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Section 1: Introduction

The Brevard County Board of County Commissioners operates as the governing board of the Space Coast Area Transit system and has initiated a major update of the Transit Development Plan (TDP). The TDP will serve as the vision for transit in Brevard County over the next 10 years.

Background

The State of Florida Public Transit Block Grant Program was enacted by the Florida Legislature to provide a stable source of State funding for public transportation. The Block Grant Program requires public transit service providers to develop and adopt a 10-year TDP. Major updates must be submitted to the Florida Department of Transportation (FDOT) by September 1 of the year they are due. The Space Coast Area Transit FY 2013-2022 TDP is a major update, which is required every five years. Each interim year, public transit providers report TDP achievements to FDOT through the submittal of annual progress reports. Space Coast Area Transit uses Block Grant funds received from FDOT for operating expenses.

Overview of TDP Requirements

The purpose of this study is to undertake a major update of the Space Coast Area Transit TDP, as required by State law. The update will result in a 10-year plan addressing transit and mobility needs, cost and revenue projections, and community transit goals, objectives, and initiatives.

This TDP is prepared according to the TDP Rule 14-73.001, which was formally adopted by FDOT on February 20, 2007. Major requirements identified in the adopted TDP rule include the following:

- Requires major updates every five years.
- Requires a public involvement plan to be developed and approved by FDOT or consistent with the approved transportation/metropolitan planning organization public involvement plan.
- Requires that FDOT, the regional workforce board, and the planning organization be advised of all public meetings where the TDP is presented and discussed and that these entities be given the opportunity to review and comment on the TDP during the development of the mission, goals, objectives, alternatives, and 10-year implementation program.
- Requires the estimation of the community's demand for transit service (10-year annual projections) using the planning tools provided by FDOT or a demand estimation technique approved by FDOT.
TDP Checklist

This plan meets the requirements for a major TDP update in accordance with Rule Chapter 14-73, Florida Administrative Code (F.A.C.). Table 1-1 is a list of TDP requirements from Rule 14-73.001. The table also indicates whether or not the item was accomplished in this TDP.

Report Organization

The Space Coast Area Transit 10-year TDP Major Update is composed of ten major sections, including this Introduction. Each section is briefly described below.

Section 2 provides a review of the study area population, demographics, travel behavior, commuting patterns, demographic activities, land use, and roadway considerations for Brevard County.

Section 3 provides an overview of the existing fixed-route transit services in Brevard County, including summaries and descriptions of operating characteristics, capital equipment, and other operational features such as Americans with Disabilities (ADA) complementary paratransit service. This section also presents the performance assessment conducted for fixed-route services.

Section 4 summarizes the public involvement activities that were undertaken as part of the TDP development process. Public involvement activities discussed and/or summarized in this section include the on-board transit survey distributed to Space Coast Area Transit riders in May 2012, and other activities that were completed as part of the TDP.

Section 5 presents the review of relevant plans, studies, and policies. The purpose of this effort is to provide information to support an understanding of transit planning issues in Brevard County and support the performance of a situation appraisal, which is an assessment of the operating environment for the transit system.

Section 6 presents the situation appraisal for the TDP. The requirements for a major update of a TDP include the need for a situation appraisal of the environment in which the transit agency operates. The purpose of this appraisal is to help develop an understanding of the Space Coast Area Transit operating environment in the context of specific elements, including regional issues, socioeconomics, travel behavior, existing and future land use, service and operational trends, and revenue and policy environment.

Section 7 presents a review and evaluation of transit demand and mobility needs regarding transit services in Brevard County. The evaluation was completed by reviewing ridership forecasting and a transit market assessment.
**Table 1-1**

**TDP Checklist**

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<td>✓ PIP approved by FDOT</td>
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<tr>
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<td>✓ Notification to FDOT provided</td>
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<td>✓ Notification to Regional Workforce Board provided</td>
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<td>✓ State and local transportation plans</td>
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<td>✓ Other governmental actions and policies</td>
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<td>✓ Socioeconomic trends</td>
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<td>✓ Organizational issues</td>
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<td>✓ Technology</td>
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<td>✓ 10-year annual projections of transit ridership using approved model</td>
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<tr>
<td>✓ Assessment of whether land uses and urban design patterns support/hinder transit service provision</td>
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<td>✓ Farebox recovery calculation and assessment</td>
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<th>Mission and Goals</th>
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<tr>
<td>✓ Provider’s vision</td>
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<tr>
<td>✓ Provider’s mission</td>
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<td>✓ Provider’s goals</td>
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<tr>
<td>✓ Provider’s objectives</td>
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<tr>
<th>Alternative Courses of Action</th>
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<td>✓ Development and evaluation of alternative strategies and actions</td>
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<tr>
<td>✓ Benefits and costs of each alternative</td>
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<tr>
<td>✓ Financial alternatives examined</td>
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<table>
<thead>
<tr>
<th>Implementation Program</th>
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<tr>
<td>✓ 10-year implementation program</td>
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<tr>
<td>✓ Maps indicating areas to be served</td>
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</tr>
<tr>
<td>✓ Maps indicating types and levels of service</td>
<td></td>
</tr>
<tr>
<td>✓ Monitoring program to track performance measures</td>
<td></td>
</tr>
<tr>
<td>✓ 10-year financial plan listing operating and capital expenses</td>
<td></td>
</tr>
<tr>
<td>✓ Capital acquisition or construction schedule</td>
<td></td>
</tr>
<tr>
<td>✓ Anticipated revenues by source</td>
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<th>Relationship to Other Plans</th>
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<td>✓ TDP consistent with Florida Transportation Plan</td>
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<tr>
<td>✓ TDP consistent with local government comprehensive plan</td>
<td></td>
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<tr>
<td>✓ TDP consistent with TPO long-range transportation plan</td>
<td></td>
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<tr>
<td>✓ TDP consistent with regional transportation goals and objectives</td>
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<table>
<thead>
<tr>
<th>Submission</th>
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<tbody>
<tr>
<td>Adopted by Brevard County Board of County Commissioners</td>
<td></td>
</tr>
<tr>
<td>Submitted to FDOT by September 1, 2012, or at a later date with FDOT approval</td>
<td></td>
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</table>
**Section 8** provides the transit mission for Brevard County and the goals, objectives, and initiatives to accomplish the transit mission. The mission, goals, objectives, and initiatives were developed based on Space Coast Area Transit's current mission, goals, and objectives and discussions with the TDP Review Committee, input through the public involvement process, and the results of the technical evaluations.

**Section 9** summarizes the potential future transit services developed as part of the 10-year planning horizon of this TDP Major Update using public, Review Committee, and Space Coast Area Transit staff input and the results of various demand analyses.

**Section 10** presents the 10-year TDP for Brevard County, developed based on coordination with Space Coast Area Transit staff, public involvement, transit demand analysis, and other recent assessment and evaluation studies conducted for the Brevard County area.

**Identification of the Submitting Entity**

<table>
<thead>
<tr>
<th>Agency:</th>
<th>Space Coast Area Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone Number:</td>
<td>321-635-7815</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>401 S Varr Avenue, Cocoa, FL 32922</td>
</tr>
<tr>
<td>Authorizing Agency Representative:</td>
<td>Jim Liesenfelt</td>
</tr>
</tbody>
</table>

**For further information about this plan, please contact:**

Mr. Jim Liesenfelt, Space Coast Area Transit, Transit Director
401 S Varr Avenue
Cocoa, FL 32922
Section 2: Study Area and Demographics

This section summarizes the existing conditions and demographic characteristics within Space Coast Area Transit’s service area. A service area description, demographic characteristics, land use information, commuting patterns data, and roadway conditions are included. Information and data presented reflect the most recent data available.

Service Area Description

Brevard County is located in central Florida and is bordered on the north by Volusia County, on the south by Indian River County, and on the west by Seminole, Orange, and Osceola counties. Approximately 62 percent of the population in Brevard County resides in 16 incorporated municipalities. Among these incorporated municipalities, the largest city, Palm Bay, has a population over 103,000. Melbourne contains the second-highest population with more than 76,000 residents. Map 2-1 presents a physical representation of the county and its municipal areas.

To better understand the study area conditions and demographic characteristics of Brevard County, a review of pertinent information was conducted as part of the TDP update process. The sources for this information include the U.S. Census Bureau, the American Community Survey (ACS), the Bureau of Economic and Business Research (BEBR) at the University of Florida, ESRI, FDOT, the Space Coast TPO, and Space Coast Area Transit.

Population Profile

According to the U.S. Census, the total population for Brevard County was 543,346 in 2010. As mentioned previously, there are 16 incorporated municipalities in Brevard County. Cities with a population of more than 10,000 in 2010 include Cocoa, Cocoa Beach, Melbourne, Palm Bay, Rockledge, Satellite Beach, Titusville, and West Melbourne. Table 2-1 shows the population levels for Brevard County and Florida. The county population increased from 476,230 in 2000 to 543,346 in 2010, a growth of 14.1 percent over the 10-year period. The population growth of Florida as a whole outpaced the population growth of Brevard County by 3.5 percent. A similar trend is true for growth in the number of households and the number of workers. The 2010 Brevard County population density was 4.2 percent less than that of the state. Table 2-2 presents population and population change data between 2000 and 2010 for incorporated and unincorporated areas in Brevard County. West Melbourne, Palm Bay, and Rockledge experienced the top three increases in population between 2000 and 2010, with 86.8 percent, 29.9 percent, and 23.6 percent, respectively.
### Table 2-1

**Population Characteristics**

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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Brevard County</td>
<td>Florida</td>
<td>Brevard County</td>
</tr>
<tr>
<td>Persons</td>
<td>476,230</td>
<td>15,982,824</td>
<td>543,346</td>
</tr>
<tr>
<td>Households</td>
<td>198,195</td>
<td>6,337,929</td>
<td>229,692</td>
</tr>
<tr>
<td>Number of Workers (employed)</td>
<td>207,366</td>
<td>7,221,000</td>
<td>227,358</td>
</tr>
<tr>
<td>Land Area (square miles)</td>
<td>1,055.5</td>
<td>53,926.8</td>
<td>1,055.5</td>
</tr>
<tr>
<td>Persons per Household</td>
<td>2.40</td>
<td>2.52</td>
<td>2.33</td>
</tr>
<tr>
<td>Workers per Household</td>
<td>1.05</td>
<td>1.14</td>
<td>1.02</td>
</tr>
<tr>
<td>Person per Sq. Mile of Land Area</td>
<td>451.2</td>
<td>296.4</td>
<td>514.8</td>
</tr>
<tr>
<td>Workers per Sq. Mile of Land Area</td>
<td>196.5</td>
<td>133.9</td>
<td>215.4</td>
</tr>
</tbody>
</table>

Source: 2000 and 2010 Census

Maps 2-2 and 2-3 illustrate 2012 population density and employment density by Traffic Analysis Zone (TAZ) for Brevard County, while Maps 2-4 and 2-5 illustrate the population density and employment density in 2022. TAZs are geographic units in the transportation planning process used to assist in forecasting travel demand. In all scenarios, the locations with the highest population and employment density are located near the Indian River along the eastern portions of the county. Maps 2-6 and 2-7 display total existing (2012) and future (2022) dwelling unit densities. The highest dwelling unit densities in 2012 were found in the Melbourne/Palm Bay area and in neighborhoods along A1A in Cape Canaveral, Cocoa Beach, and Satellite Beach.
Space Coast Area Transit
Transit Development Plan

Map 2-3: 2012 Employees per Acre

Employees per Acre
- 0 - 2
- 2.01 - 6
- 6.01 - 12
- Greater than 12

Existing Transit Routes

Prepared by:
Tindale-Oliver & Associates, Inc.
Sep 2012
Space Coast Area Transit
Transit Development Plan

Map 2-7: 2022 Dwelling Units per Acre

Dwelling Units per Acre

- 0 - 1
- 1.01 - 3
- 3.01 - 5
- Greater than 5

Existing Transit Routes

Prepared by:
Tindale-Oliver & Associates, Inc.
Sep 2012
Table 2-2
Brevard County Population Trends

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Cape Canaveral</td>
<td>8,829</td>
<td>9,912</td>
<td>12.3%</td>
</tr>
<tr>
<td>Cocoa</td>
<td>16,412</td>
<td>17,140</td>
<td>4.4%</td>
</tr>
<tr>
<td>Cocoa Beach</td>
<td>12,482</td>
<td>11,231</td>
<td>-10.0%</td>
</tr>
<tr>
<td>Grant-Valkaria*</td>
<td>-</td>
<td>3,850</td>
<td>-</td>
</tr>
<tr>
<td>Indialantic</td>
<td>2,944</td>
<td>2,720</td>
<td>-7.6%</td>
</tr>
<tr>
<td>Indian Harbour Beach</td>
<td>8,152</td>
<td>8,225</td>
<td>0.9%</td>
</tr>
<tr>
<td>Malabar</td>
<td>2,622</td>
<td>2,757</td>
<td>5.1%</td>
</tr>
<tr>
<td>Melbourne</td>
<td>71,382</td>
<td>76,068</td>
<td>6.6%</td>
</tr>
<tr>
<td>Melbourne Beach</td>
<td>3,335</td>
<td>3,101</td>
<td>-7.0%</td>
</tr>
<tr>
<td>Melbourne Village</td>
<td>706</td>
<td>662</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Palm Bay</td>
<td>79,413</td>
<td>103,190</td>
<td>29.9%</td>
</tr>
<tr>
<td>Palm Shores</td>
<td>794</td>
<td>900</td>
<td>13.4%</td>
</tr>
<tr>
<td>Rockledge</td>
<td>20,170</td>
<td>24,926</td>
<td>23.6%</td>
</tr>
<tr>
<td>Satellite Beach</td>
<td>9,577</td>
<td>10,109</td>
<td>5.6%</td>
</tr>
<tr>
<td>Titusville</td>
<td>40,670</td>
<td>43,761</td>
<td>7.6%</td>
</tr>
<tr>
<td>West Melbourne</td>
<td>9,824</td>
<td>18,355</td>
<td>86.8%</td>
</tr>
<tr>
<td>Incorporated</td>
<td>287,312</td>
<td>336,907</td>
<td>17.3%</td>
</tr>
<tr>
<td>Unincorporated</td>
<td>188,918</td>
<td>206,469</td>
<td>9.3%</td>
</tr>
<tr>
<td>Total</td>
<td>476,230</td>
<td>543,376</td>
<td>14.1%</td>
</tr>
</tbody>
</table>

* Incorporated in 2006
Source: 2000 and 2010 Census

Demographic and Journey-to-Work Characteristics

Minority Population

Table 2-3 displays the percent distribution of minority populations within Brevard County compared to Florida. The proportion of Brevard County's non-minority population, approximately 85 percent, is about 10 percent higher than that of Florida.
Table 2-3

Minority and Non-Minority Population within Brevard County

<table>
<thead>
<tr>
<th>Geographic Location</th>
<th>Minority Population</th>
<th>% of Total Population</th>
<th>Non-Minority Population</th>
<th>% of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard County</td>
<td>78,079</td>
<td>14.8%</td>
<td>450,927</td>
<td>85.2%</td>
</tr>
<tr>
<td>State of Florida</td>
<td>4,692,148</td>
<td>25.0%</td>
<td>14,109,162</td>
<td>75.0%</td>
</tr>
</tbody>
</table>

Source: 2010 U.S. Census

Age Distribution

The age distribution of Brevard County is similar to the age distribution of Florida as a whole, though Brevard County has a higher proportion of the population older than age 45 (50.8%). The transit-dependent population cohort, persons under 18 years old and persons 65 years old and over, represents 40.2 percent of the total population in Brevard County, as shown in Table 2-4.

Table 2-4

Population and Age Distribution (2010)

<table>
<thead>
<tr>
<th>Area</th>
<th>Under 18</th>
<th>18 to 24</th>
<th>25 to 44</th>
<th>45 to 64</th>
<th>65 years and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard County</td>
<td>107,686</td>
<td>42,781</td>
<td>116,943</td>
<td>165,254</td>
<td>110,712</td>
</tr>
<tr>
<td>% of total population</td>
<td>19.8%</td>
<td>7.9%</td>
<td>22.2%</td>
<td>30.4%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Florida</td>
<td>4,512,990</td>
<td>1,228,758</td>
<td>4,720,799</td>
<td>5,082,161</td>
<td>3,259,602</td>
</tr>
<tr>
<td>% of total population</td>
<td>24.0%</td>
<td>6.5%</td>
<td>25.1%</td>
<td>27.0%</td>
<td>17.3%</td>
</tr>
</tbody>
</table>

Source: 2010 U.S. Census

As indicated, young people and older adults are more likely to use public transportation. These populations include youth ages 15 years and younger who cannot legally operate a motor vehicle and, therefore, typically have a higher propensity for using transit, as well as older adults, who often are no longer able to drive due to impairments from aging. At the time of development of this TDP, ESRI provided more detailed population age data than the 2010 U.S. Census. ESRI population age data is available at a census block group level and is provided in different age cohorts than the
Census data. Therefore, Maps 2-8 and 2-9 were developed based on ESRI data to illustrate the concentrations of residents under age 15 and those who are ages 60 and over within the county.

**Income**

As shown in Table 2-5, the distribution of household incomes for Brevard County is similar to that of Florida. The biggest differences between Brevard County and the State are in the “$0 to $9,999” and “$50,000 and Over” household income categories, with about a two-percent difference in each category between Florida and Brevard County. Map 2-10 displays the locations of households with a median income less than $10,000 in 2010. Low-income populations were distributed throughout the study area, with higher concentrations located in the northern, northeastern, and southern portions of the county.

**Table 2-5**

**Household Income Distribution (2010)**

<table>
<thead>
<tr>
<th>Area</th>
<th>Household Income</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0 to $9,999</td>
<td>$10,000 to $14,999</td>
<td>$15,000 to $24,999</td>
<td>$25,000 to $34,999</td>
<td>$35,000 to $49,999</td>
<td>$50,000 and Over</td>
</tr>
<tr>
<td>Brevard County</td>
<td>14,233</td>
<td>12,600</td>
<td>29,347</td>
<td>24,894</td>
<td>37,381</td>
<td>103,490</td>
</tr>
<tr>
<td>% of total households</td>
<td>6.4%</td>
<td>5.7%</td>
<td>13.2%</td>
<td>11.2%</td>
<td>16.8%</td>
<td>46.6%</td>
</tr>
<tr>
<td>Florida</td>
<td>587,347</td>
<td>442,863</td>
<td>889,272</td>
<td>859,410</td>
<td>1,107,501</td>
<td>3,148,675</td>
</tr>
<tr>
<td>% of total households</td>
<td>8.4%</td>
<td>6.3%</td>
<td>12.6%</td>
<td>12.2%</td>
<td>15.7%</td>
<td>44.8%</td>
</tr>
</tbody>
</table>

Source: 2010 ACS 1-Year Estimate
Space Coast Area Transit
Transit Development Plan
Map 2-10: Percent of Households with Median Income Below $10,000 (2010)

Percent of Total Households

0% - 5%
5.01% - 10%
10.01% - 20%
Greater than 20%

Existing Transit Routes

Prepared by:
Tindale-Oliver & Associates, Inc.
Sep 2012
**Household Vehicle Availability**

Table 2-6 shows the number of vehicles available by household within Brevard County and Florida. As shown in the table, Brevard County has a higher proportion of vehicle ownership than the State. Nearly 75 percent of the households in the county have at least two vehicles available to them. Household vehicle availability plays an important role in determining public transit needs. Zero-vehicle households are traditionally considered transit-dependent as they rely heavily upon transit to fulfill their transportation needs.

![Table 2-6: Distribution of Vehicle Availability by Household (2010)]

**Labor Force and Employment**

**Labor Force**

Table 2-7 displays the percentage of population 16 years of age and older in the labor force and the percent of those laborers who were employed in 2010. Brevard County statistics shown are in line with the corresponding indicators for Florida.
### Table 2-7

**Labor Force Participation (2010)**

<table>
<thead>
<tr>
<th>Area</th>
<th>% of Population in Labor Force*</th>
<th>% of Labor Force Employed*</th>
<th>Unemployment Rate (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard County</td>
<td>58.3%</td>
<td>86.4%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Florida</td>
<td>60.4%</td>
<td>86.1%</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

*Represents the percent of the population (16 yrs and older only) in the labor force

Source: 2010 ACS 1-Year Estimates (Selected Economic Characteristics)

### Roadway Level of Service

Roadway congestion levels make travel more of a challenge for all transportation modes. According to the Space Coast TPO State of the System (SOS) Report-Year 2010, the overall levels of congestion along Brevard County’s regional and non-regional roadways have been decreasing. In 2010, 9 percent of the County’s regional and non-regional roadways experienced congestion compared to 12 percent in 2005. The roadway segments with the highest levels of congestion include sections of SR/CR 520, Wickham Road, U.S. 192, and Malabar Road. Along with overall congestion levels, the duration of congestion has also been decreasing, with 90 percent of the congestion lasting less than 1 hour.

### Commuting Patterns

Based on 2010 data, Brevard County had 193,700 employed persons living in the county. Of those persons, 128,900 lived and worked in Brevard County. In 2010, 64,800 residents (33% of the labor force) living in Brevard County commuted outside of the county for employment. In addition, 43,300 persons commuted into Brevard County for employment, resulting in a net employment outflow of 21,500 persons.

Table 2-8 summarizes the commuter flows for the workers living in Brevard County. The analysis of the 2010 Census Longitudinal Employer-Household Dynamics (LEHD) worker flow database indicates that 75 percent of the employed Brevard County residents commute to jobs in Brevard County. The Brevard County locations employing the highest percentage of the County’s labor force are Melbourne, Titusville, Viera West, and Palm Bay. The LEHD defines “All Other Locations” as cities and towns not included in the top 10 locations as well as land that is not part of a city or town. Orange County is the most common destination for workers commuting to counties outside Brevard (3.7%), as shown in Table 2-9. Compared with 2009, the total number of workers who both resided and worked in Brevard County in 2010 remained almost exactly the same.
Table 2-8
Where Brevard County Residents Work, by City (2010)

<table>
<thead>
<tr>
<th>Place</th>
<th>Count</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melbourne</td>
<td>31,900</td>
<td>16.5%</td>
</tr>
<tr>
<td>Titusville</td>
<td>14,650</td>
<td>7.6%</td>
</tr>
<tr>
<td>Viera West</td>
<td>13,700</td>
<td>7.1%</td>
</tr>
<tr>
<td>Palm Bay</td>
<td>13,300</td>
<td>6.9%</td>
</tr>
<tr>
<td>Rockledge</td>
<td>6,450</td>
<td>3.3%</td>
</tr>
<tr>
<td>Merritt Island</td>
<td>6,250</td>
<td>3.2%</td>
</tr>
<tr>
<td>Orlando</td>
<td>5,400</td>
<td>2.8%</td>
</tr>
<tr>
<td>Cocoa</td>
<td>5,100</td>
<td>2.6%</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>5,050</td>
<td>2.6%</td>
</tr>
<tr>
<td>Cocoa Beach</td>
<td>4,750</td>
<td>2.5%</td>
</tr>
<tr>
<td>All Other Locations</td>
<td>87,150</td>
<td>45.0%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau LEHD

Table 2-9
Where Brevard County Residents Work, by County (2009 & 2010)

<table>
<thead>
<tr>
<th>County of Residence</th>
<th>County of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brevard County</td>
</tr>
<tr>
<td>Brevard County (2010)</td>
<td>131,480</td>
</tr>
<tr>
<td>% Distribution</td>
<td>74.9%</td>
</tr>
<tr>
<td>Brevard County (2009)</td>
<td>129,742</td>
</tr>
<tr>
<td>% Distribution</td>
<td>74.6%</td>
</tr>
<tr>
<td>Percent Change (2009–2010)</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau LEHD

Table 2-10 summarizes the labor shed for workers commuting to Brevard County. The analysis of 2010 Census LEHD database worker flow data indicated that 75 percent of the county’s workers live in the county with the remaining 25 percent of workers living outside of the county. The top three cities where the county’s workers reside are Palm Bay, Melbourne, and Titusville. More than
50 percent of the county’s workers live in “All Other Areas,” which includes areas outside of the top 10 cities and Census-designated places (CDPs) or within unincorporated areas. Orange County makes up the largest (7.5%) trip origin for workers commuting to Brevard County from other counties, as shown in Table 2-11.

