EVALUATION OF MAJOR ISSUES

2.3A: Transportation Concurrency

LOS Standards for Transportation:

The County will analyze the impacts of LOS standards on land use trends; explore adding new Concurrency Exception Areas, developing standardized concurrency methodologies for Volusia County and all municipalities with the County and allowing Transportation System Operations Improvements to meet LOS standards.

INTRODUCTION

Setting acceptable level of service (LOS) standards for transportation is a crucial process for communities. Setting standards that are too high can deter development, while setting standards that are too low can cause roadway level of service problems. Understanding these tendencies and their effects on where growth occurs is vital for a successful concurrency program.

In addition to establishing the appropriate LOS for specific segments or facilities, communities must also coordinate their respective standards in order to minimize conflicts. Many transportation facilities traverse multiple jurisdictions. It is not uncommon to have a different LOS on the same facility. Because Volusia County has 16 municipalities, policies contained in the various comprehensive plans are sometimes different from the County’s adopted Policies. Additionally, it is not uncommon to have different processes to determine concurrency on the same facility. These inconsistencies can lead to unintentional, unexpected and often unwanted results. Establishing consistent concurrency methodologies and standards will help to eliminate these problems.

Another instrument that has been applied in growth management is the establishment of transportation concurrency exception areas or TCEAs. Some professionals believe traditional concurrency is a reactive system and not a planning tool. TCEAs provide a means to be pro-active in land development and growth management. Additionally, TCEAs provide an array of modal choices in areas experiencing higher-than-usual traffic volume.

Specifically, the Florida statutes state that local governments may grant an exception from concurrency requirements if the proposed development is otherwise consistent with the Comprehensive Plan and it promotes public transportation. It also must be within an urban infill development, redevelopment, or downtown revitalization area.

With the establishment of a TCEA, a local government will have indicated the type and amount of development required in a specific area. A TCEA will also indicate the type of improvements required from the development community in advance of project approval.

In addition to TCEAs a community may allow small-scale, low cost improvements often referred to as traffic operations (traffic ops, for short) as a means for developers to mitigate concurrency failures. These types of improvements, often in the form of turn
lanes, acceleration lanes, eliminating or adding median, curb cuts, traffic lights or similar low cost improvements, all tend to be very effective in managing congestion.

However, none of these types of mitigation strategies can be effective without a coordinated and standardized concurrency analysis process. When the LOS standards are coordinated, but the analysis process is different from one community to another, the results can be detrimental to the overall flow of traffic. Ideally both the standard and the analysis process are identical for all communities along a given corridor.

BACKGROUND

Thoroughfare Roadway System

The Comprehensive Plan establishes LOS standards for different areas and roadway types under the County’s jurisdiction. The standards are identified beginning on page 2-13 of the plan and are graphically displayed below. These standards are established to fulfill the requirements under Chapter 9J-5 of the Florida Administrative Code (FAC).

Table 2.3A: State Maintained Thoroughfares Minimum Level of Service Standards

<table>
<thead>
<tr>
<th>Roadway Type</th>
<th>Rural Areas</th>
<th>Transitioning Areas</th>
<th>Urbanized Areas Under 500,000</th>
<th>Urbanized Areas Over 500,000</th>
<th>Roadways parallel to Exclusive Transit Facilities</th>
<th>Inside Transportation Concurrency Management &amp; Exception Areas</th>
<th>Constrained &amp; Backlogged Roadways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Access Highway – FIHS</td>
<td>B</td>
<td>C</td>
<td>C(D)</td>
<td>D(E)</td>
<td>D(E)</td>
<td>D(E)</td>
<td>Maintain</td>
</tr>
<tr>
<td>Controlled Access Highway – FIHS</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>E</td>
<td>Maintain</td>
</tr>
<tr>
<td>Other Multilane – Non FIHS</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>D</td>
<td>E</td>
<td>E</td>
<td>Maintain</td>
</tr>
<tr>
<td>Two-Lane – Non FIHS</td>
<td>C</td>
<td>C</td>
<td>D</td>
<td>D</td>
<td>E</td>
<td>E</td>
<td>Maintain</td>
</tr>
</tbody>
</table>

Source: Volusia County Comprehensive Plan, as amended 14 December 2004 – Page 2-13

() LOS Standards inside of parentheses apply to general use lanes only when exclusive through lanes exist. Source: FDOT 2002 LOS Manual
Table 2.3B: County Maintained Thoroughfares Minimum Level of Service Standards

<table>
<thead>
<tr>
<th>Roadway Type</th>
<th>Rural Areas</th>
<th>Transitioning Areas</th>
<th>All Urbanized Areas</th>
<th>Inside Transportation Concurrency Management and Exception Areas</th>
<th>Constrained and Backlogged Roadways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterials</td>
<td>C</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>Maintain</td>
</tr>
<tr>
<td>Collectors</td>
<td>C</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>Maintain</td>
</tr>
</tbody>
</table>

Source: Volusia County Comprehensive Plan, as amended 14 December 2004 – Page 2-14

Additionally, the County has established Objectives within the Plan that addresses the linkage between the LOS and its impact on land use. Specifically, Objective 2.1.2 requires that there be coordination and compatibility between the Thoroughfare System and any modifications to the Future Land Use Element. Objective 2.1.2 is listed below:

Objective 2.1.2 Volusia County shall coordinate the transportation system with the Future Land Use Element to ensure compatibility between land use and the thoroughfare system necessary to support it.

This Objective has 13 Policies that are designed to ensure its success. One of those 13 Policies, namely Policy 2.1.2.4, requires that all proposed land use changes be evaluated based upon its impact to the thoroughfare LOS. In essence, the current Objectives and Policies appear to be adequate as relating to monitoring this issue.

In 1998 when the EAR-based Comprehensive Plan Amendment was adopted, the County analyzed the thoroughfare roadway system to determine what would be needed in the year 2020. The progress for implementation of those identified needs are shown on Figures 2.3A and 2.3B. These maps exemplify the major road projects completed between fiscal years 1996 and 2005 for both the east and west sides of the County, respectively.

Thoroughfare Overlay Zone

The County’s Comprehensive Plan identified the types of development that tend to lead to a degradation of the transportation system. In an effort to reduce or eliminate that type of development, namely uncontrolled strip commercial, the County created a thoroughfare overlay zone.

