. Direct flights are available to 31 destinations in the United States as well as four European cities.

The City has only one active rail line within the City limits. It is operated by CSX and runs along S.R. 419 and terminates just east of Wade Street, within the City's Industrial area. It is currently used for freight trains only.

FDOT, in cooperation with the federal and local governments, is planning to implement a commuter rail project (SunRail) that will follow a generally north-south route along 61 miles of existing track. The first phase, to consist of a 32.5-mile segment, will run from

Orlando to DeBary and is anticipated to be operational in 2011. Twelve stations are planned for the first phase, with the nearest one to the City to be located in Longwood. LYNX's planned 434 Crosstown route will be a feeder route, connecting the City with the SunRail system.

Until very recently, Seminole County was serviced by Greyhound Transportation Services with a bus terminal in Sanford. That facility is no longer included on the list of stations shown on the company's website.

The City is located along the south shore of Lake Jesup. The lake is currently used for recreational boating and fishing. Although it was used for steamboat transport services in the late 1800's, the lake is no longer used for transportation purposes.

D. TRANSPORTATION ANALYSIS

Transportation can have a major role shaping the spatial and functional organization of a community. It can determine the size, scale, status and identity of a community. However, there are other contributing factors that need to be considered, such as the personal, social, physical, environmental, economic and cultural attributes of the community. This section will analyze existing conditions of the transportation system to provide a comprehensive assessment of the various transportation facilities and services, and their relationship with existing land uses.

This section will also address growth trends, travel patterns, and interactions between land use and transportation, including the compatibility between future land uses and transportation systems.

The City is an integral part of the Orlando Urban Area. Additionally, the City is one of the larger municipalities within Seminole County and is located primarily between two principal arterials, S.R. 434 and Red Bug Lake Road. As such, transportation planning for Winter Springs requires close cooperation with other planning efforts within the Orlando region and Seminole County. For this reason, the transportation planning methodology used to develop the transportation plan must necessarily be compatible with transportation methodologies in adjacent jurisdictions. In order to accomplish this requirement, extensive use of data sources and planning models from the Orlando Urban Area Transportation Study (OUATS) and the Seminole County Transportation Management Program (TMP) were used in the development of the City's Transportation Plan.

Existing deficiencies on city, county and state systems were defined and Capital Improvement Programs identified to resolve these transportation deficiencies. Forecasts of anticipated land use/socio-economic activities for 2010 were made and the validated transportation models applied against them. This allowed the definition of future capacity deficiencies so that funding sources can be developed to correct these deficiencies.

1. Growth Trends

The 2000 U. S. Census reported a City population of 30,860, and a total of 12,296 dwelling units. The population projections used in the Comprehensive Plan anticipate a population of 35,857 for the year 2010, 40,319 for 2020, and 44,538 for 2030. These figures are lower than corresponding figures from the Shimberg Center for Affordable Housing.(36,929, 43,114, and 47,921, respectively). The projections reflect somewhat

slower growth than anticipated earlier which will assist the City in ensuring transportation facilities can be provided concurrent with development.

2. Roadway Current Performance

The 1985 Growth Management Act established two important responsibilities for local governments. The first was to set LOS standards for public facilities within the jurisdiction as part of the comprehensive plan. The second was to ensure that the public facilities and services proposed in the Capital Improvements Element of the local comprehensive plan were available concurrent with the development. The Florida Department of Community Affairs (DCA) requires that adopted LOS standards be achievable and financially feasible. The standards set a minimum service level that the City must maintain for each of the public facilities, including roadways.

The roadway LOS concept is defined in the FDOT Quality/Level of Service Standards Handbook (2002) as a qualitative assessment of the road user's perception of the quality of flow, and is measured by a scale of driver satisfaction. The scale ranges from "A" to "F", with "A" representing the most favorable driving conditions and "F" representing the least favorable.

FDOT adopted statewide minimum LOS standards for the state highway system. The minimum LOS standards are used for planning applications, including the review of local government plans. The generalized maximum volume tables provided by FDOT are guidelines recommended for broad planning applications. They are to be used as a general guide to determine highway LOS and through-lane requirements.

Minimum LOS standards recommended for the state system are shown in Table II-5. Projected 2013 Levels of Service are presented in Table II-7. The standardized descriptions of service levels used in transportation planning are as follows:

- LOS A - A condition of road performance where traffic density is very low, with little or no restrictions in maneuverability. Drivers can maintain their desired speed with little or no delay.
- LOS B - A condition of road performance where traffic density is low and vehicles travel with operating speeds somewhat restricted by other vehicles. Drivers still have reasonable freedom to select their speeds.
- LOS C - A performance condition where operating speeds are determined by other vehicles, permitting a stable traffic flow. Drivers might have limitations to maneuver and to increase speeds.
- LOS D - A condition of road performance where traffic density is high but tolerable. Fluctuations in traffic volumes may cause reductions in operating speeds. Drivers have little freedom to maneuver. In some instances, traffic flows approach unstable conditions.
- LOS E - Represents traffic operation near the roadway capacity or maximum service volume. Vehicles flow at unstable conditions. Stop-and-go situations may happen. In freeways or limited access roads, speeds are near thirty (30) miles per hour and traffic density is high.

- LOS F - This condition usually results from long lines of vehicles backing up because the traffic volume exceeds the roadway capacity. The vehicles are forced to operate at very low speeds. Stop-and-go situations are frequent and in extreme cases, vehicles stop for long periods of time.

Table II - 5: Statewide Minimum Level of Service (LOS) Standards for the State Highway System as Determined by ADT (total volume)

	Transitioning Urbanized Areas, Urban Areas, or Communities	Urbanized Areas Under 500,000	Urbanized Areas Over 500,000	Roadways Parallel to Exclusive Transit Facilities	Inside Transportation Concurrency Management Areas	Inside TCEAs and MMTDs	Constrained and Backlogged Roadways
INTRASTATE							
Limited Access Highway (Freeway)	C	C(D)	D(E)	D(E)	D(E)	**	Maintain
Controlled Access Highways	C	C	D	E	E	**	Maintain
OTHER STATE ROADS							
Two-Lane	C	D	D	E	*	**	Maintain
Multilanes	C	D	D	E	*	**	Maintain

* Means the LOS standard will be set in a transportation mobility element that meets the requirements of Rule 9J-5.0057, F.A.C.

** Means the Florida Department of Transportation must be consulted.

Note: LOS standards inside of parentheses apply to general use lanes only when exclusive through lanes exists.

Source: FDOT 2002 Level of Service Handbook; Rule 14-94, F.A.C.

The 2007 FDOT Generalized Tables for Annual Average Daily Traffic volumes were used to evaluate roadway performance in the City (see Table II-6), and a LOS analysis was performed to determine existing deficiencies based on FDOT 2007 AADT Traffic Data.

Deficiencies were identified in 2008 for U.S 17-92 from Shepard Road to S.R. 419, where U.S. 17-92 is a four-lane section. Seminole County is planning to widen this segment of U.S. 17-92 to 6 lanes; however, the construction phase of the project is not funded and the schedule for construction is uncertain. Deficiencies were also identified on S.R. 434 from S.R. 419 to Winding Hollow Blvd., and S.R. 434 from S.R. 417 to Deleon Street. While use of the 2007 FDOT generalized tables may indicate that certain facilities may not be operating at an acceptable LOS, a detailed analysis of those facilities might show that they are in fact, operating at an acceptable LOS. A traffic impact study is required from all new development in the City anticipated to generate 300 or more daily trips. The study supplements FDOT and County traffic count data to provide additional detail to the actual impact of a proposed use on the capacity of the adjacent road network and whether the project satisfies concurrency. Map II-4 shows the most recent LOS data available for the primary links in the City's network.

3. Future Roadway Performance

The Florida Standard Urban Transportation Model Structure (FSUTMS) was used for all of the City's travel demand forecasting. The traffic simulation process was accomplished as noted in Section 4 which follows.

Consistency with the METROPLAN ORLANDO model (OUATS) data and traffic zone structure was maintained through the process in forecasting the city's travel demand. Table II-7 shows the 2013 traffic conditions as projected. Deficiencies were identified in the 2013 forecast for S.R. 419 from U.S. 17-92 to S.R. 434, S.R. 434 from S.R. 417 to Deleon Street and S.R. 434 from S.R. 419 to Tuskawilla Road. However, the forecast did not account for additional collector roads added within the Town Center, which will help to alleviate the projected deficiency. In 2005, a traffic corridor study was prepared to analyze the Town Center and it showed that S.R. 434 could accept the traffic from the Town Center at build-out for the developments.

