

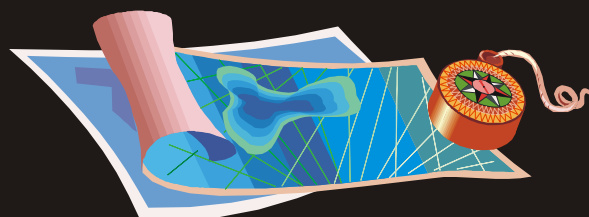
# TRANSPORTATION ELEMENT

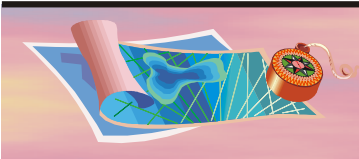
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TRANSPORTATION

# VISION 2020





# Vision 2020 Comprehensive Plan Seminole County, Florida

## TRANSPORTATION ELEMENT INTRODUCTION

The 1991 Comprehensive Plan correctly forecaste significant growth in houses and jobs and the continued urbanization of Seminole County. In response and preparation, the Traffic Circulation Element called attention to the impending congestion for State and County roadways and recommended a significant expansion of roads. Seeking to continue the County's population and economic growth, the County's voters and leaders approved a 1-cent sales tax dedicated to improving County roadways.

Seminole County has nearly completed the voter-approved 10-year road improvement program costing over \$450,000,000. These improvements have been focused on areas of the County that were expected to provide the greatest return of benefits in terms of community and economic development. The improvements to the County Road System, in conjunction with improvements to the State Road System, will maintain Seminole County's position of having one of the best major road systems in the Central Florida Region for several years to come.

While Seminole County should take pride in the new community that it has created, it must also address the new challenges that past successes have created. The greatest challenge is to determine how to maintain the high level of mobility over the long term in order to sustain the future development of the County at the level its residents have come to expect.

By the end of the County's 10-year road improvement program, many of the County's major arterial roadways will be at the maximum number of lanes due to physical and/or policy constraints. While there are still several significant major road projects to be constructed, in general, it will no longer be possible or appropriate for the County to build its way out of its problems using traditional methods. Yet, the population is still expected to increase, reaching residential build-out before 2020. These and other factors will combine to create a change in the style of growth and development, and the transportation system must change as the County's transportation needs change.

Although the 1991 Traffic Circulation Element concentrated on the imminent need for new roads, it also laid the groundwork for a more balanced transportation system. Several features of the 1991 Comprehensive Plan - the flexibility in level of service standards, the trails and greenways programs, and the inclusion of transit-supportive land development features - will grow in importance and impact as the County matures. This Transportation Element continues in this direction by continuing the work of expanding the road network while also focusing on creating balance within the transportation system. Not only does Seminole County need to complete its road expansion program, but also Seminole County's future system must fill in the gaps to create a multi-modal community through a system of roads, transit, trails, sidewalks, and bike lanes that connect people to where they work, live and play.

### A NEW FOCUS

The transportation system of Seminole County brings people and goods into the County, accommodates traffic passing through the County, and provides the mobility and accessibility that allows residents to participate in the community's social and economic activities. Historically, the County's transportation system has been dominated by a single transportation mode - the private automobile. Public transit has played a relatively minor role, and walking and biking played purely recreational roles. As the County continues to mature from a bedroom community to an economically self-sufficient community, a wider choice of transportation options will be needed to maintain economic and population growth while conserving valuable environmental lands.



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This Comprehensive Plan focuses the County efforts on preparing for an effective multi-modal transportation system. As the goals of the Comprehensive Plan are realized, employment opportunities will grow within the County and local residents will travel shorter distances to work. Forecasted residential build-out and continued population growth will increase residential densities within concentrated mixed use centers. Neighborhoods will strengthen and develop identities. These trends all lead from long distance vehicular trips from low-density suburbs to regional employment centers and toward shorter distance connections to local jobs and daily needs. As the County's economy, land use, and mobility needs transition and mature, the transportation system will transition to a more balanced multi-modal approach.

Seminole County's transportation system must not only service the local needs of County residents, but longer distance travel as well. Orlando Sanford Airport continues to mature, progressing from a general aviation facility to a regional reliever airport with scheduled air service. Rental car facilities at the airport provide local mobility for visitors. Amtrak AutoTrain links Seminole County with the nation's capital and delivers rail passengers with their vehicles to Central Florida. Greyhound Bus Lines offers multiple departures per day out of its Downtown Sanford stop.

The development of a balanced, integrated, and sustainable transportation system adds value to the community by providing alternative modes of moving people and goods, providing accessibility to markets, and providing economic returns. A concentration of transportation improvements in the urban area helps prevent urban sprawl and protect conservation areas, while a green urbanism in the increasingly dense urban area maintains the livable access to natural areas.

## MERGING OF ELEMENTS

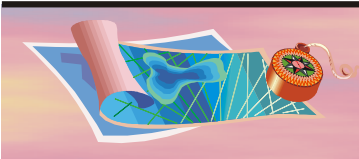
Chapter 163, of the Florida Statutes, states that the comprehensive plan for a local government which has all or part of its jurisdiction included within the urbanized Metropolitan Planning Organization (MPO) pursuant to Section 339.175, F.S. shall prepare and adopt a transportation element. The transportation element shall replace the previously required traffic circulation, mass transit, and ports, aviation, and related facilities elements. The State's minimum criteria for reviewing this element is contained in Rule 9J-5 of the Florida Administrative Code (F.A.C.). Seminole County's Comprehensive Plan combines the three referenced elements under one title, "Transportation Element", as per Rule 9J-5.5.019 F.A.C.:

Within a designated MPO area, the transportation elements of the local plans shall be coordinated with the long-range transportation plan of the MPO. The purpose of the transportation element shall be to plan for a multi-modal transportation system that places emphasis on public transportation systems.

This Element ensures that the County continues to implement a comprehensive, coordinated, and continuous transportation planning process. The goals, objectives, and policies describe the vision of an integrated and efficient transportation system and the methods by which this vision will occur.

Despite the merging of the various transportation-related elements into a unified Transportation Element, this element continues the single mode approach toward tracking the mobility and accessibility of Seminole County





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residents for much of the County. In these locations, level of service standards and methodologies are single-mode oriented and transportation regulations, investments, and incentives are not integrated to support a multimodal approach.

However, this Comprehensive Plan also recognizes that the conventional level of service standards and methodologies are becoming less applicable as portions of the County continue to mature. Certain areas of the County that are forecasted to be congested are also urban places that feature community identity, a mixing of both land uses and people, and the building blocks of the County's economy. Conventional level of service standards and methodologies are frequently inappropriate and ineffective in areas such as these, and alternative methods of assessing mobility are needed. This Comprehensive Plan encourages the development of multi-modal level of service standards and methodologies in these existing and emerging urban places, bringing together the County and private development to create characteristic and comprehensive approaches to mobility.

The transportation system brings people and goods into Seminole County, accommodates traffic passing through the County and provides the mobility and accessibility that allows people to participate in the community's social and economic activities.

## **SEMINOLE COUNTY ROAD SYSTEM**

There are approximately 1900 miles of roadways in Seminole County. These roadways have been assigned to the State Highway System, the County Road System and the City Street Systems based on the functional classification of individual roadway segments as determined by the Florida Department of Transportation.

Arterial and collector roadways are assigned to the State, County and City systems as indicated in *Exhibit: Roadway Maintenance Responsibilities* below. The remaining miles of local and unclassified roadways are assigned to the County Road System in the unincorporated area and to the City Street Systems in the incorporated areas.

Most of the roadways assigned to the State Highway System are four or more lanes wide within the urban boundary, while the County roadways are two or four lane facilities. In large part, this reflects the higher traffic volumes generally found on State highway facilities within the County. Congestion on State highways causes traffic to be diverted to County arterial and collector roadways which, in turn, become more congested.

As of March, 1999, the County maintains about 756 miles of roadways. Approximately 620 miles are paved while the remaining miles are unpaved. There are about 190 signalized intersections in Seminole County.

## **COUNTY PROGRAMS**

The County has initiated a number of programs to maintain and improve the County Road System. The Public Works Department has primary responsibility for the operation and maintenance of County Roads. The Traffic Engineering Office monitors traffic conditions utilizing travel time and delay studies, traffic counts, traffic accident reporting, speed studies, intersection studies and other techniques. It is also responsible for signage and markings and maintains traffic control devices. The Roads Division is responsible for minor construction, resurfacing and routine maintenance of all roads, rights-of-way and drainage ditches that fall within the County's jurisdiction. A Roadways Characteristics Inventory is being developed and will be maintained by the Roads Division.





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The Engineering Department has primary responsibility for the planning, design and construction of major roadway improvements and manages the overall development of the transportation system. The Department performs surveys, prepares engineering designs, accomplishes plan preparation and review and provides transportation planning services.

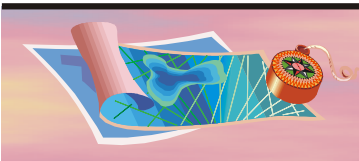
The Development Review Department has primary responsibility for the review of all land development plans submitted to the County to include review of transportation facilities and traffic impacts.

The Planning Department has primary responsibility for developing the Transportation Element of the Comprehensive Plan and coordinating the County's transportation plans and programs with other government agencies. The Department maintains the County's transportation modeling program and, in cooperation with other County departments, conducts transportation studies and evaluates the traffic impacts of land development proposals. The Capital Programs Section administers the Impact Fee Program and develops the Capital Improvements Element.

## CONCLUSION

The Transportation Element sets out the framework for the development and maintenance of an intermodal transportation system that operates safely and efficiently. The transportation system will coordinate with existing and future land use activities, will enable the economic growth of the County to continue, and will enhance the County's environmental protection and aesthetics.





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## TRANSPORTATION ELEMENT ISSUES AND CONCERNS

### Issue TRA 1

#### Population Trends

The country, state, and county are undergoing population shifts and trends that shape future transportation needs. These shifts not only impact the future demand for additional and reconstructed infrastructure, but also point to the need for a broader range of real mobility options.

#### Trend: Rapidly Increasing Population Amidst Residential Build-Out

Population projections show that the County will continue to grow at a rapid pace, and will fill up residentially-zoned land by approximately 2017. Residential build-out will have a large impact on the County and its style of growth. Now just a small portion of development activity, redevelopment and in-fill will increase.

Residential build-out has transportation implications. Redevelopment means that instead of building new roads in newly settling areas, the current transportation infrastructure will need to be maintained and improved. The 1991 Comprehensive Plan focused on the financing of new and expanded roadways to serve the rapid population and employment increases. This Comprehensive Plan continues the current road widening while preparing for a shift toward road maintenance and a new concentration on making the transportation network more livable.

Increasing population after residential build-out means higher densities, which are targeted for developed mixed use activity centers. The higher densities in these areas will require a mobility menu that is wider than the single-occupancy vehicle. Pedestrians, cycle, and transit connections will become more important as an increasing population uses a limited transportation network.

#### Trend: Increasing Average Age

Seminole County's past residential growth was focused on the young working age population between 25 and 44 years old. Populations trends point to a decrease in the growth of this age cohort and towards the rapid growth of older workers aged 45 to 64 years old. After 2010, the elderly population growth rate will accelerate.

Transportation needs change as a population ages. With a concentration of young workers, Seminole County's previous focus on road building was prudent, since this age group travels frequently and many at rush hours. As the population ages and the number of retirees increases, transportation demands will evolve as well. Retirees travel throughout the day, so the demand at rush hours will decrease and the need for road widenings to handle rush hour demands also decreases.



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Additionally, an older population is one that is less independently mobile. Narrower streets that are easy to drive and that operate at reasonable speeds allow older citizens to extend their mobility independence for several years longer. An older population is also more dependent on public transit and paratransit. While the rapid elderly population growth is not expected until after 2010, the land use changes needed to support transit are long-term in implementation. Seminole County needs to prepare for future transit demand by supporting it now through changes in the Land Development Code.

## **Trend: Increasing Number of Jobs Relative to Population**

The evolution of Seminole County from Orlando's bedroom community to employment self-sufficiency is expected to continue. With residential build-out, employment growth is expected to outpace residential growth even more.

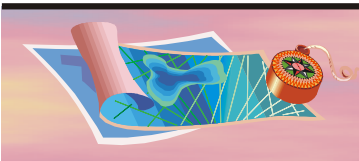
The population-jobs balance has a large impact on future transportation needs. As jobs become available in Seminole County, County residents are more likely to take jobs that are closer to their homes instead of driving into Orange County. With commuting trips shortening, traffic patterns on Interstate 4 and other intercounty connectors will change. Long distance rush hour trips on Interstate 4 are likely to mix with short distance trips from activity center to activity center. These changes will require the refocusing of resources from intercounty trips to defined employment centers on interstates and arterials, to shorter distance trips that remain in the county and are more dispersed. The improvement of street networks and connections around employment activity centers will increase in importance.

In addition to Seminole County residents taking jobs within the County, Seminole County is likely to become a regional employment center. Commuters from outside Seminole County are likely to travel to Seminole County, increasing the demands on its transportation network. Volusia County will use Interstate 4 and SR 415 to access Seminole County's transportation network and the growing employment base. So while the County must concentrate its resources on its own resident's transportation needs, the transportation needs of the region will become more important.

## **Trend: Increasing Service Sector Employment**

Reflecting national and state job growth patterns, the Commercial and Service sectors will experience rapid job growth in Seminole County while manufacturing and construction jobs will grow slowly until 2005 and then plateau.





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Workers in various professions have differing transportation needs. Industrial jobs are well paying and are shift-controlled. Conversely, commercial and service jobs have more flexible hours and are more likely to be lower wage. With the variety of shifts for commercial and service jobs, rush hours are likely to dissipate as commuters travel at all times of the day. Therefore rush-hour-related road widenings are less necessary. Additionally, lower wage service workers are more likely to use public transit. As the County's job mix continues to favor commercial and service jobs, the transportation demands will continue to center on mobility options for the lower income population.

## Issue TRA 2

### **Mobility and Accessibility in a Maturing County**

Seminole County's transportation system provides mobility and accessibility to residents and visitors alike so that they can utilize the County's social, economic, and environmental resources. In this sense, the transportation system is not an "end in itself", but only a means to accomplish other tasks. Thus, the transportation system needs to support surrounding land uses and enhance their development. Accordingly, the transportation system must adapt as the County continues to economically and socially mature.

### **To Jobs in Seminole County**

Seminole County is evolving from Orlando's bedroom community to a regional job center in itself. The transportation system must adapt from providing the means for Seminole County residents to reach Orange County jobs to providing the means for employees from all adjacent counties to access Seminole County jobs.

### **Three groups of Seminole County employees have differing transportation needs:**

- Seminole County residents: Job opportunities closer to home could reduce the commute of Seminole County residents. The transportation system previously collected commuters from diffuse residential areas and delivered them to concentrated employment centers outside the County. The system must now provide access from diffuse residential areas to a wide band of lower density employment centers along the Interstate 4 corridor and within the municipalities. Where few but wide streets previously filled the commuting needs of Seminole County residents, new commuting patterns will require a more fine-grained network that offers more accessibility.
- Employees living outside Seminole County: Previously a bedroom community, Seminole County is now attracting employees from outside its jurisdiction, prominently Volusia County residents. The transportation system, oriented toward delivering commuters to southern counties, must now accomplish the opposite task. Improving the connections from adjacent counties to employment centers will grow in importance as businesses continue to grow.
- Transportation disadvantaged: The economic growth within Seminole County threatens to leave a portion of its residents completely behind. Recent development patterns have utilized the single-occupancy vehicle as the only viable transportation mode. While the single-occupancy vehicle offers great efficiency at low-density development patterns, the assumption that this mode is available to all residents is misguided. The expense of owning and operating a private vehicle is beyond the economic means of many Seminole County residents. In addition, the skills required for driving are beyond what some otherwise employable residents are capable. The lack of transit service and development patterns that preclude walking and biking in emerging employment centers leaves behind much of Seminole County's population.