The premise that led to the creation of the overlay zone was fueled by the belief that once a community identifies a corridor as being commercial it becomes difficult, if not, impossible to change that pattern of development. For that reason, the County prepared additional regulations to monitor and control growth within those transportation corridors. These corridors were designed to accomplish three goals; (1) move large volumes of through traffic in addition to significant volumes of everyday local traffic, (2) reduce the amount of existing strip commercial development, and (3) promote controlled access with adequate separation.
Map Figure 2.3A

Major Road Projects for FY 95/96 - FY 04/05 by Florida DOT and Volusia County

Key to Features
- FDOT Bridge and Intersection Projects
- FDOT Projects
- Volusia County Bridge and Intersection Projects
- Volusia County Projects
- Development Road Projects
- FDOT 2000 Urban Areas
Map Figure 2.3B

Major Road Projects for FY 95/96 - FY 04/05 by Florida DOT and Volusia County

Key to Features:
- FlDOT Bridge and Intersection Projects
- FlDOT Projects
- Volusia County Bridge and Intersection Projects
- Volusia County Projects
- Development Road Projects
- FlDOT 2000 Urban Areas
The Objectives of the regulations controlling the corridors were crafted to prevent or decrease traffic congestion, establish high standards for development, as well as to enhance the appearance of the corridors. Achieving these Objectives required a special set of standards. These standards were incorporated into the County’s Zoning Ordinances as an overlay zone along three arterials, namely SR 40, US 92, and SR 44.

The specific densities setbacks, intensities, and types of uses permitted within the zone are determined according to the existing zoning classification, building location, and site design, as well as the overlay zone requirements.

**Transportation Concurrency Exception Areas**

Policy 2.1.6.14 recognizes the transportation concurrency exception area established by the City of Daytona Beach, and Policy 2.1.6.15 recognizes the transportation concurrency management area established by the City of DeLand. Recently, DeLand modified the TCMA to a multimodal management transportation district. This change will require a modification to the County’s Comprehensive Plan to reflect the new MMTD. There are currently no goals, objectives, or policies that promotes or allows the same for the County.

**Concurrency Management System**

The current concurrency management system does not specifically promote a coordinated or standardized system between the County and municipalities. However, Policy 2.1.4.7 does require that the development of the County’s five-year road program be coordinated. Given the relationship between the five-year road program and the concurrency management system, this could indirectly require that the concurrency systems be coordinated as well.

The Volusia Smart Growth Implementation Committee drafted a working document in July 2005 that outlines the three principles of smart growth. These principles are listed below.

**Environment**

Smart growth emphasizes the early identification and preservation of environmentally important areas, open space, and agricultural areas. These were conceived of as a connected network of multi-purpose lands that form the community’s “green infrastructure.”

**Communities**

Smart growth emphasizes compact, walkable, mixed use communities that feel and function like communities, not just developments. It emphasizes redevelopment wherever possible, while recognizing that redevelopment alone is not sufficient to accommodate new growth. It seeks to use land and infrastructure efficiently to reduce the costs of servicing new development.

In order to achieve these characteristics, smart growth development is usually denser than typical contemporary suburban development. These higher densities allow
population to be accommodated while preserving larger amounts of environmentally important lands and open space. They also promote walkability and mixed uses within communities. It is important to understand that these densities, while higher than usual in contemporary development, do not need to be high in absolute terms. The model most often sought by smart growth communities is that of the nineteenth century American small town with a defined center and a preponderance of single-family housing. High-quality design integrates the higher density development with surrounding lower-density areas. Communities have almost unlimited latitude to accommodate these higher densities in ways consistent with each community’s vision of itself and its future.

Another key characteristic of smart growth communities is the provision of a range of housing choices, including choices designed for different age groups, incomes and household sizes. This helps ensure that those who work to support the community – teachers, police officers, service workers – can live in or near the community where they work, and can benefit from the vibrant communities that smart growth seeks to create. This is especially important as smart growth has the potential to contribute to increasing property values and housing prices.¹

Economy

Finally, smart growth emphasizes a strong economy. Public investments contribute to economic competitiveness, community’s plan with the needs of economic development in mind, and in turn a healthy economy provides the resources to achieve the goals of smart growth.

The recommendations that resulted from this initiative were very specific. One of those recommendations is listed below.

Recommendation E1. – Coordinated Approach to Transportation Concurrency Management [SB 360]

Volusia County’s Concurrency Management system is consistent with Florida Statute 163.3180. The de minimis impact for concurrency review is one percent of the maximum volume at the adopted level of service of the affected transportation facility. Volusia County and Volusia municipalities should develop a single, coordinated approach to defining and implementing transportation concurrency. This should include a common approach to designating and calculating levels of service, and an entity or mechanism charged with making final concurrency decisions if local governments cannot agree. This entity may be the decision-making board described in Recommendation V5. The Volusia MPO should be tasked with providing a recommendation for action by the decision-making board in cases where the local governments cannot agree.²

Transportation System Operations Improvements

² IBID
Objective 2.1.9 requires that the County consider the need for future traffic operation measures in the design of all major transportation system improvements. Under that Objective there are 5 Policies all requiring some form of operations analysis be performed when deficiencies are identified. This includes during the updating process of the County’s Thoroughfare System, as well as during concurrency analysis process.

POTENTIAL SOCIAL IMPACTS

History has identified a one-to-one nexus between the established roadway level of service standard and the resulting development that occurs. If the standards are such that commercial development will be forced (economically) to locate on the outer fringe of a community, the residential development that follows that trend will have a negative effect on the long-term housing goals of a community. In essence, low-cost affordable housing will remain where it is currently located, within the inner city and away from better paying jobs.

This segregation of housing based on economic criteria will help to precipitate the ever-widening social and political gap between the lower and middle-classes, and those in the elite or upper class within society. Additionally, the types and amount of public works projects are in some cases controlled by the existence or non-existence of political forces. In many cases, this is at the expense of those residents in less affluent neighborhoods.

POTENTIAL ECONOMIC IMPACTS

The economic impacts from inconsistent and incompatible LOS standards are varied and numerous. They range from the costs associated with the continued operational failure of a facility due to a LOS standard that is not set at an appropriate level. In the end, when projects are allowed to continue without developer contributions beyond the payment of impact fees, the eventual burden to improving a facility to an acceptable standard will remain with the local government.

Also, because the standards play a role in the type and intensity of development, the community pays by the negative effect this has on attracting quality, higher paying employers.

