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STUDY PURPOSE
The purpose of the SR A1A/SR 200 Corridor Study is to identify operational and access management improvements and priorities needed to support all modes of transportation including roadway capacity, public transit, and bicycle/pedestrian movements. One of the goals is to maintain the traffic flow over time, even as volumes increase. The study considers short-term improvements that can be done prior to or in conjunction with the upcoming widening of the roadway. However, the primary focus of the study is on long range improvements that are appropriate for the projected 2035 population of 100,000 and strategies consistent with the 2060 Florida Transportation Plan. The study identified and evaluated opportunities for enhanced connectivity, both of land use and transportation within the corridor. The scope of the study included the following objectives:

- To determine the Corridor’s existing and future transportation demands for all modes of travel, including traffic volumes, travel characteristics, and historical trends; facility LOS, conditions of existing facilities and plans for improvements; mobility problems and special considerations;
- To identify the projected traffic circulation needs for the Corridor;
- To provide sufficient preliminary engineering and environmental information using standard typical sections and sketch planning techniques to serve as input for future production activities;
- To develop conceptual cost estimates for proposed projects to allow the TPO, state and local governments to determine funding strategies.
- To recommend any land use or Land Development Code changes needed to enhance corridor mobility and connectivity for all modes of travel.

CORRIDOR HISTORY
The Town of Yulee has been at a crossroads through history, as transshipment points for timber via rail, road, and ship at ports in Fernandina, and interconnected across Florida to the Gulf of Mexico. David Levy Yulee, the namesake of the town, was a businessman, politician, and an early railroad entrepreneur. He built the first railroad to cross Florida from Fernandina to Cedar Key just prior to the Civil War, and due to his pioneering effort he has been called the “Father of Florida’s railroads”. Yulee served as one of the first United States Senators from Florida (the other being James Westcott, Jr.) from December 1, 1845 to March 3, 1851 and again from 1855 to 1861.

Forestry was the mainstay of the local economy, and the railroad has served an important role in providing a means of shipping the timber and timber products to port and producers. One of the major players in the area is Rayonier, Inc. The company has several hundred employees in Northeast Florida and manages over 134,000 acres of timberland in Nassau County alone. The majority of forest products harvested and produced in the area are today shipped by truck, making SR A1A / SR 200 a major timber transportation corridor. The number of timber haul trucks going through the Town of Yulee has increased over time, and the total number of trucks using SR A1A / SR 200 as a direct route to and from I-95 to the Port of Fernandina has also increased. An important element of this corridor study is to address congestion and safety issues related to this increased truck traffic, while also recognizing its importance to the local and regional economy.

Exhibit A provides a graphical depiction of the history of the corridor as well as the area in general.
EXHIBIT A: HISTORICAL CONTEXT
CORRIDOR DESCRIPTION

SR A1A/SR 200 is functionally classified as a principal arterial with four lanes and limited traffic signals. The facility is designated as a Strategic Intermodal System (SIS) Connector, between I-95 and the Emerging Port of Fernandina. Currently the road has four lanes, but FDOT plans to widen it to six lanes between 2014 and 2018. The widening project will also include other modifications, including the provision of bicycle and pedestrian facilities.

The study corridor, from I-95 to the Amelia River, is diverse and includes rural and suburban areas of Nassau County. This area has grown rapidly over the past ten years and is expected to continue as the East Nassau Community Planning Area develops. The physical landscape of the land uses along the corridor changes from west to east, creating distinct segments. These are:

- Segment 1 – I-95 to west of US 17 (Still Quarters Road)
- Segment 2 – West of US 17 (Still Quarters Road) to east of US 17 (Rubin Lane)
- Segment 3 – East of US 17 (Rubin Lane) to Chester Road / Amelia Concourse
- Segment 4 – Chester Road / Amelia Concourse to east of CR 107

Each of the segments has unique characteristics and issues, yielding potentially different enhancements.

STAKEHOLDER AND PUBLIC INPUT

The need for the study had been identified for several years by citizens in Nassau County. Throughout the study many of these citizens were invited to participate. A steering committee was formed, comprised of county staff, FDOT, chamber of commerce officials, business interests along the corridor, and other citizens. The group met several times during the study to review findings and discuss opportunities. During these meetings, it became clear that the focus of the efforts should be on three major subject areas: mobility, connectivity, and identity. This became the theme of the study.

In addition to discussing the study with the steering committee, several presentations were made to groups in the area. The study was discussed at the December 11th, 2012 breakfast meeting of the Yulee Council of the Amelia Island-Fernandina Beach-Yulee Chamber of Commerce. More than 25 people attended the meeting and provided input on the study. A presentation was also given to Nassau County’s Vision Into Action Group on February 20th, 2013.

Also, on January 28th, 2013, an open house was held to update interested citizens on the progress of the study and elicit thoughts and ideas. The drop-in meeting was held at Yulee Elementary School from 4:30pm to 7pm and was attended by nearly 50 people.

REPORT THEME AND ORGANIZATION

This report provides a summary of the study process, the analyses conducted, and the recommendations identified. As discussed above, the study examined potential enhancements along the corridor in the areas of mobility, connectivity, and identity. As with the study, a theme was developed for the summary document. The title of the report, Focusing on Tomorrow, helps make clear the overall vision for the corridor. Each chapter was similarly themed, with titles reminiscent of photography. The document is divided into the following sections:

- Chapter Two: Snapshot – Existing Conditions
- Chapter Three: Wide Angle Lens – Future Conditions
- Chapter Four: Enhancing the Image – Mobility Opportunities
- Chapter Five: Enhancing the Image – Connectivity Opportunities
- Chapter Six: Enhancing the Image – Identity Opportunities
- Chapter Seven: Bringing the Picture to Life – Implementation
In order to focus in on the future of eastern Nassau County and the SR A1A / SR 200 corridor, it is first necessary to examine the current conditions. Taken as a snapshot in time, the existing conditions analysis describes the physical characteristics as well as the traffic data collected along the corridor. The information detailed in this chapter is used as a baseline for projecting how the corridor will function in the future.

CORRIDOR CHARACTERISTICS

Because of the length of the SR A1A / SR 200 corridor and the differing characteristics and land development types along it, the corridor has been divided into four segments. These segments are:

- I-95 to west of US 17 (Still Quarters Road) - 2.4 miles
- West of US 17 (Still Quarters Road) to east of US 17 (Rubin Lane) - 1.3 miles
- East of US 17 (Rubin Lane) to Chester Road / Amelia Concourse - 2.6 miles
- Chester Road / Amelia Concourse to east of CR 107 - 2.6 miles

The entire length of the corridor is currently a four-lane divided arterial facility. The land development patterns; future land use and zoning classifications; presence of bicycle and pedestrian facilities; and number of major intersections greatly affect the functioning of each corridor segment. These characteristics will be discussed more in-depth for each section of the corridor below.

SEGMENT 1: I-95 TO WEST OF US 17 (STILL QUARTERS ROAD)

Segment One, between I-95 and Still Quarters Road, is the most rural of all the corridor segments. It is approximately 2.4 miles long, and is classified as a Rural Minor Arterial facility. Immediately to the west of this segment is the Nassau Wildlife Management Area. This segment is expected to change dramatically with the development of the East Nassau Community Planning Area (discussed in Chapter Three).

LAND DEVELOPMENT PATTERNS

Fast food and hotel development surrounds the interchange with I-95, and the remainder of the corridor is sparsely developed, or not at all developed.

FUTURE LAND USE DESIGNATION

This portion of the SR A1A / SR 200 corridor has a future land use designation of commercial surrounding the I-95 interchange, and a land use designation of mixed-use for the remainder of the segment. This portion of the corridor is within the East Nassau Community Planning Area.

BICYCLE AND PEDESTRIAN FACILITIES

This segment of the corridor has paved shoulders on both sides, but no other bicycle or pedestrian facilities.

MAJOR INTERSECTIONS

The only major intersection located along this segment of the corridor is the interchange of I-95 and SR 200. As traffic grows on William Burgess Boulevard, this intersection (currently unsignalized) will also become more important.
**2. SNAPSHOTS: EXISTING CONDITIONS**

**SEGMENT 2: WEST OF US 17 (STILL QUARTERS ROAD) TO EAST OF US 17 (RUBIN LANE)**

Segment two extends from Still Quarters Road approximately 1.3 miles to east of Rubin Lane. This segment comprises the core area of Yulee on either side of the US 17 intersection. This is also one of the few areas of the corridor that is classified as an urban typical section, in that it includes a curb and gutter drainage system.

**LAND DEVELOPMENT PATTERNS**

This section of the corridor is characterized by low-density commercial development surrounding the US 17 intersection. To the east of US 17, low-density residential abuts the corridor.

**FUTURE LAND USE DESIGNATION**

This portion of the SR A1A / SR 200 Corridor has a future land use designation of commercial surrounding the US 17 intersection and medium density residential and conservation future land use designations in the remainder of the corridor segment.

**BICYCLE AND PEDESTRIAN FACILITIES**

Sidewalks begin at Pineview Drive and extend throughout the remainder of the segment. On-street parking used to exist within the core of Yulee, but this was replaced by separated bike lanes on both sides when the roadway was resurfaced in 2012. East of US 17 at Palm Tree Drive, the sidewalks end and the roadway again has paved shoulders.

**MAJOR INTERSECTIONS**

The intersection of US 17 is the only signalized intersection in this segment.

**SEGMENT 3: EAST OF US 17 (RUBIN LANE) TO CHESTER ROAD / AMELIA CONCOURSE**

Segment Three extends from east of the core of Yulee to the Chester Road / Amelia Concourse intersection. This segment is approximately 2.6 miles long. This segment includes the eastern edge of what could be called “old Yulee”, a creek crossing and natural area, as well as some of the shopping centers recently constructed near the Chester Road / Amelia Concourse intersection.

**LAND DEVELOPMENT PATTERNS**

This segment of the corridor has a number of different land uses, such as Yulee Elementary School, low-density residential development, the Lofton Creek campground, and, on the east end of the segment, new big-box retail development.

**FUTURE LAND USE DESIGNATION**

This corridor segment has a mixture of future land use designations, including: low-density and medium-density residential; commercial; multi-use; and conservation. Additionally, some parcels adjacent to the corridor on the north side have an industrial future land use category.

**BICYCLE AND PEDESTRIAN FACILITIES**

This segment of the corridor has paved shoulders, but no other bicycle or pedestrian facilities.

**MAJOR INTERSECTIONS**

This segment of SR A1A / SR 200 has three more major, signalized intersections: Felmor Road / Miner Road; Gene Lassere Boulevard; and Chester Road / Amelia Concourse.
SEGMENT 4: CHESTER ROAD / AMELIA CONCOURSE TO EAST OF CR 107

The eastern most segment of the SR A1A / SR 200 corridor contains a large amount of retail and commercial services, which contributes to the high traffic volumes. East of the CR 107 (Old Nassauville Road / Scott Road) intersection, development on the corridor becomes more sparse leading up to the Amelia River Bridge.

LAND DEVELOPMENT PATTERNS
This segment is perhaps the most intensely developed portion of the study corridor. Along this segment of SR A1A / SR 200, one can find fast food, neighborhood entrances, a car dealership, big box retail, commercial development, and restaurants. However, like the rest of the corridor, there are substantial tracts of wooded land still fronting the roadway.

FUTURE LAND USE DESIGNATION
Parcels adjacent to the corridor on the north side have an industrial future land use category. Land on the south side has future land use designations of commercial, medium density residential, and conservation.

BICYCLE AND PEDESTRIAN FACILITIES
This segment of the corridor has paved shoulders, and no other bicycle or pedestrian facilities.

MAJOR INTERSECTIONS
The major signalized intersections of this segment are: Arrigo Boulevard, Blackrock Road, Barnwell Road, and Old Nassauville Road / Scott Road (CR 107).

PUBLIC TRANSPORTATION SERVICES
Public transportation in Nassau County is provided by the Council on Aging of Nassau County. Transit service operates Monday through Friday, and fare is $1.50 for ambulatory riders; $2.50 for wheelchair riders; and $1 for Medicaid riders. A deviated-fixed route, or flex route, system was started in 2012 and two main route systems are available: between Fernandina Beach, Yulee, and Hilliard; and between Yulee and Jacksonville. These route systems cross over at the Yulee Transfer Point, and each has 4 or 5 runs per day.

SR 200 IN THE COMPREHENSIVE PLAN AND LAND DEVELOPMENT CODE

As this area is growing more rapidly than any other area in Nassau County, significant attention is paid to it in the Comprehensive Plan. Much of the future growth in the area is outlined in the East Nassau Community Planning Area, which will be discussed in the next chapter. That said, there are existing policies governing development in the SR A1A / SR 200 corridor area. These are presented below.