Improvements to U.S. 17-92, S.R. 419, S.R. 434, and S.R. 417 are dependent upon State funding based on regional priorities, as determined by METROPLAN ORLANDO. The City continues to work with FDOT and METROPLAN ORLANDO to identify and implement improvements to the network. METROPLAN ORLANDO's 2025 Long Range Transportation Plan (LRTP) includes widening of S.R. 426 to 4 lanes from Pine Street to S.R. 434 in 2010 and widening of Seminola Boulevard to 6 lanes from U.S. 17-92 to Lake Drive (a widening to 4 lanes was completed in 2008). An unfunded County project need identified in the 2025 LRTP is the widening of Red Bug Lake Road from S.R. 436 to Eagle Circle.

The City has completed numerous capacity and safety projects on City streets including turn lanes, paving and drainage improvements and construction of the Town Center collector roads and requires new development along the S.R. 434 corridor to include a cross-access easement to the adjacent properties with the intent of reducing traffic demand on S.R. 434. Improvements within Winter Springs and the surrounding roadway network may alleviate or delay deficiencies identified in the 2013 forecast.

Table II - 6: Generalized Annual Average Daily Volumes for Florida's Urbanized Areas

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	2,200	7,600	15,000	21,300	27,100
4	Divided	20,400	33,000	47,800	61,800	70,200
6	Divided	30,500	49,500	71,600	92,700	105,400

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	4,200	13,800	16,400	16,900
4	Divided	4,800	29,300	34,700	35,700	***
6	Divided	7,300	44,700	52,100	53,500	***
8	Divided	9,400	58,000	66,100	67,800	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	1,900	11,200	15,400	16,300
4	Divided	**	4,100	26,000	32,700	34,500
6	Divided	**	6,500	40,300	49,200	51,800
8	Divided	**	8,500	53,300	63,800	67,000

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	5,300	12,600	15,500
4	Divided	**	**	12,400	28,900	32,800
6	Divided	**	**	19,500	44,700	49,300
8	Divided	**	**	25,800	58,700	63,800

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	5,200	13,700	15,000
4	Divided	**	**	12,300	30,300	31,700
6	Divided	**	**	19,100	45,800	47,600
8	Divided	**	**	25,900	59,900	62,200

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	9,100	14,600	15,600
4	Divided	**	**	21,400	31,100	32,900
6	Divided	**	**	33,400	46,800	49,300

Other Signalized Roadways (signalized intersection analysis)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	4,800	10,000	12,600
4	Divided	**	**	11,100	21,700	25,200

Source: Florida Department of Transportation 05/17/07
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www.dot.state.fl.us/planning/systems/sm/los/default.htm

FREEWAYS

Interchange spacing ≥ 2 mi. apart

Lanes	Level of Service A	B	C	D	E
4	23,800	39,600	55,200	67,100	74,600
6	36,900	61,100	85,300	103,600	115,300
8	49,900	82,700	115,300	140,200	156,000
10	63,000	104,200	145,500	176,900	196,400
12	75,900	125,800	175,500	213,500	237,100

Interchange spacing < 2 mi. apart

Lanes	Level of Service A	B	C	D	E
4	22,000	36,000	52,000	67,200	76,500
6	34,800	56,500	81,700	105,800	120,200
8	47,500	77,000	111,400	144,300	163,900
10	60,200	97,500	141,200	182,600	207,600
12	72,900	118,100	170,900	221,100	251,200

BICYCLE MODE

(**Note**: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	Level of Service A	B	C	D	E
0-49%	**	**	3,200	13,800	>13,800
50-84%	**	2,500	4,100	>4,100	***
85-100%	3,100	7,200	>7,200	***	***

PEDESTRIAN MODE

(**Note:** Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-49%	**	**	**	6,400	15,500
50-84%	**	**	**	9,900	19,000
85-100%	**	2,200	11,300	>11,300	***

BUS MODE (Scheduled Fixed Route)

Level of Service (Buses per hour)

(**Note:** Buses per hour shown are only for the **peak hour** in the **single direction** of the higher traffic flow.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-84%	**	>5	≥4	≥3	≥2
85-100%	>6	>4	≥3	≥2	≥1

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

(alter corresponding volume by the indicated percent)

Lanes	Median	Left Turn Lanes	Adjustment Factors
2	Divided	Yes	+5%
2	Undivided	No	-20%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

ONE-WAY FACILITIES

Multiply the corresponding two-directional volumes in this table by 0.6.

* Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. Although presented as daily volumes, they actually represent peak hour direction conditions with applicable K and D factors applied. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

**Cannot be achieved using table input value defaults.

***Not applicable for that level of service letter grade. For automobile/truck modes, volumes greater than level of service D become F because intersection capacities have been reached. For bicycle and pedestrian modes, the level of service letter grade (including F) is not achievable, because there is no maximum vehicle volume threshold using table input value defaults.

SOURCE: Florida Department of Transportation, 2007 Generalized Q/LOS Tables

Map II - 4: Existing Level of Service – 2008

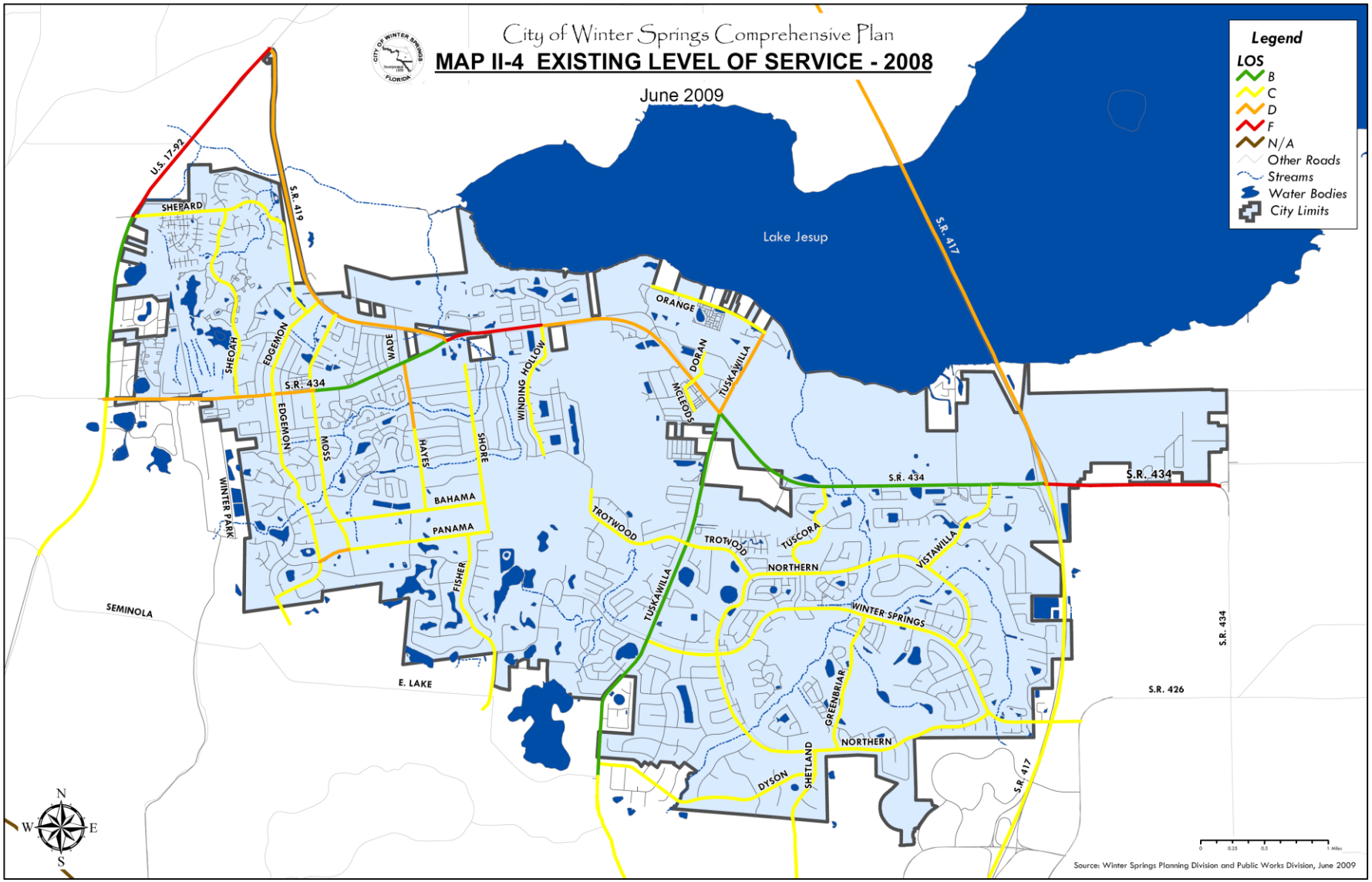


Table II - 7: Projected Year 2013 Roadway Link Levels of Service (LOS)

