

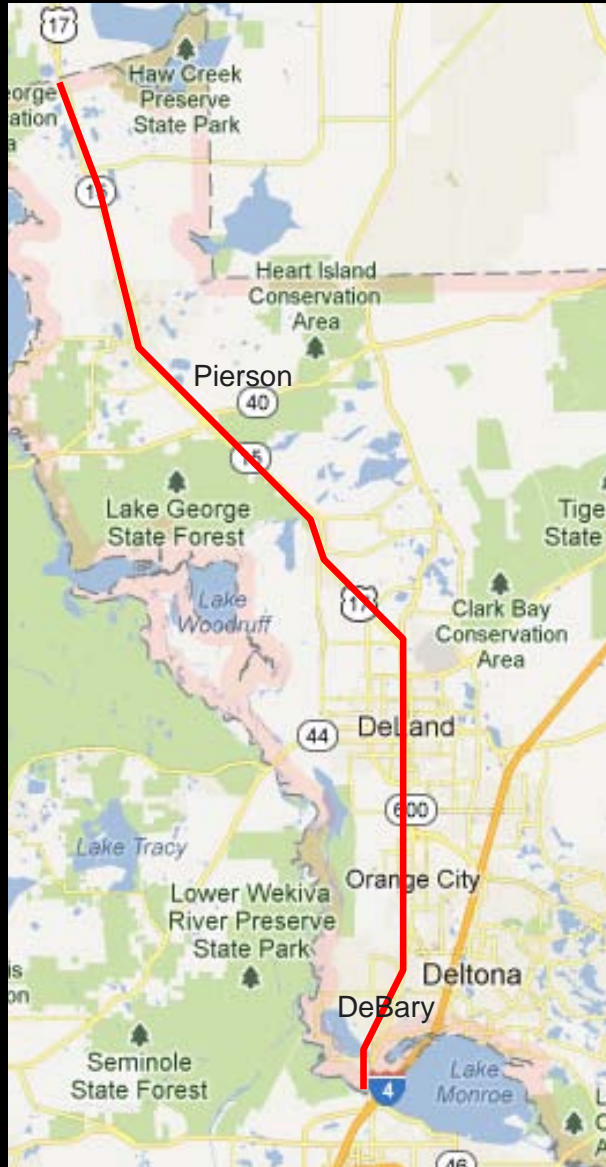
Corridor Improvement Program

Phase I: Assessment of US 17-92

January 28, 2013



**Rural
Preservation**



**Freight
Movement**



**Pedestrian and
Bicyclist Safety**



**Downtown
Redevelopment**



**Transit Oriented
Development**



**Strategic
Intermodal System**

TABLE OF CONTENTS

<i>EXECUTIVE SUMMARY.....</i>	1
<i>INTRODUCTION.....</i>	3
<i>SECTION I</i>	
<i>Study Overview</i>	
Study Area.....	4
Study Purpose.....	4
Study Process.....	5
Existing Conditions Analysis.....	5
Stakeholder Groups.....	5
Stakeholder Interviews.....	6
Document Review.....	6
Stakeholder Workshops.....	7
Volusia TPO Board and Committee Meetings.....	7
<i>Compilation of Projects/Development of GIS Database</i>	
Analysis of Existing Studies.....	7
Project Categories.....	8
Complementary and Conflicting Determination.....	10
Development of GIS Database.....	10
<i>SECTION II</i>	
<i>Existing Conditions</i>	
Roadway Inventory.....	11
Section 1 Seminole/Volusia County Line to Spring Vista Drive.....	14
Section 2 Spring Vista Drive to Highbanks Road.....	15
Section 3 Highbanks Road to Miller Road.....	16
Section 4 Miller Road to East Gardenia Drive.....	17
Section 5 East Gardenia Drive to Elm Drive.....	18
Section 6 Elm Street to Wisconsin Avenue.....	19
Section 7 Wisconsin Avenue to North of SR 472 Overpass.....	20
Section 8 North of SR 472 overpass to Taylor Road.....	21
Section 9 Taylor Road to Beresford Avenue.....	22
Section 10 Beresford Avenue to Euclid Avenue.....	23
Section 11 Euclid Avenue to Howry Avenue.....	24
Section 12 Howry Avenue to Church Street.....	25
Section 13 Church Street to Plymouth Avenue.....	26
Section 14 Plymouth Avenue to Glenwood Road.....	27
Section 15 Glenwood Road to Katrina Street.....	28
Section 16 Katrina Street to West Baxter Street.....	29
Section 17 West Baxter Street to Second Avenue.....	30
Section 18 Second Avenue to First Avenue.....	31
Section 19 First Avenue to Volusia/Putman County Line.....	32
School Attendance Areas.....	33
Americans with Disability Act Compliance.....	38
Pavement Conditions.....	39
Transit Services.....	40

Crash Data.....	41
<i>SECTION III</i>	
<i>Analysis of Roadway Designations</i>	
Overview.....	42
Background.....	42
SIS Designation and Plans.....	43
Design Standards.....	44
Design Speed.....	45
Access Management.....	46
Median Width.....	48
Freight Movement.....	49
Traffic Calming/Context Sensitive Solutions.....	50
Transit Function.....	54
<i>Regulatory and Financial Impacts</i>	
Growth Management Legislation/Level of Service Standards.....	55
Issues and Impacts of Relocating SIS Designation to SR 472.....	56
Impacts on Planned Developments.....	58
SIS Funding.....	59
<i>CONCLUSION</i>	61
<i>TABLES</i>	
Table 1. Average Annual Daily Traffic.....	11
Table 2. Segments Nearing or Exceeding Adopted LOS in 2011.....	12
Table 3. Section 1 Characteristic.....	14
Table 4. Section 2 Characteristics.....	15
Table 5. Section 3 Characteristics.....	16
Table 6. Section 4 Characteristics.....	17
Table 7. Section 5 Characteristics.....	18
Table 8. Section 6 Characteristics.....	19
Table 9. Section 7 Characteristics.....	20
Table 10. Section 8 Characteristics.....	21
Table 11. Section 9 Characteristics.....	22
Table 12. Section 10 Characteristics.....	23
Table 13. Section 11 Characteristics.....	24
Table 14. Section 12 Characteristics.....	25
Table 15. Section 13 Characteristics.....	26
Table 16. Section 14 Characteristics.....	27
Table 17. Section 15 Characteristics.....	28
Table 18. Section 16 Characteristics.....	29
Table 19. Section 17 Characteristics.....	30
Table 20. Section 18 Characteristics.....	31
Table 21. Section 19 Characteristics.....	32
Table 22. Pavement Condition Rating Criteria.....	39
Table 23. Votran Route Information (Westside Service Area).....	40
Table 24. Speed Limit Summary.....	45
Table 25. Access Management Standards.....	47
Table 26. Access Class 3 Summary.....	47
Table 27. Minimum Median Widths-Arterial and Collectors.....	48

Table 28. TDLC Techniques-General.....	51
Table 29. TDLC Techniques-Reduce Speed or Traffic Volumes.....	52
Table 30. TDLC Techniques-Encourage Multimodal Travel.....	52
Table 31. TDLC Techniques-Area-wide.....I.....	53

FIGURES

Figure 1. General Location Map.....	4
Figure 2. Screen Shot GIS Interface for US 17-92.....	10
Figure 3. Section 1.....	14
Figure 4. Section 2.....	15
Figure 5. Section 3.....	16
Figure 6. Section 4.....	17
Figure 7. Section 5.....	18
Figure 8. Section 6.....	19
Figure 9. Section 7.....	20
Figure 10. Section 8.....	21
Figure 11. Section 9.....	22
Figure 12. Section 10.....	23
Figure 13. Section 11.....	24
Figure 14. Section 12.....	25
Figure 15. Section 13.....	26
Figure 16. Section 14.....	27
Figure 17. Section 15.....	28
Figure 18. Section 16.....	29
Figure 19. Section 17.....	30
Figure 20. Section18.....	31
Figure 21. Section19.....	32
Figure 22. Attendance Area-Citrus Grove Elementary.....	34
Figure 23. Attendance Area-DeBary Elementary.....	34
Figure 24. Attendance Area-Freedom Elementary.....	34
Figure 25. Attendance Area-George Marks Elementary.....	35
Figure 26. Attendance Area-Orange City.....	35
Figure 27. Attendance Area-McInnis Elementary.....	35
Figure 28. Attendance Area-Manatee Cove Elementary.....	35
Figure 29. Attendance Area-Taylor Middle-High School.....	36
Figure 30. Attendance Area- River Springs Middle School.....	36
Figure 31. Attendance Area- Southwestern Middle School.....	36
Figure 32. Attendance Area-DeLand Middle School.....	36
Figure 33. Attendance Area-DeLand High School.....	37
Figure 34. Attendance Area-University High School.....	37
Figure 35. Existing Bus Routes Map-Votran TDP.....	40
Figure 36. Average Daily Truck Traffic for I-4/SR 472/US17-92.....	49
Figure 37. City of DeBary TOD Overlay District.....	54
Figure 38. US 17-92/SR 15A Emerging SIS Alignment.....	56
Figure 39. Potential Route for SIS Relocation to SR 472.....	57

PHOTOS

Photo 1. Stakeholder Discussion.....	6
Photo 2. Kick-off Meeting.....	6
Photo 3. Oak Tree.....	11
Photo 4. US 17 Scenic Highway Sign.....	13

Photo 5. Section 1.....	14
Photo 6. Section 2.....	15
Photo 7. Section 3.....	16
Photo 8. Section 4.....	17
Photo 9. Section 5.....	18
Photo 10. Section 6.....	19
Photo 11. Section 7.....	20
Photo 12. Section 8.....	21
Photo 13. Section 9.....	22
Photo 14. Section 10.....	23
Photo 15. Section 11.....	24
Photo 16. Section 12.....	25
Photo 17. Section 13.....	26
Photo 18. Section 14.....	27
Photo 19. Section 15.....	28
Photo 20. Section 16.....	29
Photo 21. Section 17.....	30
Photo 22. Section 18.....	31
Photo 23. Section 19.....	32
Photo 24. School Crossing in Orange City.....	35
Photo 25. Sidewalk North of French Avenue.....	38
Photo 26. Road Conditions.....	39
Photo 27. Road Conditions.....	39
Photo 28. US 17 Sign North of SR 40.....	42
Photo 29. Speed Limit Sign DeBary.....	45
Photo 30. Bi-directional Turn Lane.....	48

APPENDICIES

- Appendix A List of Studies
- Appendix B List of Projects
- Appendix C Stakeholder Meeting Summaries

EXECUTIVE SUMMARY

Study Purpose

The US 17-92 CIP Phase I is primarily a data collection effort for future efforts so there are not any specific recommendations on the plans, studies or projects. The primary task is to compile all approved and adopted studies and plans pertaining to transportation elements in order to develop a list of projects that implement to goals and visions for the corridor, as approved by federal, state, regional and local agencies/governments. The list of project also includes an analysis and summary of the complimentary and conflicting projects. The list and related analysis provides assistance to agencies in developing a coordinated implementation effort. The list also ties into the web-based GIS interface that shows the location of the projects and provides summary information based on the transportation categories and themes established for the corridor.

Study Process

The compilation of studies, plans and projects needs to be vetted through those staff members who are responsible for the planning and implementation of the agency/government's goals. This is especially true for the US 17-92 corridor, given the diversity of land uses and multiple functions associated with the corridor. A series of stakeholders meetings were staged throughout the process to allow for group discussion on the findings of the data collection and roadway classification/designation analysis. In addition, there were one-on-one interviews conducted throughout the study process to ensure that all adopted and approved studies, plans and projects were included in the CIP database. The one-on-one interviews also provided an opportunity for stakeholders to identify potential issues or projects that may be included in the next phase of this program.

Existing Conditions

The corridor extends from the Seminole County line to the Putnam County line. It is 41.1 miles long and there are 19 different roadway sections throughout the corridor. Votran, Volusia County's transit provider, runs several routes on a majority of corridor, and there are future opportunities to expand transit service once the SunRail stations in DeBary and DeLand are completed and operational. The corridor includes sidewalks primarily in the urban and suburban areas consisting of DeBary, Orange City, DeLand, DeLeon Springs and Pierson. There are extensive trail systems in place or planned that service the corridor.

One of the major issues identified by the stakeholders pertained to pedestrian and bicyclist safety. This concern prompted the need to include a summary of the student attendance areas for all public schools within the corridor. The concern also required that the study include summaries of the crash data, pavement condition and compliance with ADA standards.

Function/Design Elements

US 17-92 is designated as an emerging SIS facility for a majority of the study area. The segment between Taylor Road and CR 15A/Spring Garden Avenue has been excluded from the SIS and the designation shifted to SR 15A. While widening and intersection improvements are desired along the US 17-92 corridor north of SR 472, several local governments have expressed the following concerns with the designation of US 17-92 as a SIS facility from the Seminole County line to SR 472:

1. The design speed for SIS facilities is not appropriate for the area.
2. The access management requirements for the SIS are not appropriate given the land uses and redevelopment plans for the area.
3. The emphasis of freight movement may not be consistent with redevelopment efforts and the movement of freight could be to be addressed through alternative routes.
4. Traffic-calming and multimodal opportunities are not feasible with the design requirements of SIS facilities.

The local governments of DeBary and Orange City are aware that the SIS has specific design standards that may not be consistent with their efforts to beautify and redevelop the corridor. These redevelopment efforts could be inconsistent with the primary goal of the SIS (efficient movement of goods and vehicles). The FDOT understands that there needs to be context-sensitive solutions when designing for improvements to an existing roadway. The “Transportation Design for Livable Communities” (TDLC) standards and criteria, developed by FDOT, provide opportunities to deviate from SIS design standards where it is desirable, appropriate and feasible.

Growth Management Legislation

Recent changes to the growth management laws and the Florida Administrative Code allow for greater flexibility in establishing level of service standards for roadways. Local governments are encouraged to develop multimodal mobility plans to provide for an effective transportation network. The FDOT’s role has been modified to focus on state transportation issues and coordinate with the local governments in developing their level of service standards and mobility plans.

Relocation of Emerging SIS Designation

If the flexibility afforded by the updated growth management laws and TDLC standards are not implementable or otherwise unable to address the desired outcome, then a local government could pursue shifting the SIS designation for US 17-92. The area of concern on US 17-92 is the segment from the Seminole County line to SR 472. A potential alternative route is I-4/SR 472. The first step in the re-designation process is mutual agreement by all impacted local governments to the alternative route and the deletion of the existing route. Once that is accomplished, FDOT District 5 and Central Office staff will need to review the request to verify that the proposed route meets the criteria established for SIS highway corridors. Note that the segment between SR 472 and Taylor Road (SR 15A) would remain on the SIS if this relocation was proposed.

There is a large multi-jurisdictional development known as the I-4/SR 472 Southwest Activity Center Development of Regional Impact (SWAC). This project was planned and approved for development, subject to a series of transportation improvements that included the US 17-92 corridor and SR 472. The shifting of the SIS designation from US 17-92 to I-4/SR 472 does not appear to severely impact the mitigation of the project, but the affected local governments need to coordinate and update specific improvements to ensure consistency with adopted comprehensive plans and community redevelopment plans.

SIS Funding

There are no improvement projects identified for US 17-92 in either the First Five-Year Plan or Second Five-Year Plan developed for the SIS Highway Corridor. Also there are no projects funded in the 2035 Cost Feasible Plan for the SIS. Accordingly, a re-designation of the SIS from US 17-92 to I-4/SR 472 would not impact any planned roadway improvement projects on US 17-92.

Future Issues for Discussion

The discussions with stakeholders and review of existing plans and studies showed that there were issues that need to be addressed in the subsequent phase of this program. The common theme was the need to coordinate planning and construction of transportation improvements so that local efforts for redevelopment, economic development and development of multimodal facilities were incorporated into state and federal efforts to improve the travel in the corridor.

INTRODUCTION

The US 17-92 Corridor Improvement Program (CIP), Phase I is the first step in a developing a coordinated planning tool to assist federal, state, regional and local planning organizations in the development and implementation of transportation improvements within the corridor. The primary task for this study is the collection of data. There is a secondary task related to the analysis of the function of the roadway and potential impacts resulting from the federal and state classifications assigned to the road.

This report has been divided in three sections. Section I is an overview of the study process and provides the framework on the development of the list of projects. There is also an explanation and overview of the GIS interface tool. Section II examines the existing conditions with the corridor. This section provides a summary of the physical conditions within the corridor and includes information on the number and size of travel lanes, transit routes, pedestrian and bicycle facilities. There are other elements such as compliance with the American with Disabilities Act (ADA), school attendance areas and crash data. Section III provides an analysis of the design requirements assigned to the corridor based on federal and state classifications and designations and financial and regulatory impacts.

SECTION I

STUDY OVERVIEW:

Study Area

The US 17-92 Corridor extends the length of Volusia County from the Putnam County line north of the community of Seville to the Seminole County line in the City of DeBary. The corridor is an example of the multi-purpose highways seen throughout Florida. The roadway originally provided the primary route between small towns within Volusia County, as well as linking these towns to the larger urban areas to the south (Orlando) and to the north (Jacksonville). Over time, the roadway has transitioned into a corridor serving multiple and sometimes conflicting functions. The corridor serves as a through traffic route (sometimes as an alternate to I-4) while concurrently serving as the local access for commercial development. The corridor is also considered as the main street in downtown DeLand. Both DeBary and Orange City are looking for this route to become the centerpiece of their emerging commercial centers. These cities want to use aesthetics and multi-modal improvements as part of redevelopment efforts that define the communities' identity. In the northwest Volusia area, the road still serves as a primary farm-to-market road that helps define the area's rural character, as well as providing connectivity to other communities. This role is expected to change so the Town of Pierson proactively adopted an overlay district itscore area that addresses design and access requirements. All along this corridor, communities are working to accommodate various levels of pedestrian and transit access, while serving multiple roles for vehicular traffic.

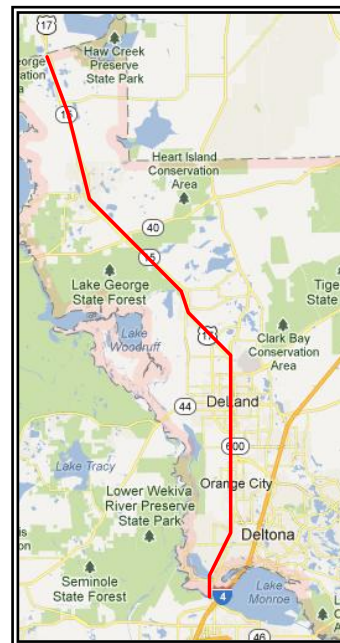


Figure 1. General Location Map of Corridor

The corridor extends some 41.1 miles from end-to-end passing through the incorporated areas of Pierson, DeLand, Orange City and DeBary as well as the communities of Seville, Barberville and DeLeon Springs in unincorporated Volusia County. The roadway is designated as a component of Florida's Strategic Intermodal System (SIS) attesting to the significance of the road's role in transportation (note that the segment from Taylor Road to Spring Garden Avenue is not part of the SIS). At its southern end, the road interfaces with the first phase of SunRail commuter rail system. The second phase of SunRail will extend this connection north to DeLand.

The roadway is far from uniform in character. There are nineteen different roadway sections within the corridor ranging from a two-lane rural section to a four-lane urban section with medians and turn lanes. The variance in roadway character results from the process of adding road improvements/elements to individual sections to address changes in demand over time. In other areas, the roadway character is reflective of the roadway's function as a traditional downtown street.

The study area has been divided into two sections. The northern section extends from the approximate intersection of SR 15A with US 17 northward to the Volusia County – Putnam County line. The northern section is more rural in character and includes the Town of Pierson and the communities of Seville, Barberville and DeLeon Springs. The southern section extends from the Seminole County line through the cities of DeLand, Orange City and DeBary and ends at the northern intersection of SR 15A and US 17. This section is more urban in character and contains a diverse set of land uses abutting the roadway.

Study Purpose

The Corridor Improvement Program (CIP) Assessment of US 17/92 provides for a comprehensive database of the approved and adopted studies or plans undertaken for the corridor. Those transportation studies include work directed toward vehicular improvements; transit; bicycle and pedestrian; and

landscaping and streetscaping elements. The SunRail system is included as part of the transit component of the study. Land use studies/plans were reviewed with respect to infrastructure recommendations and projects that had a direct influence the transportation function within this corridor. It is not the intent of this study to judge the merits of the plans and projects proposed by governments or community entities. Rather, as noted previously, this study is a planning tool provided for the summary of existing approved plans, studies and projects.

A single database was developed that lists all of the projects and plans that have been prepared by local governments, the Volusia Transportation Planning Organization (TPO), Florida Department of Transportation (FDOT), and other community entities. This effort results in an easily accessible listing of projects that local governments can use in a variety of applications.

- Projects can be compared with individual community goals to assess whether the projects are supportive of community plans/visioning efforts.
- Individual projects can be compared with other project recommendations to determine if there are complementary or conflicting projects that should be addressed as part of any implementation efforts.
- The project listing serves as an inventory of potential projects that local governments pursue through the Volusia TPO, FDOT and other implementation programs. Complementary projects can be coordinated between entities in order to allow for effective and comprehensive improvements.
- The database provides assistance to local governments and transportation agencies to identify implementation priorities and gaps where projects may be needed to advance specific planning goals and objectives.

This report also includes a review of the roadway as an emerging SIS facility and how this designation affects projects located within the corridor. Some local governments within the corridor have expressed an interest in the potential re-designation of portions of the corridor from the SIS network to non-SIS classification. This report documents the process required to change SIS designation.

Study Process

Existing Conditions Analysis

A major effort of this report was to conduct a comprehensive review of the existing conditions within the US 17/US 17-92 corridor. The survey detailed elements within the roadway including:

- Number of lanes
- Presence of turn lanes
- Presence of medians
- Right-of-way width
- Signalization
- Availability of sidewalks
- Accessibility elements
- Speed limits
- Access management
- Transit services

This information was used to identify a number of typical sections that provide a graphic representation of the character of the roadway at various points along the project length. There are 19 different typical sections were identified along the corridor.

Stakeholder Groups

Reports and studies used to generate the list of projects were provided by stakeholder groups within the US 17/US 17-92 corridor. Stakeholders included the Volusia TPO, the Florida Department of Transportation, Volusia County, the Town of Pierson, the City of DeLand, the City of Orange City, the City of DeBary, and the School District of Volusia County. The staff members from Volusia County Growth Management and Traffic Engineering were consulted for the completion of this report. The FDOT Planning, Operations and SIS Coordination staff also played a vital role in the development of this report.

One-on-one stakeholder interviews were conducted in an effort to identify and gather relevant studies and plans. This part of the study was to ensure that there was a clear understanding of the planning goals and objectives. Workshops were conducted to provide a forum for group discussion and sharing of information.

Stakeholder Interviews

Questionnaires were distributed to stakeholder groups in advance of individual and small group meetings. The questionnaire helped prepare the stakeholders for discussions and helped with the identification of available documents. Discussions with local government representatives focused in large part on general planning issues centered on the US 17/US 17-92 corridor so that the LTG teams would have a thorough understanding of current plans for development within the corridor. Discussions with other stakeholders tended to focus more on specific study recommendations and the technical aspects of traffic management, pedestrian circulation, transit and similar activities. The stakeholders interviewed include:



Photo 1. Stakeholder Discussion - October 9th Workshop



Photo 2. Kick-Off Meeting - July 11th

- Volusia County Planning: Becky Mendez, John Thomson
- Volusia County Traffic Engineering: Jon Cheney, Melissa Winsett
- Volusia County Economic Development: Rick Karl, Rob Erhardt, Pedro Leon,
- FDOT District 5 Traffic Operations: Rick Morrow, Judy Pizzo
- FDOT District 5 SIS: John Zielinski, Lori Sellers
- City of DeLand: Mike Holmes, Blanche Hardy
- City of Orange City: Alison Stettner, Wendy Hickey, Jim Kerr
- City of DeBary: Rebecca Hammock
- Town of Pierson: James Sowell, Debbie Bass, Jim Smith
- Votran: Steve Sherrer, Heather Blanck, Liz Suchsland, Carole Hinkley, John Cotton, Jim Dorsten
- Volusia County Schools: Saralee Morrissey, Greg Akin, Jesse Clark, Chip Kent

Document Review

There were over 80 documents and studies reviewed and analyzed as part of this report. The documents included comprehensive plans for the affected jurisdictions and a variety of studies ranging from preliminary engineering studies for major traffic improvements to school safety studies to site specific traffic operations reports. Appendix "A" contains the complete list of studies and plans gathered as part of the data collection effort for the US 17-92 CIP. The table summarizes the location and focus of the studies.

The US 17-92 database development also included field visits, review of aerial photography and review of data related to the existing conditions within the corridor such as right-of-way width, signalization, number of lanes and other roadway elements.

Stakeholder Workshops

A kick-off meeting and two stakeholder workshops were held during the course of the study. The workshops for the north and south sections were combined and provided a breakout session for each study area.

The first workshop included a review of the project lists developed from the individual stakeholder interviews and the review of the study area documents. Participants were asked to review the project lists for completeness and accuracy. The participants were also asked to review and verify the set of themes developed for the corridor. The themes identify visions statements and goals for the corridor based on the stakeholder interviews and planning documents. The thematic approach carried forward the methodology that was utilized for the US 1 CIP. Participants were given the opportunity to review the projects for their area and provide confirm the themes that each project is supporting.

A second workshop was held using the same format as the initial workshop with a general presentation followed by breakout sessions for each study area. The second workshop provided an additional opportunity for stakeholders to review the study information and findings so that any final adjustments could be made to the data.

Volusia TPO Board and Committee Meetings

It is important that the TPO Board and its advisory committees were given opportunities to review, discuss and provide feedback as the report was being developed and finalized. Presentations were made to the Technical Coordinating Committee (TCC) and Citizens Advisory Committee (CAC) on October 16, 2012. The TPO Board was given a presentation on October 23, 2012 so that the board members were aware of the progress of the report, as well as the comments and recommendations from the stakeholders, CAC and TCC.

COMPILATION OF PROJECTS/DEVELOPMENT OF GIS DATABASE:

Analysis of Existing Studies

The compilation of the completed and approved studies and plans for the US 17-92 corridor was the first step conducted in developing a project listing. This effort was more than a data collection and storage action. One of the tasks associated with this report was the identification of the functions that the corridor performs based on existing conditions. This tied into another task of identifying how the approved and adopted studies/plans addressed the corridor's function.

The following were qualifiers used in the development of the projects listed in Appendix "B" of this study.

1. The study had to be approved and adopted as part of local government's or agency's comprehensive plan, strategic plan or similar document. This was a critical element of the analysis. There are many studies that have been conducted, but have not been fully integrated into a governmental authority's implementation plans. For example, the Southwest Volusia Regional Transportation Study (SWVTS) identifies a series of projects for the different scenarios developed in that study. The project list developed for this study includes those projects from the SWVTS that have been included by local governments or the FDOT in their respective comprehensive plans, strategic plans or the Transportation Improvement Plan (TIP).
2. The location and scope of the plan did not have to be directly on the corridor, but had to have the effect of impacting the corridor as part of its scope. Early in the analysis it was evident that many of the local governments were developing plans for parallel facilities to address demand for vehicular, bicycle, pedestrian and transit facilities.

3. The date and assumptions of the studies or plans had to be relevant given the current and projected conditions within the corridor. Any study or plan that included specific assumptions that were based on out-of-date information could not be used. The determination as to whether a study was out-of-date was derived as part of the stakeholder interviews.

A critical element of the assessment of the reports and studies was the involvement of local stakeholders. Since this study focused on the compiling of data related to existing, adopted plans, staff from local jurisdictions governments, regional agencies and the FDOT were considered to be the “stakeholders”. The interviews and workshops with stakeholders provided a summary of the significant issues and goals of the local governments along the corridor. Feedback was used to develop a framework of specific “categories” of projects that were being proposed along the corridor. The naming of the categories is a carry-over from prior CIP efforts undertaken by Volusia TPO. This was done to ensure consistency and comparability of data.

A critical step was the development of common “themes” for the categories. This provides for a consistent understanding of the impacts of the proposed projects. The impacts were analyzed to determine if they were complimentary or conflicting to other projects within the corridor. The following identifies the categories and the associated themes used in developing the project listing matrix. Note that the color-coding is used in the tables listed in Appendix “B” and the GIS Interface in order to visually identify the project by category.

Project Categories

Vehicular Category: Focus is on operational and physical improvements to the road network to improve the movement of automobiles and trucks. Examples include but are not limited to lane widening, intersection improvements, access management improvements and signal optimization.

- Match Roadway to Local Preference
- Manage Truck Traffic
- Analyze SIS Alignment Alternative
- Improve Safety and Speed Control
- Improve Operational Efficiency

There are segments of the corridor, especially in the northern section, where widening is planned and where widening is desired. In other areas there is a desire to eliminate or modify the bi-directional turn lanes and include traffic calming or “Complete Streets” improvements. Management of truck traffic was identified as a major concern from DeLand to the north into Pierson. As part of the stakeholders meeting, representatives from Orange City and DeBary identified interest in reviewing the current roadway designations and examining alternative designations consistent with their jurisdiction's vision for the corridor.

Bicycle and Pedestrian Facilities Category: Focus is on facilities that improve the safety and operation of pedestrian and bicyclist in the corridor. Examples include, but are not limited to the development of bike lanes, construction/expansion of sidewalks, and signalization for crossing of the corridor.

- Improve Mobility Along and Across the Corridor
- Enhance Connectivity with Transit
- Maximize Connection to Regional Facilities
- Improve Safety

The primary issue identified the stakeholders was the need to provide safe, efficient and connected facilities for pedestrians and bicyclists. The issue was consistently raised by the staff members from the municipalities, the County and FDOT. Safety of school-age children was discussed and identified by all of the southern cities. The Town of Pierson raised similar safety concerns. This means that this is a corridor-wide issue that applies to urban, transitioning and rural areas.

Transit Category: Focus is on existing and planned services in the corridor and access/connections to services. Look at potential for the interaction with the Land Use/Economic Development elements to further local redevelopment efforts. Examples include, but are not limited to operational improvements, expansion of routes, improvements to facilities (bus stops, train stations, etc.).

- Enhance Services to Support Mobility Needs
- Interconnect SunRail to Transit
- Coordinate Development Transit Oriented Design (TOD) Plans with Transit Plans
- Use Transit to Support Economic Development Plans

The southern cities all identify transit service improvements/expansion as a current and future needed option. The local governments share a common goal of diversifying travel options and transit is playing a primary role. The emphasis is on integrating SunRail, Votran, and local redevelopment efforts.

Landscape/Streetscape Category: Focus is on projects that integrate a local government's vision into the streetscape and landscape elements of transportation facilities. Examples include, but are not limited to street furniture, wayfinding/branding, and theme architectural improvements.

- Enhance Community Identity
- Develop Context-Sensitive Roadway Designs
- Improve Aesthetics

The enhancement of community identity was a continuing theme from all of the cities except DeLand (where their identity is well-formed) and from several of the unincorporated communities.

Land Use/Economic Dev. Category: Focus is on opportunities to incorporate transportation options into the development or redevelopment of specific land uses in a defined area. Examples include, but are not limited to proportionate share projects from developments of regional impact, Community Redevelopment Area (CRA) master plans, mixed-use development plans and transit-oriented development.