STATE ROAD 200 / A1A ACCESS MANAGEMENT OVERLAY DISTRICT
A State Road 200 / A1A Access Management Overlay District has been created and adopted into the Land Development Code and the 2030 Comprehensive Plan. The purpose of this Overlay District is to manage development, reduce traffic congestion, and protect public investment in the existing transportation system. The District is intended to foster an orderly layout and use of land, protect community character, and conserve natural resources by promoting well-designed road and access systems and discouraging the unplanned division of land. Generally, the district lies within 1000 feet of each side of SR 200 / A1A between Edwards Road (one mile to the west of the I-95 / SR 200 interchange) and the Intracoastal Waterway. The specific requirements of the Overlay District are discussed in-depth in Chapter Four.
TRANSPORTATION POLICIES IN THE COMPREHENSIVE PLAN

In addition to the Policy T.05.07 found in the Nassau County Comprehensive Plan implementing the SR 200 / A1A Access Management Overlay District, other policies outlined in the Transportation Element impact this study, including:

**POLICY T.02.06**
In recognition of the need to provide a parallel east-west corridor to support development within the East Nassau Community Planning Area, Nassau County and the landowner shall enter into a right-of-way reservation agreement. The execution of the right-of-way agreement shall be a condition of development approval. The roadway, within the right-of-way, shall be evaluated based upon level of service standards as determined by Nassau County.

**POLICY T.05.01**
Encourage Circulation within Development. Development shall include features and provisions, which encourage internal automobile circulation, bicycle use, pedestrian movement, and other features to minimize utilization of the major roadway network.

**POLICY T.05.04**
The County shall control the connections and access points of driveways and roads through land development regulations and recommendations to the FDOT concerning driveway permit applications. Land Development Regulations shall establish criteria for access road spacing consistent with FDOT Access Management Guidelines. In addition, the County shall request FDOT to purchase access rights for controlled access roads such as U.S. 301.

**POLICY T.05.05**
All new developments, redevelopments and additions to existing developments shall make provisions for safe and convenient internal traffic flow and adequate off-street parking facilities for motorized and non-motorized vehicles as required in the Land Development Code.

**POLICY T.05.06**
The following techniques shall be applied on a countywide basis to manage traffic access:
- Public roadways shall be classified according to function and planned, designed, and managed to preserve their functional integrity.
- Allowable levels of access shall be assigned to functionally classified roadways to preserve the safety and efficiency of these important transportation facilities.
- Direct access to major arterials and collectors shall be controlled to preserve the safety, efficiency, and character of the transportation route. Individual property access shall not be provided to arterial roadways where alternative access is available as defined in the LDR’s.
- Raised medians shall be incorporated into the design of all arterial roadways with posted speeds of 45 mph or greater.
- Driveway connections shall not be permitted in the functional area of the intersections of arterial or major collector roadways.
- Signalized access points on arterial and major collector roadways shall not be approved where they substantially disrupt the ability to synchronize signals and maintain continuous traffic progression.
- Properties under the same ownership, consolidated for development or part of phased development plans shall be considered one property for the purposes of access control. Access points to such developments shall be the minimum necessary to provide reasonable access and not the maximum available for that property frontage.
- New residential subdivisions shall include an internal street layout that connects to the streets of surrounding developments unless constrained to accommodate travel demand between adjacent neighborhoods without the need to use the major thoroughfare system.
**2. SNAPSHOT: EXISTING CONDITIONS**

**EXISTING TRAFFIC DATA**

Traffic data was collected for SR A1A / SR 200 as well as adjacent roadways. This data consisted of historical count information, existing daily and peak hour counts, and vehicle classification counts. All traffic count data can be found in Appendix A on the accompanying CD.

**HISTORICAL TRAFFIC INFORMATION**

Table 2.1 below shows annual average daily traffic (AADT) between 2003 and 2012 at various points along the SR A1A / SR 200 corridor. Total growth for this ten year timeframe varied between 14% and 33%, with an average annual growth ranging from nearly 2% to 4%. Historical AADT was also collected on US 17, which exhibited similar growth rates. It should be noted that much of the growth occurred in the first few years, and that traffic counts since 2006 have been relatively flat or even lower in some cases.

**TABLE 2.1: 2002-2012 HISTORICAL TRAFFIC AND GROWTH ALONG THE SR 200 CORRIDOR**

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<td>West of I-95</td>
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<td></td>
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<td>10700</td>
<td>10500</td>
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<td>17500</td>
<td>17900</td>
<td>18500</td>
<td>21600</td>
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<tr>
<td>East of US 17</td>
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<td>25500</td>
<td>26000</td>
<td>39000</td>
<td>36000</td>
<td>36500</td>
<td>36000</td>
<td>36000</td>
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<td>39900</td>
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<td>3.28%</td>
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<td>East of Chester Road</td>
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<td>29000</td>
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<td>45000</td>
<td>41000</td>
<td>41000</td>
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<td>Nearby Roadways</td>
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<td>US 17 north of SR 270</td>
<td>11400</td>
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<td>US 17 south of SR 200</td>
<td>36000</td>
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<td>26%</td>
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<tr>
<td>Chester Road north of Pages Dairy</td>
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<td>4700</td>
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**EXISTING DAILY TRAFFIC**

Table 2.2 below shows the 2011 and 2012 current traffic along the SR A1A / SR 200 corridor. Traffic counts were collected in 2012 at three locations along the corridor. These counts were supplemented by Florida Department of Transportation (FDOT) AADT counts from 2011. As shown on the table, the current LOS is C from I-95 to west of Harts Road, which is an acceptable LOS given the standard of D. However, from east of US 17 to the end of the corridor, the LOS is a failing F. This information is also depicted on Exhibit B. It is important to note that the existing volumes would yield an LOS of C along the entire SR A1A / SR 200 corridor based on a six lane facility. As such, it is expected that the overall facility will function adequately for several years after the widening is completed.
**2. Snapshot: Existing Conditions**

**Exhibit B: 2012 Existing Daily Traffic and LOS**

4-Lane Class I Arterial
Max. Capacity @ LOS C = 34,000  
Max. Capacity @ LOS D = 35,500

6-Lane Class I Arterial  
Max. Capacity @ LOS C = 52,100  
Max. Capacity @ LOS D = 53,500

---

Max. Capacity @ LOS C = 34,000  
Max. Capacity @ LOS D = 35,500

Max. Capacity @ LOS C = 52,100  
Max. Capacity @ LOS D = 53,500
TABLE 2.2: EXISTING (2011 / 2012) AADT

<table>
<thead>
<tr>
<th>SR 200 Segment</th>
<th>2011*</th>
<th>2012**</th>
<th>LOS Std</th>
<th>Type</th>
<th># Lanes</th>
<th>Max. Cap</th>
<th>LOS</th>
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<tbody>
<tr>
<td>East of I-95</td>
<td>21,600</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
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</tr>
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<td>West of Harts Road</td>
<td>38,900</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>East of US 17</td>
<td>38,900</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>West of Meadowfield Bluffs Road</td>
<td>39,900</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>East of Chester Road</td>
<td>37,500</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>West of Barnwell Road</td>
<td>37,000</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
<td>F</td>
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</tr>
<tr>
<td>Nearby Roadways</td>
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</tr>
<tr>
<td>US 17 north of SR 200</td>
<td>12,800</td>
<td>D</td>
<td>Class I Art</td>
<td>4</td>
<td>35,500</td>
<td>C</td>
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</tr>
<tr>
<td>US 17 south of SR 200</td>
<td>10,800</td>
<td>D</td>
<td>Class I Art</td>
<td>2</td>
<td>16,200</td>
<td>C</td>
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</tr>
<tr>
<td>Chester Road north of Pages Dairy</td>
<td>4,700</td>
<td>D</td>
<td>Collector</td>
<td>2</td>
<td>14,580</td>
<td>C</td>
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</tr>
</tbody>
</table>

LOS based on 2012 FDOT Q/LOS Table 2 (Transitioning Areas)
*Source: FDOT Annual traffic counts.
**Source: Traffic counts collected for this study.

Also, as shown on the table, major adjacent roadways to the corridor are operating at an acceptable LOS. It should be noted that the daily LOS is based on FDOT generalized tables, which sometimes do not accurately reflect local conditions.

TRUCK TRAFFIC
Finally, vehicle classification counts were collected at three locations along the corridor. These counts provided detailed information on the number and type of vehicles on the roadway. Using this information, heavy truck percentages were calculated. This portion of SR A1A / SR 200 is part of the Florida's Strategic Intermodal System (SIS), as it connects the Port of Fernandina with I-95. As a result, there is a significant amount of heavy truck traffic on the corridor, with log trucks comprising a large percentage. The collected data revealed that heavy vehicles constitute roughly 10% of the traffic on the corridor daily, but that drops to around 6% during the pm peak hour when the roadway is most congested.

EXISTING PEAK HOUR TRAFFIC
In order to get a more detailed understanding of the traffic conditions on SR A1A / SR 200 corridor, peak hour turning movement counts (TMCs) were taken at nine intersections along the corridor. The peak hour TMCs for both am and pm are depicted on Exhibit C. This information, along with existing roadway geometry and signal timings, was then input into Synchro, a traffic analysis software package. Traffic conditions were then assessed at the am and pm peak hour levels to determine arterial and intersection LOS along SR A1A / SR 200.
EXHIBIT C: 2012 EXISTING PEAK HOUR TRAFFIC

LEGEND:

XX  AM PEAK
(XX) PM PEAK

Heavy Vehicle Daily % = 10%
AM PEAK HV % = 9%
PM PEAK HV % = 6%
Table 2.3 shows am peak hour traffic and LOS at the nine intersections on the corridor as well as the arterial LOS west and east of those intersections. Currently, all intersections are operating at LOS D or better in the am peak hour. As the William Burgess Boulevard intersection is not signalized, overall delay could not be measured.

Table 2.4 shows pm peak hour traffic and LOS for the major intersections on SR A1A / SR 200 and the west and east approaches to those intersections. Currently, the Felmor Road / Miner Road intersection is the only intersection operating at a failing LOS of F.

Exhibit D depicts the am and pm peak hour LOS information for the corridor and intersections, and the Synchro output files can be found in Appendix B on the accompanying CD.
EXHIBIT D: 2012 EXISTING PEAK HOUR LOS

LEGEND:
XX    AM PEAK LOS
(XX)  PM PEAK LOS

Exhibit D: 2012 Existing Peak Hour LOS
EXISTING TRAVEL TIME

LOS is a qualitative assessment based on quantitative data, but is sometimes difficult for the general public to grasp. For the travelling public, congestion is measured in travel time. As such, travel times were compiled from the Synchro outputs and validated through field observation. Given that the afternoon peak hour showed more congestion than the morning peak hour, only pm peak travel times were summarized. Table 2-5 below shows the current 2012 average pm peak hour travel times on the nine-mile long corridor. These travel times are generally in the three to four minute range for the segments between I-95 and CR 107, with overall travel times measuring just over 13 minutes.

<table>
<thead>
<tr>
<th>SR A1A / SR 200 Segment</th>
<th>2012 PM - Eastbound</th>
<th>2012 PM - Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between I-95 and US 17</td>
<td>4 minutes &amp; 19 seconds</td>
<td>3 minutes &amp; 29 seconds</td>
</tr>
<tr>
<td>Between US 17 and Chester Road</td>
<td>4 minutes &amp; 22 seconds</td>
<td>4 minutes &amp; 58 seconds</td>
</tr>
<tr>
<td>Between Chester Road and CR 107</td>
<td>3 minutes &amp; 29 seconds</td>
<td>3 minutes &amp; 16 seconds</td>
</tr>
<tr>
<td>Between CR 107 and east of CR 107</td>
<td>1 minute &amp; 11 seconds</td>
<td>1 minute &amp; 28 seconds</td>
</tr>
<tr>
<td>Total Corridor Travel Time</td>
<td>13 minutes &amp; 21 seconds</td>
<td>13 minutes &amp; 11 seconds</td>
</tr>
</tbody>
</table>

The information presented above was then carried forward to 2035 for the purposes of estimating future travel conditions, which is the focus of the report’s next chapter.
This chapter of the report focuses on the projected traffic conditions on the SR A1A / SR 200 corridor in the year 2035. The analysis includes a projection of growth in population and employment and the associated impacts of that growth on the corridor. The only assumed transportation improvements are those that are committed for construction in the next five years. This includes the six-laning of SR A1A / SR 200 and the extension of Radio Avenue.