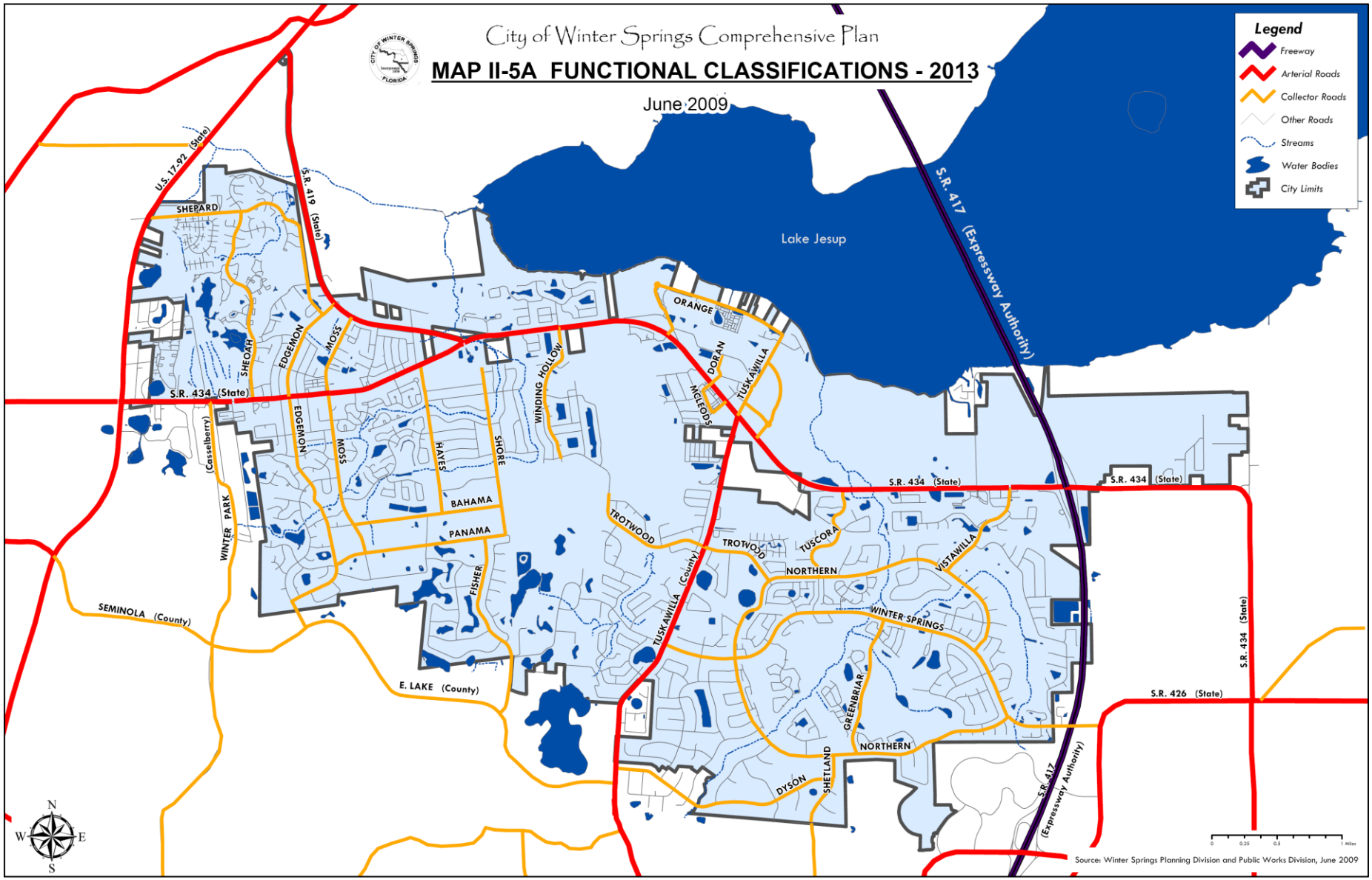
ROADWAY	FROM	TO	NO. OF LANES	ROADWAY CLASS	LOS D DAILY VOLUME	2013 PROJ DAILY VOLUME	V/C RATIO	PROJ DAILY LOS
S.R. 417**	S.R. 434	RED BUG LAKE RD	4	FREEWAY	67,100	49,800	0.74	D
U.S. 17-92*	S.R. 419	SHEPARD RD	6	ARTERIAL	53,500	50,960	1.02	C
U.S. 17-92*	SHEPARD RD	S.R. 434	6	ARTERIAL	53,500	50,960	0.82	C
S.R. 434**	U.S. 17-92	MOSS AVE	4	ARTERIAL	35,700	35,500	1.02	D
S.R.434	MOSS AVE	S.R. 419	4	ARTERIAL	35,700	31,882	0.89	C
S.R. 434	S.R. 419	TUSKAWILLA RD	4	ARTERIAL	35,700	44,669	1.25	F
S.R. 434	TUSKAWILLA RD	SPRING AVE	4	ARTERIAL	35,700	33,581	0.94	B
S.R. 434	SPRING AVE	S.R. 417	4	ARTERIAL	35,700	24,482	0.69	B
S.R. 434**	S.R. 417	DELEON ST*	2	ARTERIAL	16,400	21,500	1.31	F*
S.R. 419**	U.S. 17-92	EDGEMON AVE	2	ARTERIAL	16,400	19,096	1.16	F
S.R. 419	EDGEMON AVE	S.R. 434	2	ARTERIAL	16,400	17,721	1.08	F
TUSKAWILLA RD	S.R. 434	TROTWOOD BLVD	4	ARTERIAL	35,700	21,000	0.59	B
TUSKAWILLA RD	TROTWOOD BLVD	WINTER SPRGS BLVD	4	ARTERIAL	35,700	21,500	0.60	B
TUSKAWILLA RD	WINTER SPRGS BLVD	E. LAKE DR*	4	ARTERIAL	35,700	26,200	0.73	B
TUSKAWILLA RD*	E. LAKE DR*	EAGLE BLVD*	4	ARTERIAL	35,700	36,920	1.03	F*
E. LAKE DR*	SEMINOLA BLVD*	FISHER ROAD	4	COLLECTOR	31,100	22,360	0.72	D
E. LAKE DR*	FISHER RD	TUSKAWILLA RD	4	COLLECTOR	31,100	23,500	0.76	D
SHEPARD RD	U.S. 17-92	SHEOAH BLVD	2	COLLECTOR	10,000	5,680	0.57	D
SHEPARD RD	SHEOAH BLVD	EDGEMON AVE	2	COLLECTOR	10,000	8,216	0.82	D
SHEOAH BLVD	SHEPARD RD	S.R. 434	2	COLLECTOR	10,000	8,736	0.60	C
BAHAMA RD	MOSS RD	SHORE RD	2	COLLECTOR	10,000	104	0.01	C
MOSS RD	S.R. 419	FIRST ST	2	COLLECTOR	10,000	7,488	0.75	D
MOSS RD	FIRST ST	S.R. 434	2	COLLECTOR	14,600	14,664	1.00	D
MOSS RD	S.R. 434	DOLPHIN RD	2	COLLECTOR	10,000	7,592	0.76	D
MOSS RD	DOLPHIN RD	PANAMA RD	2	COLLECTOR	10,000	7,072	0.71	D
NORTHERN WY-N	WINTER SPRGS BLVD	TROTWOOD BLVD	2	COLLECTOR	10,000	2,600	0.26	C
NORTHERN WY-N	TROTWOOD BLVD	TUSCORA DR	2	COLLECTOR	10,000	6,344	0.63	C
NORTHERN WY-N	TUSCORA DR	VISTAWILLA DR	2	COLLECTOR	10,000	3,328	0.33	C
NORTHERN WY-N	VISTAWILLA DR	WINTER SPRGS BLVD	2	COLLECTOR	10,000	3,744	0.37	C
NORTHERN WY-S	WINTER SPRGS BLVD	SHETLAND AVE	2	COLLECTOR	10,000	3,600	0.36	C
NORTHERN WY-S	SHETLAND AVE	GREENBRIAR LN	2	COLLECTOR	10,000	4,056	0.41	C
NORTHERN WY-S	GREENBRIAR LN	WINTER SPRGS BLVD	2	COLLECTOR	10,000	2,288	0.23	C
TROTWOOD BLVD	ODAY DR	TUSKAWILLA RD	2	COLLECTOR	10,000	1,811	0.18	C
TROTWOOD BLVD	TUSKAWILLA RD	NORTHERN WY-N	2	COLLECTOR	10,000	4,680	0.47	C