OBJECTIVE ANALYSIS

The Objective analysis is provided in Table 2.3C using the recommended matrix format.
<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>TARGET</th>
<th>CONDITIONS AT THE 1998 EAR</th>
<th>CURRENT CONDITIONS</th>
<th>COMMENTS / ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.7.2 Ensure through land development regulations and capital improvements that the provision of roads and mass transit meet the adopted level of service standards.</td>
<td>Public services in the County of Volusia.</td>
<td>No failing segments at the time of Plan adoption.</td>
<td>One failing segment of SR A1A, which is the segment immediately north of SR 40 in Ormond Beach. This facility has been identified as being a constrained facility.</td>
<td>Continue to monitor the segment for opportunities to divert or reduce traffic.</td>
</tr>
<tr>
<td>2.1.6 Volusia County shall coordinate with the Volusia County Metropolitan Planning Organization (MPO) and other related agencies to achieve and maintain levels of service on the thoroughfare system as well as for mass transit services.</td>
<td>Coordination of services and plans to maintain adopted LOS.</td>
<td>Coordination occurred through the development of the MPO Long Range Plan and the County’s 5-Year Road Program.</td>
<td>Coordination continues to occur as before. However, rapid development causing cross-jurisdictional level-of-service issues. Additional countywide coordination needed in order to address future level of service issues.</td>
<td>Progressively coordinate with the MPO and other related agencies.</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>TARGET</td>
<td>CONDITIONS AT THE 1998 EAR</td>
<td>CURRENT CONDITIONS</td>
<td>COMMENTS / ACTIONS</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>---------------------------</td>
<td>--------------------</td>
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</tr>
<tr>
<td>2.2.1 Where possible, development of the Volusia County transportation system shall be directed away from areas which are naturally incapable of the service capacity to accommodate growth in an environmentally acceptable manner.</td>
<td>Control of growth away from constrained areas</td>
<td>NRMA boundaries established in the Volusia County Land Use Element limited development in environmentally sensitive areas.</td>
<td>Same as before. Also, Volusia Forever was created in 2000. The citizens of Volusia County voted to tax themselves .2 mils over 20 years to protect the County’s natural biodiversity. This program is one of the County’s best tools for directing development and transportation facilities away from environmentally sensitive areas.</td>
<td>Safeguards are in place and additional safeguards have been recommended within the EAR document.</td>
</tr>
</tbody>
</table>

RECOMMENDATION – LOS Standards For Transportation

Conduct a County-wide LOS study using FDOT LOS software and the HCM Software to determine the appropriate service volumes for each facility and segment. Once completed, develop a standardized concurrency review and analysis process that can be used by each municipality and the County. The study will also include a recommendation on a centralized agency responsible for performing the Objective concurrency analysis.
2.3B: Transportation Concurrency

Transportation Funding Issues:

The County will evaluate the current transportation revenue sources, i.e., impact fees and gas taxes, to assess their ability to fund multi-modal, backlogged and other concurrency-related projects. The County should develop a project prioritization process.

INTRODUCTION

In 1995, the Volusia MPO’s long-range transportation plan identified $500,000,000 in needed improvements. The one-half billion-dollar price tag was not constrained by available resources. This was the MPO’s needs plan, not the cost feasible plan. Today, ten years later, the price tag for the needs plan is $1.5 billion. In transportation planning, the revenue available to design and build needed facilities never keeps pace with costs. Identifying alternative financial resources for transportation improvements is a constant vigil. In most cases, local governments are limited to no more than two or three different sources. The sources range from gas taxes or general revenues, to impact fees or other developer contributions. Federal and state revenue sources are now directed towards roads on the new FDOT Strategic Intermodal System (SIS) plan, which means those revenues will no longer be available. Choosing which projects from an identified needs plan to get funding is more crucial now than ever before. Local governments have no choice but to prioritize projects.

The prioritization process should be limited to transportation projects that have been identified in the long-range planning process. To protect the integrity of the system, local governments must adhere to a strict set of procedures when adding projects that were not identified in the long-range planning process.

BACKGROUND

Comprehensive Plan

In 1998 the County adopted an update to the Transportation Element of the Comprehensive Plan. The update projected a 2% revenue shortfall for needed improvements in the year 2010. In 2020, that shortfall would increase to 19%. Given these projected shortfalls the County must begin to channel the available resources towards non-traditional transportation related improvements. The Land Development Code encourages specific, non-traditional improvements in lieu of the more expensive road widening projects.

Specifically, the Code states that acceptable mitigation for concurrency shall include, but not be limited to:

Adding turn lanes to the evaluated thoroughfare system and related road network;
Signalization, channelization and other acceptable improvement to intersections within the Thoroughfare System and related road network;
Turn prohibitors;
Improved traffic-control devices;
Subsidization of fixed route, flexible fixed route, express bus services; 
Subsidization of para-transit services; 
Access control and management, including limitations on ingress; egress; improvements 
in cross access with abutting, adjoining and nearby parcels in order to divert trips to road 
links with available capacity; 
Van and car-pooling programs; 
Staggered work hours, alternative work hours, home based work, telecommuting; 
Reduced parking, parking managements; 
Road reconstruction; and 
Other mitigation actions so permitted or agreed to by the County Traffic Engineer (CTE) 
and the Development Review Committee (DRC).

The Land Development Code (LDC) gives the responsibility of choosing the appropriate 
mitigation project to the County Traffic Engineer (CTE) and the Development Review 
Committee (DRC). The reason the responsibility has been placed with the CTE is that 
the CTE is responsible for managing the Thoroughfare Roadway System (TRS). 
However, the current process does not follow the LDC, and that responsibility is with 
another County department and the DRC. The CTE currently does not have a role in 
negotiating the appropriate mitigation projects that are eligible for impact fee credits and 
are listed in development orders.

The LDC places the responsibility of choosing the appropriate mitigation project to the 
CTE because of his/her intimate knowledge of the TRS. The CTE maintains the 
County’s transportation concurrency spreadsheet. This spreadsheet tracks both 
background and project trips. The CTE monitors the TRS level of service, as well as, 
those of surrounding municipalities. The office of the CTE is the centralized agency that 
the MPO, FDOT, and each of the neighboring agencies and local governments rely upon 
for transportation-related data and analysis. There is no agency within the County that is 
better suited to maintain the integrity of the TRS.

When the responsibility of approving mitigation projects is placed with the CTE, a true 
project prioritization process can be efficiently facilitated. The CTE is a prominent 
member of the MPO’s Technical Coordinating Committee (TCC). The TCC is charged 
with the responsibility of prioritizing the MPO’s long-range transportation plan cost 
feasible plan projects. The CTE will be able to rely on the established process of the 
MPO for use with the TRS and projects from the development review process. When 
this is accomplished, a mechanism will be established that will ensure coordination with 
the Comprehensive Plan.

**POTENTIAL ECONOMIC IMPACTS**

Economically, adhering to the LDC can have an immediate impact. The CTE can 
determine which developer projects that are not in the TRS will actually improve the level 
of service. When this occurs, the County will be able to reprogram funds from one 
project to a new, previously unfunded project, thereby creating economies of scale within 
the work program.