<table>
<thead>
<tr>
<th>Place</th>
<th>Count</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm Bay</td>
<td>23,350</td>
<td>13.6%</td>
</tr>
<tr>
<td>Melbourne</td>
<td>18,300</td>
<td>10.6%</td>
</tr>
<tr>
<td>Titusville</td>
<td>10,550</td>
<td>6.1%</td>
</tr>
<tr>
<td>Merritt Island</td>
<td>9,400</td>
<td>5.5%</td>
</tr>
<tr>
<td>Rockledge</td>
<td>6,600</td>
<td>3.8%</td>
</tr>
<tr>
<td>West Melbourne</td>
<td>3,950</td>
<td>2.3%</td>
</tr>
<tr>
<td>Cocoa</td>
<td>3,850</td>
<td>2.2%</td>
</tr>
<tr>
<td>Port St John</td>
<td>3,000</td>
<td>1.7%</td>
</tr>
<tr>
<td>Satellite Beach</td>
<td>2,750</td>
<td>1.6%</td>
</tr>
<tr>
<td>Cocoa Beach</td>
<td>2,550</td>
<td>1.5%</td>
</tr>
<tr>
<td>All Other Locations</td>
<td>87,900</td>
<td>51.0%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau LEHD
Table 2-11

Where Brevard County Workers Live, by County (2009 & 2010)

<table>
<thead>
<tr>
<th>County of Work</th>
<th>County of Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard County</td>
<td>Brevard County</td>
</tr>
<tr>
<td>Brevard County (2010) # of Workers</td>
<td>131,480</td>
</tr>
<tr>
<td>Brevard County (2010) % Distribution</td>
<td>66.9%</td>
</tr>
<tr>
<td>Brevard County (2009) # of Workers</td>
<td>129,742</td>
</tr>
<tr>
<td>Brevard County (2009) % Distribution</td>
<td>65.8%</td>
</tr>
<tr>
<td>Percent Change (2009–2010)</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau LEHD

Means of Travel to Work

Table 2-12 conveys the distribution of the primary modes of transportation used in Brevard County and Florida. Almost 83 percent of the workers in Brevard County drive alone to work, which is slightly higher than the journey-to-work mode split for the State as a whole. Compared to the overall state distribution, a smaller proportion of people in Brevard County uses public transit to access work (0.5%), carpools (9.0%), and walks or works at home (5.9%).

Table 2-12

Journey-to-Work Mode Split (2010)

<table>
<thead>
<tr>
<th>Area</th>
<th>Drive Alone</th>
<th>Carpool</th>
<th>Public Transit</th>
<th>Other(1)</th>
<th>Walk or Work at Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard County</td>
<td>82.5%</td>
<td>9.0%</td>
<td>0.5%</td>
<td>2.1%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Florida</td>
<td>79.9%</td>
<td>9.6%</td>
<td>2.0%</td>
<td>2.1%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

(1) Includes motorcycle, bicycle, and other means of transportation

Source: 2010 ACS 1-Year Estimates
Major Employers

As part of the baseline conditions analysis, data on major employers in Brevard County were reviewed and summarized. The major industries in Brevard County include healthcare and social assistance, education services, and services related to the aeronautics industry. With more than 9,000 employees, the largest employer in Brevard County is the Brevard County School Board. The next largest employers in Brevard County are Health First, Inc., and Harris Corporation, with more than 6,000 employees each. The top 15 public and private employers, listed in Table 2-13, employ 44,000 people.

Table 2-13
Brevard County Top 15 Employers (2011)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Sector</th>
<th>Employment*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brevard County School Board</td>
<td>Elementary and Secondary Schools</td>
<td>9,140</td>
</tr>
<tr>
<td>2</td>
<td>Health First, Inc.</td>
<td>Corporate, Subsidiary, and Regional Managing Offices</td>
<td>6,350</td>
</tr>
<tr>
<td>3</td>
<td>Harris Corporation</td>
<td>Semiconductor and Related Device Manufacturing</td>
<td>6,130</td>
</tr>
<tr>
<td>4</td>
<td>United Space Alliance LLC</td>
<td>Facilities Support Services</td>
<td>3,830</td>
</tr>
<tr>
<td>5</td>
<td>Brevard County Board of County Commissioners</td>
<td>Legislative Bodies</td>
<td>2,390</td>
</tr>
<tr>
<td>6</td>
<td>Department of Defense</td>
<td>Engineering Services</td>
<td>2,260</td>
</tr>
<tr>
<td>7</td>
<td>Health Management Associates</td>
<td>Offices of Physicians (except Mental Health Specialists)</td>
<td>2,220</td>
</tr>
<tr>
<td>8</td>
<td>NASA</td>
<td>Space Research and Technology</td>
<td>2,210</td>
</tr>
<tr>
<td>9</td>
<td>Brevard Community College</td>
<td>Junior Colleges</td>
<td>1,580</td>
</tr>
<tr>
<td>10</td>
<td>Rockwell Collins, Inc.</td>
<td>Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing</td>
<td>1,500</td>
</tr>
<tr>
<td>11</td>
<td>DRS, Inc.</td>
<td>Optical Instrument and Lens Manufacturing</td>
<td>1,440</td>
</tr>
<tr>
<td>12</td>
<td>Northrop Grumman Corporation</td>
<td>Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing</td>
<td>1,400</td>
</tr>
<tr>
<td>13</td>
<td>Florida Institute of Technology</td>
<td>Colleges, Universities, and Professional Schools</td>
<td>1,190</td>
</tr>
<tr>
<td>14</td>
<td>Brevard County Sheriff Office</td>
<td>Police Protection</td>
<td>1,180</td>
</tr>
<tr>
<td>15</td>
<td>Raytheon</td>
<td>Facilities Support Services</td>
<td>1,180</td>
</tr>
</tbody>
</table>

* List excludes retail operations
Source: Space Coast Economic Development Commission, First Quarter 2011
Development Activities

FDOT's updated TDP guidelines promote focus and review of ongoing and anticipated residential and commercial development activities. Therefore, a review of development activities and existing and future land uses in Brevard County was conducted. A total of 14 Developments of Regional Impact (DRIs) are approved or proposed in Brevard County, 8 of which are located in the Melbourne/Palm Bay area. Table 2-14 presents the approved and proposed major developments within the study area.

Brevard County and its municipalities have established land use and zoning maps to guide future developments in the county. Map 2-11 shows the existing land uses in Brevard County and Map 2-12 presents a snapshot of the future land use designations for Brevard County.

Table 2-14

Brevard County Developments of Regional Impact

<table>
<thead>
<tr>
<th>Name</th>
<th>Jurisdiction</th>
<th>Type</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abby Marina</td>
<td>Brevard County</td>
<td>Non-Residential</td>
<td>Approved</td>
</tr>
<tr>
<td>Brevard Crossings</td>
<td>Cocoa</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>Great Outdoors</td>
<td>Brevard County</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>Hammock Landing</td>
<td>West Melbourne</td>
<td>Commercial</td>
<td>Approved</td>
</tr>
<tr>
<td>Interchange Parcel</td>
<td>Palm Bay</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>Melbourne Regional Airport</td>
<td>Melbourne</td>
<td>Non-Residential</td>
<td>Approved</td>
</tr>
<tr>
<td>Melbourne Square Mall</td>
<td>Melbourne</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>Oakwood Village</td>
<td>Palm Bay</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>Pine Hills</td>
<td>Melbourne</td>
<td>Residential</td>
<td>Approved</td>
</tr>
<tr>
<td>Samuel’s Landing</td>
<td>West Melbourne</td>
<td>Mixed Use</td>
<td>Proposed</td>
</tr>
<tr>
<td>Sandy Pines</td>
<td>Brevard County</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>The Phenion Gallery</td>
<td>Palm Bay</td>
<td>Mixed Use</td>
<td>Proposed</td>
</tr>
<tr>
<td>Vector Space</td>
<td>Brevard County</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
<tr>
<td>Viera</td>
<td>Rockledge</td>
<td>Mixed Use</td>
<td>Approved</td>
</tr>
</tbody>
</table>

Source: Central Florida Geographic Information Systems
Space Coast Area Transit
Transit Development Plan

Map 2-11: Existing Land Uses

- Existing Transit Routes
- Residential
- Commercial
- Industrial
- Institutional
- Governmental
- Agriculture
- Non-Agricultural Acreage
- Miscellaneous
- Centrally Assessed
- Unclassified
- Military/Federal Lands
- Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Sep 2012
Section 3: Existing Transportation Services

This section provides a review of existing Space Coast Area Transit service levels and is divided into three subsections including Existing Service, Performance Evaluation and Trends, and Peer Review. The review of existing service includes a general description of the structure of Space Coast Area Transit and its system characteristics. The performance evaluation and trends sections render a detailed examination of system operating performance. The peer review is presented for the fixed-route system and provides an opportunity for Space Coast Area Transit to determine how well it is performing compared to similar peer transit agencies.

Inventory of Existing Service

Space Coast Area Transit provides the majority of transit service in Brevard County, including both fixed-route and demand response services. In addition to providing for the general population’s transportation needs, Space Coast Area Transit provides service to those who meet the mobility needs and eligibility requirements comprising the Transportation Dependent (TD) population and the Americans with Disabilities Act (ADA)-eligible population. The following are services that are offered to the public:

- Traditional fixed-route transit
- Paratransit service
- ADA paratransit service
- Volunteers in Motion
- Vanpool transportation
- Contracted routes

Additionally, private transportation providers operate additional services in Brevard County.

Fixed-Route Service

Brevard County’s public transit system, Space Coast Area Transit, is provided by the County. The service began in 1985 as a merger between two existing transportation systems that began in 1974: the Brevard Transportation Authority (BTA) and the Consolidated Agencies Transportation System (CATS). Space Coast Area Transit currently operates 16 fixed routes, 1 dial-a-ride, paratransit service, vanpools, and the Volunteers In Motion program. A majority of the routes operate Monday through Saturday. Service spans from approximately 6 a.m. to 8:30 p.m., with an average of 60-minute frequencies. Space Coast Area Transit operates limited Sunday service, limited later evening routes, and some routes with 30-minute frequencies. Currently, Space Coast Area Transit
generally observes the following holidays: New Year’s Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, the day after Thanksgiving, Christmas Eve, and Christmas Day.

Table 3-1 presents additional information on the span and frequency of Space Coast Area Transit’s fixed-route service.

Figure 3-1 provides ridership figures for FY 2010 and FY 2011. Between FY 2010 and FY 2011, Space Coast Area Transit ridership has increased by 15 percent, from 1,604,020 passenger trips in 2010 to 1,837,897 in 2011.
### Table 3-1
Summary of Transit Operating Characteristics

<table>
<thead>
<tr>
<th>Route #</th>
<th>Description</th>
<th>Monday-Friday</th>
<th>Saturday</th>
<th>Sunday</th>
<th>Frequency</th>
<th>Flag Stop Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1</td>
<td>Melbourne/Titusville Connector</td>
<td>5:10am-7:55pm</td>
<td>7:25am-5:30pm</td>
<td>N/A</td>
<td>60 Min. (Mon.-Fri.)</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120-180 Min. (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 2</td>
<td>Titusville</td>
<td>7:25am-5:23pm</td>
<td>8:25am-5:23pm</td>
<td>N/A</td>
<td>60 Min. (Mon.-Fri.)</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 3</td>
<td>Merritt Island</td>
<td>7:50am-6:01pm</td>
<td>8:16am-5:01pm</td>
<td>N/A</td>
<td>60 Min. (Mon-Fri.)</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 4</td>
<td>520 Connector</td>
<td>5:50am-11:35pm</td>
<td>5:50 am-11:35pm</td>
<td>8:00am-5:55pm</td>
<td>30 Min./60 Min. Evening (Mon-Sat.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min. (Sun.)</td>
<td></td>
</tr>
<tr>
<td>Route 5</td>
<td>Mims/Titusville</td>
<td>8:00am-4:54pm</td>
<td>N/A</td>
<td>N/A</td>
<td>60 Min./180 Min. Mid Day</td>
<td>Y</td>
</tr>
<tr>
<td>Route 6</td>
<td>Cocoa/Rockledge</td>
<td>5:45am-8:12pm</td>
<td>7:15am-6:10pm</td>
<td>N/A</td>
<td>30/60 Min. Evening (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min. (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 8</td>
<td>West Cocoa</td>
<td>6:45am-5:40pm</td>
<td>N/A</td>
<td>N/A</td>
<td>90-240 Min.</td>
<td>Y</td>
</tr>
<tr>
<td>Route 9</td>
<td>Beach Trolley</td>
<td>6:01am-11:10pm</td>
<td>6:01am-11:10pm</td>
<td>7:45am-5:40pm</td>
<td>30/60 Min. Evening (Mon-Sat.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min. (Sun.)</td>
<td></td>
</tr>
<tr>
<td>Route 21</td>
<td>Downtown Melbourne</td>
<td>7:15am-8:19pm</td>
<td>7:15am-6:19pm</td>
<td>10:00am-3:03pm</td>
<td>30 Min./60 Min. Evening (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min. (Sat &amp; Sun.)</td>
<td></td>
</tr>
<tr>
<td>Route 22</td>
<td>South Palm Bay</td>
<td>7:35am-8:30pm</td>
<td>8:35am-4:30pm</td>
<td>N/A</td>
<td>60 Min. (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 23</td>
<td>West Palm Bay</td>
<td>6:35am-8:30pm</td>
<td>7:35am-5:30pm</td>
<td>N/A</td>
<td>60 Min./120-180 Min. Mid Day (Sat.)</td>
<td>N</td>
</tr>
</tbody>
</table>
Table 3-1 (Continued)
Summary of Transit Operating Characteristics

<table>
<thead>
<tr>
<th>Route #</th>
<th>Description</th>
<th>Monday-Friday</th>
<th>Saturday</th>
<th>Sunday</th>
<th>Frequency</th>
<th>Flag Stop Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 24</td>
<td>Melbourne</td>
<td>6:55am-8:50pm</td>
<td>7:55am-5:50pm</td>
<td>N/A</td>
<td>60 Min. (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 25</td>
<td>Palm Bay Connector</td>
<td>7:07am-9:07pm</td>
<td>8:07am-6:07pm</td>
<td>N/A</td>
<td>60 Min. (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 26</td>
<td>South Beach</td>
<td>7:00am-7:52pm</td>
<td>8:00am-6:05pm</td>
<td>N/A</td>
<td>120/180 Min. (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120/180 Min. (Sat)</td>
<td></td>
</tr>
<tr>
<td>Route 27</td>
<td>East Palm Bay</td>
<td>6:35am-8:30pm</td>
<td>7:35am-5:30pm</td>
<td>N/A</td>
<td>60 Min. (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 28</td>
<td>North Melbourne</td>
<td>6:55am-8:50pm</td>
<td>7:55am-5:50pm</td>
<td>N/A</td>
<td>60 Min. (Mon-Fri.)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Min./120 Min. Mid Day (Sat.)</td>
<td></td>
</tr>
<tr>
<td>Route 32</td>
<td>South Mainland Dial-A-Bus (Viera Complex to Sebastian Super Wal-Mart)</td>
<td>8:00am-4:00pm (Mon, Tues, Friday)</td>
<td>N/A</td>
<td>N/A</td>
<td>Call before 2pm the day before your trip for home pickup</td>
<td>N</td>
</tr>
<tr>
<td>Route 33</td>
<td>Eau Gallie Art District</td>
<td>10:50am-11:00am and 1:49pm-2:20pm</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Y</td>
</tr>
</tbody>
</table>
Vehicle Inventory

Table 3-2 provides a summary of the Space Coast Area Transit vehicle inventory. As shown in the table, the entire fleet consists of a total of 62 vehicles. Buses shown in yellow are used for the paratransit service. Buses shown in green are used for fixed-route service and all other vehicles may be used to operate either service.
Table 3-2
Space Coast Area Transit Vehicles

<table>
<thead>
<tr>
<th>Number of Vehicles</th>
<th>Year</th>
<th>Model</th>
<th>Description</th>
<th>Seats</th>
<th>Wheelchair Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2005</td>
<td>Ford</td>
<td>Turtle Top 22'</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>2011</td>
<td>Allison</td>
<td>Glaval Titan II 22'</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>2003</td>
<td>Allison</td>
<td>SLF 230 30'</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>2009</td>
<td>Allison</td>
<td>Champion International 31'</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>2001</td>
<td>Allison</td>
<td>Trolley 35'</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2007</td>
<td>Allison</td>
<td>Gillig 35'</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2007</td>
<td>Allison</td>
<td>Gillig 35'</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>2011</td>
<td>Allison</td>
<td>Gillig 35'</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2011</td>
<td>Allison</td>
<td>Gillig 35'</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>2001</td>
<td>Allison</td>
<td>TL 960 40'</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2007</td>
<td>Allison</td>
<td>Gillig 40'</td>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2011</td>
<td>Allison</td>
<td>Gillig 40'</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>1994</td>
<td>Allison</td>
<td>Vista 23’ 6”</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>1996</td>
<td>Allison</td>
<td>Vista 27’ 6”</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1999</td>
<td>Allison</td>
<td>Vista 27’ 6”</td>
<td>10</td>
<td>4</td>
</tr>
</tbody>
</table>

Other Capital Equipment

Space Coast Area Transit operates from two separate transit facilities. The North Terminal located in Cocoa serves as an operational center as well as the administrative and dispatch center. The address is 401 South Varr Avenue, Cocoa, FL 32922.

The South Terminal serves primarily as an operational location providing parking and an operators’ preparation facility. It also contains the main offices of VPSI Vanpool Services. The physical address is 460 South Harbor City Boulevard, Melbourne, FL 32901. This is not a mailing address, as all mail is channeled through the administrative facility in Cocoa.

Vehicle Maintenance sites are located at each facility within the operational centers.

Paratransit Service

Paratransit service provides trips to those who are unable to use the fixed-route service due to disability or when fixed-route service is not available and that individual has no other means of transportation. Paratransit service is intended to serve a limited group of people under the following programs:
- **Americans with Disabilities Act (ADA):** Those individuals who reside within ¾-mile of an established bus route, but cannot use Space Coast Area Transit regular fixed-route service because of a disability.

- **Transportation Disadvantaged (TD):** Includes qualifying individuals located in areas where fixed-route service is not available and who have no other means of transportation.

- **Agencies:** Includes people whose trips are funded under a negotiated agency contract.

Paratransit is generally a curb-to-curb service accessed through a trip-by-trip reservation. The one-way fare for a rider is $2.50 and $1.25 for the elderly and disabled.

A paratransit trend analysis and peer review was conducted to examine the performance of Space Coast Area Transit's directly-operated demand response service and to illustrate the performance of the demand response system relative to the selected peer group. The trend analysis and peer review are presented as Appendix E.

**ADA Paratransit Service**

ADA Paratransit service is an important component of Space Coast Area Transit's commitment to providing mobility and transportation freedom to citizens with disabilities. The intent of ADA is to ensure that persons with disabilities have equal access to public transportation. ADA service is available to individuals with disabilities who are unable to use fixed-route transportation services. By law, ADA service must be provided within ¾ miles of fixed-route services, and ADA paratransit service must be available during the same days and hours. Rides can be requested up to 14 days in advance and trips that occur on a regular basis do not need to be reserved each time. The fare for ADA paratransit service cannot be more than twice the amount of the regular bus fare and can be used for any purpose.

**Volunteers In Motion**

Volunteers In Motion is a service coordinated by Space Coast Area Transit, the Senior Resource Alliance, and Community Care for the Elderly. The program began in 1996 in an effort to provide reliable transportation to Brevard County's elderly citizens who are unable to use Space Coast Area Transit fixed-route and paratransit services on their own. A major purpose of the program is to assist elderly residents of Brevard County with living independently. For example, Volunteers In Motion not only provides transportation to and from grocery stores, but also assists passengers with shopping, carrying, and unpacking groceries.
Vanpool Program

Brevard County has the largest public/private-sponsored vanpool program in Florida and one of the largest in the nation. Space Coast Area Transit’s vanpool program provides assistance to groups of commuters and various social service agencies. The vans used in the program are purchased by the County Commission with federal capital grants and are provided to VPSI, the company who administers the program. VPSI then leases vans to commuters and human service agencies at a rate that includes all maintenance, insurance, and administration costs.

Vanpools generally consist of 7-15 commuters who live in the same area and work in the same location. Drivers and passengers decide on a flexible route and schedule that meets their needs. Additionally, employers may provide up to $230.00 per month in tax-free transit and vanpool benefits to employees. Fares depend on the commute distance, the total number of riders, and the type of van. In FY 2010, Space Coast Area Transit’s vanpool program had 38 vehicles operated in maximum service, providing nearly 130,000 passenger trips and more than 6.5 million passenger miles.

Contracted Routes

Space Coast Area Transit’s bus fleet serves several not-for-profit agencies with contracted, demand response service. The agencies served include Brevard Achievement Center, Bridges BTC, INC., Easter Seals, and Seniors at Lunch. The agencies work with Space Coast Area Transit to transport agency customers to designated centers in the morning and return the customers in the afternoon.

Private Transportation Providers

Private transportation providers are comprised of taxis and shuttles that provide service for tourists and residents in Brevard County. In July 2012, each private provider in Brevard County was mailed a short questionnaire to obtain information about its transportation services. Providers that did not respond to the request also were contacted by telephone in an attempt to obtain information relating to the services that they provide. The information received from the private providers that responded to the questionnaire, a listing of the providers that did not respond to the request for information, and a copy of the questionnaire are presented as Appendix A.

Fixed-Route Trend Analysis

A trend analysis was conducted to examine the performance of Brevard County’s fixed-route bus service. Data were compiled based on the information received from the fixed-route transit service provider (Space Coast Area Transit) for five years from 2006 through 2010. This analysis includes
statistical tables and graphs that present selected performance indicators and effectiveness and efficiency measures for the selected time period. Table 3-3 lists the measures used in this performance and trend analysis. Highlights of the trend analysis are presented below.

### Table 3-3
**Performance Review Measures**

**Space Coast Area Transit Trend Analysis (2006-2010)**

<table>
<thead>
<tr>
<th>General Performance Measures</th>
<th>Effectiveness</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>Vehicle Miles per Capita</td>
<td>Operating Expense per Capita</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>Passenger Trips per Capita</td>
<td>Operating Expense per Capita (in 2006 $)</td>
</tr>
<tr>
<td>Vehicle Miles</td>
<td>Passenger Trips per Revenue</td>
<td>Operating Expense per Passenger Trip</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>Passenger Trips per Revenue Hour</td>
<td>Operating Expense per Passenger Trip (in 2006 $)</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>Number of System Failures</td>
<td>Operating Expense per Revenue Mile</td>
</tr>
<tr>
<td>Total Operating Expense (in 2006 $)</td>
<td>Revenue Miles Between Failures</td>
<td>Operating Expense per Revenue Mile (in 2006 $)</td>
</tr>
<tr>
<td>Passenger Fare Revenue</td>
<td>Weekday Span of Service</td>
<td>Farebox Recovery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revenue Miles per Vehicle Mile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Fare</td>
</tr>
</tbody>
</table>

### Performance Indicators

Performance indicators are used to present the data that are reported directly in the Florida Transit Information System (FTIS) Integrated National Transit Database Analysis System (INTDAS) reports related to overall system performance. Selected performance indicators are presented in Table 3-4 and Figures 3-2 through 3-7 for the fixed-route system, as reported to the Federal Transit Administration’s Nation Transit Database (NTD) program.