- Facilitate Economic Development, Redevelopment and Infill Development
- Facilitate Future Growth with Multi-Modal Opportunities
- Rural Community Enhancement

The City of DeBary is the preliminary stages of creating a CRA within the corridor. The cities of Orange City and DeLand have CRAs whose boundaries include the corridor. Introducing TOD project areas in support of SunRail is important aspect of DeBary, Orange City and DeLand's redevelopment efforts. It appears some of the communities along the corridor are moving away from reliance on traditional concurrency measures to coordinate traffic needs and development. Orange City has forgone traditional concurrency for the implementation of mobility strategies. The mobility strategies focus on provision of transit, development of pedestrian and bicycle facilities and land use patterns that de-emphasize reliance on the single-occupancy vehicles. DeLand and DeBary indicated in the stakeholder meetings that there is an interest in developing similar standards.

"Other" Category: Focus is on opportunities to partner with other utilities or providers of services when repairs or upgrades are planned for infrastructure within the Corridor's right-of-way. Also includes coordination with development of new projects that may need to physically improve a portion of the corridor as part of the impact mitigation. Examples include, but are not limited to expansion of water and sewer, stormwater facilities expansion or repair and (re)construction of an intersecting street.

- Coordinate with Capital Improvements (CRA, Utilities, Stormwater, Trails, Parks, etc.)

Projects listed as "Other" came from related infrastructure and capital improvements proposed by the local governments. These were coordinated with themes in the other five topic areas.

Complementary and Conflicting Determination

The projects listed in Appendix “B” and the GIS interface have been reviewed to determine if the impacts from a project are complementary or conflicting with other projects. Complementary projects are projects that pertain to specific elements and come from different reports, but provide for improvements at a specific location that further multiple transportation goals. A project can be complementary to projects within the same category, for example, intersection improvements sponsored by one agency could further the goals of a signal re-timing sponsored by another agency. Also, projects can be complementary across the categories, for example, the same intersection improvements could include bicycle and pedestrian improvements needed to implement the goals of a master trails plan.

There is also a need to identify if a proposed project does not further or possibly is contradictory to the goals of another report. It would be expected that there would be many projects that are potentially conflicting given the different physical characteristics, land use patterns and variety of travel statistics. This is not the case although there are potential for future conflicts. A project is considered to be conflicting when the development of the project prevents or prohibits another project from meeting its goal. For example, the construction of a limited access roadway through a traditional downtown may address the need to move traffic, but would have negative impacts on the economic and social aspects of the downtown area that have identified a “walkable” or “Complete Street” approach to redevelopment. As with complementary projects, conflicts between projects can extend beyond categories.

Development of GIS Database

The listing of projects and the screening to identify complementary and conflicting projects can only be useful if the information is available to those who need it. The use of a web-based GIS interface provides a quick and efficient method of accessing the information contained in this study. The Volusia TPO developed the initial version of such a planning tool in the CIP-Phase I: Assessment of US 1/SR 5. This study utilized the methodologies and assumption developed in the US 1 database. The consistent methodologies and assumptions provided uniformity in the use of the tool. Also, nomenclature, format and use of the web-based tool remain consistent so that the user can navigate seamlessly between the two studies.

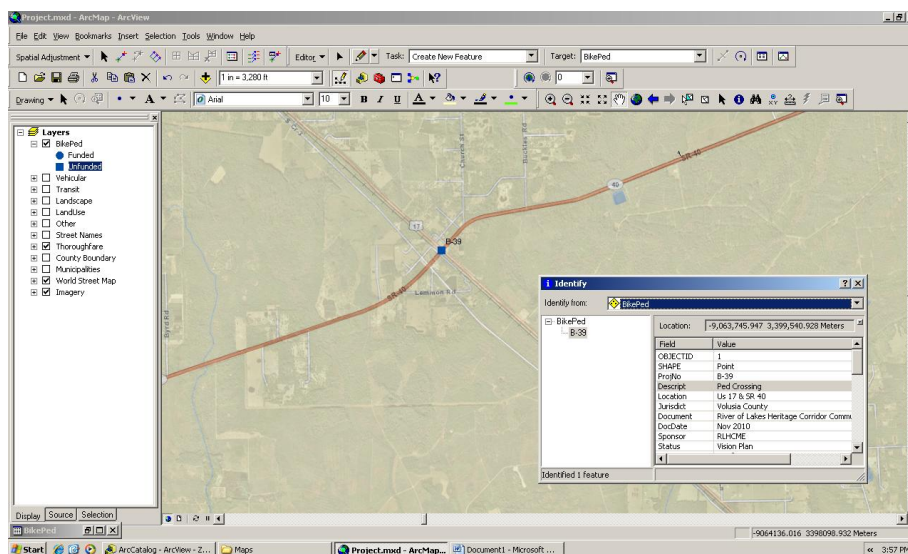


Figure 2. Screen Shot of the GIS Interface for the US 17-92 CIP

Section II

EXISTING CONDITIONS:

Roadway Inventory

An inventory of the existing conditions was completed in an effort to provide the basic understanding of the physical characteristics of the corridor and assist with subsequent elements of the program. The inventory is needed to clarify the changes that are part of the projects identified in Section I. Additionally, the information from this section is needed to complete the analysis contained in Section III

The information provided in this portion of the report is based on existing data sources including aerial photos, internet data, and GIS databases available from Volusia County, the cities and the FDOT. Additionally, a windshield survey was conducted to verify the information obtained from the available resources.



Photo 3. Oak Tree near US 17-92 and Taylor Road Intersection

One of the first items to be reviewed was the volume of traffic volume in the corridor. The following table reflects the average annual daily traffic (AADT) in the corridor. The volume of traffic varies considerably as should be expected given the number of lanes and the intensity of adjoining land uses. Also playing an important role is the freight movement and commuting for work in adjoining counties. The segment between SR 15A (Taylor Road) and SR 472 has the highest volume of all the segments within the corridor (44,000 AADT). The segments north and south of this segment have a distinct reduction in traffic. This is can be explained by the traffic that appears to by-pass US 17-92 by using SR 15A (Spring Garden Avenue) as an alternative route. The segments of SR 15 A (Spring Garden Avenue) east and west of US 17-92, carried a combined AADT of 9,960 in 2011. These trips generally correspond to the reduction in traffic that is observed north and south of Taylor Road. The segment between CR 305 (Lake George Road) and the County line carries the fewest daily trips with an AADT of 4,400. This can be expected given the rural nature of the surrounding lands and the relatively low commuting and commercial traffic in the area.

The rate of growth for traffic in the US 17-92 corridor appears to be relatively consistent. Since 2002 all segments of the corridor have experience low or negative growth in the volume of traffic. The majority of the segments experienced a small increase in traffic from 2002 until 2006 or 2007. After 2006 or 2007 a majority of the segments experienced zero or negative growth. This is reflective of the impacts of the economic downturn on travel. The significant recession that began in December 2007 resulted in fewer commercial vehicle trips for the movement of goods and fewer personal/commuting trips due to higher cost of travel.

Table 1. Average Annual Daily Traffic US 17-92

From	To	2002	2005	2008	2011
Seminole County Line	Barwick Road	25,500	21,500	23,500	19,800
Barwick Road	Ft. Florida Road	25,500	21,500	23,500	19,800
Ft. Florida Road	Dirksen Drive	25,500	214,500	135,500	19,800
Dirksen Drive	Valencia Road	20,200	21,000	22,000	21,000
Valencia Road	Highbanks Road	20,200	21,000	22,000	21,000
Highbanks Road	DeBary Plantation Blvd.	26,000	30,500	27,500	27,500
DeBary Plantation Blvd.	Saxon Avenue	26,000	30,500	27,500	27,500
Saxon Avenue	Enterprise Road	26,000	30,500	27,500	27,500
Enterprise Road	Rhode Island Avenue	34,000	36,000	35,500	32,500
Rhode Island Avenue	Graves Avenue	31,500	35,000	30,500	29,000
Graves Avenue	New York Avenue	31,500	35,000	30,000	29,000

Table 1. Average Annual Daily Traffic US 17-92

New York Avenue	SR 472	39,500	33,500	28,000	27,000
SR 472	SR 15A (Taylor Road)	45,000	51,500	47,500	44,000
SR 15A (Taylor Road)	Beresford Avenue	29,500	33,500	27,500	27,500
Beresford Avenue	Euclid Avenue	20,000	19,500	16,800	18,000
Euclid Avenue	SR 44 (New York Ave.)	17,000	17,400	15,200	16,600
SR 44 (new York Ave.)	Plymouth Avenue	17,500	19,300	18,300	16,400
Plymouth Avenue	US 92	24,000	26,500	28,500	21,500
US 92	Mercers Farm Road	23,500	30,500	35,500	30,000
Mercers Farm Road	Glenwood Road	24,000	24,500	22,500	21,000
Glenwood Road	SR 15A/C 15 A	16,600	19,200	18,000	16,400
SR 15 A/Cr15A	Reynolds Road	18,000	19,2300	18,000	16,400
Reynolds Road	Spring Garden Ranch Rd.	11,600	12,100	11,000	10,100
Spring Garden Ranch Rd.	Lake Winona Drive	8,700	8,500	8,000	7,500
Lake Winona Drive	SR 40	8,700	8,500	8,000	7,500
SR 40	Washington Avenue	7,600	7,100	7,400	6,300
Washington Avenue	CR 305 (Lk. George Rd.)	5,200	5,300	4,900	4,600
305 (Lk. George Rd.)	Putnam County line	5,400	5,600	5,100	4,400

Source: Volusia County Traffic Engineering Division 2011 Traffic Counts

The traffic count data provided by Volusia County also identifies how the segments of the corridor are operating based on the adopted level of service. The level of service standards are set by local comprehensive plans for the cities and Volusia County. The Florida Department of Transportation (FDOT) also is involved in coordinating with the local government in establishing levels of service for federal and state facilities. The Volusia County traffic data utilizes a volume-to-capacity ratio to determine if a roadway is operating within, or over, the adopted level of service. The following segments are identified as nearing capacity or exceeding capacity in 2011.

Table 2. Segments Nearing or Exceeding Adopted LOS in 2011

Nearing Adopted LOS	Exceeding Adopted LOS
SR 40 to Lake Winona Rd.	Plymouth Ave. to SR 44 (New York Ave.)
Mercers Fernery Rd. to U.S. 92	Euclid Ave. to Beresford Ave.
SR 44 (New York Ave.) to Euclid Ave.	
Rhode Island Ave. to Enterprise Rd.	

Source: Volusia County Traffic Engineering Division 2011 Traffic Counts

Roadway Sections



Photo 4. US 17 Scenic Highway Sign

The inventory and analysis of the existing conditions required defining the function of the roadway, summarizing the physical characteristics of the roadway and identification of transit and other modes of travel. The result was the identification of 19 differing sections within the 41.1 mile corridor. These sections are tied to a variety of functional and operational issues and often carry between cities and areas of unincorporated Volusia County. It is evident from the locations how the various sections function. For example, the section north of Pierson is a rural principal arterial roadway that is reflective of the agricultural and low-intensity residential and commercial land uses within the Seville area. In contrast, the section within downtown DeLand is an urban 2-lane arterial road that serves as the City's "Main Street". The diversity in the typical sections reflects the diversity of land uses within the corridor.

A summary of existing conditions is provided for each section. Additionally, the issues of school zones, bus/transit routes, ADA compliance and pavement conditions are reviewed for the corridor. The school zone and operational information is based on the 2012-2013 school attendance areas and the operational plans implemented by the School District staff. The bus and transit routes are identified by Votran and SunRail. This information is based on currently-adopted operational plans for the provision of these services. The assessment of ADA compliance is based on a windshield survey of the corridor to assess compliance with the appropriate 2012 Florida Accessibility Code. Lastly, the assessment of pavement condition is based on the Federal Highway Administration Five-Point Pavement Condition Rating. These are generalized assessments based on field surveys of existing conditions and should not be considered to be detailed surveys.

Section 1 - Seminole/Volusia County Line to Spring Vista Drive



Photo 5. South Volusia County Line, Looking North (DeBary)

The southern end of the corridor is also known as Charles Richard Beall Boulevard. This section spans from the southern boundary of Volusia County to Spring Vista Drive and is classified as transitioning (County line to Barwick Road) and an urban (Barwick Road to Spring Vista Road) arterial roadway. It is a four-lane, divided highway with left-turn bays and raised landscaped medians, curb and gutter, and sidewalks on both sides of the street (sidewalks begin at Lake Monroe Park).

The FP&L power plant is one of the first developments that is noticeable when entering Volusia County on US 17-92 from Seminole County. Immediately across the corridor is Lake Monroe Park, a county-owned and maintained recreational facility. Proceeding toward the north, the properties fronting on the corridor

consist of vacant land, commercial, industrial and office uses. Although the land use pattern within a 1/2-mile radius of the section of the corridor can be identified as primarily vacant land, it is important to note that the DeBary SunRail station and the DeBary Transit Oriented Development Overlay District are located within this section of the corridor. This transit facility and the City of DeBary's planning efforts are the initial steps to diversify transportation options available to western Volusia County.

Table 3. Section 1 Characteristics	
Element	Description
Approximate Length	2.3 miles
Approximate R/W Width	105'
Number of Lanes	4-divided
Raised Median	Yes
Median Width	20'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Traffic Signals/Locations	1 (Dirksen Dr.)
Sidewalks	Yes
Avg. Sidewalk Width	6'
Lighting	Yes (DIRKSEN DR TO SPRING VISTA DR (0.3 MI))
Pavement Condition	(Asphalt) 4.0 Good-Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	None apparent
Posted Speed	50 mph

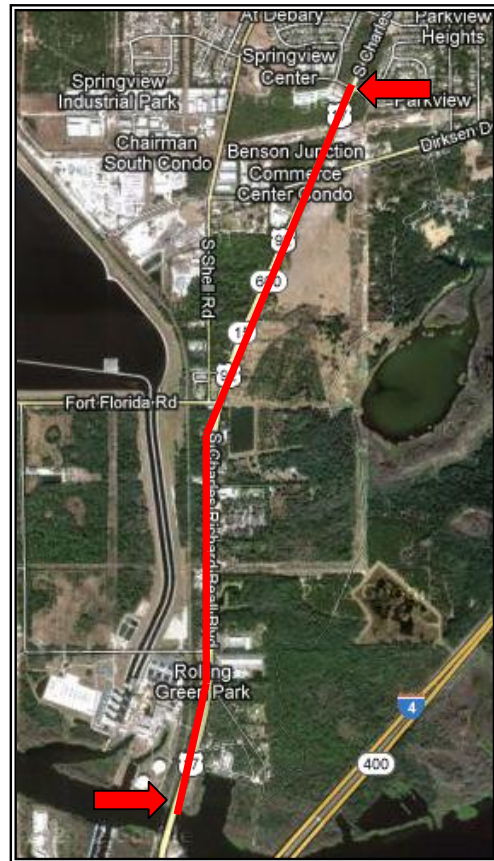


Figure 3. Section 1 – Seminole/Volusia County Line to Spring Vista Dr.

Section 2 - Spring Vista Drive to Highbanks Road



Photo 6. DeBary Streetscape Elements

This section is also located in the City of DeBary and continues the name of Charles Richard Beal Boulevard. It spans from Spring Vista Drive to Highbanks Road. It is a four-lane divided urban arterial roadway with a bi-directional left-turn lane, lighting, paved shoulders, curb and gutter, and sidewalks on both sides of the street.

From Spring Vista Drive to Glenn Forest Drive there is primarily vacant land fronting on the corridor. North of Glenn Forest Drive begins the suburban development pattern associated with the City of DeBary. The uses along the corridor are low-intensity office and commercial uses, as well as low-density single-family residential development. There are streetscape elements consisting

of stamped asphalt cross-walks, decorative lighting and themed landscaping within portions of this section. There are stops located within the corridor for Route 23 of Votran's west-side service as far south as the City of DeBary's City Hall (Colomba Road)

Table 4. Section 2 Characteristics	
Element	Description
Approximate Length	1.5 miles
Approximate R/W Width	100'
Number of Lanes	4 with bidirectional turn-lane
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Locations	1 (Highbanks Road)
Sidewalks	Yes
Avg. Sidewalk Width	6'
Lighting	Yes
Pavement Condition	(Asphalt) Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	Existing driveways and parking may impede safe accessibility
Posted Speed Limit	40 mph



Figure 4. Section 2 - Spring Vista Drive to Highbanks Road

Section 3 - Highbanks Road to Miller Road



Photo 7. DeBary, Looking North

This section is a four-lane, divided urban arterial roadway with a raised, landscaped median with left-turn bays, lighting, paved shoulders, curb and gutter, and sidewalks on both sides of the street. Streetlighting ends north of Saxon Boulevard

From Highbanks Road to Miller Road the area is developed for commercial and office uses, with vacant, undeveloped lands interspersed through the developed parcels. There are low-density single-family residential developments that use the corridor as the primary means of ingress-egress. Also, there are limited streetscape elements consisting of decorative lighting and themed landscaping within portions of this section. Votran Route 23 terminates at the Crowne Center Transfer Station located at Saxon

Boulevard. At the station riders can transfer to Route 20, which provides service to the remainder of the corridor, north of the Enterprise Road.

Table 5. Section 3 Characteristics	
Element	Description
Approximate Length	2.2 miles
Approximate R/W Width	105'
Number of Lanes	4-divided
Raised Median	Yes
Median Width	20'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	3'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No. of Signals/Location	3 (Pine Meadow Dr., DeBary Plantation Blvd., Saxon Blvd.)
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	Yes (Highbanks Rd to Saxon Blvd)
Pavement Condition	(Asphalt) 4.0 Good- Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	None apparent
Posted Speed Limit	45 mph

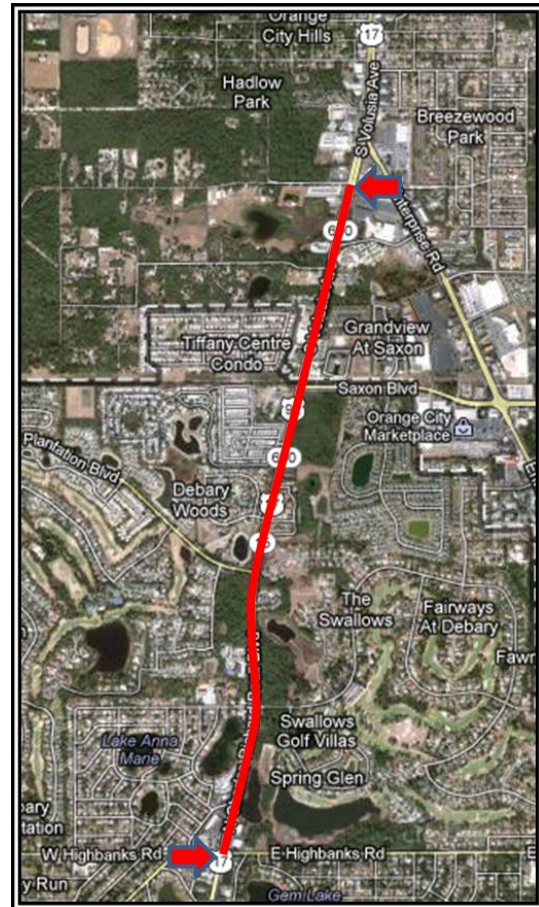


Figure 5. Section 3 - Highbanks Road to Miller Road

Section 4 - Miller Road to East Gardenia Drive



Photo 8. US 17-92 North of Miller Road, Looking North

This section includes lands within the jurisdiction of Volusia County and the City of Orange City. It is a four-lane, divided urban arterial roadway with a landscaped median, left- and right-turn bays, paved shoulders, open swale drainage, and sidewalks on both sides of the street. There are primarily retail commercial uses along this section of the corridor. There is a variety as far as size and age of the buildings. There are numerous curb cuts since many of the older commercial uses occupy stand-alone buildings. East and west of the commercial land uses are single-family residential uses.

This section is mostly served by Votran Route 20 and there are stops located throughout this section. Route 20 leaves the corridor and uses Enterprise Road.

Table 6. Section 4 Characteristics	
Element	Description
Approximate Length	.5 mile
Approximate R/W Width	105'
Number of Lanes	4-divided
Raised Median	No
Median Width	20'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	3'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No. of Signals/Location	1 (Enterprise Rd.)
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	No (limited street lights n power poles on the west side of corridor)
Pavement Condition	(Asphalt) 4.0 Good-Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	Potential issue with older driveways resulting in steep cross-slopes
Posted Speed Limit	45 mph

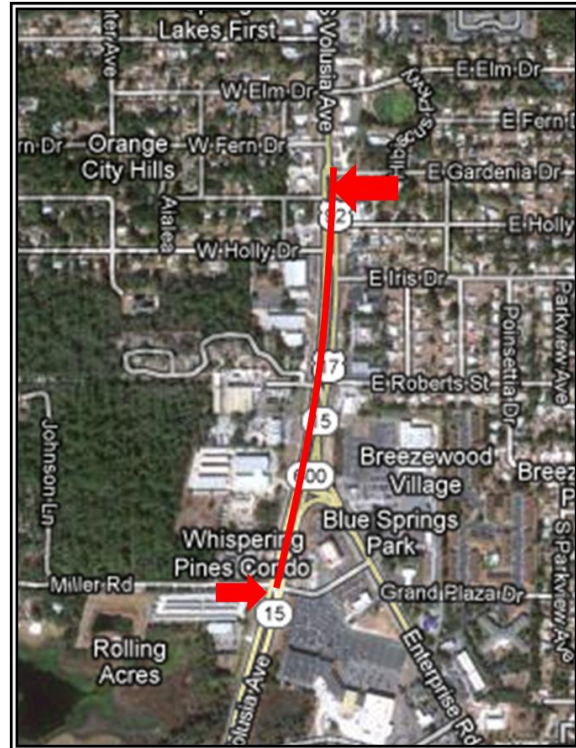


Figure 6. Section 4 - Miller Road to East Gardenia Drive

Section 5 - East Gardenia Drive to Elm Drive



Photo 9: North of Gardenia Drive, Looking North

This section is located in the City of Orange City and is one of the shortest sections. It is a four-lane divided urban arterial roadway with a bi-directional turn-lane, paved shoulders, open swale drainage, and sidewalks on both sides of the street. This is the transitioning section between the suburban/rural sections into the urban sections within Orange City.

There are stand-alone commercial retail operations along both sides of the corridor with low-density single-family residential development occurring adjacent to the commercial land uses. This section is served by Votran Route 20.

Table 7. Section 5 Characteristics	
Element	Description
Approximate Length	.1 mile
Approximate R/W Width	85'
Number of Lanes	4-undivided (bi-directional turn lane)
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	11'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Location	None
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	No
Pavement Condition	(Asphalt) 4.0 Good- Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	None apparent, although the sidewalk is in close proximity to the paved shoulder
Posted Speed Limit	45 mph

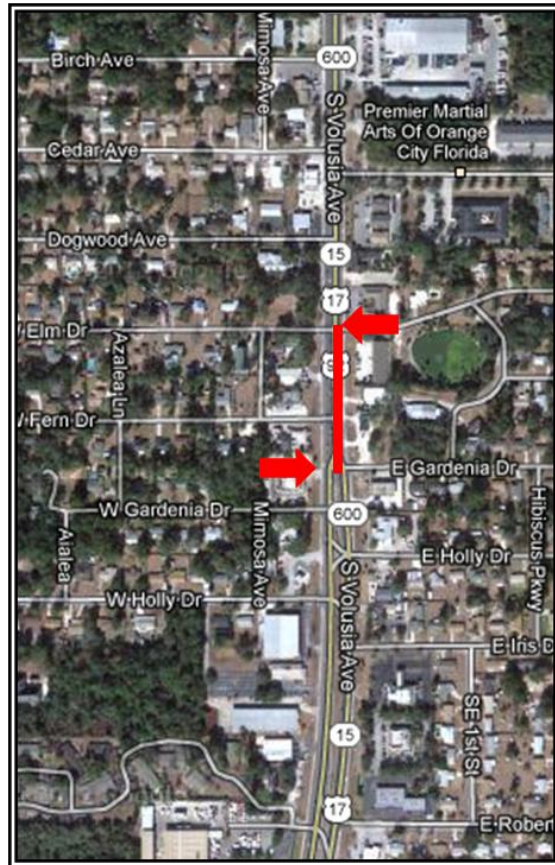


Figure 7. Section 5 - East Gardenia Drive to Elm Drive

Section 6 – Elm Drive to Wisconsin Avenue



Photo 10. Orange City, North of Graves Avenue, Looking North

This section is located within the City of Orange City. It is a four-lane divided urban arterial roadway with a bi-directional turn-lane, lighting, paved shoulders, curb and gutter, and sidewalks on both sides of the street.

The section has one of the larger amount of pedestrian and bicycle users due to close proximity of schools to the corridor. This section has a commercial strip along both sides of the corridor with low-density single-family housing as the principle uses surrounding the corridor. Graves Avenue is a focal point given the location of Orange City Elementary, the city offices and Veteran's Memorial Park. There are two reduced speed zones (Rhode Island Avenue and University Avenue).

The City has initiated a redevelopment effort for the corridor that was memorialized in April 2012 with the approval of the Finding of Necessity study, the first step in establishing a Community Redevelopment Area (CRA). The final redevelopment plan is expected to be approved in early 2013. The key issue is the enhancement of the corridor as a "complete street" that is effective in serving all modes of travel. This section is served by Votran Route 20 and there are stops located throughout this section.

Table 8. Section 6 Characteristics	
Element	Description
Approximate Length	2.0 miles
Approximate R/W Width	85'
Number of Lanes	5-undivided (bi-directional turn lane)
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	11'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Length	5 (Rhode Island Ave., Ohio Ave., Blue Springs Ave., Graves Ave., French Ave.)
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	Yes
Pavement Condition	(Asphalt) 4.0 Good-Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	None apparent. Potential issue with older driveways resulting in steep cross-slopes. Some light poles and regulatory signage may impede efficient travel
Posted Speed Limit	45 mph



Figure 8. Section 6 - Elm Drive to Wisconsin Avenue

Section 7 - Wisconsin Avenue to North of SR 472 Overpass



Photo 11. North of Orange Camp Road, Looking Northwest

This area transitions from the City of Orange City to the City of DeLand with areas of unincorporated Volusia County in between. Although this section is designated as an urban arterial, it complies with the design standards of a rural highway. The southern point of Wisconsin Avenue begins a four lane, divided highway with median (no curb), open swale drainage and paved shoulders. There are limited sidewalks along this sections.

The property fronting the entire section is designated for commercial use by both the City of Orange City and Volusia County in the respective comprehensive plans and zoning maps. The land use pattern is generally consistent with these designations, except for an existing manufactured home community located

on the east side of US 17-92, approximately 500-feet north of E. New York Avenue. The lands generally surrounding the corridor are developed for low-density single-family residences or vacant, undeveloped land. These vacant lands have residential or agricultural designations on respective future land use and zoning maps for the County and Orange City. This section is served by Votran Route 20 and there are stops located throughout this section.

Table 9. Section 7 Characteristics	
Element	Description
Approximate Length	1.3 miles
Approximate R/W Width	190'
Number of Lanes	4-divided
Raised Median	No
Median Width	40'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	5'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No. of Signals/Location	2 (New York Ave., Minnesota Ave.)
Sidewalks	Yes, but very limited
Avg. Sidewalk Width	5' when provided
Lighting	No
Pavement Condition	(Asphalt) 4.0 Good-Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	There is limited accessibility given the gaps in the sidewalks.
Posted Speed Limit	55 mph

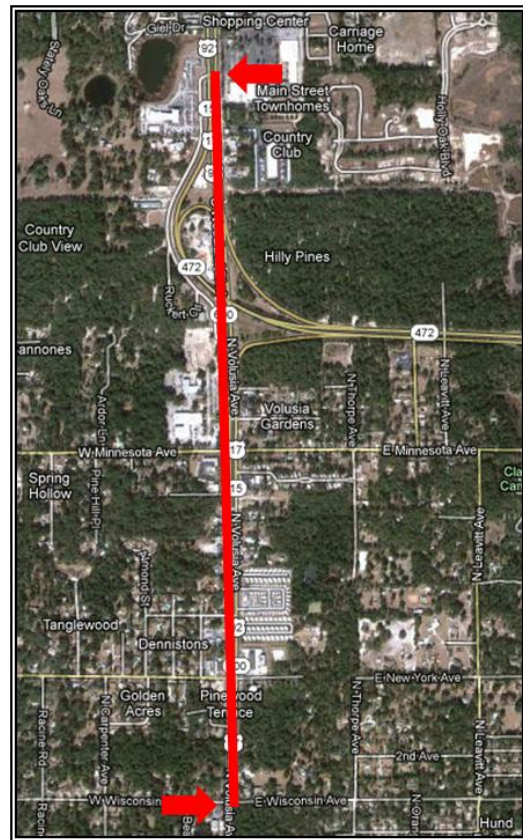


Figure 9. Section 7 - Wisconsin Avenue to North of SR 472 Overpass

Section 8 – North of SR 472 Overpass to SR 15A/Taylor Road



Photo 12. North of Taylor Road, Looking North

This section of Volusia Avenue is completely developed for commercial uses and is characterized by strip-commercial development. It is an urban arterial roadway with six lanes, raised medians, left and right turn lanes, curb and gutter with sidewalks on both sides of the street. The surrounding lands are developed for residential uses and a golf course.

This section is one of the more intensively developed areas and the traffic volumes reflect the commercial impacts of the adjoining land uses. SR 15A/Taylor Road is a major intersection that impacts the movement of freight to the north. The City of DeLand, in conjunction

with Volusia County shifted the Strategic Intermodal System designation from US 17-92 to SR/CR 15A (Taylor Road) in 2009 in order to divert commercial truck traffic away from the historic downtown area in DeLand. This was approved by the FDOT and assisted in providing for ease of congestion in the downtown area. There have been freight movement and origin-destination studies completed by the FDOT that reflect that the through-traffic is using Taylor Road. This is an issue that the City of DeLand continues to monitor to ensure that commercial truck traffic has minimal impact within the downtown area. The City of DeLand still favors the widening of this section and intersection improvements to accommodate the commercial truck traffic occurring south of Taylor Road.

The corridor is served by Votran and is part of Route 20.

Table 10. Section 8 Characteristics	
Element	Description
Approximate Length	1.4 miles
Approximate R/W Width	195'
Number of Lanes	6-divided
Raised Median	Yes
Median Width	20'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No of Signals/Location	2 (Firehouse Rd., Orange Camp Rd.)
Sidewalks	Yes
Avg. Sidewalk Width	6'
Lighting	No
Pavement Condition	(Asphalt) 4.0 Very Good –Pavement is nearly ides a first class ride and exhibits few signs of deterioration
ADA Issues	None apparent
Posted Speed Limit	50 mph

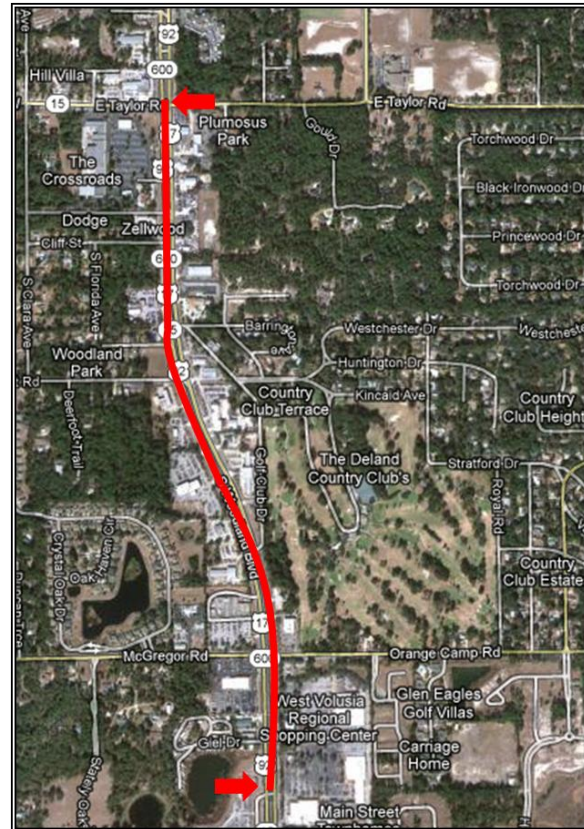


Figure 10. Section 8 - North of SR 472 Overpass to Taylor Road

Section 9 – SR 15A/Taylor Road to Beresford Avenue



Photo 13. Looking South from Beresford Avenue

The typical cross section from Taylor Road to Beresford Avenue consists of a four-lane, divided highway with a median (no curbing), lighting, paved shoulders, sidewalks on both sides of the street and open swale drainage.