**OBJECTIVE ANALYSIS**

The Objective analysis is provided in Table 2.3D using the recommended matrix format.
Table 2.3D: Objective Analysis Regarding Transportation Funding Issues

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>TARGET</th>
<th>CONDITIONS AT THE 1998 EAR</th>
<th>CURRENT CONDITIONS</th>
<th>COMMENTS / ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1.19 Volusia County shall require applicants for development proposals to be consistent with all adopted transportation plans of the FDOT, the Volusia County MPO, Volusia County, and all affected municipalities.</td>
<td>Consistency and compatibility.</td>
<td>Somewhat consistent. Coordination and implementation required needed improvements.</td>
<td>Projects continue to be added to the TRS that were not previously identified in the long-range transportation planning process.</td>
<td>Follow the Goals, Objectives, and Policies, and the LDC as written.</td>
</tr>
<tr>
<td>2.1.1.20 Volusia County has established parking strategies that promote its transportation Goals and Objectives.</td>
<td>Increased reliance on public transportation.</td>
<td>Coordination was strongly urged and a commitment was established.</td>
<td>Parking requirements in areas conducive to Public Transportation are not under the purview of the County.</td>
<td>Review the current LDC and the zoning codes for parking requirements.</td>
</tr>
<tr>
<td>2.1.1.23 Volusia County shall coordinate with the Volusia County MPO to develop a County-wide Bicycle and Pedestrian Systems Plan.</td>
<td>Increase non-motorized travel infrastructure.</td>
<td>Coordination began in earnest.</td>
<td>Plan is scheduled to be adopted.</td>
<td>No change.</td>
</tr>
<tr>
<td>2.1.1.29 Volusia County shall research traffic-calming techniques and explore their feasibility.</td>
<td>Increased safety.</td>
<td>Techniques were to be applied in certain areas of the County.</td>
<td>Same as before.</td>
<td>Continue current implementation strategy.</td>
</tr>
</tbody>
</table>

RECOMMENDATION - Transportation Funding Issues

Conduct a review and establish a set of policies requiring that each roadway added to or modified in the TRS go through a prioritization process developed in conjunction with other applicable County departments, and maintained by the County Traffic Engineer.
2.3C: Transportation Concurrency

Thoroughfare Roadway System Issues:

The County will research and analyze coordinating the County road classifications with the Florida Department of Transportation’s (FDOT) Strategic Intermodal System (SIS). The County will assess the impacts from developing a set of criteria for additions, to the Thoroughfare Map based on regional benefits. They will also analyze the need to remove scenic, constrained, and/or other roads from the Thoroughfare Map.

INTRODUCTION

A County’s short and long-range transportation plan, in order for it to be efficient and effective, must be coordinated and consistent with the plans from other agencies or municipalities. It should also be a plan that helps to protect areas or corridors within the County that have been recognized as being important for social and environmental purposes. Any modifications to the plan must meet these same criteria.

Additionally, the projects in the plan should be beneficial to regional and/or inter-city/jurisdictional travel. This criterion is especially important to Volusia County residents given the close proximity of the different jurisdictions within the County.

BACKGROUND

Strategic Intermodal System (SIS)

Florida’s Strategic Intermodal System (SIS) was established in 2003 and adopted in January 2005 to enhance Florida’s economic competitiveness by focusing the State’s limited resources on facilities that are critical to Florida’s economy and quality of life. The SIS is a state-wide network of high-priority transportation facilities. It includes the state’s most significant commercial service airports, spaceport, deepwater seaports, freight rail terminals, passenger rail and inter-city bus terminals, rail corridors, waterways and highways. These systems carry more than 99 percent of all commercial air passengers, and more than 68 percent of all truck traffic and 54 percent of total traffic on the State Highway System.  

The amount of funding applied to the SIS matches the level of importance that has been placed on the system. Approximately 75% of the federal metropolitan area funds now go towards the SIS. Metropolitan Planning Organizations (MPOs) now control only 25% of urban area funds. That MPO number is expected to decrease over the next five to ten years.

Volusia MPO’s Long-range Transportation Plan is the foundation of the County’s Thoroughfare Roadway Plan. The MPO’s plan is largely controlled by projects on the FDOT’s SIS. In essence, all three documents must be consistent. Any gaps within the three systems will be the responsibility of the local governments.

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3 T. Kraft, Florida’s Strategic Intermodal System Plan (FDOT, 2005)
Policy 2.1.1.1 states that the County has adopted the Federal Functional Classification system. Policy 2.1.1.2 states that the County shall coordinate and cooperate with the FDOT to limit access to the State Thoroughfare System, i.e., the SIS, in order to facilitate the efficient flow of traffic and to enhance the State Thoroughfare System’s capacity.

**Transportation Element**

**Thoroughfare Roadway System**

The County's Thoroughfare Roadway System (TRS) is the list of arterial roads that serve longer trip lengths and major travel purposes to or through urban areas. The TRS is also a list of collector roads that serve moderate trip lengths and minor travel purposes, provide access to the Arterial Road system, and connect concentrated land uses.\(^4\)

The TRS is the source document that the County relies upon for concurrency analysis. Currently, there are no objective criteria that the County uses to create or modify the TRS. During the traffic impact analysis process for concurrency, a developer may add a project to the list that may or may not be consistent with the Transportation Element of the Comprehensive Plan. Florida Statutes requires that the TRS be consistent with the Comprehensive Plan. Any modification to the TRS requires an amendment to the Comprehensive Plan.

**Scenic Corridors**

Volusia County is buttressed by the St. Johns River on the west and the Atlantic Ocean on the east. Within those two boundaries lie several environmentally sensitive areas. These and other natural environments provide the County with a wealth of visual opportunities. However, the Comprehensive Plan has projected a 2020 population of approximately 610,000 people. For this reason, the County must strike a balance between the pressures of growth and the need to protect these natural environments. In anticipation to these pressures the County has designated seven scenic corridors.\(^5\) None of these corridors are referenced in the Land Development Code. Specifically they are not referenced in the concurrency management system, which is the section of the Codes that constrained corridors should be specifically referenced.\(^6\)

The LDC, in Section 1404, (4)(b) 1, 2, and 3, pages CDA 127 -128, does allow widening of backlogged and constrained facilities, which includes some of the scenic corridors. This appears to be in contradiction to the definition of a constrained facility or scenic corridor.

**POTENTIAL ECONOMIC IMPACTS**

Coordination of FDOT’s SIS with the County’s TRS can benefit the community in several ways. When both documents are coordinated, it ensures that the level of service

\(^4\) Volusia County Council, *Volusia County Comprehensive Plan - Transportation Element* (Volusia County – December 2004)

\(^5\) IBID

standards will be coordinated. When the standards are coordinated the likelihood of project duplications or conflicts are reduced or eliminated, which in turn reduces costs.