PROJECTED GROWTH
The first step in analyzing future traffic conditions in an area is identifying the potential drivers of growth. As discussed in the previous chapter, there has been little to no growth in vehicular traffic on the SR A1A / SR 200 corridor over the past 4-6 years. This is consistent with most other roadways in Florida, where travel was severely affected by the economic recession. However, despite the lack of growth in travel demand, there has been modest growth in retail services along the corridor. Most of the commercial shopping centers in the Chester Road/Amelia Concourse area were developed recently, and there are several new multi-family apartment complexes. Furthermore, the housing market is recovering and some of the newer single family residential developments in the area are growing once again.

Over the long term, the SR A1A / SR 200 corridor will be most affected by development of the East Nassau Community Planning Area, which is discussed in detail below.

EAST NASSAU COMMUNITY PLANNING AREA (ENCPA)
Nassau County has recently approved the ENCPA through amendments to the 2030 Comprehensive Plan and in Article 27 of the Zoning Code. The purpose of the ENCPA is to provide for a mixture of uses in the East Nassau area, where the primary uses may be residential, commercial, office, tourist commercial or industrial. The ENCPA is a long-term vision, meaning that buildout could take 50 or more years.

As shown on Exhibit E, the ENCPA encompasses a large section of the eastern portion of Nassau County. Portions of SR A1A / SR 200 (between I-95 and US 17) are contained within the ENCPA. Further, the scope of the projected development of the planning area will have significant implications for the entire corridor. Overall, the ENCPA is expected to generate 25,000 units accommodating approximately 57,000 people and 11 million square feet of non-residential development. Employment Centers are planned for the corridor area between I-95 and US 17, while Regional Centers are planned to be constructed north of the roadway, in conjunction with a new I-95 interchange. Large amounts of residential development will be located to the east of the regional and employment centers.

In order to develop within the ENCPA, a Detailed Specific Area Plan (DSAP) must be proposed and approved. Currently, the first DSAP has been proposed by TerraPointe, the real estate arm of Rayonier, and negotiations are ongoing between the developer and the County. The development plan for this DSAP includes 4,000 dwelling units and seven million square feet of non-residential uses.
3. Wide Angle Lens: Future Conditions

Exhibit E: ENCPA Master Land Use Plan

Future Land Use Map Series
FLUMS-6

Legend
- East Nassau Community Planning Area Boundary
- Transit Oriented Development
- Proposed Road Network
- St. Mary’s River Greenway (SMRG)

East Nassau Community Planning Area

Land Use
- Regional Center
- Employment Center
- Village Center

Residential Neighborhood
- Residential - Tier 1
- Residential - Tier 2
- Residential - Tier 3
- Resort Development

Conservation and Habitat Network
- Rivers and Lakes
- Conservation
- Wetland System

Scale: 0.5 1 Miles
3 WIDE ANGLE LENS: FUTURE CONDITIONS

PROJECTED FUTURE SOCIOECONOMIC DATA FOR THE ENCPA

To analyze the potential impact of the proposed and expected development within the ENCPA (proposed DSAP plus additional projected development near Chester Road), socioeconomic data was projected for 2035 utilizing two scenarios: 2035 projected growth for the traffic analysis zones (TAZs) in the area without the DSAP and projected additional development; and 2035 projected growth for the TAZs in the area including the DSAP and Chester Road development. This future development scenario was discussed and agreed upon with Nassau County Growth Management Department Staff. The future development scenario includes 6.7 million square feet of industrial development; 1.3 million square feet of service development; and 500,000 square feet of commercial development within the ENCPA. This information was input in the regional travel demand model in order to forecast daily traffic volumes in 2035.

Table 3.1 shows the projected growth of the area without the development scenario discussed above, while Table 3.2 shows the projected growth for the ENCPA if the future development scenario is built. The implementation of the future development scenario would drastically change the make-up of the area, with population, dwelling units, and employment increasing at least tenfold under this development scenario.

<table>
<thead>
<tr>
<th>TAZ</th>
<th>SFDU</th>
<th>SFPOP</th>
<th>MFDU</th>
<th>MFPOP</th>
<th>TOTDU</th>
<th>TOTPAP</th>
<th>EMPMFG</th>
<th>EMPIND</th>
<th>EMPCOM</th>
<th>EMPsvc</th>
<th>EMPTOT</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>20</td>
<td>41</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>41</td>
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<td>26</td>
<td>588</td>
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FDOT WIDENING PLANS

The Florida Department of Transportation (FDOT) has solidified plans to widen SR A1A / SR 200 between I-95 and CR 107 from four lanes to six lanes. In advance of the widening projects, FDOT resurfaced the existing 4-lane roadway from I-95 to the Intracoastal Waterway (construction was completed in the summer of 2012). The widening project will be done in three stages, with construction expected to start in 2014 and be completed in 2018. The first segment to be constructed along the Corridor will be from west of Still Quarters Road to west of Rubin Davis Lanes. Design and right-of-way are currently underway, with construction funded for FY 2014. Next, the six-laning of the corridor segment from Rubin Lane to CR 107 is planned for construction in FY 2016 (design plans and right of way are currently underway). The final segment of the corridor, from I-95 to west of Still Quarters Road, is currently being designed and construction will begin in FY 2017.

2035 TRAFFIC FORECASTS

Using the projected growth in population and employment combined with committed roadway projects, initial 2035 traffic forecasts for the area were developed. The SR A1A / SR 200 corridor was evaluated for both average daily and pm peak hour conditions. In addition, 2035 daily forecasts for some of the other area roads was summarized.

TABLE 3.1: 2035 PROJECTED GROWTH FOR ENCPA TAZS, NOT INCLUDING PROPOSED DSAP & CHESTER ROAD DEVELOPMENT

<table>
<thead>
<tr>
<th>TAZ</th>
<th>SFDU</th>
<th>SFPOP</th>
<th>MFDU</th>
<th>MFPOP</th>
<th>TOTDU</th>
<th>TOTPAP</th>
<th>EMPMFG</th>
<th>EMPIND</th>
<th>EMPCOM</th>
<th>EMPsvc</th>
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<tr>
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<td>285</td>
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<td>0</td>
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<td>610</td>
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<td>11</td>
<td>21</td>
<td>29</td>
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<tr>
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<td>45</td>
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<td>0</td>
<td>22</td>
<td>45</td>
<td>23</td>
<td>12</td>
<td>134</td>
<td>95</td>
<td>264</td>
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<tr>
<td>TOTAL</td>
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<td>868</td>
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<td>588</td>
<td>446</td>
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</table>

TABLE 3.2: 2035 PROJECTED GROWTH FOR ENCPA TAZS, INCLUDING PROPOSED DSAP & CHESTER ROAD DEVELOPMENT

<table>
<thead>
<tr>
<th>TAZ</th>
<th>SFDU</th>
<th>SFPOP</th>
<th>MFDU</th>
<th>MFPOP</th>
<th>TOTDU</th>
<th>TOTPAP</th>
<th>EMPMFG</th>
<th>EMPIND</th>
<th>EMPCOM</th>
<th>EMPsvc</th>
<th>EMPTOT</th>
<th>SCHOOL</th>
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<td>7100</td>
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<td>1900</td>
<td>4875</td>
<td>13575</td>
</tr>
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</table>
2035 DAILY FORECASTS
Table 3.3 shows the projected 2035 daily traffic in the SR A1A / SR 200 corridor. They were forecasted using the 2035 Cost-Feasible Northeast Florida Regional Planning Model (NERRPM). The model was modified to include the additional ENCPA growth discussed above as well as several key road links in the area not needed for a regional model but useful for conducting this study. As shown on the table, LOS is projected to be failing on two segments by 2035: east of I-95 and east of Old Nassauville Road (CR 107). The segment from I-95 to William Burgess is projected to be deficient due to the growth of the ENCPA. The segment east of CR 107 will be deficient because the six lanes end there and this portion of the corridor remains a four lane road.

<table>
<thead>
<tr>
<th>TABLE 3.3: PROJECTED 2035 SR 200 DAILY TRAFFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 200 Segment</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>East of I-95</td>
</tr>
<tr>
<td>East of William Burgess Road</td>
</tr>
<tr>
<td>East of US 17</td>
</tr>
<tr>
<td>East of Chester Road</td>
</tr>
<tr>
<td>West of Barnwell Bluffs Rd</td>
</tr>
<tr>
<td>West of Old Nassauville Road</td>
</tr>
<tr>
<td>Nearby Roadways</td>
</tr>
<tr>
<td>US 17 north of SR 200</td>
</tr>
<tr>
<td>US 17 north of Pages Dairy</td>
</tr>
<tr>
<td>US 17 south of SR 200</td>
</tr>
<tr>
<td>US 17 south of Wm. Burgess</td>
</tr>
<tr>
<td>US 17 south of Harts Rd.</td>
</tr>
<tr>
<td>I-95 north of SR 200</td>
</tr>
<tr>
<td>I-95 south of SR 200</td>
</tr>
<tr>
<td>Wm. Burgess north of SR 200</td>
</tr>
<tr>
<td>Wm. Burgess south of SR 200</td>
</tr>
<tr>
<td>Harts Rd. south of SR 200</td>
</tr>
<tr>
<td>Harts Rd. south of Wm. Burgess</td>
</tr>
<tr>
<td>Radio Ave. east of US 17</td>
</tr>
<tr>
<td>Pages Dairy Rd. north of SR 200</td>
</tr>
<tr>
<td>Pages Dairy south of Wm. Burgess</td>
</tr>
<tr>
<td>Pages Dairy Rd. east of Felmor Rd.</td>
</tr>
<tr>
<td>Pages Dairy Rd. west of Chester Rd.</td>
</tr>
<tr>
<td>Felmor Rd. north of SR 200</td>
</tr>
<tr>
<td>Miner Rd. south of SR 200</td>
</tr>
<tr>
<td>Chester Rd. north of Pages Dairy</td>
</tr>
<tr>
<td>Amelia Concourse south of SR 200</td>
</tr>
<tr>
<td>Blackrock Rd. north of SR 200</td>
</tr>
<tr>
<td>Old Nassauville Rd. south of SR 200</td>
</tr>
</tbody>
</table>

*LOS based on 2012 FDOT Q/LOS Table 1

It should also be noted that, by 2035, segments of US 17 and I-95 are also projected to be deficient. 2035 daily traffic volumes, maximum capacity, and LOS for the SR A1A/ SR 200 corridor are also depicted on Exhibit F.
3 WIDE ANGLE LENS: FUTURE CONDITIONS

EXHIBIT F: 2035 DAILY TRAFFIC AND LOS

LEGEND:
4-Lane Class I Arterial
Max. Capacity @ LOS C = 37,900
Max. Capacity @ LOS D = 39,800

6-Lane Class I Arterial
Max. Capacity @ LOS C = 58,400
Max. Capacity @ LOS D = 59,900
2035 PM PEAK HOUR TRAFFIC

Table 3.4 shows projected 2035 pm peak hour traffic along SR A1A / SR 200 at the major intersections. This information is also depicted on Exhibit G, along with projected turning movement volumes at each intersection. The peak hour directional volumes were developed by applying K and D factors to the model output volumes presented above. Turning movements were forecasted by applying existing TMC percentages to the peak hour approach volumes.

As shown in Table 3.4, a number of intersections are projected to operate at a failing LOS by 2035, including William Burgess Boulevard, US 17, Felmor Road / Miner Road, Chester Road / Amelia Concourse, and Old Nassauville Road.