### Table 3-4
**General Performance Indicators**

**Space Coast Area Transit Trend Analysis (2006-2010)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>504,891</td>
<td>551,030</td>
<td>554,560</td>
<td>554,698</td>
<td>554,354</td>
<td>9.8%</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>913,132</td>
<td>1,021,110</td>
<td>1,222,336</td>
<td>1,418,430</td>
<td>1,603,948</td>
<td>75.7%</td>
</tr>
<tr>
<td>Vehicle Miles</td>
<td>1,026,682</td>
<td>1,239,454</td>
<td>1,370,513</td>
<td>1,555,745</td>
<td>1,618,646</td>
<td>57.7%</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>993,194</td>
<td>1,198,870</td>
<td>1,321,461</td>
<td>1,494,229</td>
<td>1,554,341</td>
<td>56.5%</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>$3,524,696</td>
<td>$4,646,114</td>
<td>$5,432,796</td>
<td>$5,427,799</td>
<td>$5,504,926</td>
<td>56.2%</td>
</tr>
<tr>
<td>Total Operating Expense (in 2006 $)</td>
<td>$3,524,696</td>
<td>$4,514,043</td>
<td>$5,063,205</td>
<td>$5,079,222</td>
<td>$5,060,400</td>
<td>43.6%</td>
</tr>
<tr>
<td>Passenger Fare Revenue</td>
<td>$260,810</td>
<td>$456,012</td>
<td>$535,329</td>
<td>$582,902</td>
<td>$608,155</td>
<td>133.2%</td>
</tr>
</tbody>
</table>

Source: FTIS
Figure 3-2
Passenger Trips

Figure 3-3
Service Area Population

Figure 3-4
Vehicle Miles
Figure 3-5
Revenue Miles

Figure 3-6
Passenger Fare Revenue

Figure 3-7
Operating Expense
The following is a summary of the trends that are evident among the performance indicators provided in Table 3-4 and Figures 3-2 through 3-7:

- According to the information reported to NTD, the service area population for Space Coast Area Transit has increased by nearly 10 percent.
- The passenger trips increased from 913,132 in 2006 to 1,603,948 in 2010, an increase of 75 percent.
- Total vehicle miles of service increased from 1,026,682 in 2006 to 1,618,646 in 2010, an increase of approximately 58 percent.
- Similarly, revenue miles of service also increased by approximately 57 percent from 993,194 in 2006 to 1,554,341 in 2010.
- Total operating expense increased from $3.5 million in 2006 to $5.5 million in 2010, an increase of 56 percent. However, the real dollar increase (adjusted for inflation) in total operating expense is 44 percent. It should also be noted that service increases occurring during this same time period would also increase expenses.
- Passenger fare revenues have increased by over 130 percent from $260,810 in 2006 to $608,155 in 2010.

Effectiveness Measures

Effectiveness measures indicate the extent to which service-related goals are being met. For example, passenger trips per capita are a measure of the effectiveness of a system in meeting the transportation needs of the community. Selected effectiveness measures are presented in Table 3-5 and Figures 3-8 through 3-11.

### Table 3-5

**Effectiveness Measures**

**Space Coast Area Transit Trend Analysis (2006-2010)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Miles per Capita</td>
<td>2.03</td>
<td>2.25</td>
<td>2.47</td>
<td>2.80</td>
<td>2.92</td>
<td>43.6%</td>
</tr>
<tr>
<td>Passenger Trips per Capita</td>
<td>1.81</td>
<td>1.85</td>
<td>2.20</td>
<td>2.56</td>
<td>2.89</td>
<td>60.0%</td>
</tr>
<tr>
<td>Passenger Trips per Revenue Mile</td>
<td>0.92</td>
<td>0.85</td>
<td>0.92</td>
<td>0.95</td>
<td>1.03</td>
<td>12.2%</td>
</tr>
<tr>
<td>Passenger Trips per Revenue Hour</td>
<td>19.21</td>
<td>16.91</td>
<td>17.17</td>
<td>18.05</td>
<td>19.54</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Source: FTIS
Figure 3-8
Vehicle Miles per Capita

Figure 3-9
Passenger Trips per Capita

Figure 3-10
Passenger Trips per Revenue Mile
The following is a summary of the trends that are evident among the effectiveness measures presented in Table 3-5 and Figures 3-8 through 3-11:

- Vehicle miles per capita increased by over 40 percent from 2006 to 2010.
- Passenger trips per capita increased from 1.8 in 2006 to 2.9 in 2010, an increase of 60 percent.
- Passenger trips per revenue mile increased from 0.9 in 2006 to 1.0 in 2010, an increase of 12 percent.
- Passenger trips per revenue hour increased from 19.2 in 2006 to 19.5 in 2010, an increase of almost 2 percent.

These measures indicate that Space Coast Area Transit is providing more service per service area resident, and is effectively attracting more passengers with the increasing service. The effectiveness trends could be related to the challenge of serving the sprawled development occurring in the region, operating bases being located farther away from actual routes, and/or modifications to routing. Regardless, the relative trends in these measures reflect positively on Space Coast Area Transit’s provision of service in the last few years.

**Efficiency Measures**

Efficiency measures are designed to measure the level of resources necessary to achieve a given level of output. Efficiency measures are presented in Table 3-6 and Figures 3-12 through 3-17. Many of the efficiency measures show that cost for service increased, which is consistent with the experience of several Florida transit agencies during this timeframe due to unstable fuel prices, increases in healthcare costs, wage increases, and inflation. To analyze the costs in real dollars, all costs were deflated to 2006 using annual inflation rates based on the Consumer Price Index (CPI).
### Table 3-6
#### Efficiency Measures
Space Coast Area Transit Trend Analysis (2006-2010)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expense per Capita</td>
<td>$6.98</td>
<td>$8.34</td>
<td>$9.79</td>
<td>$9.93</td>
<td>42.3%</td>
<td></td>
</tr>
<tr>
<td>Operating Expense per Capita (in 2006 $)</td>
<td>$6.98</td>
<td>$8.19</td>
<td>$9.16</td>
<td>$9.13</td>
<td>30.3%</td>
<td></td>
</tr>
<tr>
<td>Operating Expense per Passenger Trip</td>
<td>$3.86</td>
<td>$4.55</td>
<td>$3.83</td>
<td>$3.43</td>
<td>-11.1%</td>
<td></td>
</tr>
<tr>
<td>Operating Expense per Passenger Trip (in 2006 $)</td>
<td>$3.86</td>
<td>$4.42</td>
<td>$3.58</td>
<td>$3.15</td>
<td>-18.3%</td>
<td></td>
</tr>
<tr>
<td>Operating Expense per Revenue Mile</td>
<td>$3.55</td>
<td>$3.88</td>
<td>$4.11</td>
<td>$3.63</td>
<td>$3.54</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Mile (in 2006 $)</td>
<td>$3.55</td>
<td>$3.77</td>
<td>$3.83</td>
<td>$3.40</td>
<td>$3.26</td>
<td>-8.3%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Hour</td>
<td>$74.15</td>
<td>$76.95</td>
<td>$76.32</td>
<td>$69.08</td>
<td>$67.08</td>
<td>-9.5%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Hour (in 2006 $)</td>
<td>$74.15</td>
<td>$74.76</td>
<td>$71.13</td>
<td>$64.64</td>
<td>$61.66</td>
<td>-16.8%</td>
</tr>
<tr>
<td>Farebox Recovery</td>
<td>7.40%</td>
<td>9.81%</td>
<td>9.85%</td>
<td>10.94%</td>
<td>11.05%</td>
<td>49.3%</td>
</tr>
<tr>
<td>Revenue Miles Per Vehicle Mile</td>
<td>0.97</td>
<td>0.97</td>
<td>0.96</td>
<td>0.96</td>
<td>0.96</td>
<td>-0.7%</td>
</tr>
<tr>
<td>Revenue Hours Per Total Vehicles</td>
<td>864</td>
<td>2,236</td>
<td>1,453</td>
<td>1,604</td>
<td>1,345</td>
<td>55.7%</td>
</tr>
<tr>
<td>Average Fare</td>
<td>$0.29</td>
<td>$0.45</td>
<td>$0.44</td>
<td>$0.41</td>
<td>$0.38</td>
<td>32.3%</td>
</tr>
</tbody>
</table>

Source: FTIS

![Figure 3-12](Operating Expense per Capita)
Figure 3-13
Operating Expense per Passenger Trip

Figure 3-14
Operating Expense per Revenue Mile

Figure 3-15
Farebox Recovery Ratio
The following is a summary of the trends that are evident among the cost efficiency measures presented in Table 3-6 and Figures 3-12 through 3-17:

- Operating expense per capita increased by 42 percent, from $6.98 in 2006 to $9.93 in 2010. The real dollar increase, however, is approximately 31 percent.
- Operating expense per passenger trip decreased from $3.86 in 2006 to $3.43 in 2010, a decrease of 11 percent in nominal dollars and 18 percent in real dollars.
- Farebox recovery increased by almost 50 percent, from 7.4 percent in 2006 to 11 percent in 2010.
- Revenue miles per vehicle mile remained relatively stable, decreasing by less than 1 percent from 0.97 in 2006 to 0.96 in 2010.
- The average fare increased from $0.29 in 2006 to $0.38 in 2010, an increase of nearly 33 percent.
Summary Results for the Trend Analysis

The trend analysis is only one aspect of transit performance evaluation; however, when combined with the peer review analysis, the results provide a starting point for understanding the trends in transit system performance over time and compared to other transit systems with similar characteristics. Table 3-7 provides a summary of the trend analysis showing the positive and negative trends identified in the analysis.

<table>
<thead>
<tr>
<th>Measure/Indicator</th>
<th>Change (2006-2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Performance</strong></td>
<td></td>
</tr>
<tr>
<td>Service Area Population</td>
<td>9.8%</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>75.7%</td>
</tr>
<tr>
<td>Vehicle Miles</td>
<td>57.7%</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>56.5%</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>56.2%</td>
</tr>
<tr>
<td>Total Operating Expense (in 2006 $)</td>
<td>43.6%</td>
</tr>
<tr>
<td>Passenger Fare Revenue</td>
<td>133.2%</td>
</tr>
<tr>
<td><strong>Service Supply</strong></td>
<td></td>
</tr>
<tr>
<td>Vehicle Miles per Capita</td>
<td>43.6%</td>
</tr>
<tr>
<td><strong>Service Consumption</strong></td>
<td></td>
</tr>
<tr>
<td>Passenger Trips per Capita</td>
<td>60.0%</td>
</tr>
<tr>
<td>Passenger Trips per Revenue Mile</td>
<td>12.2%</td>
</tr>
<tr>
<td>Passenger Trips per Revenue Hour</td>
<td>1.7%</td>
</tr>
<tr>
<td><strong>Cost Efficiency</strong></td>
<td></td>
</tr>
<tr>
<td>Operating Expense per Capita</td>
<td>42.3%</td>
</tr>
<tr>
<td>Operating Expense per Capita (in 2006 $)</td>
<td>30.8%</td>
</tr>
<tr>
<td>Operating Expense per Passenger Trip</td>
<td>-11.1%</td>
</tr>
<tr>
<td>Operating Expense per Passenger Trip (in 2006 $)</td>
<td>-18.3%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Mile</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Mile (in 2006 $)</td>
<td>-8.3%</td>
</tr>
<tr>
<td><strong>Operating Ratio</strong></td>
<td></td>
</tr>
<tr>
<td>Farebox Recovery</td>
<td>49.3%</td>
</tr>
<tr>
<td><strong>Vehicle Utilization</strong></td>
<td></td>
</tr>
<tr>
<td>Revenue Miles Per Vehicle Mile</td>
<td>-0.7%</td>
</tr>
<tr>
<td><strong>Fare</strong></td>
<td></td>
</tr>
<tr>
<td>Average Fare</td>
<td>32.8%</td>
</tr>
</tbody>
</table>

Source: FTIS
Fixed-Route Peer Analysis

A peer review analysis was conducted for Space Coast Area Transit to compare its performance at a given point in time with other similar agencies. The peer review was conducted using 2010 NTD data, the most current validated NTD data available. Selected performance indicators, effectiveness measures, and efficiency measures are provided throughout this section in tabular and graphical formats to illustrate the performance of the fixed-route system relative to the peer group. For each selected indicator and measure, the tables provide the Space Coast Area Transit value, the minimum value among the peer group, the maximum value among the peer group, the mean of the peer group, and the percent that the Space Coast Area Transit values are away from the mean. The methodology used to select the peer systems is discussed below.

Peer System Selection Methodology

The peer selection was conducted using the 2010 FTIS database. At the time of the peer selection process, the most current data available in the FTIS database was for the 2010 NTD. The peers were identified through use of the Transit Cooperative Research Program (TCRP) methodology. The peer grouping factors used to determine which potential peer agencies are most similar to the target agency include five service characteristics (total vehicle miles operated, total operating budget, percent demand response, percent service purchased, and service area type) and nine urban area characteristics (urban area population, population growth rate, population density, state capital, percent of population with college degree, percent poverty, annual delay [hours] per traveler, freeway lane-miles per capita, and distance). The data for all population-related variables were extracted from the American Community Survey (ACS). Likeness scores are first determined for each individual screening and peer-group factor. Next, total likeness scores are calculated from the individual scores. The lower the score of a potential peer system, the more similar it is to the target system.

Based on the results of the FTIS peer selection process and input from Space Coast Area Transit staff, nine transit systems were selected for the peer review analysis. Table 3-8 presents the selected peers.

Performance Indicators

Selected performance indicators for the peer review are presented in this section. Categories of performance indicators include population, population density, ridership, revenue miles, and vehicles. Table 3-9 and Figures 3-18 through 3-25 present the performance indicators for the Space Coast Area Transit peer review analysis.
### Table 3-8
Selected Peer Systems
Space Coast Area Transit Peer Review Analysis

<table>
<thead>
<tr>
<th>#</th>
<th>System</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Polk County Transit Services (PCTS)</td>
<td>Bartow, FL</td>
</tr>
<tr>
<td>2</td>
<td>Pasco County Public Transportation (PCPT)</td>
<td>New Port Richey, FL</td>
</tr>
<tr>
<td>3</td>
<td>Volusia County (VOTRAN)</td>
<td>South Daytona, FL</td>
</tr>
<tr>
<td>4</td>
<td>Worcester Regional Transit Authority (WRTA)</td>
<td>Worcester, MA</td>
</tr>
<tr>
<td>5</td>
<td>Red Rose Transit Authority (RRTA)</td>
<td>Lancaster, PA</td>
</tr>
<tr>
<td>6</td>
<td>York County Transportation Authority (YCTA)</td>
<td>York, PA</td>
</tr>
<tr>
<td>7</td>
<td>Portage Area Regional Transportation Authority (PARTA)</td>
<td>Kent, OH</td>
</tr>
<tr>
<td>8</td>
<td>Sarasota County Area Transit (SCAT)</td>
<td>Sarasota, FL</td>
</tr>
<tr>
<td>9</td>
<td>Manatee County Area Transit (MCAT)</td>
<td>Bradenton, FL</td>
</tr>
</tbody>
</table>

### Table 3-9
Performance Indicators
Space Coast Area Transit Peer Review Analysis (2010)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Space Coast Area Transit</th>
<th>Peer Group Minimum</th>
<th>Peer Group Maximum</th>
<th>Peer Group Mean</th>
<th>Space Coast Area Transit % from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>554,354</td>
<td>103,000</td>
<td>479,329</td>
<td>336,460</td>
<td>64.76%</td>
</tr>
<tr>
<td>Service Area Population Density</td>
<td>1,283</td>
<td>315</td>
<td>3,207</td>
<td>995</td>
<td>29.02%</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>1,603,948</td>
<td>473,353</td>
<td>3,283,799</td>
<td>1,833,556</td>
<td>-12.52%</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>1,554,341</td>
<td>725,738</td>
<td>2,794,925</td>
<td>1,494,907</td>
<td>3.98%</td>
</tr>
<tr>
<td>Revenue Hours</td>
<td>82,067</td>
<td>34,829</td>
<td>190,489</td>
<td>104,814</td>
<td>-21.70%</td>
</tr>
<tr>
<td>Vehicles Operated in Maximum Service</td>
<td>24</td>
<td>10</td>
<td>46</td>
<td>28</td>
<td>-14.96%</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>5,504,926</td>
<td>2,399,478</td>
<td>14,262,021</td>
<td>7,827,788</td>
<td>-29.67%</td>
</tr>
<tr>
<td>Passenger Fare Revenues</td>
<td>608,155</td>
<td>140,962</td>
<td>2,759,796</td>
<td>1,270,170</td>
<td>-52.12%</td>
</tr>
</tbody>
</table>

Source: FTIS
Figure 3-18
Service Area Population

Figure 3-19
Service Area Population Density
(persons/square mile)
Figure 3-20
Passenger Trips

Figure 3-21
Revenue Miles
Figure 3-22
Revenue Hours

Figure 3-23
Vehicles Operated in Maximum Service
The following is a summary of the peer review analysis performance indicators, based on the information presented in Table 3-9 and Figures 3-18 through 3-25:

- Service area population for Space Coast Area Transit is greater than the peer group average, 65 percent above the mean. The service area population density is also greater than the peer group average, 29 percent above the mean.
- The passenger trips for Space Coast Area Transit are nearly 13 percent below the peer group mean.
- Revenue miles for Space Coast Area Transit are 4 percent above the peer group mean.
• Space Coast Area Transit’s vehicles operated in maximum service are 15 percent below the peer group mean.
• Operating expense for Space Coast Area Transit is less than the peer group average by almost 30 percent, and passenger fare revenues are over 50 percent below the peer group average.

Effectiveness Measures

Categories of effectiveness measures include service supply, service consumption, and quality of service. These categories are each represented by one variable: vehicle miles per capita, passenger trips per revenue mile, and weekday span of service. Table 3-10 and Figures 3-26 through 3-28 represent the effectiveness measures for the Space Coast Area Transit peer review analysis.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Space Coast Area Transit</th>
<th>Peer Group Minimum</th>
<th>Peer Group Maximum</th>
<th>Peer Group Mean</th>
<th>Space Coast Area Transit % from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Miles per Capita</td>
<td>2.92</td>
<td>2.48</td>
<td>13.29</td>
<td>5.53</td>
<td>-47.23%</td>
</tr>
<tr>
<td>Passenger Trips per Revenue Mile</td>
<td>1.03</td>
<td>0.65</td>
<td>2.16</td>
<td>1.22</td>
<td>-15.57%</td>
</tr>
<tr>
<td>Weekday Span of Service (in hours)</td>
<td>17.83</td>
<td>13.25</td>
<td>21.00</td>
<td>17.43</td>
<td>2.29%</td>
</tr>
</tbody>
</table>

Source: FTIS

Figure 3-26
Vehicle Miles per Capita
The following is a summary of the effectiveness measures for the peer review analysis:

- Vehicle miles per capita for Space Coast Area Transit are 47 percent below the peer group mean.
- Passenger trips per revenue mile for Space Coast Area Transit are 16 percent below the peer group mean.
- Weekday span of service for Space Coast Area Transit is 2 percent above the peer group mean.
Efficiency Measures

Categories of efficiency measures include cost efficiency and operating ratios. Table 3-11 and Figures 3-29 through 3-35 present the efficiency measures for the Space Coast Area Transit peer review analysis.

Table 3-11
Efficiency Measures
Space Coast Area Transit Peer Review Analysis (2010)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Space Coast Area Transit</th>
<th>Peer Group Minimum</th>
<th>Peer Group Maximum</th>
<th>Peer Group Mean</th>
<th>Space Coast Area Transit % from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expense per Capita</td>
<td>$9.93</td>
<td>$8.22</td>
<td>$66.45</td>
<td>$26.47</td>
<td>-62.48%</td>
</tr>
<tr>
<td>Operating Expense per Passenger Trip</td>
<td>$3.43</td>
<td>$2.59</td>
<td>$5.08</td>
<td>$4.40</td>
<td>-22.10%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Mile</td>
<td>$3.54</td>
<td>$3.31</td>
<td>$9.37</td>
<td>$5.14</td>
<td>-31.08%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Hour</td>
<td>$67.08</td>
<td>$54.21</td>
<td>$109.99</td>
<td>$72.64</td>
<td>-7.65%</td>
</tr>
<tr>
<td>Farebox Recovery Ratio (%)</td>
<td>11.05%</td>
<td>3.87%</td>
<td>25.20%</td>
<td>15.32%</td>
<td>-27.86%</td>
</tr>
<tr>
<td>Revenue Miles per Vehicle Mile</td>
<td>0.96</td>
<td>0.93</td>
<td>0.97</td>
<td>0.95</td>
<td>1.29%</td>
</tr>
<tr>
<td>Average Fare</td>
<td>$0.38</td>
<td>$0.10</td>
<td>$1.15</td>
<td>$0.69</td>
<td>-45.02%</td>
</tr>
</tbody>
</table>

Source: FTIS
Figure 3-30
Operating Expense per Passenger Trip

Figure 3-31
Operating Expense per Revenue Mile
Figure 3-32
Operating Expense per Revenue Hour

Figure 3-33
Farebox Recovery
The following is a summary of the efficiency measures for the peer review analysis:

- Operating expense per capita for Space Coast Area Transit is 62 percent below the peer group mean.
- Operating expense per passenger trip for Space Coast Area Transit is 22 percent below the peer group mean. Operating expense per revenue mile for Space Coast Area Transit is 31 percent below the peer group mean, and operating expense per revenue hour is nearly 8 percent below the peer group mean.
- Farebox recovery for Space Coast Area Transit is below the peer group mean by almost 28 percent.
Summary Results for the Peer Review Analysis

Table 3-12 provides a summary of the peer review analysis for the Space Coast Area Transit fixed-route system. The summary includes the percent that Space Coast Area Transit is away from the peer group mean for each performance measure.