**POTENTIAL ENVIRONMENTAL IMPACTS**

When backlogged or constrained facilities are not allowed to be widened, the pressure from the development community will lessen in the area of the facility. Less development equates to more protection of the natural resources in and around the backlogged or constrained facility.

**OBJECTIVE ANALYSIS**

The Objective analysis is provided in Table 2.3E using the recommended matrix format.
### Table 2.3E: Objective Analysis Regarding Thoroughfare Roadway System Issues

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>TARGET</th>
<th>CONDITIONS AT THE 1998 EAR</th>
<th>CURRENT CONDITIONS</th>
<th>COMMENTS / ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.6.5 Scenic Routes: Volusia County may establish scenic routes and roadways consistent with the Scenic Roadway Element, to preserve the natural beauty and vistas of the Coastal Management Planning Area.</td>
<td>Consistency, compatibility, and coordination.</td>
<td>No corridor management plans at time of Plan adoption.</td>
<td>There are three (3) plans: Lake Monroe, Lake Helen - Cassadaga, and the Ormond Loop.</td>
<td>Per the County Council’s direction, continue to implement the recommendations in the corridor management plans and pursue a State designation for the Ormond Loop.</td>
</tr>
<tr>
<td>2.1.2 Volusia County shall coordinate the transportation system with the Future Land Use Element to ensure compatibility between land use and the thoroughfare system necessary to support it.</td>
<td>Consistency, compatibility, and coordination.</td>
<td>Growth Management Staff and the Traffic Engineering Staff worked very closely together on reviewing future land use amendments to the Volusia County Comprehensive Plan.</td>
<td>Same as before.</td>
<td>The County has a thorough system of checks and balances between the departments involved in growth management and public works/engineering.</td>
</tr>
<tr>
<td>2.1.3 Volusia County shall review as necessary, the 2020 Thoroughfare Roadway System Map (Figure 2-1) to ensure appropriateness and to protect rights-of-way needed for transportation improvements.</td>
<td>Land use compatibility and protection of necessary R-O-W.</td>
<td>Achieved through regulations in the adopted Volusia County Land Development Code.</td>
<td>Same as before.</td>
<td>This is an on-going process that has helped to reduce construction cost on several projects.</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>TARGET</td>
<td>CONDITIONS AT THE 1998 EAR</td>
<td>CURRENT CONDITIONS</td>
<td>COMMENTS / ACTIONS</td>
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<td>2.1.4 Volusia County shall coordinate the transportation system with the plans and programs of the Volusia County MPO, the Florida Transportation Plan, and the FDOT’s Adopted Work Program.</td>
<td>Consistency and coordination of Plans.</td>
<td>The County participates on several of the MPO advisory committees, holds public meetings during the development of the Five-Year Road Program, and has Joint Planning Agreements with various municipalities.</td>
<td>Same as before.</td>
<td>Continue with the current process.</td>
</tr>
<tr>
<td>2.1.6 Volusia County shall coordinate with the Volusia County Metropolitan Planning Organization (MPO) and other related agencies to achieve and maintain levels of service on the thoroughfare system as well as for mass transit services.</td>
<td>Consistency and coordination of Plans.</td>
<td>Coordination occurred through the development of the MPO Long Range Plan and the County’s 5-Year Road Program.</td>
<td>Coordination continues to occur as before. However, rapid development causing cross-jurisdictional level-of-service issues. Additional County-wide coordination needed in order to address future level-of-service issues.</td>
<td>The County and the MPO staff rely upon each other for exchange of information and data on a regular basis.</td>
</tr>
<tr>
<td>2.1.7 Volusia County shall ensure that current and future transportation system needs are financed in an effective, efficient, and equitable manner.</td>
<td>Financially feasible transportation system.</td>
<td>The Countywide impact fee program was in place and collected funds by zone to successfully make needed road improvements as identified in the 5-Year Road Program.</td>
<td>Same as before. Also, with the passage of Senate Bill 360, a proportionate fair share calculation will need to be considered.</td>
<td>The County will continue to rely upon local jurisdictions to assist in identifying opportunities to fund transportation needs.</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>TARGET</td>
<td>CONDITIONS AT THE 1998 EAR</td>
<td>CURRENT CONDITIONS</td>
<td>COMMENTS / ACTIONS</td>
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</tr>
<tr>
<td>2.1.9 Volusia County shall consider the need for future traffic operation measures in the design of all major transportation system improvements.</td>
<td>Ensure that small-scale, low-cost measures are utilized for congestion mitigation options.</td>
<td>Coordinated with FDOT and the City of Daytona Beach on plans for advanced traffic operations systems.</td>
<td>Same as before.</td>
<td>The County was instrumental in the decision to allocate MPO funds on a regular basis towards traffic operations related improvements.</td>
</tr>
<tr>
<td>2.2.1 Where possible, development of the Volusia County transportation system shall be directed away from areas which are naturally incapable of the service capacity to accommodate growth in an environmentally acceptable manner.</td>
<td>Protection of environmentally sensitive areas.</td>
<td>NRMA boundaries established in the Volusia County Land Use Element limited development in environmentally sensitive areas.</td>
<td>Same as before. Also, Volusia Forever was created in 2000. The citizens of Volusia County voted to tax themselves .2 mils over 20 years to protect the County’s natural biodiversity. This program is one of the County’s best tools for directing development and transportation facilities away from environmentally sensitive areas.</td>
<td>Safeguards are in place and additional safeguards have been recommended within the EAR document.</td>
</tr>
</tbody>
</table>

RECOMMENDATION - Thoroughfare Roadway System Issues

Amend the Land Development Codes prohibiting any constrained/backlogged facilities from being widened.
2.3D: Transportation Concurrency

Multimodal Transportation:

Assess the provision of transportation choices by identifying needs/gaps via the Metropolitan Planning Organization (MPO) Bike/Ped Plan map, the County-wide Trails map, and the VOTRAN Transit Development Plan (TDP), and incorporate local and regional plans for commuter rail into the Comprehensive Plan.

INTRODUCTION

Overview

The old adage ‘if you build it, they will come’ is not just a field of dreams; it is true in transportation as well. History has proven that building additional lanes does not equate to a reduction in traffic, in most cases it actually increases traffic congestion. International transportation research has yielded other promising insights: the reduction of roadway capacity actually reduces traffic in most cases because people shift to transit, walking, bicycling and other modes of travel. In 1998, British researchers analyzed 60 road closures worldwide and found that on average, traffic decreased by 25 percent when a road was closed. It is becoming more imperative for metropolitan areas to start investing in more promising strategies to manage congestion. Recognizing that there is no simple prescription to this problem, some agencies have begun to develop integrated approaches that include expanding the choices available to travelers (e.g., transit, walking, bicycling, ride sharing, commuter rail), pricing strategies (e.g., roadway tolling, transit incentives), telecommuting, and travel demand management.