This area has a considerable amount of commercial uses fronting on both sides of the corridor. There are limited cross-access easements and shared access points onto the corridor so there can be considerable congestion due to vehicles accessing the commercial uses.

US 17-92 reduces from a four-lane divided road to a two-lane divided road at the Beresford Avenue intersection. This has been identified as a major concern planners at the City of DeLand due to the

“bottleneck” created at Beresford Avenue and the lack of notification to motorists that the roadway reduced to two lanes. This section is included in Route 20 of Votran's west side service.

Table 11. Section 9 Characteristics	
Element	Description
Approximate Length	1.0 mile
Approximate R/W Width	200'
Number of Lanes	4-divided
Raised Median	No
Median Width	40'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	5'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No. of Signals/Location	2 (Taylor Rd., New Hampshire Ave.)
Sidewalks	Yes
Avg. Sidewalk Width	6'
Lighting	Yes
Pavement Condition	(Asphalt) 4.0 Good-pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issues	None apparent
Posted Speed Limit	40 mph



Figure 11. Section 9 - Taylor Road to Beresford Avenue

Section 10 - Beresford Avenue to Euclid Avenue



Photo 14. City of DeLand by FDOT Offices, Looking Northwest

This portion of the corridor is located in the City of DeLand and contains primarily retail commercial and office uses on smaller lots. There is a large government building that attracts employees during typical rush-hour times. This section is a 2-lane, divided, urban arterial roadway with a bi-directional turn-lane. There is lighting, curb and gutter, and sidewalks on both sides of the street.

This is an area with older commercial development that has smaller lot areas compared to the sections to the south in DeBary and newer commercial centers in DeLand. There are numerous curb cuts and limited cross access for these commercial uses. Surrounding lands include a large park area and residential uses. This area is served

by Route 20 of Votran. There is a proposed Intermodal Transfer Facility (ITF) that is scheduled to be operating by Spring 2014. The ITF is located east of US 17-92 and south of Hubbard Avenue.

Table 12. Section 10 Characteristics	
Element	Description
Approximate Length	.5 mile
Approximate R/W Width	70'
Number of Lanes	2 with bi-directional turn-lane
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	No
Shoulder width	Not Applicable
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Locations	None
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	Yes
Pavement Condition	(Concrete) 3.0 Fair-Riding qualities are noticeably inferior. Defects include cracking and expansion joint separation
ADA Issues	Potential issue with older driveways resulting in steep cross-slopes. Some utility poles and regulatory signage may impede access due to placement
Posted Speed Limit	35 mph

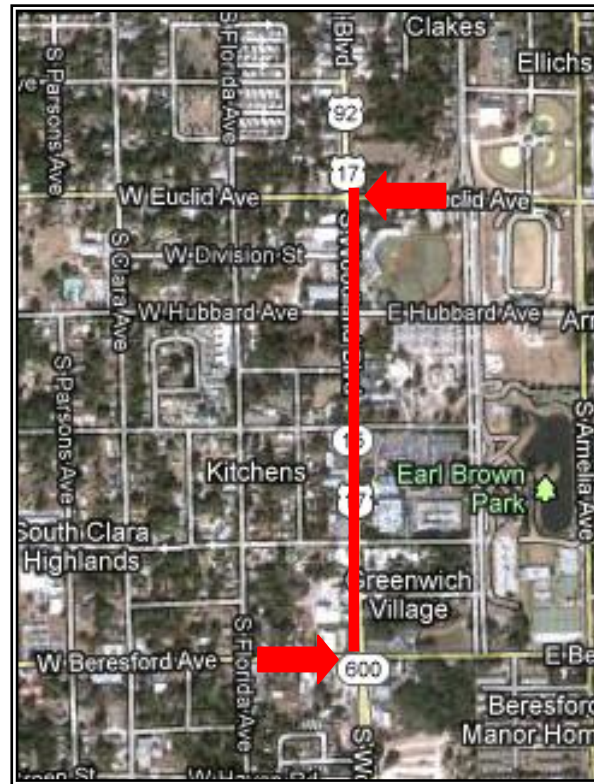


Figure 12. Section 10 - Beresford Avenue to Euclid Avenue

Section 11 - Euclid Avenue to Howry Avenue



Photo 15. City of DeLand, Looking North to Howry Avenue

This section begins the transition into downtown DeLand. Additionally, this is where the bi-directional turn lane is removed. Also there is not any on-street parking in this section. This is a two-lane, undivided urban arterial roadway with curb and gutter. There are sidewalks on both sides of the street. There are streetscape and landscape elements present in this section.

The majority of the uses abutting the corridor are small stand-alone commercial and multi-tenant office uses. There are some service-oriented businesses located closer to Howry Avenue. Route 20 of Votran's west side service is located within this section.

Table 13. Section 11 Characteristics	
Element	Description
Approximate Length	.4 mile
Approximate R/W Width	70'
Number of Lanes	2-undivided
Raised Median	None
Median Width	Not Applicable
Avg. Lane Width	18'
Marked Bike Lanes	No
Paved shoulders	No
Shoulder width	Not Applicable
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Locations	1 (Voorhis Ave.)
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	Yes
Pavement Condition	(Concrete) 3.0 Fair - Riding qualities are noticeably inferior. Defects include cracking and expansion joint separation
ADA Issues	Potential issue with older driveways resulting in steep cross-slopes. Some utility poles and regulatory signage may impede access due to placement
Posted Speed Limit	35 mph

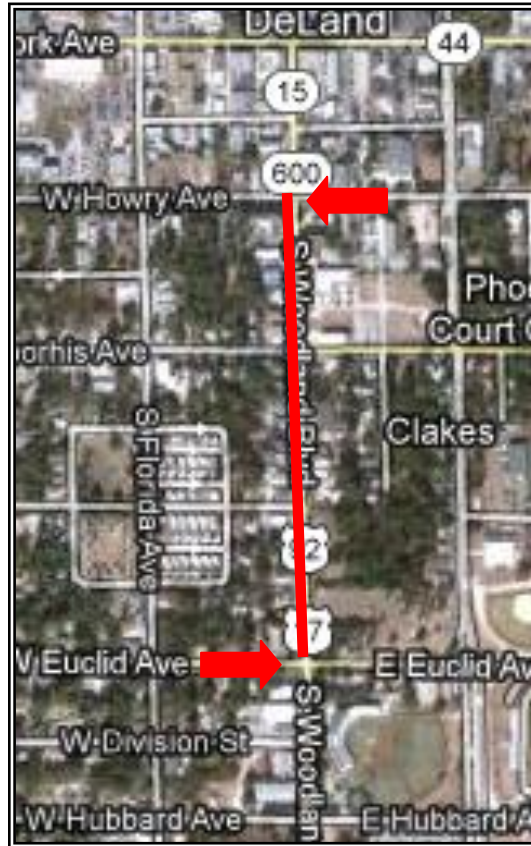


Figure 13. Section 11 - Euclid Avenue to Howry Avenue

Section 12 - Howry Avenue to Church Street



Photo 16. Downtown DeLand Streetscape Area

This section serves the traditional downtown area of DeLand. There is extensive streetscape treatment and on-street parking is provided. These elements play a significant role in the corridor's function. Stetson University, Volusia County Government and City of DeLand Government offices are located either directly on the corridor or within close proximity.

This is a two-lane undivided with left turn lanes at signalized intersection and on-street parking. This section reflects the desire of the City of DeLand to maintain the historic nature of the area and wishes to seek alternatives to widening the roadway to accommodate travel demand. The City of DeLand is working with the FDOT to develop better routing and coordination between signals to minimize peak-hour congestion.

This area has the largest amount of pedestrian users in the corridor due to the location of shops and restaurant within close proximity of the governmental and educational facilities. The section is served by Route 20 of Votran, which jogs off of US 17-92 through Downtown Deland by using Howry Avenue, Amelia Avenue, Florida Avenue and Wisconsin Avenue to serve the area

Table 14. Section 12 Characteristics	
Element	Description
Approximate Length	.3 mile
Approximate R/W Width	70'
Number of Lanes	2-undivided
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	No
Shoulder width	Not Applicable
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Locations	4- Howry Ave., New York Ave., Indiana Ave., Rich Ave.
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	Yes
Pavement Condition	(Concrete) 3.0 Fair--Riding qualities are noticeably inferior. Defects include cracking/expansion joint separation
ADA Issues	Potential issue with older driveways resulting in steep cross-slopes. Utility poles and regulatory signage may impede access due to placement
Posted Speed Limit	25 mph

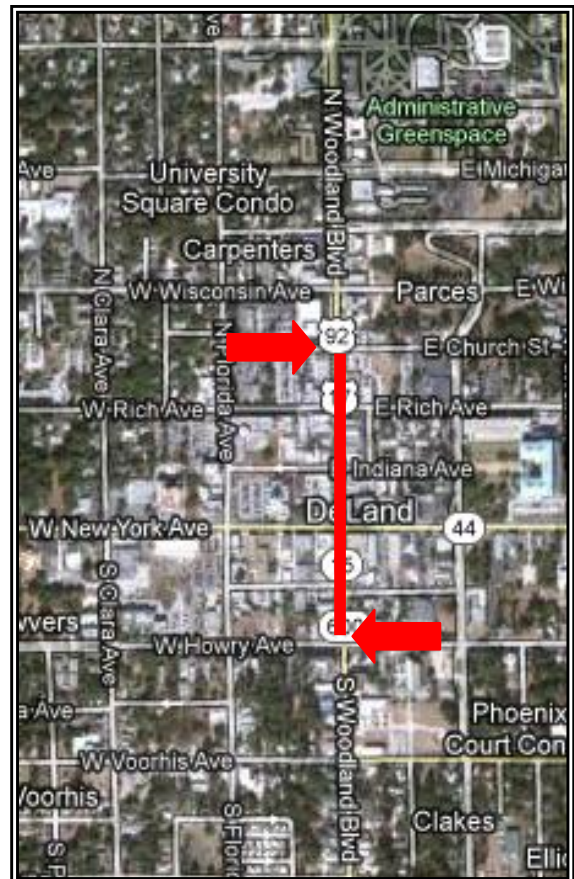


Figure 14. Section 12 - Howry Avenue to Church Street

Section 13 - Church Street to Plymouth Avenue



Photo 17. North of Wisconsin Avenue, Looking North

The only difference between this section and the section between Howry Avenue and Church Street is the lack of on-street parking. This is two-lane undivided roadway with left turn lanes at specific intersections. The turn lanes and lack of on-street parking is to ensure efficient flow of traffic through the campus of Stetson University, which is bifurcated by the corridor. This section is also served by Route 20 of Votran's west side service.

Table 15. Section 13 Characteristics	
Element	Description
Approximate Length	.8 mile
Approximate R/W Width	70'
Number of Lanes	2-undivided
Raised Median	None
Median Width	Not Applicable
Avg. Lane Width	18'
Marked Bike Lanes	No
Paved shoulders	No
Shoulder width	Not Applicable
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Locations	3 (Wisconsin Ave., Minnesota Ave., Pennsylvania Ave.)
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	Yes
Pavement Condition	(Concrete) 3.0 Fair--Riding qualities are noticeably inferior. Defects include cracking and expansion joint separation
ADA Issue	None apparent. Potential issue with older driveways resulting in steep cross-slopes
Posted Speed Limit	25 mph

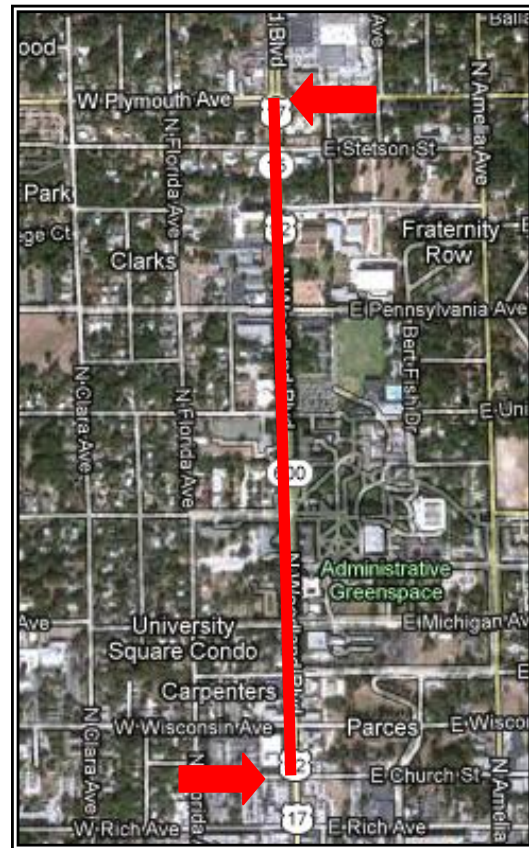


Figure 15. Section 13 - Church Street to Plymouth Avenue

Section 14 - Plymouth Avenue to Glenwood Road



Photo 18. US 17-92 North of Plymouth Avenue - Looking North

This section transitions from the downtown area of DeLand to a typical suburban land use pattern with commercial development abutting both sides of the roadway and low-density residential development in close proximity of the corridor. This section is a designated urban arterial roadway with raised, landscaped medians, curb and gutter, and sidewalks on both sides of the street. This is also the section where US 17 and US 92 split. Votran has a transfer site at the northeast corner of US 17 and US 92. This station provides connectivity to the east side service through Route 60 and provides for continued service to the northwest portion of the county on route 24. Route 20 terminates at the US 92 transfer site.

Table 16. Section 14 Characteristics	
Element	Description
Approximate Length	2.0 miles
Approximate R/W Width	100'
Number of Lanes	4-divided
Raised Median	Yes
Median Width	15'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	No
Shoulder width	Not Applicable
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Location	3 (Plymouth Ave., US 92, Wal-Mart entrance road))
Sidewalks	Yes
Avg. Sidewalk Width	5'
Lighting	No
Pavement Condition	(Asphalt) 4.0 Good- Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issue	None apparent
Posted Speed Limit	45 mph

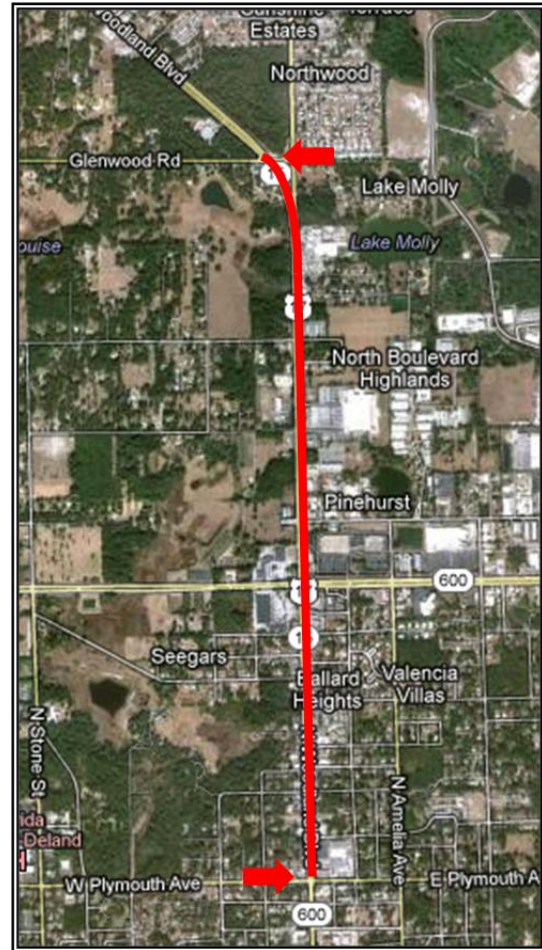


Figure 16. Section 14 - Plymouth Avenue to Glenwood Road

Section 15 - Glenwood Road to Katrina Street



Photo 19. North of Glenwood Road.

This section is between the City of DeLand and the unincorporated community of DeLeon Springs. The segment from Glenwood Road to Spring Garden Road (CR/SR15A) is urban arterial major county/city road, but from Spring Garden Drive (CR/SR 15A) to Katrina Street it is identified as an uninterrupted flow highway. The section from Glenwood Road to Katrina Street reflects a rural design consisting of a four-lane, divided highway with a median, paved shoulders, and open swale drainage, but no sidewalks/curb and gutter.

There are primarily commercial lands abutting the corridor and many are vacant or have older, non-conforming single-family homes on the property. Volusia County, working with the City of DeLand

and the DeLeon Springs Community Association, is developing a series of planning and zoning initiatives to improve the land use pattern so that the corridor may be improved to provide for multiple modes of travel. Currently this section is served by Route 24 of the Votran west side service.

Table 17. Section 15 Characteristics	
Element	Description
Approximate Length	4.0 miles
Approximate R/W Width	100'
Number of Lanes	4-divided
Raised Median	No
Median Width	40'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
Avg. Signal Spacing per Mile	2 (Glenwood CR 15A (Spring Garden Dr.))
Sidewalks	Yes
Avg. Sidewalk Width	6'
Lighting	No
Pavement Condition	(Asphalt)4.0 Good - Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issue	No sidewalks provided. Some existing commercial uses have parking directly backing into corridor
Posted Speed Limit	55 mph

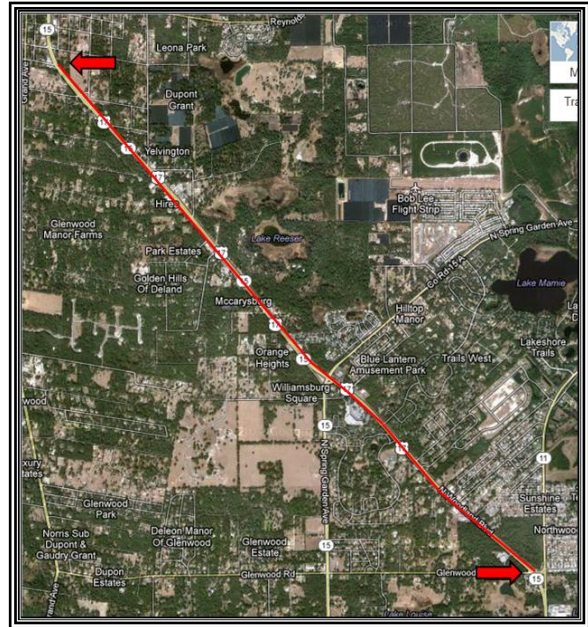


Figure 17. Section 15 - Glenwood Road to Katrina Street

Section 16 - Katrina Street to Ponce DeLeon Boulevard



Photo 20. US 17 northbound

This section consists of a four-lane divided highway with raised, landscaped medians, curb and gutter, sidewalks on both sides of the street. The portion of this section between Katrina Street and Reynolds Road is identified as a urban arterial roadway and the segment between Reynolds Road to CR 3 Ponce DeLeon Boulevard is identified as an urban arterial, uninterrupted flow highway.

This portion of the corridor serves as the main street for the unincorporated community of DeLeon Springs (Special Rural Area per adopted Volusia County Future Land Use Element). The primary land use along the corridor is commercial. This segment of the corridor is on Route 24 of Votran's west side service.

Table 18. Section 16 Characteristics	
Element	Description
Approximate Length	.6 mile
Approximate R/W Width	105'
Number of Lanes	4-divided
Raised Median	Yes
Median Width	20'
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	8'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
No. of Signals/Location	None
Sidewalks	No
Avg. Sidewalk Width	Not applicable
Lighting	Yes
Pavement Condition	(Asphalt) 4.0 Good- Pavement is not new, but provides a first class ride and exhibits few signs of deterioration.
ADA Issue	None apparent, there are potential issues with cross-slopes at existing driveways, as well as parking directly backing into the corridor.
Posted Speed Limit	45 mph

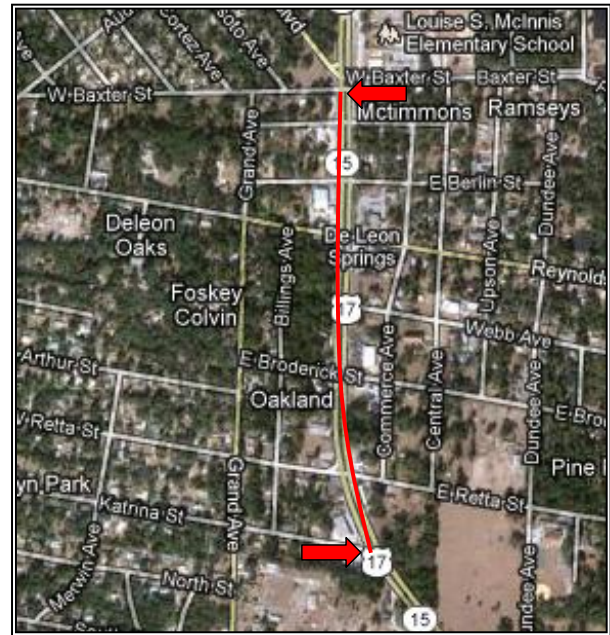


Figure 18. Section 16 - Katrina Street to W. Baxter Street

Section 17 – CR 3 Ponce DeLeon Boulevard to Second Avenue



Photo 21. North of SR 40 - Looking North

This is a two-lane undivided road with paved shoulders and open swale drainage from north of CR 3/Ponce DeLeon Avenue until Second Avenue in the Town of Pierson. There are not any sidewalks or designated bike lanes. According to Volusia County this section is an urban arterial in the southern portion (Reynolds Road to Spring Garden Ranch Road) and a transitioning arterial between Spring Garden Ranch Road to Lake Winona Road; a rural undeveloped area from Lake Winona Road to SR 40; and a rural developing area from SR 40 to Washington Avenue. Throughout the section the road is designated as an uninterrupted flow highway.

The majority of the land abutting the corridor is vacant or developed for large rural uses including residences. There is a considerable amount of land

designated for conservation or environmental protection according to the adopted Volusia County Future Land Use Map. The Special Rural Area of Barberville is located at the intersection of SR 40 and US 17 and has commercial uses at all four corners of the intersection. North of SR 40 the land use is a mix of conservation rural uses. Votran Route 24 provides service along this portion of the corridor.

There are several road capacity improvement projects included in the adopted Transportation Improvement Program that impact this section. The first is the right-of-way (ROW) acquisition for the eventual widening of the corridor to four lanes from DeLeon Spring to SR 40. The other major road capacity projects are the two projects for widening of SR 40 from two to four lanes. There are two segments to this project. The first is from SR 15 (SR 17) to SR 11 and SR 11 to Cone Road. Additionally, FDOT has a PD&E planned for US 17 from the SR 40 to the Putnam County line.

Table 19. Section 17 Characteristics	
Characteristic/Element	Description
Approximate Length	11.1 miles
Approximate R/W Width	200'
Number of Lanes	2-undivided
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	11'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No. of Signals/Location	1 (SR 40)
Sidewalks	No
Avg. Sidewalk Width	Not applicable
Lighting	Yes (4 th Ave to Second Ave (0.6 Mi))
Pavement Condition	(Asphalt) 4.0 Good- Pavement is not new, but provides a first class ride and exhibits few signs of deterioration
ADA Issue	No facilities
Posted Speed Limit	60 mph; 50 north of Hagstrom Rd.

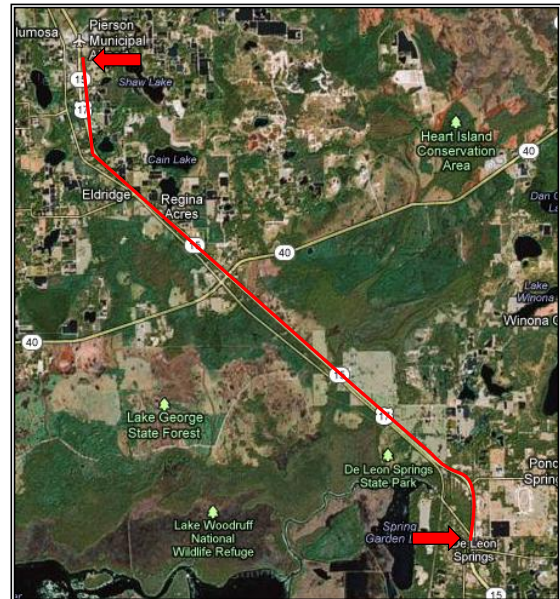


Figure 19. Section 17 – CR 3 Ponce DeLeon Boulevard to Second Avenue

Section 18 - Second Avenue to First Avenue



Photo 22. Town of Pierson North of Second Avenue - Looking North

This segment is located in the Town of Pierson. This section from Second Avenue to First Avenue is a two-lane, undivided highway with lighting, paved shoulders, curb and gutter, and sidewalks. This arterial road is characterized as an uninterrupted flow highway in a rural developing area. Votran Route 24 provides service along this portion of the corridor.

There are vacant lands and commercial uses abutting the corridor, as well as vacant lands and residential single family homes.

The FDOT has a PD&E planned for US 17 from the SR 40 to the Putnam County line.

Table 20. Section 18 Characteristics	
Element	Description
Approximate Length	.2 mile
Approximate R/W Width	50'
Number of Lanes	2-undivided
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	11'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	4'
Left-Turn Lanes	Yes
Right-Turn Lanes	No
Avg. Signal Spacing per Mile	2 (Flashing Caution at 1 st and 2 nd Ave.)
Sidewalks	Yes
Avg. Sidewalk Width	6'
Lighting	Yes
Pavement Condition	(Asphalt) 4.0 Good- Pavement is not new, but provides a first class ride and exhibits few signs of deterioration.
ADA Issue	None apparent. Potential issue with older driveways resulting in steep cross-slopes.
Posted Speed Limit	40-45 mph

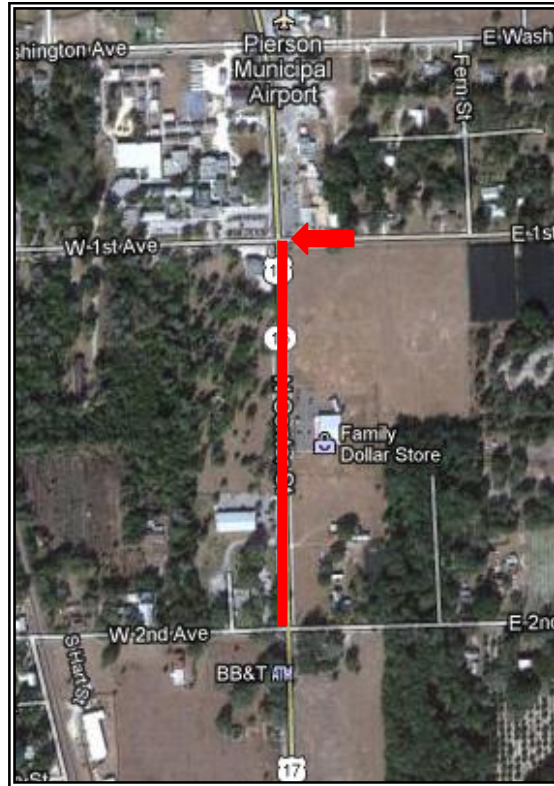


Figure 20. Section 18 - Second Avenue to First Avenue

Section 19 – First Avenue to Volusia/Putman County Line



Photo 23. US 17 North of Seville - Looking North

The typical cross section from First Avenue to Volusia's north county line is a two lane, undivided highway with paved shoulders and open ditch drainage. This arterial road has two different area types assigned to it by Volusia County. The segment from Washington Avenue to CR 305 (Lake George Road) is located in a rural developing area, while the remainder of the road from CR 305 to the Putnam County line is located in a rural undeveloped area. It is considered to be an uninterrupted flow highway in both areas. Votran Route 24 provides service along this portion of the corridor.

The Special Rural Area of Seville is located is centered around the intersection of US 17 and CR 305. The majority of the land use of abutting and nearby land is rural and agricultural, except for the

intersection of CR 305 where there are commercial retail uses surrounded by agricultural, environmental and rural land uses. The FDOT has a PD&E planned for US 17 from the SR 40 to the Putnam County line.

Table 21. Section 19 Characteristics	
Element	Description
Approximate Length	8.9 miles
Approximate R/W Width	170'
Number of Lanes	2-undivided
Raised Median	No
Median Width	Not Applicable
Avg. Lane Width	12'
Marked Bike Lanes	No
Paved shoulders	Yes
Shoulder width	5'
Left-Turn Lanes	Yes
Right-Turn Lanes	Yes
No. of Signal/Location	2 (Full signal at Washington Ave, Flashing signal at CR 305)
Sidewalks	No
Avg. Sidewalk Width	Not Applicable
Lighting	No
Pavement Condition	(Asphalt) 4.0 Good (Pavement is not new, but provides a first class ride and exhibits few signs of deterioration)
ADA Issue	No facilities provided
Posted Speed Limit	55-60 mph

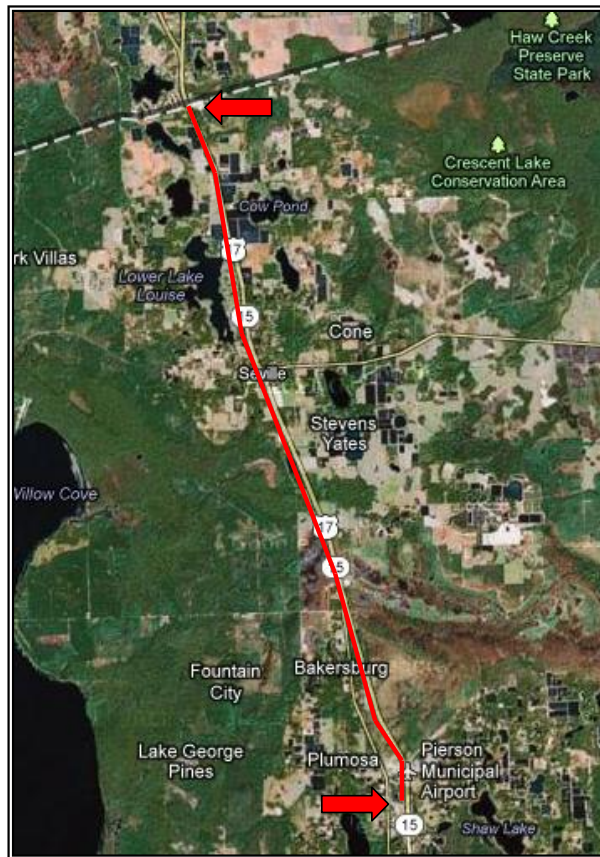


Figure 21. Section 19 - First Avenue to the Putnam County Line

School Attendance Areas

School safety and the operations of the corridor was an issue of high importance identified by all stakeholders who participated in the study. There are numerous elementary, middle and high schools surrounding the US 17-92 corridor. The Volusia County School District, Volusia TPO, and the Volusia County Public Works Department have all been working on a multi-faceted approach to improve the safety of school-age children traveling in the corridor. The approach has included capital improvements, operational changes, educational programs and enhanced enforcement activities. Together these efforts are designed to protect the pedestrian and bicyclists while still maintaining efficient traffic flow. The following summarizes the location of the school attendance areas. Please note that the attendance areas are for the 2012-2013 school year and these attendance areas can be expected to change in the future.