Table 3-12
Space Coast Area Transit Peer Review Analysis Summary (2010)

<table>
<thead>
<tr>
<th>Performance Indicators/Measures</th>
<th>Percent from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>64.76%</td>
</tr>
<tr>
<td>Service Area Population Density</td>
<td>29.02%</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>-12.52%</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>3.98%</td>
</tr>
<tr>
<td>Revenue Hours</td>
<td>-21.70%</td>
</tr>
<tr>
<td>Vehicles Operated in Maximum Service</td>
<td>-14.96%</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>-29.67%</td>
</tr>
<tr>
<td>Passenger Fare Revenues</td>
<td>-52.12%</td>
</tr>
<tr>
<td>Vehicle Miles per Capita</td>
<td>-47.23%</td>
</tr>
<tr>
<td>Passenger Trips per Revenue Mile</td>
<td>-15.57%</td>
</tr>
<tr>
<td>Weekday Span of Service (in hours)</td>
<td>2.29%</td>
</tr>
<tr>
<td>Operating Expense per Capita</td>
<td>-62.48%</td>
</tr>
<tr>
<td>Operating Expense per Passenger Trip</td>
<td>-22.10%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Mile</td>
<td>-31.08%</td>
</tr>
<tr>
<td>Operating Expense per Revenue Hour</td>
<td>-7.65%</td>
</tr>
<tr>
<td>Farebox Recovery Ratio (%)</td>
<td>-27.86%</td>
</tr>
<tr>
<td>Revenue Miles per Vehicle Mile</td>
<td>1.29%</td>
</tr>
<tr>
<td>Average Fare</td>
<td>-45.02%</td>
</tr>
</tbody>
</table>

Source: FTIS
Section 4: Public Involvement

A public involvement process was developed for the TDP to outline public involvement efforts throughout the TDP process and ensure ample opportunities for the public as well as local agencies and organizations to participate in the development of the TDP. The TDP is developed in accordance with the Space Coast Area Transit TDP Public Involvement Plan (PIP). A copy of the TDP public involvement process has been submitted to and approved by FDOT. Both PIP and FDOT approval are included in Appendix B. This section summarizes the public involvement activities that have been undertaken to date as part of the TDP major update. The components of the public involvement activities are presented below.

Review Committee Meetings

As part of the TDP process, a TDP Review Committee was established to provide oversight and technical feedback. The Review Committee is composed of representatives from the Transportation Disadvantaged Local Coordinating Board (TDLCB), Space Coast Transportation Planning Organization (TPO), Brevard County, FDOT, and Space Coast Area Transit.

The first TDP Review Committee Meeting was held on June 27, 2012. The meeting began with a brief overview of the TDP process, including the advisory role of the Review Committee. The committee members were asked to participate in an exercise to determine the transit needs and vision for the community. The responses provided by the committee members are listed below.

- The baby boomer needs should be reviewed based on the trend of the age group moving closer to downtown areas
- Bus route from Brevard County to Orlando International Airport
- Park-and-ride near Viera Government Center
- Bike racks, cameras, and bus shelters are needed at the Space Coast Area Transit facility
- A review for bus pads should be conducted
- Marketing should be geared to the changing society, including college students and those that may not know the service is available

The second TDP Review Committee Meeting was held on July 23, 2012. The meeting began with a review and discussion of Technical Memorandum #2, including the baseline conditions, relevant plans and policies review, agency trends, and peer review analysis. Next, the committee members were asked to review the previous TDP goals, objectives, and initiatives and make recommendations for removal, modification, or the addition of new goals, objectives, and initiatives. The Review Committee’s recommendations were as follows.
• Incorporate the Complete Streets concept
• Include updated objectives from the latest TDSP
• Add an objective to improve accessibility and visibility at bus stops
• Remove objectives regarding no-shows and Transit Quality of Service as these are no longer relevant
• Add an objective to develop an “App” for Space Coast Area Transit service
• Update vanpool objectives to incorporate ReThink, the regional commuter assistance program provided by FDOT
• Add a goal to improve the passenger experience by making improvements to transfer facilities, including the bus stop location and current bus circulation patterns at the Space Coast Area Transit north facility
• Add an objective to combine multimodal facilities so that passengers can exit the Space Coast Area Transit bus and board the future Amtrak.

Following the discussion on goals, objectives, and policies, Review Committee members were asked to review the prior TDP alternatives and make recommendations for future alternatives that should be considered in the TDP Major Update. The following lists the recommendations from the committee members.

• Service to University of Central Florida (UCF) from somewhere in North Brevard (Brevard Community College Cocoa Campus)
• Service on Murrell Road from Barton Boulevard to Wickham Road
• Routes 22, 25, and 27 improve frequency to 30 minutes
• Improve frequency to 30 minutes throughout Palm Bay
• Service north/south along U.S. 1
• Improve frequency on Route 1
• Additional service on Wickham Road
• Peak hour/express service to the Space Center (AM pickup and PM drop off only)

It was also mentioned during the meeting that as a result of the last Review Committee meeting, 10 Space Coast Area Transit commercials have been scheduled and progress is being made towards the construction of an additional bus shelter at Hammock Landing. The meeting concluded with a schedule update.

The third TDP Review Committee meeting was held on August 8, 2012. The meeting began with a brief overview of the completed and planned public involvement activities. Next, the committee was asked to provide input on topics that should be considered during the completion of the situation appraisal. Some of the topics identified include implications of MAP-21, the need for additional shelters around the county, funding, and the differences between the urban and rural areas in the county. Following the discussion on the situation appraisal, the committee was asked
to review the draft alternatives and build consensus on the need for each proposed improvement and the appropriate implementation years. Input provided by the Review Committee included the following.

- Existing routes should be improved to operate at frequencies that are half of the existing frequency (i.e., 60-minute routes to 30 minutes)
- Implementation years for improvements to existing routes should be based on route performance
- The Port St. John route should be extended to include a portion of Titusville
- Flex-routes should not be considered during the current TDP Major Update
- A route should be added to connect Barefoot Bay, Roseland, and Sebastian
- Potential funding sources for future alternatives may consider a fare increase of $0.25

Other topics that were mentioned during the 3rd Review Committee meeting included:

- The need to develop a shelter design that allows air to flow through the side panels
- The City of Cape Canaveral would be willing to provide funds to cut the sides of the glass on the shelters
- The City of Cape Canaveral is looking for a grant to fund solar panels on top of its shelters
- Space Coast Area Transit is coordinating with the Searstown Mall to establish a transfer point
- Discussions need to occur with the cities and county for the provision of additional funding and staffing support

The meeting concluded with a review of potential dates for the final Review Committee meeting.

The final Review Committee meeting was scheduled to be held on August 27, 2012 at the Government Center located in Viera. The meeting was postponed due to weather conditions caused by Hurricane Isaac and will be rescheduled.

**Stakeholder Interviews**

To assess the attitudes of key local officials and community leaders regarding the transit system, a series of stakeholder interviews were conducted. Some interviews included multiple individuals, while others were one-on-one. The interviews sought to assess political and community leaders’ views on transit’s current and future role in the community, transit finance and governance, and other issues relevant to the transit plan. Key themes that emerged from the interviews are listed below.

- All of the stakeholders are aware of Space Coast Area Transit and its services; however, none of the stakeholders use the system mostly because it is inconvenient and they own their own transportation.
- Stakeholders would like to see more frequent service (especially during peak times on high
demand routes), increased weekend service, later evening service, additional fixed-routes, more direct routes, and circulators.

- The most significant issues facing transit users include:
  - Time to get from Point A to Point B
  - Frequencies are too long
  - Limited number of shelters
- Stakeholders think the current fare is sufficient and an increase would not support the program but rather impact lower income persons. Some stakeholders mentioned that gas tax, sales tax, or private-public partnerships would be a more effective way to increase revenues. However, stakeholders also commented that now is not the time to request any additional taxes.
- Stakeholders commented that congestion only exists in the south part of the county.
- Areas identified as needing additional transit service include:
  - East, west, north, and south trolley connections along Babcock Road, Wickham Road, and U.S. 192
  - Viera
  - Area around the Melbourne Airport
- Most stakeholders commented that regional transportation is needed but not important at this time and service should be improved in Brevard County before connecting to surrounding counties.
- Stakeholders’ 10-year visions for Space Coast Area Transit include:
  - More user-friendly, frequent service with improved amenities, increased ridership, and trolleys going down main roads (U.S. 1, Malabar Road, etc.).
  - Express service going to Orlando in 10 to 20 years.
  - If funded appropriately, considered an integral component of Brevard’s mobility strategy.
  - Space Coast Area Transit has the potential for growth with effective leadership and continued coordination with new development.
- Other comments from the interviews included:
  - Consider developing paid parking garages with new development to generate additional transit revenue.
  - Use of social media to reach certain segments of the populations can be/should be expanded.
  - Services from similar types of counties should be compared to Brevard County’s service, not Miami or Fort Lauderdale.
- Overall, stakeholders believe that Space Coast Area Transit has done an effective job providing and marketing its transit service.
Public Workshops

As part of the TDP planning process, Space Coast Area Transit held two rounds of two workshops for a total of four public workshops. The first workshop was held in coordination with the Space Coast TPO at the Brevard County Government Center, the second workshop was conducted at the Hammock Landing Transfer Center, the third workshop was held at the Space Coast Area Transit north facility located on Varr Avenue, and the final workshop was held at the Searstown Mall. The workshops were geographically dispersed to encourage participation from citizens across Brevard County.

Brevard County Government Center

The workshop at the Brevard County Government Center began with brief presentations on both the TPO project priorities and the TDP. Attendees were asked for any questions and to complete a survey prior to leaving. The workshop was open-house style and participants were encouraged to walk around the room and review the maps and other materials provided. While the format was informal, staff was present at the meeting facility for the timeframe publicly noticed to answer any questions about the plan and describe the services. Schedules and maps were also available. Comments provided on the project survey indicated that Space coast Area Transit is doing a good job and later evening service is needed.

Hammock Landing Transfer Center

The workshop at the Hammock Landing Transfer Center was open-house style with maps, surveys, and Space Coast Area Transit information set up inside of a fixed-route bus. As the passengers arrived at the transfer center, they were encouraged to board the bus, review the information, and provide input for the TDP. For those passengers that either did not want to board the bus or felt there was not enough time between their transfers to participate, staff members asked them to fill out surveys or provide verbal input on the existing and future transit services in Brevard County. Comments received during the public workshop are presented below.

- Later service on Saturday and Sunday service on Malabar Road
- More buses are needed on many routes that are standing room only
- Buses should run until after 11 p.m.
- The Wake Forest Road route has too much time for the number of riders
- Drivers are not following protocol at the flag stop located at Publix and Chase in Hammock Landing
- Service is needed to Heritage High School
- Another bus is needed on Route 25
- Another bus is needed on Palm Bay Road and Malabar Road along Babcock Street
- Route 27 should be switched back to RJ Conlon Road
- Bike racks are needed on the back of the buses
- Frequencies need to be improved to 30-minute routes
- Connections with LYNX are needed
- Route 27 should go to Wal-Mart on certain hours
- Bus service should be provided with extended hours and half fares during the Super Bowl, New Year's Eve, and Christmas holiday shopping
- A stop is needed at the Winn-Dixie
- Service should run all the way along Malabar Road
- Service is needed from the Palm Bay campus of Brevard Community College (BCC) to UCF
- Service should operate north/south along U.S. 1
- Sunday service is needed on Route 25
- More service is needed on the beachside
- More Sunday service is needed
- Later Saturday service is needed
- Buses should go to the Palm Bay Hospital
- Service is needed along U.S. 1 to Malabar and Lighthouse Pointe

The survey results from the workshop indicated the following.

- 60 percent of the respondents perceive Space Coast Area Transit to be satisfactory.
- 100 percent of the survey respondents use Space Coast Area Transit and believe that there is an additional need for service in Brevard County.
- Some areas identified as needing additional transit service include Merritt Island (north of Barge Canal), the entire county, all over the county, Bayside, Route 25 in Palm Bay, South Brevard, Wal-Mart, more stops between Malabar and Palm Bay Road along Babcock, Indian River Line, Eau Gallie Boulevard to U.S. 1, better connectivity between routes, north on I-95, U.S. 192 three miles each way from the Melbourne Square Mall, beach bus on Sunday, extended Sunday hours on Route 21 (at least until Melbourne Square Mall closes).
- 77 percent of the respondents are willing to pay additional local taxes for an expanded transit system.
- 80 percent of the survey respondents are not willing to pay higher fares.
- 78 percent of the survey respondents think more regional transit service is needed to connect Brevard with the surrounding counties and cities, particularly Indian River County, Orlando, Orange County, Tampa, and other areas to the south, north, and west.
- Survey respondents were asked to indicate what type of overall improvement they believed to be most important for Space Coast Area Transit to pursue in the near future. The responses primarily were distributed among improving the frequency of existing bus routes.
(27%), extending bus service to new areas (22%), increasing weekend service (27%), and providing later evening service (24%).

- Survey respondents were asked to indicate the improvement that would interest them in using the Space Coast Area Transit system, if they were not already using the system. While 100 percent of the survey respondents responded that they are current system users, the respondents also provided answers to this question. The responses were distributed among increased frequencies (30%), extended evening service (35%), and increased weekend service (35%).

- Other comments noted on the surveys included a request to increase the transfer ticket time to 2 hours and an extra route to run on Saturday providing service during the lunch hour similar to the weekday schedule.

**Space Coast Area Transit North Terminal**

The workshop at the Space Coast Area Transit North Terminal was conducted in coordination with the TPO. The format was open-house style with maps, surveys, PowerPoint handouts, and information on the TPO’s priority projects and programs. Participants were encouraged to review the list of draft alternatives and provide input on the proposed improvements and new services. Comments received during the public workshop are presented below.

- The Route 25 operates in a loop and requires a trip to Palm Bay to receive a transfer to the Route 27. Passengers should be able to transfer from Route 25 to Route 27 at Babcock Street and University Boulevard.
- Customer service is very helpful in the North Terminal and overall the system is good.
- The implementation year for Sunday service on Route 6 should be moved if funding becomes available or the City of Cocoa agrees to fund the improvement.
- Participants were fine with a fare increase of $0.25 because they need the service.
- Garbage cans are needed at the bus stops.
- The Viera Public Health Department bus stop has no shelter or trees and has only one bench on one side. Space Coast Area Transit should contact the Public Health Department to request funding for a shelter at this location.
- Security cameras are needed outside of the North Terminal.
- The BCC to UCF express alternative must go all the way to Downtown Orlando to obtain the funding for employment purposes.
- Beach side transit service is needed in Melbourne for job access.

**Searstown Mall**

The workshop at the Searstown Mall was conducted in coordination with the TPO. The format was open-house style with maps, surveys, PowerPoint handouts, and information on the TPO’s priority...
projects and programs. Participants were encouraged to review the list of draft alternatives and provide input on the proposed improvements and new services. Comments received during the public workshop are presented below.

- The Port St. John route needs to be modified to go down SR 50 rather than Knox McRae Drive and should extend to the Winn-Dixie on U.S. 1 and the Parrish Medical Center on Grissom Parkway.
- The implementation year for the Port St. John route needs to be prior to 2018.
- A route is needed from Titusville to the Canaveral National Seashore with a stop at the Merritt Island National Wildlife Refuge.
- The Cocoa-to-Kennedy Space Center express should be realigned to start in Titusville.
- An improved transfer hub is needed in Titusville.
- The route along U.S. 1 should operate at 15-minute frequencies.
- The northern portion of the county is underserved.
- Additional gas tax is needed to fund the transit improvements.
- Immediate improvements are needed to the bus stop at the North Terminal. This is not an adequate facility for the public and should be a focus before any other new services.

Discussion Group Workshops

To supplement the information collected during the public workshops and to support the TDP update process, discussion group workshops were held. Two workshops were held with the Space Coast Area Transit operators: one at the north terminal and one at the south terminal. Comments were also provided by the Brevard Workforce Palm Bay Job Club and a future discussion group will be held with the Student Government representatives from Brevard Community College when school is back in session to obtain student input regarding the TDP alternatives.

The intent of the discussion groups were to have facilitated dialogue with users of the system, job seekers, nonusers, and operators to gather views on existing service, expectations for future service, as well as to disseminate information about transit.

During the discussions at the meetings, the following key themes emerged:

North Terminal Discussion Group

- More buses are needed on the routes
- Schedule timing should be reviewed since wheelchairs, too many stops, and red lights put the buses behind schedule
- The trolleys are in terrible condition with broken air conditioners, windows, and inability to kneel for wheelchairs
• The trolley service needs to be marketed to the hotels because tourists do not really ride the service
• Service should go to the Port rather than stopping at Flounder Street
• People sharing transfer tickets is a problem
• Collecting the fare is an issue, particularly the full fare since many passengers think they qualify for half fares
• Bus service does not go into any higher class neighborhoods
• Equipment is needed, including cameras
• Bus service should go farther south on U.S. 1, at least to Clayton Crab Company
• The terminal needs security
• The fare should be increased or charge one daily rate without transfers; a reasonable fare would be at least $2 each way
• Reduced fare ID cards are needed to eliminate unqualified passengers from trying to get the reduced fare
• West Cocoa should be an all day route rather than just a few hours to serve the Waffle House, etc.
• The Merritt Island route should go at least to the courthouse
• Children who ride free should be identified on library cards
• Bus service is needed on Murrell Road to serve the apartments and low-income persons living in the area
• Route from BCC to UCF would be good, but the problem would be setting the fare appropriately
• Fareboxes that indicate the fare has been remitted would help with fare collections
• The service span on the beaches should be extended to after the bars close
• Service is needed in the center of Titusville
• Service is needed in Port St. John from Grissom Parkway to U.S. 1 and to the Space Coast High School
• Need buses that are equipped to hold additional bicycles; shared-ride bike program will not work because people will steal the bicycles
• The Murrell Road route may not be successful due to the demographics of the area
• West Cocoa should get additional service based on ridership
• The majority of funding is spent in the south county because the people living in that area have money; however, the ridership is low
• More shelters are needed
• Road supervisors are needed
• Passes should be sold in Cocoa Beach either from the farebox or at the Port
• Reservationists need Global Positioning Systems (GPS) on the buses
• Signal timing and design should be reviewed at Varr Avenue and SR 520; the signal timing takes too long and the angle turn is dangerous
Transfer connections need improvement
Designated stops are needed rather than the flag stops
Route along Malabar Road stopping at the Palm Bay Hospital
Bus pullout bays should be considered in coordination with police enforcement; two-lane roads should be the first priority
A no-show policy is needed; currently, nothing is being done to suspend service for no-shows
Reservationists are having problems with the volume on their headsets and need replacements
Operators would like to see an increase in pay and a better union
Mobile Data Terminals (MDTs) with icons would be better than radios
The routes should not go near homes, but rather stay on the major roadways
Routes 1, 6, and 8 should not go through Rosa L. Jones
Bus stop improvements are needed

South Terminal Discussion Group
Route from Melbourne to the beach
Service is needed around I-95 and U.S. 192 for the commercial businesses
New fareboxes are needed to reduce arguments over fare collections and to issue the transfer tickets
The reduced fare is a problem with most passengers attempting to pay the half fare
A route is needed in Malabar down Babcock Street to Palm Bay
A route is needed along U.S. 1 in Malabar
Adding GPS to the buses would be good
Fixed-route and paratransit dispatch should be separated
Bikes should not go inside the buses; consideration should be given to storing the bikes in the back interior of the bus
All bus stops should be fixed and not flag stops
Buses should be kept on the main corridors
The ADA announcements on the buses need improvement because they cannot be heard from the pulled tapes; consideration should be given to implementing Talking Bus
Passengers complain about not having service from Wickham Road and Eau Gallie all the way to the beach
Route 25 needs to be reviewed since paratransit vehicles are being dispatched to cover a portion of that route at times; an additional bidirectional bus may help to solve the overcrowding issue
Service to the Palm Bay Hospital is needed
Stickers should be added to the back of the buses to assist with pulling back onto the road
Connections are needed to Sebastian and Fellsmere
• Service is needed to the Citrus packaging plant in Gifford with pickups from Port Malabar and U.S. 1
• Service from Pineda to Malabar along U.S. 1
• Express service from Brevard County to Orange or Seminole County
• The bus stops are not lined up across streets; therefore, passengers exiting the buses on the street must look around for the bus stops
• The bus stop signs on Route 28 along Wickham Road are located in the ditches and are not safe for persons with disabilities or older persons
• Education for the local governments is important
• People may pay more for the service if they got better transit service
• Connections points with bathrooms are needed
• Light up signals at bus stops would help the night operators know to stop, especially on Route 4
• Service is needed from San Filipo to Melbourne
• Bus service is needed on Degroot Road, particularly where the high school is located
• Service is needed to the businesses along Ellis Road
• Signal timing needs to be reviewed for Downtown Melbourne, particularly the light coming out of the BCC campus
• BCC shuttle connecting all of the campuses should be considered
• Students at Florida Institute of Technology want more frequent service and service to the beaches
• Routes should also be considered for U.S. 1 and Malabar to Heritage High School, U.S. 1 and Micco, and U.S. 1 up to Port Malabar Boulevard connecting to Route 27
• A transfer point is needed at the Winn Dixie in Palm Bay West

Brevard Workforce Palm Bay Job Club

• Participants at the Palm Bay Job Club commented that there are several areas with job opportunities that lack available transportation services. Some of the identified transportation needs include:
  o Extended service to Babcock Road
  o Service to Heritage High School
  o Service down Malabar Road to the Palm Bay Hospital
  o More transit service in Titusville
  o Improved frequencies on the existing routes

On-Board Survey

As part of the TDP public involvement process, an on-board survey of bus passengers was conducted on a weekday (April 26, 2012) and a Saturday (April 28, 2012). On-board surveys are an
important service assessment tool employed by public transportation agencies. Feedback from the on-board survey effort will assist Space Coast Area Transit in planning for immediate service improvements and in determining future transit need in Brevard County. In addition, Space Coast Area Transit can use the on-board survey results to determine the demographic make-up and travel characteristics of its existing customer base. The survey questionnaires that were utilized are similar in format and in the types of questions asked by Space Coast Area Transit during other major on-board survey efforts completed in 2008 and 2004. This was done to allow for comparative analysis of current and historical survey results. Appendix D includes the approach and results of the on-board survey.
Section 5: Review of Plans, Studies, and Policies

A major component of the TDP Update is the review of transit policies and their relationship to Space Coast Area Transit. This chapter reviews transit policies at the local, state, and federal levels of government. Various transportation planning and programming documents are summarized, with an emphasis on issues that may have implications for public transportation in Brevard County.

The following local plans were reviewed in order to understand current transit policies and plans with potential implications for transit services and to help the TDP become a plan that will guide local transportation decision making:

- Space Coast TDP and 10-Year Vision (2008-2013)
- Space Coast Transportation Disadvantaged Service Plan (TDSP) Update (2007)
- Space Coast 2035 Long Range Transportation Plan (2011)
- Brevard County Comprehensive Plan (2011)
- East Central Regional Rail Trail PD&E Study (2010)
- City of Cocoa Comprehensive Plan (2011)
- City of Cocoa Beach Comprehensive Plan (2010)
- Town of Grant-Valkaria Comprehensive Plan (2010)
- City of Melbourne Comprehensive Plan (2010)
- City of Palm Bay Comprehensive Plan (2001)
- City of Rockledge Comprehensive Plan (2011)
- City of Satellite Beach Comprehensive Plan (2009)
- City of Titusville Comprehensive Plan (2011)
- City of West Melbourne Comprehensive Plan (2011)

In addition, the following state and federal plans also were reviewed:

- Florida Transportation Plan (FTP)
- State Growth Management Legislation (House Bill 7207)
- FDOT Work Program
- State of Florida TD Five-Year/Twenty-Year Plan
- MAP-21
- Clean Air Act of 1990
- Title VI and Environmental Justice Circulars
- DOT Livability Initiative and Federal Sustainable Communities Program
Local Plans and Policies

Space Coast TDP & 10-Year Vision (2008-2013)

The 2008-2013 Space Coast TDP & 10-Year Vision established a number of prioritized action items to be undertaken to implement the ten-year plan. The 2013-2022 Space Coast TDP will consider the goals and action items from the previous TDP and build on them as applicable. Some of the ongoing and near-term actions include the following:

**Emphasize Coordination and Compliance:** Continue the employee input process, improve coordination with cities in the County; continue to ensure that the fixed-route service is in compliance with the Americans with Disabilities Act (ADA); continue coordination with major employers to provide transportation for work trips; pursue coordination efforts with the Central Florida Regional Transportation Authority (LYNX) to eliminate any overlapping services; continue coordination with the Space Coast Transportation Planning Organization (TPO) and local governments to consider transit opportunities in conjunction with corridor or area transportation studies and follow-up on transit-related recommendations resulting from corridor or area transportation studies.