Table II - 7: Projected Year 2013 Roadway Link Levels of Service (LOS), cont'd

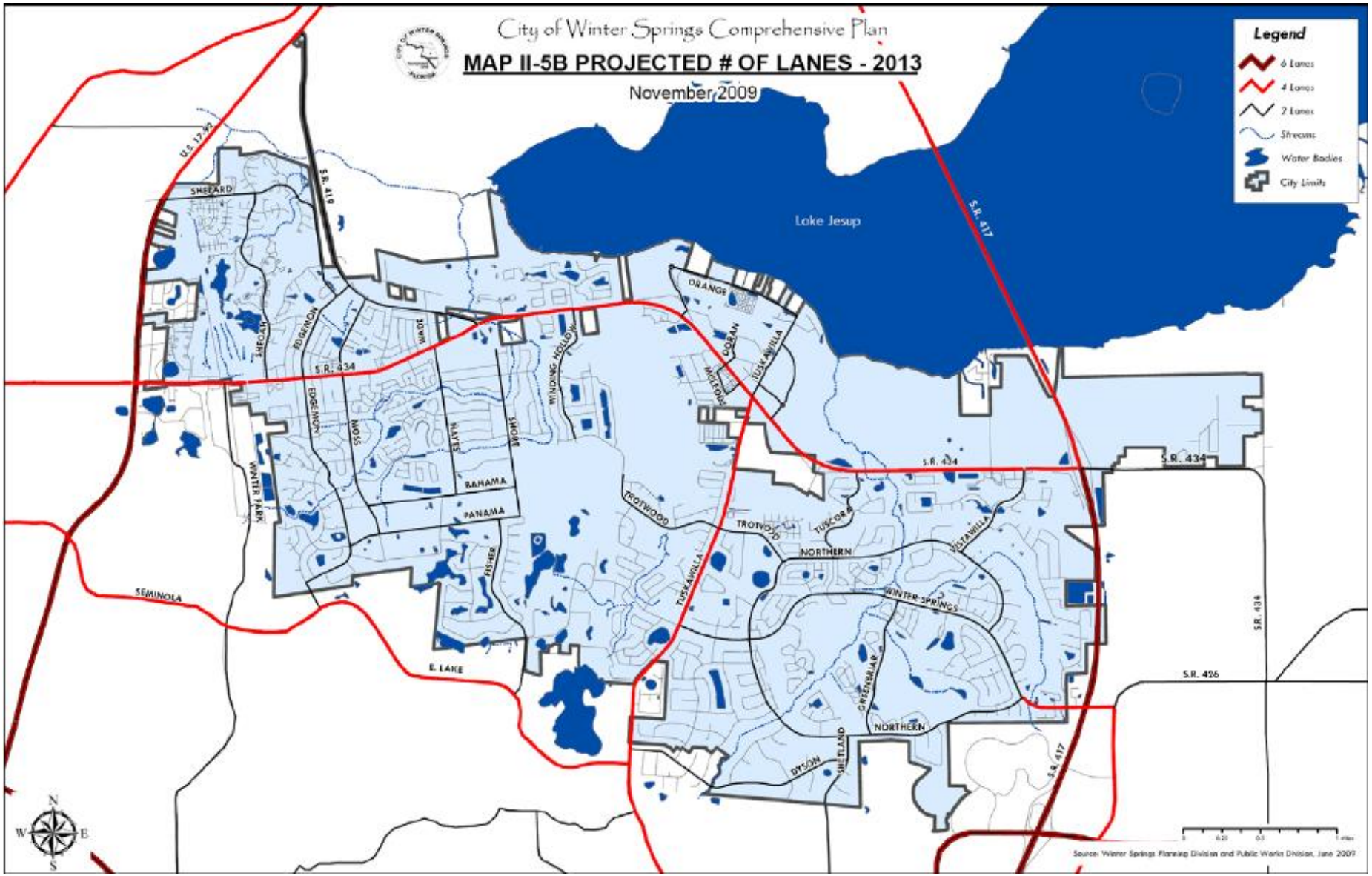
ROADWAY	FROM	TO	NO. OF LANES	ROADWAY CLASS	LOS D DAILY VOLUME	2013 PROJ DAILY VOLUME	V/C RATIO	PROJ DAILY LOS
WINTER SPRGS BLVD	TUSKAWILLA RD	NORTHERN WY-N	2	COLLECTOR	14,600	8,840	0.61	C
WINTER SPRGS BLVD	NORTHERN WY-N	GREENBRIAR LN	2	COLLECTOR	14,600	5,824	0.40	C
WINTER SPRGS BLVD	GREENBRIAR LN	NORTHERN WY-N	2	COLLECTOR	14,600	5,200	0.36	C
WINTER SPRGS BLVD	NORTHERN WY-N	NORTHERN WY-S	2	COLLECTOR	14,600	8,300	0.57	C
WINTER SPRGS BLVD	NORTHERN WY-S	S.R. 426*	4	COLLECTOR	31,100	11,900	0.38	C
PANAMA RD	EDGEMON AVE	MOSS RD	2	COLLECTOR	10,000	9,464	0.95	D
PANAMA RD	MOSS RD	SHORE RD	2	COLLECTOR	10,000	1,352	0.14	C
HAYES RD	S.R. 434	DOLPHIN RD	2	COLLECTOR	10,000	6,864	0.69	D
HAYES RD	DOLPHIN RD	BAHAMA RD	2	COLLECTOR	10,000	2,080	0.21	C
FISHER RD	PANAMA RD	E LAKE DR	2	COLLECTOR	10,000	1,456	0.15	C
SHORE RD	TEMPLE WY	PANAMA RD	2	COLLECTOR	10,000	488	0.05	C
TUSCORA DR	S.R. 434	NORTHERN WY-N	2	COLLECTOR	10,000	2,800	0.28	C
VISTAWILLA DR	S.R. 434	NORTHERN WY-N	2	COLLECTOR	10,000	4,160	0.42	C
GREENBRIAR LN	WINTER SPRGS BLVD	NORTHERN WY-S	2	COLLECTOR	10,000	1,560	0.16	C
DYSON DR**	TUSKAWILLA RD**	SHETLAND AVE	2	COLLECTOR	10,000	2,700	0.27	C
SHETLAND AVE	NORTHERN WY-S	DYSON DR**	2	COLLECTOR	10,000	5,200	0.52	D
SHETLAND AVE-CITRUS RD**	DYSON DR**	RED BUG LAKE RD*	2	COLLECTOR	10,000	3,640	0.36	C
EDGEMON AVE	S.R. 419**	SHEPARD RD	2	COLLECTOR	10,000	4,470	0.45	C
EDGEMON AVE	SHEPARD RD	S.R. 434	2	COLLECTOR	10,000	5,820	0.58	D
EDGEMON AVE	PANAMA RD	SEMINOLA BLVD*	2	COLLECTOR	10,000	9,464	0.95	D

*Roadway not within the City.
**Portion of the Roadway not within the City.
NA= Direct comparison not available for segment.