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## **Redevelopment of Development Corridors within Mixed Use Centers**

As the County continues to protect its rural and conservation lands and the population continues to increase, new development will wind down and the redevelopment of previously developed areas will increase. As development corridors and mixed use centers redevelop, the transportation system that supports them will need to adapt to changing transportation needs and circumstances.

The current development pattern in Seminole County's development corridors and mixed use centers is primarily that of unconnected businesses on arterials, low density strip shopping centers, interchange development and regional shopping malls and office complexes. As these areas are redeveloped, a new pattern that is better suited to higher population densities, more diverse economic needs, and higher real estate costs will emerge. More urban patterns of mixed uses will occur, with the attendant change in transportation patterns.

The County ensures the coordination of growth and development by tying new development approvals to the provision of infrastructure and other facilities. Thus, in areas where adequate facilities are not provided in time, development must slow to allow a catch up. While this method of growth coordination may be useful in areas where new development must be paired with new infrastructure, it is not effective as the County's development corridors and activity centers redevelop. This concurrency management system instead acts to discourage redevelopment and encourage urban sprawl. The County must investigate methods that encourage redevelopment and continued economic growth while still ensuring that these redevelopment efforts do not overwhelm available infrastructure.

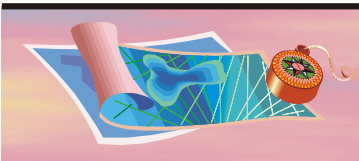
One method at ensuring concurrency is to expand the definition of what kinds of transportation infrastructure and facilities are needed by a new or redeveloped property. Instead of relying on the arterial road network for all of the transportation needs of each development, expanding "facilities" to include those of all modes provides a clearer picture of mobility and accessibility. Facilities that support transit, walking, and biking offers accessibility options that are not currently present. Connecting redeveloping areas to surrounding communities and making internal connections within the redeveloping areas and surrounding communities allows continued economic growth in the midst of limited roadway expansion opportunities.

## **Adequate Facilities in Maturing Counties**

Within the transition of population and economy in Seminole County, it has an adopted goal to provide an effective, convenient, and economically feasible transportation system. To assess progress toward this goal, the Comprehensive Plan has established specific measurable objectives, and the County's regulations, investments, and incentives are focused on attaining the adopted goal.







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Seminole County has utilized and continues to utilize the conventional method of measuring transportation system efficacy - level of service standards. It has established LOS E as the standard for County arterial and collector streets that are impacted by mixed use center traffic, and LOS D for other arterials and collectors. The lower level of service standard for mixed use centers encourages the concentration of new development in established mixed use centers, maximizing the infrastructure investment in the centers while minimizing urban sprawl. The conventional methods of measurement are also employed.

Yet the transportation system is only one component of a much larger system, in which it must be balanced and coordinated with other components. Sub-optimization of a single component can lead to failure in other system components. Additional service standards and measurement criteria are needed that recognize the role that the transportation system plays in the community. Improvements in the operation of the transportation system should outweigh localized deficiencies. And improvements in the urban environment should outweigh deficiencies in the transportation system.

As the County transitions, the methods used by the County to measure its progress toward transportation goals must also transition. In addition to conventional methods of measurement, the County will continue to employ a variety of techniques and procedures.

- The County will continue address traffic safety through the County's accident analysis program.
- The County will continue to conduct special area and corridor transportation studies in order to refine the data reported in the Plan and to evaluate alternative transportation improvements.
- The County will continue to conduct detailed studies of specific roadway segments such as travel time/delay studies as a means of evaluating levels of service and transportation systems management options for improvement roadways.
- In development corridors and mixed use centers where conventional level of service standards fail to measure all mobility and accessibility options, the County will develop multi-modal level of service standards and methodologies.

## Issue TRA 3

### Character Areas

In order to develop a place that residents and businesses are proud of and a place to where visitors wish to move, the County must prioritize its regulatory focus, its investments, and its incentive programs. The County recognizes that its economic, cultural, and social strength is centered on its neighborhoods, and thus has placed the strengthening of its neighborhoods as its highest priority. The framework that delineates the County into its component parts - Rural, Mixed Use Centers, Development Corridors, and Neighborhoods - allows the County to refocus its current efforts and target future efforts.

This framework has implications on transportation and its planning and provision. The transportation needs of Neighborhoods differ from the other character areas, and the Comprehensive Plan, Land Development Code, and other County policies, programs, and regulations should reflect this difference.



# Vision 2020 Comprehensive Plan

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### **Rural Areas**

The focus of transportation in rural area is on the private automobile. Land uses in rural areas are spaced far apart, with residential density at 1 unit per 5-10 acres. Rural land is dedicated to environmental conservation, agriculture, water and sewage treatment, and very low density residential. For daily needs, rural residents must travel some distance to the urban area. At such low densities, walking and biking are done only for recreational purposes, and mass transit is not economically sustainable. Paratransit and family and friends serve those that are not independently mobile.

### **Development Corridors**

Development corridors contain a mix of transportation needs. Seminole County residents become regional traffic when they use state roads to access jobs and services in Orange and Volusia Counties. The office and commercial land uses on development corridors have a countywide draw, and thus the streets that serve them carry County traffic. Finally, the retail that is mixed in with the office and commercial uses serve the neighborhoods that are directly adjacent to the development corridor. All development is linear in form - a thin veneer of office, commercial, and retail mask the large neighborhoods directly behind it.

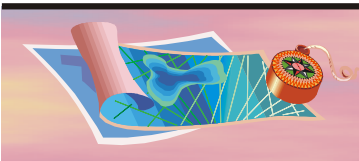
With a growing County in terms of population and economy, the traffic must increase on the current arterial system since geography and development patterns dictate no new major arterials. As the economy grows and transitions, the redevelopment on the County's development corridors will mix land uses, serving not only regional traffic but neighborhood residents as well. Yet, with increase traffic on limited arterials, congestion and travel time will increase for residents forced to travel on the arterial.

This Comprehensive Plan addresses these issues by encouraging local roads, sidewalks, and trails to provide connections between areas so that residents can travel without using the congestion corridor. The Plan seeks to improve the visual quality of the development corridors through the Design Element. Finally, it seeks to manage and consolidate access along roads so that the roadway can serve the dual purpose of moving vehicles as well as serving the local accessibility of mixed use corridors. The Plan encourages access management through internal connections, alleys, cross-access agreements, and other mechanisms.

### **Mixed Use Centers**

In mixed use centers, the kind of development seen on development corridors is concentrated into a single urban space, and residential and other land uses are mixed in. Frequently located at the crossroads of development corridors, mixed use centers are distinctly different. There is a higher concentration of development and higher density of residential uses, and a sense of "place" is possible. All development is circular in form - the center is synergistic and concentrated.





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As economic development continues to add jobs to activity centers, these areas begin to mix land uses with the inclusion of public buildings, multi-family residential and other uses not typically seen today. The transportation needs that emerge stem from mobility and accessibility needs to and from and within centers. Residents from outside Seminole County will be attracted to regional job opportunities and travel long distances. Seminole County residents will travel shorter distances to mixed use centers. Finally, when commuters, shoppers, and residents come together in the center, effective circulation within the center becomes paramount. This Comprehensive Plan addresses these needs by encouraging a full network of roads, bike ways, and sidewalks within centers, effective and efficient transit to/from and between centers, and a network of local arterials so that regional commuting traffic is on Interstate 4 and the Central Florida GreeneWay.

## **Neighborhoods**

Neighborhoods, the basic building blocks of the economy, culture, and society of Seminole County, support development corridors and mixed use centers, but are different in character. Primarily residential in land use, neighborhoods also feature neighborhood-level retail and public buildings like schools and community centers.

The effects of continuing economic development in the County, residential growth past build-out, and the aging of the housing stock and commercial buildings impact neighborhoods and their transportation needs. The vehicular and other modal demand on the arterials will increase, increasing travel times for motorists and increasing their frustration. The potential for these motorists to avoid the congestion on the arterials increases, and inappropriate neighborhood cut-through occurs. This Comprehensive Plan addresses these needs by formalizing a neighborhood traffic-calming program to decrease the negative impacts of neighborhood cut-through traffic.

Although there is congestion and slow moving traffic on the arterials, the neighborhood residents still need to shop, play, and attend to personal business. To meet these needs while avoiding the congestion on the arterials, the residents will look for convenient access points and routes within their neighborhoods. Accessibility within neighborhoods means connections between homes and nearby schools, shopping, and personal business. This Comprehensive Plan provides mobility options to neighborhood residents by encouraging increased connections among residential areas, schools, and local shopping through local roads, sidewalks, bike lanes, and trails.

## **Connections Among all Four Character Areas**

Although the transportation and land use patterns within each of the character areas differ, they do not function independently of each other. A single road can transform from a rural high-speed truck route into a development corridor, then crossing into a mixed use center, and finally branching off into neighborhoods. The connections between these character areas are as important as the transportation needs within them. Especially important are the critical but appropriately designed pedestrians and bicycle/trail connections between neighborhoods and the development corridors that form their boundaries.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## Hierarchy of Modes with Character Areas

- Rural and Development Corridors
  - 1 Single-Occupancy Vehicle
  - 2 Multiple-Occupancy Vehicle
  - 3 Public Transportation
  - 4 Cyclist
  - 5 Pedestrian
- Mixed Use Activity Center and Neighborhoods
  - 1 Pedestrian
  - 2 Cyclist
  - 3 Public Transportation
  - 4 Multiple-Occupancy Vehicle
  - 5 Single-Occupancy Vehicle

## Issue TRA 4

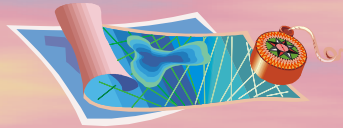
### Transportation Safety

Safety is the primary concern for every transportation system. There is an implicit promise from the government to its residents that the County's transportation network will be safe and reliable. Because of this implicit promise, the County's efforts in regulating private development of new roads are justified and necessary.

In calendar year 1999, there were a total of 2,147 long-form crashes countywide with 2,838 injuries and 42 fatalities. While the number of crashes is the lowest in the County since 1993, the number of fatalities is the highest. The top 25 vehicular crash sites of 1999 are listed and mapped in the Exhibits. Of the 1,870 vehicular crashes that are accounted for in these 25 sites, 828 were at a SR 436 intersection, and 817 were on Interstate 4 or near one of its ramps. The County needs to continue its work to ensure the safety of the road system. For example, the County's current reconstruction program to align Markham Woods Road and Douglas Avenue should decrease that intersection's 1999 crash rate of more than one crash per week.

The County needs to focus its safety-related investments on other modes as well. The rate of bicycle crashes in Seminole County is decreasing. Mirroring the vehicular crash trend, between 1990-1994 and 1995-1999, bicycle injury per population rates declined by approximately 28 percent, while bicyclist fatality rates increased by 33 percent during the same time period (Metroplan Orlando, 2000).





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Transit users and other pedestrians are also at risk. A 1998 Surface Transportation Policy Project report, "Mean Streets 1998" ranked metropolitan Orlando as the most dangerous metropolitan area in the nation for pedestrians. According to that report, 22 percent of all 1996 crash-related injuries and fatalities in metropolitan Orlando were pedestrians. The pedestrian injury per population rate in Seminole County declined by over 10 percent between 1990-1994 and 1995-1999, but the pedestrian fatality per population rate increased by over 16 percent. In particular, Metroplan Orlando has singled out US 17&92 between O'Brien and SR 436 as a regional "hot spot" for pedestrian crashes and fatalities (Metroplan Orlando, 2000).

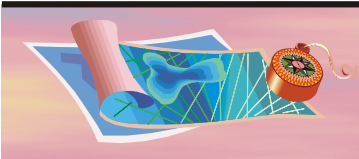
The common trend among all modes in Seminole County is that although overall crash and injury rates are decreasing, fatality rates are increasing. A number of factors could be contributing, including an increase in the amount of travel by Seminole County residents, average higher speeds which convert injuries to fatalities, inadequate emergency medical assistance, or perhaps a lack of facilities for pedestrian and bicyclists. Seminole County should continue its research in the cause of vehicular, bicyclist, transit, and pedestrian crashes and program modifications to improve safety.





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## TRANSPORTATION ELEMENT GOALS, OBJECTIVES AND POLICIES

### GOAL                      RURAL AREAS

The county shall develop and maintain an effective, convenient and economically feasible transportation system in its rural areas that provides regional access for people and goods, is compatible with environmental conservation, provides access to recreational opportunities, and that preserves the rural quality of life.

### OBJECTIVE TRA 1    LEVEL OF SERVICE STANDARDS

The County shall establish and utilize level of service standards for the provision of the County Transportation System and for the portion of the State Highway System in the rural area of the County that will measure progress toward achieving the stated goal through implementation of the following policies.

#### Policy TRA 1.1      County Road Level of Service Standards

The County shall establish operational level of service standards for the peak operating hours based on the 1997 Highway Capacity Manual. For rural arterial and collector roadway segments on the County's major road system, the adopted level of service standards shall be as follows:

- All arterial and collector County Roads in the Rural Area: LOS D
- Special Transportation Areas: LOS E as determined in accordance with provisions of the Comprehensive Plan
- Facilities parallel to exclusive mass transit or toll facilities: LOS E
- Backlogged facilities: Maintain
- Physically/Policy constrained facilities: Not degrade more than 20% below applicable standard

*Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roadways* shows maximum service volumes for rural arterial and collectors roadways in the interim and long range. *Exhibit TRA: Roadway Level of Service Standards 2000* depicts the level of service standards for all limited access facilities, arterials, and major collectors.

#### Policy TRA 1.2      State Highway Level of Service Standards

The operational level of service standards, as defined by the 1997 Highway Capacity Manual, for roadway segments in the unincorporated areas of the County on the Florida Intrastate Highway System (Interstate 4 and the Central Florida Greenway) shall be based by the County on the statewide minimum level of service standards established by the Florida Department of Transportation. For other State roads on the State highway system that are not part of the Florida Intrastate Highway System, the operational level of service standards shall be as listed in *Exhibit TRA: Level of Service Standards for the State Highways*. Florida Department of Transportation Level of Service Criteria for Rural and Urban State Highways are depicted in *Exhibit TRA: Level of Service Criteria for State Highways*.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## Policy TRA 1.3

### Policy Constrained State Facilities

The Florida Department of Transportation and the Metropolitan Planning Organization have identified all segments of State facilities that are 6 lanes as constrained facilities.

## Policy TRA 1.4

### County Functional Classification of Roads

The County shall continue to establish and use functional classifications that provide greater detail and direction than those assigned by Federal Highway Administration, but are consistent with Federal Highway Administration 's designations. *Exhibit TRA: Existing FDOT Functional Classifications, and Exhibit TRA: Future County Functional Classifications* depict the respective functional classifications. *Exhibit TRA: Functional Classifications of County Roads and Exhibit TRA: Functional Classification for State Roads* list both classifications for state and county roadways.

## Policy TRA 1.5

### Techniques for Determining Roadway Level of Service

For the evaluation of existing and near term traffic conditions, the County has used: (1) Travel Time Delay Studies for selected County roadway segments; and (2) the five year maximum service volume table for roadways which were not evaluated using Travel Time and Delay Studies.