**Improve Transit Infrastructure:** Continue to expand the park-and-ride lot program; complete installation of bus stop signs; establish superstop/transfer centers at major locations where bus routes intersect; install bus shelters and benches at appropriate locations; consider incorporating Intelligent Transportation Systems (ITS) technologies.

**Enhance Transit System Efficiency and Travel Options:** Emphasize the connection between transit and land use; continue to support the vanpool program; review the route numbering scheme used for bus routes; consider increasing frequency of service on selected routes as funds are made available; pursue permanent funding options for extended hours and weekend service.

**Emphasize Education and Outreach:** Increase education about the half-price bus pass program; fully implement the strategies and goals of the 2005 Marketing Plan; consider implementing a travel training program to assist seniors with the utilization of the fixed-route bus system; consider the expansion of Volunteers in Motion (VIM) program through partnerships with other Brevard County volunteer programs.

**Space Coast Transportation Disadvantaged Service Plan (2007)**

The TPO TDSP is the region’s Locally Developed Coordinated Public Transit-Human Services Transportation Plan for delivering public transportation services to meet the needs of individuals with disabilities, older populations, and individuals with limited income. It was developed through
a collaborative process by the members of the TPO, local government officials, Brevard County Local Coordinating Board, FDOT, Space Coast Area Transit, and citizens to ensure that the TDSP is consistent with the goals and objectives of locally adopted comprehensive and transportation plans.

The current TDSP, which was adopted in September 2007, identified a number of unmet needs within the Brevard County region, including limited accessibility to fixed-route service for persons with disabilities, inefficiencies in customer service, inadequate personal transportation options for persons with disabilities, inadequate and insufficient information on transportation options that are available to persons with disabilities and their families, and lack of understanding and awareness by local officials, policy-makers, legislators, and the general public of the daily challenges and obstacles experienced by persons with disabilities in their efforts to get to and from work. The TDSP also identified barriers to coordination and recommendations to address each identified barrier. For example, rural and/or suburban areas are less likely to have mobility needs met due to limited services, fewer activities, and increased distances to destinations. The recommended approach to deal with this barrier is to improve service to rural and suburban areas with paratransit services, improve service efficiency through the use of advanced technology and computerized dispatching and mapping systems, and provide for better coordination of transportation services among agencies locally and regionally.

The TDSP also provides goals, objectives and strategies for the long-term planning horizon. Its goals include implementing a fully coordinated transportation system, enhancing citizen mobility by increasing public transportation service to county citizens, improving rider responsibility and experience, ensuring program accountability, and securing funding necessary to meet service needs. Based on the Space Coast Area Transit 5-Year Budget from fiscal year 2008 through fiscal year 2012, in 2012, Space Coast Area Transit will have total revenues of $18,884,452 with expenses estimated at $20,794,616, resulting in an estimated shortfall of $1.9 million. Space Coast Area Transit will continue to work with local, state, and federal agencies to continue to obtain funding necessary to meet the service demands of transportation disadvantaged citizens.

**Space Coast 2035 Long Range Transportation Plan**

The TPO 2035 Long Range Transportation Plan (LRTP) was developed in coordination with a technical advisory committee of staff from local, regional, and state agencies as well as citizen advisors, the general public, and local decision-makers. Key components of the plan development process included identifying anticipated Year 2035 system capacity, system needs, cost estimates for the identified needs, and the projections of financial resources and revenues anticipated to be available by the Year of Expenditure (YOE). The resulting 2035 Cost Feasible Plan reflects an array of projects to provide the best possible plan for ensuring mobility and accessibility for the region’s people and goods in a cost-efficient manner.
In general, key projects within the Cost Feasible Plan (CFP) include a select number of critical highway and transit capacity expansion projects, such as additional lanes and routes along major corridors, supported by an array of multimodal strategies to improve traffic and transit operations, including intersection signal coordination, roadway connectivity, transit service frequency increases, and pedestrian/bicycle route development. Though the majority of the CFP is funded, including regional priority projects along Interstate 95, St. Johns Heritage Parkway, U.S. 1, and U.S. 192, the 2035 LRTP indicates that there is insufficient revenues to fund all of the needed projects and that the TPO, Space Coast Area Transit, and local governments should begin planning for future express bus service and other transit options to encourage mode shift on I-95 by 2020. Notwithstanding the CFP projects, the primary focus of the 2035 LRTP is placed on making the existing system more efficient through a number of operational improvements and investments in multimodal options to support the use of transit as reflected in Table 17 of the Cost Feasible Plan. Transit projects, as reflected in the CFP, include a new route along Grissom Corridor from Titusville to Cocoa and projects to increase frequency on four existing routes (Routes 6, 21, 23, and 28) within the next 20 years.

In addition to the projects, a series of policy and coordination recommendations arose from the plan development process for each element of the LRTP. The recommendations for the transit system element were focused on coordinating land use and transportation policies in order to optimize the performance gained by transit network improvements. Highlights of the transit system recommendations include:

- Facilitate coordinated planning among the TPO, Space Coast Area Transit and local governments to add more fixed-route and express bus services;
- Focus federal and state funds on regional roadway network, which provides the greatest benefit to transit operations and maintenance;
- Provide transit system improvements through Complete Streets projects;
- Encourage land use and design activities that complement transit usage along designated multimodal corridors; and
- Encourage participation in statewide initiatives on regional high speed rail and passenger rail, including station area and transit-oriented development (TOD) planning in Brevard County.

The plan development process afforded an opportunity for the TPO, Space Coast Area Transit, and local governments to work together to identify needs and desired outcomes and establish policy and planning directives that many of the local governments have adopted into their comprehensive plans. The summary of Local Government Comprehensive Plans below support and, in some instances, reiterate the value and benefit in coordinating land use development activities with transportation planning efforts in order to optimize existing public transportation infrastructure and promote and encourage infill developments and redevelopments.
Brevard County Comprehensive Plan (2011)

Brevard County’s goal is to provide a “safe, convenient and energy efficient transportation system ... that supports the community ... and enhances the mobility of people and goods while reducing reliance on automobile and minimizing impacts to neighborhoods, cultural resources and natural habitats.” To this end, the County’s comprehensive plan has a number of objectives and policies within its Future Land Use and Transportation Elements that promote and support the use of multimodal transportation systems.

Within its Transportation Element (TE), Brevard County has adopted Objective 4 to encourage multimodal transportation alternatives to accommodate existing and proposed major trip generators/attractors, Objective 6 to recognize the interrelationship of land use patterns and transportation needs, and Objective 11 to establish complete streets policies to enable safe access for the community.

Pursuant to Objective 1, the performance of roadways and other modes (including transit) is to be routinely monitored as appropriate. To achieve Objective 4, the County routinely considers transit as a supplement to road improvements (Policy 4.2), cooperatively works with municipalities to establish parking strategies and park-and-ride sites (Policy 4.3), and continues to promote expansion of vanpool programs and services to the transportation disadvantaged to the extent practicable (Policies 4.4 and 4.5). The County also participates in the “welfare-to-work” plan, which recognizes the important role that transit plays in assisting citizens in the transition from welfare to employment. Brevard County also encourages land use patterns and site planning activities that can be conveniently and economically served by transit, bicycle, and pedestrian modes (Policy 6.6). Furthermore, the County encourages streets, bridges, and transit stops to be planned, designed, operated, and maintained in a way that pedestrians, bicyclists, transit users, and motorists can travel safely (Policy 11.4). Transit vehicles, facilities, and routes are elements of the County's Complete Streets Program (Policy 11.5). An essential component of transit planning is public participation. Objective 7 stipulates that the County shall encourage public involvement in the transportation planning process, and Policies 7.1 through 7.4 define the guidelines for obtaining public input.

Within its Future Land Use Element (FLUE), Policy 2.13 allows residential developments within Neighborhood Commercial and Community Commercial land use designations. The integration of residential into commercial developments is encouraged to utilize public transit and neo-traditional development techniques. In Objective 9, the County has adopted standards and incentives for large-scale, mixed-use projects – termed the New Town Overlay (NTO). An example of such a new town is Viera. The NTO encourages the use of transit and addition of transit corridors. The Future Land Use Element also contains redevelopment and re-gentrification

**East Central Regional Rail Trail PD&E Study (2010)**

The East Central Regional Rail Trail (ECRRT) PD&E Study was conducted in Volusia and Brevard Counties to identify the social and environmental issues associated with the proposed action to convert an abandoned rail corridor into a multi-use paved trail. The 46-mile ECRRT corridor under evaluation begins at Canaveral Avenue in Titusville, traverses into Volusia County and terminates at SR 415 in Osteen. An additional segment starts in Maytown in Volusia County, terminating at Dale Street in Edgewater. The proposed alignment of the 12-foot wide, paved, multi-use trail will be within the purchased right-of-way. Trail amenities developed and analyzed within this study included trailheads and “pocket pavilions.” A trailhead will allow access to the trail, and may include a shelter or building with or without restrooms, a paved or unpaved parking lot, trail information, and other related amenities. A trailhead may be within or outside of the trail right-of-way. Pocket pavilions are shelters that may or may not have restrooms, and are located within the trail right-of-way.

**City of Cocoa Comprehensive Plan (2010)**

The City of Cocoa’s transportation goal is to provide a safe, efficient, and comprehensive multimodal transportation system that is available to all residents and visitors. In addition to the mobility strategies established in TE Objective 2.1.3, the City also adopts public transit provisions (Objective 2.1.12) that require the City to coordinate with Brevard County, Space Coast TPO, Space Coast Area Transit, and neighboring municipalities to determine public transportation demands and establish new public transportation management solutions and routes (including transit stops, terminals, maintenance, and improvements) to serve the general population and special needs populations (Policies 2.1.12.1 and 2.1.12.3). The City routinely considers transit as an alternative to roadway improvements (Policy 2.1.12.5) and periodically reviews its Land Development Regulations and offers incentives to developers to ensure that development allows and encourages accessibility to public transit (Policies 2.1.12.6 and 2.1.12.7). Cocoa also requires, within its FLUE Objective 1.2.1, that new developments incorporate “Smart Growth” principles, including requiring new developments and infill developments to provide connectivity to public transit (Policy 1.2.1.6).

**City of Cocoa Beach Comprehensive Plan (2010)**

The City of Cocoa Beach strives to provide a functional transportation network that ensures safe, convenient, and energy efficient mobility within the city through a variety of transportation modes, including transit. Through its TE Objectives and Policies, the City continually investigates, in conjunction with the County and Space Coast Area Transit, opportunities to improve the efficiency
of its multimodal transportation system (Objective V-A.2) and appropriate standards to improve accessibility to transit services (Policy V-A.2.3). The City also requires new commercial and residential developments to provide transit amenities, such as bus stop improvements or dedicated spaces for shelters, stops, etc., if they are located on an existing or proposed bus route. Such developments are also required to provide transit information to employees and/or residents (Policy V-A.4.4). The City of Cocoa Beach also encourages Space Coast Area Transit to investigate the use of transit services during times of evacuation to reduce traffic volumes on the evacuation routes (Policy V-A.5.2).

**Town of Grant-Valkaria Comprehensive Plan (2010)**

The Town of Grant-Valkaria was incorporated on July 25, 2006, by referendum joining the communities of Grant and Valkaria. It is located in Brevard County south of Melbourne bordered by Malabar to the north, Palm Bay to the west, Micco to the south, and the Indian River Lagoon to the east. The Town adopted its comprehensive plan on October 26, 2011. With respect to transportation, the Town’s goal is to provide a safe, convenient, and energy efficient transportation system that supports the community and enhances mobility of people and goods. The Town recognizes the inter-relationship of land use patterns and transportation needs (TE Objective 4) and encourages land use patterns and site planning activities that can economically and conveniently be served by transit, bicycle, and pedestrian modes (Policy 4.4). Policy 7.4 also establishes that the Town will provide measures for the acquisition and preservation of public transit rights-of-way and corridors when necessary.

Additionally, as part of its energy conservation goals (FLUE Objective 13), the Town promotes development patterns that reduce the need for new roads and infrastructure, encourages the use of multiple modes of transportation, and provides access to future transit routes. To that end, the Town will work with Space Coast Area Transit to help determine the feasibility of establishing transit service (FLUE Policy 13.3) within the Town.

**City of Melbourne Comprehensive Plan**

The goal of the City of Melbourne’s TE is to provide a safe, efficient, and convenient transportation system that considers both motorized and non-motorized users of the transportation network. Objective 1.7 promotes the development of a multimodal system to reduce individual motor vehicle travel. Through Policies 1.7.1 through 1.7.19, the City shall design all major roadways as complete transportation corridors incorporating transit, bicycle, and pedestrian facilities (Policy 1.7.1), and require connectivity between public transit and developments along future collector roads (Policy 1.7.2). Other policies in this Objective promote and encourage other modes that support the use of transit, including improvements and enhancements to bicycle and pedestrian facilities, creation of pedestrian-friendly environments and streetscapes, and parking standards to encourage walking.
Additionally, by 2014, in coordination with the Space Coast TPO, the City of Melbourne shall evaluate the need for additional public transit routes to serve major trip generators and attractors (Policy 1.7.16) and update the Land Development Regulations to include site and building design standards for development in public transportation corridors to assure accessibility of the new development to transit (Policy 1.7.17). The City also measures annual transit trips per capita as one indicator of achieving the City's mobility goals (Policy 1.5.4).

The City of Melbourne also aims to achieve a sustainable and energy efficient environment and has adopted provisions within both the TE and the FLUE to encourage the use of transit and other modes of transportation in efforts to reduce greenhouse gas emissions. Specifically, Policy 1.13.2 promotes sustainable developments through master planned communities that feature a strong pedestrian network with access to dedicated transit corridors. Policy 1.19.2 promotes walking, bicycling, and use of transit by requiring compact design, shared facilities between adjacent or nearby uses, and interconnectivity between transit stops and walkways, bicycle ways, and parking.

City of Palm Bay Comprehensive Plan (2001)

The City of Palm Bay desires to serve the transportation needs of all residents and visitors by providing a safe, balanced, efficient, and comprehensive transportation system. Objective 1-5 of the TE states that the City shall work to increase ridership on mass transit and paratransit service within the City. The implementing policies under this Objective include Policy 1.5C, which incorporates bus benches, shelters, park-and-ride lots, and bus stops into design plans for new or revised development projects; Policy 1.5D, which requires coordination with the TPO, FDOT, Area Agency on Aging, and Space Coast Area Transit in the provision of public transit and/or paratransit service; and Policy 1.5E, which requires that brochures, newsletters, and other informational materials regarding the availability of public transit and paratransit services be made available to transportation disadvantaged groups. Objective 1.9 of this Element states that the City's multimodal transportation system shall be coordinated with the FLUE. Through Policies 1.9A and 1.9B, the City requests Space Coast Area Transit to provide transit service to all major traffic generators/attractors, major employers, and employment centers within the City. The TE also requires the development of land use, site design, and building design guidelines for development activities within "exclusive public transit corridors" within the City (Policy 1.9D). This policy may have been created with the possibility of the high speed rail or other exclusive premium transit service or facility in mind. The City works to ensure consistency between the Transportation and FLUE relative to policy direction on transportation planning and land use patterns (including housing and employment patterns).
City of Rockledge Comprehensive Plan

The TE states that the City shall provide a safe and efficient transportation system that offers a variety of transportation mode options. According to Section 2-K of the City of Rockledge's adopted comprehensive plan, the City Council adopted and included within the TE the goals, objectives, and policies of the Space Coast TPO which provides for a comprehensive and coordinated transportation system for the safe and efficient movement of people and goods. However, neither the TE nor the FLUE contains provisions that specifically promote, support, or encourage the use or enhancement of public transportation.

City of Satellite Beach Comprehensive Plan (2009)

According to the FLUE, the City of Satellite Beach is roughly 98 percent built out. Thus, the City, through its various Plan Elements, promotes land use patterns that foster a healthy and attractive physical environment (FLUE Goal 1) and that support the use of alternative modes of transportation, including mass transit, bicycle, and pedestrian facilities, over individualized vehicle uses (TE Goal 1). Satellite Beach encourages infill and redevelopment of properties within the City and continually works with Brevard County and Space Coast Area Transit in establishing policies and standards that promote housing in close proximity to employment opportunities and transit services (TE Policy 1.1.12). The City’s goal is to develop a transportation system, including a traffic circulation and public transit system, that ensures safe and efficient movement of people and goods based on major trip generators and the special needs of the transportation disadvantaged – at reasonable cost and minimum detriment to the environment. Objective 1.6 of the TE requires the City to provide periodic inputs into the Space Coast Area Transit and other mass transit service providers to address efficiencies in meeting the special public transportation needs of the transportation disadvantaged. Additionally, the City works and coordinates with Space Coast Area Transit to survey area residents on ridership requirements (TE Policy 1.6.1) and to provide transportation-related recommendations within Satellite Beach every five years, including recommendations on terminal locations, route structuring, scheduling, bus bay locations, and optimizing facilities (TE Policy 1.6.2). To further support transit use and overall mobility, the City will implement and improve upon, as resources permit, the recommendations of the Citizen’s Ad Hoc Bicycle/Pedestrian Committee for development of a network of recreational trails, which connect significant destinations within the City and which pass within 500 feet of roughly 90 percent of the residences in the City (TE Policy 1.3.4).

City of Titusville Comprehensive Plan (2011)

The City of Titusville’s adopted FLUE does not contain any references to transit facilities and services. The TE identifies two Space Coast Area Transit routes operating in and serving the City
(Routes 2 and 5); however, based on the Existing and Future Transit Service Maps (Maps 4, 9, and 14), there are no additional transit stops planned along these two routes in the short- or long-year planning horizons (2015 and 2020). Objective 1.5 speaks to examining the need for transit services based on existing and proposed major trip generators and projected growth, and Policies 1.1.9 and 1.5.2 require new developments of regional impact (DRIs) or other large scale planned developments to make contributions, enhancements, or provisions towards the public transportation system. However, there is not a strong requirement within the TE requiring transit as part of site design or the development approval process. Additionally, there are no provisions requiring connectivity or accessibility to transit for new developments, redevelopments, or infill developments in general; neither are there provisions that promote, encourage, or incentivize the use of public transit.

City of West Melbourne Comprehensive Plan

In addition to its Transportation Services Standard Element, the City of West Melbourne has adopted a Multimodal Transportation Element (MMTE) with implementing goals, objectives, and policies. The MMTE’s goal is to provide for the mobility needs of City residents and visitors by supporting, promoting, and encouraging a safe, accessible, and efficient transportation system with varied alternatives, improved connectivity, and enhanced quality of life. This goal is to be achieved through implementation of a sequence of planning directives and objectives. Objective 1 fosters a comprehensive multimodal system to meet the needs of pedestrians, bicyclists, public transportation riders, and motorists. Objective 2 establishes user-based financing strategies as the preferred means to fund new transportation and transit improvements and programs. Objective 3 utilizes transportation land use master planning strategies as a means of coordinating future land use practices with the expansion and improvement of the multimodal transportation system. Lastly, Objective 4 ensures the development of a linked/connected transportation system that provides connectivity between the City of West Melbourne and the larger Brevard County area. The implementing policies under these planning objectives provide specific standards and guidelines addressing roadway alternatives to connect community centers, neighborhoods, schools, civic buildings, and parks/recreation areas and the pedestrian network to increase opportunities for walking to shopping, services, employment, schools, and other destinations. Objective 7 of the City’s Future Land Use Element also provides for the coordination of land use development practices and transportation planning efforts to improve connectivity between uses and foster the use of transit, ride sharing, bicycling, and walking. Policy 7.1 of this Objective establishes multimodal strategies that include, among other strategies, community transit service, transit facility enhancements, modified parking standards, complete streets policies with pedestrian and bicycle enhancements, and transportation demand management programs.
State Plan and Policies

Florida Transportation Plan (FTP)

In 2010, FDOT completed the 2060 Florida Transportation Plan Update, which looks at a 50-year transportation planning horizon. The 2060 FTP calls for a fundamental change in how and where Florida invests in transportation. The FTP defines transportation goals, objectives, and strategies to make Florida’s economy more competitive, communities more livable, and the environment more sustainable for future generations. Pertinent long range goals and objectives are provided below.

- **Goal**: Invest in transportation systems to support a prosperous, globally competitive economy.
  - **Objective**: Improve transportation connectivity for people and freight to established and emerging regional employment centers in rural and urban areas.
  - **Objective**: Invest in transportation capacity improvements to meet future demand for moving people and freight.

- **Goal**: Make transportation decisions to promote responsible environmental stewardship.
  - **Objective**: Plan and develop transportation systems and facilities in a manner which protects and, where feasible, restores the function and character of the natural environment and avoids or minimizes adverse environmental impacts.
  - **Objective**: Plan and develop transportation systems to reduce energy consumption, improve air quality, and reduce greenhouse gas emissions.

- **Goal**: Maintain and operate Florida’s transportation system proactively.
  - **Objective**: Achieve and maintain a state of good repair for transportation assets for all modes.
  - **Objective**: Minimize damage to infrastructure from transportation vehicles.
  - **Objective**: Optimize the efficiency of the transportation system for all modes.

- **Goal**: Improve mobility and connectivity for people and freight.
  - **Objective**: Expand transportation options for residents, visitors, and businesses.
  - **Objective**: Reinforce and transform Florida’s Strategic Intermodal System facilities to provide multi-modal options for moving people and freight.
  - **Objective**: Expand and integrate regional public transit systems in Florida’s urban areas.
  - **Objective**: Increase the efficiency and reliability of travel for people and freight.
  - **Objective**: Integrate modal infrastructure, technologies, and payment systems to provide seamless connectivity for passenger and freight trips from origin to destination.
In summary, the FTP supports the development of state, regional, and local transit services. The growth in Florida requires new and innovative approaches by all modes to meet the needs today and in the future.

**State Growth Management Legislation (House Bill 7207)**

House Bill (HB) 7207, named the Community Planning Act, was signed into law on June 2, 2011. That bill is intended to stimulate Florida's economic development and economic recovery by taking state government out of the development business and giving the responsibility of community planning back to local communities. The landmark legislation is the biggest change to growth management laws in many years, repealing most of the State-mandated growth management planning laws that have governed development activities within Florida since the original Growth Management Act of 1975. As of June 3, 2011, the role of state and regional agencies in the review of comprehensive plan amendments and the time needed to process the majority of plan amendments has been significantly reduced, and many development and plan amendment hurdles have been modified throughout the state – transportation concurrency being one of the main hurdles. State-mandated concurrency requirements have been repealed and, consequently, a large share of growth management responsibility has shifted to cities and counties.

The new legislation also supersedes Senate Bill (SB) 360, the Community Renewal Act, which required the preparation of mobility plans within dense urban land areas (DULAs) and Transportation Concurrency Exemption Areas (TCEAs). Instead, a local jurisdiction interested in implementing its own concurrency ordinance or mobility plan can still do so, but will have limitations on how to implement and enforce the ordinance. HB 7207 strengthens legislative language that supports multi-modal approaches to transportation by stating that Comprehensive Plan Transportation Elements "shall provide for a safe, convenient multi-modal transportation system" (F.S. Section 163.3177 [6b]).