One project initiated by the Volusia TPO in conjunction with the Volusia County School District is the Bicycle and Pedestrian School Safety Studies. These studies analyzed existing conditions at various school campuses to identify specific physical and operational improvements that would enhance the safety of the children attending the selected schools. The studies looked at the sidewalk, trails, road conditions, traffic control measures (signals), crash records and other factors in order to identify a variety of improvements internally to the campuses, as well as to the area surrounding the schools.

The following is a list of schools within the corridor. Those schools with an asterisk indicate that there is a completed Bicycle and Pedestrian School Safety Studies available from the Volusia TPO:

1. Taylor Middle-High School (Pierson/Seville)*
2. DeLand High (DeLand/DeLeon Springs)
3. University High (Orange City/DeBary)
4. DeLand Middle (DeLand/Orange City)*
5. River Springs Middle (Orange City/DeBary)*
6. Southwestern Middle (DeLand/DeLeon Springs)*
7. Pierson Elementary
8. George Marks Elementary*
9. Orange City Elementary*
10. Manatee Cove Elementary*
11. DeBary Elementary*
12. Freedom Elementary*
13. Citrus Grove Elementary*
14. McInnis Elementary*
15. School Site "J" Seville/Pierson (There is a 2008 School Safety Study that is completed, but may not be applicable since the school is not scheduled for construction)*

The School District staff provided valuable information and feedback as part of this study at the stakeholder meeting. The primary point of the meeting was to identify not only existing studies, but how successful were efforts for implementation and coordination of the various safety projects resulting from the school safety studies. The over-riding comment from the school district staff included:

1. The Bicycle and Pedestrian School Safety Studies are very useful in developing an action plan, coordinating with local governments and seeking funding assistance.
2. There have been alternative improvements recommended due to incidents that occurred after the adoption of the study.
3. There may be a need to update some of the studies given changes to external conditions.
4. A major safety issue is that automobiles are not stopping while a students embarks/disembarks from school buses. This is an enforcement issue that may be outside the scope of the studies, but it being addressed by the educational/enforcement efforts from the Volusia TPO and law enforcement officials.
5. The School District is coordinating with Volusia County Public Works to utilize funds to eliminate critical gaps in sidewalks that provide access to the schools near the corridor.

A related issue included the accidents involving students during the 2011-2012 school year in the Orange City/DeBary area. These unfortunate accidents prompted significantly revised traffic patterns including the designation of certain roads as one-way. The majority of the actions focus on operational issues, but enforcement and education are part of a multi-tiered approach to addressing the situation. The Volusia

TPO, working in conjunction with School District, Volusia County Sheriff's Office and Orange City Police, will be providing additional assistance with the education/enforcement efforts through out the 2012-2013 school year. It was pointed out that enforcement and education on speed zones, school safety issues and other operational actions can help, but a driver's perception of the road is a primary force in the decision on travel speed and should be addressed as well.

The stakeholders in the northern segment of the corridor also have identified concerns with operations within the corridor. One of the concerns included the impacts of the pending widening of US 17 through DeLeon Springs on the McInnis Elementary parking and access. The school is located at an intersection that has been identified (see River of Lake Corridor Management Plan and the McInnis Bicycle and Pedestrian School Safety Study) as having a problem with safe operations due to the intersection geometry and street layout. Prior to analyzing any improvements to this intersection, the local agencies have requested the Scenic Corridor Management Entity to identify proposed geometry reconfiguration that is acceptable to the residents.

The VCSB staff indicated that there may be an issue with the school crossings and truck traffic in the Town of Pierson. The primary concern is with truck travel, vehicular speed and concerns with crossing areas. Safety studies and related documents (US 17 Sidewalk Study, Volusia TPO 2012) provide for some suggested improvements. It is important that future studies, such as a PD&E for the widening of the road, incorporate the pedestrian and bicycle movements associated with the existing school areas to ensure these modes of travel are incorporated into the final plans.

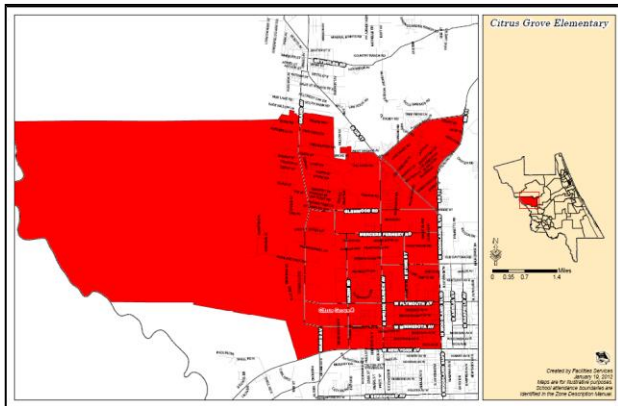


Figure 22. Citrus Grove Elementary - Northwest of US 17-92 and New York Ave. (DeLand)

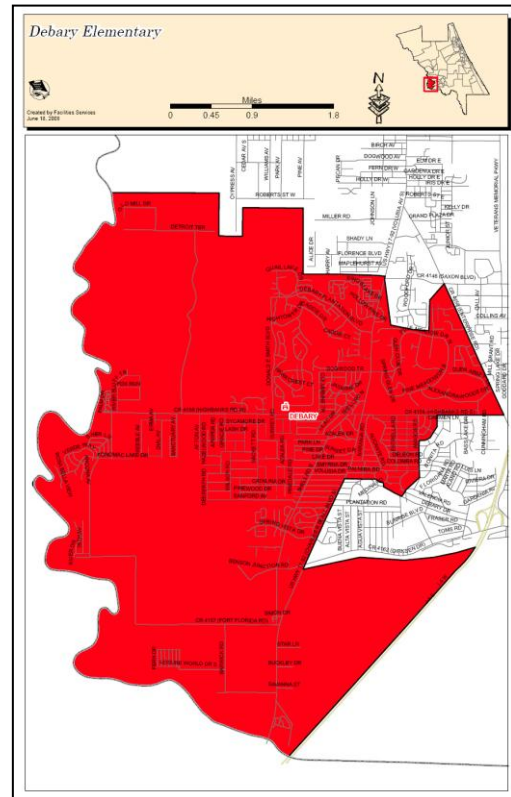


Figure 23. DeBary Elementary - North of Highbanks Rd. and West of US 17-92

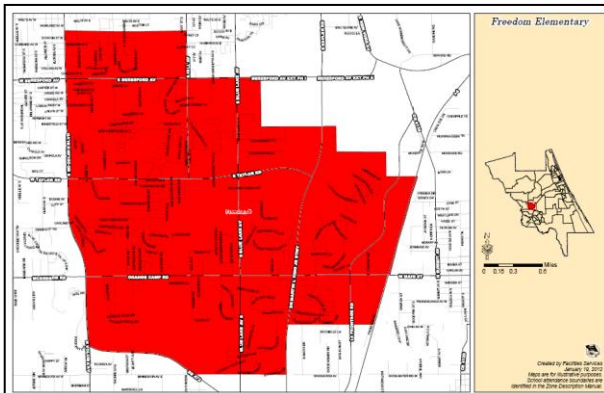


Figure 24. Freedom Elementary - East of Blue Lake Ave., Between Orange Camp Rd. and Taylor Rd.

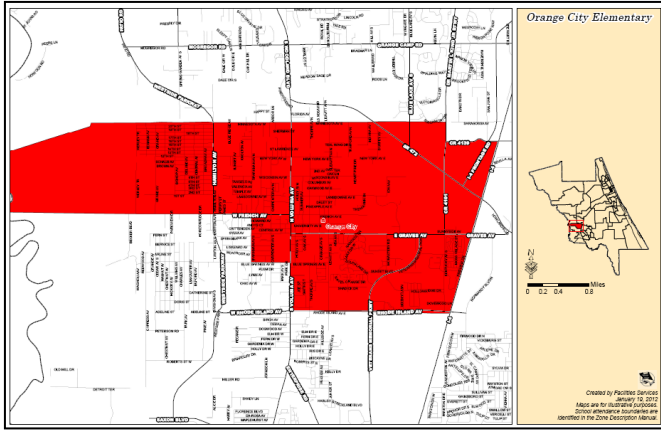


Figure 26. Orange City Elementary - North of Graves Ave. and East of US 17-92



Photo 24. School Crossing Orange City

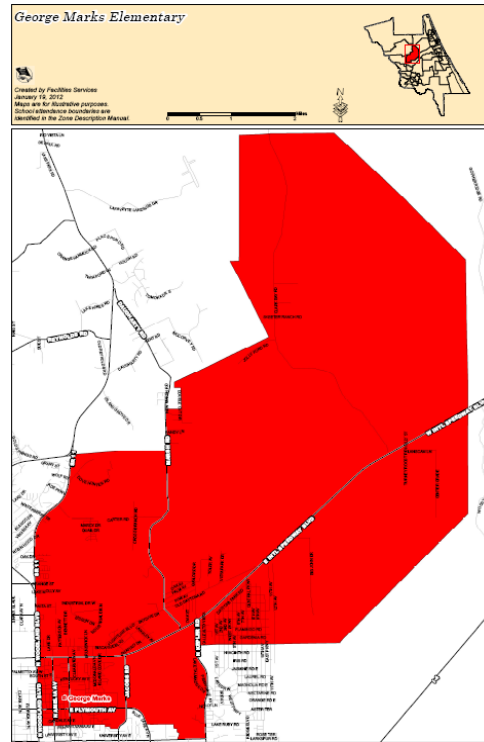


Figure 25. George Marks Elementary - North of Plymouth Ave. and East of Amelia Ave.

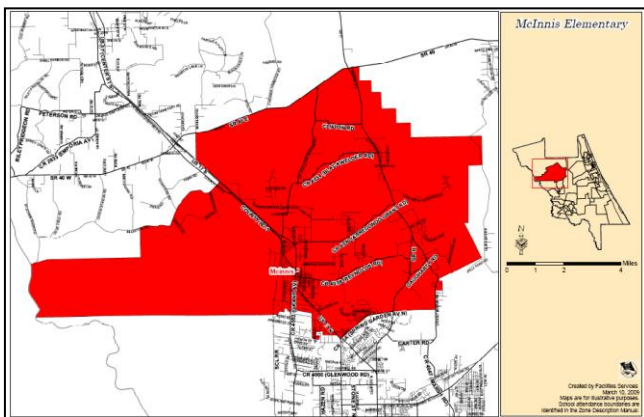


Figure 27. McInnis Elementary - North of Reynolds Rd. and East of US 17

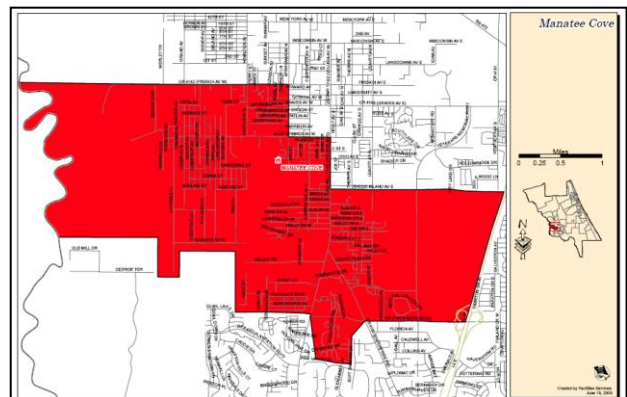


Figure 28. Manatee Cove Elementary - South of Blue Springs Rd. and West of Carpenter Ave.

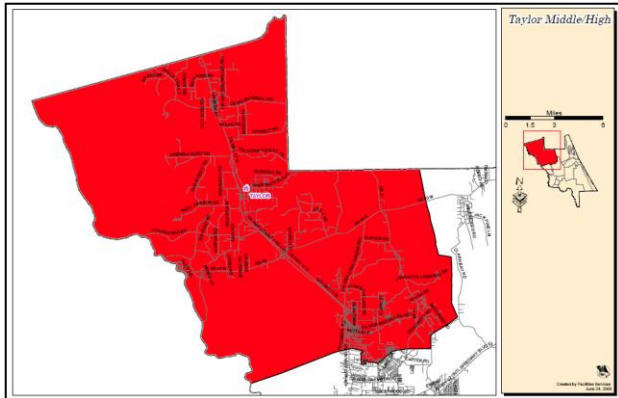


Figure 29. Taylor Middle-High - North of Washington Ave. and East of US 17

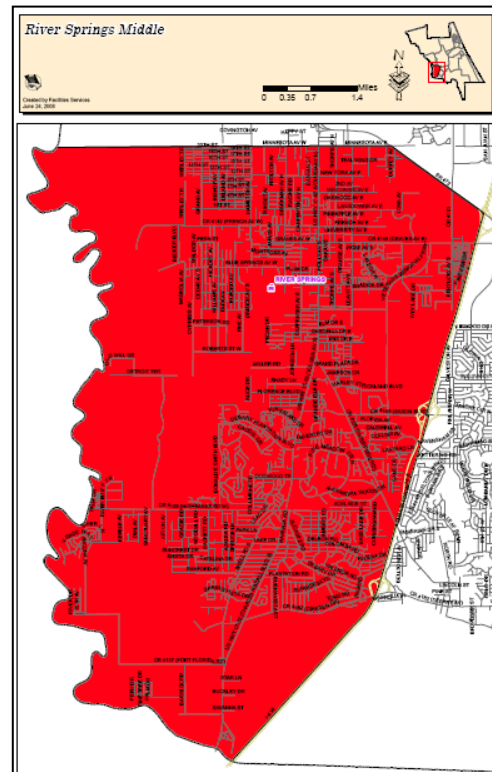


Figure 31. River Springs Middle - South of Blue Springs Rd. and West of Hill Ave.

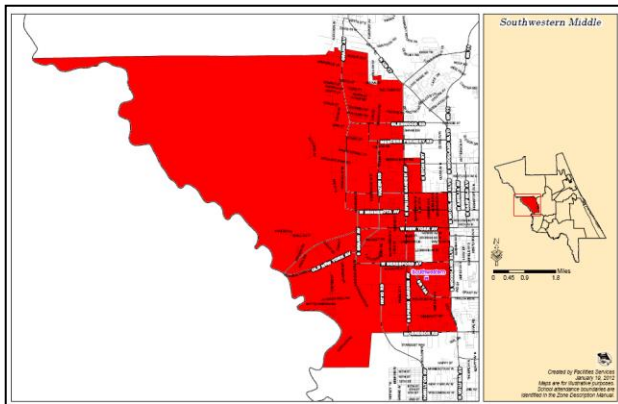


Figure 30. Southwestern Middle - South of Beresford Ave. and West of US 17-92

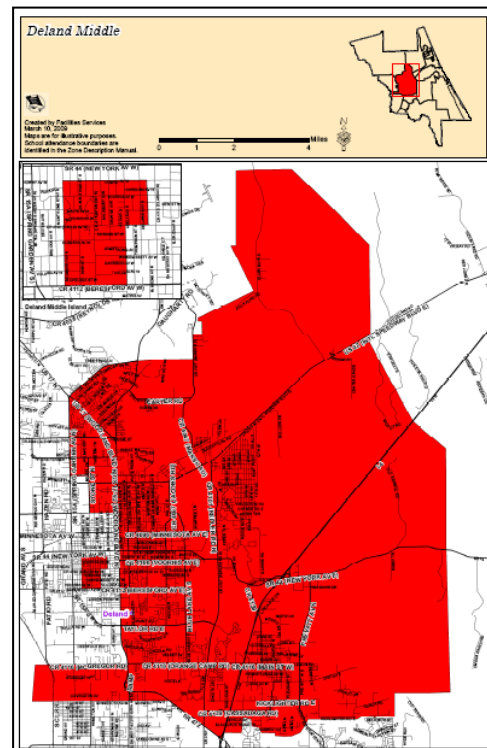
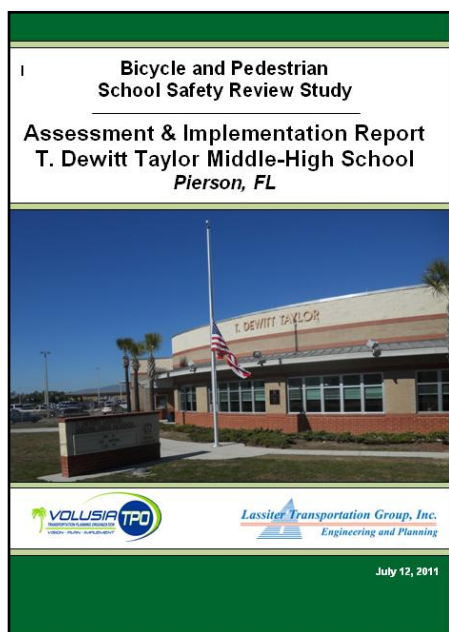


Figure 32. DeLand Middle - North of Taylor Rd. and East of US 17-92



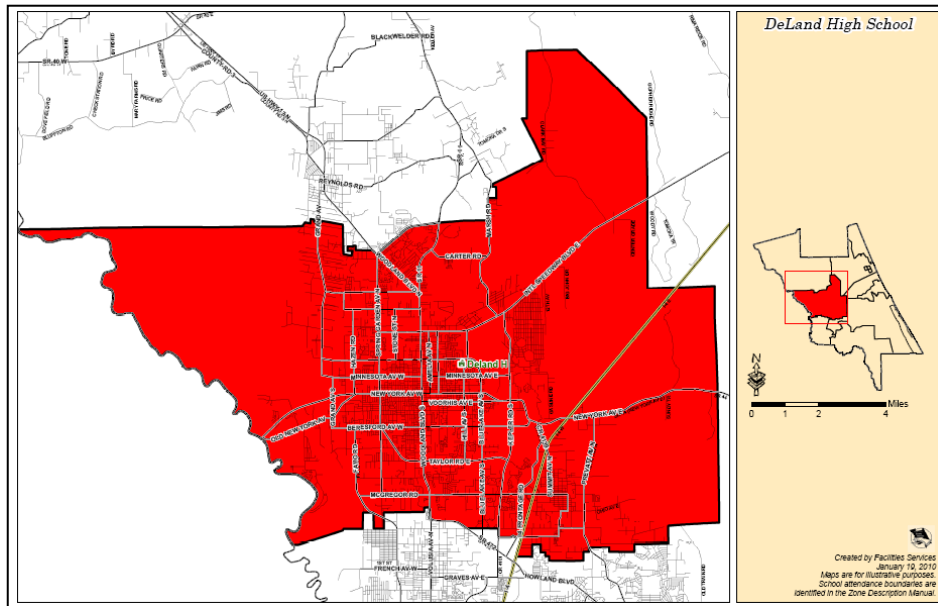


Figure 33. DeLand High - South of Plymouth Ave. and West of Hill Ave.

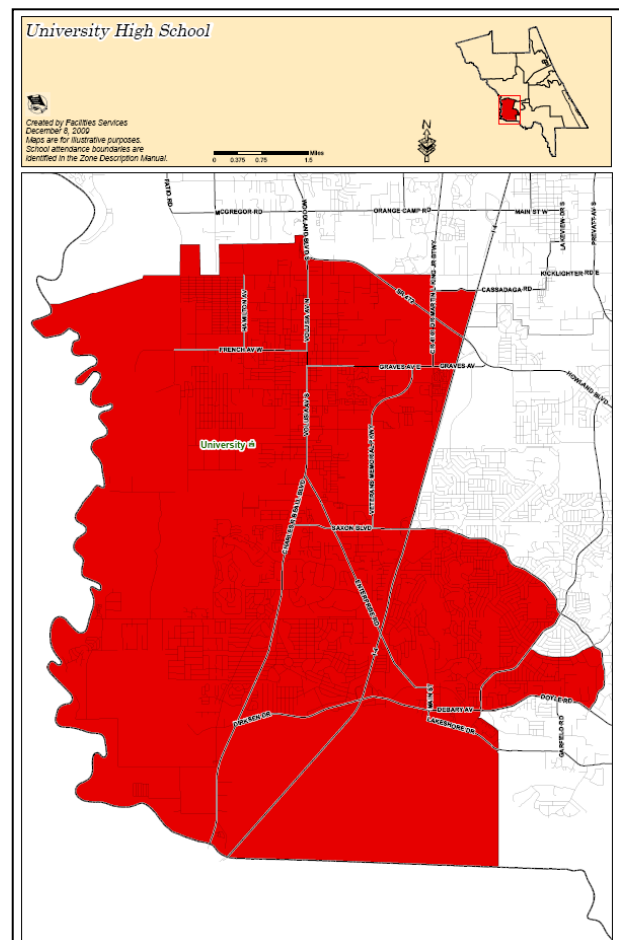


Figure 34. University High - South of Rhode Island Ave. and West of US 17-92

Americans with Disabilities Accessibility (ADA) Compliance

Public accessibility to all persons, regardless of their physical capabilities, is of vital importance. Federal and state laws are in place to ensure that construction of new facilities and applicable reconstruction activities utilize designs that provide for maximum accessibility. The FDOT, Volusia County and the other local governments are required to include the necessary improvements to ensure compliance with the accessibility standards as part of the roadway maintenance and construction projects within the corridor.

The analysis of accessibility within the corridor is based on the most recent Americans with Disabilities Act Accessibility Guidelines (ADAAG) and Florida Accessibility Code (FAC). The analysis was general in nature and reflected an overview of the existing conditions as observed from a windshield survey and internet sources. The following items were identified as being representative of the major accessibility issues within the corridor:

1. Existing commercial retail operations with parking that directly accesses US 17-92. This is a safety issue given that automobiles and trucks must cross sidewalks in order to access these spaces. The primary concern is with vehicles backing over the sidewalk and the ability of the drivers to see handicapped pedestrians or bicyclists using the sidewalk.
2. The issue of sidewalk width, slopes and ramps did not appear to be a major issue in the corridor since the majority of sidewalks appeared to meet the minimum requirements. A few of the existing commercial retail users in the Orange City and DeLand areas may have driveways that may exceed the 2% maximum cross-slope. A related issue in these areas is the sidewalk ramps leading from the street onto the sidewalk. The ramps appear to meet the maximum slope but some of the ramps are not ideal for individuals who must use wheelchairs.
3. Light poles, regulatory signage and other utility elements may be located in a manner to prevent easy access. In several situations it was observed that the spacing met the minimum clearance, but accessibility could be compromised due to the need to jog to avoid a pole, sign or landscape element.
4. Signage, striping and other related items (pedestrian detectors, cross-walks, etc.) should comply with design standards established by FDOT. Critical items included detectable warnings at curb ramps and the height and location of pedestrian detector assemblies.
5. On-street parking does occur within the corridor in limited areas, such as Downtown DeLand. Handicapped parking spaces need to provide a minimum width of 8-feet and length of 22-feet with access to a properly designed and constructed ramp. Signage and striping also must comply with the applicable standard. This does not appear to be an issue, but as the cities of Orange City and DeBary contemplate redevelopment projects, it is important that any efforts to add on-street parking must comply with these standards.
6. Driveways and turnouts also may need to be updated given the amount of existing commercial development that fronts on the corridor and uses the highway as the primary means of ingress and egress. Also there may be issues where stamped concrete/asphalt or pavers may create potential difficulties for handicapped persons if not properly designed.



Photo 25. US 17-92 north of French Ave.

There are other items that required greater level of detailed survey (i.e., sidewalk joint spacing or methods of installation). Also there were items that were not evident in the corridor (median refuge areas or median crosswalks). Lastly, the details on existing driveways require measurement of the existing flare and returns, which is beyond the scope of this study. The survey identified where potential ADA compliance items may be apparent so that these issues may be addressed in subsequent analyses and construction projects.

Pavement Condition

Pavement condition is based on field observations of the surface and does not include any subsurface analysis. The determination on the condition of the pavement is based on the Federal Highway Administration Five-Point Pavement Surface Condition rating. This method of assessment is used primarily in developing a bicycle level of service, pursuant to the 2009 Quality/Level of Service Handbook from the Florida Department of Transportation. The following table provides a summary of the ratings and the general description of the pavement condition.

Table 22. Pavement Condition Rating Criteria	
Rating	Pavement Condition
5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category.
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration.
3.0 (Fair)	Riding qualities are noticeably inferior to those above: may be barely tolerable for high-speed traffic. Defects include rutting, map cracking and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress include joint spalling, patching, etc.
1.0 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

Source: U.S. Department of Transportation. Highway Performance Monitoring System-Field Manual. Federal Highway Administration, Washington, DC, 1987



Photo 26. US 17-92

Overall the corridor has pavement in good condition. There are no visible signs of deterioration and the overall ride is smooth. There are sections within the downtown area of DeLand that considered "Fair" since this has a rigid material (concrete) that has experienced considerable amounts of traffic over its lifetime.



Photo 27. US 17/92 in Orange City

In the future as the roadway paving begins to falter it is important that the local governments coordinate with the FDOT as to when it is appropriate for resurfacing. FDOT Topic 625-000-007, revised in January 2012, summarizes the planning and design criteria for resurfacing, restoration and rehabilitation (RRR) projects. The timing and planning for RRR projects will require coordination with the approved plans for SIS facilities. This may be relatively simple for minor operational improvements.

Transit Services

Volusia County's public transit system, Votran, is provided by the County and managed by McDonald transit. Votran currently operates a western area service that includes DeLand, Deltona, Pierson and Seville.

The US 17-92 corridor serves as a conduit for the primary transit provider, Votran. There have been recent changes to the State's growth management laws that encourage local governments to focus on mobility rather than solely on automobile travel. This change in focus results in a greater need to emphasize the importance of transit as an alternative to the single-occupancy vehicle.

Orange City initiated changes to its comprehensive plan in order to facilitate "Complete Streets" and improve the transportation options available to its residents and businesses. The cities of DeLand and DeBary are also developing similar plans to create greater opportunities for the use of transit. The rural communities of DeLeon Springs, Barberville and Seville, as well as the Town of Pierson, are keenly aware of their respective transit ridership and the need for transportation alternatives. Lastly, the construction of the DeBary SunRail station further encourages land use and transportation decisions that looked at transit and other modes of travel as the future solutions for the area's transportation needs. All of the local initiatives for transit need to be coordinated with Votran to ensure that there is a consistent and comprehensive method of funding, the maintenance and operation of the expanded services and related facilities.

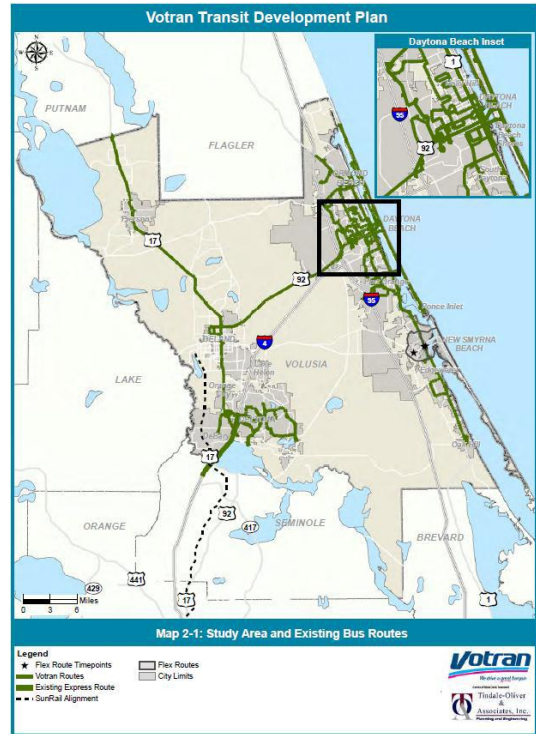


Figure 35. Existing Bus Routes Map from Transit Development Plan

Currently, there are three routes that service the US 17-92 corridor. A detailed inventory of transit stops along the corridor was provided by Votran. More than 50 attributes were collected and noted for each stop location. Route 20 has more than 100 stops each day on US 17-92. Route 23 currently has 21 stops on US 17-92. Lastly, Route 24 has over 60 stops within the corridor.

West Side Service: The routes operating along US 17-92 include:

- North Section – Route 24 (Pierson/Seville)
- South Section – Route 20 (DeLand)
- South Section – Route 23 (Orange City)

Both Route 20 and Route 23 have 60-minute headways and operate Monday through Saturday. Route 24 has 6-hour headways on weekdays and 4 to 6-hour headways on Saturdays.

Table 23. Votran Route Information (Westside Service)				
Route No.	Segment Served	Days of Service	Hours of Service	Headways (min.)
20	Market Place shopping center to DeLand	Monday-Friday	6:30 am – 7:23 pm	60
		Saturday	7:30 am – 6:25 pm	60
23	Market Place shopping center to Providence/Ft. Smith	Monday-Friday	5:57 am – 7:08 pm	60
		Saturday	7:04 am – 6:33 pm	60
24	DeLand to Seville via US 17/CR 3	Monday-Friday	5:40 am – 7:20 pm	360
		Saturday	7:30 am – 7:20 pm	240-360

Crash Data

Crash data is collected and used to determine if improvements are needed to address a pressing safety issue. The issue of safety was identified as a top priority by all of the stakeholders. The safety issues did vary considerably from section to section.

In the southern section, the issue of pedestrian and bicycle safety was greatly emphasized. This response was expected given the unfortunate accidents involving children and teenagers walking or biking to schools that occurred in 2011. Additionally, it was brought out in discussions with Orange City Planning Department staff that there is a concern with the elderly and handicapped being able to safely use the crosswalks due to drivers' not yielding the right-of-way.

Crash data from Volusia County for 2011 showed the following:

1. A total 415 crashes that occurred in the southern section (Seminole County line to SR 15A)
2. 2 fatalities and 57 injuries
3. 6 crashes involving pedestrians
4. 10 involving bicycles
5. 19 involving motorcycles
6. 10 involving heavy vehicles
7. The top three causes were Aggressive Driving (81), Lane Departure (66) and Intoxication (22)
8. The majority of the crashes occurred within the City of DeLand from SR 15A/Taylor Road to Mercers Fernery Road
9. January was the month with the highest number of crashes (43)
10. Friday was the day with the highest amount of crashes (82)
11. The majority of crashes occurred between 11:00 am and 6:00 pm

In the northern section of the study area, the primary concern pertains to the impacts from freight vehicles. The roadway through the northern section is primarily a two-lane rural facility. The rural communities of Barberville DeLeon Springs and Seville, as well as the Town of Pierson have commercial centers with limited sidewalks and bike paths. These are the areas where the local stakeholders have the greatest concerns. The freight vehicles typically are larger and travel at the speed limit. The introduction of a passenger vehicle, bicyclist or pedestrian into the corridor may result in an accident when the freight vehicles are present. Often these crashes are quite serious. This point was reiterated by the representatives of the Town of Pierson in the stakeholder interview. They expressed a belief that appropriate enforcement, education and expansion of the road would address the safety issues within the corridor. The crash data for 2011 did not show a large number of crashes involving heavy vehicles so the concern from the stakeholders may require additional review to determine the extent that heavy vehicles impact the roadway.