<table>
<thead>
<tr>
<th>SR 200 Intersection:</th>
<th>Peak Hour Volume West</th>
<th>Peak Hour Volume East</th>
<th>Intersection LOS</th>
<th>Intersection V/C Ratio</th>
<th>Intersection Delay (sec.)</th>
<th>West Approach LOS</th>
<th>East Approach LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Burgess Blvd</td>
<td>5600</td>
<td>4375</td>
<td>E</td>
<td>1.17</td>
<td>71.1</td>
<td>D</td>
<td>F</td>
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<td>US 17</td>
<td>3650</td>
<td>4650</td>
<td>E</td>
<td>1.16</td>
<td>77.5</td>
<td>F</td>
<td>D</td>
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<tr>
<td>Felmor Rd / Miner Rd</td>
<td>4750</td>
<td>4700</td>
<td>F</td>
<td>1.25</td>
<td>124.0</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>Gene Lassere Blvd</td>
<td>5150</td>
<td>5150</td>
<td>B</td>
<td>0.81</td>
<td>14.5</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Chester Rd / Amelia Concourse</td>
<td>4925</td>
<td>4625</td>
<td>E</td>
<td>1.06</td>
<td>63.3</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>Arrigo Blvd</td>
<td>4270</td>
<td>4220</td>
<td>B</td>
<td>0.94</td>
<td>18.9</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Blackrock Rd</td>
<td>4275</td>
<td>4275</td>
<td>B</td>
<td>0.77</td>
<td>17.1</td>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>Barnwell Rd</td>
<td>4425</td>
<td>4355</td>
<td>C</td>
<td>0.79</td>
<td>20.1</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Old Nassauville Rd</td>
<td>4500</td>
<td>4525</td>
<td>F</td>
<td>1.27</td>
<td>87.4</td>
<td>F</td>
<td>D</td>
</tr>
</tbody>
</table>

As with the existing conditions analysis, peak hour arterial and intersection LOS was evaluated in detail using Synchro. Overall intersection LOS and corridor approach LOS are depicted on Exhibit H and Synchro summary outputs are included in Appendix C of the accompanying CD.
EXHIBIT G: 2035 PM PEAK HOUR TRAFFIC

LEGEND:

XX PM PEAK
EXHIBIT H: 2035 PM PEAK HOUR LOS

LEGEND:

XX PM Peak LOS
2035 TRAVEL TIME

Finally, as noted by members of the steering committee, travel time is a more understandable measure than LOS or intersection delay. As such, estimated corridor travel times output from Synchro were summarized. Table 3.5 shows the projected 2035 average PM peak hour travel times on SR A1A / SR 200. Overall, travel times on the approximately 9-mile long corridor are projected to increase from 13 minutes currently to 16-17 minutes in 2035.

<table>
<thead>
<tr>
<th>SR A1A / SR 200 Segment</th>
<th>2035 PM - Eastbound</th>
<th>2035 PM - Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between I-95 and US 17</td>
<td>5 minutes &amp; 53 seconds</td>
<td>4 minutes &amp; 31 seconds</td>
</tr>
<tr>
<td>Between US 17 and Chester Road</td>
<td>4 minutes &amp; 41 seconds</td>
<td>6 minutes &amp; 36 seconds</td>
</tr>
<tr>
<td>Between Chester Road and CR 107</td>
<td>5 minutes &amp; 3 seconds</td>
<td>3 minutes &amp; 54 seconds</td>
</tr>
<tr>
<td>Between CR 107 and east of CR 107</td>
<td>1 minute &amp; 11 seconds</td>
<td>1 minute &amp; 29 seconds</td>
</tr>
<tr>
<td>Total Corridor Travel Time</td>
<td>16 minutes &amp; 48 seconds</td>
<td>16 minutes &amp; 30 seconds</td>
</tr>
</tbody>
</table>

Based on the information presented in Table 3.5, it is clear that the six-laning of SR A1A / SR 200 will not be sufficient to address all of the growth expected on the corridor by 2035. Additional enhancements, both to the corridor itself as well as other roads in the area will be needed in order to maintain the same level of mobility that exists today. These corridor opportunities will be presented in the next three chapters.
4 ENHANCING THE IMAGE: MOBILITY

The next three chapters in the report will outline potential improvements that can be made to enhance corridor mobility, connectivity, and identity. The first area examined is mobility, as improvements can be implemented prior to or in conjunction with the FDOT widening projects scheduled to start next year. The two largest factors affecting mobility on urban arterial corridors are traffic signal management and access management. As depicted on Figure 4.1, this is because the amount of access permitted on a corridor directly affects the mobility (or speed) of the facility.

SIGNAL ENHANCEMENTS

There are multiple ways to operate traffic signals. Each type of operation has advantages and disadvantages. The simplest way is to allow each intersection to operate independently. For this type of operation, a set of timing parameters are developed based on the traffic volumes at each specific intersection. If detection is used, the traffic signal is considered actuated. Intersections can be fully actuated with all approaches having vehicle detection or semi actuated where just the some of the approaches having vehicle detection. If no detection is used, the signal is known as pre-timed and runs a fixed set of timing parameters without recognition for vehicular demand. This independent operation works well for isolated signals or signals that are spaced far apart (greater than ½ mile) along a corridor.

Currently, the eight traffic signals on the SR A1A / SR 200 corridor east of I-95 operate independently. Upgrades could allow for more advanced signal systems along the roadway. This will be especially useful as traffic on the corridor continues to grow and additional intersections are signalized. Several enhancements are discussed below.

COORDINATED SIGNAL SYSTEMS

Corridors with higher signal density (multiple signals with less than 2640 feet between each signal) usually benefit from some sort of coordinated timing plans. Coordinated signal systems can range from simply operating signals without detection on a pre-timed plan, to operating actuated signals with time based coordination, to installing advanced detection systems and running an adaptive signal system.

Coordinated signal systems using pre-timed cycle lengths are often found in downtown areas where the grid roadway network necessitates coordination of both the main street and side street. These systems provide a fixed amount of time for each movement at an intersection regardless of vehicular demand. Green signals are coordinated such that drivers delay is minimized, and the difference in green intervals between intersections is known as an offset. The signal cycle lengths and operational patterns can vary throughout the day based on a predetermined plan. This type of system does not have the ability to actively adapt to changing traffic conditions. With some care and proper maintenance, a coordinated signal timing plan can be implanted without extensive upgrades to existing equipment. This type of system works well when traffic patterns are predictable.
Coordination using actuated traffic signals works on similar principles. The main difference is that the green time allocated to the side street, and in some cases main street left turn movements, can be reduced based on the vehicular demand. Two types of systems can fall into this category, traffic responsive and time of day. In both cases, the intersection will continue to operate at a set cycle length but the time saved by shortening the minor movements at the intersection is added back to the main street through movements. As with pre-timed signals, the offsets between intersections must be programmed and the cycle lengths and operational patterns can vary by time of day based on predetermined intervals or in the case of traffic responsive, predetermined roadway parameters. A responsive system can change to accommodate some degree of change in the traffic flow, but is limited to a predefined set of options. A time of day system is simpler than a traffic responsive system.

ADAPTIVE SIGNAL SYSTEMS

Traffic adaptive systems are far more advanced. By using detection to provide information to a central computer, new signal timing data can be developed for each signal cycle. Adaptive Control systems are the most advanced, complex, and costly control systems available. The costs associated with implementing an adaptive system are significantly higher than with a Traffic Responsive system, primarily due to the amount of additional infrastructure required, such as network and communications servers and system software. These systems require significant effort to understand and calibrate which would necessitate additional training for staffing. Traffic adaptive systems work well on corridors with unpredictable variances in traffic flow.

LEFT TURN SIGNAL HEAD MODIFICATIONS

An effective way to help increase traffic flow along an arterial is to allow protected / permitted lefts. This allows left turns to occur under their own protected signal phase as well as when acceptable gaps occur in the opposing traffic stream. Traditionally this movement was controlled by a five-section or dog house signal head similar to Figure 4.2. The indications and associated driver actions with this signal are as follows:

- Circular Red Indication (R) – All movements viewing this indication stop
- Yellow Arrow – Left turn prepare to stop
- Circular Yellow Indication – Through movement and left turn movement prepare to stop
- Green Arrow – Left turns allowed and do not need to yield to oncoming traffic. Proceed with caution.
- Circular Green Indication – Through traffic allowed, left turns are allowed but must first yield to oncoming traffic and pedestrians.

More recently there has been a movement to incorporate the four-section protected-permissive flashing yellow arrow signal head. This signal head has shown in studies to be a more intuitive display for motorists. Replacing the circular green indication with a flashing yellow arrow, drivers were less apt to assume they had the right-of-way during the permitted left-turn interval. In addition it eliminates the “Yellow Trap” that occurs when a protected/permissive left turn is allowed to operate using lead/lag phasing. Figure 4.3 shows the four-section protected-permissive flashing yellow arrow signal head.

- Solid Red Arrow – Stop. No turns are allowed.
- Yellow Arrow – Left turn prepare to stop.
- Flashing Yellow – Left turns are permitted, but must first yield to oncoming traffic and pedestrians.
- Green Arrow – Left turns allowed and do not need to yield to oncoming traffic. Proceed with caution.

Consideration should be given when replacing a five-section head with a four-section protected-permissive flashing yellow arrow signal head. In order to provide the appropriate number of indicators to the motorist, the replacement of the five section head requires the maintaining agency to install a three section head with circular indicators plus the four-section protected-permissive flashing yellow arrow signal head. In some locations this will require the analysis of the signal structure to ensure it is capable of supporting the additional load.
4 ENHANCING THE IMAGE: MOBILITY

SIGNAL BACKPLATES
Backplates are added to a traffic signal indication in order to improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background. The improved visibility of a signal head with a backplate is then made more conspicuous by framing the backplate with a retro-reflective border. Taken together, a signal head equipped with a backplate with retro-reflective border is made more visible and conspicuous in both daytime and nighttime conditions, which is intended to reduce unintentional red-light running crashes.

BACKGROUND
A project initiated in 1998 by the Insurance Corporation of British Columbia and the Canadian National Committee on Uniform Traffic Control investigated the effectiveness of applying retro-reflective tape around the borders of traffic signal backplates. A small number of signalized intersections were treated and followed up with a simple before/after study, which concluded that the enhancement was effective at reducing crashes. A larger number of sites were subsequently treated and a more robust statistical study was performed. Since their initial introduction in Canada, several U.S. State transportation departments have adopted practices and policies concerning this countermeasure. Additionally, the FHWA has encouraged this treatment as a human factors enhancement of traffic signal visibility and conspicuity for older and colorblind drivers. Adding retro-reflective borders is also advantageous during periods of power outages when the signals would otherwise be dark. The retro-reflective sheeting continues to provide a visible cue for travelers to take note of the dark signal and adjust their actions accordingly. Per the study included in the Crash Modification Factor Clearinghouse, the use of backplates with retro-reflective borders may result in a 15 percent reduction in all crashes at urban, signalized intersections.

GUIDANCE
Backplates with retro-reflective borders should be considered as part of efforts to systemically improve safety performance at signalized intersections. Adding a retro-reflective border to an existing signal backplate can be a very low-cost safety treatment, as the materials are simple strips of retro-reflective sheeting. For existing traffic signals that lack even standard backplates, the addition of backplates with a retro-reflective border can often be accommodated on existing mast arm and span wire assemblies, but the structural capacity of the supports must be properly evaluated. The most effective means of implementing this proven safety countermeasure is to adopt it as a standard treatment for signalized intersections across a jurisdiction so that it is consistently included with all new construction and modernization projects, as well as being a worthy retrofit project for existing signals at intersections with red-light running crash histories. It is important to note that the Manual on Uniform Traffic Control Devices (MUTCD) specifically allows this treatment as an option that is discussed in Part 4. In terms of color and size, implementation of backplates and retro-reflective borders must be consistent with the latest edition of the MUTCD.

Recent changes to FDOT policies now require retro-reflective backplates on all newly installed signals.

SIGNAL ENFORCEMENT LIGHTS
Red-Signal Enforcement Lights enhance safety at signalized intersections by improving red-light compliance, resulting in a reduction of red-light running violations. They are auxiliary lights connected to a traffic signal to help law enforcement officers more efficiently and safely issue citations for drivers who violate the red lights at a traffic signal. These devices go by several names including red light indicator lights, red light indicators, signal indicator lights, enforcement lights, and tattletale lights.

The Red-Signal Enforcement Light activates simultaneously with the red signal phase, providing an enforcement officer located downstream from an intersection with a visible indication of the upstream red signal so they can determine when a vehicle has violated run a red light. Relatively small, low-cost lights are mounted on the top, bottom, or rear of a traffic signal and are wired into the signal controller for accurate red-signal indication. Red-Signal Enforcement Lights should not be colored red, yellow, or green, in order to avoid confusion with traffic signal control indications. In Florida a blue LED indicator is used.
Red-Signal Enforcement Lights can provide safety, efficiency and/or cost benefits, compared to other enforcement methods. These benefits include:

- Allowing red-light running monitoring from any leg of an intersection, particularly downstream from the intersection;
- Eliminating the need for unsafe pursuit by single upstream officer across the intersection during the red phase;
- Allowing one patrol officer instead of two (downstream) to enforce a traffic-control signal, thus increasing enforcement resource efficiency and versatility;
- Having lower installation and maintenance costs than automated enforcement systems, potentially allowing more numerous installations.

Here in Florida, the FDOT conducted a study in 2008 that determined, with aggressive enforcement, the red-signal enforcement lights reduced red light violations by 25% (“A Study of the Effectiveness of White Enforcement Lights,” Florida Department of Transportation, 2008). It should be noted that the lights have since been switched to blue LED to increase visibility. Similar results were reported by the city of Clearwater, Florida. Some considerations should be given to the implementation of these devices. These include:

- Lights are only effective when coupled with enforcement by police.
- Positioning is critical. The lights need to be easily visible to law enforcement while being minimally distractive to other motorists.
- Public awareness campaigns in conjunction with the lights may also increase their effectiveness. This could include signs reminding of red light violation fines.