**FDOT Work Program**

FDOT annually develops a Five-Year Work Program. The Work Program is a project-specific list of transportation activities and improvements developed in cooperation with the TPO and local transportation agency. The Work Program must be consistent, to the maximum extent feasible, with the capital improvement elements of local government comprehensive plans.

The Tentative Work Program is presented to the Legislature at the beginning of each legislative session. It identifies transportation projects and programmed funding by year and is adopted by July 1 each year.
Once adopted, the Work Program is used by FDOT to develop the State Transportation Improvement Program (STIP) that is used at the federal level to ensure that planning efforts are consistent with federal guidelines. All transit funding coming through FTA must be included in the STIP before a grant award can be finalized and approved. Close coordination with FDOT on the programming of federal funds is required in the development of the Tentative Work Program, as well as throughout the year as federal adjustments and allocations are announced.

State transit planning and programs encourage the growth of public transportation services and support the increasing local investment in transit systems. The State has several funding programs that are available if local areas are able to commit to a dedicated funding source for system development and expansion. Legislation passed over the past few years indicates that the State plans to continue to foster a multimodal approach to transportation investment.

**State of Florida TD Five-Year/Twenty-Year Plan**

Developed by the Commission for the Transportation Disadvantaged (CTD), this plan is required under the Florida Statutes and includes the following elements:

- Explanation of the Florida Coordinated Transportation System
- Five-Year Report Card
- Florida Office of Program Policy Analysis and Government Accountability Review
- Strategic Vision and Goals, Objectives, and Measures

The long-range and five-year strategic visions were reviewed and used for guidance and are indicated below.

**Long-Range Strategic Vision**

Create a strategy for the Florida CTD to support the development of a universal transportation system with the following features:

- A coordinated, cost-effective multi-modal transportation system delivered through public-private partnerships.
- A single, uniform funding system with a single eligibility determination process.
- A sliding scale of fare payment based on a person’s ability to pay.
- Use of electronic fare media for all passengers.
- Services that are designed and implemented regionally (both inter-county and inter-city) throughout the state.
**Five-Year Strategic Vision**

Develop and field-test a model community transportation system for persons who are TD incorporating the following features:

- Statewide coordination of community transportation services using Advanced Public Transportation Systems including Smart Traveler Technology, Smart Vehicle Technology, and Smart Intermodal Systems.
- Statewide coordination and consolidation of community transportation funding sources
- A statewide information management system for tracking passenger eligibility determination.
- Integration of Smart Vehicle Technology on a statewide multi-modal basis to improve vehicle and fleet planning, scheduling, and operations. This effort includes vehicle and ridership data collection, electronic fare media, and geographic information system (GIS) applications.
- Development of a multi-modal transportation network to optimize the transportation system as a whole, using Smart Intermodal Systems. This feature would be available in all areas of the state via electronic access.

**Federal Plans and Policies**

**MAP-21**

On July 6, 2012, Moving Ahead for Progress in the 21st Century (MAP-21) was signed into law. MAP-21 provides for two years of funding for surface transportation in FY 2013 and 2014. Formula funds for urban transit, rural transit, and transportation for seniors and people with disabilities remain roughly the same in MAP-21. The Job Access and Reverse Commute and New Freedom programs are consolidated into formula funds, while capital funding for bus and bus facilities have slightly reduced funding levels in the new legislation. MAP-21 emphasizes safety and asset management, and introduces the Transportation Emergency Relief Program. MAP-21 generally avoids discretionary programs while favoring formula-based concepts.

**Clean Air Act of 1990**

The Clean Air Act of 1990 and subsequent amendments determine the National Ambient Air Quality Standards (NAAQS). NAAQS are standards based on the amount of particulate matter in the air, measured in parts per million of the following pollutants:

- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO₂)
On January 6, 2010, Environmental Protection Agency (EPA) proposed revisions to the NAAQS for ground-level ozone. The revisions are based on scientific evidence about ozone and its effects on people, sensitive trees, and plants. The proposed revisions would affect two types of ozone standards. The first standard affected deals with protection of public health, including the health of at-risk populations such as children, people with asthma, and older adults. The secondary standard affected by revisions deals with protection of public welfare and the environment, including sensitive vegetation and ecosystems. Specifically, the EPA proposes to revise the existing ozone standards and update the Air Quality Index (AQI) for ozone.

An area meeting NAAQS standards is classified as an “attainment area.” EPA’s reconsideration of the Clean Air Act health standard for ground level ozone is currently going through interagency review led by the Office of Management and Budget (OMB). Following completion of this final step, EPA will finalize its reconsideration. Due to the current state of the economy, and the financial burden that higher environmental standards are expected to place on corporations, President Obama announced September 2, 2011, that the EPA’s tighter standards would not be implemented. The anticipated implementation of the new standards will not be until 2013.

**Title VI Circular and New Environmental Justice Circular**

FTA has issued a new Environmental Justice (EJ) Circular with an effective date of August 15, 2012 and revised the Title VI Requirements and Guidelines for FTA Recipients with an effective date of October 1, 2012. The changes will likely impact transit agencies, metropolitan planning organizations (MPOs), and state departments of transportation (DOTs). The EJ Circular moves EJ language to the new circular with the exception of the service and fare equity analysis section that remains in the Title VI Circular. In addition, the EJ Circular provides further clarification and additional details on the various steps. Notable changes to the Title VI Circular include the following:

1. All recipients, including MPOs, are required to submit Title VI programs every three years.
2. Title VI program must be approved by grantee’s Board of Directors or equivalent before it is submitted to FTA.
3. Grantees must submit all documents that comprise a complete Title VI Program, even if the documents have not changed since the last submission.
4. Reporting requirements are based on whether the transit provider operates 50 or more fixed route vehicles in peak service and are located in an urbanized area of 200,000 or more in population.
5. Transit providers operating 50 or more fixed route vehicles in peak service and are located in an urbanized area of 200,000 or more in population are required to evaluate service and fare equity changes or monitor transit service.

**DOT Livability Initiative and Federal Sustainable Communities Program**

All of FTA’s programs work to enhance the livability of communities by providing transportation options for people and communities across the country. FTA’s grant programs provide flexibility for communities to make investments in transit as part of multimodal transportation networks, with connections to improved facilities for walking and bicycling, and encouragement of transit oriented developments. The programs below represent highlights of the policies and provisions specifically intended to help communities improve their quality of life by identifying investments in transit. Most of these policies/provisions do not have associated designated funding sources. Rather, these elements are eligible for federal transit funds under appropriate FTA grant programs.

- **Transit Oriented Development** – FTA encourages Transit Oriented Developments (TODs) through its grants, programs, research, technical assistance, and various partnerships. TOD is defined as compact, mixed-use development near transit facilities and high-quality walking environments. Transit elements of TOD are eligible for FTA funding.

- **Joint Development** – Joint development is a specific form of transit oriented development that is often project-specific, taking place on, above, or adjacent to transit agency property that was acquired (in whole or in part) with federal transit funds. Joint development activities are subject to FTA review for eligibility.

- **Associated Transit Improvements** – The term “associated transit improvements” means projects or project elements that are designed to enhance mass transportation service or use and are physically or functionally related to transit facilities. FTA’s Urbanized Area Formula Grant Program requires at least one percent of money to be used for transit improvements. Other associated transit improvements funding is also available under the Surface Transportation Program (STP).

- **Bike and Pedestrian** – Funding from FTA grant programs can be used for bicycle facilities and access, and pedestrian-related alternatives connected to transit facilities.

- **Intercity Bus (5311(f))** – The Intercity Bus Program under FTA’s Nonurbanized Area Formula Grant Program supports the connections between nonurbanized areas and the larger regional or national system of intercity bus service.

- **Art in Transit** – Art in Transit is an example of the quality of life initiatives that FTA supports through the Urbanized Area Formula Grant Program, STP, and other funding sources. FTA program funds may be used for the costs of design, fabrication, and installation of art that is part of a transit facility.
Section 6: Situation Appraisal

The TDP Rule requires that TDP major updates include a situation appraisal of the environment in which the transit agency operates. This appraisal documents factors that will help Space Coast Area Transit better understand the environment in which the transit agency operates. The purpose of this appraisal is to understand key trends and implications that impact the approach that Space Coast Area Transit will take in developing its future transit program.

This section was developed following a detailed review of relevant plans, programs, and studies undertaken by Space Coast Area Transit and other entities, including local, regional, state, and federal agencies. In addition, input received from recent public and agency outreach, as well as technical analysis undertaken as part of the TDP development process, helped guide the identification of critical issues.

The situation appraisal findings are presented for the following areas:

- Regional transportation
- Socioeconomic trends
- Travel behavior
- Land use
- Technology
- Revenue trends
- Ridership forecasting
- Organizational issues

For each of these areas, there is a discussion of trends and issues, as well as an identification of the specific implications for the transit program.

Regional Transportation

Regional transportation issues are of critical importance to Space Coast Area Transit and are highlighted below.

Ridership Increases

Space Coast Area Transit expanded its service significantly in 2007, resulting in an increase in ridership of more than 75 percent on the fixed-route system from 2006 to 2010. Space Coast Area Transit ridership continues to increase, creating capacity issues on several routes. These routes are
currently being served with paratransit vehicles as “plug” buses when passengers are left behind. In addition, Space Coast Area Transit continues to receive requests for expanded transit service.

**Implications** – With the current level of available funding and staff, Space Coast Area Transit will have major challenges with providing expanded service throughout the county and increasing the level of existing service to address capacity issues. However, the ridership trend will likely not continue to increase at the same pace without adding additional transit services. Several conditions may contribute to the ridership increases including fluctuating gas prices, state of the local economy, and increased marketing efforts.

**Future Amtrak Service**

Brevard County expects to secure funding for the planned Amtrak passenger service effective July 2013, with the service being operational 24 months later. The passenger rail service will stop in Brevard County while operating from Jacksonville to Miami. The new Amtrak passenger rail service will not operate as high speed. A privately-funded passenger rail service is also being considered. The private service will operate along the Florida East Coast Railway (FEC) tracks. The FEC passenger rail service is planned to operate at higher speeds with fewer stops.

**Implications** – The new Amtrak service will provide important multimodal connections allowing passengers to transfer from the train to the bus, if the transfer opportunities are planned at multimodal stations that serve both Amtrak and Space Coast Area Transit. However, this new modal type will provide connectivity, but may also require Space Coast Area Transit to compete for local dollars.

**Serving as the CTC**

Space Coast Area Transit is currently the designated CTC for Brevard County; however, the Space Coast Area Transit does not provide non-emergency Medicaid transportation service. The County’s non-emergency Medicaid transportation service is provided by TMS of Brevard, Inc. The CTC is responsible for assessing community transportation needs and resources to maximize the provision of service. To manage and deliver TD service, Space Coast Area Transit with approval from the TDLCB has developed policies and procedures. Also, the TDLCB approved the existing fare structure and annual TD cost per trip in accordance with the CTD’s Cost/Revenue Allocation and Rate Justification process.

**Implication** – As the public transit provider for Brevard County, it has been a strategic decision for Space Coast Area Transit to serve as the CTC and ensure local coordination of transportation services. As the CTC, Space Coast Area Transit not only provides transportation disadvantaged trips, but coordinates with other providers of transportation, issues and manages coordination.
agreements, collects data, and completes transportation provider compliance inspections. As the CTC, Space Coast Area Transit also coordinates with the TDLCB, completes the TDSP annual updates and its major update every fifth year, and completes the Annual Operating Report (AOR). Space Coast Area Transit receives and manages funding provided through the CTD. If Space Coast Area Transit decided not to serve as the CTC, removal of such designation could impact funding provided through the CTD, decrease the current level of coordination for public transportation achieved through Space Coast Area Transit’s leadership, increase coordination for Space Coast Area Transit staff to work with a newly-designated CTC, and affect customers served by Space Coast Area Transit on CTD-funded trips.

**Vanpool Program**

Space Coast Area Transit operates one of the largest vanpool programs in the nation. The program has effectively helped to reduce paratransit costs by leasing vans to 18 human services agencies in the county. Using the vans, these agencies are able to provide trips to their clients, resulting in not only reduced ridership on the more costly paratransit service, but also a reduction in the number of reservations and other paratransit administrative functions completed by staff.

**Implications** – The decrease in paratransit trips allows Space Coast Area Transit to focus more on the fixed-route system and reduces overall agency costs. Accessibility improvements at fixed-route stops may further reduce paratransit trips/costs by providing opportunities for older persons and persons with disabilities to use the fixed-route service.

**Commuting To and From Jobs**

Based on the analysis of the 2010 Census LEHD data, 75 percent of the workers residing in Brevard County also work in Brevard County. Approximately 25 percent of workers commute to neighboring counties or areas that are not part of a city or town, with Orange County ranking first among counties to which Brevard workers are traveling.

**Implications** – There are both pros and cons to providing cross-county service. Providing transit service across county lines creates the potential for decreasing the county's existing employee pool as residents review employment opportunities in surrounding counties. However, providing regional transit service also provides opportunities for residents in surrounding counties to access employment and recreational opportunities in Brevard County. Future cross-county services should be optimized to connect with existing transit services in other counties. However, these connections open up implications for fare payment options between systems, safety of transfer points, ease of transfers, and availability of customer information. In addition, there are regulations with regard to the provision of service within and outside of county lines, adding a coordination
element between transit agencies. Future cross-county routes should be planned to ensure that the service does not result in duplications and over-investment.

**Socioeconomic Trends**

**Population Growth**
According to TAZ data from the Space Coast TPO, Brevard County's population is projected to increase by 10 percent from 2012 to 2022 (546,111 to 605,632).

**Implications** – Space Coast Area Transit will need to review transportation solutions for areas with non-transit supportive densities. As discussed in the review of local plans section of this TDP, many Brevard County municipalities have updated their comprehensive plans to become more transit supportive; however, this support is spurred by redevelopment or additional development.

**Demographic and Current Transit Market**
Transit markets can be organized into three major categories: traditional markets, discretionary markets, and regional markets. The traditional market includes individuals who have no or limited transportation alternatives and rely on public transit for essential and recreational trips. This market includes older adults, youth, persons with disabilities, and those with low-income and no/limited vehicles. The discretionary market refers to individuals who have a choice of transportation alternatives and may choose transit if the service is able to be competitive with the automobile in terms of travel time, convenience, or other reasons. The regional market refers to the demand for commuter travel to other counties in the region. Based on the Space Coast Area Transit on-board survey results, the typical Space Coast Area Transit rider is from the traditional market.

**Implications** – Currently, the traditional market is the primary market for public transit in Brevard County. Existing conditions, including the large square miles of land and the existing level of transit service make it difficult to target discretionary and regional transit markets. The implementation of premium services and improved frequencies may lead to more discretionary passengers.

**Travel Behavior**

**Fuel Prices**

According to the American Public Transportation Association (APTA) and Building America's Future (BAF), price increases in gasoline create related increases in public transportation ridership. APTA and BAF’s analysis reveals that a price of $4 per gallon for regular gas could produce an additional 290 million passenger trips per year. If gas prices go to $3.74, the analysis still predicts
an additional 240 million passenger trips per year. Figure 6-1 presents the average retail fuel price trend for 2010 through 2012.

**Figure 6-1**

*Average Retail Fuel Price (2010-2012)*

24 Month Average Retail Price Chart

Source: 2012 GasBuddy.com

**Implications** – Space Coast Area Transit is already experiencing capacity issues on several of its routes due to increased ridership. If further fluctuations in gas prices increase demand, Space Coast Area Transit will face further capacity issues. Expanding service to meet demand should be carefully planned to ensure that the agency is not adversely impacted if gas prices decrease, resulting in lower ridership and excess capacity. However, if new riders are attracted to the system based on increased gas prices, there would be an opportunity for Space Coast Area Transit to retain new discretionary riders.

**Land Use**

**Development Patterns**

Brevard County includes a mix of development, with the highest employment and population densities occurring in the eastern portion of the county near the Indian River. The northern portion and western portions of the county are more rural in nature. Areas in the southern portion of the county have transitioned from rural to suburban, with the majority of current DRI projects planned for development in Palm Bay, West Melbourne, Melbourne, and Rockledge.
Implications – Space Coast Area Transit will face difficulty moving passengers efficiently throughout the county based on the distance, development patterns, and resources available. Premium services with limited stops along major corridors may better connect the northern and southern portions of the county; however, future planning will need to focus on establishing the densities and intensities necessary to support premium transit service.

Complete Street

The County has adopted the Complete Streets policies to enable safe access for the community. Transit vehicles, facilities, and routes are elements of the County’s Complete Streets Program. The County has also adopted standards and incentives for large-scale mixed-use projects termed New Town Overlay (NTO). The NTO encourages the use of transit and addition of transit corridors.

In addition, land use policy considerations at the state level have changed in recent years. By passing HB 7207, the State placed responsibility for transportation planning and growth management in the hands of local planners. This allows Brevard County, the TPO, the municipalities, and Space Coast Area Transit to work together to leverage their local resources and funding to best suit local conditions. This bill also requires that Comprehensive Plan Transportation Elements provide “convenient multimodal transportation systems.”

Implications – The County has adopted policies that make Complete Streets and multimodal transportation a priority. Space Coast Area Transit must continue to participate in and coordinate with the County to encourage transit-supportive development and include transit recommendations in future projects and plan reviews.

Bus Shelters and Benches Agreements

Space Coast Area Transit has developed agreements with Cocoa Beach, Melbourne, Palm Bay, and Cape Canaveral for bus benches and bus shelters. In addition, Space Coast Area Transit has coordinated with Brevard Community College to place shelters and offer free rides to the students. Space Coast Area Transit has worked directly with the cities of Cape Canaveral, Cocoa Beach, Rockledge, Cocoa, Melbourne, West Cocoa, and Titusville for the provision of transit service.

Implications – Space Coast Area Transit will need to work to secure additional funding from the municipalities and local businesses for the provision of additional bus benches and shelters.

Project Plan Review

Space Coast Area Transit has participated in reviewing plans for roadway improvements, site plans for the new County Health Department and Cocoa City Hall, and comprehensive plan updates for a
number of municipalities. Space Coast Area Transit worked closely with Hammock Landing during the DRI review process resulting in the establishment of a bus shelter and transfer location. The Hammock Landing transfer area has become a successful transfer point; with so many passengers using this hub, there is a need for additional benches and shelters.

**Implications** – Space Coast Area Transit will need to remain actively involved in the County and Cities’ planning studies to ensure that transit-related recommendations are included.

**Technology**

Space Coast Area Transit should consider equipping its buses and paratransit vehicles with ITS technologies, including automatic vehicle location (AVL), mobile data terminals (MDTs), and electronic fare collection. The current fareboxes could be upgraded to electronic fare collection.

**Implication** – While Space Coast Area Transit operations could benefit from the addition of ITS technologies, it is important to note that these technologies produce volumes of data that would be useless without sufficient staff with the skill set and capacity to manage the outputs. With the implementation of any new technology, consideration should be given to implementing an effective training program to equip staff with the necessary skills to effectively use the technology to its full benefit.

**Revenue Trends**

**Revenue Constraints**

New revenue sources will need to be established to implement expanded service, service improvements, or new regional connections. The TDP stakeholders and the public recognized the need for dedicated funding for transit; however, the overall consensus was that no new taxes should be proposed at this time.

**Implications** – Space Coast Area Transit’s last fare increase was in 2006, and the agency’s fare is considered to be one of the lowest. Space Coast Area Transit may want to consider reevaluating its fare structure in an effort to improve the farebox recovery ratio. The fare analysis should review any potential inequities and identify mitigation strategies. The potential impact to ridership levels based on the fare change should also be considered.

In addition, Space Coast Area Transit offers reduced fares to seniors, people with disabilities, youth, and veterans. Based on established agreements, Brevard Community College students and staff ride the system for free and Melbourne residents are offered free rides on two routes in the City of Melbourne. During the public involvement process, participants indicated that many routes are
experiencing fare abuse with passengers only paying the half-fare or refusing to pay the fare at all. The implementation of reduced fare identification cards may help to reduce the operator fare collection time and improve the farebox recovery ratio by requiring all passengers that do not qualify for the half-fare to pay the full-fare when boarding the bus.

**Moving Ahead for Progress in the 21st Century Act (MAP-21)**

The Moving Ahead for Progress in the 21st Century Act (MAP-21), signed into law by President Obama on July 6, 2012, provides needed funds and transforms the policy and programmatic framework for investments to guide the growth and development of the nation’s vital transportation infrastructure. Highlights of MAP-21 are listed below.

- Section 5307 can be used for operating assistance for transit agencies operating in urbanized areas under 200,000
- For urbanized areas over 200,000, Section 5307 may be used for operating assistance as follows:
  - Urban systems with 75 or fewer buses in peak service hours may use up to 75 percent of Section 5307 funding for operating expenses
  - Urban systems with 75 to 100 buses may use up to 50 percent of Section 5307 funding for operating expenses
- Federal assistance for operating expenses may not exceed 50 percent with a 50 percent local match requirement from sources other than DOT
- Section 5316 (Job Access and Reverse Commute) has been eliminated and activities are eligible under Section 5307 or Section 5311 for rural areas
- Section 5317 (New Freedom) was merged with Section 5310 (Elderly & Disabled grant program)

**Implications** – The MAP-21 changes will result in additional operating revenue for Space Coast Area Transit. However, FDOT currently administers Section 5310 funding; therefore, these changes may require additional staff time if Space Coast Area Transit is expected to take over the program administration of Section 5310 now that the program has been combined with Section 5317.

**Ridership Forecasting**

As part of this TDP, the FDOT TBEST model was used to forecast ridership for existing services based on changes in the demographics and potential new service options. The model was validated using FY 2011 ridership totals by route. The results for TBEST are presented in various sections of this TDP.
Implications – The TBEST ridership forecasts can assist Space Coast Area Transit in determining the implementation of new service and whether service modifications may be needed to existing routes in future years to maintain ridership.

Organizational Issues

Space Coast Area Transit operates as a department of Brevard County and is currently the only public transit provider in Brevard County. Space Coast Area Transit has not recently completed an assessment to evaluate the effectiveness of the current transit operations and identify opportunities for improvements through changes to its operations, marketing, and administration. Also, Space Coast Area Transit must coordinate with the local governments for the provision of shelters within the right-of-way of the roadways along the routes.

Implications – Based on discussions that occurred during the TDP public involvement process, Space Coast Area Transit should consider conducting a Comprehensive Operational Analysis (COA) to assess the transit system and identify any efficiencies that can be gained. In addition, Space Coast Area Transit should work with the local governments to develop a plan to improve bus stop infrastructure and amenities.

Summary

This situational appraisal was performed to document the current operating environment and identify potential implications that should be considered by Space Coast Area Transit in preparing this major update to the 10-year TDP. The implications summarized in this section were used to support the transit demand estimation and mobility needs assessment, as well as the development and evaluation of transit priorities presented later in this document.
Section 7: Transit Demand and Mobility Needs

Transit demand and mobility needs were assessed for the study area using various analytical techniques. Two market assessment tools and ridership forecasting software were used to assess demand for public transportation services. This section includes the results of that demand analysis. When combined with the public involvement feedback presented in Section 4, the demand assessment yields the building blocks for a transit services Needs Plan for the county.

Market Assessment

The transit market assessment for Brevard County includes an evaluation from two different perspectives: the discretionary market and traditional market. Analysis tools used to conduct each market analysis were a Density Threshold Assessment (DTA) and a Transit Orientation Index (TOI). These tools were used to determine whether existing transit routes are serving areas of the county considered to be transit-supportive for the corresponding transit market. The transit markets and the corresponding market assessment tool used to measure each are described in detail below.