#### For County roadways:

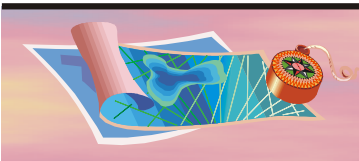
- For interim (5-year) planning applications and development impact evaluations of County roadways, the *Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roads – interim (5-year) Urban and Rural Roads* will be utilized where more specific analysis is not available. (These standards are based on standards developed for the Impact Fee Study.)
- For long range (20-year) planning applications and development impact evaluations of County roadways, the *Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roads -- Long Range (20-Year)* will be utilized. (These standards are based on standards from the 1997 Highway Capacity Manual.)

#### For State roadways:

- For interim (5-year) and long range (20-year) planning applications and development impact evaluations, the Maximum Service Volume Tables developed by the County for state highways will be utilized where more specific analysis is not available. See *Exhibit TRA: Level of Service Criteria for State Highways*.

Traffic operation models and other assessment techniques may be used where the County determines that a more detailed analysis is desired. In determining levels of service, the County shall follow procedures and techniques based on the 1997 Highway Capacity Manual.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## Policy TRA 1.5.1

### Refined Roadway LOS Analysis Techniques

Subject to prior approval by the County, the County may authorize refined methodologies and techniques to be used in the review and evaluation of development proposals for the determination of existing and future levels of service on specific roadway segments, the development of specific mitigation plans, corridor or intersection design analysis or other situations where more precise input data and analysis is desired by the County prior to final action on the development proposal. Acceptable methodologies and techniques may include, but are not limited to:

- Trip generation studies
- Traffic studies
- Trip characteristics studies
- Travel time/speed/delay studies
- Passer-by and internal trip analysis
- Person trip analysis
- Planning level models
- Traffic operation models
- Intersection analysis
- Corridor/subarea analysis
- Multi-modal analysis

## Policy TRA 1.5.2

### Multi-Modal Transportation LOS Analysis Techniques/Standards

The County shall develop special area plans, as needed, for the areas of special concern, in consultation with local governments and the Florida Department of Community Affairs. When appropriate, the County shall adopt additional or alternative level of service standards and methods of applying levels of service standards that recognize that:

- Improvements in overall operation of the roadway system outweigh localized deficiencies, and
- Improvements in the overall transportation system outweigh deficiencies in the roadway system, and
- Improvements in the overall urban environment outweigh deficiencies in the transportation system.

These multimodal level of service standards shall address accessibility for vehicular traffic, pedestrians, cyclists, transit and other modes.

## Policy TRA 1.6

### Measurement of Roadway Operational Level of Service

The Seminole County Generalized Maximum Service Volumes for Arterial and Collector Roadways are an appropriate guideline for comparing the LOS for different years, in order to establish the extent of traffic service improvement or deterioration over time.

The generalized guidelines are not an appropriate indicator of the actual operational LOS or of the improvement needed to correct a LOS that is deemed "deficient". Rather, the





generalized guidelines, when applied to a specific road link, should be interpreted as meaning that under worst-case conditions, the "deficient" link might need improvement of some type, and that further analysis using the more rigorous procedures of the 1997 Highway Capacity Manual is warranted. It is further emphasized that even where a road link is found to be deficient according to Highway Capacity Manual methods, the appropriate remedy to restoring a satisfactory LOS is not necessarily widening of the link, but could instead be:

- Intersection improvements,
- Signal timing changes,
- Turning or auxiliary lanes,
- Access management,
- Reclassification of the road,
- Signal removal,
- Improvements in parallel corridors,
- Mass transit improvements,
- Improvement in other modes of travel, or
- Numerous other traffic engineering measures.

Current roadway operating level of service is displayed in *Exhibit TRA: Existing Roadway Level of Service 1999*. Operating roadway level of service for 2020 is shown in *Exhibit TRA: Projected Level of Service 2020*.

## Policy TRA 1.7

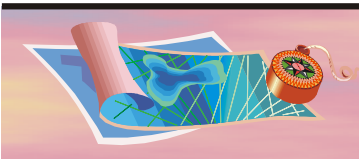
### **Concurrency Management System and Ongoing Monitoring Program**

The County shall maintain its Concurrency Management System that monitors transportation level of service for facilities and services for which the County has established minimum acceptable level of service standards. The purpose of the Concurrency Management System is to ensure that adequate public facilities and services are available or are scheduled to be available in a manner which is consistent with State law. The County shall continue an ongoing program to:

- Monitor operating conditions on transit, arterial and collector roadways;
- Collect and evaluate data for the establishment of transit level of service;
- Collect and evaluate data for the establishment of peak hour level of service thresholds and maximum service volumes based on operational analysis of roadways; and
- Establish procedures for measuring bicycle and pedestrian facility availability and use; and
- Establish procedures for measuring roadway level of service thresholds using either travel speeds or traffic volumes.







# Vision 2020 Comprehensive Plan Seminole County, Florida

In implementing the program the County shall utilize methodologies, techniques and procedures based on the 1997 Highway Capacity Manual, such as, Travel Time and Delay

Studies, arterial analysis procedures and other operational analysis techniques. The County shall collect transportation system characteristics data in support of the program utilizing various data collection activities, which may include,

- Pedestrian and bicycle studies,
- Transit ridership studies,
- Travel time and delay studies,
- Traffic counts,
- Traffic accident reporting speed studies,
- Intersection studies,
- Data from the transportation system characteristics inventory, and
- Data reported by the closed loop signal system.

The County shall coordinate its efforts with other public and private entities.

## **Policy TRA 1.8**

### **Annual Evaluation of State Constrained/Backlogged Facilities**

At least annually, the County shall determine the need to evaluate the operating conditions on constrained and backlogged state roadway facilities in order to determine whether operating conditions have been maintained.

## **Policy TRA 1.9**

### **Transportation Facility Transfer Standards**

The County shall oppose any transfer of roadways to the County's jurisdiction unless the roadways are improved to meet County established operational level of service and design standards and are accompanied by a commensurate level of operating funding or additional local authority to generate funding without referendum.

## **Policy TRA 1.10**

### **Alternative Land Development Proposals**

The County may consider some alternative reasonable use, development agreement or development phasing when a development order is subject to denial on the basis of substandard operational level(s) of service on the major road system.

## **Policy TRA 1.11**

### **Prior Development Order Conditions Remain Valid**

Developments approved prior to the adoption of this Plan with conditions to improve the transportation system shall not be exempted from those conditions as a result of adoption of any LOS standard or any County Comprehensive Plan provision. To that end, nothing in this Plan shall be deemed or construed to eliminate or obviate any development condition placed upon a development as a condition of approval.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 2 LAND USE AND DESIGN COORDINATION

The County shall establish and enforce land use, design and transportation policies, standards and regulations in the rural area that coordinate the development of the transportation system with the land development activities shown on the Future Land Use map exhibit and which discourage urban sprawl through implementation of the following policies.

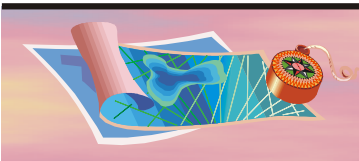
### Policy TRA 2.1 Consistency with Future Land Use and Design Elements

In terms of all development proposals, the County shall impose a linkage between the Future Land Use Element, Design Element and the Transportation Element and all land development activities shall be consistent with the adopted Future Land Use Element and adopted Design Element.

### Policy TRA 2.2 Transportation/Land Development Coordination

To provide adequate accessibility to land use activities and to preserve the mobility function of major roadways and to discourage urban sprawl, the County shall continue to adopt and enforce policies, standards and regulations which relate the design and function of the roadway to the type, size and location of the land uses which they serve.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## **OBJECTIVE TRA 3 SAFE, EFFICIENT AND LIVABLE TRANSPORTATION SYSTEM**

The County shall establish and enforce policies, standards and regulations as one means of providing for a safe, efficient and livable transportation system that provides convenient intermodal connections among automobiles and more energy efficient transportation modes in the rural area through implementation of the following policies.

### **Policy TRA 3.1 Rely on Existing Ordinances**

The County shall continue to rely on Appendix A Seminole County Transportation Standards and other appropriate chapters of the Land Development Code of Seminole County and other related laws, rules, ordinances and resolutions to provide for a safe, convenient and efficient transportation system.

### **Policy TRA 3.2 Update Ordinances**

Annually, the County shall review and, as deemed necessary, amend the Land Development Code and other related ordinances.

### **Policy TRA 3.3 Require Construction to County Standards**

The County shall require that all new or improved transportation facilities be constructed to County standards and shall review, on an annual basis, and amend, as deemed necessary, construction inspection practices. The County requires transportation facilities be brought up to standard prior to development of unincorporated lands.

### **Policy TRA 3.4 Require Context-Sensitive Design**

The County shall require that all new or improved roadways be designed and constructed in manner that is supportive and reflective of adjacent land uses and development patterns. In accordance with the Design Element, the County shall adopt design standards that address not only roadway pavement but also the entire right of way.

### **Policy TRA 3.5 Enforce Design Principles**

The visual and functional characteristics of streets are important in the design of the community. The design principles are:

- Streets should be designed as public open space.
- Streets should be designed to accommodate a mix of travel modes including vehicles, bicycles, transit and pedestrians.
- Streets should be designed holistically, considering the pavement, curbing, bikeways, pedestrianways, lighting signs, front yard setback areas and building facades.

### **Policy TRA 3.6 Safety Considerations for New or Expanded Roadways**

For new or expanded roadways, the County shall continue to consider adding an additional width of the outside lanes on rural roads to enhance safe operating conditions on the roadways for both motorized and non-motorized roadway users.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## Policy TRA 3.7

### **Consideration of Intermodal Connections in Transportation Improvements**

In the planning, design and construction of transportation improvements, the County shall consider the safety and efficiency of features at intermodal connections, such as: bus stops, bus shelters, signage, pedestrian and bicycle/trail access, handicapped access and park-and-ride lots. *TRA Exhibit: Greenways and Trails Linkages* and *TRA Exhibit: 2020 Multimodal Transportation* map exhibits display potential points where proposed park and ride lots connect to conceptual neighborhood transit circulators, express buses, or major roadways and potential connections between transit and trails.

## Policy TRA 3.8

### **Access Management**

The County shall continue to establish and enforce policies, standards and regulations for the management of access points and connections to the County Road System to include, but not be limited to, provisions for the location, design and frequency of access points and connections. Implementation of the State Access Management Program and the control of access connections to the State highway system consistent with Chapter 14-96 and 14-97, F.A.C. and the Florida Department of Transportation Access Management Rule will be coordinated with the Florida Department of Transportation through the County's access permitting process.

## Policy TRA 3.9

### **Park Access and Accessibility**

The County shall ensure access to parks and accessibility within parks:

- The County shall ensure, through the Land Development Code, adequate vehicular, pedestrian and bicycle access provided to on-site and adjacent park sites during the development of planned unit developments and residential developments.
- The County shall coordinate with all appropriate transportation providers to evaluate and expand, if necessary, transportation routes to parks and recreational facilities to provide access for special groups including the handicapped, lower income residents, elderly and the general public.
- The County shall continue to require sidewalk connectors to public park sites and additional pavement width to be installed with new development and the expansion of public roadways.

## Policy TRA 3.10

### **Bicycle and Recreational Trail Planning and Coordination**

The County shall continue to fund and construct a countywide network of pedestrian, bicycle, recreational and equestrian trails. The County shall continue to coordinate with the Metropolitan Planning Organization, Florida Department of Transportation, municipalities and other appropriate agencies to study and implement options for coordinated provision of a pedestrian and bicycle/trail networks.



**Policy TRA 3.11 Livable Transportation System**

To ensure the implementation of a livable transportation system, the County will strive to provide its residents and business community multiple travel choices and the ability to move from one mode of travel to another with ease, such as, parking one's car at a park and ride lot and accessing rail, express bus or local transit circulator, to reach one's destination in a timely fashion. A livable, multimodal transportation system is depicted in *Exhibit TRA: 2020 Multimodal Transportation* map exhibit and will be used by the County to conceptually plan for future transportation needs.





# Vision 2020 Comprehensive Plan Seminole County, Florida



## GOAL TRA 2 DEVELOPMENT CORRIDORS AND MIXED USE CENTERS

The county shall develop and maintain an effective, convenient and economically feasible multi-modal transportation system within its development corridors and mixed uses centers that provides a balance between access and mobility, supports development and redevelopment of adjacent land uses, and is compatible with the economic viability and aesthetics of the County.

## OBJECTIVE TRA 4 LEVEL OF SERVICE STANDARDS

The County shall establish and utilize level of service standards for the provision of a multi-modal transportation system (including pedestrian and bicycle facilities, mass transit and paratransit services, the County Road System and the portion of the State Highway System in the unincorporated area of the County) that will measure progress toward achieving the stated goal through implementation of the following policies.

### Policy TRA 4.1 County Transit Level of Service Standard

The following operational level of service standard for transit services is adopted: 1.03 revenue miles per capita per year based on the estimated functional population within the transit service area as depicted in *Exhibit TRA: Transit Service 2000*.

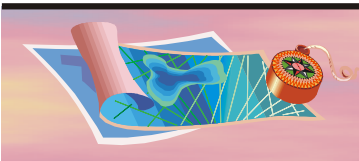
### Policy TRA 4.2 County Road Level of Service Standards

The County shall establish operational level of service standards for the peak operating hours based on the 1997 Highway Capacity Manual. For arterial and collector roadway segments on the County's major road system the adopted level of service standards shall be as follows:

- All County Roadways within Development Corridors: LOS E
- All County Roadways within, or impacted by traffic from, Mixed Use Centers: LOS E
- Special Transportation Areas: LOS E or determined in accordance with provisions of the Comprehensive Plan
- Facilities parallel to exclusive or facilities: LOS E
- Backlogged facilities: Maintain
- Physically/Policy constrained facilities: Not degrade more than 20% below applicable standard

*Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roadways* shows maximum service volumes for urban arterial and collectors roadways in the interim and long range. *Exhibit TRA: Roadway Level of Service Standards 2000* depicts the level of service standards for all limited access facilities, arterials, and major collectors.





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## **Policy TRA 4.3 State Highway Level of Service Standards**

The operational level of service standards, as defined by the 1997 Highway Capacity Manual, for roadway segments in the unincorporated areas of the County on the Florida Intrastate Highway System (Interstate 4 and the Greenway) shall be based by the County on the statewide minimum level of service standards established by the Florida Department of Transportation. For other State roads on the State highway system that are not part of the Florida Intrastate Highway

System, the operational level of service standards shall be as listed in *Exhibit TRA: Minimum Level of Service Standards for the State Highway System*. Florida Department of Transportation Level of Service Criteria for Rural and Urban State Highways are depicted in *Exhibit TRA: Level of Service Criteria for State Highways*.

## **Policy TRA 4.3.1 Level of Service for S.R. 436**

The level of service standard for S.R. 436 from Montgomery Road to Maitland Avenue is LOS E as adopted in the Altamonte Springs Central Development Plan ADA/DRI.