Multimodalism

Other Modes of Moving Goods and People

Methods of transporting goods and people that are not dependent on automobiles or trucks are numerous. Taxi fares could be subsidized for transit users and a shared ride taxi system could be established to fill in the gaps during non-commuting hours. In Europe and older American cities like New York and Chicago, it is possible to get back and forth to work, shopping, and entertainment without owning a car. In European cities, it is possible to walk from one side of the city to the other. In England, the majority of construction projects are on top of already built land. This practice preserves open-space, the countryside and creates a clear demarcation between a city or village and the countryside.\(^7\)

Sidewalks

Lack of sidewalks or missing sidewalk links forces children, who live within walking distance of schools, to ride school buses because there are no safe alternatives. The construction of new sidewalks not only allows more children to walk to school, thus reducing the use of school buses, but provides a mechanism for other members of the community such as joggers, cyclists, and dog walkers to enjoy the neighborhoods more.

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as well. Although some residents facing new sidewalks along their property have concerns about their property values and the increased pedestrian traffic near their homes, properly installed landscaping and additional lighting are just one means of addressing these issues.

A program in Maryland where the construction of one 900-foot sidewalk enabled 141 students to walk to school, eliminated three buses, which cost $10,000 to $35,000 a year to operate, and 2,000 bus trips per year. The funds saved from decreased bus use were redirected to educational programs.  

**Bicycles**

Consideration of bicycle facilities and pedestrian accommodations is explicitly mandated by TEA-21. Advocates for bicycling are working here in Florida to establish a bicycle and pedestrian friendly transportation system. The use of federal funds for bicycle and pedestrian facilities has increased from $8 million in 1990 to more than $265 million in 1997 because of the Transportation Enhancement program. Bicycling was thought of as a child’s activity, until adults started biking for aerobic exercise and out of concern for the environment. Today bicycling has become a viable alternative mode of travel due to increases in vehicular congestion.

In Florida, many bicycle trails have been built on abandoned railroad lines or designated on existing streets. It costs between $100,000 and $1 million dollars a mile to build a path, depending upon the surface material. Gravel paths are cheaper than asphalt or concrete. In the past, homeowners situated along proposed trails feared that the value of their property would drop; however, that has not been the case as property values have actually risen near bike trails. Trails have improved neighborhoods in urban and suburban areas. Road engineers have also discovered that improving highway shoulders to accommodate bike lanes typically saves money in road reconstruction and repair. 

**Bus Transit**

Many people rely on public transportation as their primary means of transportation. Transit is often the only option for persons with disabilities, low-income residents, and persons without cars. Transit authorities are creating new systems to serve our changing land use and lifestyles. Transit directors are working to stretch limited funding to meet the needs of their typical constituencies who lack access to a car, and commuters who want to avoid congestion, parking difficulties and expenses.

All public transit systems need to be more convenient to increase ridership. However, marketing of the system remains a major concern for most transit properties. Bus systems can be improved with better bus schedules, priority treatment for buses on multi-lanes roads, a signal pre-emption system, bike racks, transit hubs, and "real time" information regarding arrival and departure times. Buses need to be cleaner and future buses should be powered by "clean" diesel or compressed gas. A program that was

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8 IBID
originally included in TEA-21 provides money for transit systems to purchase buses that use new clean technologies and retrofit existing buses. Clean fuel is defined as:

- compressed or liquefied natural gas;
- bio-diesel fuels;
- batteries;
- alcohol-based fuels;
- hybrid electric;
- fuel cells;
- certain clean diesel (diesel engines that exhibit equivalent or superior emissions reductions to existing clean fuel or hybrid electric technologies);
- any other low or zero emissions technology that is certified by EPA to sufficiently reduce harmful emissions.

Transit agencies must apply for these funds. Florida needs to provide more operating funds to improve the system. It has been estimated that a ten percent nation-wide increase in transit ridership would save 135 millions gallons of gasoline each year, or roughly $405 million.  

Since 1998, VOTRAN has implemented the following new services:

The Beach Tram – 2000  
Route 24, which goes through Pierson and Seville up to the Putnam County Line – 2000  
Night Services – 2003  
Route 60, cross-County on Saturdays – 2005
- Route 200, Commuter Express service - 1998.  
- The Intermodal Transfer Facility (ITF) - 2000  
- VOTRAN's Stow & Go program for bike racks on buses - 2000

Commuter Rail Systems

Commuter rail has been generally defined as passenger train service that operates on existing freight railroad tracks. They primarily operate during "peak" travel times, usually the hours of 6:00 a.m. to 9:00 a.m. and again from 3:00 p.m. to 6:00 p.m.

Trains run inbound to the city center in the morning and outbound to suburban areas in the evening. The trains can also accommodate reverse commuters (passengers traveling to suburban areas for work) and other travel times, such as midday, evening and weekend hours.

Most commuter rail systems are integrated with other transit services, such as bus systems, to encourage transfers throughout the region.

10 IBID
A discussion of a proposed system in central Florida has been an on-going item for years. A proposed 61-mile system running from West Volusia to Poinciana Boulevard in Osceola County has been discussed and pursued. It would go through Seminole County and downtown Orlando at a cost of $473 million to build, and another $5 million per year to operate. The vast majority of the funds, 75%, would come from state and federal sources.

BACKGROUND

Comprehensive Plan

The Transportation Element of the Comprehensive Plan has 3 Goals, 13 Objectives, and 119 Policies. Two of the Goals, 5 of the Objectives, and 39 of the Policies are specifically promoting some form of multimodal or non-highway related planning and implementation efforts. In essence, there is no need to amend the Comprehensive Plan to require multimodal planning. The Land Development Code (LDC) also reflects the Goals outlined in the Comprehensive Plan related to multimodal planning. The land development review process that is currently in place to implement the LDC and the Comprehensive Plan does not adequately encourage multimodal choices. The current process must be proactive in discouraging traditional (highway capacity improvements) means of eliminating or reducing congestion. There are several templates around the country, and more specifically, around the area that uses non-traditional means of addressing issues related to congestion.