- **Discretionary Market – Density Threshold Assessment (DTA)**

  The discretionary market refers to potential riders living in higher density areas of the county that may choose to use transit as a commuting or transportation alternative. A DTA was conducted based on industry standard relationships to identify those areas of Brevard County that will experience transit-supportive residential and commercial density levels in 2022.

  Three levels of density thresholds were developed to indicate whether or not an area contains sufficient densities to sustain efficient fixed-route transit operations. The levels include:

  - Minimum – Reflects minimum population and employment densities to consider basic fixed-route transit services (i.e., fixed-route bus service).
  - High – Reflects high population or employment densities that may be able to support higher levels of transit investment than areas that meet only the minimum density threshold (i.e., increased frequencies, express bus).
  - Very High – Reflects very high population or employment densities that may be able to support higher levels of transit investment than areas that meet the minimum or high density thresholds (i.e., premium transit services, etc.).

  Table 7-1 presents the density thresholds for each of the noted categories.
### Table 7-1
Transit Service Density Threshold

<table>
<thead>
<tr>
<th>Transit Mode</th>
<th>Population Density Threshold(^1)</th>
<th>Employment Density Threshold(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>4.5 – 5 dwelling units/acre</td>
<td>4 employees/acre</td>
</tr>
<tr>
<td>High</td>
<td>6 – 7 dwelling units/acre</td>
<td>5 – 6 employees/acre</td>
</tr>
<tr>
<td>Very High</td>
<td>&gt;=8 dwelling units/acre</td>
<td>&gt;=7 employees/acre</td>
</tr>
</tbody>
</table>


\(^2\) Based on a review of research on the relationship between transit technology and employment densities.

**Traditional Market – Transit Orientation Index (TOI)**

The traditional transit market refers to population segments that historically have a higher propensity to use transit and/or are dependent on public transit for their transportation needs. Traditional transit users include older adults, youth, and households that are low income and/or have no vehicles.

A TOI assists in identifying areas of the county where a traditional transit market exists. To create the TOI, 2010 ESRI demographic data estimates were compiled at the block group level and categorized according to each block group’s relative ability to support transit based on the prevalence of specific demographic characteristics. For this analysis, four population and demographic characteristics were used to develop the TOI. Each characteristic traditionally is associated with the propensity to use transit. The four characteristics that were used to produce the index include the following:

- Population density (persons per square mile)
- Proportion of the population age 60 and over (older adults)
- Proportion of the population under age 16 (youths)
- Proportion of the population below the poverty level

ESRI data do not include zero-vehicle household information. As a surrogate measure, the number of households with an annual income equal to or less than $10,000 was used. It was assumed that households earning less than $10,000 are not able to afford vehicles or other costs associated with vehicle ownership. The block groups are related as “Very High,” “High,” “Medium,” or “Low” in their respective levels of transit orientation, where “Very High” reflects a very high transit orientation, i.e., a high proportion of transit-dependent populations.

Maps 7-1 through 7-3 illustrate the 2012 and 2022 DTA, and 2012 TOI, respectively. In addition, the maps include the existing Space Coast Area Transit service network to show how well Space
Space Coast Area Transit
Transit Development Plan

Map 7-1: 2012 Density Threshold Assessment

Existing Routes

Population Density Threshold
- Minimum
- High
- Very High

Employment Density Threshold
- Very High
- High
- Minimum

Prepared by:
Tindale-Oliver & Associates, Inc.
Sep 2012
Coast Area Transit covers areas of the county that are considered transit supportive for both market assessments.

The 2012 TOI for the study area shows that, for the most part, block groups in portions of developed areas of Brevard County have Low or Medium transit orientation. In addition, the existing Space Coast Area Transit routes are located in most portions of the study area with High or Very High transit orientation. Areas with High or Very High transit orientation that may benefit from additional transit services include West Cocoa, Titusville near Columbia Boulevard and U.S. 1 and Barna Avenue north of Harrison Street, and Palm Bay near Babcock Street and Malabar Road.

As shown on the 2012 DTA map, there are only a few areas in Brevard County that qualify as transit supportive, including block groups in Melbourne, Cape Canaveral, Merritt Island, Cocoa, Patrick Air Force Base, and Titusville. Of the block groups that are supportive of bus service, all are located near a fixed-route with the exception of a small area located east of I-95 and north of U.S. 192 in Melbourne.

In 2022, several block groups within Brevard County are anticipated to become more transit supportive including areas in Melbourne, Cape Canaveral, and Palm Bay; however, there are still few areas with transit-supportive density thresholds. The 2022 transit-supportive block groups currently are served by transit, with the exception of a small block group in Palm Bay along Degroodt Road and the area east of I-95 and north of U.S. 192 in Melbourne.

**TBEST Modeling Ridership Forecasting**

Space Coast Area Transit ridership forecasts were prepared using the FDOT-approved transit demand forecasting tool, Transit Boardings Estimation and Simulation Tool (TBEST). It has long been a desire of FDOT to have a standard modeling tool for transit demand that could be standardized across the state similar to the Florida Standard Urban Transportation Model Structure (FSUTMS) model used by Metropolitan Planning Organizations (MPOs) in developing Long-Range Transportation Plans (LRTPs). TBEST is a comprehensive transit analysis and ridership-forecasting model capable of simulating travel demand at the individual route level. The software was designed to provide near- and mid-term forecasts of transit ridership consistent with the needs of transit operational planning and TDP development. In producing model outputs, TBEST also considers the following factors:

*Transit network connectivity* – the level of connectivity between routes within the bus network; the greater the connectivity between bus routes, the more efficient the bus service becomes.

*Spatial and temporal accessibility* – service frequency and the distance between stops; the larger the physical distance between potential bus riders and bus stops, the lower the level of service
utilization; similarly, less frequent service is perceived as being less reliable and utilization decreases.

*Time-of-day variations* – accommodates peak period travel patterns by rewarding peak service periods with greater service utilization forecasts.

*Route competition and route complementarities* – accounts for competition between routes; routes connecting to the same destinations or anchor points, or that travel on common corridors, experience decreases in service utilization; conversely, routes that are synchronized and support each other in terms of schedule and service to major destinations or transfer locations benefit from that complementary relationship.

Because a model in TBEST was not available for Space Coast Area Transit, the system needed to be created in TBEST. The first task in creating the network in TBEST involved collecting service data from transit agency staff. Data required to update the Space Coast Area Transit network included the following:

- Bus schedules with time points and route map;
- Operating characteristics for bus transit routes, including route type, headways, route length, days of service, service span, and fares;
- Observed average daily ridership by route;
- Socioeconomic data in GIS and tabular formats; and
- GIS bus stop and route layers.

For TBEST modeling as part of the Space Coast Area Transit TDP, the most recent version of the modeling software, TBEST Version 4.0.5, was used.

**Model Inputs, Assumptions, and Limitations**

TBEST uses various demographic and transit network data as model inputs. The inputs and the assumptions made in modeling the Space Coast Area Transit system in TBEST are presented below. It should be noted, however, that the model is not interactive with roadway network conditions. Therefore, ridership forecasts will not show direct sensitivity to changes in the roadway traffic conditions or speeds.

**Transit Network**

The transit route network for all Space Coast Area Transit routes was created to reflect the most recent, existing schedules for routes currently operating in 2012, the validation year for the model.
The transit network in TBEST required various steps to reflect the current route alignments and service characteristics in Brevard County, including the following:

- Creating the Space Coast Area Transit validation scenario;
  - Importing the bus stops
  - Digitizing the routes using GIS shapefiles
- Updating InfoUSA data to 2010;
- Identifying existing service span;
- Inputting headways, i.e., the frequency with which a bus will arrive at a stop (e.g., one bus every 60 minutes or one bus every 30 minutes);
- Establishing passenger travel times on board a bus; and
- Entering observed average daily ridership.

Demographic Data

The demographics, including population and employment, used as the base input for the TBEST model are derived from the 2000 Census and 2010 InfoUSA spatial and tabular databases. The model uses a Census Block-level personal geodatabase as the format for spatial distribution of population data. Varying data sets were used for TBEST because demographic data in TBEST is hard-coded and cannot be modified by end-users.

Population and Employment Growth Rates

TBEST uses a socio-economic data growth function to project population and employment data. A population growth rate and an employment growth rate were calculated using the ACS. System-wide annual growth rates (from 2005 to 2010) derived for total population and employment are 0.71 and -0.52 percent, respectively. As indicated previously, population and employment data are hard-coded into the model and cannot be modified by the end-user. As applied, the growth rates do not reflect fluctuating economic conditions as experienced in real time.

Special Generators

Special generators and transfer points in Brevard County were determined in order to evaluate locations with opportunities for high ridership. Special generators include the following:

- Viera Park & Ride Lot
- Palm Bay Park & Ride Lot
- Palm Bay Brevard Community College
- Melbourne Brevard Community College
- Titusville Brevard Community College
• UCF Cocoa Campus/ Cocoa Brevard Community College
• Florida Tech
• Melbourne International Airport
• Sandrift Community Center
• Nance Park
• Shepard Park
• West Cocoa Recreation Complex
• Melbourne Square Mall
• Merritt Square Mall
• Patrick Air Force Base

TBEST Modeling Results

This section includes a description of the TBEST model run and summarizes the ridership forecasts produced by TBEST. It is important to keep in mind that while TBEST is an important tool for evaluating improvements to existing and future transit services, model outputs do not account for latent demand for transit that could yield significantly higher ridership, and, correspondingly, model outputs may overestimate demand in isolated cases. In addition, TBEST cannot display sensitivities to external factors such as an improved marketing and advertising program, changes in pricing service for customers, and other local conditions. Furthermore, although TBEST provides ridership projections at the route and bus stop levels, its strength lies more in its ability to facilitate relative comparisons of ridership productivity. As a result, model outputs are not absolute ridership projections, but rather provide comparative evaluations for actual service implementation decisions.

Using the inputs and assumptions described in this document, the model was successfully validated. The validation process uses observed ridership data and socioeconomic data to check for reasonableness and sensitivity within the model. Using the validated model, the 2013 and 2022 scenarios were created. Both scenarios represent the existing fixed-route system without any modifications. A model run was performed in each scenario, and the results are described in Table 7-2. Table 7-2 shows the projected number of average daily riders by route in 2022 and ridership growth rates from 2013 to 2022 derived from TBEST. Annual TBEST ridership forecasts for the TDP alternatives and their corresponding implementation years also were developed and are presented in Section 10 of this report.

TBEST has generated interest with DOTs in other states and continues to be a work in progress that will become more useful as its capabilities are enhanced in future updates to the model. Consequently, it is important for the transit agency to integrate sound planning judgment and experience when interpreting TBEST results.
### Table 7-2
**Average Annual Ridership and Growth Rates**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1 - North Loop</td>
<td>617</td>
<td>643</td>
<td>26</td>
<td>4.18%</td>
</tr>
<tr>
<td>Route 1 - South Loop</td>
<td>506</td>
<td>516</td>
<td>10</td>
<td>1.94%</td>
</tr>
<tr>
<td>Route 2 - Titusville</td>
<td>156</td>
<td>160</td>
<td>5</td>
<td>3.08%</td>
</tr>
<tr>
<td>Route 3 - Merritt Island</td>
<td>165</td>
<td>168</td>
<td>2</td>
<td>1.39%</td>
</tr>
<tr>
<td>Route 4 - 520 Connector</td>
<td>1,020</td>
<td>1,075</td>
<td>55</td>
<td>5.35%</td>
</tr>
<tr>
<td>Route 5 - Mims/Titusville</td>
<td>47</td>
<td>50</td>
<td>3</td>
<td>7.25%</td>
</tr>
<tr>
<td>Route 6 - Cocoa/Rockledge</td>
<td>725</td>
<td>762</td>
<td>37</td>
<td>5.07%</td>
</tr>
<tr>
<td>Route 8 - West Cocoa*</td>
<td>26</td>
<td>28</td>
<td>2</td>
<td>7.28%</td>
</tr>
<tr>
<td>Route 9 - Beach Trolley</td>
<td>841</td>
<td>877</td>
<td>35</td>
<td>4.20%</td>
</tr>
<tr>
<td>Route 21 - Downtown Melbourne</td>
<td>469</td>
<td>463</td>
<td>-6</td>
<td>-1.30%</td>
</tr>
<tr>
<td>Route 22 - South Palm Bay</td>
<td>277</td>
<td>292</td>
<td>15</td>
<td>5.46%</td>
</tr>
<tr>
<td>Route 23 - West Palm Bay</td>
<td>292</td>
<td>308</td>
<td>16</td>
<td>5.38%</td>
</tr>
<tr>
<td>Route 24 - Melbourne</td>
<td>180</td>
<td>188</td>
<td>8</td>
<td>4.16%</td>
</tr>
<tr>
<td>Route 25 - Palm Bay Connector</td>
<td>509</td>
<td>523</td>
<td>14</td>
<td>2.81%</td>
</tr>
<tr>
<td>Route 26 - South Beach</td>
<td>137</td>
<td>144</td>
<td>7</td>
<td>4.74%</td>
</tr>
<tr>
<td>Route 27 - East Palm Bay</td>
<td>392</td>
<td>415</td>
<td>23</td>
<td>5.77%</td>
</tr>
<tr>
<td>Route 28 - North Melbourne</td>
<td>357</td>
<td>367</td>
<td>10</td>
<td>2.80%</td>
</tr>
<tr>
<td>Totals</td>
<td>6,717</td>
<td>6,977</td>
<td>260</td>
<td>3.88%</td>
</tr>
</tbody>
</table>

*Based on 10 months of available ridership data.

According to TBEST, average daily weekday ridership is expected to increase 3.88 percent (from 6,717 to 6,977 average daily riders) by 2022.
Implications

Based on the TBEST results shown, maintaining the status quo will result in marginal increases in transit ridership. Based on the model outputs, for Space Coast Area Transit to increase its market share for transit, service expansion will need to occur and service improvements will need to be implemented. However, it is important to note that the current ridership on the Space Coast Area Transit System is growing at an annual pace that exceeds the growth projected by TBEST over the entire planning period. Several factors may contribute to the growth that Space Coast Area Transit is currently experiencing, including higher gas prices, state of the local economy, improved marketing, etc. Due to the ridership growth, Space Coast Area Transit is already having capacity issues on several of its existing routes. At some point, the ridership growth will level out if additional services or capacity is not added to the system.
Section 8: Goals, Objectives, and Strategies

This section presents Space Coast Area Transit’s transit goals, objectives, and strategies for the next 10 years. Goals, objectives, and strategies are an integral part of any transportation plan because they provide the policy direction to achieve the community’s vision. A goal is a long-term end toward which programs or activities are ultimately directed. On the other hand, an objective is a specific, measurable, intermediate end that is achievable and allows measurement of progress toward a goal. A strategy is the course of action or way in which programs and activities are conducted to achieve an identified objective.

The goals, objectives, and strategies presented in this section were prepared based on the review of the goals and objectives adopted in the 2008-2013 TDP Major Update and the 2012 TDSP Minor Update. Other factors contributing to this section include the assessment of existing conditions, feedback received during the public involvement process, and the review of local planning documents. Strategies have been developed for each objective to set a course of action for attaining the goals and objectives.

Space Coast Area Transit Vision

To maintain the current level of transit service in the county and expand service to better respond to the key emerging service market needs of students, commuters, and the tourism industry (including both workers and visitors) by developing new routes and/or service enhancements that target these unique markets and connect with transit providers in adjacent counties for improved regional accessibility.

Space Coast Area Transit Mission

To continue to provide accessible and affordable transportation options to Brevard County residents of all ages and abilities by maintaining the current level of transit service in the county and gradually enhancing existing fixed-route service to extend hours of operation and increase frequency in the most productive corridors.

Goals, Objectives, and Strategies

GOAL 1: IMPLEMENT A TRANSIT SYSTEM FULLY INTEGRATED WITH OTHER TRANSPORTATION MODES AND BREVARD COUNTY’S COMPLETE STREETS PRINCIPLES
Objective 1.1: Maximize coordination with public and private agencies and other transportation operators in Brevard County.

Objective 1.2: Coordinate with the Space Coast Transportation Planning Organization (TPO) in the utilization of transit planning funds to support and improve transit service.

Objective 1.3: Communicate and coordinate with other counties and agencies such as LYNX, Votran, and Indian River Transit to promote ride-sharing practices and transportation arrangements.

Objective 1.4: Maintain existing coordination contracts and execute new ones, where feasible, needed, and cost effective.

Objective 1.5: Encourage the connection between transit, land uses, and Complete Streets principles through coordination with the TPO, Brevard County, and municipalities in the growth management process including comprehensive plans, land development codes, corridor studies, and site review of development.

Objective 1.6: Access and utilize New Freedom funding for transportation that exceeds Americans with Disabilities Act regulations.

Objective 1.7: Access and utilize JARC funding to provide for fixed-route transportation on evening and weekends in order to provide transportation to employment locations in Brevard County.

Strategy 1.1: Establish an advocacy coalition to promote and expand Space Coast Area Transit service.

Strategy 1.2: Coordinate with the TPO to ensure that Space Coast Area Transit has an opportunity to review all corridor or area transportation studies and provide transit-related recommendations.

Strategy 1.3: By 2014, review the feasibility of constructing a multimodal transfer facility near the future Brevard County Amtrak Station.

GOAL 2: ENHANCE CITIZEN MOBILITY BY INCREASING AVAILABILITY OF PUBLIC TRANSPORTATION SERVICE

Objective 2.1: Ensure that the fixed-route, vanpool, and paratransit systems continue to remain responsive to the needs of the transportation disadvantaged.

Objective 2.2: Continue the implementation of expanded evening and weekend fixed-route service.

Objective 2.3: Continue maximizing the use of the fixed-route bus service for the transportation disadvantaged.

Objective 2.4: As feasible, implement increased paratransit service and expanded fixed-route service as outlined by the 10-year vision.
Strategy 2.1: Coordinate with the ReThink program to ensure the maximization of the vanpool program by providing connections to surrounding counties.

Strategy 2.2: By 2014, review the feasibility of relocating the Cocoa transfer facility to a location with multimodal connections.

GOAL 3: IMPROVE THE EXPERIENCE OF THOSE RIDING SPACE COAST AREA TRANSIT

Objective 3.1: Research new methods to improve and streamline passenger fare collection.

Objective 3.2: Investigate Intelligent Transportation Systems (ITS) technologies to improve customer experience and scheduling.

Objective 3.3: Develop a smart phone application for Space Coast Area Transit services, including system-wide information, service updates, and real-time vehicle location.

Strategy 3.1: Operate a fleet of fixed-route vehicles with an average age of less than 7 years.

Strategy 3.2: Complete a demo project to evaluate operations and dispatch using Global Positioning Systems, Automatic Vehicle Location, and Mobile Data Terminals.

Strategy 3.3: Print a schedule book that includes all transit service for Brevard County.

Strategy 3.4: Make improvements to the existing bus stop at the North Terminal to include security cameras, benches, and covered shelters.

GOAL 4: ENSURE PROGRAM ACCOUNTABILITY

Objective 4.1: Adhere to the procedures, rules, and regulations established by the Commission for the Transportation Disadvantaged, Florida Department of Transportation, State of Florida, Federal Transit Administration, and Brevard County.

Objective 4.2: Collect and compile the data necessary for the evaluation of service including rider surveys. These data will be repeated in the Annual Operating Report, National Transit Database, and the Annual Community Transportation Coordinator evaluation.

Objective 4.3: Continue to provide and review performance reports at the Local Coordinating Board meetings.
Strategy 4.1: Ensure staff training opportunities to keep pace with program requirements and information reporting.

Strategy 4.2: Review policies and procedures annually to ensure that they provide the oversight and guidance necessary to ensure program compliance.

GOAL 5: SECURE THE FUNDING NECESSARY TO MEET SERVICE NEEDS

Objective 5.1: Continue to pursue local government and private sector funding partnerships to provide operating assistance to maintain existing service levels and expand service to meet future needs.

Objective 5.1: Investigate alternative funding sources to provide continuing operating revenue for services currently funded through FDOT Transit Corridor Grants and the FDOT Transportation Regional Incentive Program (TRIP).

Objective 5.2: Work with the Commission for the Transportation Disadvantaged, Florida Department of Transportation, and the Federal Transit Administration to continue to obtain funding necessary to meet service demands of transportation disadvantaged citizens.

Objective 5.3: Work with local and state agencies to secure sufficient funding to provide social service agency trips.

Strategy 5.1: Conduct a fare analysis and equity study in FY 2013 to review the impacts of a potential fare increase.

Strategy 5.2: Meet with two private and/or public sector entities annually to review the potential for partnerships to fund expanded transit service.

GOAL 6: BUILD ON SPACE COAST AREA TRANSIT’S AWARD-Winning MARKETING AND OUTREACH STRATEGIES TO INCREASE RIDErSHIP, USE OF PARK AND RIDE LOTS, THE RETHINK VANPOOL PROGRAM, AND PARTICIPATION IN THE VOLUNTEERS IN MOTION PROGRAM

Objective 6.1: Maximize availability of service information; ensure that material is available in accessible formats including print, radio, and video media.

Objective 6.2: Actively engage the community in promoting transit by calling attention to Space Coast Area Transit services through sponsorships, editorials, advertisements, and the like.

Objective 6.3: Participate in community events and meetings where information can be distributed to potential participants.
Objective 6.4: Develop a core group of transit advocates including elected officials, community advocates, agency heads, education leaders, and business leaders from the Economic Development Council of Florida's Space Coast, Florida's Space Coast Office of Tourism, and the Space Coast Economic Development Commission.

Strategy 6.1: Develop one commercial each year that targets first time riders and visitors to Brevard County.

Strategy 6.2: Participate quarterly in one community event or meeting and distribute Space Coast Area Transit information.

Strategy 6.3: Meet quarterly with a representative from the established group of transit advocates to provide updates on existing and planned transit services.
Section 9: Transit Alternatives

The purpose of this section is to summarize the potential transit improvements developed as part of the 10-year planning horizon of this TDP Major Update. Recommended improvements to a transit system can include items such as the implementation of a new route or improved frequency on a route, or can be more administrative in nature, such as improving marketing or purchasing technology. The improvements presented in this section are part of Space Coast Area Transit’s vision for the 10-year planning horizon. These improvements in no way establish a financial commitment for Brevard County; they have been developed only for transit planning purposes and do not reflect the actual budget or expenses of Space Coast Area Transit. A map for each recommended new transit improvement is included as Appendix F, Alternatives Map Series. Section 10 presents the cost-feasible financial plan, identification of the shortfall if all improvements are implemented, and a display of each service-related improvement by suggested implementation year and whether it can be funded with existing sources. The revenue streams identified in the financial plan are also for planning purposes and may not reflect actual funding levels. The table identifying the shortfall summarizes the total cost of all needs recommended for this planning period.

Ten-Year TDP Priorities

Transit alternatives for Brevard County were developed through:

- Public involvement input
- Discussions with Space Coast Area Transit staff
- Discussions with the TDP Review Committee
- Stakeholder interviews
- Situation appraisal
- Transit demand estimation and identification of mobility needs
- Review of Brevard County planning efforts

The TDP alternatives/improvements have been grouped into four major categories: operations, capital and infrastructure, planning, and policy considerations. Each category and its corresponding priorities are described below.