## **Policy TRA 4.4 Policy Constrained County Facilities**

Policy constrained facilities are roadway segments on which it is not feasible to add at least two additional through-lanes to meet current or future traffic needs because of the need to achieve other important County goals, objectives or policies as determined by the Board of County Commissioners. Based on prior direction of the Board of County Commissioners, the following County arterial and collector roadway segments are currently identified as policy constrained regarding improvements:

- Bear Lake Road from Orange County line to S.R. 436 (Permanent constraint to 2 lanes)
- Chapman Road from SR 426 to SR 434 (Temporary constraint until roadway nears capacity. BCC approval for construction required.)
- Howell Branch Road from S.R. 436 to S.R. 426 (Permanent constraint to 4 lanes)
- Howell Branch Road from Orange County line east to SR 436 (Temporary constraint. BCC approval of design and construction required.)
- Lake Emma Road from E.E. Williamson Road to Greenway Boulevard. (Temporary constraint. Construction beyond approved interim improvements requires BCC approval.)
- Lake Howell Road from Orange County line to S.R. 436 (Permanent constraint to 2 lanes)
- Lake Markham Road from Markham Road to State Road 46 (Permanent constraint to 2 lanes)
- Longwood Markham Road from Markham Road to State Road 46 (Permanent constraint to 2 lanes)
- Markham Road from Orange Boulevard to Longwood Markham Road (Permanent constraint to 2 lanes)



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- Markham Woods Road from S.R. 434 to Markham Road (Permanent constraint to 2 lanes)
- Palm Springs Drive from Central Parkway to S.R. 434 (Permanent constraint to 2 lanes)
- Red Bug Lake Road: from S.R. 436 to Eagle Circle (Temporary constraint to 4 lanes. BCC approval for construction required.)
- Red Bug Lake Road: from Eagle Circle to Tuskawilla Road (Permanent constraint to 4 lanes)
- South Lake Sylvan Drive from Orange Boulevard to Lake Markham Rd. (Permanent constraint to 2 lanes with alternative surface treatment program allowed to control erosion).
- General Hutchison Parkway from US 17-92 to Timocuan Way (Permanent constraint to 2 lanes).
- All County facilities constructed or improved after December 15, 1999 that are located within the Wekiva River Protection Area are permanently constrained to their existing laneage. Exempted facilities are Orange Boulevard and those roads scheduled for improvement in the Capital Improvements Element in effect on December 15, 1999 (such as County Road 46A).

*(Revised: Amendment 04S.TXT02.2; Ordinance 2004-25, 06/08/2004.)*

*(Revised: Amendment 02F.TXT04; Ordinance 2002-55, 12/10/2002.)*

## Policy TRA 4.5

### Policy Constrained State Facilities

The County, the Florida Department of Transportation and the Metropolitan Planning Organization have identified the following state roadway segments as constrained facilities:

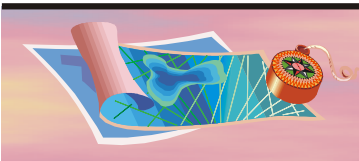
- S.R. 436/Semorán Blvd. from Hunt Club Blvd. to Pearl Lake Cswy. (Permanent constraint to 4 lanes)
- S.R. 46 from US 17-92 to Mellonville Avenue (Permanent constraint to 4 lanes)
- US 17-92 from Lake Monroe to Park Drive (Permanent constraint to 4 lanes)
- S.R. 434/S.R. 426 Intersection in Oviedo
- S.R. 426 - Graham Avenue to Station Street (Permanent constraint to 2 lanes)
- S.R. 434 - Garden Street to Myrtle Street (Permanent constraint to 2 lanes)
- All segments of State facilities that are 6 lanes.

## Policy TRA 4.6

### County Functional Classification of Roads

The County shall continue to establish and use functional classifications that provide greater detail and direction than those assigned by Federal Highway Administration, but are consistent with Federal Highway Administration's designations. *Exhibit TRA: Existing FDOT Functional Classifications, and Exhibit TRA: Future County Functional Classifications* depict the respective functional classifications. *Exhibit TRA: Functional Classifications of County Roads and Exhibit TRA: Functional Classification for State Roads* list both classifications for state and county roadways.





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## **Policy TRA 4.7      Technique for Determining Transit Level of Service**

At least annually, the County shall use revenue miles of service data reported by all transit service providers and estimates of functional population within the transit service area developed by the County Planning Department to measure the then current level of service.

## **Policy TRA 4.7.1      Techniques for Determining Roadway Level of Service**

For the evaluation of existing and near term traffic conditions, the County has used: (1) Travel Time Delay Studies for selected County roadway segments; and (2) the five year maximum service volume table for roadways which were not evaluated using Travel Time and Delay Studies.

### **For County roadways:**

- For interim (5-year) planning applications and development impact evaluations of County roadways, the *Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roads – interim (5-year) Urban and Rural Roads* will be utilized where more specific analysis is not available. (These standards are based on standards developed for the Impact Fee Study.)
- For long range (20-year) planning applications and development impact evaluations of County roadways, the *Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roads -- Long Range (20-Year)* will be utilized. (These standards are based on standards from the 1997 Highway Capacity Manual.)

### **For State roadways:**

- For interim (5-year) and long range (20-year) planning applications and development impact evaluations, the Maximum Service Volume Tables developed by the County for state highways will be utilized where more specific analysis is not available. See *Exhibit TRA: Level of Service Criteria for State Highways*.

Traffic operation models and other assessment techniques may be used where the County determines that a more detailed analysis is desired. In determining levels of service, the County shall follow procedures and techniques based on the 1997 Highway Capacity Manual.

## **Policy TRA 4.7.2      Refined Level of Service Analysis Techniques**

Subject to prior approval by the County, the County may authorize refined methodologies and techniques to be used in the review and evaluation of development proposals for the determination of existing and future levels of service on specific roadway segments, the development of specific mitigation plans, corridor or intersection design analysis or other situations where more precise input data and analysis is desired by the County prior to final action on the development proposal. Acceptable methodologies and techniques may include, but are not limited to:

- Trip generation studies
- Traffic studies
- Trip characteristics studies
- Travel time/speed/delay studies
- Passer-by and internal trip analysis
- Person trip analysis





- Planning level models
- Traffic operation models
- Intersection analysis
- Corridor/subarea analysis
- Multi-modal analysis

#### **Policy TRA 4.7.3 Multi-Modal Transportation Level of Service Analysis Techniques/Standards**

The County shall develop special area plans, as needed, for the areas of special concern, in consultation with local governments and the Florida Department of Community Affairs. When appropriate, the County shall adopt additional or alternative level of service standards and methods of applying levels of service standards that recognize that:

- Improvements in overall operation of the roadway system outweigh localized deficiencies, and
- Improvements in the overall transportation system outweigh deficiencies in the roadway system, and
- Improvements in the overall urban environment outweigh deficiencies in the transportation system.

These multimodal level of service standards shall address accessibility for vehicular traffic, pedestrians, cyclists, transit and other modes.

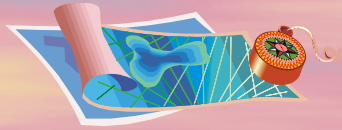
#### **Policy TRA 4.7.4 Measurement of Roadway Operational Level of Service**

The Seminole County Generalized Maximum Service Volumes for Arterial and Collector Roadways are an appropriate guideline for comparing the level of service for different years, in order to establish the extent of traffic service improvement or deterioration over time.

The generalized guidelines are not an appropriate indicator of the actual operational level of service or of the improvement needed to correct a level of service that is deemed "deficient". Rather, the generalized guidelines, when applied to a specific road link, should be interpreted as meaning that under worst-case conditions, the "deficient" link might need improvement of some type, and that further analysis using the more rigorous procedures of the 1997 Highway Capacity Manual is warranted. It is further emphasized that even where a road link is found to be deficient according to Highway Capacity Manual methods, the appropriate remedy to restoring a satisfactory level of service is not necessarily widening of the link, but could instead be:

- Intersection improvements,
- Signal timing changes,
- Turning or auxiliary lanes,
- Access management,





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- Reclassification of the road,
- Signal removal,
- Improvements in parallel corridors,
- Mass transit improvements,
- Improvement in other modes of travel, or
- Numerous other traffic engineering measures.

Current roadway operating level of service is displayed in *Exhibit TRA: Existing Roadway Level of Service 1999*. Operating roadway level of service for 2020 is shown in *Exhibit TRA: Projected Level of Service 2020*.

## Policy TRA 4.8

### **Concurrency Management System and Ongoing Monitoring Program**

The County shall maintain its Concurrency Management System that monitors transportation level of service for facilities and services for which the County has established minimum acceptable level of service standards. The purpose of the Concurrency Management System is to ensure that adequate public facilities and services are available or are scheduled to be available in a manner which is consistent with State law. The County shall continue an ongoing program to:

- Monitor operating conditions on transit, arterial and collector roadways;
- Collect and evaluate data for the establishment of transit level of service;
- Collect and evaluate data for the establishment of peak hour level of service thresholds and maximum service volumes based on operational analysis of roadways; and
- Establish procedures for measuring bicycle and pedestrian facility availability and use; and
- Establish procedures for measuring roadway level of service thresholds using either travel speeds or traffic volumes.

In implementing the program the County shall utilize methodologies, techniques and procedures based on the 1997 Highway Capacity Manual, such as, Travel Time and Delay Studies, arterial analysis procedures and other operational analysis techniques. The County shall collect transportation system characteristics data in support of the program utilizing various data collection activities, which may include,

- Pedestrian and bicycle studies,
- Transit ridership studies,
- Travel time and delay studies,
- Traffic counts,
- Traffic accident reporting speed studies,
- Intersection studies,
- Data from the roadway characteristics inventory, and
- Data reported by the closed loop signal system.

The County shall coordinate its efforts with other public and private entities.





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**Policy TRA 4.9 Annual Evaluation of State Constrained/Backlogged Facilities**  
At least annually, the County shall determine the need to evaluate the operating conditions on constrained and backlogged state roadway facilities in order to determine whether operating conditions have been maintained.

**Policy TRA 4.10 Florida Department Of Transportation Programs/Plans for Backlogged/Constrained Facilities**

The County shall request the Florida Department Of Transportation, following consultation with the County, to annually adopt strategies and a schedule to maintain/improve the operating conditions on State backlogged and constrained facilities and to incorporate these mitigation strategies into its improvement programs and longer range plans. Such strategies may include, but are not limited to,

- Additional through lanes (backlogged facilities),
- Access management techniques,
- Traffic operations improvements,
- Construction or improvements of parallel facilities and
- Alternative modal investments, such as, public transit, bicycle and pedestrian facilities.

*Exhibit: Backlogged and Constrained Facilities* is a listing with maintenance of service thresholds and recommended actions.

**Policy TRA 4.10.1 Alternative Mitigation Strategies for Backlogged and Constrained Facilities**

Following consultation with the Florida Department of Community Affairs and appropriate local governments, the County shall devise alternative strategies and schedules for mitigating substandard conditions based on a determination of the extent or magnitude of the adverse condition, the relative significance of contributing factors, the degree of urgency to mitigate a deficiency and the relative priority of the adverse condition.

**Policy TRA 4.11 Transportation Facility Transfer Standards**

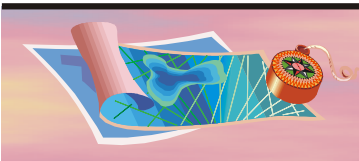
The County shall oppose any transfer of roadways to the County's jurisdiction unless the roadways are improved to meet County established operational level of service and design standards and are accompanied by a commensurate level of operating funding or additional local authority to generate funding without referendum.

**Policy TRA 4.12 Approval of Developments Utilizing Backlogged and Constrained Facilities**

For State and County roadway facilities designated as constrained facilities, Seminole County shall not approve development that results in either a 5% increase in peak hour traffic volume or a 10% decrease in average peak hour travel speed over the designated service threshold.

- For facilities with Existing Acceptable Operating Conditions, the designated threshold is the appropriate minimum acceptable level of service standard.





# Vision 2020 Comprehensive Plan Seminole County, Florida

- For facilities with Existing Substandard Operating Conditions, the designated threshold is existing operating conditions.

This policy does not apply to County policy constrained roads to which two or more lanes can be added without exceeding the constrained number of lanes.

## **Policy TRA 4.13      Enhancement Techniques and Activities for Developments Utilizing Backlogged Facilities**

New or expanded developments whose traffic is projected to utilize roadways designated as backlogged facilities shall be subject to additional enhancement techniques and activities to maintain and improve the roadway's average peak hour operating speeds at the time of plan adoption. These techniques and activities shall include, but are not limited to: ride-sharing, access control, signal optimization, transit accessibility, and staggered work hours. Other service enhancement techniques and activities may include:

- Site design shall provide a stacking lane or lanes to permit vehicles to wait on-site and enter the traffic flow when gaps occur;
- No new traffic signals which will reduce peak hour travel speeds will be permitted, unless a high accident rate exists;
- New or revised median openings will only be permitted where they do not impede flow of traffic;
- Out-parcels, created in previously approved developments, shall have no inherent right of direct access to major collector or arterial streets unless such access is the only access available to the property. New out-parcels may be denied direct access to arterial or collector streets;
- Where appropriate, primary access on backlogged streets should be directed to adjacent nonresidential collector streets, with limited secondary access to adjacent arterials;
- Access points to collector and arterial streets should be limited to one major access point or curb cut along each roadway frontage; additional access and egress points may be granted for unusually large parcels, based on site characteristics or as considered appropriate by the Traffic Engineer and approving agencies, to provide for safe and efficient site-related traffic movements on adjacent street;
- As a condition of site plan or subdivision plat approval for development or redevelopment, the access or egress points to collector or arterial streets may be relocated, restricted or otherwise controlled to facilitate traffic flow along the adjacent thoroughfare.

## **Policy TRA 4.14      Alternative Land Development Proposals**

The County may consider some alternative reasonable use, development agreement or development phasing when a development order is subject to denial on the basis of substandard operational level(s) of service on the major road system.



# Vision 2020 Comprehensive Plan Seminole County, Florida

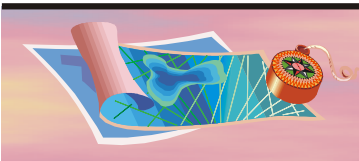


## Policy TRA 4.15

### **Prior Development Order Conditions Remain Valid**

Developments approved prior to the adoption of this Plan with conditions to improve the transportation system shall not be exempted from those conditions as a result of adoption of any LOS standard or any County Comprehensive Plan provision. To that end, nothing in this Plan shall be deemed or construed to eliminate or obviate any development condition placed upon a development as a condition of approval.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## **OBJECTIVE TRA 5 LAND USE AND DESIGN COORDINATION**

The County shall establish and enforce land use, design and transportation policies, standards and regulations in development corridors and mixed-use centers that coordinate the transportation system adjacent land uses as shown in the Future Land Use map exhibit and that discourage urban sprawl by enabling higher density development through implementation of the following policies.

### **Policy TRA 5.1 Consistency with Future Land Use and Design Elements**

In terms of all development proposals, the County shall impose a linkage between the Future Land Use Element, Design Element and the Transportation Element and all land development activities shall be consistent with the adopted Future Land Use Element and adopted Design Element.

### **Policy TRA 5.2 Promote Mixed Use Centers**

To reduce trip lengths, reduce the demand for automobile travel and discourage urban sprawl, the County shall adopt and enforce land use policies, standards and regulations that increase the County's share of the urban area's retail and employment activities, promote high intensity mixed use developments which include requirements for multi-family housing including affordable housing and provide convenient shopping adjacent to residential neighborhoods.

### **Policy TRA 5.3 Promote Clustering of Development**

The County shall enforce policies, standards and regulations that promote the clustering of development into smaller areas of higher intensity.

### **Policy TRA 5.4 Promote Infill Development**

By 2004, the County shall evaluate the need for incentives, policies, standards and regulations that promote the transfer of development rights from low intensity rural areas and environmentally sensitive areas to more intense urban corridors to make the most efficient use of the existing transportation network and to discourage urban sprawl.

### **Policy TRA 5.5 Transportation/Land Development Coordination**

To provide adequate accessibility to land use activities and to preserve the mobility function of major roadways and to discourage urban sprawl, the County shall adopt and enforce policies, standards and regulations which relate the design and function of the roadway to the type, size and location of the land uses which they serve.