The County, through its membership on the MPO and the Volusia County Transit Authority, has an established mechanism in place to coordinate its plans with the other agencies. The County controls one-third or more of the votes on the MPO Board and the MPO Citizen's Advisory Committee. The Volusia County Council is also VOTRAN's board of directors. Its membership on the MPO affords the County an opportunity to identify needs and gaps in the entire system. Commuter rail planning and coordination is identified in Objective 2.1.1.8 of the Comprehensive Plan. Specifically it states,

Objective 2.1.1.8 Volusia County shall coordinate and cooperate with the FDOT, the Volusia County MPO, MetroPlan Orlando, VOTRAN, LYNX, and other agencies, to support state-wide high-speed, regional commuter, and/or light rail in Volusia County.

Each of these coordination efforts provides the policy makers, as well as the staff, numerous opportunities to implement plans and programs that are multimodal.

POTENTIAL SOCIAL IMPACTS

Many sectors of our population are transit dependent. As our population ages and marriages are delayed, households are changing. One-third of the home-buying market is over the age of 45 and prefers smaller houses and lots. Most trips by seniors are generally within two miles of their homes. Federal welfare programs that limit the amount of time recipients can be on welfare have increased the need for public transportation. Florida’s Welfare-to-Work program requires welfare recipients to be employed within two and a half years of initially receiving benefits. This increases the reliance on public transit for those without cars to get to work. Our transportation system must address
these issues, and serve the elderly, the young, the infirm, households without cars, and those who prefer to live a lifestyle that is not dependent on a car.

Recent data shows that most of the entry-level job centers are located far away and inaccessible by transit from the largest concentration of people who are either out of work, without a car, or both. Most of the transportation improvements in the County’s Thoroughfare Plan are to upgrade or build new highways. These types of projects may lead to a short-term reduction in congestion but do nothing to increase the access to entry-level jobs for the people who need them most. Furthermore, employers will continue to locate businesses where there is a commitment to infrastructure improvement by the government.

**POTENTIAL ECONOMIC IMPACTS**

One mile of a lane of an urban highway costs about $7 million and requires 250,000 tons of gravel and 25 acres of concrete. On average, a road starts to deteriorate after 12 to 14 years and needs to be repaired. After 30 years, the road must be replaced. Construction practices and materials can be used which will initially cost more, but significantly extend the life of the road. One mile of a bikeway costs from $100,000 to $1 million depending on the material used and right-of-way costs. Light rail costs between $10 and $20 million per mile to build. Operating costs are about the same as a bus system.

**POTENTIAL ENVIRONMENTAL IMPACTS**

Studies have shown that every fully occupied bus on the road during rush hour holds 70 people and is fifteen times more energy efficient than the average car – freeing up space, reducing air emissions and reducing accidents. A bus with only seven passengers is more fuel-efficient than a single person commuting. A fully occupied rail car is fifteen times more efficient than the average car. Two parallel railroad tracks have the same carrying capacity as 16 highway lanes. A single subway line in Washington DC or New York can carry 30,000 passengers per hour in each direction.11

**OBJECTIVE ANALYSIS**

The Objective analysis is provided in Table 2.3F using the recommended matrix format.

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### Table 2.3F: Objective Analysis Regarding Multimodal Transportation

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>TARGET</th>
<th>CONDITIONS AT THE 1998 EAR</th>
<th>CURRENT CONDITIONS</th>
<th>COMMENTS / ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1 Volusia County shall implement programs to provide a safe, convenient, and energy efficient multimodal transportation system.</td>
<td>Land use allocation, and consistency and coordination.</td>
<td>On-going and in its infancy.</td>
<td>On-going and improving.</td>
<td>Direct more private developer and public funds towards the implementation efforts.</td>
</tr>
<tr>
<td>2.1.5 Volusia County shall coordinate with and assist the Volusia County MPO, VOTRAN, and the Daytona Beach International Airport to provide efficient public transportation services based upon existing and proposed major trip generators and attractors, safe and convenient public transportation terminals, land uses, passenger amenities, and accommodation of the special needs of the transportation disadvantaged.</td>
<td>Land use allocation, Land Development reviews, consistency and coordination.</td>
<td>Good coordination and communication, little implementation.</td>
<td>Good coordination and communication, little implementation.</td>
<td>Improve implementation by establishing quantifiable policies.</td>
</tr>
<tr>
<td>2.1.6 Volusia County shall coordinate with the Volusia County MPO and other related agencies to achieve and maintain LOS on the Thoroughfare System as well as for mass transit services.</td>
<td>Coordinated and consistent standards.</td>
<td>Process of initiating implementation.</td>
<td>Coordination is excellent; implementation needs improvement. Level of federal funds available has been appreciably reduced.</td>
<td>Establish a standardized LOS for each facility, regardless of jurisdiction.</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>TARGET</td>
<td>CONDITIONS AT THE 1998 EAR</td>
<td>CURRENT CONDITIONS</td>
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<td>2.1.8 Volusia County shall support development and expansion of the Daytona Beach International Airport as recommended in the Airport Master plan.</td>
<td>Reduction in the use of the private automobile on regional travel.</td>
<td>County funding of Airport capital improvement projects.</td>
<td>Same as before.</td>
<td>Continue on same course of action.</td>
</tr>
<tr>
<td>2.1.10 Encourage bicycle use and pedestrian activity throughout Volusia County.</td>
<td>Increase recreational and school-related trips by use of non-vehicular modes.</td>
<td>Major resurgence of the bicycle and pedestrian community.</td>
<td>Continued interest in bike and pedestrian projects.</td>
<td>Establish a set of quantifiable goals to increase availability of facilities.</td>
</tr>
</tbody>
</table>

**RECOMMENDATION - Multimodal Transportation**

The County should emphasize multimodal projects during the concurrency mitigation process. This will require a thorough understanding of the needs of the other modes of transportation, such as VOTRAN, the MPO’s Bicycle and Pedestrian Plan, and any intersection failures in and around the project impact area.

The County should establish certain dollar amounts or percentages for funding multimodal projects. The dollar amounts or percentages should be consistent or compatible with those established by the MPO.
2.3E: Transportation Concurrency

Traffic Impact Analysis:

Research and analyze replacing the Traffic Impact Analysis with a Transportation Impact Analysis that addresses all modes and provides incentives.

INTRODUCTION

Traditional impact analyses have concentrated exclusively on highway-related capacity needs. In essence, the results of these analyses have been limited to an identification of the number of additional lanes required to maintain an established LOS. Beginning in 1991 with the passage of the seminal federal legislation referred to as ISTEA or the Intermodal Surface Transportation Efficiency Act, all federal, state, and local governments have been required to analyze transportation needs from a multimodal perspective. Fourteen years and two federal funding bills later, there has yet to be any clear and quantifiable methods for implementing multi-modal planning.