ACCESS MANAGEMENT

Access management can have a profound effect on the safety and operation of roadways. Studies have shown a direct correlation between the number of crashes and the number of driveways on a roadway. Studies have also shown that increasing the number of driveways can yield as much as a 10mph reduction in average speeds. The presence of median openings can have a similar effect on the number of crashes, as they increase turning movements and thereby potential conflicts.

ACCESS MANAGEMENT OVERVIEW

According to FDOT, access management is the careful planning of the location design and operation of driveways, median openings, interchanges, and street connections. The purpose of access management is to provide access to land development while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed.

Access management functions by reducing conflict points associated with traffic turning into or leaving land developments. Conflict points are locations along a roadway where two vehicle’s paths can legally cross. At a four way intersection there are as many as 36 conflict points. Crashes can potentially occur at each of these conflict points. By implementing access management techniques, the number of conflict points can be reduced, thus reducing the potential for crashes.

Without access management, the function of major roadway corridors can deteriorate rapidly. Poor access management can result in the following impacts:

- An increase in vehicular crashes
- More collisions involving pedestrians and cyclists
- Accelerated reduction in roadway efficiency
- Unsightly commercial strip development
- Degradation of scenic landscapes
- More cut-through traffic in residential areas due to overburdened arterials
- Homes and businesses adversely impacted by a continuous cycle of widening roads
- Increased commute times, fuel consumption, and vehicular emissions as numerous driveways and traffic signals intensify congestion and delays along major roads
Implementing good access management practices can increase public safety, extend the life of major roadways, reduce traffic congestion, support alternative transportation modes, and potentially improve the appearance and quality of a corridor (Source: TRB Access Management Committee).

**BENEFITS OF ACCESS MANAGEMENT**
Proper access management can preserve good traffic flow and minimize accidents on roadways at a relatively low cost. A well designed access management system can:

- Reduce accidents
- Maintain efficient movement
- Preserve public investment in transportation
- Reduce the need for more new roadways
- Protect the value of private and public investments
- Enhance the environment and economic vitality of surrounding communities

**ACCESS MANAGEMENT TECHNIQUES**
There are numerous ways to implement proper access management on a corridor. Some of these techniques include:

- Proper traffic signal spacing
- Proper unsignalized access spacing
- Corner clearances (minimum distances required between intersection and driveways)
- Median alternatives
- Left-turn lane treatments
- U-turn alternatives
- Driveway consolidation

Implementation of these various techniques can help limit the number of conflict points at driveway locations, separate conflict areas, reduce the interference of turning traffic with through traffic and provide adequate circulation and storage for traffic on properties (Sources: FDOT and NCHRP 420). For example, directional medians greatly reduce conflict points when compared to fully open medians by limiting the number of allowed turning movements.

**FLORIDA ADMINISTRATIVE CODE SPACING STANDARDS**
Spacing standards are established by the Florida Administrative Code (FAC) Chapter 14-97 and are depicted in Table 4.1. These classifications contain separation standards for access features. Median and median openings are regulated through the requirement for a restrictive median in certain classes.
TABLE 4.1: ACCESS MANAGEMENT STANDARDS IN FAC RULE CHAPTER 14-97.003

<table>
<thead>
<tr>
<th>Class</th>
<th>Medians</th>
<th>Median Openings</th>
<th>Signal</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Full</td>
<td>Directional</td>
<td>More than 45 MPH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Posted Speed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45 MPH and Less</td>
</tr>
<tr>
<td>2</td>
<td>Restrictive w/Service Road</td>
<td>2,640</td>
<td>1,320</td>
<td>2,640</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,320</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>660</td>
</tr>
<tr>
<td>3</td>
<td>Restrictive</td>
<td>2,640</td>
<td>1,320</td>
<td>2,640</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>660</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>440</td>
</tr>
<tr>
<td>4</td>
<td>Non-Restrictive</td>
<td>2,640</td>
<td>1,320</td>
<td>2,640</td>
</tr>
<tr>
<td></td>
<td></td>
<td>660</td>
<td></td>
<td>440</td>
</tr>
<tr>
<td>5</td>
<td>Restrictive</td>
<td>2,640 at greater than 45 MPH Posted Speed</td>
<td>1,320 at 45 MPH or less Posted Speed</td>
<td>440</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>245</td>
</tr>
<tr>
<td>6</td>
<td>Non-Restrictive</td>
<td>1,320</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>440</td>
<td></td>
<td>245</td>
</tr>
<tr>
<td>7</td>
<td>Both Median Types</td>
<td>660</td>
<td>330</td>
<td>1,320</td>
</tr>
</tbody>
</table>

The SR A1A / SR 200 corridor is considered a Class 3 arterial, with most of the corridor speed limits set above 45 miles per hour. This means that full median openings should be spaced at least ½ mile apart, with directional median openings in between at no more than ¼ mile intervals. The portion of the corridor just east and west of the US 17 intersection has a current speed limit of 35 miles per hour and is considered a Class 5 arterial.

SR 200 / AIA ACCESS MANAGEMENT OVERLAY DISTRICT

In addition to FDOT access management standards, Nassau County also has guidelines governing the SR A1A / SR 200 corridor. Housed within the Transportation Element of the Nassau County 2030 Comprehensive Plan is Policy T.05.07, which establishes the SR 200/ AIA Access Management Overlay District. According to the Comprehensive Plan, the creation of this District is a mechanism for the County to manage development, reduce traffic congestion, and protect public investment in the existing transportation system. The District is intended to foster an orderly layout and use of land, protect community character, and conserve natural resources by promoting well-designed road and access systems and discouraging the unplanned division of land. Generally, the district lies within 1000 feet of each side of SR 200 / AIA between Edwards Road (one mile to the west of the I-95 interchange) and the Intracoastal Waterway.

Policy T.05.07 specifies that the creation of this Overlay District created added policies that apply to development within this district, in addition to the pre-existing access management policies. These additional policies are spelled out in the Land Development Code, as discussed below. Further, the comprehensive plan states, “Nassau County shall consider additional FDOT access management activities aimed at reducing congestion and improving safety on SR 200/AIA.”

In regard to access management standards, the code sets standards addressing the following:

PRIMARY ACCESS

For lots having frontage on SR 200/A1A, primary access shall be from SR 200/A1A, an intersecting public street, or provided through the use of parallel roads side streets, joint access driveways, and cross-access easements connecting adjacent developments in accordance with the county's approved comprehensive plan, as acceptable to the county, with priority and focus on rearage roads, where possible.

CORNER LOTS

For corner lots, where the corner is formed by SR 200/A1A and a side street that is functionally classified as a collector street or arterial road, the primary driveway access shall be from the side street. A corner lot exceeding three and one-half (3½) acres in size, and having at least three hundred seventy-five (375) feet of frontage on SR 200/A1A, may have primary access on SR 200/A1A provided that said primary access is located as far from the intersecting corner roads as possible (minimum) distance of two hundred fifty (250) feet and that the driveway access otherwise meets the upstream spacing criteria of these driveway regulations.
INTERIOR LOTS
New access points shall be limited to one (1) for every six hundred sixty (660) feet of frontage along SR 200/A1A. Regardless of total frontage length, no more than two (2) access points shall be allowed. New driveway access points shall not be allowed within five hundred (500) feet of any other existing driveway access on that property. In the event that the spacing criteria does not allow for the necessary access, the property may be accessed by frontage roads, rearage roads, or by cross-access easements. The engineering services director or his/her designee may recommend a waiver of the requirements of this paragraph in writing if the requirements cannot be met based upon configuration of the property or a determination that the rearage road, frontage road, or cross-access easement cannot be provided. The director of engineering services or his/her designee may also propose to the board of county commissioners an alternative to the requirements of this paragraph.

CREATION OF NEW LOTS
To preserve the safety and operational efficiency of the A1A Corridor, it is the intent of the county to carefully limit the number of driveway access points that are constructed in the future. However, to balance access management with reasonable use of property, while maintaining the functional importance of the A1A Corridor, the county shall apply the following requirements:

- In designing office or retail business centers (such as shopping plazas, malls, power centers and single user/big box structures), the creation of outparcels is prohibited unless access to said outparcels is not directly to SR 200/A1A, but rather a frontage road, a rearage road, direct access to a parent tract, or by a minimum thirty (30) foot wide cross-access corridor. It shall be the responsibility of the applicant to convey any such access-way through dedication or grant of easement and to construct the access facility in a manner acceptable to the county.

SECONDARY ACCESS
CORNER LOTS
Secondary access, other than primary access, may be provided to corner lots on a permanent or temporary basis in the following manner:

1. A right-in/right-out may be allowed on SR 200/A1A only if the FDOT approves such access; and
2. A right-in/right-out may be allowed on SR 200/A1A only if there is no other driveway of any type within six hundred sixty (660) feet of the proposed driveway, of if there is no other practical point of ingress/egress, such as a frontage or rearage road, or a cross-access easement; and
3. A right-in/right-out may be allowed on SR 200/A1A only if such access does not interfere with the safe operation, as determined by the engineering services director or his/her designee, of existing or planned turn acceleration/deceleration lanes existing along SR 200/A1A.

INTERNAL LOT
Secondary access for interior (non-corner) lots shall be either from SR 200/A1A, provided that the minimum spacing criteria can be met, or by frontage roads, rearage roads, or by a cross-access corridor. New driveway access points shall be limited to no more than one (1) per every six hundred sixty (660) feet of frontage. Under no circumstances shall an internal lot be approved for more than two (2) access points (one (1) primary and one (1) secondary). Outparcels shall not be granted a secondary access point on SR 200/A1A.
SR 200/A1A MEDIAN OPENINGS

All development plans submitted to the county that desire any access connection to SR 200/A1A require FDOT approval. The general policy of the county is to support the spacing standards recognized by the FDOT, provided they are implemented and upheld in a fair, reasonable and pragmatic fashion. Thus, minor deviations in the spacing dimensions may be accommodated if the intent of the regulations is, in the opinion of the county, otherwise being met.

- The FDOT has primary authority to allow or provide for median crossing movements on the SR 200/A1A Corridor. The FDOT spacing standard for full median openings on SR 200/A1A is one-half (½) mile per opening (FDOT Access Classification 3). The county policy is to support the pragmatic and reasonable implementation of this standard.
- Intermediate openings that provide for some, but not all, movements across a median may occur on a more periodic basis and as permitted by the FDOT. While the FDOT spacing standard between such intermediate openings is one-quarter (¼) mile per opening, the county recognizes the changing character of the A1A Corridor and, as such, may in certain cases support spacing intervals at no less than six hundred sixty (660) feet.

In addition to setting standards for access management of the corridor, the overlay also identifies special restrictions for the overlay district, including: pedestrian and bicycle circulation (sidewalks must extend logically); setbacks (25 feet); use of landscape buffering; and parking areas (minimum of 10). The Land Development Code also gives details regarding screening requirements; signage specifications; and regulation of outparcels (generally, outparcels will not have direct access to SR 200/ A1A).

SR A1A / SR 200 MEDIAN MODIFICATIONS

As shown on Figure 4.4, modifying median openings can be done relatively simply. The most difficult part of the process is the amount of public involvement, especially with area businesses, often required. Median modifications to the SR A1A / SR 200 will be made as part of the widening projects scheduled to begin in 2014. As part of this corridor study, a review of FDOT design plans for the widening projects was conducted. This included an evaluation of proposed median openings, which in many cases met or exceeded FDOT access management standards.

Two areas in the design plans were identified as being inconsistent with existing or proposed developments along the corridor. The first is adjacent to Yulee Baptist Church, where the design plans would have limited access to the church from the east. This issue was discussed with FDOT staff at the January 28th open house workshop and changes to the design plans are being made (see Exhibit K in Chapter Five). The other area identified is east of the Chester Road / Amelia Concourse intersection, where Nassau County has plans to install a new traffic signal (see Exhibit I in Chapter Five). County staff has discussed this inconsistency with FDOT and modifications to the design plans will be made.
From the outset the steering committee for this study expressed a desire for ease of mobility in the future. Specifically, they suggested that it would be ideal if travel times along the SR A1A / SR 200 corridor could be the same in 2035 as they are today. Given the growth in population and employment expected in eastern Nassau County, it is a substantial challenge to meet that goal. As shown in Chapter Three, even with the six lane widening project, travel times on the corridor are expected to increase by 25%. So, the primary motivation for the projects identified in this chapter relate to reducing the travel times on SR A1A / SR 200 as well as enhancing north-south connectivity across the corridor.