### **Policy TRA 5.6 Transportation/Affordable Housing Coordination**

The County shall continue to establish policies, standards and regulations that promote affordable housing in close proximity to employment opportunities and transit services.

### **Policy TRA 5.7 Promote Shared and Reduced Parking**

The County shall adopt and enforce policies, standards and regulations that encourage reduced parking requirements within mixed use centers and development corridors. The



# Vision 2020 Comprehensive Plan Seminole County, Florida



County shall, from time to time, evaluate and, as deemed necessary, modify its land use policies, standards and regulations to establish parking ratio maximums for mixed use centers and development corridors.

## **Policy TRA 5.8 Require Multi-Modal Facilities in Site Planning and Design**

Through the policies, standards and regulations in the Land Development Code, the County shall continue to require the accommodation of desirable multi-modal features in site planning and design. Such features may include, but not be limited to:

- Parking requirements (including shared parking and parking ratio maximums)
- Parking management,
- Pedestrian/bicycle/transit facilities,
- Pedestrian/bicycle/transit access (including sidewalk and bicycle path connections to adjacent parcels),
- Taxi stands,
- Lot sizes,
- Land use intensities,
- Mixed-uses,
- Internal circulation, and
- Car pools/van pools.

## **Policy TRA 5.9 Evaluate Transit Corridor Land Use Policies, Regulations**

The County shall, from time to time, evaluate and, as deemed necessary, modify its land use policies, standards and regulations to allow higher density, mixed-use development along designated transit corridors to encourage increased transit ridership and discourage urban sprawl.

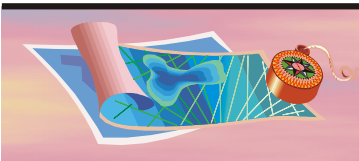
## **Policy TRA 5.10 Criteria for Designation of New Mixed Use Centers**

The County's establishment of new mixed use centers shall, in part, be based on the County's approval of plans for internal circulation which include, at a minimum, integrated roadway, transit, pedestrian and bikeway systems designed to reduce demand for automobile travel.

## **Policy TRA 5.11 Criteria for Siting High Speed Rail Stations, Ancillary Facilities**

The County shall require high speed rail stations and ancillary facilities to be sited only within high intensity mixed use development areas in the Interstate 4 corridor which are interconnected by an operational exclusive rail corridor.





# Vision 2020 Comprehensive Plan Seminole County, Florida

- Policy TRA 5.12      Joint Use of Public Lands, Facilities**  
In the planning, siting and design of transportation system facilities, the County shall take into consideration the potential benefits and/or cost savings that may accrue from joint use of the site with other existing or planned public facilities or multi-use of the facilities.
- Policy TRA 5.13      Orlando Sanford International Airport Area**  
The County shall, from time to time, evaluate the need to amend the Comprehensive Plan and Land Development Code to designate Airport compatible land uses in the Airport flight paths and noise zones. At a minimum, the amendments shall include:
- Designation of uses which will not prohibit expansion of Airport operations;
  - Strategies to permit the conversion of existing neighborhoods to Airport compatible uses and to minimize non-residential impacts during the conversion process; and
  - Identification of services and facilities needed to support the future land use designations assigned.
- Policy TRA 5.14      Amendment of Land Development Code to Regulate Airport Area Uses**  
The County shall amend the Land Development Code, by August 2004, to establish airport compatible land uses consistent with the Orlando Sanford International Airport Noise Compatibility Program approved by the Federal Aviation Administration. *(Revised: Amendment 03F.TXT04.2; Ordinance 2003-63; 12/09/2003).*
- Policy TRA 5.15      Modeling Airport Noise Contours**  
*(Deleted: Amendment 03F.TXT04.3; Ordinance 2003-63; 12/09/2003).*
- Policy TRA 5.16      Impact on County Land Uses**  
The County shall evaluate airport capital improvement programs to determine their impact on the County's land use designations assigned to affected properties. Improvements shall be compatible with the Future Land Use Element and the Design Element.
- Policy TRA 5.17      Purchase of Noise Impacted Land**  
In order to minimize land use/noise conflicts, the County shall recommend that the Sanford Airport Authority purchase lands that lie within the 60 DNL noise contour for use as a buffer. *(Revised: Amendment 03F.TXT04.4; Ordinance 2003-63; 12/09/2003).*
- Policy TRA 5.18      Interstate 4 High Tech Corridor**  
The County shall encourage the growth of high tech industries in the HIP-Target Industry designation in keeping with efforts of economic development agencies such as Enterprise Florida and the Florida High Tech Corridor Council which have designated I-4 as the "I-4 High Tech Corridor" from Tampa to Volusia County.





# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 6 SAFE, EFFICIENT AND LIVABLE TRANSPORTATION SYSTEM

The County shall establish and enforce policies, standards and regulations as one means of providing for a safe, efficient and livable transportation system that provides convenient intermodal connections among automobile and more energy efficient transportation modes within development corridors and mixed use centers through implementation of the following policies.

### Policy TRA 6.1 Rely on Existing Ordinances

The County shall continue to rely on Appendix A Seminole County Transportation Standards and other appropriate chapters of the Land Development Code of Seminole County and other related laws, rules, ordinances and resolutions to provide for a safe, convenient and efficient transportation system.

### Policy TRA 6.2 Update Ordinances

Annually, the County shall review and, as deemed necessary, amend the Land Development Code and other related ordinances.

### Policy TRA 6.2.1 Evaluate Land Development Code for Pedestrian and Bicycle Design

By 2005, the County shall evaluate the Land Development Code requirements, guidelines and incentives that encourage the design of well-connected pedestrian and bicycle facilities and circulation systems that promote walking and biking and encourage the use of alternative modes of transportation to the single-occupant vehicle.

### Policy TRA 6.2.2 Evaluate Regulations and Policies for Multi-Modal Design Standards

By 2005, the County shall evaluate Land Development Code requirements, guidelines, and incentives and County investment policies and incentives to implement integrated, multi-modal transportation/development corridor design standards for transportation improvements on the countywide basis.

### Policy TRA 6.2.3 Evaluate Regulations for High Technology Development

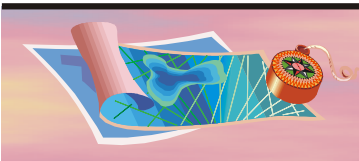
The County shall evaluate the Land Development Code requirements, guidelines, and incentives that provide for high-technology ("smart building") upgrades for telecommunications, energy-efficiency and other features.

### Policy TRA 6.3 Transit Planning Considerations

In its transit planning activities, the County and its transit service provider shall consider:

- Existing and proposed major trip generators and attractors;
- Accommodation of the special needs of the service population;
- The provision of safe and convenient mass transit terminals, transfer stations and other facilities;
- The financial feasibility, costs and benefits of potential transit service options; and
- The overall improvement in the intermodal transportation system.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## **Policy TRA 6.3.1 Evaluate Transit Service Options**

The County shall continue to evaluate and, as deemed necessary, implement additional mass transit, paratransit and transportation demand management strategies and programs which support the Future Land Use Element, address the special needs of the service population, and increase the efficiency of transit services. Such strategies and programs may include rail services, carpools/vanpools, Park-and-Ride, Dial-a-Ride, parking management, express bus services, transfer stations and increasing frequency of bus service. The County shall continue to evaluate and, as deemed necessary, modify its policies, standards and regulations to promote increased usage of taxi, limousine and other "for hire" paratransit services.

## **Policy TRA 6.3.2 Monitor Transit Services**

The County shall monitor the provision of transit services within the County and, as deemed necessary, actively pursue improvements that increase the safety, efficiency and livability of transit services.

- The County shall monitor the marketing and public information programs and internal management of local transit providers and, as deemed necessary, actively pursue improvements in these programs to increase the efficiency of transit services.
- The County shall encourage local transit providers to coordinate and provide adequate mass transit and paratransit services for the transportation disadvantaged in compliance with Federal and State requirements.
- The County shall require local transit providers to provide bicycle racks on all transit vehicles.
- The County shall encourage local transit providers to provide service to Orlando Sanford Airport.

## **Policy TRA 6.4 Evaluate Desirability of Transportation Management Associations**

The County shall continue to evaluate the desirability of requiring the establishment of private/semi-private transportation management associations within mixed use centers and other concentrations of major trip generators and attractors to sponsor employee van pools, car pools and other transportation management programs.

## **Policy TRA 6.5 Require Construction to County Standards**

The County shall require that all new or improved transportation facilities be constructed to County standards and shall review, on a time to time basis, and amend, as deemed necessary, construction inspection practices. The County requires transportation facilities be brought up to standard prior to development of unincorporated lands.

## **Policy TRA 6.6 Require Context-Sensitive Design**

The County shall require that all new or improved roadways be designed and constructed in manner that is supportive and reflective of adjacent land uses and development patterns. In accordance with the Design Element, the County shall adopt design standards that address not only roadway pavement but also the entire right of way.

## **Policy TRA 6.7 Enforce Design Principles**

The visual and functional characteristics of streets are important in the design of the community. The design principles are:

- Streets should be designed as public open space.



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- Streets should be designed to accommodate a mix of travel modes including vehicles, bicycles, transit and pedestrians.
- Streets should be designed holistically, considering the pavement, curbing, bikeways, pedestrianways, lighting signs, front yard setback areas and building facades.

## **Policy TRA 6.8 Require Multi-Modal Facilities**

The County shall require the construction of sidewalks on both sides of new and improved County arterials and collectors, and on at least one side of new and improved County local roads unless deemed unsafe. Bicycle lanes shall be incorporated into every new or improved road project unless deemed unnecessary or unsafe. In coordination with the local transit service provider, the County shall require the inclusion of transit stops during the redevelopment of parcels on a current or future transit corridor.

## **Policy TRA 6.9 Landscaping County Roads**

The County shall promote the aesthetic improvement, enhancement, scenic beauty and unique high quality of life in the County through landscaping and other programs and techniques within development corridors and mixed use centers. This shall also include protection of existing canopy roadways such as General Hutchison Parkway and those roadways located within the East Seminole County Scenic Corridor Overlay District.

*(Added: Amendment 04S.TXT02.3; Ordinance 2004-25, 06/08/2004)*

## **Policy TRA 6.10 Safety Considerations for New or Expanded Roadways**

For new or expanded roadways, the County shall continue to consider adding an additional width of the outside lanes on multi-lane roadways with curbs and gutters and on rural roads to enhance safe operating conditions on the roadways for both motorized and non-motorized roadway users.

## **Policy TRA 6.11 On-Street Parking in Retail Districts**

Within retail districts adjacent to designated development corridors and within mixed use centers, the County shall encourage the inclusion of on-street parking except where deemed unsafe or unnecessary.

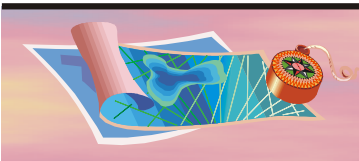
## **Policy TRA 6.12 Consideration of Intermodal Connections in Transportation Improvements**

In the planning, design and construction of transportation improvements, the County shall consider the safety and efficiency of features at intermodal connections, such as: bus stops, bus shelters, signage, pedestrian and bicycle access, handicapped access and park-and-ride lots. *TRA Exhibit: Greenways and Trails Linkages* and *TRA Exhibit: 2020 Multimodal Transportation* map exhibits display potential points where proposed park and ride lots connect to conceptual neighborhood transit circulators, express buses, or major roadways and potential connections between transit and trails.

## **Policy TRA 6.13 Dedication of Access Rights**

The County shall continue to require parcels adjacent to collector or arterial streets to dedicate all access rights to the County when lawful access has been granted to the property owners.





# Vision 2020 Comprehensive Plan Seminole County, Florida

**Policy TRA 6.14      On-Site Traffic Flow**

The County shall continue to establish and enforce policies, standards and regulations which provide safe and convenient on-site traffic flow, considering site access, traffic circulation and parking for both motorized and non-motorized movement of vehicles and pedestrians.

**Policy TRA 6.15      Access Management**

The County shall continue to establish and enforce policies, standards and regulations for the management of access points and connections to the County Road System to include, but not be limited to, provisions for the location, design and frequency of access points and connections. Implementation of the State Access Management Program and the control of access connections to the State highway system consistent with Chapter 14-96 and 14-97, F.A.C. and the Florida Department of Transportation Access Management Rule will be coordinated with the Florida Department of Transportation through the County's access permitting process.

**Policy TRA 6.16      Park Access and Accessibility**

The County shall ensure access to parks and accessibility within parks:

- The County shall ensure, through the Land Development Code, adequate vehicular, pedestrian and bicycle access provided to on-site and adjacent park sites during the development of planned unit developments and residential developments.
- The County shall coordinate with all appropriate transportation providers to evaluate and expand, if necessary, transportation routes to parks and recreational facilities to provide access for special groups including the handicapped, lower income residents, elderly and the general public.
- The County shall continue to require sidewalk connectors to public park sites and additional pavement width to be installed with new development and the expansion of public roadways.

**Policy TRA 6.17      Bicycle and Recreational Trail Planning and Coordination**

The County shall continue to fund and construct a countywide network of pedestrian, bicycle, recreational and equestrian trails. The County shall continue to coordinate with the Metropolitan Planning Organization, Florida Department of Transportation, municipalities and other appropriate agencies to study and implement options for coordinated provision of a bike/trail network.

**Policy TRA 6.18      Critical Airport Area Transportation Improvements**

To ensure adequate access to the airport, the County shall continue to place a high priority on the programmed improvements to East Lake Mary Boulevard and C.R. 427 and shall encourage regular transit service.

**Policy TRA 6.19      Identifying Airport Transportation Needs**

The County shall assist the Airport Authority in identifying transportation improvements and funding sources needed for the expansion of the airport in order to correct existing access problems and to provide efficient and safe access to the airport.



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**Policy TRA 6.20 Amtrak AutoTrain**

The County shall coordinate with Amtrak to provide accessibility to AutoTrain passengers, including but not limited to signage and road conditions.

**Policy TRA 6.21 Livable Transportation System**

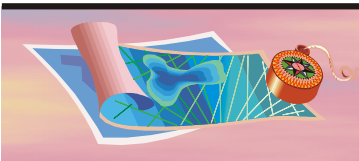
To ensure the implementation of a livable transportation system, the County will strive to provide its residents and business community multiple travel choices and the ability to move from one mode of travel to another with ease, such as, parking one's car at a park and ride lot and accessing rail, express bus or local transit circulator, to reach one's destination in a timely fashion. A livable, multimodal transportation system is depicted in Exhibit TRA: 2020 Multimodal Transportation map exhibit and will be used by the County to conceptually plan for future transportation needs.

**Policy TRA 6.22 Florida Intrastate Highway System**

To protect the interregional and intrastate functions of the Florida Intrastate Highway System (FIHS), the County will continue to:

- Provide alternatives to FIHS for local travel: complete and maintain parallel arterial or collector roads, encourage connections among non-FIHS roads, and
- Increase use of non-automotive modes: provide and maintain transit, bicycle and pedestrian facilities, and expand of transit service.





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## GOAL TRA 3 NEIGHBORHOODS

The county shall develop and maintain an effective, convenient and economically feasible multi-modal transportation system in its neighborhoods that provides local accessibility for travelers of all modes, favors pedestrian and bicycle mobility over automobile use, provide access to neighborhood developments and attractors, and that preserves and strengthens the residential quality of life.