Map II – 5A: Functional Classifications – 2013



Map II – 5B: Projected Number of Lanes – 2013



Map II – 6: Projected Level of Service – 2013

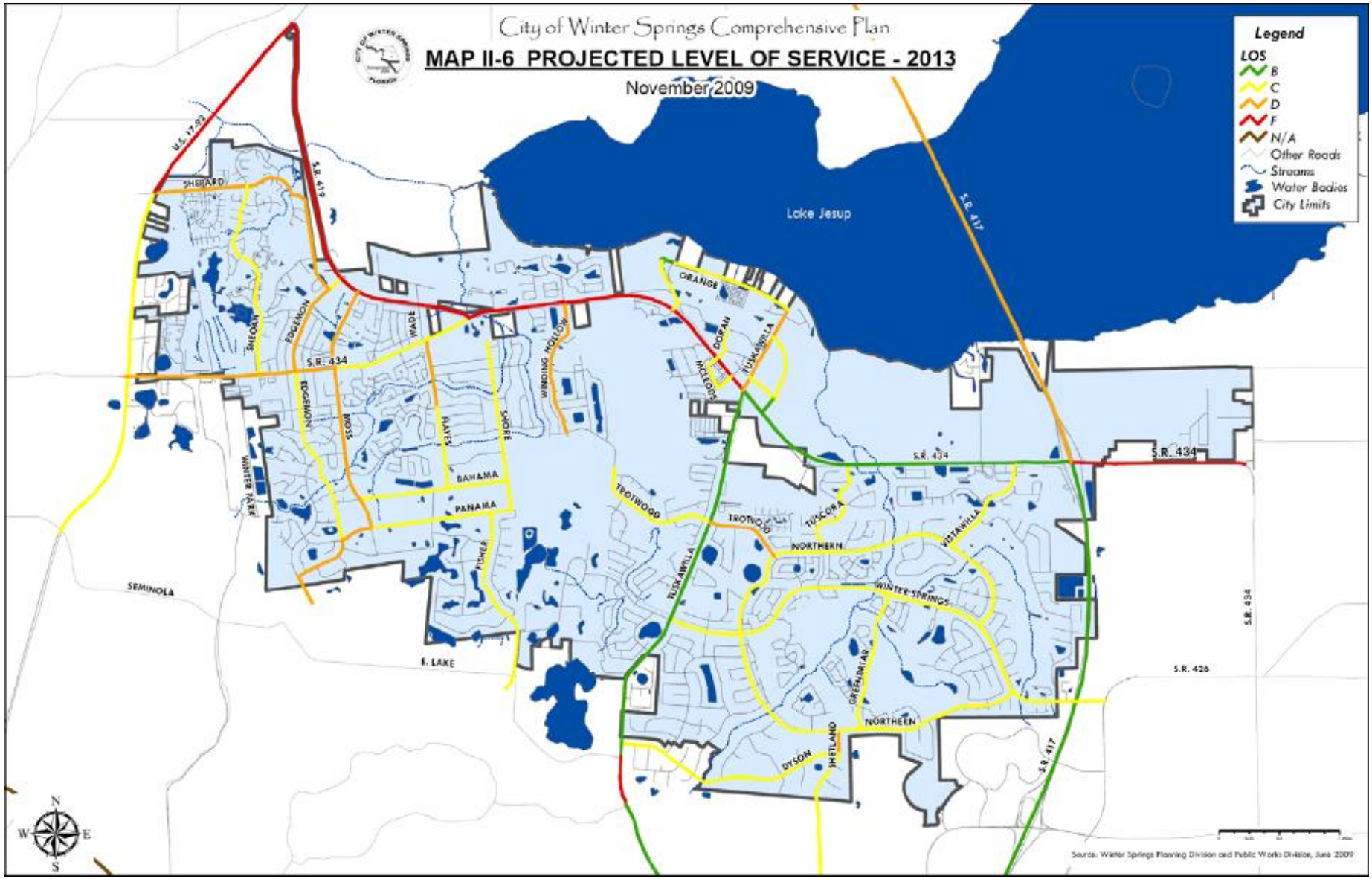


Table II - 8: Programmed and Planned Highway System Improvements

Roadway	Segment	Improvement	Programmed *	Planned **
Seminola Blvd.	U.S. 17-92 to Lake Dr.	Widen to 6 lanes		2010***
U.S. 17-92	Shepard Rd. to Lake Mary Blvd.	Widen to 6 lanes	2010/2013	
S.R. 426	Mitchell Hammock Rd. to Pine Ave.	Widen to 4 lanes	2008/2009	
S.R. 417	Orange/Seminole County line to S.R. 434	Widen to 4 lanes	2008/2013	
S.R. 426	Pine Ave. to S.R. 434	Widen to 4 lanes		2010 ***

* Contained in construction program of FDOT, Seminole County, or Florida's Turnpike Enterprise (METROPLAN ORLANDO Transportation Improvement Program 2008/09 – 2012/13)
** 2025 Long Range Transportation Plan
*** Latest data based on need (from 2005 CPH Engineers transportation study)
Source: METROPLAN ORLANDO, CPH Engineers

Table II - 9: Programmed City Improvements

Roadway	Segment	Improvement	Programmed *
S.R. 434	at S.R. 419	traffic signal improvements	2008/2009
Michael Blake Blvd. (Spine Rd.)	S.R. 434 to Tuskawilla Blvd.	new Town Center roadway	2008/2009
Orange Ave. Loop	Central Winds Park to S.R. 434	new Town Center roadway	2012/2013
S.R. 434	at Hayes Rd.	add deceleration lane	2008/2009
S.R. 434	at Vistawilla Dr.	add deceleration lane	2008/2009
Bahama Rd.	Shore Rd. to Hayes Rd.	paving	2011/2012

* Contained in the City's Five Year Schedule of Capital Improvements FY 08–FY 13 Source: City of Winter Springs, January 2009

Table II - 10: Projected Year 2030 Roadway Link Levels of Service

ROADWAY	FROM	TO	NO. OF LANES	ROADWAY CLASS	LOS D DAILY VOLUME	2030 PROJ DAILY VOLUME	V/C RATIO	PROJ DAILY LOS
S.R. 417**	S.R. 434	RED BUG LAKE RD	8	FREEWAY	140,200	95,022	0.67	C
U.S. 17-92	S.R. 419	S.R. 434	6	ARTERIAL	53,500	66,303	1.24	F*
U.S. 17-92	S.R. 434	SEMINOLA BLVD*	6	ARTERIAL	53,500	72,363	1.35	F*
S.R. 434	U.S. 17-92	BELLE AVE	4	ARTERIAL	35,700	45,523	1.27	D
S.R. 434	BELLE AVE	S.R. 419	4	ARTERIAL	35,700	39,972	1.12	D
S.R. 434	S.R. 419	TUSKAWILLA RD	4	ARTERIAL	35,700	50,654	1.42	F
S.R. 434	TUSKAWILLA RD	SPRING AVE	4	ARTERIAL	35,700	31,868	0.89	D
S.R. 434	SPRING AVE	S.R. 417	4	ARTERIAL	35,700	31,575	0.88	D
S.R. 434	S.R. 417	DELEON ST*	2	ARTERIAL	16,400	31,251	1.9	F*
S.R. 419	U.S. 17-92	EDGEMON AVE	4	ARTERIAL	35,700	24,426	0.68	B
S.R. 419	EDGEMON AVE	S.R. 434	4	ARTERIAL	35,700	27,048	0.76	B
TUSKAWILLA RD	S.R. 434	TROTWOOD BLVD	4	ARTERIAL	31,100	35,926	1.16	F
TUSKAWILLA RD	TROTWOOD BLVD	WINTER SPRGS BLVD	4	ARTERIAL	31,100	32,353	1.04	F
TUSKAWILLA RD**	WINTER SPRGS BLVD	E. LAKE DR*	4	ARTERIAL	31,100	38,448	1.24	F*
TUSKAWILLA RD*	E. LAKE DR*	EAGLE BLVD*	4	ARTERIAL	31,100	53,072	1.71	F*
TUSKAWILLA RD*	EAGLE BLVD*	RED BUG LAKE RD*	4	ARTERIAL	31,100	41,697	1.34	F*
SEMINOLA BLVD*	U.S. 17-92	WINTER PARK DR*	6	COLLECTOR	46,800	41,373	0.88	D
SEMINOLA BLVD*	WINTER PARK DR	E. LAKE DR*	4	COLLECTOR	46,800	37,031	0.79	D
E. LAKE DR*	SEMINOLA BLVD*	FISHER ROAD	4	COLLECTOR	31,100	23,501	0.66	D
E. LAKE DR*	FISHER ROAD	TUSKAWILLA RD	4	COLLECTOR	31,100	24,699	0.69	D
SHEPARD RD	U.S. 17-92	SHEOAH BLVD	2	COLLECTOR	10,000	5,970	0.60	D
SHEPARD RD	SHEOAH BLVD	EDGEMON AVE	2	COLLECTOR	10,000	8,635	0.86	D
SHEOAH BLVD	SHEPARD RD	S.R. 434	2	COLLECTOR	10,000	9,273	0.93	D
BAHAMA RD	MOSS RD	SHORE RD	2	COLLECTOR	10,000	109	0.01	C
MOSS RD	S.R. 419	S.R. 434	2	COLLECTOR	10,000	7,979	0.80	D
MOSS RD	S.R. 434	DOLPHIN RD	2	COLLECTOR	10,000	7,979	0.80	D
MOSS RD	DOLPHIN RD	PANAMA RD	2	COLLECTOR	10,000	7,433	0.74	D
NORTHERN WY-N	WINTER SPRGS BLVD	TROTWOOD BLVD	2	COLLECTOR	10,000	2,733	0.27	C
NORTHERN WY-N	TROTWOOD BLVD	VISTAWILLA DR	2	COLLECTOR	10,000	3,935	0.39	C
NORTHERN WY-N	VISTAWILLA DR	WINTER SPRGS BLVD	2	COLLECTOR	10,000	3,935	0.39	D
NORTHERN WY-S	WINTER SPRGS BLVD	SHETLAND AVE	2	COLLECTOR	10,000	3,784	0.38	D
NORTHERN WY-S	SHETLAND AVE	GREENBRIAR LN	2	COLLECTOR	10,000	4,263	0.43	D
NORTHERN WY-S	GREENBRIAR LN	WINTER SPRGS BLVD	2	COLLECTOR	10,000	2,405	0.24	C
TROTWOOD BLVD	ODAY DR	TUSKAWILLA RD	2	COLLECTOR	10,000	4,500	0.45	C
TROTWOOD BLVD	TUSKAWILLA RD	NORTHERN WY-N	2	COLLECTOR	10,000	4,919	0.49	D
WINTER SPRGS BLVD	TUSKAWILLA RD	NORTHERN WY-N	2	COLLECTOR	10,000	9,291	0.92	D
WINTER SPRGS BLVD	NORTHERN WY-N	GREENBRIAR LN	2	COLLECTOR	10,000	6,121	0.61	D