**CONNECTIVITY PROJECTS**

Throughout the process, gaps in connectivity were identified. Some of the gaps are based on natural features, such as waterways, while others are a result of new roadways coming in after areas had developed. Moreover, there are a few gaps that are likely borne out of a fear of cut through traffic in neighborhoods. County staff was also consulted regarding planned projects, including the Chester Road Loop system and future roadways associated with development of the ENCPA. Thirty-five connectivity opportunities were identified as potentially being feasible. These projects are depicted on Exhibit I. They include new roadways, roadway extensions, and development of a street grid in the core of Yulee. Also shown on the exhibit, in green, are roadway connections with the ENCPA. All new and enhanced roadway connections should include pedestrian and bicycle accommodations as appropriate.

A table detailing more information on each project, including project limits, project length, proposed improvement, and estimated cost, is included in Chapter Seven.

As part of the process of identifying connectivity opportunities (as well as the mobility opportunities discussed in Chapter Five), it was important to first understand what the six lane widening project along SR A1A / SR 200 would look like. Preliminary design plans, obtained from FDOT, were reviewed. Exhibit J depicts the area between I-95 and William Burgess Boulevard. As shown on the graphic, this section is proposed to be constructed with inside and outside shoulders in both directions. This extra pavement could help facilitate future widening of the roadway (Project #32 on Exhibit I), depending on development of the ENCPA and the timing and location of a new interchange (Project #35 on Exhibit I) with I-95 north of SR A1A / SR 200.

Further east on the corridor, approaching Yulee, concerns were raised regarding the potential closing of median openings. As discussed in Chapter Four, FDOT is revising its design plans to better address the issue. Exhibit K depicts the recommended median modifications, including the closing of the existing full opening at Harts Road and Pineview Drive. As a result, an extension of Cardinal Street (Project #7 on Exhibit I) from Cardinal Avenue to SR A1A / SR 200 along with a full median opening at the intersection is proposed. FDOT will be implementing the median modifications as part of the upcoming widening project, but funding for the construction of the Cardinal Street extension has not yet been identified.
5. ENHANCING THE IMAGE: CONNECTIVITY OPPORTUNITIES

EXHIBIT I: POTENTIAL CONNECTIVITY PROJECTS

Legend
- Future Traffic Signals
- New I-95 Interchange
- Major Roads
- Other Roads
- New Roads
- Local Roads
- Other
- Sector Plan
- SB Directional median access
- NB directional median access
- Full Median Openings
- Traffic Signals

30 - Turn Lanes
31 - Overpass
32 - SR 200 8-Lanes
33 - US 17 4-Lanes W. N.
34 - US 17 4-Lanes W. S.
35 - New I-95 Int.
EXHIBIT K: CARDINAL STREET EXTENSION CONCEPT
YULEE OVERPASS CONCEPT
The highest profile project envisioned as part of the connectivity opportunities is a flyover overpass of US 17 and the CSX railroad track. This project, which would be constructed in the median of SR A1A / SR 200 would ease congestion in the core of Yulee and provide reliable travel times not impeded by trains crossing the at-grade roadway. Exhibit L depicts the concept for the overpass as well as images and renderings of similar facilities in other parts of Florida as well as images of possible aesthetic treatments from Florida, Texas, and North Carolina.

In examining the feasibility of constructing the overpass, a schematic and several typical sections were developed. As shown on Exhibit L1, the overpass and merging areas would extend roughly 8000 feet (1.5 miles) from Still Quarters Road to Rubin Lane. The structure itself is 4500 feet long, with 750-foot mechanically stabilized earth (MSE) ramps on each side. The overpass would be built on piers in the median, as shown on Exhibit L2, allowing for the structure to overhang the at-grade roadway. Construction of the 2 lane overpass (1 lane per direction) could be facilitated within the existing right of way by reducing the at-grade portion of SR A1A / SR 200 from six lanes back down to four lanes. Since the overpass would be free-flow, the combined capacity of the roadways would be far greater than the six lane arterial itself would be. Furthermore, narrowing the at-grade roadway would assist in enhancing the pedestrian experience in the core of Yulee. Additional opportunities to enhance the physical environment of Yulee are described in Chapter Six.

SR A1A / SR 200 INTERSECTION IMPROVEMENTS
In order for the connectivity opportunities identified to work seamlessly with SR A1A / SR 200, some modifications to intersections will be necessary. As shown on Exhibit M, these changes primarily consist of additional turn lanes. The LOS analysis described below assumes all of these modifications are implemented.
5 ENHANCING THE IMAGE: CONNECTIVITY OPPORTUNITIES

EXHIBIT L: YULEE OVERPASS CONCEPT

Yulee Overpass Concept

Aesthetic design solutions examples

Grade separation of through lanes and intersections: SR 200 in Ponte Vedra Beach, FL.

Candy Road Overpass (Holinoke Road/Sr 200 interchange, Yulee, Florida)

Centralized diamond flyover concept; Ft. Myers, Florida

North Carolina Turnpike Authority Interchange Design Guidelines, Raleigh, North Carolina

Aesthetic Design Guidelines for Central Texas Turnpikes, Austin, Texas

Interstate w/ Sea Biscuit Avenue - Cutthroat Expressway, Connector, Jacksonville, Florida

SR A1A/SR 200 Flyover Schematics

EXHIBIT L: YULEE OVERPASS CONCEPT

North Florida Transportation Planning Organization
5 ENHANCING THE IMAGE: CONNECTIVITY OPPORTUNITIES

EXHIBIT L1: YULEE OVERPASS SCHEMATIC
EXHIBIT L2: YULEE OVERPASS TYPICAL SECTIONS
RESULTING CONDITIONS

2035 PM PEAK HOUR TRAFFIC

Table 5.1 shows projected 2035 pm peak hour traffic along SR A1A / SR 200 at the major intersections. This information is also depicted on Exhibit N, along with projected turning movement volumes at each intersection. The peak hour directional volumes were developed by applying K and D factors to the model output volumes presented in Chapter Three. Traffic diversion from SR A1A / SR 200 was estimated using both NERPM model and professional judgement. In some cases, the provision of parallel facilities led to as much as a 15% drop in traffic on the corridor. Turning movements were forecasted by applying existing TMC percentages to the peak hour approach volumes.

As shown in Table 5.1, all intersections will operate at LOS D or better with the exception of the US 17 intersection. However, this intersection LOS is based on the corridor being reduced to four lanes and does not include the overpass, which will be free-flow.

<table>
<thead>
<tr>
<th>SR 200 Intersection:</th>
<th>Peak Hour Volume West</th>
<th>Peak Hour Volume East</th>
<th>Intersection LOS</th>
<th>Intersection V/C Ratio</th>
<th>Intersection Delay (sec.)</th>
<th>West Approach LOS</th>
<th>East Approach LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Burgess Boulevard</td>
<td>5600</td>
<td>4375</td>
<td>D</td>
<td>0.94</td>
<td>38.7</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>US 17</td>
<td>3130</td>
<td>3860</td>
<td>E</td>
<td>1.01</td>
<td>61.7</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>Felmor Road / Miner Road</td>
<td>4590</td>
<td>4635</td>
<td>D</td>
<td>0.95</td>
<td>48.9</td>
<td>E</td>
<td>C</td>
</tr>
<tr>
<td>Gene Lassere Boulevard</td>
<td>4790</td>
<td>4785</td>
<td>C</td>
<td>0.75</td>
<td>22.1</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>Chester Road / Amelia Concourse</td>
<td>4265</td>
<td>4005</td>
<td>D</td>
<td>0.83</td>
<td>42.8</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Aringo Boulevard</td>
<td>3765</td>
<td>3770</td>
<td>B</td>
<td>0.71</td>
<td>18.9</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Blackrock Road</td>
<td>3810</td>
<td>4075</td>
<td>C</td>
<td>0.62</td>
<td>24.3</td>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>Barnwell Road</td>
<td>4425</td>
<td>4335</td>
<td>B</td>
<td>0.78</td>
<td>19.7</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>CR 107/Old Nassauville Road</td>
<td>4490</td>
<td>4275</td>
<td>D</td>
<td>1.11</td>
<td>42.3</td>
<td>D</td>
<td>C</td>
</tr>
</tbody>
</table>
EXHIBIT N: 2035 PM PEAK HOUR TRAFFIC WITH CONNECTIVITY PROJECTS

LEGEND:

XX PM PEAK
As with the existing conditions and future “no-build” analyses, peak hour arterial and intersection LOS was evaluated in detail using Synchro. Overall intersection LOS and corridor approach LOS are depicted on Exhibit O. Synchro output summaries are included in Appendix D.

2035 TRAVEL TIME

Notwithstanding the value of summarizing LOS and delay, the public understands a measure such as travel time better. As with the existing and initial 2035 analyses, estimated corridor travel times output from Synchro were summarized. Table 5.2 below shows the projected 2035 average PM peak hour travel times on SR A1A / SR 200.

As shown in Table 5.2, the connectivity projects without the US 17 overpass only reduce travel times by 12-15% over the projected times with the six laning only. In order to generate the maximum time savings, travelers must also utilize the US 17 overpass. Travel times in that scenario are further reduced by roughly 70 seconds; with total corridor travel times roughly the same as they are today. Furthermore, the overpass will save considerably more time if/when there are trains crossing SR A1A / SR 200.

<table>
<thead>
<tr>
<th>SR A1A / SR 200 Segment</th>
<th>2035 PM – EB w/ Connectivity</th>
<th>2035 PM – WB w/ Connectivity</th>
<th>2035 PM – EB w/ US 17 Overpass</th>
<th>2035 PM – WB w/ US 17 Overpass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between I-95 and US 17</td>
<td>5 minutes &amp; 16 seconds</td>
<td>4 minutes &amp; 18 seconds</td>
<td>4 minutes &amp; 5 seconds</td>
<td>4 minutes &amp; 18 seconds</td>
</tr>
<tr>
<td>Between US 17 and Chester Road</td>
<td>4 minutes &amp; 34 seconds</td>
<td>5 minutes &amp; 5 seconds</td>
<td>4 minutes &amp; 34 seconds</td>
<td>5 minutes &amp; 57 seconds</td>
</tr>
<tr>
<td>Between Chester Road and CR 107</td>
<td>3 minutes &amp; 46 seconds</td>
<td>3 minutes &amp; 40 seconds</td>
<td>3 minutes &amp; 46 seconds</td>
<td>3 minutes &amp; 40 seconds</td>
</tr>
<tr>
<td>Between CR 107 and east of CR 107</td>
<td>1 minute &amp; 11 seconds</td>
<td>1 minute &amp; 29 seconds</td>
<td>1 minute &amp; 11 seconds</td>
<td>1 minute &amp; 29 seconds</td>
</tr>
<tr>
<td>Total Corridor Travel Time</td>
<td>14 minutes &amp; 47 seconds</td>
<td>14 minutes &amp; 33 seconds</td>
<td>13 minutes &amp; 36 seconds</td>
<td>13 minutes &amp; 24 seconds</td>
</tr>
</tbody>
</table>
EXHIBIT O: 2035 PM PEAK HOUR LOS WITH CONNECTIVITY PROJECTS

LEGEND:

XX PM PEAK
Small towns and villages have innate identity as communities where the population has close ties to the community and its institutions, and the economy tends to be self-supporting and somewhat independent of regional connections. In some cases (such as a major crossroad), the linkages to the region are linear along those connections, in this case several major regional roadways. The interconnection between I-95 and Fernandina Beach/Amelia Island as coastal destinations means that a large proportion of the traffic traveling along SR A1A / SR 200 in and near the Town of Yulee is pass-through traffic that does not stop except for retail impulse purchases, or vacation provisioning. Yulee and surrounding neighborhoods have also become bedroom communities to the greater Jacksonville/Duval County regional economy and are dependent upon the larger economy for employment and specialized purchases beyond the capability of the Town to supply them. As a pass-through crossroad and bedroom community, creating and marketing an identity along SR A1A / SR 200 will aid in creating a sense of place and community and in increasing the likelihood of positive economic growth in the Town and along its linear corridor.