## OBJECTIVE TRA 7 LEVEL OF SERVICE STANDARDS

The County shall establish and utilize level of service standards for the provision of a multi-modal transportation system (including pedestrian and bicycle facilities, mass transit and paratransit services, the County Road System and the portion of the State Highway System in the unincorporated area of the County) that will measure progress toward achieving the stated goal through implementation of the following policies.

### Policy TRA 7.1 County Transit Level of Service Standard

The following operational level of service standard for transit services is adopted: 1.03 revenue miles per capita per year based on the estimated functional population within the transit service area as depicted in *Exhibit TRA: 2000 Transit Service*.

### Policy TRA 7.2 County Road Level of Service Standards

The County shall establish operational level of service standards for the peak operating hours based on the 1997 Highway Capacity Manual. For arterial and collector roadway segments on the County's major road system the adopted level of service standards shall be as follows:

- All County roadways within Development Corridors: E
- All County roadways within, and impacted by traffic from, Mixed Use Centers: LOS E
- All other Facilities in neighborhoods: LOS D
- Special Transportation Areas: LOS E or determined in accordance with provisions of the Comprehensive Plan
- Facilities parallel to exclusive mass transit or toll facilities: LOS E
- Backlogged facilities: Maintain
- Physically/Policy constrained facilities: Not degrade more than 20% below applicable standard

*Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roadways* shows maximum service volumes for urban and rural arterial and collectors roadways in the interim, and for all roadways in the long range. *Exhibit TRA: Roadway Level of Service Standards 2000* depicts the level of service standards for all limited access facilities, arterials, and major collectors.





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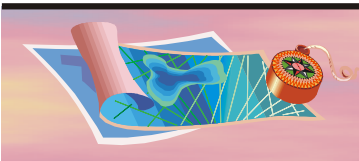
### Policy TRA 7.3

#### Policy Constrained County Facilities

Policy constrained facilities are roadway segments on which it is not feasible to add at least two additional through-lanes to meet current or future traffic needs because of the need to achieve other important County goals, objectives or policies as determined by the Board of County Commissioners. Based on prior direction of the Board of County Commissioners, the following County arterial and collector roadway segments are currently identified as policy constrained regarding improvements:

- Bear Lake Road from Orange County line to S.R. 436 (Permanent constraint to 2 lanes)
- Chapman Road from SR 426 to SR 434 (Temporary constraint until roadway nears capacity. BCC approval for construction required.)
- Howell Branch Road from S.R. 436 to S.R. 426 (Permanent constraint to 4 lanes)
- Howell Branch Road from Orange County line east to SR 436 (Temporary constraint. BCC approval of design and construction required.)
- Lake Emma Road from E.E. Williamson Road to Greenway Boulevard. (Temporary constraint. Construction beyond approved interim improvements requires BCC approval).
- Lake Howell Road from Orange County line to S.R. 436 (Permanent constraint to 2 lanes)
- Lake Markham Road from Markham Road to State Road 46 (Permanent constraint to 2 lanes)
- Longwood Markham Road from Markham Road to State Road 46 (Permanent constraint to 2 lanes)
- Markham Road from Orange Boulevard to Longwood Markham Road (Permanent constraint to 2 lanes)
- Markham Woods Road from S.R. 434 to Markham Road (Permanent constraint to 2 lanes)
- Palm Springs Drive from Central Parkway to S.R. 434 (Permanent constraint to 2 lanes)
- Red Bug Lake Road: from S.R. 436 to Eagle Circle (Temporary constraint to 4 lanes. BCC approval for construction required.)
- Red Bug Lake Road: from Eagle Circle to Tuskawilla Road (Permanent constraint to 4 lanes)





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- South Lake Sylvan Drive from Orange Boulevard to Lake Markham Rd. (Permanent constraint to 2 lanes with alternative surface treatment program allowed to control erosion).
- General Hutchison Parkway from US 17-92 to Timocuan Way (Permanent constraint to 2 lanes).
- All County facilities constructed or improved after December 15, 1999 that are located within the Wekiva River Protection Area (other than Orange Boulevard and those roads scheduled for improvement in the Capital Improvements Element in effect on December 15, 1999 (such as County Road 46A) are permanently constrained to their existing laneage.

(Revised: Amendment 04S.TXT02.4; Ordinance 2004-25, 06/08/2004)

(Revised: Amendment 02F.TXT04; Ordinance 2002-55, 12/10/2002)

## **Policy TRA 7.4 County Functional Classification of Roads**

The County shall continue to establish and use functional classifications that provide greater detail and direction than those assigned by Federal Highway Administration, but are consistent with Federal Highway Administration's designations. *Exhibit TRA: Existing FDOT Functional Classifications, and Exhibit TRA: Future County Functional Classifications* depict the respective functional classifications. *Exhibit TRA: Functional Classifications of County Roads and Exhibit TRA: Functional Classification for State Roads* list both classifications for state and county roadways.

## **Policy TRA 7.5 Technique for Determining Transit Level of Service**

At least annually, the County shall use revenue miles of service data reported by all transit service providers and estimates of functional population within the transit service area developed by the County Planning Department to measure the then current level of service.

## **Policy TRA 7.5.1 Techniques for Determining Roadway Level of Service**

For the evaluation of existing and near term traffic conditions, the County has used: (1) Travel Time Delay Studies for selected County roadway segments; and (2) the five year maximum service volume table for roadways which were not evaluated using Travel Time and Delay Studies.

### **For County roadways:**

- For interim (5-year) planning applications and development impact evaluations of County roadways, the *Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roads – interim (5-year) Urban and Rural Roads* will be utilized where more specific analysis is not available. (These standards are based on standards developed for the Impact Fee Study.)
- For long range (20-year) planning applications and development impact evaluations of County roadways, the *Exhibit TRA: Generalized Maximum Service Volumes for County Arterial and Collector Roads -- Long Range (20-Year)* will be utilized. (These standards are based on standards from the 1997 Highway Capacity Manual.)



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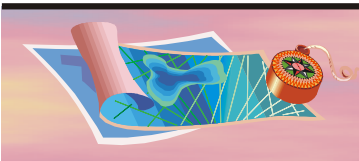


## For State roadways:

- For interim (5-year) and long range (20-year) planning applications and development impact evaluations, the Maximum Service Volume Tables developed by the County for state highways will be utilized where more specific analysis is not available. See *Exhibit TRA: Level of Service Criteria for State Highways*.

Traffic operation models and other assessment techniques may be used where the County determines that a more detailed analysis is desired. In determining levels of service, the County shall follow procedures and techniques based on the 1997 Highway Capacity Manual.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## **Policy TRA 7.5.2 Refined Level of Service Analysis Techniques**

Subject to prior approval by the County, the County may authorize refined methodologies and techniques to be used in the review and evaluation of development proposals for the determination of existing and future levels of service on specific roadway segments, the development of specific mitigation plans, corridor or intersection design analysis or other situations where more precise input data and analysis is desired by the County prior to final action on the development proposal. Acceptable methodologies and techniques may include, but are not limited to:

- Trip generation studies
- Traffic studies
- Trip characteristics studies
- Travel time/speed/delay studies
- Passer-by and internal trip analysis
- Person trip analysis
- Planning level models
- Traffic operation models
- Intersection analysis
- Corridor/subarea analysis
- Multi-modal analysis

## **Policy TRA 7.5.3 Alternative Level of Service Analysis Techniques/Standards**

The County shall develop special area plans, as needed, for the areas of special concern, in consultation with local governments and the Florida Department of Community Affairs. When appropriate, the County shall adopt additional or alternative level of service standards and methods of applying levels of service standards that recognize that:

- Improvements in overall operation of the roadway portion of the transportation system outweigh localized deficiencies, and
- Improvements in the overall urban environment outweigh deficiencies in the transportation system.

These multi-modal level of service standards shall address accessibility for vehicular traffic, pedestrians, cyclists, transit and other modes.

## **Policy TRA 7.5.4 Measurement of Roadway Operational Level of Service**

The Seminole County Generalized Maximum Service Volumes for Arterial and Collector Roadways are an appropriate guideline for comparing the level of service for different years, in order to establish the extent of traffic service improvement or deterioration over time.



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The generalized guidelines are not an appropriate indicator of the actual operational level of service or of the improvement needed to correct a level of service that is deemed "deficient". Rather, the generalized guidelines, when applied to a specific road link, should be interpreted as meaning that under worst-case conditions, the "deficient" link might need improvement of some type, and that further analysis using the more rigorous procedures of the 1997 Highway Capacity Manual is warranted. It is further emphasized that even where a road link is found to be deficient according to Highway Capacity Manual methods, the appropriate remedy to restoring a satisfactory level of service is not necessarily widening of the link, but could instead be:

- Intersection improvements,
- Signal timing changes,
- Turning or auxiliary lanes,
- Access management,
- Reclassification of the road,
- Signal removal,
- Improvements in parallel corridors,
- Mass transit improvements,
- Improvement in other modes of travel, or
- Numerous other traffic engineering measures.

Current roadway operating level of service is displayed in *Exhibit TRA: Existing Roadway Level of Service 1999*. Operating roadway level of service for 2020 is shown in *Exhibit TRA: Projected Level of Service 2020*.

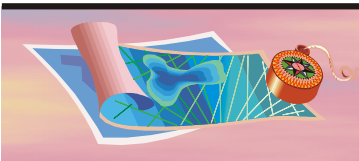
## Policy TRA 7.6

### **Concurrency Management System and Ongoing Monitoring Program**

The County shall maintain its Concurrency Management System that monitors transportation level of service for facilities and services for which the County has established minimum acceptable level of service standards. The purpose of the Concurrency Management System is to ensure that adequate public facilities and services are available or are scheduled to be available in a manner which is consistent with State law. The County shall continue an ongoing program to:

- Monitor operating conditions on transit, arterial and collector roadways;
- Collect and evaluate data for the establishment of transit level of service;
- Collect and evaluate data for the establishment of peak hour level of service thresholds and maximum service volumes based on operational analysis of roadways; and
- Establish procedures for measuring bicycle and pedestrian facility availability and use; and
- Establish procedures for measuring roadway level of service thresholds using either travel speeds or traffic volumes.





# Vision 2020 Comprehensive Plan Seminole County, Florida

In implementing the program the County shall utilize methodologies, techniques and procedures based on the 1997 Highway Capacity Manual, such as, Travel Time and Delay Studies, arterial analysis procedures and other operational analysis techniques. The County shall collect transportation system characteristics data in support of the program utilizing various data collection activities, which may include,

- Pedestrian and bicycle studies,
- Transit ridership studies,
- Travel time and delay studies,
- Traffic counts,
- Traffic accident reporting speed studies,
- Intersection studies,
- Data from the transportation system characteristics inventory, and
- Data reported by the closed loop signal system.

The County shall coordinate its efforts with other public and private entities.

## **Policy TRA 7.7**

### **Transportation Facility Transfer Standards**

The County shall oppose any transfer of transportation facilities to the County's jurisdiction unless the facilities are improved to meet County established operational level of service and design standards and are accompanied by a commensurate level of operating funding or additional local authority to generate funding without referendum.

## **Policy TRA 7.8**

### **Alternative Land Development Proposals**

The County may consider some alternative reasonable use, development agreement or development phasing when a development order is subject to denial on the basis of substandard operational level(s) of service on the major road system.

## **Policy TRA 7.9**

### **Prior Development Order Conditions Remain Valid**

Developments approved prior to the adoption of this Plan with conditions to improve the transportation system shall not be exempted from those conditions as a result of adoption of any level of service standard or any County Comprehensive Plan provision. To that end, nothing in this Plan shall be deemed or construed to eliminate or obviate any development condition placed upon a development as a condition of approval.





# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 8 LAND USE AND DESIGN COORDINATION

The County shall establish and enforce land use, design and transportation policies, standards and regulations within neighborhoods that coordinate the transportation system with the residential and residential-supportive land uses shown on the Future Land Use map exhibit and that promote the mixing of uses on a neighborhood scale.

### Policy TRA 8.1 Consistency with Future Land Use and Design Elements

In terms of all development proposals, the County shall impose a linkage between the Future Land Use Element, Design Element and the Transportation Element and all land development activities shall be consistent with the adopted Future Land Use Element and adopted Design Element.

### Policy TRA 8.2 Promote Neighborhood Scale Retail, Office, and Services

To reduce trip lengths, reduce the demand for automobile travel, discourage urban sprawl, the County shall adopt and enforce land use policies, standards and regulations that provide convenient shopping within and adjacent to residential neighborhoods.

### Policy TRA 8.3 Promote Infill Development

To make the most efficient use of the existing transportation network and to discourage urban sprawl, the County shall enforce policies, standards and regulations that promote the redevelopment of neighborhoods and neighborhood scale nonresidential development consistent with the Design Element.

### Policy TRA 8.4 Transportation/Land Development Coordination

To provide adequate accessibility to land use activities and to preserve the mobility function of major roadways and to discourage urban sprawl, the County shall continue to adopt and enforce policies, standards and regulations which relate the design and function of the roadway to the type, size and location of the land uses which they serve.

### Policy TRA 8.5 Transportation/Affordable Housing Coordination

The County shall continue to establish policies, standards and regulations that promote affordable housing in close proximity to employment opportunities and transit services.

### Policy TRA 8.6 Require Multi-Modal Facilities in Site Planning and Design

Through the policies, standards and regulations in the Land Development Code, the County shall require the construction of desirable multi-modal features in site planning and design for nonresidential development within neighborhoods. Such features may include, but not be limited to:

- Parking requirements (including shared parking and parking ratio maximums)
- Parking management,
- Pedestrian/bicycle/transit facilities,



- Pedestrian/bicycle/trail/transit access (including sidewalk and bicycle path connections to adjacent parcels),
- Taxi stands,
- Lot sizes,
- Land use intensities,
- Mixed-uses,
- Internal circulation, and
- Car pools/van pools.

**Policy TRA 8.7**

**Joint Use of Public Lands, Facilities**

In the planning, siting and design of transportation system facilities, the County shall take into consideration the potential benefits and/or cost savings that may accrue from joint use of the site with other existing or planned public facilities or multi-use of the facilities.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 9 SAFE, EFFICIENT AND LIVABLE TRANSPORTATION SYSTEM

The County shall establish and enforce policies, standards and regulations as one means of providing for a safe, efficient and livable transportation system that provides convenient intermodal connections among automobile and more energy efficient transportation modes within neighborhoods through implementation of the following policies.

### Policy TRA 9.1 Rely on Existing Ordinances

The County shall continue to rely on Appendix A Seminole County Transportation Standards and other appropriate chapters of the Land Development Code of Seminole County and other related laws, rules, ordinances and resolutions to provide for a safe, convenient and efficient transportation system.

### Policy TRA 9.2 Update Ordinances

Annually, the County shall review and, as deemed necessary, amend the Land Development Code and other related ordinances.

### Policy TRA 9.2.1 Evaluate Land Development Code for Pedestrian and Bicycle Design

By 2005, the County shall evaluate and strengthen, as deemed necessary, the Land Development Code requirements, guidelines and incentives that encourage the design of well-connected pedestrian and bicycle facilities and circulation systems that promote walking and biking and encourage the use of alternative modes of transportation to the single-occupant vehicle.

### Policy TRA 9.2.2 Evaluate Regulations and Policies for Multi-Modal Design Standards

By 2005, the County shall evaluate and strengthen, as deemed necessary, Land Development Code requirements, guidelines, and incentives and County investment policies and incentives to implement integrated, multi-modal transportation/development corridor design standards for transportation improvements on the countywide basis.