Table II - 10: Projected Year 2030 Roadway Link Levels of Service, cont'd

ROADWAY	FROM	TO	NO. OF LANES	ROADWAY CLASS	LOS D DAILY VOLUME	2030 PROJ DAILY VOLUME	V/C RATIO	PROJ DAILY LOS
WINTER SPRGS BLVD	GREENBRIAR LN	NORTHERN WY-N	2	COLLECTOR	10,000	5,465	0.54	D
WINTER SPRGS BLVD	NORTHERN WY-N	NORTHERN WY-S	2	COLLECTOR	10,000	8,723	0.87	D
WINTER SPRGS BLVD	NORTHERN WY-S	S.R. 426	4	COLLECTOR	21,700	12,507	0.58	D
PANAMA RD	EDGEMON AVE	MOSS RD	2	COLLECTOR	10,000	9,947	0.99	D
PANAMA RD	MOSS RD	SHORE RD	2	COLLECTOR	10,000	1,421	0.14	C
HAYES RD	S.R. 434	DOLPHIN RD	2	COLLECTOR	10,000	7,286	0.73	D
HAYES RD	DOLPHIN RD	BAHAMA RD	2	COLLECTOR	10,000	2,186	0.22	C
FISHER RD	PANAMA RD	E LAKE DR	2	COLLECTOR	10,000	1,530	0.15	C
SHORE RD	TEMPLE WY	PANAMA RD	2	COLLECTOR	10,000	1,500	0.15	C
TUSCORA DR	S.R. 434	NORTHERN WY-N	2	COLLECTOR	10,000	2,943	0.29	C
VISTAWILLA DR	S.R. 434	NORTHERN WY-N	2	COLLECTOR	10,000	4,372	0.44	D
GREENBRIAR LN	WINTER SPGS BLVD	NORTHERN WY-S	2	COLLECTOR	10,000	1,640	0.16	C
DYSON DR**	TUSKAWILLA RD**	SHETLAND AVE**	2	COLLECTOR	10,000	2,838	0.28	C
SHETLAND AVE-	DYSON DR	RED BUG LAKE RD*	2	COLLECTOR	10,000	3,826	0.38	C
SHETLAND AVE	NORTHERN WY-S	DYSON DR	2	COLLECTOR	10,000	5,465	0.55	D
EDGEMON AVE	S.R. 419	SHEPARD RD	2	COLLECTOR	10,000	4,698	0.47	D
EDGEMON AVE	SHEPARD RD	S.R. 434	2	COLLECTOR	10,000	6,117	0.61	D
EDGEMON AVE	S.R. 434	PANAMA RD	2	COLLECTOR	10,000	6,500	0.65	D
EDGEMON AVE	PANAMA RD	SEMINOLA BLVD*	2	COLLECTOR	10,000	9,947	0.99	D
WINDING HOLLOW	S.R. 434	WINDING CHASE	2	COLLECTOR	10,000	3,500	0.35	C
TUSKAWILLA RD	ORANGE AVE	S.R. 434	2	COLLECTOR	10,000	6,500	0.65	D
DORAN DR	WS HIGH SCHOOL	S.R. 434	2	COLLECTOR	10,000	3,500	0.35	C
CENTRAL WINDS	ORANGE AVE	S.R. 434	2	COLLECTOR	10,000	2,500	0.25	C
ORANGE AVE	S.R. 434	CENTRAL WDS PARK	2	COLLECTOR	10,000	1,500	0.15	C
ORANGE AVE	CENTRAL WDS PARK	TUSKAWILLA RD	2	COLLECTOR	10,000	2,500	0.25	C
TREE SWALLOW	TUSKAWILLA RD	MICHAEL BLAKE	2	COLLECTOR	10,000	5,500	0.55	D
MICHAEL BLAKE	TUSKAWILLA RD	TREE SWALLOW	2	COLLECTOR	10,000	4,500	0.45	C
MICHAEL BLAKE	TREE SWALLOW	S.R. 434	2	COLLECTOR	10,000	5,500	0.55	D
MCLEODS WY	S.R. 434	ROBERTS FAMILY LN	2	COLLECTOR	10,000	3,500	0.35	C
MCLEODS WY	ROBERTS FAMILY LN	TUSKAWILLA RD	2	COLLECTOR	10,000	3,500	0.35	C
ROBERTS FAMILY	S.R. 434	MCLEODS WY	2	COLLECTOR	10,000	3,500	0.35	C
MILKY WAY	TUSKAWILLA RD	S.R. 434	2	COLLECTOR	10,000	3,500	0.35	C
CASSCELLS PKWY	S.R. 434	SPRING AVE	2	COLLECTOR	10,000	4,500	0.45	C
CASSCELLS PKWY	SPRING AVE	S.R. 434	2	COLLECTOR	10,000	4,500	0.45	C

*Roadway not within the City.

**Portion of the Roadway not within the City.

4. Model Development and Validation

To adequately forecast future traffic conditions in a rapidly urbanizing area such as the City, a set of transportation planning models must be developed and validated. In the case of the City, such models exist and these models have been previously used to develop City, regional and county wide plans. These models are contained in the model set documented for the Orlando Urban Area Transportation Study (OUATS).

In order to provide the more detailed analysis required for the City, this model set was modified. These modifications include the development of a more detailed TAZ set (microzones), a more detailed highway network, and the use of the FSUTMS. These changes require the validation of the model set used in this process even though this model set is derived from and closely resembles the OUATS model set. This model set has been modified as detailed below.

a. OUATS Model Set

The transportation planning models used in the OUATS have evolved from a set of models developed in the mid-sixties and based upon extensive home interviews conducted at that time. The model set is divided into four general functions and modifications to each of these functions have occurred over the last twenty-five years.

b. Trip Generation

The existing OUATS trip generation model is a cross-classification person trip production model with attractions calculated using expressions derived from regression analysis. This model currently uses 11 purposes including special generator purposed for the major tourist attractions, the various universities and colleges in the region, and Orlando International Airport. The model requires extensive data not generally available such as the forecast of the median income and car ownership by zone for the calculation of home-based productions.

c. Trip Distribution

The OUATS trip distribution model utilizes each of the 11 purposes for which productions and attractions are generated. Friction factors for each of these 11 purposes have been developed, although the special generator purposes generally borrow friction factors from other purposes. There are not K-factors utilized in the model.

d. Modal Split/Auto Occupancy

The OUATS model set includes a multi-nominal logit expression for calculation of splits of trips to the transit sector. Auto occupancy is calculated with simple rates by purpose. The modal split is system-sensitive in that it requires the coded description of a transit system.

e. Traffic Assignment

The current OUATS traffic assignment procedure consists of a four-iteration equilibrium assignment with capacity restraint. This process is applied using

network descriptions in accordance with the 1979 version of the Urban Transportation Planning System (UTPS) developed by the U.S. Department of Transportation.

f. Trip Generation Modifications

In order to make use of the data available from Seminole County and to avoid the necessity to forecast income and car ownership as required by the OUATS trip generation model, modifications were made to this model. The trip generation models used are based upon the OUATS models, but these models incorporate simpler rate expressions instead of the more complex cross-classification models. These models have successfully been used numerous times in Winter Springs and in the greater Orlando area including Seminole County. The models were used to forecast trip generation for the City's 2005 Transportation Study and the 2007 Impact Fee Study. The models forecast vehicle trips instead of person trips so they additionally do not require a separate auto occupancy model.

g. Use of OUATS 11 Trip Purpose Models

Since trip generation expressions were available for each of the OUATS nonspecial generator purposes, it was decided to use the entire 11 purpose models available in OUATS. This required incorporating the special generator expressions available from OUATS into the Winter Springs Model Set. This use of the full OUATS model purposes additionally permitted use of the OUATS friction factors.

5. Public Transit Performance

The new LYNX route offers the potential to significantly increase the capacity of the City's transportation network while reducing traffic congestion, pollution and greenhouse gas emissions. One average size bus at capacity can carry as many passengers (approximately 40 persons) as 10 or more private automobiles. However, any impact in LOS for S.R. 434 will not be apparent (or documented) for several years.

Successful transit systems emphasize the land use and travel demand relationship necessary to address congestion problems. The most important factors in encouraging transit use are mixed land uses and an urban form, which provides street connectivity and access to the pedestrian, transit and bikeway systems.

Transit facilities and multimodal terminals also are important for the success of the transit system. These facilities allow for transfers among the various modes within the transportation system.

Public transit LOS criteria are based on the operational and service characteristics of the transit system. Operational characteristics include the number of vehicles operated in maximum service, the amount of service supplied, the average speed, and the number of days the service is provided. Service characteristics include geographic location and service area population. These characteristics are monitored by the local transit provider, but the City could be monitoring LOS for transit performance based on headway standards. Headway is the time that separates vehicles moving in the same direction on

the same route or track. The emphasis should be on reducing headways to encourage public transit ridership.

The new LYNX Crosstown bus route now serves all of the City's major traffic generators/attractors identified on Map II-3. In analyzing access to transit service, national planning studies consider one-quarter to one-half mile on either side of the route the maximum distance that people would be willing to walk to use transit.

6. Other Transportation Systems

The City's current transportation network is based primarily on a road network serving vehicular traffic, with very little attention given to other means of transportation. The City needs to start establishing facilities that will encourage the use of alternative transportation systems.

Parking is an essential component of the overall transportation system. The decision of a commuter to drive alone or to use alternative transportation modes such as ride-sharing or public transit depends to a large extent on the cost, accessibility and availability of parking. As the City grows the need for these types of facilities will increase.