Crash data from Volusia County for 2011 showed the following:

1. A total 52 crashes that occurred in the northern section (Seminole County line to SR 15A)
2. 1 fatality and 35 injuries
3. 3 crashes involving pedestrians
4. None involving bicycles
5. 2 involving motorcycles
6. 1 involving heavy vehicles
7. The top three causes were Aggressive Driving (17), Lane Departure (13) and Intoxication (12)
8. The majority of the crashes occurred in the segment between SR 15A/Spring Garden Avenue and Ponce DeLeon Boulevard
9. March was the month with the highest amount of crashes (9)
10. Sunday was the day with the highest amount of crashes (11)
11. The majority of crashes occurred between 6:00 pm and 8 pm

Section III

ANALYSIS OF ROADWAY DESIGNATIONS

Overview

Section I of this study identified the process and methodology used to develop a list of the projects currently approved and adopted by the various local governments and the FDOT. Section II provided a summary of the existing conditions of the corridor. This section provides for additional discussion of opportunities for future improvements in the corridor, given the regulatory and fiscal requirements associated with the classifications and designations assigned by the federal and state transportation agencies. The section addresses how the existing functional classifications and designations may be used so that future improvements to the corridor are consistent with the approved and adopted plans referenced in Section I. Additionally, the analysis identifies how the regulatory framework has changed or may be amended to address the local or regional initiatives.

One of the major items discussed throughout the stakeholders meetings and workshops was the design requirements for the roadway based on functional classification. An equally important issue was the impact that the designation as a highway corridor on the "Emerging Strategic Intermodal System" (SIS) had on future visions for the roadway. The functional classification of the corridor and the requirements of SIS are complicated and the stakeholders indicated a need for further clarification of the SIS requirements. The following provides an overview of these issues.

Background

Roadways in the United States are classified according to the area they serve, the type of facility and the volume of traffic using the road. All highways in the United States are functionally classified using a common nomenclature in order to provide a consistently-defined roadway network across the country. These classifications are determined by the individual states' department of transportation (in conjunction with metropolitan planning organizations) based on criteria established by the Federal Highway Administration (FHWA) who responsible for the final approval of the classifications.

The federal system includes a distinction as to whether or not a road lies within a "rural" or "urban" area. Boundaries for these classifications are based on the latest U.S. Census and subsequent updates. The FHWA typically allows some adjustments to the Census-defined urban and rural areas in defining these areas for FHWA purposes. Whether an area is classified as rural or urban can have funding and policy implications.

The State of Florida also has developed a classification and hierarchy of roads. The Florida Intrastate Highway System (FIHS) was created in 1990 to provide for coordinated planning of high-priority roadways to better serve intrastate and regional commerce. The FIHS was eliminated as part of a wide-reaching transportation bill passed by the Florida Legislature and approved by Governor Scott in 2012. The facilities identified as being part of the FIHS were transferred into the Strategic Intermodal System (SIS). The SIS includes four different types of existing or planned facilities, each of which forms one component of an interconnected transportation system.

1. Hubs: Ports and terminals that move goods or people between Florida regions or between Florida and other origin/destination markets in the United States and globally. These include commercial service airports, deepwater seaports, spaceports, interregional rail and bus terminals and freight rail terminals.
2. Corridors: Highways, rail lines, waterways and other



Photo 28. US 17 Sign north of SR 40

exclusive-use facilities that connect major origin/destination markets within Florida or between Florida and other states or nations.

3. Intermodal connectors: Highways, rail lines or waterways that connect hubs and corridors.
4. Military Access Facilities: Transportation facilities linking SIS corridors to the state's strategic military installations. These are generally access facilities designated as part of the federal Strategic Highway Network and/or the Strategic Rail Corridor Network.

US 17-92 from the Seminole County line to the Putnam County line has been a part of the SIS since the original drafting of the system. The SIS expands beyond what was previously identified as the FIHS since the focus is on interconnectivity between all modes of travel. This system serves as a method of prioritizing funding for intermodal components that improve Florida's economic competitiveness.

The classification system used by FHWA and the Florida Department of Transportation (FDOT) is used to set priorities for funding improvements to the highway network and identifying minimum design standards. In regard to funding, the functional classification is directly tied to the Federal-aid Highway System and to eligibility for Surface Transportation Program (STP) funds and for other federal highway funding. At both the federal and state levels, design standards are established to ensure that a roadway provides for a safe and efficient flow of traffic, given the classification and function of the road. For example, limited access highways that are intended for high-speeds and carrying large volumes of traffic have minimum standards for lane widths, design speeds and access to ensure that the facility effectively allows for efficient movement of passenger and freight traffic.

SIS Designation and Plans

The FDOT Central Office, in coordination with the district offices, is responsible for the planning and development of the SIS. Pursuant to Section 339.65, Florida Statutes, the SIS Highway Corridors shall consist of the following:

1. The interstate highway system
2. The Florida Turnpike system
3. Interregional and intercity limited access facilities
4. Existing interregional and intercity arterial highways previously upgraded or planned to be upgraded in the future to limited access or controlled access facility standards
5. New limited access facilities necessary to complete a balanced statewide system.

The FDOT is responsible for the development of criteria to be used in developing the SIS. The criteria shall be used in evaluating requests to have facilities either added or removed from the list of SIS facilities. The designation of a highway corridor as a SIS or an Emerging SIS is dependent on meeting one of the following criteria:

1. Is it an Interstate Highway as designated by USDOT (SIS)?
2. Is it a designated National Highway System facility that is connected to Georgia or Alabama (SIS)?
3. Is it a limited access facility that is part of the State Highway System and connects two or more Economic Regions as defined by Enterprise Florida, with each end at a SIS facility (SIS)?
4. Is it part of the State Highway System that connects two or more Economic Regions as defined by Enterprise Florida, with each end at a SIS facility, and is a controlled access facility with Access Classification 1, 2, or 3 (Emerging SIS)?
5. Is it a State Highway System (SHS) facility that provides service to at least one county or city within a designated Rural Area of Critical Economic Concern, with each end at a SIS facility, and is the Annual Average Daily Traffic (AADT) equal to or greater than 6,000 trips on at least 50% of component length (Emerging SIS)?
6. Does the amount of truck traffic equal or exceed 13% of total traffic on 50% of the component length; and is the Annual Average Daily Truck Traffic (AADTT) equal to or greater than 1,000 trips on at least 50% of the component length (Emerging SIS)?

The planning for SIS facilities is a detailed process and requires various steps to finalize an improvement to an existing corridor, such as US 17-92. The first step in developing the design for improvement to an existing SIS facility is the development of a SIS Corridor Plan. This plan is developed by FDOT's planning offices to formally identify a course of action that includes "Conceptual Mobility Enhancement

Alternatives". These alternatives may include a variety of different actions to improve all modes of travel. The final goal is to develop a list of specific improvements that will focus on efficient movement of interstate and regional commerce and long-distance passenger trips through a facility designed to provide safety and efficiency for high-volumes of traffic traveling at high speeds.

The second step involves the development of a Master Plan. This step is necessary for the development of the SIS and the scheduling of any operational improvements. Actions in this step include Project Development and Environmental (PD&E) studies, Interchange Modification Reports (IMR), and Interchange Justification Reports (IJR) that the Master Plan may indicate as necessary. The Master Plans shall contain a thorough analysis of Conceptual Mobility Enhancement Alternatives, and shall provide recommendations concerning a schedule for implementation, phasing, financing of construction, and cost estimates of the various components of each Master Plan. In situations where a PD&E study is required, the Preliminary Engineering Report portion of the study may be used in place of the Master Plan and/or Action Plan.

The third step is the development of individual "Action Plans" for controlled access corridors. The FDOT's planning offices will assist with the development of the design principals to be applied to corridor segments in the project development process. This step is where the specific details regarding the corridor are refined and potential issues with minimum design specifications have to be identified. These plans include the preliminary typical sections for the corridor and define the controlling design criteria, such as design speed. The SIS designation also requires that the plans include an analysis of the opportunities for multi-modal use of the corridor. Again the primary goal is to develop as many modes of travel that will improve the economic competitiveness of the State of Florida.

The Action Plan shall include analysis of the potential problems and issues regarding compliance with the SIS design standards. The analysis of potential problems shall be based on all possible alternatives for capacity improvements. These improvements can include transit, multi-modal, and congestion management strategies. This step also includes an investigation of the existing conditions impacting the corridor. These conditions include the physical condition of the roads, the availability of right-of-way, funding opportunities for the improvements and the potential impacts to social and environmental resources. Once the analysis required for an Action Plan is complete, there will be a schedule created to show when improvements to the corridor may occur.

The FDOT requires that all of the plans be coordinated with the appropriate metropolitan planning organizations (MPOs), regional planning councils, local governments and other transportation planning agencies.

The issue of classification and design criteria varies greatly throughout the US 17-92 corridor. The cities located in the southern section are attempting to balance the need for efficient travel in the corridor with the desire to provide for redevelopment of the corridor. A similar issue is facing the northern section of the corridor since the rural communities (DeLeon Springs, Barberville, and Seville) and the town of Pierson are working to balance the area's "small town" character with the pending widening of the segment of US 17 running through DeLeon Springs and the potential future widening in Pierson. These local initiatives are complementary to some of the design standards, but there are several issues, such as design speed and access management, that conflict with the design standards required for an emerging SIS corridor.

Design Standards

US 17-92 is an existing highway that has varying rights-of-way widths and lane configurations throughout the corridor. The traffic volumes reported for the corridor vary from a low of 4,400 AADT to a high of 44,000 AADT. The recent trends show traffic volumes remaining constant or decreasing. This trend is likely to end and positive growth will occur in the corridor as the economy improves. Also, in the southern portion of Volusia County, the corridor serves as the primary alternative to Interstate 4 (I-4) and is used heavily when traffic is congested on the I-4 bridge between Volusia and Seminole counties. Future increases in the volume of traffic may require capacity improvements to various segments of the corridor. There are constrained segments, such as the portion within downtown DeLand, where widening is not a feasible alternative. When improvements are deemed feasible and funded, the FDOT will utilize design standards established for the SIS since US 17-92 is designated as an emerging SIS corridor. The

following identifies the SIS standards and compares them to the existing conditions of the corridor, as well as planned improvements approved and funded by various governmental agencies.

The FDOT Design Standards and Plans Preparation Manual (PPM) are the primary documents outlining design criteria on state roadways. The Manual of Uniform Minimum Standards for Design, Construction and Maintenance of Streets and Highways, commonly known as the Florida Greenbook, is the primary source of basic guidelines for local and county roadways. Local governments and regional transportation authorities defer to the Greenbook in developing their rules and regulations for roadway development within their jurisdiction. Typically, all levels of government use these standards for new roadway construction projects. The application of these updated standards for the reconstruction of existing roadways can be problematic, but it is understood that the standards should be applied to the extent possible.

The SIS Handbook and FDOT Topic 525-030-026-a provide for additional procedural and technical requirements to be used in conjunction with the aforementioned design standards. These documents provide the primary guidance on design standards and criteria for emerging SIS corridors, such as US 17-92. There are numerous design elements that could be listed, but the following reflect those issues that have been identified as the primary concerns from the local government in the adopted plans and studies.

Design Speed

The first issue to be discussed is the design speed for the corridor. The primary goal of SIS facilities is to provide efficient and safe routes for the movement of people and freight. The design speeds for the SIS facilities reflect this goal. FDOT Topic No. 525-030-260-a addresses the standards and design criteria for the SIS. US 17-92 between the Seminole County line and SR 472 is a controlled access facility. As such, it should follow the design speed specified for that type of road. The design speed for controlled access facilities is 65 mph in rural areas, and at least 50 mph in the FHWA urban clusters and urbanized areas. Table 1 shows the posted speed limits for the various segments of US 17-92. It should be noted that the design speed is typically at least 5 mph higher than the posted speed limit. At this time, the majority of the posted speed limits in the corridor are lower than 5 mph below the required design speed (50 mph for urban clusters and urbanized areas) and may not comply with standards established for SIS facilities.



Photo 29. Speed Limit Sign in DeBary

Table 24, Speed Limit Summary			
Location	Distance (miles)	Posted Speed Limit (MPH)	Estimated Design Speed
Seminole/Volusia County Line to Spring Vista Drive	2.2	50	55
Spring Vista Drive to Highbanks Road	1.5	40	45
Highbanks Road to E Gardenia Drive	2.7	45	50
E Gardenia Drive to Wisconsin Avenue	2.1	45	50
Wisconsin Avenue to SR 472	2.2	55	60
SR 472 to SR 15 A/Taylor Road	1.4	50	55
Taylor Road to Beresford Avenue	1.0	40	45
Beresford Road to Plymouth Avenue	2.0	25-35	30-40
Plymouth Avenue to Glenwood Road	2.0	45	50
Glenwood Road to Katrina Street	4.0	55	60
Katrina Street to CR 3 Ponce DeLeon Boulevard Avenue	0.6	45	50
Ponce DeLeon Blvd. to Second Avenue	11	50-60	55-65
Second Avenue to Washington Avenue	0.4	35-45	40-50
Washington Avenue to Volusia/Putman County Line	8.7	55-60	50-65

Note: Design speed is an estimate and is based on the posted speed plus five (5) miles per hour.

Excessive speeds have consistently been identified as an issue by all of the local government stakeholders. The City of Orange City has on record several resolutions requesting that the FDOT reduce the speed limit for safety reasons. The Town of Pierson has made similar requests for its community core area as well. Speed limits have been identified as an issue by all of the cities and the Scenic Highway Corridor Management Entity (CME) in the Corridor Management Plan (CMP) for the River of Lakes Scenic Highway. The FDOT has conducted several speed studies in accordance with the Manual on Speed Zoning for Highways, Roads, and Streets in Florida. Speed limits are based on an analysis of the travel speeds of vehicles using a particular roadway. The posted speed limit is based on the 85th percentile speed, 10-mph pace, and other factors such as crashes, adjoining development and roadway geometry.

It is important to note that there are speed limitations through the City of Orange City to accommodate the numerous school zones that require students to cross the corridor. The Volusia School District, working in conjunction with the Volusia Transportation Planning Organization (VTPO), Volusia Sheriff's Office and Orange City Police, have developed the following plans to minimize the potential dangers to students crossing the corridor:

1. School attendance zones will minimize the crossing of the corridor to maximum extent possible. This is not always an option for middle and high school students due to the large attendance areas typically associated with these grades. Additionally, there are several schools that do not have an alternative school site available to the students so the attendance areas have to cross over the corridor.
2. Enhanced school safety zones were introduced for the 2012-2013 school year. The program included expanding the area covered by the school zone, enhanced signage and notice, as well as enhanced enforcement.
3. Improved driver and student education will be conducted by the Volusia TPO and the law enforcement agencies to make all users of the corridor aware of the laws pertaining to pedestrian/student safety.
4. The School District implemented revised accessibility and management plans to several elementary schools to improve traffic flow and provide school staff with better control and oversight of the students.

Improvements to existing SIS corridors, such as US 17-92, are typically required to comply with the Design Speed Standards established for SIS Highways. The FDOT is aware that with existing roadways, such as US 17-92, there may be difficulties in complying with the SIS design standards. According to Section 2.4. Design Exceptions and Design Variation Process for Design Speed Standards on the SIS Highway Component (FDOT Topic 525-030-260):

Improvements to existing SIS highway component facilities and new construction should meet the SIS Highway component Design Speed Standards. However, occasionally it becomes necessary to deviate from the design speed standards when improving existing or constructing new SIS highway facilities. Whenever this is necessary, a design exception or design variation is required. All potential design exceptions and design variations for design speed shall follow the process outlined in the Department's *Plans Preparation Manual, Topic No. 625-000-007, Chapter 23* and be identified in the earliest possible planning or production phase. Additionally, these design exceptions and design variations require the concurrence from the Chief Engineer.

Access Management

The State of Florida incorporated access management standards under the purview of the FDOT for the State Highway System. Chapter 14-97, F.A.C. contains the regulations established for access management. The chapter identifies the specific standards for the seven (7) Access Classes. The Access Classes are based on the type of facility, limited access or controlled access. The system is set up so that the lower the class number, the more restrictive the access standards. This means that interstate highways and various toll facilities have the most restrictive standards (Access Class 1) for location of points of access, such as interchanges. The standards for controlled access facilities have a focus on median dimensions, median opening locations, the spacing of signals and connections.

SIS facilities are intended for high-speed travel so it is appropriate that SIS facilities have to comply with restrictive access management requirements. Table 2 summarizes the spacing requirements for

controlled access facilities. Currently, there are multiple access classes assigned to various segments in the corridor and these designations are not necessarily consistent with the access management requirements for SIS facilities. If a major reconstruction or expansion to US 17-92 is planned, then the plans would need to be designed to comply with the Access Class 3 standards since the road is an emerging SIS highway corridor. This reflects one of the concerns raised by local stakeholders. The primary concern is with the impacts that would result if US 17-92 is reconstructed accordance with Access Class 3 standards. The stakeholders realize the many of the existing connections could not be altered but compliance other elements such as median openings and signal spacing requirements of the Access Class 3 may have significant impacts on adjoining land uses. Table 3 identifies where the current conditions of the roadway segments comply with the standards for Access Class 3. To reiterate, the actual Access Class currently assigned to these roads is not necessarily Access Class 3. The review is to determine if the existing conditions of the segments would comply with the access management requirements of a SIS highway corridor.

Table 25. Access Management Standards

Access Class	Facility Design Features	Minimum Connection Spacing (ft)*	Minimum Median Opening Spacing Directional (ft.)	Minimum Median Opening Spacing Full*	Minimum Signal Spacing (mi.)*
2	Restrictive with Service Roads	1,320/660	1,320	0.5	0.5
3**	Restrictive	660/440	1,320	0.5	0.5
4	Non-Restrictive	660/440	N/A	N/A	
5	Restrictive	440/245	660	0.5/0.25	0.5/0.25
6	Non-Restrictive	440/245	N/A	N/A	0.25
7	Both	125	330	0.125	0.25

Source: F.A.C. Rule No. 14-97.003 * Greater than 45 mph/Less than or equal to 45 mph
**** This is the Access Class required for all SIS Highway Corridor (Controlled Access) Per FDOT Topic No: 525-030-260-a**

Table 26. Access Class 3 Compliance Summary

Segment of US 17-92		Median Standards-Compliant with Class 3 Standards (Y/N)		Connection Spacing Compliant (Y/N)	Signal Spacing Compliant (Y/N)
From	To	Are Medians Present?	Are Median Spacing Opening Compliant?		
Seminole County Line	Dirksen Dr.	Y	Y	Y	Y
Dirksen Dr.	Highbanks Rd.	N	N/A	N/A	N/A
Highbanks Rd.	Saxon Blvd.	Y	N	Y	N
Saxon Blvd.	Enterprise Rd.	Y	N	Y	N
Enterprise Rd.	East Gardenia Ave.	Y	N	Y	N
East Gardenia Ave.	Ohio Ave.	N	N/A	N/A	N/A
Ohio Ave..	Wisconsin Ave.	N	N/A	N/A	N/A
Wisconsin Ave.	SR 472	Y	N	Y	N
SR 472	SR 15A/Taylor Rd.	Y	Y	Y	Y
SR 15A/Taylor Rd.	Beresford Ave.*	Y	N/A	N/A	N/A
Beresford Ave.	Plymouth Ave.*	N	N/A	N/A	N/A
Plymouth Ave.	Glenwood Rd.*	Y	N/A	N/A	N/A
Glenwood Rd.	Spring Garden Ave.*	Y	N/A	N/A	N/A
Spring Garden Ave	Katrina St.	Y	N	Y	N
Katrina St.	Ponce DeLeon Ave. (CR 3)	Y	N	Y	N
Ponce DeLeon Ave. (CR 3)	Putnam County Line	N	N/A	N/A	N/A

* These segments are not part of the SIS and would not have to comply with the Access Class 3 standards.

The issue of access management impacts is not a recent issue. The FDOT authorized an access management study that was completed in July 2010 for a portion of the corridor generally located between New York Avenue (SR 44) and Firehouse Road in DeLand. The findings reflected that the existing conditions of the corridor do not comply with the minimum access management classification required for emerging SIS facilities and that the FDOT should consider changing the access classification to be more consistent with adjacent segments (currently designated Class 3 and 4, but recommended it be changed to Access Class 5). The conditions identified for this segment are very similar to the segments in DeBary, Orange City and the remainder of DeLand. Conversely, there are limited issues being raised as part of the proposed widening project that is scheduled for the segment between DeLeon Springs Boulevard and SR 40. According to the 2006 Preliminary Engineering Report prepared by FDOT, this segment of the corridor has an existing Access Classification 4. The report identified that the preferred alternative was designed to meet the requirements for a Class 3. This can be accomplished since the scope and magnitude of the project allows for significant changes to the roadway. This does not mean that there were not concerns or objections identified in the development of the plans, but the ability to comply with Access Class 3 is easier with widening projects in rural areas.

The implementation of access management in the US 17-92 corridor can be divided into three design concepts:

1. Segments with existing, divided roadways with medians and existing connections. These segments will have the greatest challenges to full compliance with Access Class 3 standards.

2. Downtown DeLand, a city designated by the Florida Department of State, Division of Historic Resources as a "Main Street City." This portion of the roadway is a critical part of the "Main Street" city and should remain as it currently operates given the right of way width and adjacent land uses. Note that this area is not actually part of the SIS so it is not mandated to comply with the Access Class 3 standard.

3. The two-lane segments in the rural areas north of Spring Garden Avenue. Future widening projects would likely include design elements that comply with the SIS standards for medians and signal spacing. There may be difficulties in a design that complies fully with the SIS standards given that existing driveway connections in the Town of Pierson and the rural commercial centers in Barberville and Seville do not comply with the standards. There also may be issues within these areas regarding sufficient right of way to accommodate a 4-lane divided roadway, regardless of the access management requirements. This is further compounded with the inconsistencies between the Access Management standards and the Town of Pierson Overlay District.

Median Width

According to Section 2.2.2 of the FDOT Plans Preparation Manual, all multilane SIS facilities shall include a raised or restrictive median. The following table includes the minimum standards applied to medians within the State Highway System.

Table 27. Minimum Median Widths-Arterials and Collectors	
Design Speed > 45 mph	40 feet
Design Speed ≤ 45 mph	22-feet
Paved and Painted for Left Turns	12-feet
Source: FDOT Plans Preparation Manual 2011	

The majority of medians within the corridor do not comply with the minimum width requirements since many of the segments of the corridor that are SIS-designated have a posted speed exceeding 45 miles per hour with median widths less than 40-feet. The following segments have medians that comply with the minimum width of 40-feet:

1. Wisconsin Avenue (Orange City) to Orange Camp Road (1.8 miles)
2. Taylor Road to Beresford Avenue (1.0 miles)
3. Glenwood Road to Katrina Street (4.0 miles)



Photo 30. Bi-directional turn lane Orange City

This means that approximately 17% of the corridor has medians that comply with the minimum width requirements. This statistic identifies the potential need for a variance to one of the design standards if there are major reconstruction projects slated for the existing 4-lane sections located south of Glenwood Road. Also note that there are deviations allowed for reconstruction of facilities where there is a fixed curb location due to restrictive right-of-way conditions. There may be need for a variance or exceptions allowed in the future reconstruction of the existing 4-lane segments south of Glenwood Road since there is a concern with the available right-of-way. These standards reflect a flexibility that is needed for the older arterial and collector roads that run through many of the historic downtown areas in the State of Florida.

Lastly, the segments with bi-directional turn lanes could be reconstructed to include raised medians, but there needs to be caution in areas where there may not be sufficient right-of-way to allow for safe movements. The design of medians located in areas where there is less than 100-feet of right-of-way need to be able to accommodate a U-turn for commercial vehicles. This is especially important in Orange City given that commercial trucks are prohibited on many of the collectors and local streets that intersect with US 17-92. Given the adjoining commercial land uses, large commercial vehicles would be forced to use the local street network to access business in this area if medians are constructed in a manner that does not provide sufficient area for a U-turns.

Freight Movement

The primary design issues applicable to all roadways regarding the movement of freight include weight, length and width of the vehicles. Also, design specifications are used to make sure roadways are designed to accommodate the operation of commercial freight vehicles (pavement types, geometry, etc.). Lastly, there are federal and state laws that set specific standards for the operation of commercial freight vehicles and the ability to limit their operations.

A primary focus of the SIS is economic competitiveness and the ability to efficiently move freight. This means that SIS facilities need to be designed to accommodate truck traffic. Volusia County conducted a freight movement study in 2009 with the goal of identifying optimal truck routes to ensure accessibility, as well as assistance to those areas seeking to restrict the amount of truck traffic. The US 17-92 corridor is identified as a part of the preferred truck routes in the County given its connectivity to Seminole County and Putnam County.

The cities of DeLand and Orange City are the only communities along the corridor that had pre-existing regulations and plans for directing truck traffic. DeLand has long sought to limit the number of trucks using the corridor through the downtown. In order to assist with this effort, a designated truck route was established to direct trucks away from the downtown. There are trucks still in the downtown, but these are primarily delivering supplies/goods to

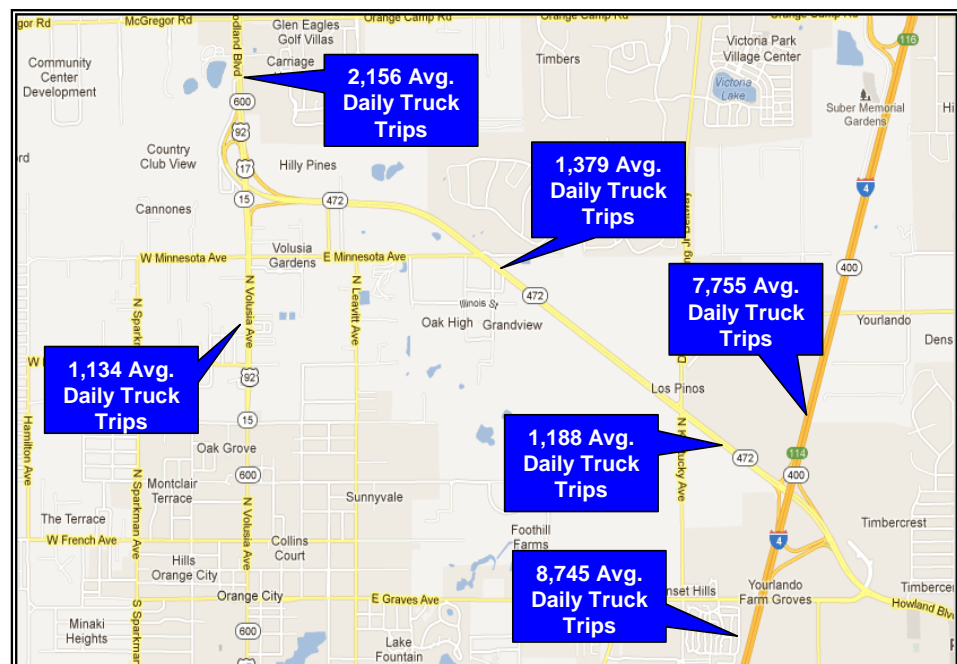


Figure 36. Average Daily Truck Volumes-Source FDOT/Google Maps

businesses within the downtown. The FDOT conducted a license plate study that showed this to be the case. Orange City has maintained the use of US 17-92 as the primary truck route, but has restrictions for trucks on various local roads. The Town Officials in Pierson see a need to widen the corridor in their area to accommodate the existing traffic and the potential traffic generated by the Wal-Mart distribution center that may be constructed in south Putnam County.

A review of the 2011 traffic count data collected by the FDOT shows that approximately 1,000 trucks appear to utilize the I-4 to SR 472 route as a way of accessing US 17-92, rather than traveling from Seminole County on US 17-92. These statistics by themselves are not conclusive about commercial travel behavior, but the information does provide for a snapshot image of the truck volumes on the roads.

Overall, the issue of freight movement will continue to be a topic of interest regardless of the designation of the corridor. It is clear that any facility that is part of the US Highway system cannot have a prohibition on trucks using the roadway. This means that US 17-92 will continue to have considerable commercial truck traffic, but there appear to be viable alternative routes in the southern portion of the corridor that may address the local concerns of the various cities. The future reconstruction of various segments in the corridor will need to address safe accessibility of commercial vehicles given the nature of the adjoining land uses and the importance of the corridor as a truck route.

Traffic Calming/Context Sensitive Design

The US 17-92 corridor is considered to be the traditional "main street" in many of the cities and communities in western Volusia County. The City of DeLand has been proactive in protecting the historic attributes of its downtown. Similar efforts are underway in Orange City and the rural community of DeLeon Springs. One concept that has been embraced by redevelopment professionals is the need to slow or calm traffic through downtown areas. The belief is that slowing traffic will make these areas more attractive to pedestrians and bicyclist, support local businesses, as well as minimize negative impacts of traffic (noise, safety concerns, etc.).

The portions of the corridor that are part of the emerging SIS face potential conflicting functions. The slowing or calming of traffic is opposite of the goals of the SIS. The primary function of the SIS is to move goods and people as quickly, efficiently and safely as possible. It may be possible to resolve this conflict through a variety of design modifications given that FDOT has initiated many efforts to incorporate "context sensitive solutions" into its methodologies for planning and design. The FDOT's Project Management Handbook, Volume 1, includes the following statement about context sensitive solutions:

Context Sensitive Solutions (CSS) happen when existing processes are designed to help make transportation decisions that are sensitive to impacts and improvements on both the environment and communities. CSS is not a new process or a process separate from other transportation processes. To the greatest extent feasible, all projects should be planned, designed, constructed, and maintained to be sensitive to the context. No project is exempt. Sometimes referred to as "Thinking Beyond the Pavement," CSS reflects an understanding that a host of important and often competing values or interests must be considered in defining and addressing transportation needs. Being sensitive to the context does not always add cost or time to complete a transportation project.

The implementation of CSS solutions is identified in Section 1.7 and Chapter 21 of the Plans Preparation Manual. This section and chapter identify how to work "Transportation Design for Livable Communities" or TDLC into new construction, reconstruction, or resurfacing, restoration rehabilitation (RRR) projects. The basic premise is that FDOT will work with a local government to incorporate techniques, such as landscaping, streetscaping and other TDLC items when it is desirable, appropriate and feasible. The following tables from the Plans Preparation Manual provide a quick summary of the techniques that may be allowed for controlled access facilities, such as the US 17-92 corridor. This also provides a comparison based on other roadway classifications. Table 28 lists the "corridor" techniques and applies to a variety of operational improvements.

Table 28. TDLC Corridor Techniques (General)					
Technique	SIS		SHS Urban	SHS Rural	Non-SHS
	Limited Access	Controlled Access *			
Improved location, oversized or redundant directional signs	Appropriate	<i>Appropriate</i>	May be Appropriate	May Be Appropriate	May be Appropriate
Use of route markings/signing for historical and cultural resources	May be Appropriate	<i>Appropriate</i>	Appropriate	Appropriate	Appropriate
Increased use of variable message signing	Appropriate	<i>Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Landscaping	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Sidewalks or wider Sidewalks	Not Appropriate	<i>May be Appropriate</i>	Appropriate	May be Appropriate	May be Appropriate
Street furniture	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Bicycle lanes	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Shared use paths	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Conversion to/from one-way street pairs	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	Not Appropriate	May be Appropriate
Alternative paving material	Not Appropriate	<i>Not Appropriate</i>	May be Appropriate	Not Appropriate	May be Appropriate
Pedestrian signals, midblock crossings, median refuge areas	Not Appropriate	<i>May be Appropriate</i>	Appropriate	May be Appropriate	May be Appropriate
Parking modification or restoration	Not Appropriate	<i>Not Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Safety and personal security amenities	May be Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Street mall	Not Appropriate	<i>Not Appropriate</i>	Not Appropriate	Not Appropriate	May be Appropriate
Source: Exhibit 21-A Corridor Techniques, 2011 Plans Preparation Manual					
<i>* These are TDLC standards that would be applied to the portions of US 17-92 that are designated SIS facilities</i>					

Table 28 indicates that there is some flexibility allowed for SIS Controlled Access Facilities since many of the techniques are identified as "Appropriate" or "May be Appropriate". The techniques identified as "Not Appropriate" include alternative paving materials, parking modification or restoration, and street mall. There is nothing in the adopted plans or visions that indicate that these "Not Appropriate" techniques are being sought by the local governments, but there are plans being developed by Orange City to reconstruct the US 17-92 corridor and these plans may include alternative paving materials, which are allowed in SHS Urban Areas. A prima example is the River of Lakes Corridor Management Plan, which has incorporated many of the techniques in its recommendations and implementation strategies.