CORRIDOR IDENTITY
Early on in the study it was determined that the roadway corridor goes by many names. Most locals call it SR A1A, while the post office addresses say SR 200, and maps identify it as The Buccaneer Trail. This helped bolster the notion that the corridor lacks a cohesive identity. To begin the process of defining an identity for SR A1A / SR 200 within Yulee and the vicinity, the project team developed general ideas for identity logos and branding. As shown on Exhibit A, the history of the area suggested some overarching historical characteristics identified as: Timber, Trade, Tourism, and Trains. Identity branding concepts included textual phrases and their accompanying graphic logos that relate to both the history of the area and its location on major transportation routes. The four ideas developed are:

- “Yulee Parkway: Pathway to the First Coast”
- “Coastal Crossing: Connecting Florida’s First Coast”
- “Buccaneer Passage”: Gateway to the First Coast”
- “8 Flags Trail: A Coastal Cross Road”
6 ENHANCING THE IMAGE: IDENTITY OPPORTUNITIES

The project team felt that any of the four themes could be mixed and/or matched. For example, 8 Flags Trail and Coastal Crossing could be modified to 8 Flags Crossing or Coastal Trail. After discussion with the steering committee and presentations to the public and various committees, Coastal Crossing was chosen as the preferred theme. The logo itself was modified slightly to further expound on the area’s railroad history. The final logo is shown to the right.

STREETSCAPE ENHANCEMENTS

The project team developed an identity board to introduce ideas for further defining and refining the potential corridor brands into specific brand identification and marketing that could be employed in a variety of ways and locations along the SR A1A/ SR 200 in Yulee and at gateways to the corridor. Options include streetscaping and landscaping enhancements, identification of potential gateways, and developing specific districts along the corridor. Although the identity branding will create a unifying theme to introduce the corridor, at gateways for instance, special attention may be given to specific districts along the corridor. Furthermore, the corridor could be broken up into zones, such as “gateway”, “parkway”, and “boulevard”.

The identity board shows ways in which identity can be displayed, potential ideas, and a process for working out design elements. The board, included in the report as Exhibit P, was displayed at the January 28th open house and included in subsequent presentations on the study.

Coastal Crossing
- Connecting Florida's First Coast -
6 ENHANCING THE IMAGE: IDENTITY OPPORTUNITIES

EXHIBIT P: CORRIDOR THEMING CONCEPTS

Creating Identity

Corridor Districts and Identity Development

TOD Village
Activity Center

Mobility • Connectivity • Identity
The term “placemaking” refers to the development of urban design guiding principles intended to transform a urban or suburban commercial corridor to provide pedestrian-friendly, mixed-use, destination districts oriented toward and serving the surrounding neighborhoods.

A number of definitions have been developed over time for the term placemaking and the activities associated with the process:

- Place/Placemaking—A holistic and community-based approach to the development and revitalization of cities and neighborhoods. Placemaking creates unique places with lasting value that are compact, mixed-use, and pedestrian and transit oriented, and that have a strong civic character.
- “Placemaking is a multi-faceted approach to the planning, design and management of public spaces. Put simply, it involves looking at, listening to, and asking questions of the people who live, work and play in a particular space, to discover their needs and aspirations. This information is then used to create a common vision for that place. The vision can evolve quickly into an implementation strategy, beginning with small-scale, do-able improvements that can immediately bring benefits to public spaces and the people who use them.”

And…

- When you focus on place, you do everything differently. For us, placemaking is both a process and a philosophy. It takes root when a community expresses needs and desires about places in their lives, even if there is not yet a clearly defined plan of action. The yearning to unite people around a larger vision for a particular place is often present long before the word “Placemaking” is ever mentioned. Once the term is introduced, however, it enables people to realize just how inspiring their collective vision can be, and allows them to look with fresh eyes at the potential of parks, downtowns, waterfronts, plazas, neighborhoods, streets, markets, campuses and public buildings. It sparks an exciting re-examination of everyday settings and experiences in our lives.”

Source: Project for Public Spaces (www.pps.org)

“Placemaking is a multi-layered process within which citizens foster active, engaged relationships to the spaces which they inhabit, the landscapes of their lives, and shape those spaces in a way which creates a sense of communal stewardship and lived connection. This is most often accomplished through a creative reclamation of public space: projects which take the form of benches on street corners where neighbors can sit, rest and talk with each other, kiosks on sidewalks where neighbors can post information about local events, needs and resources and street paintings in the public right-of-way that demonstrate to all who pass through that this is a Place: inhabited, known and loved by its residents. In all instances, these projects are undertaken by local communities who come together to discuss what it is they want in their neighborhood – what elements are lacking in the public sphere and how the community can work together with the resources they have to create their own place.”

Source: City Repair. Intro to Placemaking. (http://cityrepair.org/how-to/placemaking/)

Placemaking can also be defined as functional urban design;

- "Urban design differs from planning in scale, orientation, and treatment of space. The scale of design is primarily that of the street, park, or transit stop, as opposed to the larger region, community, or activity center. The orientation of design is aesthetic, broadly defined. Design lies somewhere between art, whose object is beauty, and planning, whose object is functionality. The treatment of space in design is three-dimensional, with vertical elements as important as horizontal ones in designing street space, park space, and other urban spaces. Planning, on the other hand, is a singularly two-dimensional activity...”

Source: Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth, Reid Ewing. Smart Growth Network (www.smartgrowth.org)
The Project for Public Spaces suggests eleven principles for creating great community places that can guide future development approaches programs, activities, and policies to “create place” along the SR A1A / SR 200 corridor. A summary, taken from their placemaking website, is provided below. While not all eleven principles are not immediately applicable or available through the proposed corridor improvements, an incremental program can be initiated to build enthusiasm for placemaking.

1. The community is the expert. The important starting point in developing a concept for any public space is to identify the talents and assets within the community. In any community there are people who can provide an historical perspective, valuable insights into how the area functions, and an understanding of the critical issues and what is meaningful to people.

2. Create a place, not a design. The goal is to create a place that has both a strong sense of community and a comfortable image, as well as a setting and activities and uses that collectively add up to something more than the sum of its often simple parts. This is easy to say, but difficult to accomplish.

3. Look for partners. Partners are critical to the future success and image of a public space improvement project. … They can be local institutions, museums, schools and others.

4. You can see a lot just by observing. We can all learn a great deal from others’ successes and failures. By looking at how people are using (or not using) public spaces and finding out what they like and don’t like about them, it is possible to assess what makes them work or not work.

5. Have a vision. The vision needs to come out of each individual community. … It should instill a sense of pride in the people who live and work in the surrounding area.

6. Start with petunias: lighter, quicker, cheaper. The complexity of public spaces is such that you cannot expect to do everything right initially. … Elements such as seating, outdoor cafes, public art, striping of crosswalks and pedestrian havens, community gardens and murals are examples of improvements that can be accomplished in a short time.

7. Triangulate. Elements such as seating, outdoor cafes, public art, striping of crosswalks and pedestrian havens, community gardens and murals are examples of improvements that can be accomplished in a short time. In a public space, the choice and arrangement of different elements in relation to each other can put the triangulation process in motion (or not). For example, if a bench, a wastebasket and a telephone are placed with no connection to each other, each may receive a very limited use, but when they are arranged together along with other amenities such as a coffee cart, they will naturally bring people together (or triangulate!).

8. They always say “It can’t be done”. Creating good public spaces is inevitably about encountering obstacles, because no one in either the public or private sectors has the job or responsibility to “create places.” … Starting with small scale community-nurturing improvements can demonstrate the importance of “places” and help to overcome obstacles.

9. Form supports function. The input from the community and potential partners, the understanding of how other spaces function, the experimentation, and overcoming the obstacles and naysayers provides the concept for the space. Although design is important, these other elements tell you what “form” you need to accomplish the future vision for the space.

10. Money is not the issue. …once you’ve put in the basic infrastructure of the public spaces, the elements that are added that will make it work (e.g., vendors, cafes, flowers and seating) will not be expensive. In addition, if the community and other partners are involved in programming and other activities, this can also reduce costs. More important is that by following these steps, people will have so much enthusiasm for the project that the cost is viewed much more broadly and consequently as not significant when compared with the benefits.
11. You are never finished. By nature good public spaces that respond to the needs, the opinions and the ongoing changes of the community require attention. Amenities wear out, needs change and other things happen in an urban environment. Being open to the need for change and having the management flexibility to enact that change is what builds great public spaces and great cities and towns.

A twelfth principle may be the common wisdom, that for any program to begin “you have to start somewhere”. The placemaking approaches introduced through this corridor study can be a beginning point for discussion of context sensitive design, walkable community, and urban design within the corridor communities.

RETROFITTING SUBURBIA

Ellen Dunham-Jones and colleagues have introduced a number of ideas for redevelopment of suburban places, often referred to as “retrofitting suburbia”. Others of the new urbanists, urban theorists and designers present form-based codes, context sensitive design, traffic calming, intersection density, transit oriented development, and transportation design for livable communities as technical solutions to retrofitting suburban and urban corridors.

Dunham-Jones suggests retrofitting the design features of the suburbs to address the excesses of suburbanization:

- Rehabilitating “dead malls and big box shopping centers”.
- Re-inhabitation of underused malls, stores, and office spaces.
- Removing and redeveloping “underperforming asphalt” parking.
- Re-green by reconstructing wetlands in place of parking lots.
- Reducing heat island effects and greenhouse gas emissions.
- Reducing an epidemic of obesity by facilitating walking.
- Reducing energy use and improving land use efficiency.
- Redevelopment through adaptive reuse of buildings/districts.
- Retrofit residential into commercial districts and corridors.

Many of these principles can be implemented along the SR A1A / SR 200 corridor to encourage revitalization of the neighborhoods and districts along the roadway. Some of them have been included in concepts included in this corridor report simply to introduce the concepts and opportunities of post-sprawl redevelopment.

SR A1A / SR 200 CORRIDOR DISTRICTS AND NODES

During the course of this corridor study, a number of conversations regarding the need to create a more sustainable transportation facility occurred. However, the important goal of continuing to move traffic along the major arterials, while managing traffic flow and congestion, led to a set of recommendations that can be developed over time to create mixed-use destination districts that focus on managing access, parking, and walkability functions, as well as aesthetic characteristics and neighborhood context. The corridor was divided and defined as four types with four major nodes:

DISTRICTS

- Segment 1 (I-95 to Yulee village edge) – Parkway
- Segment 2 (Yulee village west edge to Lofton Creek) – Village Town Center (TOD Activity Center)
- Segment 3 (Lofton Creek to Gene Lassere Boulevard) – Boulevard
- Segment 4 (Gene Lassere Boulevard to Blackrock Road) – Chester Road Activity Center
- Segment 5 (Blackrock Road to Amelia River Bridge) – Boulevard
MAJOR NODES
- I-95/SR 200 Gateway
- TOD Village (Yulee Traditional Town Center)
- Chester Road Activity Center
- Amelia River Gateway

A variety of redevelopment and urban design criteria or traffic operations systems improvements can be applied to the SR A1A / SR 200 segments and nodes noted above. A summary list of these follows:

- Form-Based Development Codes for specific areas along the entire corridor can be implemented to encourage or require development that is consistent with principles, practices, and goals that redefine desirable redevelopment that can aid in moving much of the corridor away from its present form as a suburban commercial strip and toward an urban mixed-use walkable thoroughfare.
- Landscaping and Adding Urban Street Amenities along the corridor can aid in the development of the concept of “placemaking”, providing identity, branding, and a sense of place to districts along the corridor as destinations rather than confusing and forgettable locations along the way.
- Traffic Calming in the form of lane narrowing, on-street parking, zero front setbacks, landscaping, driveway consolidations or closures, optimizing pedestrian signal phasing, and variable message signage may be applied in various locations to provide control or calming of existing traffic along the corridor.
- Redevelopment of Village Districts can combine, remove, or relocate driveways, consolidate parking into mid-block lots, move retail and office buildings closer to the right-of-way, provide wide pedestrian sidewalks, and landscape corridors for aesthetics.
- Retrofitting Shopping Centers could include mixed-use opportunities for live/work outparcels that would benefit congestion along the corridor by limiting the necessity for “offsite” trips.
- Infill, Mixed-Use Development of existing shopping centers could provide more intense retail uses, and mixed-uses within existing shopping centers to provide one-stop shopping retail districts making trip-chaining less necessary and providing a variety of needed goods and services closer to neighborhoods.
- Connectivity Improvements between neighborhoods and districts can provide alternative or parallel routes between origins and destinations along the entire corridor. In some cases even very minor connections can provide alternate routes, either frontage roads or “backage roads”, that would divert traffic from the corridor altogether.
- Elimination and Consolidation of Existing Driveways can limit or eliminate turning movement conflicts, smoothing traffic flow and resolving traffic congestion.
- Elimination of Median Openings and Lengthening or Doubling Turn Lanes can similarly limit or eliminate turn queue lengths that back into travel lanes, and can smooth traffic flow.
- Intersection Improvements can include roundabouts, additional or lengthened pedestrian signal phases, additional turn lanes, prohibition against left turns or u-turns, and realignment of intersections for efficiency or future extensions for interconnectivity.
- Signalization Improvements can be made to align and combine misaligned intersections into more efficient locations, adding pedestrian signal phases, timing signals to optimize neighborhood connections, and providing time of day directional optimization.