Bicycling is a viable mobility alternative. Bicycle networks provide a commuting alternative as well as a recreational asset. The City has made efforts to establish a bicycle system. However, the adopted five-year plan was not achieved within that timeframe. The existing bicycle plan will need to be updated to plan for the expansion of the current system. Subsection 335.065, F.S., requires with only a few exceptions, that bicycle and pedestrian ways be established in conjunction with the construction, reconstruction, or other change of any state transportation facility.

Pedestrian mobility is greatly influenced by the mix and proximity of land uses as well as the availability of adequate, unencumbered sidewalks, lighting, and other pedestrian facilities. Adequate land uses and appropriate urban design would encourage walking for short trips and for accessing transit facilities and services. The City Code currently requires developers to provide sidewalks in new subdivisions.

7. Future Transportation Planning

This section provides recommendations for creating a safe, convenient, and energy efficient multimodal transportation system, coordinated with future land uses, plans and programs of the Seminole County, METROPLAN ORLANDO, and FDOT.

Since World War II, roadways have been designed primarily for automobiles. Very little attention has been given to accommodating other modes of transportation such as bicycles, pedestrians, and transit. The goal of this Transportation Element is to look at roads as multimodal interconnected transportation corridors, and design them accordingly.

Intergovernmental coordination is essential for the most cost-effective provision of transportation system improvements. Clearly, the City does not possess the resources nor is it fiscally responsible for the entire transportation system within the City. Seminole County and FDOT have financial responsibility for county roads and state highway system roads, respectively. Therefore, it is necessary for the City to review the transportation improvement plans and programs prepared by the County and FDOT. In this way, the

effort and dollars expended by the City to improve its traffic circulation system may be complemented and perhaps enhanced by the activities of the County and FDOT.

One area of coordination should include the preservation and protection of rights-of-way for identified future roadway improvements and construction. With the escalating value of land and costs entailed in right-of-way acquisition, it is essential that the City protect roadway corridors in advance of development. Increased right-of-way costs reduce the funds available for actual construction. The City needs to utilize such techniques as setback requirements, zoning restrictions, right-of-way protection regulations and official transportation maps to preserve and protect existing and future rights-of-way. Other measures are discussed in the policy section.

a. Future Transportation Map - 2030

The purpose of a Transportation Map is to graphically depict the location of all proposed collector and arterial roadways and any limited access facilities, airports, rail lines, and other related facilities.

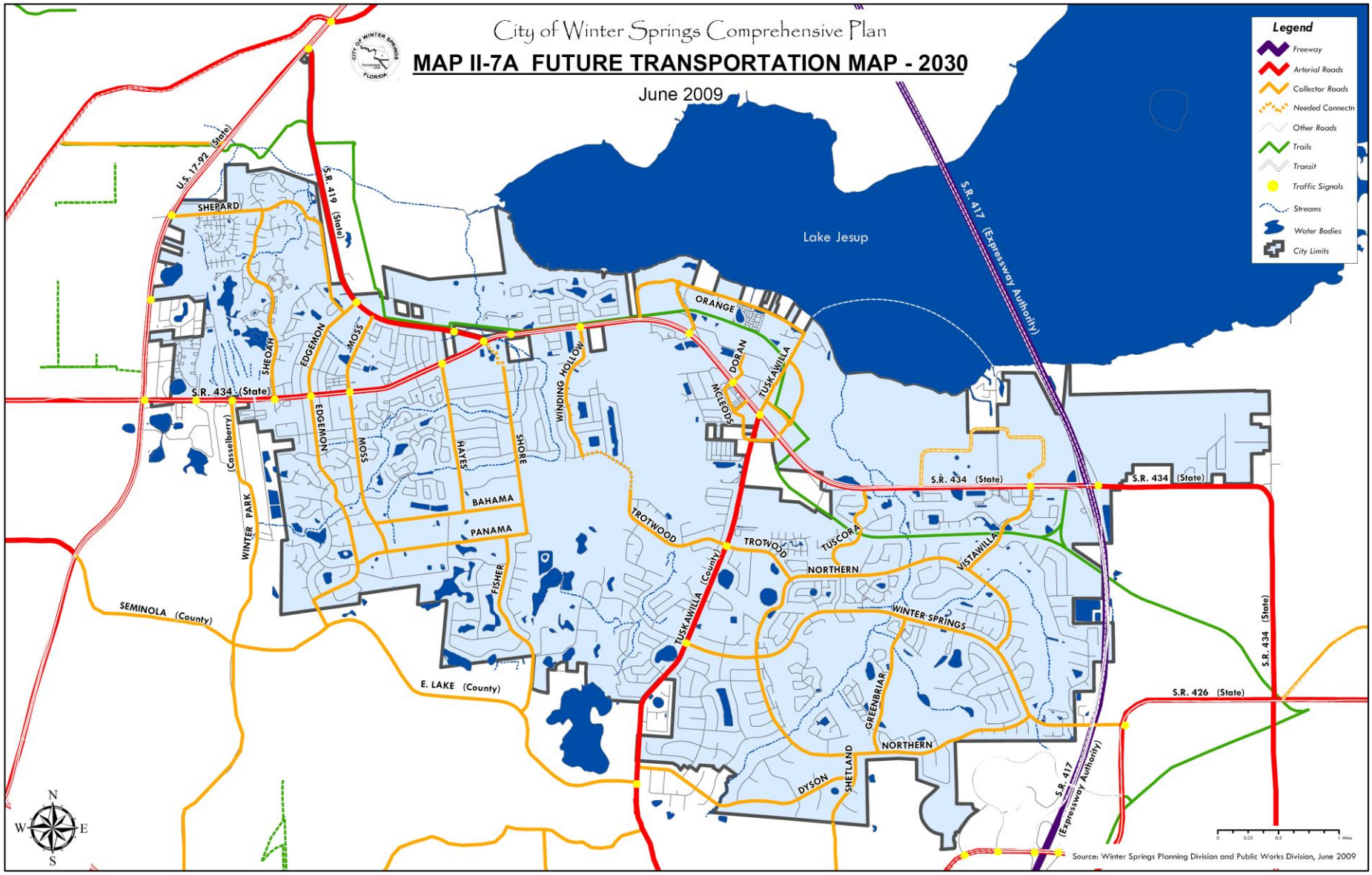
Map II-7A presents the proposed Future Transportation Map - 2030 for the City. This map shows the proposed roadway functional classification. The number of lanes for each roadway segment is illustrated in Map II-7B. Roadway capacity is based on the functional classification and number of lanes. The projected LOS is illustrated in Map II-8. The map shows the network as it is planned for the year 2030, with several roads at a LOS D, which is an acceptable standard. .

Future roadway design will need to incorporate bicycle, pedestrian, and transit features to achieve a true multimodal system. In addition to incorporating roadway design standards in the City Code, the City will start requiring that new developments be interconnected to enhance the transportation network. Development design must provide connectivity and access between adjacent residential developments and nearby land uses. Traffic calming techniques can be used to protect neighborhoods, although street design that utilizes curving streets and on-street parking will naturally reduce speed and the need for other traffic calming methods.