The criteria and process utilized by communities and agencies to select and then prioritize transportation projects for funding should be both objective and defensible. The process should be one that, when repeated, will always render the same results. The criteria used should also support the established goals, objectives, and policies of the governing body. When one or both of these principles are missing, the LOS in most cases deteriorates. When goals and policies match the process created, communities have a clear and concise means of tracking progress. This process will also help to identify the reasons for not reaching identified goals.

BACKGROUND

Comprehensive Plan

The Transportation Element of the Comprehensive Plan has 3 Goals, 13 Objectives, and 119 Policies. Two of the Goals, 5 of the Objectives, and 39 of the Policies are specifically promoting some form of multimodal or non-highway related planning and implementation efforts.

Goal 2.1 of the Comprehensive Plan requires that the County provide a coordinated multimodal transportation system to serve current and future land uses and population needs.  

Chapter XIV of the Land Development Code is the County’s adopted concurrency management system process. On page CDA: 127, under paragraphs 1404.01(3)(b) 6(c), 1-12, the Code explicitly allow and encourage an analysis of the proposed development considering all facets of transportation. Each of the different types of transportation improvements has established levels of service within the Comprehensive Plan.

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12 Volusia County Council, Volusia County Comprehensive Plan - Transportation Element (Volusia County – December 2004)
Transportation and Smart Growth

Transportation reform must involve multimodalism and provide people with a choice for transportation. Although none of these measures alone will solve congestion and sprawl, each measure will do a small part toward that goal. It is essential that transit service be competitive in terms of speed, convenience, comfort and prestige.

Demand for private motor vehicles must be regulated. The means of transportation should be priced to better reflect true costs. Activists should not be forced into an either/or philosophy. However, given Florida’s history of generally only funding roads, a case could be made that new road capacity should only be added after Florida has a true multimodal transportation system that supports sustainable, livable communities. This means mixed-use communities with multi-modes of transportation that are pedestrian, bicycle, and transit friendly.

Smart growth advocates want to leverage new growth to improve a community’s quality of life. Advocates seek development that draws on neighborhood and village design from the early part of the 20th Century to create more interactive and livable communities. This type of development would consist of streets based on a grid system, pedestrian friendly design, and a mix of uses and traditional architecture styles.

The benefits from this type of development are enhanced quality of life and development of a pedestrian oriented environment, decreased automobile trips and traffic congestion, more appealing residential and business designs, reduced environmental impacts from air pollution due to a reduction in Vehicle Miles Traveled (VMT), and a reduction in roadway expansions into open spaces.¹⁴

POTENTIAL SOCIAL IMPACTS

An impact analysis that goes from traffic to transportation is the equivalent of switching from an analysis of cars to an analysis of people. When the analysis concentrates more on the availability of public transit, sidewalks or bike paths, developers will begin to design projects that are truly people-friendly.

POTENTIAL ECONOMIC IMPACTS

The County’s Thoroughfare Plan is under-funded. This situation is prevalent throughout the state and country. The current funding shortfall in the MPO’s Long-range Transportation Plan update is approximately $1 billion. There are never enough available dollars to handle the projected highway needs. Communities must rely on alternative modes to handle the project growth. When alternatives to highway construction are utilized, the amount of infrastructure needed is reduced. The resources that were once directed toward highway construction can now go toward other service requirements, or may not be needed at all.

POTENTIAL ENVIRONMENTAL IMPACTS

If the current pattern of growth and development continues, coupled with the required services that follow, Volusia is expected to consume the majority of its private undeveloped land. The loss of the vast array of environmental resources will be irreversible. What was once a panacea of rural lands will be consumed by shopping and strip malls. Wildlife will be forced to move to other, less inhabitable areas. Natural ponds and streams will be replaced with man-made drainage facilities.

An impact analysis that includes all modes of transportation will encourage compact urban development. It will consume less of the areas’ natural resources. It will cause less wildlife displacements.

OBJECTIVE ANALYSIS

The Objective analysis is provided in Table 2.3G using the recommended matrix format.
Table 2.3G: Objective Analysis Regarding Traffic Impact Analysis

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>TARGET</th>
<th>CONDITIONS AT THE 1998 EAR</th>
<th>CURRENT CONDITIONS</th>
<th>COMMENTS / ACTIONS</th>
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</thead>
<tbody>
<tr>
<td>12.3.1.8 Where appropriate County transportation projects, new or expanded, shall include: bicycle facilities, sidewalks (except in controlled access facilities), parking bays for buses, and passenger shelters for either public and private bus or ride sharing programs.</td>
<td>Maintain existing air quality levels, and provide a choice of modes to the general public.</td>
<td>Process was just beginning.</td>
<td>All transportation projects include, when possible, provisions for non-highway improvements.</td>
<td>Continue with existing program.</td>
</tr>
<tr>
<td>2.1.1 Volusia County shall implement programs to provide a safe, convenient, and energy efficient multimodal transportation system.</td>
<td>Provide a means of establishing multi-modal project analysis and selection</td>
<td>Although multimodal transportation options were a priority, funding was not prioritized for non-roadway projects.</td>
<td>The County and cities prioritize funding for bicycle, transit, and traffic operations improvements. As further commitment, the County Council voted on June 3, 2004 to annually allocate $1,000,000 in ECHO program funds for the construction of trails of the County’s Master Trails Plan.</td>
<td>The County was instrumental in the decision to annually allocate MPO funding towards bicycle, transit, and traffic operations improvements.</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>TARGET</td>
<td>CONDITIONS AT THE 1998 EAR</td>
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<tr>
<td>2.1.5 Volusia County shall coordinate with and assist the Volusia County MPO, VOTRAN, and the Daytona Beach International Airport to provide efficient public transportation services based upon existing and proposed major trip generators and attractors, safe and convenient public transportation terminals, land uses, passenger amenities, and accommodation of the special needs of the transportation disadvantaged.</td>
<td>Coordination with other agencies to ensure multimodal needs are acknowledged and addressed.</td>
<td>The County coordinated with the MPO, VOTRAN, and the Daytona Beach International Airport on plans to provide public transportation services.</td>
<td>Same as before.</td>
<td>Continue with the current system and process.</td>
</tr>
<tr>
<td>2.1.6 Volusia County shall coordinate with the Volusia County Metropolitan Planning Organization (MPO) and other related agencies to achieve and maintain levels of service on the thoroughfare system as well as for mass transit services.</td>
<td>Coordination with other agencies to ensure multimodal needs are acknowledged and addressed.</td>
<td>Process of initiating implementation.</td>
<td>Coordination is excellent; implementation needs improvement. Level of federal funds available has been appreciably reduced.</td>
<td>Continue with the current system and process.</td>
</tr>
</tbody>
</table>
RECOMMENDATION - Traffic Impact Analysis