There are other TDLC options identified in Table 29 pertaining to techniques for reducing speed or traffic volumes. These include lower speed limits, use of 4-way stops at intersections, on-street parking, curbed bulb-outs, traffic "chokers", compact intersections, roundabouts, curvilinear alignment and street closures. Only compact intersections and roundabouts are identified as techniques that are either appropriate or may be appropriate for SIS controlled access facilities.

Table 29. TDLC Techniques to Reduce Speed or Traffic Volumes

Technique	SIS		SHS Urban	SHS Rural	Non-SHS
	Limited Access	Controlled Access *			
Lower speed limits	Not Appropriate	Not Appropriate	Not Appropriate	Not Appropriate	Not Appropriate
Increase use of stop or multi-way stops signs	Not Appropriate	Not Appropriate	Not Appropriate	Not Appropriate	Not Appropriate
Speed humps/tables	Not Appropriate	Not Appropriate	Not Appropriate	Not Appropriate	May be Appropriate
On-street parking to serve as buffer between travel lanes and pedestrian areas	Not Appropriate	Not Appropriate	May be Appropriate	May be Appropriate	May be Appropriate
Curb bulb-outs at end of blocks	Not Appropriate	Not Appropriate	May be Appropriate	May be Appropriate	May be Appropriate
Traffic “chokers” oriented to slowing traffic	Not Appropriate	Not Appropriate	Not Appropriate	Not Appropriate	May be Appropriate
“Compact” intersections	Not Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Traffic roundabouts to facilitate intersection movement	Not Appropriate	May be Appropriate	May be Appropriate	May be Appropriate	May be Appropriate
Curvilinear alignment (with redesign, chicanes, winding paths, etc.)	Not Appropriate	Not Appropriate	May be Appropriate	Not Appropriate	May be Appropriate
Street closing or route relocation	Not Appropriate	Not Appropriate	May be Appropriate	Not Appropriate	May be Appropriate
Source: Exhibit 21-B Techniques to Encourage Multimodal travel, 2011 Plans Preparation Manual					
* These are TDLC standards that would be applied to the portions of US 17-92 that are designated SIS facilities					

Table 30 lists the multimodal techniques that may be used. The importance of multimodal travel is reflected in all of the local governments' comprehensive plans. The transportation elements of the comprehensive plans for DeBary, Orange City and DeLand identify the use multimodal travel as viable options in providing sufficient transportation facilities to their residents. Volusia County is working on a series of amendments to its comprehensive plan and land development code to encourage and accommodate multimodal forms of travel and transit oriented developments. The following table summarizes techniques for encouraging multimodal travel that can be incorporated into roadway design.

Table 30. TDLC Techniques to Encourage Multimodal Travel

Technique	SIS		SHS Urban	SHS Rural	Non-SHS
	Limited Access	Controlled Access *			
Sidewalks	Not Appropriate	May be Appropriate	Appropriate	May be Appropriate	May be Appropriate
Pedestrian friendly intersection design	Not Appropriate	May be Appropriate	Appropriate	May be Appropriate	May be Appropriate
Midblock pedestrian crossings	Not Appropriate	May be Appropriate	May be Appropriate	May be Appropriate	May be Appropriate
Illuminated pedestrian crossings	Not Appropriate	May be Appropriate	May be Appropriate	May be Appropriate	May be Appropriate
Bicycles lanes/paved shoulders	Not Appropriate	May be Appropriate	Appropriate	Appropriate	May be Appropriate
Independent shared use paths	Not Appropriate	May be Appropriate	May be Appropriate	May be Appropriate	May be Appropriate
Bicycle friendly design and	Not	May be	Appropriate	Appropriate	Appropriate

Table 30. TDLC Techniques to Encourage Multimodal Travel

Technique	SIS		SHS Urban	SHS Rural	Non-SHS
	Limited Access	Controlled Access *			
parking	Appropriate	<i>Appropriate</i>			
Transit system amenities	Not Appropriate	<i>May be Appropriate</i>	Appropriate	May be Appropriate	May be Appropriate
Transit users amenities	Not Appropriate	<i>May be Appropriate</i>	Appropriate	May be Appropriate	May be Appropriate
Exclusive transit lanes	May be Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Linking modal facilities	Appropriate	<i>Appropriate</i>	Appropriate	Appropriate	Appropriate
Lower speed limits	Not Appropriate	<i>Not Appropriate</i>	Not Appropriate	Not Appropriate	Not Appropriate
Removal of street parking	Not Appropriate	<i>Not Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate

Source: Exhibit 21-C Techniques to Encourage Multimodal travel, 2011 Plans Preparation Manual
** These are TDLC standards that would be applied to the portions of US 17-92 that are designated SIS facilities*

Lastly, there are other techniques identified as "Area-wide Techniques" that can be included in the design for SIS Controlled Access facilities. Table 31 summarizes these techniques and provides a comparison to other facilities as well.

Table 31. TDLC Area-wide Techniques

Technique	SIS		SHS Urban	SHS Rural	Non-SHS
	Limited Access	Controlled Access *			
Design the street network with multiple connections and relatively direct routes	Not Appropriate	<i>Not Appropriate</i>	Appropriate	May be Appropriate	May be Appropriate
Space through streets no more than a mile apart	Not Appropriate	<i>Not Appropriate</i>	Appropriate	May be Appropriate	May be Appropriate
Use traffic calming measures	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Limit local speed limit to 20 mph	Not Appropriate	<i>Not Appropriate</i>	Not Appropriate	Not Appropriate	May be Appropriate
Limit lanes	May be Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Align streets to give buildings energy-efficient orientation	Not Appropriate	<i>Not Appropriate</i>	May be Appropriate	Not Appropriate	May be Appropriate
Avoid using traffic signals wherever possible. Space signal for good traffic progression	Not Appropriate	<i>May be Appropriate</i>	May be Appropriate	May be Appropriate	May be Appropriate
Incorporate pedestrian and bicyclist design features	Not Appropriate	<i>Appropriate</i>	Appropriate	Appropriate	Appropriate
Incorporate transit oriented design		<i>Appropriate</i>	Appropriate	Appropriate	Appropriate
Design attractive greenway corridors	Appropriate	<i>Appropriate</i>	Appropriate	Appropriate	Appropriate
Design attractive storm water facilities	Appropriate	<i>Appropriate</i>	Appropriate	Appropriate	Appropriate

Source: Exhibit 21-D Network Techniques, 2011 Plans Preparation Manual
** These are TDLC standards that would be applied to the portions of US 17-92 that are designated SIS facilities*

Transit Function

Currently the only transit operator in the corridor is Votran, the county bus service. There are three routes (Routes 20-DeLand, Route 23-Orange City and Route 24-Pierson/Seville) located in the corridor and there are stops along both sides of the road from Columbia Road, north of the Seminole County line to areas near the Putnam County line. All of the routes operate Monday through Saturday. Routes 20 and 23 have one-hour headways and Route 24 has four to six-hour headways. There are also two transfer stations located in the corridor that provide for accessibility to other routes in the Votran system. There are over 200 bus stops for the three western routes along US 17-92. The stops have a wide variety of amenities with a lack of consistent standards.

The US 17-92 corridor plays a critical part in future transit opportunities and investments. Both of the approved SunRail stations are located in close proximity to the corridor. The DeBarry station is under construction and US 17-92 serves as the only direct vehicular access to the station. This station is envisioned as a park-n-ride facility. Additionally, the station will serve as a bus drop-off area. These two functions results in greater emphasis on vehicular access to the station. The proposed DeLand station is further from the corridor, but accessibility between the station and the population will require use of the corridor. The need for connectivity between the SunRail stations and other transportation corridors and systems was identified in the 2009 Transit Corridor Feasibility Analysis, which concluded that local circulator systems that rely on the corridor be studied further.



Figure 37. City of DeBarry TOD Overlay District

Local initiatives from the cities of DeBarry, Orange City and DeLand further reflect the importance of a viable transit system operating within the corridor. The City of DeBarry has aggressively worked to establish development initiatives for the Transit Oriented Development overlay district. This effort was the result of years of coordination between transportation and land use professionals. The City of Orange City was one of the first local governments to revise its comprehensive plan and land development regulations to incorporate mobility strategies focused on a variety of transportation opportunities. The City of DeLand and Volusia County are working together in planning for the DeLand SunRail station. The station is located in an area under the jurisdiction of the County, but will require coordinated planning efforts with the City of DeLand to ensure that there is a complementary land use pattern.

All of these plans and activities indicate that the corridor has a strong transit function. The reliance on transit results in a potential conflict with the vehicular goals established for the SIS highway components. The SIS highway network is focused on facilities conducive to moving a large volume of vehicles at high speeds in the safest manner possible. The TOD standards established in DeBarry and the Orange City Mobility Strategy highlight pedestrian and transit services that emphasize slowing traffic speeds. The TDLC standards allow for flexibility in several areas such as parking, transit amenities and pedestrian-friendly facilities. The two area not addressed by the TDLC standards are the access class standards (Access Class 3) and travel speeds. It is clear that these conflicts will have to be addressed in order to come to a balanced solution given the mobility strategies adopted by the local government, the expansion of SunRail and Votran services and the need for efficient vehicular travel.

REGULATORY AND FINANCIAL IMPACTS:

Growth Management Legislation Impact/Level of Service

The State of Florida has one of the most comprehensive growth management systems in the United States. All cities and counties within the state are required to develop and implement comprehensive plans.

In Florida, the functional classification system also plays a role in the determination of concurrency, or in other words, the ability of the roadway to serve current and projected traffic based on an adopted level of service. Local governments within the US 17-92 corridor are aware of these classifications and realize that modifications can play an important role in the development of the corridor in accordance with their local visions.

In 2011 and 2012 there were changes to the laws and rules established for growth management in the State of Florida. The 2011 Community Planning Act contained major changes to the operational, procedural and information requirements for local planning. One of the most noticeable changes was the elimination of transportation concurrency as a mandatory part of local comprehensive plans. The Community Planning Act included provisions that allowed transportation concurrency to be added as an optional part of the transportation element. According to the Act, transportation elements of local comprehensive plans needed to focus on the development of multimodal strategies that provide for the transportation needs of the particular community.

A recent survey conducted by the Volusia County Traffic Engineering Division showed that the majority of cities within the US 17-92 corridor have not abandoned concurrency, but several are considering adopting mobility criteria as an alternative. It should be noted that the City of Orange City adopted a mobility system as part of the 2010 Evaluation and Appraisal Report (EAR)-based amendments. The Orange City Planning Department staff has developed and adopted land development regulations that implement the mobility strategies established in the adopted comprehensive plan. Other cities such as DeLand and DeBary are contemplating similar policy changes and are researching the most appropriate alternatives for their respective communities.

The other component of the Community Planning Act pertained to the role of the FDOT in the development of the transportation elements and the ability to comment on proposed amendments to their respective comprehensive plans. The Community Planning Act included limitations on the FDOT's involvement by requiring them to coordinate with local governments in establishing minimum level of service standards for SIS facilities and limiting the FDOT reviewers' focus to state transportation issues.

One of the resulting changes from the Community Planning Act has been extensive changes to the Florida Administrative Code (FAC). A major change was the elimination of the level of service requirements contained in Chapter 14-97.003 that became effective in October 2012. This FAC chapter had contained the minimum levels of service required by the FDOT on various classifications of roads within the State of Florida. The standards varied by facility type and focused on preservation of higher standards on SIS facilities. Since the elimination of these standards, the FDOT requests a level of service standard of "D" in urban areas and "C" in rural areas. It would be up to the local governments that are still implementing concurrency to determine if these recommended standards are applicable within their community.

These recent changes to the growth management rules and regulations provide local governments' greater flexibility with the comprehensive planning issues facing their communities. It eliminates much of the state involvement with local issues and focuses the state agencies on the protection and development of state resources. The local governments within the US 17-92 corridor have greater planning options to address the function and appearance of the corridor. The critical issue is ensuring that planning efforts are coordinated early in the process.

Issues and Impacts of Relocating SIS Designation to SR 472

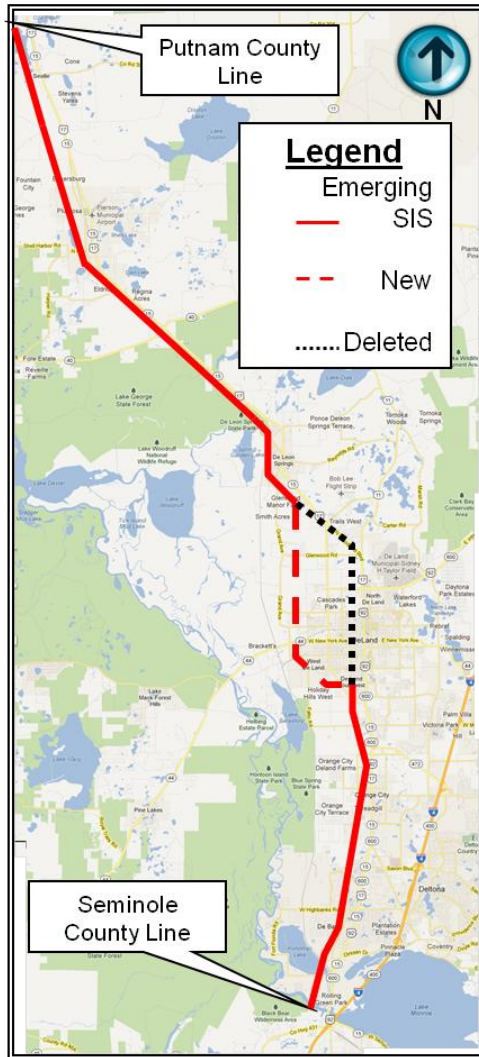


Figure 38. US 17-92/SR 15 A Emerging SIS Alignment

Prior to the Community Planning Act and the related changes to the FAC, there was a perception by some of the local stakeholders that the designation of US 17-92 as a SIS facility was detrimental to the local government's efforts for redevelopment of the corridor. The primary issues were:

1. Design standards were stringent and focused solely on the movement of traffic
2. Level of service standards for the SIS created difficulties for local governments that did not have the financial resources to fund the improvements needed to support the standards
3. The SIS designation required additional review at the state level that is not required with local arterial roads
4. Planning and funding were developed at the state level and with limited local involvement

Based on these issues, local planning staff identified a potential option of relocating a segment of the SIS designation from US 17-92 (Seminole County line to SR 472) to I-4 and SR 472. The idea is based on a similar successful effort led by the City of DeLand when US 17 and US 17-92 were removed from the SIS and the designation shifted to SR 15A (Spring Garden Avenue). This discussion is still at a staff level discussion since only the City of Orange City has made official steps to work on the potential relocation. Other cities, such as DeBary and Volusia County, have not taken formal action to act on the relocation of the SIS designation.

DeLand's portion of the US 17-92 redesignation (see Figure 38) is one of 16 requested changes approved by the FDOT since 2007. This modification preserved the historic downtown area and rerouted truck traffic to the more efficient path.

Although the Community Planning Act and various design variance procedures have allowed for greater local involvement in developing the level of service and design of SIS facilities, there is still a concern that the SIS relocation for this segment of the corridor could be detrimental to efforts to redevelop the corridor. There are specific procedures and analyses that need to be completed in order for local governments to pursue the relocation of the SIS designation from the aforementioned segment of US 17-92. Note that the segment of US 17-92 between SR 472 and Taylor Road (SR 15A) is not included as part of the relocation and is expected to retain its SIS designation.

A viable alternative must be identified for the SIS highway corridor before any actions can be taken to remove the SIS designation from US 17-92. The primary alternative SIS designation is SR 472, from US 17-92 to I-4 (see Figure 39). SR 472 is a controlled access, four-lane divided roadway that connects I-4 to US 17-92. Generally, the existing conditions of the roadway (posted speed, lane widths, access, medians openings and connections) comply with the standards established for Emerging SIS facilities. The I-4/SR 472 route meets the eligibility criteria developed by FDOT since: 1) it is a part of the State Highway System; 2) it would be part of the connection between two economic regions identified by Enterprise Florida with SIS facilities at each end; and 3) it is a controlled access highway.

All local governments with jurisdictional boundaries along the roadway must agree to the proposed relocation of the SIS designation, including those outside Volusia County. The relocation process requires approval from all local governments that have the facility within their jurisdictional boundaries.

If there is a consensus among the impacted local governments, then the FDOT District 5 staff will coordinate with the FDOT Central Offices to process the re-designation request. This will require provision of data to support why the existing facility should be removed from the SIS and how the new facility provides a reasonable alternative SIS highway corridor.

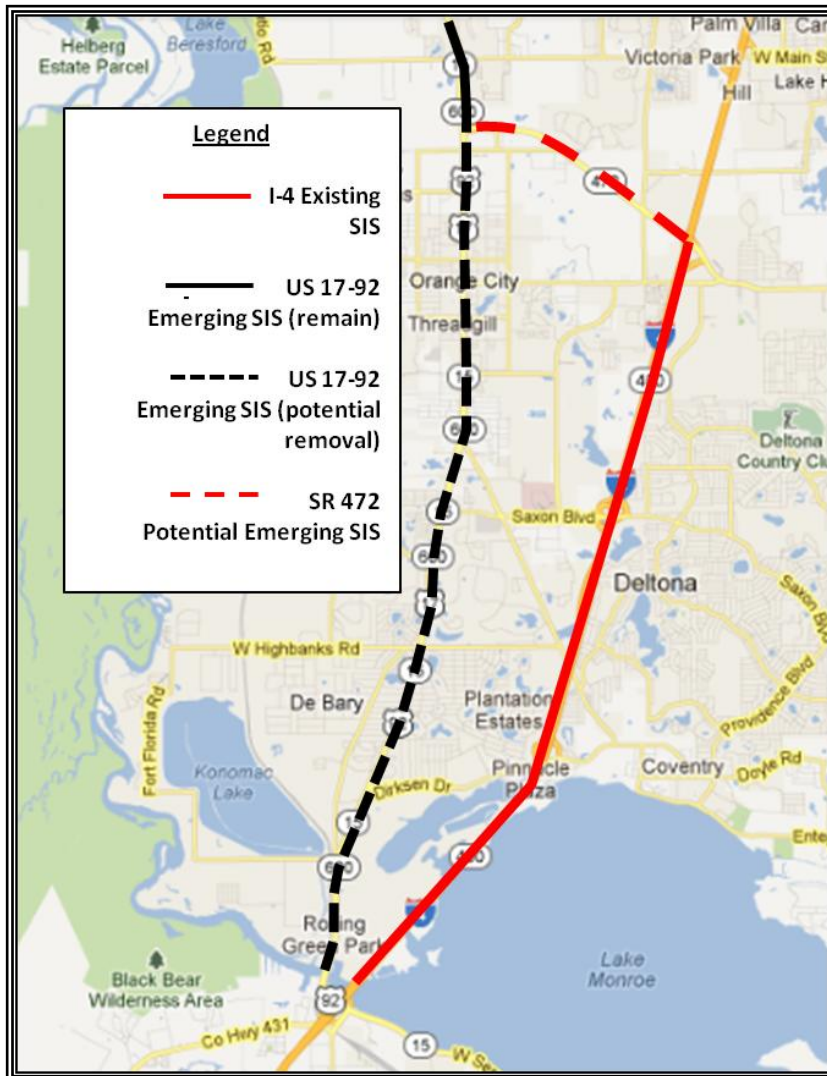


Figure 39. Potential Route for SIS Relocation To SR 472

Impact on Planned Developments

The designation of SR 472 as a SIS facility and the removal of that designation from US 17-92 may have impacts on future planned developments such as the I-4/SR 472 Southwest Activity Center (SWAC) Development of Regional Impact (DRI). This project is a joint effort between the City of Deltona, City of DeLand and Volusia County to encourage economic development surrounding the SR 472/I-4 interchange. The project consists of 1,824 acres of land and includes the following proposed land uses:

- 722 hotel rooms
- 7,428,674 square feet of industrial development
- 6,795,391 square feet of office development
- 3,032,818 square feet of commercial development
- 2,315 multi-family dwelling units
- 263 single-family dwelling units

A detailed traffic impact analysis was prepared as part of the SWAC DRI application. The study identified the four phases for the project and the potential development scenarios. As part of the study, the analysis identified roadways where the project traffic was significant and adverse; meaning where a project has a large percentage of the future traffic impacts on roadways ("significance") and the impacts will cause those roadways to fall below the adopted levels of service ("adversity"). The developer of a DRI is required to construct improvements or enter into a proportionate share agreement for funding roadway impact mitigation when a project has impacts on a road that are both significant and adverse.

The Phase 1 traffic analysis for the DRI concluded that certain segments of the US 17-92 corridor would be impacted by the project's traffic and would require six-laning of US 17-92 based on the adopted level of service. The segments are located in Orange City between Graves Avenue and French Avenue; in unincorporated Volusia County from French Avenue to the city limits of DeLand; and in DeLand from its southern city limits to Taylor Road. The impacts to the segments were based on a level of service standard of "C", as previously mandated by FDOT for SIS designated roadways. Similarly, there were impacts on SR 472 where the adopted level service of "D" was exceeded due the DRI project traffic. The SWAC DRI analysis presented mitigation that would provide for the necessary improvements to address the degradation to the adopted levels of service.

The primary issue associated with the potential re-designation of SR 472 as a SIS facility and removing US 17-92 from the SIS is the change to the minimum acceptable level of service. The issue has been impacted by the changes to the growth management laws and the elimination of the level of service standard previously contained in FAC Chapter 14-97. The new laws do not diminish the need to address the mitigation requirements, but provide for the use of mobility strategies by local governments in planning transportation networks. Also, the establishment of levels of service for those local governments continuing to implement concurrency can now be refined to suit the needs of the community since FDOT's role in comprehensive planning has changed their focus to larger state issues. This means that allowing a level of service "D" on a SIS facility is now acceptable.

Aside from transportation concurrency issues, there are other changes that may impact the mitigation requirements for the I-4/SR 472 Southwest Activity Center DRI. The first critical issue is the establishment of "Dense Urban Land Areas" or DULAs. In the simplest of terms, a DULA is a city or county with a population density that is equal to or greater than 1,000 persons per square mile within the jurisdiction of the local government. DULAs were created in 2009 to allow urban cities and counties to remove concurrency requirements from their comprehensive plans and focus on the development of mobility strategies. The law also included provisions that allowed development applicants within DULAs the choice to opt out of the traditional DRI process.

The 2011 Community Planning Act made transportation concurrency optional for all cities and counties so the concurrency exemption for DULAs was removed from the statutes, but the DULA exemption to the DRI requirements remain. The cities of Deltona and DeLand are DULAs. Although Deltona is a DULA and could have allowed the project to proceed without a DRI designation, instead it allowed the DRI

Development Order (DO) for the I-4/SR 472 Southwest Activity Center DRI to expire. The City of DeLand has maintained and extended the DRI DO. Volusia County is not a DULA but has also extended the DRI DO. The requirement for improvements to US 17-92 has raised a conflict between their respective DOs (the City of DeLand and Volusia County) and the redevelopment plans of Orange City. This conflict is further defined below.

The City of Orange City, also a DULA, has adopted a mobility strategy to be used in lieu of traditional concurrency. Orange City also incorporated new level of service standards for roadways that are lower than those required by FDOT for SIS facilities. The mobility strategy adopted by the City has been incorporated into its proposed CRA master plan. The City's comprehensive plan prohibits the widening of US 17-92 from Graves Avenue to SR 472 based on specific policies that restrict the road to a four-lane divided section. These policies are in conflict with the identified improvements to US 17-92 required by the Southwest Activity Center DRI, requirements that are still part of the approved Development Orders issued by Volusia County and the City of DeLand. While the widening projects on US 17-92 identified in the respective Development Orders have been excluded from the list of projects included in this study, it is necessary that all impacted local governments develop a coordinated approach to address the traffic impacts resulting from the DRI that are consistent with the City of Orange City's Comprehensive Plan, its redevelopment plans and its city-wide mobility strategy.

In summary, the recent changes to the growth management laws and the enhanced flexibility granted to local governments minimize any potential impacts resulting from the designation of SR 472 as a SIS facility and the removal of the designation for US 17-92 from the Seminole County line to SR 472. Additional traffic impact assessments may be required to ensure that the appropriate mitigation is planned to address the SWAC DRI's transportation impacts. Lastly, local governments will need to coordinate future transportation improvements needed to mitigate impacts resulting from the I-4/SR 472 Southwest Activity Center DRI that does not include the widening of US 17-92 beyond 4-lanes.

SIS Funding

The question of funding benefits for SIS facilities has been identified as a critical element in the decision-making process. The funding of SIS projects is identified in three separate, but coordinated, documents. The adopted FDOT SIS First 5-Year Plan shows projects that are either funded or programmed in the FDOT's adopted Work Program for the fiscal years 2010/2011 to 2015/2016. The adopted FDOT's SIS Second 5-Year Plan summarizes projects that are planned to be funded for the fiscal years of 2016/2017 to 2021/2022. These projects may be shifted forward into the adopted FDOT SIS First 5-Year Plan if additional funds are made available to the SIS. Lastly, the 2035 SIS Cost Feasible Plan summarizes projects that are feasible given current revenue forecasts. This plan addresses projects that can be built during the 2022/2023 to 2036/2037 fiscal years. No projects are identified in the SIS plans for the US 17-92 corridor in Volusia County. The 2040 SIS Unfunded Needs Plan identifies two widening projects for the northern section of the corridor. The first is the widening of US 17 from Lake Winona Road to SR 40. This project is estimated to cost \$80,746,000. The second project is the widening of US 17 from SR 40 to the Putnam County line and the estimated cost is \$113,554,000. The final project is the widening of SR 15A from US 17 to Glenwood Road, which is estimated to cost \$168,451,000. This last project is identified since it provides for parallel improvements to US 17 that should alleviate congestion in downtown DeLand.

SIS funding is subject to change and can be allocated to capacity projects for SIS highway corridors. Improvements that are eligible include design, right-of-way, additional lanes, new facilities, enlarged bridges, intersection/interchange modifications and special use lanes. All of these improvements may be needed within the corridor. There may also be opportunities in the future to utilize some of the unused funds for smaller operational improvements in the corridor if the scopes are consistent with the standards for the SIS and provide for an overall improvement to the capacity of the system. At this time, there are no funds that are directly allocated to projects within the corridor and there are not likely to be any funds allocated for improvements within the adopted FDOT's SIS Second 5-Year Plan. This means that no viable SIS funding is projected to be available for potential roadway or multi-modal improvements within the corridor during the planning horizons established in the adopted comprehensive plan of the adjoining local governments.

It should be noted that this report documents issues noted from the reviews of the studies previously performed within the US 17-92 corridor. This study does not make recommendations regarding the designation or redesignation of the SIS status of US 17-92. Any desired action regarding SIS redesignation should be pursued independently.

CONCLUSION

IDENTIFIED ISSUES FOR FUTURE DISCUSSION

Local governments have greater opportunities to work with FDOT to identify mutually acceptable alternatives for the US 17-92 corridor. These opportunities still require that there is an efficient transportation network that can effectively move freight and vehicles. All agencies and local government staff involved in the study agreed that the important issue is to address potential conflicts early in the planning process. The following are items that were identified by the stakeholders that may need to be monitored and addressed as part of the second phase of the US 17-92 CIP.

- ✓ The cities of DeBary, Orange City and DeLand and the rural community of DeLeon Springs are looking at the corridor to provide for a "Complete Street" function. This includes the provision of transit, pedestrian and bicycle facilities. These improvements have the potential to be contradictory to the goals of the SIS for the movement of freight.
- ✓ The I-4/SR 472 Southwest Activity Center DRI Development Orders for the City of DeLand and Volusia County identify improvements that are inconsistent with the City of Orange City Comprehensive Plan, CRA Redevelopment Plan and Mobility Strategy. The local governments and FDOT need to coordinate a revision to the Development Orders in order to develop a coordinated transportation mitigation plan for the DRI.
- ✓ Based on conversations with representatives of the City of DeBary, there is concern with the widening of US 17-92 in their City. City staff is investigating amendments to the City's comprehensive plan and development regulations to provide alternative mitigation to avoid any future widening of US 17-92.
- ✓ The provision of transit is a major element of the existing and future transportation system in the corridor. A coordinated effort between land use initiatives and transit planning may be needed to ensure efficient delivery of these services. This issue extends beyond the physical location of the corridor and impacts communities outside those listed in study, such as the City of Deltona. At stakeholder meetings, representatives from cities outside the corridor, such as Deltona, identified a need for future transportation plans and projects to include connectivity to SunRail and other transit alternatives.
- ✓ The economic development and redevelopment efforts need to be coordinated to ensure appropriate and adequate transportation systems are in place.
- ✓ The future improvements to the corridor will need to ensure that safety of school children, bicyclist, pedestrians and handicapped person are properly addressed through a multi-tiered approach including design, operations, education and enforcement.
- ✓ The movement of freight is an issue that requires application of a balanced approach. The Town of Pierson and the cities of DeLand and Orange City have identified a concern with the potential negative impacts of increasing commercial vehicles. This is countered with commercial uses within the corridor needing to have an efficient network for the delivery of goods and services.
- ✓ The Wal-Mart distribution center is an example of an external development that may have impacts on local governments within Volusia County. This proposed development's traffic will continue to be an issue within the corridor given its connectivity from Putnam County through Volusia County.