Implementation of many of these placemaking or operational guiding principles, practices, standards, or goals, can improve the identity and function of the SR A1A / SR 200 corridor from its present form as a congested suburban commercial thoroughfare to a destination that provides a gateway to Nassau County with its own unique identity, sense of place, and community cohesion.

The following pages describe concepts that can be pursued to begin the process of retrofitting the suburban sprawl along the corridor into a series of mixed-use destination districts and a village town center.
ACTIVITY CENTERS

Existing “village core” development in the location of the traditional, “historic” town center of Yulee is distinctly different than the predominant strip commercial districts to the east. So too is the emerging retail hub around the Chester Road / Amelia Concourse intersection, thought of by many as the new center of Yulee. Each of these areas can and should be defined, themed, and marketed differently.

YULEE VILLAGE TRANSIT ORIENTED DISTRICT

Because the traditional town center of Yulee still provides the aesthetic and community characteristics of a rural village, and is at the crossroads of SR A1A / SR 200 and US 17 (as well as the CSX rail corridor), a transportation hub (defined as a as Transit Oriented Development or TOD) is indicated on Exhibit P. In this location a multimodal hub bringing together possible transportation options can be developed (bike/pedestrian; park and ride; transit bus; commuter rail; and streetcar) to connect all forms of transport surrounded with complementary commercial/retail, office, and residential uses either on the site or in close proximity.

The Yulee Village TOD area, explored further as shown on Exhibit Q, depicts a transit hub on either side the roadway. The north option has the flexibility of connecting the CSX corridor with the rail line to the east to Fernandina with a future option of a streetcar or tourist train using the corridor. This rail line could also one day be used as an extension of the regional commuter rail system currently being studied by the Jacksonville Transportation Authority (JTA) for northeast Florida. The northern site would not require extensive redevelopment of existing structures. The south option, while not providing the streetcar connection, would provide more space for commercial/retail; flex space including community services such as a farmer’s market, and space for town center parking. This option requires acquisition of one commercial parcel fronting SR A1A / SR 200 in order to provide good access from the roadway and to align an entrance with Pages Dairy Road on the north side of the road.

The Yulee Village TOD Concepts indicate potential land use and/or zoning required for or beneficial to a multimodal transportation district. Land use categories, zoning districts, and development code guidance can all be used to unify the “village town center” district in terms of supporting function, character, and theming, all of which are required to create a functioning “place”. The concept developed for the Yulee Village Transit Oriented District town center also represents redevelopment of the surrounding commercial/retail/office/residential uses to create a small village town center district emphasizing redevelopment area between the CSX railroad corridor and US 17 intersections with SR A1A / SR 200 and the surrounding commercial, institutional and residential parcels.
EXHIBIT Q: ACTIVITY CENTER CONCEPTS

Activity Centers

- TOD Development
- Connecting Walkway
- Trolley Station / Visitors Center
- Commuter Rail Station
- TOD Retail or "Farmer’s Market"
- Commuter Rail Platform
- Bus Passenger Loading
- Multi-modal Center
- Auxiliary Parking Lot or Office/Retail Site

Yulee Village Transit Oriented District Concepts
- Mixed-use development including residential, commercial/retail, office, and public facilities
- Develop sidewalks and bikeways to encourage non-vehicular modes
- Develop train and streetcar stations and multimodal facilities to provide regional transit options
- Encourage higher densities and intensities of use
- Control roadway access to limit congestion

Chester Road Activity Center Concepts
- Mixed-use development including residential, commercial/retail, office, and public facilities
- Develop a network of interconnected service, frontage, and back connecting roadways to control access to SR 200 and limit congestion
- Develop a sense of community by creating a district identity
6. Enhancing the Image: Identity Opportunities

A similar opportunity exists to emphasize elements of placemaking in this location:

- By creating a district with unique features, a more intensely developed street front, and improved aesthetic appearance, traffic flow will naturally slow through the area—providing naturally occurring traffic calming.
- The multimodal features of the district, especially the potential rail and streetcar connections, could assist in placemaking, creating a destination shopping, entertainment, transportation hub that could attract seasonal and daily visitors.
- The density and intensity of development is low at this location, and by redeveloping the parcels surrounding the intersections, a similar intense, efficient destination walkable working village can be created that can serve as a destination town center for the surrounding neighborhoods.
- Again, building facades can be brought forward to the street to create a pedestrian shopping block.
- Parking could be unified and placed in the center of the block eliminating the need for multiple driveways that create congestion along SR A1A / SR 200 and US 17. Parking can potentially serve multiple sites.
- Another gateway feature could be provided at the intersection of US 17.
- Wide pedestrian sidewalks or landscaped plazas can line the shopping streets around the entire block.
- Careful attention to provision of pedestrian walkways along the street front and from the street to parking in the rear will facilitate a walkable district.
The concept developed for the Chester Road intersections with SR A1A / SR 200 represent potential redevelopment of the surrounding commercial/retail, office, industrial, and residential uses to create a unified, walkable, and connected district.
The opportunity exists to emphasize elements of placemaking in this location using the following methods or guidelines:

- The existing intensity of development is moderate at this location, but by redeveloping the parcels surrounding the intersections, a more intense (and efficient) destination shopping/working activity center can be created.
- Building facades can be brought forward to the street to create a pedestrian shopping street.
- Wide pedestrian sidewalks or landscaped plazas can line the shopping street.
- Parking could be unified and placed in the center of each block eliminating the need for multiple driveways that create congestion along the corridor.
- Careful attention to provision of pedestrian walkways along the street front and from the street to parking in the rear will facilitate a walkable district.
- By creating a district with unique features, a more intensely developed street front, and improved aesthetic appearance, traffic flow will naturally slow through the area—providing naturally occurring traffic calming.
- Access management reconsidering median openings, driveway locations and combinations, interconnectivity between sites, connections to side streets when possible, and the development of frontage and backage roads can improve mobility while also addressing congestion and safety.
The purpose of this study was to evaluate projected transportation conditions in 2035 along the SR A1A / SR 200 corridor and identify potential enhancement projects. These enhancements were classified as mobility, connectivity, and identity projects. The mobility projects consist of access management modifications and signalization upgrades, many of which can be accomplished in conjunction with the upcoming FDOT widening of the corridor. The identity projects can be phased in as the area surrounding the corridor continues to develop and redevelop. The streetscape concepts presented in Chapter Six should be studied in more detail, to determine the appropriate theme/design for eastern Nassau County.

The primary focus of this chapter is on the implementation of the 35 connectivity projects, including cost estimates and a phasing plan. Many of these projects serve mainly as local neighborhood connections and will likely require all local funding. However, some of the projects will ease congestion on SR A1A / SR 200 and could be eligible for MPO, state, and federal funds. Finally, some of the projects are necessitated by development of the ENCPA, and could be at least partially funded by those developing in the sector plan area.

PROJECT COST ESTIMATES
Projected costs were developed for each of the 35 connectivity projects described in Chapter Five and identified on Exhibit 1. These costs, shown on Table 7.1, are in current (2012) dollars and include engineering, right of way (ROW), and construction. Costs were developed by using FDOT State Estimates Office’s Transportation Cost tables, as published on the following website: http://www.dot.state.fl.us/planning/policy/costs/. General per-mile construction estimates from FDOT used in this study are as follows:

- New 2 Lane Facility – Rural Design = $1.9 million
- New 2 Lane Facility – Urban Design = $3.7 million
- Widen from 2 Lanes to 4 Lanes – Urban Design = $4.0 million
- Widen from 4 Lanes to 6 Lanes – Urban Design = $3.8 million

While there are no proposed projects that widen a four lane facility to a six lane facility, this estimate was applied to the potential widening of SR A1A / SR 200 from I-95 to William Burgess Road from six lanes to eight lanes. ROW costs for projects where acquisition appears likely were based off of construction costs. Projects were categorized based on physical conditions and the amount of land required as either low (30% of construction), medium (65% of construction), or high (100%). In addition to using the FDOT generalized cost estimates, more detailed information was either available or developed for five of the projects. These include:

- Radio Avenue Extension
- Pages Dairy / Felmor Roundabout
- Chester Road Loop System (north)
- Chester Road Loop System (south)
- SR 200 Overpass
### 7. BRINGING THE PICTURE TO LIFE: IMPLEMENTATION

#### TABLE 7.1: SR A1A / SR 200 CORRIDOR CONNECTIVITY PROJECTS - COST ESTIMATES

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project Description</th>
<th>Length (miles)</th>
<th>Project Type</th>
<th>Cost Per Mile</th>
<th>Construction</th>
<th>Design &amp; CEI Cost</th>
<th>ROW Cost</th>
<th>Total Cost</th>
<th>Phasing Period</th>
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<td>31</td>
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<td>$3,424,000</td>
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<td>33</td>
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<td>Widen to 4 Lanes</td>
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<td>34</td>
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<td>Widen to 4 Lanes</td>
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<td>$6,000,000</td>
<td>$1,800,000</td>
<td>$12,000,000</td>
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<td>35</td>
<td>I-95 Interchange w/ ENCPA</td>
<td>New Interchange</td>
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<td>$35,000,000</td>
<td>$10,500,000</td>
<td>$45,500,000</td>
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</table>

**Total**

$161,850,000

$48,555,000

$29,409,500

$23,814,500
Cost estimates for the Chester Road Loop System are based on actual costs from the phases of the loop system now under construction. The cost estimate for the roundabout project is based on similar roundabout projects completed in Florida recently. The cost estimate for the Radio Avenue Extension is based on information contained in the design plans completed by Peters & Yaffee. Finally, a conceptual long range estimate (LRE) was completed, as part of this study, for the envisioned SR A1A / SR 200 overpass. Information on the last two projects can be found in Appendix C. The total estimated cost for all 35 projects is approximately $240 million, with roughly 2/3 of the cost being for construction with the remainder for engineering and ROW acquisition.

PHASING PLAN
As noted earlier, some of the connectivity projects proposed could be done in conjunction with the upcoming FDOT six laning of SR A1A / SR 200. Others are relatively simple projects that could be constructed without significant additional studies. However, many of the projects identified will need to more in depth feasibility and/or environmental studies as well as public outreach/involvement prior to being designed and constructed. As such, a phasing plan for implementation was developed.

As shown on Table 7-1, there are five phasing time periods. Projects were assigned to each time period based on factors including ease of implementation, potential benefit, and a desire to spread costs out evenly over time. The time periods are:

- Phase 1: 2014-2020
- Phase 2: 2021-2025
- Phase 3: 2026-2030
- Phase 4: 2031-2035
- Phase 5: Beyond 2035

Table 7.2 includes the same information presented on Table 7-1, but the projects have been sorted and summarized by phase. Three of the projects are shown as funded after 2035, including the overpass, which will require much more study prior to being constructed. The other two projects (widening of US 17 north of SR A1A / SR 200 and eight-laning of SR A1A / SR 200) are directly related to the ENCPA and the pace of that development will determine if and when they are needed.

It should be noted that the five time periods coincide with the time periods that will be used as part of the North Florida TPO’s 2040 Long Range Transportation Plan (LRTP) Update. This will be useful as some of the connectivity projects identified in this study serve regional travel and could be included in the LRTP Cost Feasible Plan.

POTENTIAL REVENUE SOURCES
As discussed above, many of the connectivity projects identified (as well as the mobility projects) will serve local and regional travel. As such, they could be eligible for state and/or federal funds. These projects should be included in the North Florida TPO’s Project Priorities list, and eventually in the FDOT District Two Work Program and/or the North Florida TPO’s Transportation Improvement program (TIP).

Other revenue sources include local capital improvement funds and developer contributions. Nassau County is currently evaluating the potential of implementing a mobility fee, which would closely align transportation impacts from developments with planned improvements identified by the County. Coordination with staff and the consultants engaged in the mobility fee study was a component of the SR A1A / SR 200 Corridor Study and many of the proposed projects have been included in both efforts.
<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project Description</th>
<th>Length (miles)</th>
<th>Project Type</th>
<th>Cost Per Mile</th>
<th>Construction Cost</th>
<th>Design &amp; CEI Cost</th>
<th>ROW Cost</th>
<th>Total Cost</th>
<th>Phasing Period</th>
</tr>
</thead>
<tbody>
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<td>$150,000</td>
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<td>Various SR 200 Intersections Modifications</td>
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<td>US 17-Pages Dairy Connector w/ roundabout</td>
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