### Policy TRA 9.2.3 Evaluate Regulations for High Technology Development

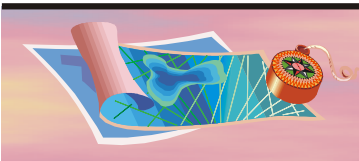
The County shall evaluate the Land Development Code requirements, guidelines, and incentives that provide for high-technology ("smart building") upgrades for telecommunications, energy-efficiency and other features.

### Policy TRA 9.3 Transit Planning Considerations

In its transit planning activities, the County and its transit service provider shall consider:

- Existing and proposed major trip generators and attractors;
- Accommodation of the special needs of the service population;
- The provision of safe and convenient mass transit terminals, transfer stations and other facilities;
- The financial feasibility, costs and benefits of potential transit service options; and
- The overall improvement in the intermodal transportation system.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## **Policy TRA 9.3.1 Evaluate Transit Service Options**

The County shall continue to evaluate and, as deemed necessary, implement additional mass transit, paratransit and transportation demand management strategies and programs which support the Future Land Use Element, address the special needs of the service population, and increase the efficiency of transit services. Such strategies and programs may include rail services, carpools/vanpools, Park-and-Ride, Dial-a-Ride, parking management, express bus services, transfer stations and increasing frequency of bus service. The County shall continue to evaluate and, as deemed necessary, modify its policies, standards and regulations to promote increased usage of taxi, limousine and other "for hire" paratransit services.

## **Policy TRA 9.3.2 Monitor Transit Services**

The County shall monitor the provision of transit services within the County and, as deemed necessary, actively pursue improvements that increase the safety, convenience and efficiency of transit services.

- The County shall monitor the marketing and public information programs and internal management of local transit providers and, as deemed necessary, actively pursue improvements in these programs to increase the efficiency of transit services.
- The County shall encourage local transit providers to coordinate and provide adequate mass transit and paratransit services for the transportation disadvantaged in compliance with Federal and State requirements.
- The County shall require local transit providers to provide bicycle racks on all transit vehicles.

The County shall encourage local transit providers to provide service to Orlando Sanford Airport.

## **Policy TRA 9.4 Require Construction to County Standards**

The County shall require that all new or improved transportation facilities be constructed to County standards and shall review, on an annual basis, and amend, as deemed necessary, construction inspection practices. The County requires transportation facilities be brought up to standard prior to development of unincorporated lands.

## **Policy TRA 9.5 Require Context-Sensitive Design**

The County shall require that all new or improved roadways be designed and constructed in manner that is supportive and reflective of adjacent land uses and development patterns. In accordance with the Design Element, the County shall adopt design standards that address not only roadway pavement but also the entire right of way.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## Policy TRA 9.6

### **Enforce Design Principles**

The visual and functional characteristics of streets are important in the design of the community. The design principles are:

- Streets should be designed as public open space.
- Streets should be designed to accommodate a mix of travel modes including vehicles, bicycles, transit and pedestrians.
- Streets should be designed holistically, considering the pavement, curbing, bikeways, pedestrianways, lighting signs, front yard setback areas and building facades.
- Neighborhood streets should be designed to connect to adjacent activities and neighborhood-serving businesses with streets that do not encourage cut-through traffic.

## Policy TRA 9.7

### **Require Multi-Modal Facilities**

The County shall require the construction of sidewalks on both sides of new and improved County arterials and collectors, and on at least one side of new and improved County local roads unless deemed unsafe. Bicycle lanes shall be incorporated into every new or improved road project unless deemed unnecessary or unsafe. In coordination with the local transit service provider, the County shall require the inclusion of transit stops during the redevelopment of parcels on a current or future transit corridor.

## Policy TRA 9.8

### **Require Multi-Modal School Access**

In coordination with the Seminole County School Board, the neighborhood associations and affected developers, the County shall require the provision of sidewalks and bicycle paths for all roadways within two miles of each elementary, middle and high school for all new, improved and existing roadways.

## Policy TRA 9.9

### **Safety Considerations for New or Expanded Roadways**

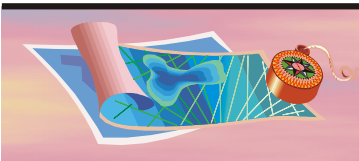
For new or expanded roadways, the County shall continue to consider adding an additional width of the outside lanes on multi-lane roadways with curbs and gutters to enhance safe operating conditions on the roadways for both motorized and non-motorized roadway users.

## Policy TRA 9.10

### **Consideration of Intermodal Connections in Transportation Improvements**

In the planning, design and construction of transportation improvements, the County shall consider the safety and efficiency of features at intermodal connections, such as: bus stops, bus shelters, signage, pedestrian and bicycle access, handicapped access and park-and-ride lots. *TRA Exhibit: Greenways and Trails Linkages* and *TRA Exhibit: 2020 Multimodal Transportation* map exhibits display potential points where proposed park and ride lots connect to conceptual neighborhood transit circulators, express buses, or major roadways and potential connections between transit and trails.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## Policy TRA 9.11

### Park Access and Accessibility

The County shall ensure access to parks and accessibility within parks:

- The County shall ensure, through the Land Development Code, adequate vehicular, pedestrian and bicycle access provided to on-site and adjacent park sites during the development of planned unit developments and residential developments.
- The County shall coordinate with all appropriate transportation providers to evaluate and expand, if necessary, transportation routes to parks and recreational facilities to provide access for special groups including the handicapped, lower income residents, elderly and the general public.
- The County shall continue to require sidewalk connectors to public park sites and additional pavement width to be installed with new development and the expansion of public roadways.

## Policy TRA 9.12

### Bicycle and Recreational Trail Planning and Coordination

The County shall continue to fund and construct a countywide network of pedestrian, bicycle, recreational and equestrian trails. The County shall continue to coordinate with the Metropolitan Planning Organization, Florida Department of Transportation, municipalities and other appropriate agencies to study and implement options for coordinated provision of a pedestrian and bicycle/trail network.

## Policy TRA 9.13

### Livable Transportation System

To ensure the implementation of a livable transportation system, the County will strive to provide its residents and business community multiple travel choices and the ability to move from one mode of travel to another with ease, such as, parking one's car at a park and rife lot and accessing rail, express bus or local transit circulator, to reach one's destination in a timely fashion. A livable, multimodal transportation system is depicted in *TRA Exhibit: 2020 Multitmodal Transportation* map exhibit and will be used by the County to conceptually plan for future transportation needs.

## Policy TRA 9.14

### Florida Intrastate Highway System

To protect the interregional and intrastate functions of the Florida Intrastate Highway System (FIHS, the County will continue to :

- Provide alternatives to FIHS for local travel: complete and maintain parallel arterial or collector roads, encourage connections among non-FIHS roads, and
- Increase use of non-automotive modes: provide and maintain transit, bicycle and pedestrian facilities, and expand of transit service.





# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 10 NEIGHBORHOOD CUT-THROUGH TRAFFIC

The County shall establish a coordinated set of policies, standards and regulations designed to discourage neighborhood cut-through traffic in new and existing residential subdivisions through the implementation of the following policies.

### Policy TRA 10.1 **Interconnecting System of Internal Streets**

The County shall enforce all policies, standards and regulations for the inclusion of convenient pedestrian, bicycle and vehicular linkages between abutting residential areas and areas of recreation, schools, libraries and shopping.

### Policy TRA 10.2 **Discourage Through Traffic**

The County shall endeavor to ensure that vehicular connections between subdivisions are designed to serve local residents and preclude through traffic.

### Policy TRA 10.3 **Review of Development Applications**

As part of the review of development applications, the County shall evaluate the potential impacts of the proposed development on surrounding residential neighborhoods (particularly cut-through traffic impacts) and, as may be required, conditions for approval which will mitigate the potential impacts of the proposed development on surrounding neighborhoods.

### Policy TRA 10.4 **Review Regulations**

The County shall continue to evaluate and, as deemed necessary, revise its transportation and land use policies, standards and regulations so as to continue to discourage neighborhood cut-through traffic.

### Policy TRA 10.5 **Consideration of Techniques to Reduce Traffic Impacts**

In the planning, design and construction of transportation improvements, the County shall take into consideration design and operational techniques to mitigate adverse impacts on established neighborhoods and planned residential areas.

### Policy TRA 10.6 **Establish Traffic Calming Improvement Program**

The County in partnership with other public and private entities shall establish a program to plan, design, and implement traffic calming improvements on existing neighborhood streets to ensure safe use of residential streets by all local residents, including drivers, walkers, cyclists and those using other modes.

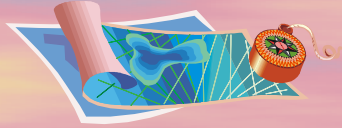
### Policy TRA 10.7 **Discourage Direct Access**

The County in partnership with other public and private entities shall continue to discourage the creation of individual lots and parcels that require direct access and connections to any county roadway with the exception of residential subdivision streets.

### Policy TRA 10.8 **Prohibit Direct Access**

The County shall continue to prohibit the creation of any individual lots within a residential subdivision that have direct access to any county roadway with the exception of residential subdivision streets.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## Policy TRA 10.9

### Approval of Developments Utilizing Backlogged and Constrained Facilities

For State and County roadway facilities designated as constrained facilities, Seminole County shall not approve development that results in either a 5% increase in peak hour traffic volume or a 10% decrease in average peak hour travel speed over the designated service threshold.

- For facilities with Existing Acceptable Operating Conditions, the designated threshold is the appropriate minimum acceptable level of service standard.
- For facilities with Existing Substandard Operating Conditions, the designated threshold is existing operating conditions.

This policy does not apply to County policy constrained roads to which two or more lanes can be added without exceeding the constrained number of lanes.

## Policy TRA 10.10

### Access Control to Protect Residential Uses

The County shall require that access to properties fronting on more than one roadway shall be designed to minimize impact to adjacent residential areas. Access should be permitted on adjacent collector or arterial roadways and not on the adjacent local or residential streets. However, where improved traffic control can be achieved with minimum impact to adjacent residential neighborhoods, access may be considered on a local or residential street.

*(Added: Amendment 02S.TXT2; Ordinance 2002-37, 9/10/2002)*



# Vision 2020 Comprehensive Plan Seminole County, Florida



## GOAL TRA 4 COUNTYWIDE

The County shall develop and maintain an effective, convenient and economically feasible multi-modal transportation system throughout the County that is financially feasible in cooperation with local and regional mobility planning agencies and groups and is compatible with environmental conservation and protection.

### OBJECTIVE TRA 11 PROTECTION OF RIGHTS-OF-WAY

The County shall establish policies, standards and regulations as one means of providing for the acquisition, reservation and protection of existing and future transportation rights-of-way throughout the County through the implementation of the following policies.

#### Policy TRA 11.1 Rights-of-Way and Building Setback Policies, Regulations

The County shall continue to adopt and enforce policies, standards and regulations which specify the County's right-of-way and building setback standards based on generally accepted planning principles adopted by the County and the needs identified in the County's long range transportation plans.

#### Policy TRA 11.2 Dedication of Rights-of-Way

The County shall continue to require, as set forth in the Land Development Code and as authorized by law, the dedication of rights-of-way and appropriate building set backs as conditions of approval for all development proposals and subdivision plats.

#### Policy TRA 11.3 Evaluation of Rights-of-Way and Building Setback Policies, Regulations

The County shall continue to review and, as deemed necessary, revise its right-of-way and building setback policies, standards and regulations to include new or additional provisions for the acquisition, reservation and protection of mass transit rights-of-way and designated rail/mass transit corridors.

#### Policy TRA 11.4 Designation of Future Enhanced Transit Corridors

The County shall designate the Interstate 4, CSX and U.S. 17-92 corridors as future enhanced high capacity mass transit corridors. *Exhibit TRA: Future Enhanced Transit Corridor* depicts this area.

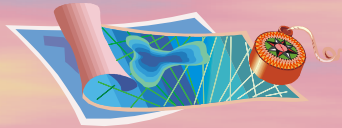
#### Policy TRA 11.5 Identification of Future Enhanced Transit Corridors

The County shall continue to evaluate deed reservations, rail rights-of-way, major utility corridors and undeveloped platted road rights-of-way for potential use as future multi-use corridors and make a determination of consistency of these corridors with other elements of the Plan.

#### Policy TRA 11.6 Designation of Future Rail/Enhanced Mass Transit Corridors

No new or additional rail/enhanced high capacity mass transit corridors shall be designated, designed, engineered or improved within Seminole County without the express consent and approval of the Board of County Commissioners.





# Vision 2020 Comprehensive Plan Seminole County, Florida

- Policy TRA 11.7      Review of Development Proposals**  
The County shall continue to review all proposals for new or expanded land development activities for consistency with future transportation improvements in order to address rights-of-way (existing and future) and the viability of the property in the post road construction state.
- Policy TRA 11.8      Review Requests to Vacate or Abandon Rights-of-Way**  
The County shall continue to review all requests to vacate or abandon rights-of-way for consistency with the Plan and future transportation improvement needs.
- Policy TRA 11.9      Rail Sidings**  
The County shall review all plans to eliminate freight sidings and, at a minimum, estimate the public economic cost and benefit from the loss of industrial infrastructure.
- Policy TRA 11.10     Utility of Railroad Spurs and Sidings**  
The County shall recommend that the Airport Authority consider, in updates of the Airport Master Plan, the potential utility of the Airport's existing railroad siding and spurs.
- Policy TRA 11.11     Evaluate Rail Rights-of-Way, Utility Corridors, Etc**  
The County shall continue to evaluate rail rights-of-way, major utility corridors, Murphy Deed reservations and undeveloped platted road rights-of-way for potential use as future transportation corridors and, as deemed necessary, establish rights-of-way standards and building setback requirements which will enhance their use as future multi-use corridors.
- Policy TRA 11.12     Coordinate Transportation/Other Public Facilities**  
As part of the process for the acquisition or development of land for public uses, such as, parks, open space, environmental protection or other public purpose, the County shall evaluate the impacts of the proposed project on the future transportation system and the potential for the development of future transportation corridors as a joint use.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 12 COORDINATION WITH NATURAL RESOURCES, ENVIRONMENTAL QUALITY

The County shall establish policies, standards and regulations as one means of coordinating the future development of the transportation system with the County's desire to conserve natural resources, maintain the quality of the environment and to improve the aesthetic and sensory quality of the urban community through the implementation of the following policies.

- Policy TRA 12.1 Consideration of Techniques to Protect Natural Resources, Environmental Quality**  
In the planning, design and construction of transportation improvements, the County shall take into consideration:
- Design techniques to mitigate adverse impacts on natural resources, the quality of the environment and surrounding development; and
  - Design and operational techniques which complement adjacent development and enhance the aesthetic and sensory quality of the transportation corridor.

- Policy TRA 12.2 Prohibit Use of Roadway Improvements as Sole Justification for Land Use Amendments**  
The County shall prohibit the use of new or expanded roadway facilities as sole justification for amendments to the Future Land Use Element where new or expanded development will adversely impact resource/ conservation areas or neighborhoods or will otherwise be deemed to adversely affect the problem.

- Policy TRA 12.3 Consideration of Multi-use in Acquisition of Land**  
In the planning and design of transportation improvements, the County shall take into consideration the acquisition of land for other public purposes as a joint use in order to provide buffers for the control of access to new or expanded transportation facilities and to make them more compatible with the surrounding environment.

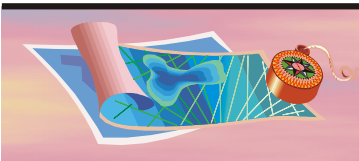
- Policy TRA 12.4 Enforcement of Environmental Regulations**  
In the planning, design and construction of new transportation facilities, the County shall continue to enforce policies, standards and regulations which provide for the protection of wetland areas by requiring documented evidence of an overriding public interest and appropriate mitigation of any unavoidable disturbance of the wetland areas as required by other environmental agencies.