APPENDIX A
LIST OF STUDIES AND PLANS

US 17-92 Corridor Improvement Program

Project Name	Jurisdiction	Location	Vehicular	Bike/Ped	Transit	Landscape	Development	Other
City of DeBary Comprehensive Plan	DeBary	entire city	x	x	x		x	x
Community Design Portfolio-DeBary Transit Oriented Development	DeBary	Fort Florida Road			x			
DeBary Elementary School	DeBary	Highbanks Road	x	x				
Naranja Road Sidewalk Feasibility Study	DeBary	Valencia Rd. to Highbanks Rd.		x				
Dirksen Drive Bicycle/Pedestrian Feasibility Study	DeBary	SR 17 to Gemini Springs		x				
City of DeBary Gateway Corridor Standards	DeBary	entire corridor				x		
City of DeBary Southeast Mixed-use Area/Transit Oriented Development Overlay	DeBary	Fort Florida Road and US 17			x		x	x
Victoria Park DRI	DeLand	entire corridor	x	x	x		x	x
City of DeLand Comprehensive Plan	DeLand	entire corridor	x	x	x		x	x
City of DeLand 2010-2015 Strategic Plan	DeLand	entire corridor						
City of DeLand 2011-2012 Capital Improvement Plan	DeLand	entire corridor	x	x	x		x	x
Twelve Oaks/Royal Oaks PD Traffic Impact Study	DeLand	Beresford Avenue to Minnesota Avenue	x					
SR 44 Special Transportation Area Designation Study	DeLand	Beresford Avenue to Minnesota Avenue	x					
The DeLandArea Model Validation Study 1999	DeLand	entire corridor	x					
SR 44 PD&E Study	DeLand	CR 42 to I-4	x	x				
DeLand Sunrail/Amtrak Concept Plan	DeLand	Old New York Avenue and Grand Avenue South			x			
George W. Marks Elementary School Bike and Ped Safety Study	DeLand	Washington Avenue and SR 17		x				

US 17-92 Corridor Improvement Program

Project Name	Jurisdiction	Location	Vehicular	Bike/Ped	Transit	Landscape	Development	Other
Southwestern Middel School Bike and Ped School Safety Study	DeLand	New Hampshire and US 17		x				
Starke Elementrary Bike and Ped School Safety Study	DeLand	Beresford and US 17		x				
City of DeLand Alternative Routing Map	DeLand	DeLand	x					
Taylor Place Apartments TIA	DeLand	DeLand	x					
DeLand Ventures, LLC TIA	DeLand	DeLand	x					
Mainstreet Twonhomes TIA	DeLand	DeLand	x					
Laural Villas TIA	DeLand	DeLand	x					
Murphy Oil TIA	DeLand	DeLand	x					
I-4/SR 472 Actvity Center DRI	Deltona	entire corridor	x	x	x		x	x
City of Orange City Comprehensive Plan	Orange City	entire corridor	x	x	x		x	x
Manatee Cove Elementary Bike and Ped School Safety Study	Orange City	Blue Springs Avenue and US 17		x				
River Springs Middle Bike and Ped School Safety Study	Orange City	Blue Springs Avenue and US 17		x				
Orange City Elementary Bike and Ped School Safety Study	Orange City	Fench Avenue and US 17		x				
City of Orange City Strategic Plan-Orange City 2014	Orange City	entire corridor	x	x	x	x	x	x
Graves Avenue and Park Avenue Multi-use Trails Feasibility Study	Orange City	French Ave. to Graves Ave. to US 17		x				
Orange City Finding of Necessity Study	Orange City	Orange City	x	x	x		x	
City Resolution No 80-1-2	Orange City	Orange City	x					
City Resolution No. 84-4-1	Orange City	Orange City	x					
City Resolution No. 642-11	Orange City	Orange City	x					
County Road 3 Bike Path Study	Pierson	CR 3		x				
McInnis Elementary School Bike/Ped Safety Study	Pierson		x	x				
US 17/SR 15 PD&E/Widening	Pierson	Ponce DeLeon Blvd. to SR 40	x					

US 17-92 Corridor Improvement Program

Project Name	Jurisdiction	Location	Vehicular	Bike/Ped	Transit	Landscape	Development	Other
Safety and Traffic Flow Improvement Study for US 17 at Washington Ave.	Pierson	Washington Ave at US 17	x	x				
South Putnam Distribution Warehouse Special Planning Area Traffic Analysis	Pierson	SR 17 Putnam County to SR 40	x					
SR 40 Status Change Study (SIS/FIHS evaluation)	Pierson	SR 17 and SR 40	x					
T. Dewitt Taylor Middle-High School Bike and Ped Safety Study	Pierson	Washington Ave at US 17	x	x				
US 17 (Center Street) Sidewalk Feasibility Study	Pierson	US 17 from Washington Ave. to First Street and Second Ave. to Hagstrom St.		x				
City of Pierson Comprehensive Plan	Pierson	entire corridor	x	x	x		x	x
SR 15 Ponce DeLeon Springs Blvd. To SR 40 Preliminary Engineering Report	Pierson	Ponce DeLeon Blvd. to SR 40						
Pierson/Seville Elementary Bike and Ped Safety Study	Seville	Seville		x				
Florida Department of Transportation Strategic Intermodal System Strategic Plan	Volusia County	entire corridor	x	x	x			
Volusia County Transit Development Plan	Volusia County	entire corridor			x			
Volusia County Comprehensive Plan	Volusia County	entire corridor	x	x	x		x	x
Volusia County Freight and Goods Movement	Volusia County	entire corridor	x					
Southwest Volusia Regional Transportation Study	Volusia County	entire corridor	x	x	x			
2011 AADT's Volusia County	Volusia County	entire corridor	x					
River of Lakes Scenic Highway Corridor Master Plan	Volusia County	entire corridor	x	x	x	x	x	x
CSX Transportation Agreement	Volusia County	CSX Rail			x			
Amtrak Operational Agreement	Volusia County	CSX Rail			x			

US 17-92 Corridor Improvement Program

Project Name	Jurisdiction	Location	Vehicular	Bike/Ped	Transit	Landscape	Development	Other
Votran-FDOT Letter of Understanding	Volusia County	CSX Rail			x			
Central Florida Community Rail Transit North/South Corridor Project (Sunrail) Environmental Assessment Report	Volusia County	CSX Rail			x			
Sunrail Full Funding Agreement	Volusia County	CSX Rail			x			
Sunrail Second Supplemental Environmental Assessment	Volusia County	CSX Rail			x			
Sunrail Transit Oriented Design Sketchbook-updates included	Volusia County	CSX Rail			x			
Countywide Emergency Vehicle Preemption Study	Volusia County	entire corridor	x					x
County Road 3 Bicycle Path and Pedestrian Sidewalk Feasibility Study	Volusia County	DeLeon Springs to SR 40		x				
Volusia County MPO Transit Corridor Feasibility Study	Volusia County	entire corridor			x			
Investigation of Potential Local Area Transportation Alternatives for an Aging Population	Volusia County	entire corridor	x		x			
The Volusia County MPO Bicycle/Pedestrian Plan	Volusia County	entire corridor		x				
Volusia County Resolution No 2009-15 (TPO TIA Standards)	Volusia County	entire corridor	x					
TOD Comp Plan Amendment	Volusia County	entire corridor	x	x	x		x	
Volusia County Ord. No 2010-10 Revised Parking Stnds.	Volusia County	entire corridor					x	
Adopted DeLeon Springs Corridor Planning Area	Volusia County	Between DeLand and DeLeon Springs					x	
Joint Planning Agreement Maps (City of DeLand)	Volusia County	Between DeLand and DeLeon Springs					x	

US 17-92 Corridor Improvement Program

Project Name	Jurisdiction	Location	Vehicular	Bike/Ped	Transit	Landscape	Development	Other
Transit Development Design Guidelines	Volusia County	entire corridor			x			
Volusia County CIP Class A Facilities	Volusia County	entire corridor			x			
West Side Transit Plan	Volusia County	entire corridor			x			

APPENDIX B
LISTS OF PROJECTS/CATEGORIES/THEMES

Note: This listing of projects is for information purposes only. This list is not to be construed to establish priority or the merit of the projects listed therein. There is a GIS-based interface available for ease of locating these projects that is available at the Volusia Transportation Planning Organization's website.

US 17/92 CIP List of Bicycle/Pedestrian Projects

Legend: Some Funding Unfunded Completed

Proj. No.	Description	Location	Jurisdiction	Source	Document Date	Sponsor	Status	Committed Funding						Complementary Projects	Conflicting Projects	Themes																			
								Design		Construction		Other				Vehicular						Transit				Bicycling/ Pedestrian				Landscape/Streetscape			Land Use/Economic Dev't.		
								Cost (\$1,000)	Date	Cost (\$1,000)	Date	Cost (\$1,000)	Date			Modify Road to Support Traffic Demand	Manage Truck Traffic	SS Designation Impacts	Improve Safety and Speed Control	Improve Operational Efficiency	Enhance Service to Support Mobility Strategies	Interconnect Sunrail as an Integral Transit Element	Transit Supporting TOD Efforts	Improve Mobility Along and Across Corridor	Enhance Connectivity with Transit	Maximize Connection to Regional Facilities (Parks, Trails, Schools, etc.)	Improve Safety	Enhance Community Identity	Develop Content-Sensitive Roadway Cross-Sections	Improve Aesthetics	Facilitate Redevelopment and In-Fill	Facilitate Growth Supporting Multi-Modal Forms of Travel and TOD	Rural Community Enhancement		
B-1	Bicycle and pedestrian connections linking DeBary commuter rail station to the TOD, SEMUA, VCA	US 17/92	DeBary	DeBary Comprehensive Plan, TE, Policy 6.703	Oct 6, 2010	DeBary	Ongoing																		X	X	X								
B-2	Construct Safe Pedestrian Crossings on US 17/92	Various Location	DeBary	DeBary Comprehensive Plan, TE, Policy 6.707	Oct 6, 2010	DeBary	Ongoing													X							X								
B-3	Naranja Rd Sidewalk - five foot sidewalk	Eastside of Naranja Rd from Valencia Rd to Highbanks Rd	DeBary	DeBary Elementary School Bike Ped Safety Study, Naranja Road Sidewalk Feasibility Study, VTPO TIP 2012/13-2016/17	Sept 25, 2012	DeBary	Programmed			\$235	2012/13																	X							
B-4	Highbanks Rd Sidewalk	Southside of Highbanks Rd from Orchid Dr to US 17/92	DeBary	DeBary Elementary School Bike Ped Safety Study/Highbanks Road Feasibility Study	March 2007, Aug 2007	DeBary	Unfeasible																					X							
B-5	Highbanks Rd Sidewalk - replaces existing 5 foot sidewalk with an 8 foot sidewalk	Northside of Highbanks Rd from Donald Smith Blvd to Rob Sullivan Park	DeBary	VTPO TIP 2012/13-2016/17	October 23, 2012	DeBary	Programmed			\$200	2012/13																	X							
B-6	Dirksen Drive Trail	From US 17/92 to Gemini Springs Park	DeBary	Bicycle/Pedestrian Feasibility Study Dirksen Drive Trail	Sept 2007	Volusia County	Completed																			X	X								
B-7	Beresford Ave Bike Facility	From US 17/92 to Hill Ave	DeLand	DeLand Comprehensive Plan, Transportation Maps (Existing and Future Bicycle Facilities)	April 2009	DeLand	No Activity																					X							
B-8	Alabama Ave Multi-Use Trail	From Beresford Ave to Wisconsin Ave	DeLand	VTPO Priority Project Lists	Aug 28, 2012	DeLand	Completed																					X	X						
B-9	Alabama Ave Multi-Use Trail	From Minnesota Ave to US 92	DeLand	VTPO Priority Project Lists	Aug 28, 2012	DeLand	Programmed	\$150	2011/12	\$750	2012/13															X	X								
B-10	Alabama Ave Multi-Use Trail	From US 92 to Sperling Sports Complex	DeLand	VTPO Priority Project Lists	Aug 28, 2012	DeLand	Programmed	\$165	2011/12																										
B-11	Orange Camp Rd Sidewalk	From US 17/92 to Dr. MLK Jr. Beltway	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	No Activity							B-18														X							
B-12	Taylor Rd Sidewalk	From US 17/92 to Blue Lake Ave	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	No Activity							B-18														X							
B-13	New Hampshire Ave Sidewalk	From Clara Ave to US 17/92	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	No Activity							B-18														X							
B-14	Beresford Ave Sidewalk	From Spring Garden Ave to Hill Ave	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	No Activity							B-18														X							
B-15	Euclid Ave Sidewalk	From Spring Garden Ave to Hill Ave (except between Woodland Blvd and Amelia Ave)	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	No Activity							B-18														X							
B-16	Voorhis Ave Sidewalk	From Amelia Ave to Blue Lake Ave	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	No Activity							B-18														X							
B-17	Amelia Ave Sidewalk	From New Hampshire Ave to Beresford Ave	DeLand	DeLand Comprehensive Plan Transportation Maps (Existing and Future Pedestrian Facilities)	April 2009	DeLand	Completed							B-18														X							
B-18	Construction of New Sidewalks - DeLand	Various locations city wide	DeLand	City of DeLand 2012-2017 CIP	Sept 2011	DeLand	Programmed			\$192	2012-2015			B-18, B-11, B-12, B-13, B-14, B-15, B-16, B-17,														X							
B-19	St John's River to Sea Bicycle Loop	Five County Project	Multiple	Bike Florida 2010 Economic Impact Report		Volusia County	Ongoing																												
B-20	Spring to Spring Trail	Gemini Springs Park to DeLeon Springs Park	Multiple	VTPO Priority Project Lists	Aug 28, 2012	Volusia County	Ongoing													X	X	X	X												
B-21	Bike Lanes and Pedestrian Facilities	Various locations city wide	Orange City	Orange City Comprehensive Plan, TE, Policy 1.6.7	8-Jun-10	Orange City	Ongoing																												
B-22	Washington Ave Sidewalk	Southside of Washington Avenue from US 17 to Gate 1	Pierson	US 17 & Washington Traffic Study	July 2009	Pierson	Unfunded							B-23						X								X							
B-23	Washington Ave Sidewalk	From US 17 to Pine St	Pierson	Taylor Middle-High School Bike Ped Safety Study/ VTPO Priority Project Lists	Sept 2011	Pierson	Programmed	\$218	2011/12	\$120	2013/14			B-22														X							
B-24	Washington Ave Sidewalk	West of US 17 - Missing Link in Front of Recreational Fields	Pierson	Taylor Middle-High School Bike Ped Safety Study	Sept 2011	Pierson	Unfunded																			X	X								
B-25	US 17 Sidewalk	From Hagstrom Rd to Washington Ave	Pierson	Taylor Middle-High School Bike Ped Safety Study, VTPO Priority Project Lists	Sept 2011, Aug 28, 2012	Pierson	Awaiting Funding													X	X						X								
B-26	US 17 Sidewalk	From Washington Ave to Palmetto Ave	Pierson	Pierson-Seville School Safety Study	March 2008	N/A	N/A							B-27, B-28						X	X						X								
B-27	CR 3 Sidewalk	from Washington Ave to Palmetto Ave	Pierson	Pierson-Seville School Safety Study	March 2008	N/A	N/A							B-28														X							
B-28	Palmetto Ave Sidewalk	From CR 3 to US 17	Pierson	Pierson-Seville School Safety Study	March 2008	N/A	N/A							B-26, B-27						X								X							
B-29	US 17 - RR Crossing	Improve for Pedestrian Use	Pierson	Pierson-Seville School Safety Study	March 2008	N/A	N/A							B-28						X								X							
B-30	US 17 Bikelane	Pierson Area	Pierson	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan							V-17																					
B-31	Taylor Ave Sidewalk - five foot sidewalk	Northside of Taylor Ave from US 17/92 to Aquarius Ave	Volusia County	DeLand Middle School Bike Ped Safety Study	Sept 2011	Volusia County	Unfunded																					X							
B-32	Ponce DeLeon Sidewalk	From US 17 to the Park	Volusia County	CR 3 Bike Path Study	Sept 2006	Volusia County	Unfunded							B-33, B-34						X	X	X	X												
B-33	CR 3 Bike lanes	DeLeon Springs to SR 40	Volusia County	CR 3 Bike Path Study	Sept 2006	Volusia County	Unfunded							B-32						X							X	X							
B-34	CR 3 Parallel Trail	DeLeon Springs to SR 40	Volusia County	CR 3 Bike Path Study	Sept 2006	Volusia County	Unfunded													X							X	X							
B-35	Baxter St Sidewalk	Baxter St from Alhambra Ave to US 17	Volusia County	McInnis Elementary School Bike Ped Safety Study	March 2007	Volusia County	Completed													X	X	X	X												
B-36	Ponce DeLeon Trail	Southside Ponce DeLeon Blvd	Volusia County	McInnis Elementary School Bike Ped Safety Study	March 2007	Volusia County	Unfunded							B-32, B-33, B-34						X								X							
B-37	Central Ave Sidewalk	From Baxter St to Webb St	Volusia County	McInnis Elementary School Bike Ped Safety Study	March 2007	Volusia County	Unfunded							B-35														X							
B-38	Bikelane	Deleon Springs Town Center	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan							V-19						X								X							
B-39	Ped Crossings	US 17 & SR 40	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan							V-20						X								X							
B-40	US 17 and SR 40 Sidewalks	Barberville Area	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan													X								X							
B-41	US 17 Bikelane	Pierson to Seville	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan													X								X							

US 17/92 CIP List of Vehicular Projects

Legend: Some Funding Unfunded Completed

Proj. No.	Description	Location	Jurisdiction	Source	Document Date	Sponsor	Status	Committed Funding						Complementary Projects	Conflicting Projects	Themes																	
								Design		Construction		Other				Modify Road to Support Traffic Demand	Vehicular			Transit			Bicycling/ Pedestrian				Landscape/Streetscape			Land Use/Economic Dev't.			
								Cost (\$1,000)	Date	Cost (\$1,000)	Date	Cost (\$1,000)	Date				Manage Truck Traffic	SIS Designation Impacts	Improve Safety and Speed Control	Improve Operational Efficiency	Enhance Service to Support Mobility Strategies	Interconnect SunRail as an Integral Transit Element	Transit Supporting TOD Efforts	Improve Mobility Along and Across Corridor	Enhance Connectivity with Transit	Maximize Connection to Regional Facilities (Parks, Trails, Schools, etc.)	Improve Safety	Enhance Community Identity	Develop Context-Sensitive Roadway Cross-Sections	Improve Aesthetics	Facilitate Redevelopment and In-Fill	Facilitate Growth Supporting Multi-Modal Forms of Travel and TOD	Rural Community enhancement
V-1	Fort Florida Rd - Widen and Pave	Between Highbanks Rd and US 17/92	DeBary	DeBary Comprehensive Plan, TE, Policy 6.104(c)	Oct 6, 2010	DeBary, Volusia County	Partially Completed													X									X				
V-2	US 17/92 Roadway Widening - 2 to 4 lanes	From Dirksen Dr to Plantation Rd	DeBary	SWAC 2nd Sufficiency Responses Report	Nov 25, 2002	DeBary, FDOT	Completed								X					X													
V-3	Relocation of Emerging SIS Designation	US 17/92 to SR 15A	DeLand	SIS Map	June 9, 2009	DeLand, FDOT	Completed									X	X			X								X	X				
V-4	Intersection Improvements - Add Lanes	US 17/92 at Orange Camp Rd	DeLand	SWAC DRI - Phase 1 Improvements	July 2002	DeLand, FDOT	Completed							V-8						X													
V-5	Provide adequate parking for downtown development - short term parking (<2 hours)	Downtown DeLand	DeLand	DeLand Comprehensive Plan, TE, Policy t6.1.2	April 2009	DeLand	Ongoing																						X				
V-6	Satellite Parking Facilities with shuttle service to Downtown DeLand - long term parking (>2 hours)	Perimeter of Downtown DeLand	DeLand	DeLand Comprehensive Plan, TE, Policy t6.1.2	April 2009	DeLand	Ongoing												X														
V-7	US 17/92 Roadway Widening - 4 to 6 lanes	From SR 472 to SR 15A	DeLand, Volusia County	SWAC DRI - Phase 1 Improvements	July 2002	DeLand, FDOT	Completed							V-4	V-8	X				X								X	X				
V-8	US 17/92 Roadway Widening - 6 to 8 lanes	From SR 472 to SR 15A	DeLand, Volusia County	SWAC DRI - Phase 2 Improvements	July 2002	DeLand, FDOT	No Activity							V-4	V-7	X				X								X	X				
V-9	Construction of Proposed Western Parkway	From SR 44 to Donald E. Smith Boulevard	Orange City, Volusia County	Orange City Comprehensive Plan, TE, Policy 1.2.3	June 8, 2010	Volusia County	Ongoing										X			X								X	X				
V-10	Intersection Improvements - Signal Timing Adjustment	US 17/92 at Graves Ave	Orange City	SWAC DRI - Phase 1 Improvements	July 2002	Orange City, FDOT	No Activity													X													
V-11	Traffic Control	US 17/92 at Graves Ave	Orange City	Orange City 2009-2014 Strategic Plan	FY 2009/10	Orange City, FDOT	Completed											X		X													
V-12	Intersection Improvement - Add Additional WB Right-Turn Lane	US 17/92 at Enterprise Rd	Orange City	XU Project Ideas City Breakout - Volusia County Staff Observation	N/A	FDOT	Unfeasible													X													
V-13	Intersection Improvements - Add WB Right-Turn Lane	US 17 at Washington Ave	Pierson	US 17 & Washington Traffic Study	July 2009	Pierson								V-14, V-15						X													
V-14	Intersection Improvements - Signal Timing Adjustment	US 17 at Washington Ave	Pierson	US 17 & Washington Traffic Study	July 2009	Pierson	Completed							V-13, V-15						X													
V-15	Intersection Improvements - Restripe	US 17 at Washington Ave	Pierson	US 17 & Washington Traffic Study	July 2009	Pierson	Completed							V-13, V-14				X															
V-16	Roundabout	US 17 North & South of Pierson	Pierson	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan							V-17				X							X					X			
V-17	US 17 Roadway Widening - 2 to 4 Lanes	From SR 40 to Putnam County Line	Volusia County	VTPO Priority Project Lists	Aug 28, 2012	FDOT	Unfunded							E-11	X	X			X														
V-18	Minnesota Ave Safety Upgrade	US 17/92 Leavitt Ave	Volusia County	XU Project Ideas City Breakout - Volusia County Staff Observation	N/A	Volusia County	Unknown											X															
V-19	US 17 Roadway Widening - 2 to 4-lanes	DeLeon Springs Blvd to SR 40	Volusia County	US 17 PD&E/ VTPO TIP 2012/13-2016/17	Sept 25, 2012	FDOT	In process					\$1,109 (PD&E)/ \$12,469 (ROW)	2012/13 (PD&E) 2014/15 (ROW)	V-20		X	X		X	X								X					
V-20	Intersection Redesign	US 17 at SR 40	Volusia County	US 17 PD&E	Sept 2006	FDOT	Revised							V-19, V-22, V-23					X											X			
V-21	Intersection Redesign	US 17 at Baxter St	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan							V-19																X			
V-22	SR 40 Roadway Widening - 2 to 4 lanes	From US 17 to SR 11	Volusia County	VTPO TIP 2012/13-2016/17	Sept 25, 2012	FDOT	In Process					\$7,450 (PD&E)	2012/13, 2013/14, 2014/15	V-20	X	X		X															
V-23	SR 40 Roadway Widening - 2 to 4 lanes	From Lake County to US 17	Volusia County	VTPO Priority Project Lists	Aug 28, 2012	FDOT	Unfunded							V-20	X	X		X															

Legend: Some Funding Unfunded Completed

Legend: Some Funding Unfunded Completed

US 17/92 CIP List of Landscape/Streetscape Projects

Legend:

Some Funding

Unfunded

Completed

Proj. No.	Description	Location	Jurisdiction	Source	Document Date	Sponsor	Status	Committed Funding						Complementary Projects	Conflicting Projects	Themes																		
								Design		Construction		Other				Vehicular				Transit				Bicycling/ Pedestrian				Landscape/Streetscape			Land Use/Economic Dev't.			
								Cost (\$1,000)	Date	Cost (\$1,000)	Date	Cost (\$1,000)	Date			Manage Truck Traffic	SIS Designation Impacts	Improve Safety and Speed Control	Improve Operational Efficiency	Enhance Service to Support Mobility Strategies	Interconnect SunRail as an Integral Transit Element	Transit Supporting TOD Efforts	Improve Mobility Along and Across Corridor	Enhance Connectivity with Transit	Maximize Connection to Regional Facilities (Parks, Trails, Schools, etc.)	Improve Safety	Enhance Community Identity	Develop Context-Sensitive Roadway Cross-Sections	Improve Aesthetics	Facilitate Redevelopment and In-Fill	Facilitate Growth Supporting Multi-Modal Forms of Travel and TOD	Rural Community Enhancement		
L-1	Determine feasibility of constructing landscaped median along US 17/92	US 17/92 - Orange City	Orange City	Orange City Comprehensive Plan, TE, Policy 1.4.4	June 8, 2010	Orange City	Ongoing							L-2														X	X	X				
L-2	US 17/92 Streetscape and Beautification	Orange City Limits	Orange City	Orange City 2009-2014 Strategic Plan	FY 2009/10	Orange City	Ongoing							L-1														X	X	X				
L-3	Median Landscaping and Gateways	US 17 - DeLeon Springs Area	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan																				X		X					
L-4	Landscaping, Community Icon	Barberville Area	Volusia County	River of Lakes Heritage Corridor Community Visioning Report	Nov 2010	RLHCME	Vision Plan																				X		X				X	

APPENDIX C
STAKEHOLDER MEETING SUMMARIES

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary**

Meeting Date: Tuesday, October 2, 2012
Offices

Location: VC Economic Dev.

Attendees (name/title organization):

1. Rick Karl, Director, Aviation and Economic Resources Department
2. Rob Erhardt, Manager, Volusia County Division of Economic Development
3. Pedro Leon, Project Development Manager, Volusia County Division of Economic Development

Staff/Consulting Team members

1. R. Sans Lassiter, Principle and Project Manager, LTG
2. Tom Harowski, Principle, North Section Manager, TMH Consultants
3. Beth Lemke, Project Planner, Planning Solutions Corp.
4. Clay Ervin, South Section Manager, LTG

Issues discussed:

1. The attendees did not raised any issues related to adopted plans, studies or other related documents that pertain to the corridor. Mr. Erhardt provided an detailed overview of the Division's effort to spur a variety of economic development activities. The primary focus pertained to establishment of new facilities and reuse of existing facilities.
 2. The issue of the Wal-Mart distribution center in Putnam County was discussed. The overall consensus was that the facility will eventually be developed and will have significant truck traffic generated by the facility. All parties in attendance agreed that the exact amount of truck traffic impacting the US 17 corridor in Pierson cannot be identified, but everyone felt it would be significant.
 3. The recent activities for new development or reuse of existing facilities in the northern segment of the corridor were primarily north and west of SR 40. There had been opportunities for development of a bio-reuse facility located on property that had been previously used for a saw mill. The new company would have benefitted from the close proximity of the various logging operations since it used timber/lumber bi-products for its energy product. This was not successful due to many issues, but one that was evident was the concerns with the adjoining land owners and the potential impacts to their rural lifestyles.
 4. South of SR 40 to DeLeon Springs provided limited opportunities for economic development opportunities due to the large amounts of land held in conservation land use or in public ownership for preservation purposes. There are smaller commercial parcels abutting the corridor that provide some opportunities for re-use. One of note is a old citrus packing plant that has historical significance. There has been interest in the site, but no one has committed to the use of the site for commercial purposes.
 5. North of DeLeon Springs, on Spring Garden Ranch Road, is Spartan Electronics, Inc., a major employer in western Volusia County. This company has made it through the economic downturn and has stabilized. There are growth signs with this company and expansion of workforce should be expected.
-

6. At Lake Winona Road there are vacant lands available for sizeable industrial development. These should be watched as the economy improves.
7. From DeLeon Springs to DeLand there is a variety of opportunities, especially with lands surrounding the DeLand Airport Industrial Park. There is approximately 100-acres that could be developed for complimentary industrial uses.
8. The Main Street DeLand, the City of DeLand and Stetson University have done a good job of making the downtown an attractive area for a variety of services, office and commercial retail uses.
9. South of the downtown area is Frontier Communications, an independent communications business that will be increasing its employee count by approximately 50%. It was also pointed out that the truck route (CR/SR 15A) appears to be attractive to various commercial interests and the accessibility appears to be appealing.
10. The I-4/SR 472 Southwest Activity Center DRI is a valuable project, and there is continued interest in the project. Accessibility, infrastructure and development costs appear to be some of the issues that need to be addressed.
11. The DeBary TOD Overlay and the SunRail stations in DeBary and DeLand are providing great publicity to areas outside Volusia County. Pedro Leon indicated that the work that went into the DeBary TOD standards and the design of the SunRail station are excellent examples of planning and economic development working together.
12. Duke/Progress Energy are showing signs of interests in moving forward with the vacant lands around the facilities on the west side of US 17-92/US 17. This is still very preliminary and nothing has been discussed. No future schedules or expectations have even been discussed.

Additional issues raised by Stakeholder:

1. Pedro Leon referenced an older study undertaken in Seminole County where there was a “fine grain” analysis of the individual parcel abutting US 17-92/US 17 as a way of determining the viability of the parcels for development. The study looked at all facets of the development process, including the importance of transportation in fostering economic development opportunities.
2. Given the amount of conservation and preservation lands, there may be a need to incorporate how eco-tourism may play into the economic development plans for the area and if the US 17-92/US 17 corridor can assist with this activity. This could be tied into the potential deployment of SunRail for weekend activities.
3. Could SunRail provide opportunities for visitors and tourists to expand access to recreational facilities in Volusia County.

Follow-up Items for LTG Team:

It was recommended that we contact the staff at Team Volusia to see if there is any information regarding business recruiting that would impact the corridor or could be impacted by the development of the corridor.

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary**

Meeting Date: 08/03/12 - 10:00 a.m. **Location:** Votran Conf. Room

Stakeholders (name/title organization):

1. Jim Dorsten, Finance, jdorsten@co.volusia.fl.us, VOTRAN
2. John Cotton, Bus Stop Inventories, GIS, jcotton@co.volusia.fl.us, VOTRAN
3. Carole M. Hinkley, Transit Planner, cmhinkley@volusiatpo.org, Volusia TPO
4. Heather Blanck, Assistant General Manager, Planning, Marketing & Customer Service, hblank@co.volusia.fl.us, VOTRAN
5. Liz Suchsland, Assistant General Manager, Operations and Maintenance, esuchsland@co.volusia.fl.us, VOTRAN
6. Steve Sherrer, General Manager, ssherrer@co.volusia.fl.us, VOTRAN

Staff/Consulting Team members

1. Jean Parlow, Project Manager, Volusia TPO
2. Tom Harowski, North Section Manager, TMH
3. Beth Lemke, Transit Manager, Planning Solutions Corp

Identify documents provided at meeting:

1. West Volusia County Area Bus Service Guide
2. West Side Transit Plan (April 2007) – borrowed from VOTRAN – return to Jim Dorsten
3. Corridor Improvement Program – Phase 1: Assessment of US 1/SR 5, April 2012 (Extra copy provided by Jean Parlow)

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. Route 20 (DeLand) services US 17 /92. It is the busiest route on the west side. Experiences congestion in downtown DeLand. Circulator to relieve congestion. Beth to check with the City of DeLand.
 2. SunRail - Existing routes will remain. New routes will be added to support SunRail, but details have not yet been determined.
 3. Orange City has a mobility strategy which was used for the Family Dollar Transit Oriented Development (TOD) recently.
 4. Volusia County fast-tracking transit oriented development guidelines outside DeLand. Implement by end of the year. Comprehensive plan amendment to be completed by 10/8.
 5. A signal priority system would help system-wide with delays. Beth to check with John Cheney regarding Transportation Improvement Program.
 6. VOTRAN does not want bus pull-outs on 17-92.
 7. Bus stop inventory should be complete next week. John Cotton will provide to Beth when complete.
 8. Transit Development Guidelines – updated prototypes need to be developed. Half of the bus stops are in FDOT right-of-way.
 9. Accessing Transit – new release issued at the end of the year. This will be used more readily, along with new ADA guidelines.
-

10. If there is no sidewalk, a sign in the grass is acceptable. If a sidewalk is provided to the bus stop, then an ADA-compliant bus stop is required.
11. FDOT conducted a sidewalk gap inventory, which Clay is in the process of obtaining.