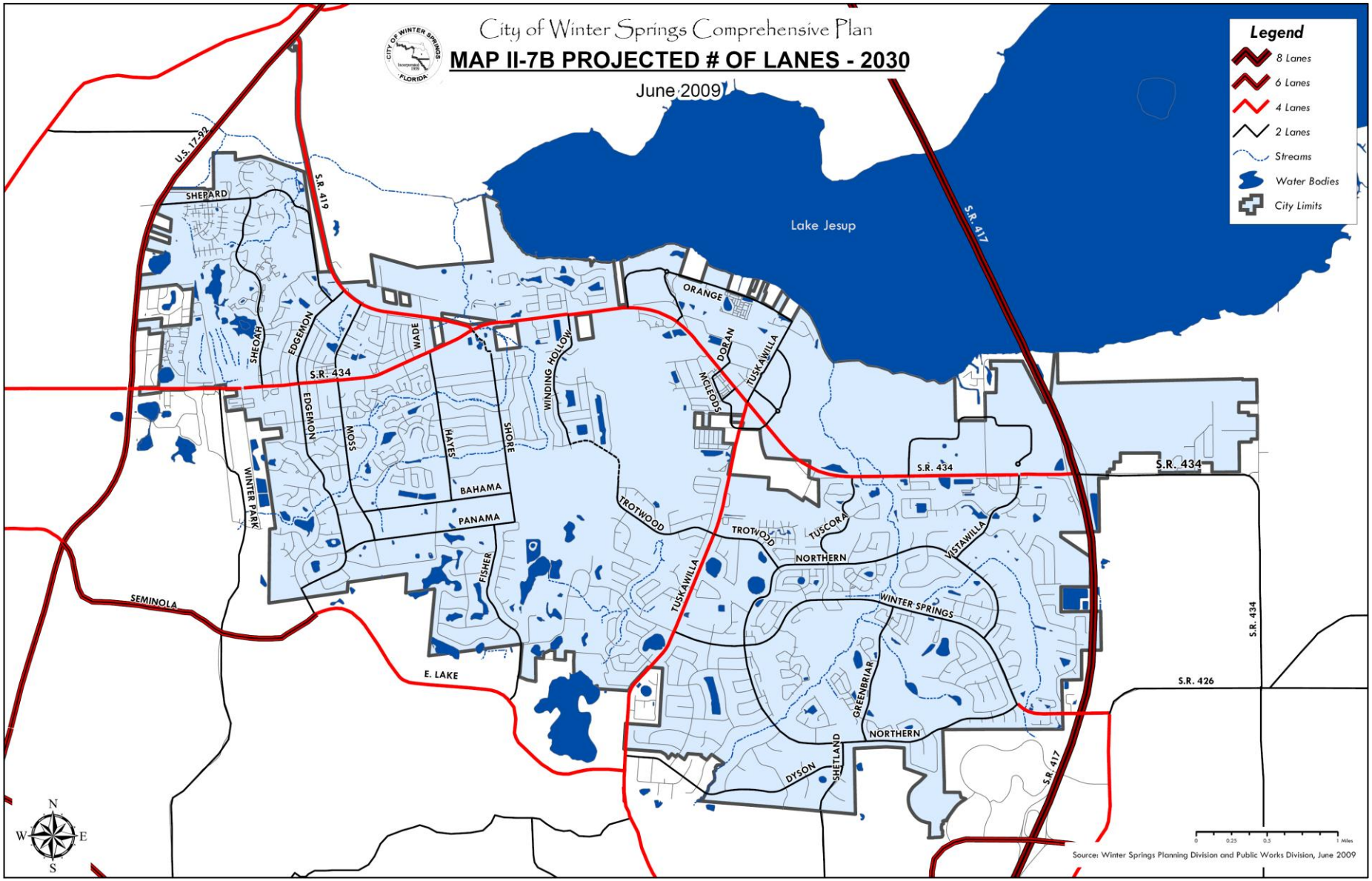
b. Transportation Concurrency Alternatives

Several alternatives are available to the City to assist in meeting Florida's concurrency management requirements in the Urban Central Business District (Town Center) and elsewhere in the community. These alternatives are provided for in Chapter 163, F.S. and Rule 9J-5, F.A.C. The statute recognizes that planning and public policy goals may conflict with the requirement that transportation facilities and services be available concurrent with the impacts of development, and it provides for exceptions from the concurrency requirement for transportation facilities if certain criteria are met. Available alternatives include a Transportation Concurrency Exception Area (TCEA), a Transportation Concurrency Management Area (TCMA), a Long-term Transportation Concurrency Management System (LTTCMS), a Multimodal Transportation District (MMTD), a Transportation Concurrency Backlog Area (TCBA), and an Urban Infill and Redevelopment Area.

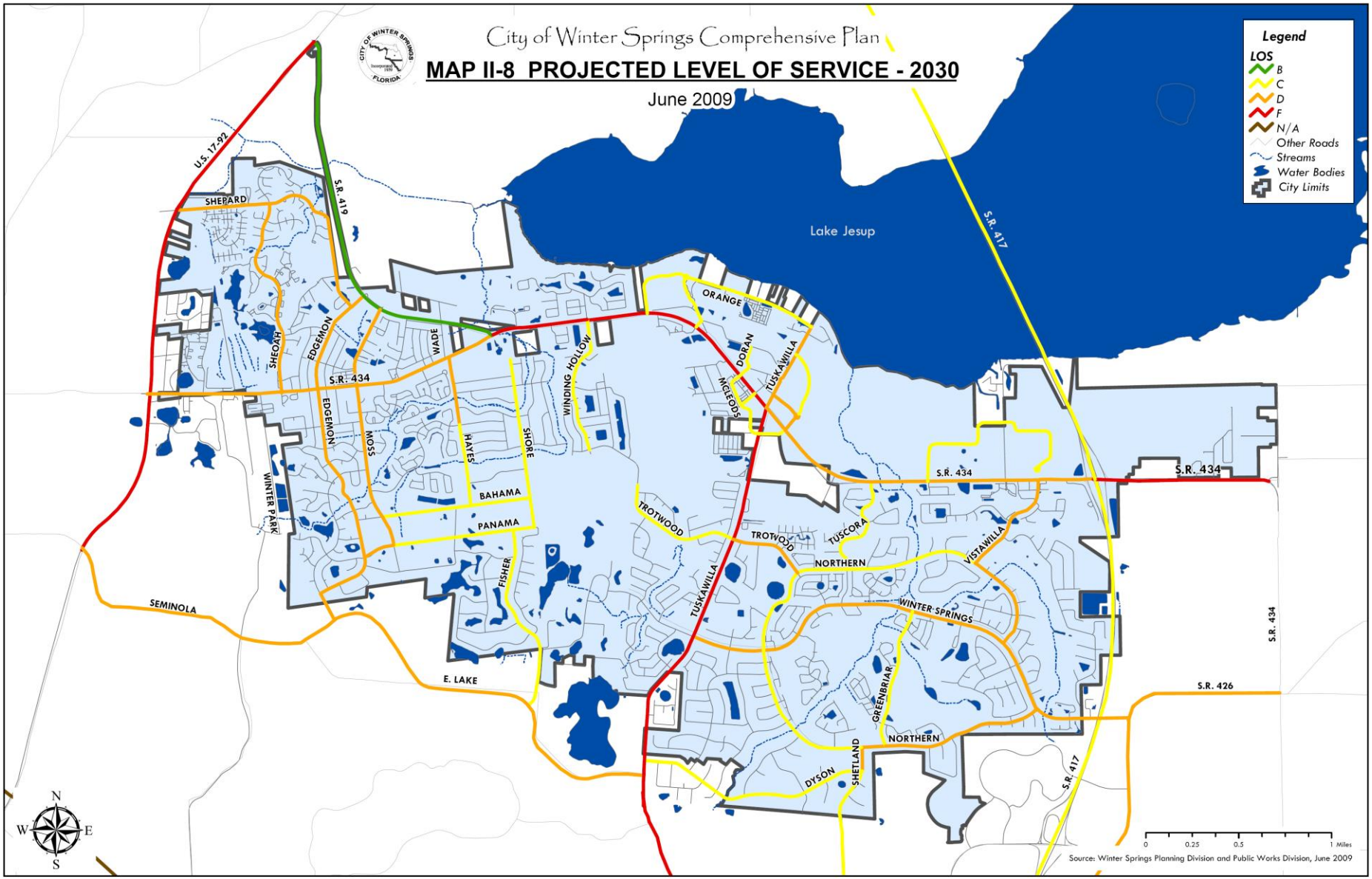
Map II - 7A: Future Transportation Map – 2030



Map II – 7B: Projected Number of Lanes – 2030



Map II – 8: Projected Level of Service – 2030



c. Future Public Transit Plan

A transportation system that offers multimodal opportunities has the potential to absorb a significantly higher number of person trips than a system that focuses solely on accommodating vehicle trips. Improved transit service frequencies and new routes offer a viable transportation alternative and promote transit use. With the new LYNX Crosstown route, the City will need to work closely with METROPLAN ORLANDO, LYNX, and Seminole County to coordinate its support and participation in the transit system. The City will help achieve increased ridership by improving pedestrian access, encouraging compact development, and requiring the provision of transit facilities and amenities where warranted.

d. Pedestrian Planning

In order to develop a pedestrian improvement/construction program to address City streets lacking sidewalks, a city-wide inventory of sidewalks, crosswalks and other pedestrian facilities must be completed. By identifying missing links in the pedestrian system, the inventory will allow prioritization of improvements. Implementation of these improvements will provide pedestrian connectivity to the overall transportation system. Particularly important will be an inventory of sidewalks within one-quarter to one-half mile of the new LYNX Crosstown bus route.

e. Bicycle Planning

An important action needed by the City in the immediate future is the planning of a City trail system to interconnect with the LYNX Crosstown bus route and the Cross Seminole Trail. Such a system could result in reducing vehicle miles traveled and increasing bus ridership by providing alternative transportation options. The City currently owns a substantial portion of FP&L easement which could be the beginnings of this network. In order to accomplish this, several policies relating to trails have been added to the Recreation and Open Space Element.

Bicycle lanes should be implemented on existing roadways, where right-of-way allows.

f. TSM/TDM Strategies

Transportation System Management (TSM) and Transportation Demand Management (TDM) are options for communities trying to add roadway capacity without having to construct costly new facilities. The ultimate goal of the TDM program is to influence people to shift to more efficient modes of transportation and to travel during off-peak hours. TSM strategies, on the other hand, aim to affect the actual supply of transportation services. The most effective policies integrate supply and demand strategies to create a transportation network that promotes efficient choices. The City does not currently offer any of these programs. However, they are options to consider in the future.