- Policy TRA 12.5 Aesthetics and Visual Appearance of Transportation Facilities**  
The County shall promote the aesthetic and visual enhancement of roadways through the programs and standards contained in the Design Element. Existing scenic and canopy roadways shall be protected by restricting construction activity within rights-of-way to ensure preservation of canopy trees and native vegetation.

*(Revised: Amendment 04S.TXT02.5; Ordinance 2004-25, 06/08/2004)*

- Policy TRA 12.6 Evaluate Transportation Systems Management Activities**  
The County shall evaluate and, as deemed necessary, support transportation systems management activities that reduce travel demands or increase the use of alternative modes of transportation in order to conserve energy, reduce noise, water and air pollution and discourage urban sprawl.





# Vision 2020 Comprehensive Plan Seminole County, Florida

**Policy TRA 12.7 Support Quality of Environment**

The County shall continue to consider mass transit, paratransit and transportation demand management activities as one means of supporting the County's goals, objectives and policies to conserve natural resources, maintain the quality of the environment, improve the aesthetic and sensory quality of the urban community and discourage urban sprawl.

**Policy TRA 12.8 Conservation Compliance**

The County shall maintain close coordination with the airport authority during the expansion of existing or new facility siting improvements and shall endeavor to ensure compliance with the Conservation Element and conservation and natural resource laws, rules and regulations and to ensure protection and conservation of natural resources within the airport.

**Policy TRA 12.9 Conservation Information**

The County shall provide current available information on conservation land uses, wetland boundaries, flood plains, threatened or endangered species and other environmentally regulated areas and transmit them to the airport and rail companies as necessary.





# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE TRA 13 FINANCING AND PROGRAMMING TRANSPORTATION IMPROVEMENT

The County shall provide a financially feasible program for funding transportation improvements necessary to support the growth forecasts, goals, objectives and policies of the Future Land Use Element and as one means of providing for a safe, convenient and efficient transportation system, through implementation of the following policies.

### Policy TRA 13.1 **Adopt Capital Improvements Program**

The County shall establish and adopt a Capital Improvement Program that shall be updated annually. The CIP shall list planned improvements for all vehicular, transit, pedestrian, and bicycle modes and their interconnections.

### Policy TRA 13.2 **Programming of Transportation Improvements**

The County shall plan, program and implement transportation improvements based on the costs and benefits of individual projects as they relate to improving the overall performance of the transportation system and in coordination with the land development program reflected in the Future Land Use Element. The County shall consider existing and projected capacity deficiencies, safety deficiencies, physical and policy constraints, required right-of-way needs, design deficiencies and system continuity considerations in the prioritization of transportation improvements.

### Policy TRA 13.3 **Funding of Transportation Improvements**

The County shall continue to fund transportation improvement costs and operation and maintenance costs of the County Road System, transit system, and bicycle and pedestrian facilities through available sources of revenue, such as:

- State and Federal funds,
- Constitutional gas tax,
- Countywide road and bridge ad valorem tax,
- Local option gas tax,
- Local option sales tax,
- Special assessment districts, and
- Impact fees

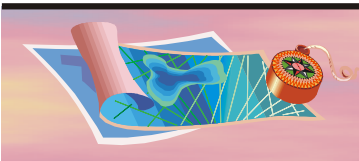
### Policy TRA 13.4 **Use of Transportation Plans as Basis for Funding Improvements**

The County shall use its transportation plans at the regional and State levels as the basis for securing Federal and State funds for improvements to the major road systems.

### Policy TRA 13.5 **Pursue Alternate Forms of Funding**

The County shall pursue funding outside the normal funding process for transportation projects that are needed by Seminole County residents but are not listed in either the financially feasible transportation plans or in the 5-year work programs at the regional and State levels.





# Vision 2020 Comprehensive Plan Seminole County, Florida

The County will pursue additional and alternative funding, as appropriate, for improvements indicated in *Exhibit TRA: Roadway Number of Lanes 2020* and *Exhibit TRA: Transit Service 2020*. A list of high priority transportation projects not included in the Metroplan Orlando Financially Feasible Plan 2020 Revised can be found at *Exhibit TRA: Needed Unfunded Transportation Improvements*.

## Policy TRA 13.6

### **Promote Increased Funding Support**

The County shall support legislative initiatives to increase existing funding and provide new State funding sources for the County road system, the State highway system within the County, the city street system, transit capital and operations, pedestrian and bicycle facilities, and other transportation facilities and services of regional significance such as the Central Florida GreeneWay. The County shall request the Legislature to support legislative initiatives to establish dedicated sources of revenue for the provision of transit services without a requirement for a local referendum.

## Policy TRA 13.7

### **Evaluate Local Funding Options**

The County shall continue to evaluate and, as deemed necessary, establish new or alternative assessments, fees or charges for the improvement, operation and maintenance of the major road system and for the provision of mass transit, paratransit, transportation demand management, and/or pedestrian and bicycle services, facilities and equipment.

## Policy TRA 13.8

### **Mitigation of Transportation Impacts Generated by New or Expanded Land Development Activities**

The County shall continue to require new or expanded land development activities to be responsible for the costs of transportation improvement needs generated by new growth and development.

## Policy TRA 13.9

### **Update Impact Fee Program**

As required, the County shall evaluate the need to update its Impact Fee Program to ensure that it is responsive to the transportation needs generated by new growth and development. The County shall ensure that transit service and airport and rail facility expansion plans are adequately reflected in Road Impact Fee Program Updates.

## Policy TRA 13.10

### **Mitigation of Site Related Transportation Impacts**

In addition to the payment of Impact Fee Assessments, the County shall continue to require new or expanded land development activities to provide transportation improvements for: (1) safe and convenient on-site traffic circulation; and (2) safe and adequate access to the major road systems when such land development activities cause, in whole or part, the need for new improvements or the earlier completion of the improvement.

## Policy TRA 13.11

### **Support Private Initiatives**

The County shall support private initiatives for the implementation of transportation improvements that are consistent with the Plan.

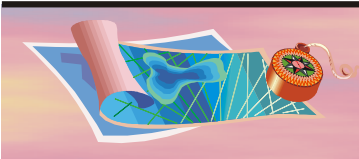


# Vision 2020 Comprehensive Plan Seminole County, Florida



- Policy TRA 13.12 Coordinated Capital Plans with Airport Authority and Rail Companies**  
The County shall coordinate with the Airport Authority and rail companies during annual CIE updates to ensure participation in the County roads and utilities programs.
- Policy TRA 13.13 Evaluate Provision of Transit Services**  
By 2005, the County shall evaluate the provision of transit services, and shall ensure that it is provided at a fair and reasonable price as compared to other alternatives and that it is financially feasible.
- Policy TRA 13.14 Consideration of Economic Vitality and Environmental Quality**  
In its planning activities, the County shall consider the role that the transportation system plays in maintaining the economic vitality and environmental quality of the County.
- Policy TRA 13.15 Public Participation**  
The County shall continue to require public notice of and public meetings on the planning and design of transportation improvements as required by law or as established by policy of the Board of County Commissioners.
- Policy TRA 13.16 Consideration of Transportation Systems Management Activities**  
In order to make more efficient use of the existing transportation infrastructure and available financial resources, the County shall continue to consider and implement transportation systems management activities which discourage urban sprawl, reduce travel time, increase capacity at a relatively low cost, and increase the use of alternative modes of transportation.
- Policy TRA 13.17 Adopted Future Transportation System Map Series**  
The County adopts the Future Transportation System Map Series as depicted in the Exhibits.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## **OBJECTIVE TRA 14 INTERGOVERNMENTAL COORDINATION**

The County shall coordinate its transportation plans and programs with the plans and programs of appropriate Federal, State, regional and local agencies and authorities as one means of providing for a safe, convenient and efficient transportation system.

### **Policy TRA 14.1 Coordination of Plans and Programs**

Through its transportation planning program, comprehensive planning program, representation on boards and committees, and through other activities, the County shall continue to coordinate its transportation plans and programs with those of:

- Florida Department of Transportation,
- East Central Florida Regional Planning Council,
- Metropolitan Planning Organization,
- Central Florida Regional Transportation Authority,
- Other transit providers,
- Transportation authorities,
- Other counties and municipalities and
- With any other plans or programs prepared pursuant to Chapter 380, F.S.,

In addition, the County shall coordinate Airport and Rail expansion plans with the appropriate agencies and plans, including, but not limited to, the

- Army Corps of Engineers,
- Federal Aviation Administration,
- Metropolitan Planning Organization,
- Military services,
- Approved Resource Management Plan,
- Department of Transportation 5-Year Transportation Plan,
- Adopted Continuing Florida Aviation System Planning Process and
- All Joint Planning Agreements.

### **Policy TRA 14.2 Monitor and Update Data**

In cooperation with Federal, State, regional and local agencies, the County shall continue to monitor and, at least annually, update its information on land development activities and transportation system characteristics.

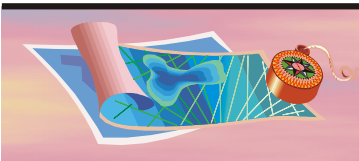


# Vision 2020 Comprehensive Plan Seminole County, Florida



- Policy TRA 14.3      Coordination with the Florida Department of Transportation**  
The County shall coordinate the development of the State Highway System with the planning, construction, maintenance and permitting functions of the Florida Department of Transportation through the County programs and activities which parallel these Florida Department of Transportation functions.
- Policy TRA 14.4      Mitigation of Impacts of Extra-Jurisdictional Traffic**  
The County shall coordinate with the Florida Department of Transportation, the Florida Department of Community Affairs and appropriate local governments on a program and schedule for mitigating the impacts of extra-jurisdictional traffic on the County and State road system.
- Policy TRA 14.5      High Speed Rail Siting Coordination**  
The County shall coordinate with the East Central Florida Regional Planning Council, the Department of Community Affairs and other appropriate local government agencies on issues related to the siting of high speed rail stations and ancillary facilities. The high speed rail shall be balanced with the community needs within the corridor.
- Policy TRA 14.6      Efficient Use of International Airport Capacity**  
The County shall endeavor to ensure full utilization of the Orlando Sanford International Airport by requesting the East Central Florida Regional Planning Council, the Federal Aviation Authority and the Florida Department of Transportation to include a policy in the Metropolitan Aviation Systems Plan and their appropriate agency plans that supports full utilization of the ECFRPC's existing Airport capacity when new capacity is planned.
- Policy TRA 14.7      Active Participation**  
The County shall continue to actively participate on the technical advisory committees and the policy making boards such as those of the East Central Florida Regional Planning Council, the Metropolitan Planning Organization, and the Central Florida Regional Transportation Authority in order to represent the County's transportation policies, needs and desires.
- Policy TRA 14.8      Urbanized Area Boundary Update**  
The County shall evaluate the need to update the Urbanized Area Boundary annually. All updates shall be coordinated with the Florida Department of Transportation, the Metropolitan Planning Organization and appropriate local governments.
- Policy TRA 14.9      Support Regional Transportation Planning**  
The County shall actively participate in transportation planning efforts for projects that are outside Seminole County when those projects impact the regional travel needs of Seminole County residents.





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- Policy TRA 14.10 Regional Approach for Provision of Mobility and Accessibility**  
The County shall continue to work with the Florida Department of Transportation, the Metropolitan Planning Organization, local governments and other public/private entities to identify, promote and construct transportation improvements of various modes and intermodal facilities that will:
- Increase the mobility options for the movement of people, freight and goods, and
  - Enhance the accessibility of the County from the balance of the Central Florida region and the urban/economic centers.
- Policy TRA 14.11 Support Transit Programs of Other Agencies**  
The County shall continue to support and promote the adoption of policies and programs by Federal, State and local agencies and transit service providers that insure that the County receives its fair share of federal and state transit funds and that the County can contract for transit services at a fair and reasonable price.
- Policy TRA 14.12 Support Establishment of Mechanisms to Enhance Intergovernmental Coordination**  
The County shall continue to support the establishment of coordinating committees, interlocal agreements and other formal mechanisms to enhance intergovernmental coordination efforts through continued participation/representation of policy, technical and coordinating committees, related to by way of examples:
- A Monitoring of land development activities and transportation system characteristics;
  - B Conducting transportation studies;
  - C Planning and programming transportation improvements;
  - D Evaluation of development impacts on transportation facilities;
  - E Protection of existing and future rights-of-way;
  - F Compatibility among adopted transportation standards; and
  - G Maintaining level of service standards on transportation facilities.
- Policy TRA 14.13 Municipal Participation**  
The County shall promote and actively pursue the cooperation and participation of the several municipalities in funding their share of the cost for the delivery of transit services. The County shall continue to implement the Road Impact Fee Program on a Countywide basis.
- Policy TRA 14.14 Multi-Jurisdictional Review**  
The County shall continue to support multi-jurisdictional participation in the development review and approval process of development projects through standing committees and boards, interlocal agreements, and other mechanisms.





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- Policy TRA 14.15 Encourage Coordination with Educational/Training Institutions**  
The County shall encourage local transit providers to coordinate with the Seminole County School Board, Seminole Community College, University of Central Florida and other educational and training institutions to provide efficient transit services to students and faculty and for educational activities. The County shall continue to coordinate with the School Board in providing safe access to existing and future school sites through the proper design of future roadway, pedestrian, and bicycle improvements and by requiring access control and sidewalks for new developments.
- Policy TRA 14.16 Encourage Public Agencies to Provide Transit Related Programs for Employees**  
The County shall encourage public agencies to provide transit, paratransit and transportation demand management programs for employees.
- Policy TRA 14.17 Economy Studies**  
The County shall include the airport facilities as economic factors when preparing an economic plan and when coordinating with the Economic Development Commission of Mid-Florida, the Private Industry Council, chambers of commerce and other economic development agencies.
- Policy TRA 14.18 Airport Economic Role**  
The County shall recommend that the Airport include in its Master Plan an evaluation of the relative impact that different aviation activities may potentially have on the Airport's overall economic development.
- Policy TRA 14.19 Tourism Potential of Airport**  
The County shall coordinate its tourism development program with the Orlando Sanford Airport by promoting Orlando Sanford Airport facilities and capacity in tourist development activities.
- Policy TRA 14.20 Provision of Socioeconomic Data**  
The County shall assist the Airport Authority in attracting passenger and cargo service by providing the Airport Authority with copies of County socioeconomic projections and economic/demographic data relevant to attracting Airport industries.
- Policy TRA 14.21 Preservation of Rail Service**  
The County shall monitor the service plans of railroad companies servicing the County (Amtrak, CSX and Florida Central) to endeavor to ensure that passenger and freight service to Seminole County is maintained as required by the Florida Department of Transportation's Florida Rail System Plan.
- Policy TRA 14.22 Florida Trail/Rails to Trails**  
The County shall coordinate with the Florida Trail Association, the Rails to Trails Conservancy and other organizations involved in the acquisition and development of trail systems within Seminole County.



**Policy TRA 14.23 State Road 13**

The County shall continue to permit the use of the Old SR 13 property by the Florida Trail Association and shall encourage the expansion of the Flagler Trail within Seminole County.

**Policy TRA 14.24 Adopted Standards**

As the County's adopted standards for transportation facility planning and to adhere to the provisions of State law relating to same, it shall continue to utilize:

- Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways ("The Green Book"),
- Manual of Uniform Traffic Control Devices,
- Seminole County Land Development Code,
- Seminole County Transportation Guidelines, and
- Florida Department of Transportation's 1986 Standard Specifications for Road and Bridge Construction.