Follow-up Items for LTG Team:

1. Beth to check with the City of DeLand regarding whether any project is proposed for a downtown circulator to address congestion on US 17 / 92.
2. Beth to check with Jon Cheney regarding any projects for a signal priority system (5-year TIP).
3. Beth to follow-up with John Cotton regarding status of bus stop inventory.
4. Beth to follow-up with Clay regarding sidewalk gap inventory.

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
Volusia County School District**

Meeting Date: August 17, 2012 **Location:** Volusia County School District
Transportation Center 1648 Hancock
Boulevard, Daytona Beach, Fl.

Attendees (name/title organization):

1. Saralee Morrissey, Director, Planning and Business Services, VCSB
2. Greg Atkin, Director, Transportation Services, VCSB
3. Jessie Clark, Energy Management Specialist, VCSB
4. Chip Kent, Assistant Director, Transportation Services, VCSB

Staff/Consulting Team Members

1. Lois Bollenback, Interim Executive Director, Volusia TPO
2. Jean Parlow, Project Manager, Volusia TPO
3. Stephan Harris, Bicycle/Pedestrian Coordinator
4. R. Sans Lassiter, Project Manager, LTG, Inc.
5. Clay Ervin, South Section Mgr., LTG, Inc.
6. Tom Harowski, North Section Mgr. LRG, Inc.

Identify documents provided at meeting:

1. Orange City School Traffic Control Plan (aerial)
2. Manatee Cove Parent Flow (aerial)
3. River Springs Parent Flow (aerial)
4. Signing & Pavement Marking Changes for River Springs and Manatee Cove

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issued Discussed:

1. The Bike/Ped School studies are useful, but there have been derivations due to incidents that occurred after the adoption of the study. One issue identified is that the studies may need to be updated. The following is a list of schools within the corridor. Those schools with an asterix indicate that there is a completed Bike-Ped School Safety Study available from the TPO:
 - a. Taylor Middle-High School (Pierson/Seville)*
 - b. DeLand High (DeLand/DeLeon Springs)
 - c. University High (Orange City/DeBary)
 - d. DeLand Middle (DeLand/Orange City)*
 - e. River Springs Middle (Orange City/DeBary)*
 - f. Southwestern Middle (DeLand/DeLeon Springs)*
 - g. Pierson Elementary
 - h. George Marks Elementary*
 - i. Orange City Elementary*
 - j. Manatee Cove Elementary*
 - k. DeBary Elementary*
 - l. Freedom Elementary*

- m. Citrus Grove Elementary*
 - n. McInnis Elementary*
 - o. School Site "J" Seville/Pierson (un-built replacement)*
2. The accidents involving students during the 2011-2012 school year in Orange City has prompted significantly revised traffic patterns including the designation of certain roads as one-way. The majority of the actions focus on operational issues, but enforcement and education are playing an equal part of the solution. The TPO working in conjunction with School District, Volusia County Sheriff's Office and Orange City Police will be providing additional assistance with the education/enforcement efforts.
 3. Greg Atkin pointed out that one of the major safety issues pertains to lack of stopping by automobiles while a school bus embarks/disembarks students. He indicated that he could provide us generalized locations of the bus stops. He cannot provide specific locations since this will change and there is a security issue with publicizing the locations.
 4. Volusia County (Gerry Brinton) has eliminated many of the gaps in the sidewalks leading to the schools within Orange City. Greg Atkin has sent a list of preferred sidewalk improvements to the County and will send us a copy of the report. Mr. Atkin will provide a copy of this document to the consulting team for inclusion in the data collection.
 5. Saralee Morrissey's department has assumed responsibility of school zoning. This has resulted in modifications so that attendance areas for Freedom Elementary and Citrus Grove Elementary are not bifurcated by the 17/92 corridor, thereby reducing the need for students to cross this corridor. She will be providing the shape files of the attendance areas for integration into the CIP.
 6. In DeBary there is still an issue of children crossing 17/92 from the Glenn Abbey development in order to attend DeBary Elementary since they are within the 2-mile radius of the school. The sidewalk improvements identified in the DeBary Elementary Study have been completed (south side of Highbanks Road; construct sidewalk along east side of Naranja Road from Valencia to Highbanks Rd.). There is still a concern with pedestrians crossing the rail tracks. This will intensify once the SunRail station is up and running.
 7. Lois Bollenback pointed out that speed zones, signage and other operational actions can help, but a driver's perception of the road is a primary force in the decision on travel speed.
 8. If 17/92 is widened in the future through DeLeon Springs, there may be impacts to McInnis Elementary due to parking and access issues within the ROW. Also the school is located at an intersection that has been identified (see River of Lake CMP and McInnis Bike/Ped School Safety Study) as having a problem with safe operations due to the alignment of the multiple streets. At this point in time there is not an identified study or analysis of the intersection set in anyone's strategic plan or other operational plan. It was pointed out that there may be ground contamination near the school.
 9. The VCSB staff indicated that there may be an issue with the school crossings and truck traffic in the Town of Pierson. The primary concern is with truck travel, speed and lack of proper crossing areas. Safety studies and related documents (US 17 Sidewalk Study TPO 2012) provide for some suggested improvements.
 10. VCSB owns land on the east side of US 17 at the north end of Pierson that is targeted for an elementary school. The declining capital revenues and lack of adequate funding has resulted in an indefinite delay of this replacement school. There is a 2008 School Safety
-

Study that is completed but may not be applicable since the school is not scheduled for construction.

Follow-up Items for LTG Team:

Check on the status of a traffic signal in DeBary. Originally was a ped-crossing, but was being removed. The signal may be installed but serving only as an emergency signal for the DeBary Fire Station. This could provide dual purpose.

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
Volusia County Traffic Engineering**

Meeting Date: 08/21/12 4:00 **Location:** Volusia TPO Office

Stakeholders (name/title organization):

1. Jon Cheney, PE, Director, Volusia County
2. Melissa Winsett, Transportation Planner

Staff/Consulting Team (name/title/organization)

1. Lois Bollenback, Interim Executive Director, TPO
2. Jean Parlow, Project Manager, Volusia TPO
3. Sans Lassiter, PE, Project Manager, LTG
4. Tom Harowski, North Section Manager, TMH
5. Clay Ervin, South Section Manager, LTG

Identify documents provided at meeting:

None-Note that Clay Ervin and Tom Harowski met with Melissa Winsett earlier and received numerous plans and studies.

Issues discussed

- a. Clay Ervin summarized the studies and plans obtained at this time and indicated that there are numerous "visions" for the corridor that result in a variety of planning efforts.
- b. The 1990 PD&E study for SR 40 from SR 17 to Cone Road is not up to date. There are plans in place for the widening that are not consistent with the 1990 study. Use the approved construction plans and the EIX that was prepared for the other segments of SR 40 as the primary guide for future improvements to SR 40.
- c. Tom Harowski inquired if the recommendations from the River of Lake CMP that identified needed improvements at the intersection of Baxter Road and SR 17 in DeLeon Spring (McInnis Elementary School) were going to be pursued by Volusia County. Jon Cheney indicated that there were not any plans in place now or in the foreseeable future. He understood that the alignment of all of the intersections may appear to be problematic, but the crash data and intersection analysis did not identify any specific issues that needed attention. This is consistent with the statements from Rick Morrow, PE, Traffic Operation Engineer for FDOT District 5.
- d. Jon Cheney agreed with the LTG Team and TPO staff that US 17-92/US 17 is a vital link and provides for connectivity to the SunRail station in DeBary and future SunRail stations in DeLand and other possible locations.
- e. The Volusia County Council has not reviewed nor has it made any specific recommendations regarding the designation of SR 472 as a SIS or emerging SIS facility, and removing that designation from US 17-92/US 17. He indicated from his perspective that the SIS designation may allow for some funding of projects, given the shrinking funds available for roadway project.
- f. Jon and Melissa confirmed that the County is not looking to eliminate transportation concurrency from the adopted comp plan at this time.

Follow-up Items for LTG Team:

- a. Check with Volusia County Attorney's office to obtain studies regarding the development of the Wal-Mart distribution center in Putnam County.

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
FDOT Operations/Planning**

Meeting Date: 08/20/12 – 2:00 p.m. **Location:** FDOT District 5, Magnolia
Conf. Room

Stakeholders (name/title organization):

1. Rick Morrow, PE, Traffic Operations Engineer, FDOT District 5,
2. Judy Pizzo, GISP, Systems Planner, FDOT District 5

Staff/Consulting Team (name/title/organization)

1. Lois Bollenback, Interim Executive Director, Volusia TPO
2. Jean Parlow, Project Manager, Volusia TPO
3. Sans Lassiter, Project Manager, LTG
4. Clay Ervin, North Section Manager, LTG
5. Tom Harowski, North Section Manager, TMH

Issues discussed:

1. The FDOT has many studies within the corridor. Mr. Morrow will send a listing of the studies to Clay Ervin for his review. He will confer with Tom Harowski and Jean Parlow once he receives the list and send Mr. Morrow with a list of the studies needed to complete the Phase 1 data collection. It is important to note that any studies involving detailed traffic accident information will need to have that information redacted in order to be included in the list of studies available from the study.
 2. Mr. Morrow indicated that studies are based on specific mile posts so any future request should identify these markers.
 3. The issues of school safety and the operational changes initiated by Volusia County and the VCSB were discussed. Mr. Morrow corrected the comment that the intersection with Rhode Island is not a ped-scramble, but a ped-leading that is timed for the specialized school zone operations.
 4. Mr. Morrow wanted to be involved early in order to avoid users of the US 17-92/US 17 CIP from going down a route that has already been taken. We discussed examples of the operational issues raised by local governments such as reduction of speed in Orange City, signage for the CR 15A Truck Route, Signage/Intersection Improvements at SR 17/92 and Beresford Avenue and a continuous southbound right-turn lane added to eastbound CR 15A to better serve freight carriers. Mr. Morrow pointed out that many of these issues raised in the southern section of the study area have been addressed by the various FDOT studies.
 5. Tom Harowski summarized issue for the northern section of the study area. He pointed out that we have not been able to track down the SR 40 PD&E Study for the segment from US 17 to Cone Road. Judy Pizzo gave us a name of a FDOT staff person who could help us find that study. Mr. Harowski also brought up the issues related to the widening of US 17 in response to the potential truck impacts resulting from the Wal-Mart Distribution Center in Putnam County, the safety issues related to crossing US 17 and the sidewalk and school safety studies for the Washington Street sidewalk project.
 6. Mr. Harowski also discussed the issues raised in the River of Lakes Scenic Highway CMP regarding the intersection of Ponce DeLeon Boulevard/US 17 and Baxter Road. He noted that this had been identified as an issue. Mr. Morrow acknowledged that there were some minor issues identified with McInnis Elementary, but there were not any studies or other plans to conduct further study or modifications.
-

7. Judy Pizzo directed us to look at www.cflroads.com for specific information on currently planned and funded roadway projects from the FDOT District 5.

Follow-up Items for LTG Team:

1. Follow-up with Mr. Morrow with the review of studies.
2. Contact Kathleen Linger at FDOT to obtain copy of the SR 40 PD&E Study (Cone Road to SR 17).
3. Verify if there is any on-street parking within the US 17 corridor in DeLeon Springs.

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
FDOT SIS**

Meeting Date:08/17/12 - 2:00 p.m.

Location: FDOT District 5, Live Oak Conf. Room

Stakeholders (name/title organization):

1. John Zielinski, FDOT District 5, SIS Coordinator
2. Lori Sellers, AICP, Sr. Transportation Planner, HDR (Consultant to FDOT)

Staff/Consulting Team (name/title/organization)

1. Lois Bollenback, Interim Executive Director, Volusia TPO
2. Jean Parlow, Project Manager, Volusia TPO
3. Sans Lassiter, Project Manager, LTG
4. Clay Ervin, North Section Manager, LTG
5. Tom Harowski, North Section Manager, TMH

Identify documents provided at meeting:

1. SIS Handbook –July 2012 (via CD)
2. SIS Funding Eligibility Matrix (April 16, 2012)
3. Map of Volusia County SIS & Emerging SIS Hubs, Corridors & Connectors
4. Florida's Strategic Intermodal System Flyer with D5 Map(September 2011)

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. The TPO consultants and staff clarified that this is an issue for discussion and that there are not any specific recommendations as to whether or not the emerging SIS designation needed to be shifted to SR 472. The final report shall summarize the process and issues, but will not have a recommendation.
 2. The 2011 Community Planning Act limited the ability of the FDOT to enforce the minimum level of service standards if a local government deleted traditional concurrency and implemented a mobility strategy. John indicated that the coordination with the local governments is handled primarily through Judy Pisso.
 3. John Zielinski and Lori Sellers provided us with copies of the documents referenced above. They indicated that regardless of the designation, the roadway is still part of the US highway system and will continue to function as a major commercial corridor for western Volusia County.
 4. The SunRail station in Orange City was integrated into the SIS system and is considered a "hub" since it is the sole access point to a regional rail system.
 5. The fact that US 17-92/US 17 is a connector to this "hub" will not be a major issue if there is an effort to shift the emerging SIS corridor to SR 472. TPO staff and the consulting team were concerned since the only method to access the train via bike, ped, auto or bus was by SR 17/92 (See US 92/US 1 designation as SIS for access to Greyhound Station). After considerable discussion, the FDOT staff and consultants indicated that the access to the rail hub was not an issue in maintaining the emerging SIS designation for US 17-92/US 17. This may be a topic to add to the list of follow-up items.
-

6. Clay Ervin provided a summary of the comments from the local governments regarding the possibility of relocating the SIS designation to SR 472. He noted that the primary factors identified by those supporting the relocation included:
 - i. Access management standards for the SIS would be problematic given the current sections and access points.
 - ii. The minimum design requirements (speed, lane width, turning radii, etc.) do not match what is existing or proposed as part of the local government redevelopment efforts
 - iii. Funding, if available, should be directed to the proposed and potential SunRail stations within the DeBary, Orange City and DeLand. Note that there is discussion about adding a third SunRail station. Orange City, DeLand and Volusia County are all involved with the development of this potential site.
7. John Zielinski and Lori Sellers responded to local comments. They indicated that there are no plans at this time to fund any major upgrades to US 17-92/US 17. It was also pointed out that the local governments' concerns need to be re-evaluated given that FDOT is aware of context-sensitive solutions and has developed a "Complete Streets" design standards that could be integrated into any future plans for upgrades or improvements to the US 17-92/US 17 corridor in DeBary, Orange City or DeLand.
8. There are some major trends that will influence how the SIS is managed. First, the minimum LOS standards for urban areas will be "D" and rural areas will be "C". Secondly, the focus of the national and state transportation initiatives appear to be stressing movement of freight and accommodation of economic development initiatives.
9. In regard to opportunities for improvements there are limited funding, but there may be opportunities to fund smaller, operational improvements with SIS funding.
10. Procedurally, the effort to relocate the SIS designation to SR 472 would require 100% support by all impacted local governments. The impacted segments have to include specific connections to ensure a seamless system. This means that the SIS cannot be truncated at the municipal boundary of DeBary because that does not provide connection to another corridor of the SIS. The SIS designation would have to be truncated at the intersection of US 17-92/US 17 with I-4. This means that Seminole County and the City of Sanford may have to be included in the discussion of relocation of the SIS, if any of the local governments in Volusia County decide to pursue the relocation.

Follow-up Items for LTG Team:

1. Check accessibility to the DeBary SunRail site (does not impact study per se', but should be noted in report that the removal of this as a SIS facility would leave a transit hub without any connector or corridor).
-

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
City of DeLand**

Meeting Date:07/26/12 2:00

Location: City of DeLand Planning Conf. Room

Stakeholders (name/title organization):

1. Mike Holmes, Planning Director, City of DeLand
2. Blanche Hardy, Senior Planner, City of DeLand

Staff/Consulting Team (name/title/organization)

1. Jean Parlow, Project Manager, Volusia TPO
2. Tom Harowski, North Section Manager, TMH
3. Clay Ervin, South Section Manager, LTG

Identify documents provided at meeting:

1. Maps of Alternative Routes Downtown DeLand-approved by City Council
2. TIA for Taylor Place Apartments
3. TIS for DeLand Ventures, LLC
4. TIS for Mainstreet Townhomes
5. TIA for Laurel Villas
6. TIA for Murphy Oil, DeLand, Florida

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. The downtown circulation will be addressed since the basis of the current circulation was based on a Greyhound bus station that is no longer in existence. The City will be working with FDOT to address the issues. One item that is needed is the designation of Wisconsin Street as the official "by-pass" and eliminating Ohio Street as the "by-pass" for SR 44 since Ohio Street "truncates" and there is no room to the north (Stetson University) for expansion of road or potential stormwater improvements.
 2. Ms. Hardy indicated that there is a major issue with geometry and signage leading up to CR 15A. There is insufficient notice to trucks about the routing of the truck route on CR 15A so that most drivers miss the route entirely and go through downtown. She emphasized the need for intersection improvements and re-approval of a proposed travel lane that was removed in an earlier LRTP.
 3. Ms. Hardy does not support efforts to reduce the speed limit to 35 for portions of the corridor outside the downtown since congestion and lack of mobility will occur.
 4. The issue of the Wal-Mart Traffic was extensively discussed. The City is concerned that there has not been sufficient analysis and that the impacts will be considerable.
 5. Mr. Holmes indicated that the issue of truck traffic continues to be the main concern voiced by business owners, the public and elected officials. Multiple studies have been completed, but the issue is still present. He believes that it can be addressed if improvements identified by Ms. Hardy are implemented.
-

6. The City of DeLand is supportive of the SIS relocation from US 17-92/US 17 to I-4 and SR 472.
7. The proposed DeLand SunRail station will need to include a circulator (bus or use existing rail into downtown) given the western location of the facility. DeLand is highly supportive of SunRail and is working with Volusia County in the development of the County's TOD standards and coordination of potential new stations.
8. The City has not officially changes its concurrency system, but is reviewing options for a mobility system of transportation planning.

Follow-up Items for LTG Team:

1. Need to find resolution or other City Council document approving the alternative routes shown on map provided by staff.
 2. Check on date of DeLand Subarea Model Validation. Verify that it is still relevant.
 3. Check with Volusia County Traffic Engineering to determine if there are additional studies regarding the development of the Wal-Mart distribution center in Putnam County. We have the study prepared for Putnam County, but are not aware if the County staff accepted the findings of that study.
 4. Contact Rick Morrow about the expanded speed zones and other studies (OD/Truck and Freight).
 5. Follow-up on the sidewalk program initiated as part of school safety studies.
 6. Follow the progress of the TOD standards from Volusia County.
 7. Contact the City Engineer, Keith Riger to verify is additional studies or plans are in place. Also check with Jim Ailes if the potential exists for extending utilities to DeLeon Springs (NOTE-this is not a major issue, we only have to check to see if a project is planned and to make sure it is coordinated with efforts to expand sidewalks, bus shelters and other element identified in the River of Lake Scenic Corridor Master Plan).
-

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
City of DeBary**

Meeting Date: 07/26/12 2:00 **Location:** City of DeLand Planning Conf. Room

Stakeholders (name/title organization):

1. Rebecca Hammock, Planning Administrator, City of DeBary

Staff/Consulting Team (name/title/organization)

1. Jean Parlow, Project Manager, Volusia TPO
2. Tom Harowski, North Section Manager, TMH
3. Clay Ervin, South Section Manager, LTG

Identify documents provided at meeting:

1. Southwest Volusia Regional Transportation Study

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. There is initiating efforts to develop a CRA that is centered on the US 17-92/US 17 Corridor. The RFP is scheduled to be issued in August and will take approximately 2 years to complete the CRA analysis and approval process.
2. Speed through the corridor is a concern and prohibits bike and pedestrian from crossing, based on Ms. Hammock's observations.
3. The City has Gateway standards in place that include streetscape and landscape treatment of development and redevelopment occurring on the corridor.
4. There are required bus stops improvements (shelters, trash receptacles, etc.) that are included in the LDRs. Ms. Hammock will be sending these to us.
5. Lack of signalized intersections adds to the speed issues and decrease the perceived safety of crossing the corridor, according to Ms. Hammock's observations.
6. Ms. Hammock provides us with a link to the TOD Overlay standards. This is a voluntary program initiated by the City and incorporated into the comp plan and LDRs to encourage development near the SunRail station that will be consistent and compatible with the transit opportunities.
7. The City is part of a multi-jurisdictional HUD grant that is being used to fund a series of studies to ensure that the SunRail project and associated planning efforts are being coordinated and contain sufficient standards/requirements for connectivity. The study appears to focus on land use and bike/ped/transit connectivity.

Follow-up Items for LTG Team:

1. As an "item for Follow-up" we need to get information on the HUD grant and associated study. May need to contact ECFRPC since they spear-headed the effort and were the primary recipient, according to Ms. Hammock.
 2. Verify Volusia County Spring to Spring Trails plan and Lake Monroe Master Plan for issues. Also check on "Other" opportunities associated with the master stormwater plan that is being developed by the City, under the HUD grant.
-

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
City of Orange City**

Meeting Date: 07/26/12 2:00 **Location:** City of DeLand Planning Conf. Room

Stakeholders (name/title organization):

1. Alison Stettner, Development Services Director, Orange City

Staff/Consulting Team (name/title/organization)

1. Jean Parlow, Project Manager, Volusia TPO
2. Tom Harowski, North Section Manager, TMH
3. Clay Ervin, South Section Manager, LTG

Identify documents provided at meeting:

1. Orange City Finding of Necessity Study (aka CRA Blight Study)
2. City Resolution 80-1-2 Request to Decrease Speed Limit on US 17-92/US 17
3. City Resolution 84-4-1 Request to Decrease Speed Limit on US 17-92/US 17
4. City Resolution 642-11 Request to Decrease Speed Limit on US 17-92/US 17

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. The Blight Study was adopted on April 24, 2012 so it will be included in the list of studies. The CRA Master Plan will be adopted after the deadline of the US 17-92/US 17 Phase I CIP, but this will be identified in the list of follow-up activities.
 2. Orange City has amended its comp plan and LDC to include mobility strategies instead of conventional LOS concurrency. The goal is development of 17/92 as a "complete street" that addresses bike, pedestrian and transit modes of travel, as well as automobile travel.
 3. Safety of elderly and school age children is important and there appears to be issues with regard to ADA compliance based on the observations of the stakeholder. The desired outcome from the efforts of the CRA in the 17/92 corridor is a "safe" welcoming corridor that encourages bike and pedestrian modes.
 4. The relocation of the SIS is important. The LOS standard adopted by FDOT is not a significant issue given the changes in the Community Planning Act of 2011. The issue is access management. The current requirement of a Class 3 access management standard creates major issues with the City's street grid and redevelopment plans. Ms. Stettner indicated that the potential funds from the SIS would be better spent on the Orange City SunRail station in the third phase of the SunRail expansion than on roadway improvements within the US 17-92/US 17 corridor. NOTE-This is not a formal policy of the City Council, that we are aware of.
 5. The expanded school safety zone is needed and the TPO will be following up in Spring 2013 with education and enforcement. There is a concern that the larger school safety zone may encourage local traffic to use parallel local streets that are not
-

- designed/constructed to accommodate increased traffic. This will be a monitoring and enforcement issue, but Orange City has limitations due to the size of its police force.
6. Orange City is very supportive of efforts to expand Votran, SunRail and other transit initiatives within the community. Orange City is seeking to have a 3rd SunRail station at SR 472 and I-4. Also a potential location at Blue Springs would also be favorable. NOTE-there are not any official studies or plans approved by Orange City for the development of either site. The comp plan and LDRs contain the majority of the policies and initiatives for the coordination and expansion of transit within the corridor. Ms. Stettner indicated that she will forward meeting minutes from the City Council meeting where the issue of a new SunRail station was discussed and formal action was taken.
 7. Orange City is not requesting that lanes be removed from SR 17/92. The City is looking to improve the existing cross-section (94-feet in width) to maintain 4-lanes, reduced lane width, install median in the bi-directional turn lanes, integrate pedestrian and bicycle improvements to allow for safe crossing of the corridor and better integration of transit stops. Ms. Stettner stated that Orange City is not looking for US 17-92/US 17 to function as a "through-put facility" that speeds people and goods through the town.
 8. There are not any specific transit standards for shelters, benches, bike racks or garbage receptacles, but the City expects to use the CRA master plan and associated LDR standards to require redevelopment efforts to include these improvements. NOTE-the City does not allow for advertisement on bus benches.
 9. Western Parkway, in the opinion of Ms. Stettner is going to be difficult to construct due to environmental and adjoining lands. Focus on completing the Veteran's Memorial Parkway. There are some options that could be accomplished. Note that Kentucky Avenue is a "private" road made up of prescriptive ROW.
 10. Ms. Stettner indicated that the findings of the Southwest Volusia Regional Transportation Study are not reliable in her opinion due to the assumptions regarding development and population growth. The study was conducted during a period of intense growth so development potential and growth rates are unrealistically high. These assumptions result in the roadway network failing throughout the area. The recommended improvements appear to be focused solely on road projects instead of a multi-modal approach to the transportation needs.

Follow-up Items for LTG Team:

1. Check demographics and crash data regarding safety issues
 2. Re-check ADA issues as part of existing conditions analysis.
 3. Contact Rick Morrow about the expanded speed zones and other studies (OD/Truck and Freight).
 4. Follow-up on the sidewalk program initiated as part of school safety studies.
 5. Follow the progress of the TOD standards from Volusia County. Specifically, if a TOD area is designated in Orange City or at the SR 472/I-4 interchange.
 6. Verify if there are any approved alignments for the final section of the Veteran's Memorial Parkway.
 7. Check on "GAP analysis completed by FDOT when George Lovett was still there.
 8. Check to see if there are planned improvements to the SR 472/I-4 interchange listed in the LRTP or other documents.
-

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
Town of Pierson**

Meeting Date: 07/25/12 2:00 **Location:** City of DeLand Planning Conf. Room

Stakeholders (name/title organization):

1. James Sowell, Mayor, Town of Pierson
2. Debbie Bass, City Clerk, Town of Pierson
3. Jim Smith, Planning Consultant for the Town of Pierson

Staff/Consulting Team (name/title/organization)

1. Jean Parlow, Project Manager, Volusia TPO
2. Tom Harowski, North Section Manager, TMH
3. Clay Ervin, South Section Manager, LTG

Identify documents provided at meeting:

1. Town of Pierson Comprehensive Plan (electronic format)

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. Primary concern is with the speed and operations of intersections with flashing signals north and south of Washington Avenue signal. Stakeholders identified several crashes and a fatality that has occurred in the area near Washing Avenue.
2. The widening of SR 17/92 is of critical importance to the elected officials, although there is some concern voiced by the staff regarding the impacts to the safety and impacts to the "quant little town" appearance. The elected officials believe that the need for the widening is needed as soon as possible to address impacts from the pending Wal-Mart distribution center; the existing safety issues and traffic congestion during emergency situations that require evacuation.
3. The Mayor indicated support for a three-lane cross-section as an interim improvement needed for safe operation and congestion management.
4. The Mayor was not supportive of designating CR 3 as a truck route. This has not been formally addressed by the Town and is not a formal policy.
5. The Mayor wants the regional impacts of Taylor High School, as well as all the schools in the Town needs to be addressed and incorporated into any future plans/studies/construction projects.
6. The School District still owns the 23-acre site that was subject to a school safety study. Although the construction of the school is not in the capital improvement plan of the VCSB, the Town of Pierson believes that there will be a school built there eventually.
7. CR 3 is a very tight ROW and is used by bikers (clarify motorcycles or bicycle). There are plans to use this for a parallel facility for bikes and pedestrians. This is a concern to the Mayor given the lack of width and the potential for accidents.

Follow-up Items for LTG Team:

1. Check to see if 17/92 is a designated emergency evacuation route.
-

2. Check with Volusia County Traffic Engineering to determine if there are additional studies regarding the development of the Wal-Mart distribution center in Putnam County. We have the study prepared for Putnam County, but are not aware if the County staff accepted the findings of that study. Include FDOT (Rick Morrow) for O-D studies as well.
3. Verify the final design and feasibility study recommendations for the Washington Avenue sidewalk project with Fred Ferrell at TEDs.
4. Check with VCSB regarding un-built elementary school.

**Corridor Improvement Program (CIP) Phase I:
Assessment of US 17-92/US 17
Stakeholder Meeting Summary
Town of Pierson**

Meeting Date: 07/25/12 12:00

Location: LTG Offices

Stakeholders (name/title organization):

1. Becky Mendez, Senior Planning Manager, Volusia County

Staff/Consulting Team (name/title/organization)

1. Jean Parlow, Project Manager, Volusia TPO
2. Tom Harowski, North Section Manager, TMH
3. Clay Ervin, South Section Manager, LTG

Identify documents provided at meeting:

1. VC Resolution No. 2009-155 (approving TPO TIA Standards)
2. Scope of Services for TOD Comp Plan amendment transportation assessment
3. VC Ordinance No. 2012-10 Amendment to LDRs (Parking Standards Reduction)
4. Aerial Map of Proposed JPA Boundary N. US Hwy. 17-92 (DeLand and VC)
5. Zoning Map of Proposed JPA Boundary N. US Hwy 17-92 (DeLand and VC)
6. Adopted and Proposed FLUM of Proposed JPA Boundary N. US. Hwy 17-92 (DeLand/VC)
7. Aerial Map of DeLeon Springs Corridor Planning Area
8. Adopted and proposed FLUM for DeLeon Springs Corridor Planning Area
9. Adopted and proposed zoning map for DeLeon Spring Corridor Planning Area
10. SunRail DeLand Area Activity Center-Location Map Series

Note: Those documents provided at these meetings that do not pertain to an adopted plan or study may not be included in the final inventory of studies, plans or projects. This phase of the project is for collection of existing, approved plans and studies. Those documents that pertain to future or pending issues may be included in the list of follow-up activities listed in the final report.

Issues discussed:

1. Volusia County does not have a mixed-use land use category so the PUD process is currently the only way to allow for TOD or in-fill projects. This has caused Volusia County to fast track a TOD comp plan and LDC amendments to assist with the provision of the DeLand SunRail station and any other future stations located in unincorporated Volusia County.
 2. The DeLeon Springs Community Association is working with the County and the City of DeLand for the provision of utilities. This has not been studied in detail and there is nothing formally adopted regarding the extension of the utilities at this time.
 3. Volusia County is working on a joint planning agreement with the City of DeLand to address the unincorporated areas immediately north of the City's municipal boundary. This has been placed in a holding pattern to allow staff to complete the TOD comp plan amendment and LDC amendment.
 4. Transit is a vital issue given the recommendations of the River of Lakes CMP. The recommendations of the ROL CMP are generally consistent with the efforts of the DeLeon Spring Community Association.
 5. The County's Trail Plan and related documents have elements within the corridor that need to be included in the report.
 6. It is recommended that we contact FDOT regarding truck OD studies, as well as the Freight and Goods study completed by Volusia County.
-

7. There are no pending planning initiatives or studies regarding the agricultural and conservation lands located between DeLeon Spring and Pierson; and the area between Pierson and Seville.
8. The issues pertaining to the SIS relocation to SR 473 from 17/92 (segment from SR 472 to the Seminole County line) has not been formally addressed by VC Growth Management at this time.

Follow-up Items for LTG Team:

1. Check with Volusia County Traffic Engineering to determine if there are additional studies regarding the development of the Wal-Mart distribution center in Putnam County. We have the study prepared for Putnam County, but are not aware if the County staff accepted the findings of that study.
2. Check with the City of DeLand regarding the provision of utilities to DeLeon Springs.