Operations

Operations priorities refer specifically to transit service. For example, new bus routes and adjustments to existing services are considered operational improvements. TDP priorities for the operational category include the following:
• Continue operating the existing bus routes and maximize existing service efficiency – The existing fixed routes should continue to operate in coordination with the service improvements that have been included to bolster the efficiency of the existing routes and improve ridership levels.

• Continue operating the complementary ADA paratransit service and expand ADA service to complement new service – To continue serving the needs of the ADA-eligible residents of Brevard County and in compliance with the ADA regulations, Space Coast Area Transit is obligated to expand paratransit service in conjunction with the implementation of new fixed routes.

• Improve existing service – A number of improvements are recommended for existing services to accommodate current demand, to include: increasing hours of service later in the evening, adding Saturday and Sunday service, and increasing frequency on most routes to a half-hour.

• Implement new service – Based on the transit demand assessment, public involvement activities, and discussions with Space Coast Area Transit staff, recommendations are proposed for new services. These new services are designed to capture emerging and underserved transit markets, and provide connectivity throughout Brevard County.
  o Two route extensions that would lengthen existing service on Route 3 to serve the courthouse in Merritt Island and Route 9 to provide closer access to the pier and surrounding businesses in Cape Canaveral.
  o Five new express routes connecting Brevard County service with LYNX service at the University of Central Florida and the Orlando International Airport in Orange County, Cocoa to Kennedy Space Center, connecting all Brevard BCC campuses, and an express route along U.S. 1 from SR 520 to the Brevard County line.
  o Four circulator services providing local access or circulation connecting smaller communities in Port St. John, Viera, Palm Bay, and south Brevard County connecting to Indian River County.
  o Twelve fixed-route services providing longer distance connections along major corridors in Brevard County to include: Grissom Parkway, Palm Bay Road, Malabar Road, Minuteman Causeway, U.S. 192, Babcock Road, A1A, SR 520 and 528, Melbourne Causeway, and St. Johns Heritage Parkway.

• Ensure the highest level of safety for customers and staff when riding the bus or at Space Coast Area Transit facilities, to include administrative facilities, terminals, shelters, and bus stops.

As new services are added or route improvements are made, system modifications to the existing route structure may be necessary to ensure the overall maximization of the system, that additions do not create unnecessary service duplications, and that Space Coast Area Transit is providing the greatest number of potential users with the best access to service.
Capital and Infrastructure

Capital and infrastructure priorities refer to improvements not related directly with service delivery. For example, rolling stock (i.e., vehicles) is treated as an up-front capital investment. Additional examples of capital needs include technological improvements and facilities improvements. TDP capital and infrastructure priorities for this TDP include the following:

- **Upgrade Vehicle Fleet** – Space Coast Area Transit should replace its aging vehicle fleet with vehicles that are Buy America compliant, economical, and may include environmentally-friendly propulsion technology. The average age of the entire Space Coast Area Transit fleet is seven years. Assuming a vehicle useful life of 12 years for fixed-route vehicles and 5 years for paratransit vehicles, Space Coast Area Transit will need to replace a significant portion of its existing fleet over the 10-year planning period.

- **Improve/Construct Cocoa Terminal** – Currently, passengers boarding or transferring at the Cocoa terminal have no protection from the various Florida weather elements. Also, based on the location, vehicles are constrained in their movements, which impacts the ability of Space Coast Area Transit to schedule based on complete operational benefit. Construction of a Cocoa passenger terminal designed to accommodate multiple vehicles, varying direction of travel, and convenient passenger transfers will provide better accessibility and safety to the system.

- **Improve Stop Amenities and Infrastructure** – Input received throughout the plan development process indicated a need for improvements to transit stop infrastructure and amenities. Space Coast Area Transit will need to inventory and prioritize bus stop locations for ADA accessibility and safety alternatives. Improving stops and stop infrastructure will enhance the visibility of the service and possibly draw more users to the system. Space Coast Area Transit will continue to coordinate with local municipalities on the placement of bus stops and stop amenities to assist in the improvement of their local infrastructure. Some of the recommended stop and amenities improvements include:
  - Additional shelter locations
  - Lighting around stops
  - Passenger push-button signs that will illuminate to notify operators when passengers are waiting for stops
  - Video surveillance
  - Sidewalk connectivity
  - Trash receptacles
  - Information kiosk

- **Establish Community Transfer Centers** – As stop amenities and infrastructure are planned over the 10-year period, consideration should be given to the areas where multiple routes converge and more frequent passenger transfers occur (South Street and U.S. 1, Hammock Landing, Florida Tech, and South Apollo Boulevard and East Nasa Boulevard) to build
transfer centers. These centers are larger bus staging areas used at locations where multiple services come together at a point in the system. The transfer center should serve as a community focal point and a transit system destination/transfer station. Some of the characteristics of a transfer center include high volumes of customers, significant transfer activity among routes, and major land use development.

- **Upgrade Technology Features** – Space Coast Area Transit has purchased new fareboxes, considered the applicability of a GPS demonstration on its vehicles, and may want to consider upgraded radio/dispatch functionality, mobile data terminals, and automated audio stop announcements on-board vehicles. These technology improvements can lead to operational efficiencies and better fare collections once fully implemented; however, it is important to mention that Space Coast Area Transit’s staffing is minimal and technology improvements through full effective deployment are typically massive efforts. Whether it is the implementation of farebox upgrades or a GPS tracking system, these initiatives start with review of which system would be most effective, complying with the FTA system architecture standards, installation, testing, and then final acceptance. After the technology is deployed, maintaining the system(s), reporting from the technology, and/or reviewing return on investment also require staff time and effort. Prior to deploying new technology, Space Coast Area Transit should ensure that staff is available to manage the implementation process and successfully utilize the tools employed.

### Planning

Transit agencies are always in a state of planning, whether it is route level planning for operations or big picture planning to set the vision. Space Coast Area Transit works in concert with the Space Coast TPO for developing its large-scale planning efforts, especially those that will seek to use FTA 5303 Metropolitan and Statewide Planning grant funds. As funding is available over the next 10 years, Space Coast Area Transit may pursue major planning initiatives, including the following.

- **Comprehensive Operations Analysis (COA)** - A COA will review all Space Coast Area Transit services and provide information on service efficiencies, route performance, and overall operations. Space Coast Area Transit should complete a COA during the 10-year planning horizon to determine how the fixed-route bus service can be reconfigured to improve efficiency. The COA will provide recommendations for addressing transition from flag stops, capacity issues during various trips, and streamlining passenger transfer needs.

- **Organizational Assessment** – Space Coast Area Transit should conduct an organizational assessment that determines whether staffing levels and abilities are appropriate or if additional staff or training is needed throughout the organization. An organizational assessment does not denote that there are any problems with the agency, but is a proactive step to ensure that staff can be the most productive and Space Coast Area Transit can continue to deliver high quality service to its patrons.

- **Major TDP Update** – FDOT requires that a TDP undergo a major update in the fifth year. In
addition, FDOT requires that TDP progress reports are submitted annually. It is anticipated that this effort will be undertaken and funded in coordination with the Space Coast TPO.

- Bus Stop Inventory and Assessment – Space Coast Area Transit should conduct a study to inventory and prioritize ADA bus stop improvements throughout the system, thereby leading to the development of an ADA Transition Plan.

- Intelligent Transportation Systems Plan (ITS) – Space Coast Area Transit provides customers information through printed and website-accessible materials; however, more transit agencies are considering how smart phone features can be utilized to disseminate customer information, collect fares, or market new transit users. Space Coast Area Transit, over this planning horizon, may decide that advanced technologies designed to collect statistical information for future planning and reporting purposes are desirable. Other technologies are available to assist customers with obtaining transit information and improving customer service. Development of an ITS plan will help to identify areas that may be improved through ITS and establishment of a staged implementation plan for updating Space Coast Area Transit’s existing technology.

Policy Considerations

Policy priorities are agency-specific guidelines that should be reviewed periodically to ensure that the agency maintains standards consistent with industry peers, changing regulations, the local environment, and the best interest of Space Coast Area Transit. Below are some policy considerations that should take place over the next 10 years.

- Fare Policy – Both current patrons’ and the general public’s perceived value of service offered by Space Coast Area Transit should be assessed from time to time, and changes to fare policy should be adopted based on the results. In addition, maintaining and improving the farebox recovery and consistency in fares with peer transit agencies delivering the same level of service are other reasons for assessing fares. Prior to any changes to the current fare, Space Coast Area Transit would have to complete a fare equity analysis in compliance with FTA Title VI regulations.

- Flag Bus Stops – Flag bus stops offer the highest level of customer service by allowing patrons the ability to board and alight at any safe vehicle stopping location along a route. When ridership on routes grow or routes are extended to cover additional areas, flag stops can become problematic because the quantity of these stops cannot be quantified for scheduling purposes and may impact the on-time-performance of a route. In addition, flag stops can increase customer complaints (passenger inadvertently missed by an operator) and operator stress (operators must focus on all pedestrians along the roadway, not just a specific stop, to ensure they do not pass up potential customers).

- Passenger Personal Belongings – Space Coast Area Transit currently allows passengers to board vehicles with bicycles, strollers, and other personal belongings that may take up additional space on the vehicle. This policy provides enhanced customer care as many of
the customers have no other mode of transportation and require the public transportation services to go to appointments with children, access locations from which they will continue to their final destination using a bicycle, and for travel to shopping venues. This policy should be evaluated as increases in ridership restrict vehicle space and some personal belongings can increase safety hazards by blocking the aisle or exits.

- Bus Stop Shelter Design – During public involvement activities, members of the public commented that many of the bus shelters are not functional. The shelters either allow rain or heat at levels that make them inadequate as passenger waiting areas. Bus stop shelter design guidelines should be reviewed to assist local jurisdictions with providing the community shelters that are both functional and still representative of the community’s character. The guidelines should not dictate a uniform shelter but rather should include the design requirements that are needed to effectively provide shelter and accessibility. Sample shelter types from around Florida along with standard bus shelter design guidelines are included below.

  - Minimum 30” x 48” wheelchair space.
  - Entry/exit points with minimum 3’ clear width.
  - 5’ x 8’ boarding and alighting area, can be extended into shelter.
  - No change in elevation greater than ¼”.
  - Account for environmental factors, including sun, rain, wind.
  - Compliance with Florida Building codes and local codes.
  - Shelter must be anchored.
  - Use materials that will minimize the need for maintenance.
  - Must be frangible or breakaway.
  - Seating not required but is a best practice and should be accommodated within the shelter as feasible.
  - Minimum height standard of 84” (7’).
  - Accommodate a clear opening at the bottom for cleaning.
  - Allow space behind the shelter for maintenance.
• Development Review Considerations – Continue coordination with local jurisdictions to ensure that new development will be served by existing or planned transit services. Agency guidelines can be established to assist local jurisdictions with the type of transit service or infrastructure that should be considered based on the jurisdiction’s desire to be TOD or the type/size of the development. The DTA guidelines used to assess transit demand as part of this TDP are presented in Section 7. Any development review policies should be done in conjunction with the Space Coast TPO and consider that agency’s efforts for Complete Streets and bike and pedestrian plans.

• Work with local jurisdictions and FDOT to ensure that traffic signals are appropriately timed to maximize bus schedule adherence. Traffic signals allowing the public transit vehicle to have priority assist in operational efficiencies while enhancing transit travel time to attract choice users.

Based on the analysis completed through this effort and the four categories of recommendations above, Table 9-1 presents the Operating Needs Plan, including funded and unfunded needs and the corresponding year of proposed implementation. Many of the services will remain unfunded unless additional revenue streams are identified. Table 9-2 presents the capital improvements and phasing plan that was identified through the TDP process. It is important to note that the priorities listed in Tables 9-1 and 9-2 are subject to the availability of funding. If alternative revenue sources are identified for the implementation of any improvement, regardless of the implementation year identified in this TDP, that improvement may be advanced for implementation in an earlier year.

The priorities listed in Tables 9-1 and 9-2 are consistent with the goals, objectives, and strategies in this report. Appendix F Alternatives Map Series identifies all of the proposed new services visually.
# Ten-Year TDP Operating Implementation Plan

<table>
<thead>
<tr>
<th>Service Type/Mode</th>
<th>Description</th>
<th>Implementation Year</th>
<th>Estimated Annual Operating Cost 2011 Dollars</th>
<th>Funding Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Route Bus Service</td>
<td>Maintain Existing Fixed Route Service</td>
<td>Existing</td>
<td>$6,084,500</td>
<td>Funded</td>
</tr>
<tr>
<td>Paratransit Service</td>
<td>Maintain Existing Paratransit Service</td>
<td>Existing</td>
<td>$5,171,825</td>
<td>Funded</td>
</tr>
<tr>
<td><strong>Enhance Existing Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route 9: Extension to the Pier</td>
<td>Route Realignment</td>
<td>2013</td>
<td>$0</td>
<td>N/A</td>
</tr>
<tr>
<td>Route 3: Extension to the Courthouse</td>
<td>Route Realignment</td>
<td>2013</td>
<td>$0</td>
<td>N/A</td>
</tr>
<tr>
<td>Increase weekday frequencies to 30 minutes on Routes 25 and 27</td>
<td>Increase Frequency</td>
<td>2018</td>
<td>$493,694</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase weekday frequencies to 15 minutes on Routes 4, 6, 9, and 21 during the day and 30 minutes in the evening. Day trips are operating at 30 minutes currently.</td>
<td>Increase Frequency</td>
<td>2018</td>
<td>$2,589,662</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase Saturday frequencies to 30 minutes on 6, 25, and 27</td>
<td>Increase Frequency</td>
<td>2018</td>
<td>$197,251</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase Saturday frequencies to 15 minutes during the day and 30 minutes in the evening on routes 4 and 9</td>
<td>Increase Frequency</td>
<td>2018</td>
<td>$301,678</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later weekday evening service to 9 PM on Routes 6, 25, 27, 21, and 22</td>
<td>Increase Hours of Service</td>
<td>2018</td>
<td>$140,863</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later Saturday service to 9 PM on Routes 6, 25, 27, 21, and 22</td>
<td>Increase Hours of Service</td>
<td>2018</td>
<td>$86,952</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Sunday service on Routes 1, 6, 25, and 27</td>
<td>Expand Service</td>
<td>2018</td>
<td>$497,726</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later Sunday service to 7 PM on Routes 4, 9, and 21</td>
<td>Expand Service</td>
<td>2018</td>
<td>$45,917</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase weekday frequencies to 30 minutes on Routes 1, 2, 3, 22, 23, and 28</td>
<td>Increase Frequency</td>
<td>2019</td>
<td>$2,146,626</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase Saturday frequencies to 30 minutes on Routes 1, 2, 3, 22, 23, and 28</td>
<td>Increase Frequency</td>
<td>2019</td>
<td>$425,703</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later weekday evening service until 9 PM on Routes 1, 23, and 28</td>
<td>Increase Hours of Service</td>
<td>2019</td>
<td>$177,583</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later Saturday service to 9 PM on Routes 1, 21, 23, and 28</td>
<td>Increase Hours of Service</td>
<td>2019</td>
<td>$168,527</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Sunday service on Routes 2, 3, 22, 23, and 24</td>
<td>Expand Service</td>
<td>2019</td>
<td>$398,606</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase weekday frequencies to 30 minutes on Routes 5, 8, and 24</td>
<td>Increase Frequency</td>
<td>2020</td>
<td>$611,351</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase Saturday frequencies to 30 minutes on Routes 22 and 24</td>
<td>Increase Frequency</td>
<td>2020</td>
<td>$162,796</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Saturday service on Route 5 and 8</td>
<td>Expand Service</td>
<td>2020</td>
<td>$299,485</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase weekday frequencies to 60 minutes on Route 26</td>
<td>Increase Frequency</td>
<td>2020</td>
<td>$245,361</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase Saturday frequencies to 60 minutes on Route 26</td>
<td>Increase Frequency</td>
<td>2020</td>
<td>$39,974</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later weekday evening service to 9 PM on Routes 2, 3, 5, 8, 24, and 26</td>
<td>Increase Hours of Service</td>
<td>2020</td>
<td>$482,444</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Later Saturday service to 9 PM on Routes 2, 3, 22, 24, and 26</td>
<td>Increase Hours of Service</td>
<td>2020</td>
<td>$124,025</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Sunday service on Routes 5, 8, 26, and 28</td>
<td>Expand Service</td>
<td>2020</td>
<td>$415,586</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Increase Sunday service frequencies to 30 minutes on Routes 4, 9, and 21</td>
<td>Increase Frequency</td>
<td>2021</td>
<td>$326,228</td>
<td>Unfunded</td>
</tr>
</tbody>
</table>
### Table 9-1

**Ten-Year TDP Operating Implementation Plan (Continued)**

<table>
<thead>
<tr>
<th>Service Type/Mode</th>
<th>Description</th>
<th>Implementation Year</th>
<th>Estimated Annual Operating Cost 2011 Dollars</th>
<th>Funding Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viera and Rockledge</td>
<td>Add New Service</td>
<td>2013</td>
<td>$372,923</td>
<td>Funded - FDOT/Match</td>
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<tr>
<td>Alternative 1: BCC to UCF Express</td>
<td>Add New Service</td>
<td>2015</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 2: Port St. John to Titusville Circulator</td>
<td>Add New Service</td>
<td>2018</td>
<td>$599,394</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 3: Grissom Parkway North-South Corridor</td>
<td>Add New Service</td>
<td>2018</td>
<td>$599,394</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 4: US 1/Heritage Corridor to Palm Bay</td>
<td>Add New Service</td>
<td>2018</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 5: US 1/Heritage Corridor via Malabar</td>
<td>Add New Service</td>
<td>2018</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 6: West Cocoa Circulator</td>
<td>Add New Service</td>
<td>2018</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 7: SR 520 to Port Canaveral</td>
<td>Add New Service</td>
<td>2019</td>
<td>$599,394</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 8: Viera Circulator</td>
<td>Add New Service</td>
<td>2019</td>
<td>$599,394</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 9: Minuteman Causeway East-West Connector</td>
<td>Add New Service</td>
<td>2019</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 11: Babcock Road</td>
<td>Add New Service</td>
<td>2019</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 12: Palm Bay Circulator</td>
<td>Add New Service</td>
<td>2019</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 13: Downtown Melbourne to A1A Condo Park</td>
<td>Add New Service</td>
<td>2019</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 14: Heritage High School</td>
<td>Add New Service</td>
<td>2019</td>
<td>$299,697</td>
<td>Unfunded</td>
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<tr>
<td>Alternative 15: St. Johns Heritage Parkway Corridor</td>
<td>Add New Service</td>
<td>2019</td>
<td>$599,394</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 16: Orlando Airport Express</td>
<td>Add New Service</td>
<td>2020</td>
<td>$299,697</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Alternative 17: Kennedy Space Center Express</td>
<td>Add New Service</td>
<td>2020</td>
<td>$299,697</td>
<td>Unfunded</td>
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<td>Alternative 18: BCC Connector</td>
<td>Add New Service</td>
<td>2021</td>
<td>$213,099</td>
<td>Unfunded</td>
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<td>Alternative 19: US 1 Express</td>
<td>Add New Service</td>
<td>2021</td>
<td>$599,394</td>
<td>Unfunded</td>
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<td>Alternative 20: Sebastian and South County</td>
<td>Add New Service</td>
<td>2022</td>
<td>$299,697</td>
<td>Unfunded</td>
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<tr>
<td>Alternative 21: Canaveral National Seashore</td>
<td>Add New Service</td>
<td>2022</td>
<td>$299,697</td>
<td>Unfunded</td>
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</tbody>
</table>
### Table 9-2

#### Ten-Year TDP Capital Implementation Plan

<table>
<thead>
<tr>
<th>Capital Needs</th>
<th>Unit Cost (2011 Dollars)</th>
<th>10-Year Need</th>
<th>10-Year Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maintain Existing Service</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement Vehicles - Maintain Existing Bus Service</td>
<td>$360,000</td>
<td>38</td>
<td>$15,122,785</td>
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<tr>
<td>Replacement Vehicles - Maintain Existing Paratransit Services</td>
<td>$95,000</td>
<td>18</td>
<td>$1,935,680</td>
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<tr>
<td>Replacement Vehicles - Vanpool</td>
<td>$28,000</td>
<td>10</td>
<td>$323,545</td>
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<tr>
<td>Associated Capital Maintenance Items</td>
<td>$1,707,474</td>
<td>10</td>
<td>$19,966,916</td>
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<tr>
<td>Bus Shelter</td>
<td>$25,000</td>
<td>20</td>
<td>$584,692</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>$500</td>
<td>30</td>
<td>$17,541</td>
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<tr>
<td>Transit Benches at Bus Stops</td>
<td>$2,500</td>
<td>20</td>
<td>$58,469</td>
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<tr>
<td><strong>Total</strong></td>
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<td></td>
<td>$38,009,627</td>
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<tr>
<td><strong>Service Enhancements</strong></td>
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<tr>
<td>Vehicles for Expansion of Existing Service</td>
<td>$360,000</td>
<td>22</td>
<td>$9,504,270</td>
</tr>
<tr>
<td>Viera and Rockledge</td>
<td>$360,000</td>
<td>2</td>
<td>$754,975</td>
</tr>
<tr>
<td>Alternative 1: BCC to UCF Express</td>
<td>$360,000</td>
<td>1</td>
<td>$395,824</td>
</tr>
<tr>
<td>Alternative 2: Port St. John to Titusville Circulator</td>
<td>$360,000</td>
<td>2</td>
<td>$850,026</td>
</tr>
<tr>
<td>Alternative 3: Grissom Parkway North-South Corridor</td>
<td>$360,000</td>
<td>2</td>
<td>$850,026</td>
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<tr>
<td>Alternative 4: US 1 to Parkway via Palm Bay Road</td>
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<td>1</td>
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<tr>
<td>Alternative 5: US 1 to Parkway via Malabar Road</td>
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<td>1</td>
<td>$425,013</td>
</tr>
<tr>
<td>Alternative 6: West Cocoa Circulator</td>
<td>$360,000</td>
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<td>$425,013</td>
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<tr>
<td>Alternative 7: SR 520 to Port Canaveral</td>
<td>$360,000</td>
<td>2</td>
<td>$870,427</td>
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<td>Alternative 8: Viera Circulator</td>
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<td>Alternative 9: Minuteman Causeway East-West Connector</td>
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<td>Alternative 10: US 192 East-West Connector</td>
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<td>Alternative 11: Babcock Road</td>
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<td>$435,213</td>
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<tr>
<td>Alternative 12: Palm Bay Circulator</td>
<td>$360,000</td>
<td>2</td>
<td>$870,427</td>
</tr>
<tr>
<td>Alternative 13: Downtown Melbourne to A1A Condo Park</td>
<td>$360,000</td>
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<td>Alternative 14: Heritage High School</td>
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<td><strong>Other Capital/Infrastructure &amp; Planning</strong></td>
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<td><strong>Total</strong></td>
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<td>$8,235,008</td>
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Ridership Projections

As mentioned previously, TBEST is required by legislation and is the FDOT-approved transit demand forecasting tool for TDPs. TBEST was used to project ridership according to the phased implementation plan. TBEST uses network connectivity, spatial and temporal accessibility, time-of-day variations, and route competition to project ridership. Population projections are also considered; however, land uses are not taken into account in TBEST. While TBEST is a useful tool, it is important to note that its strength lies in comparative projections, not absolute projections. It is unlikely that the projections provided represent actual ridership to be attained. TBEST also experiences difficulty projecting ridership for beach routes due to their tourist-oriented use and weekend ridership is generally overestimated. It is more likely that the estimates herein project relative ridership amounts between routes. TBEST is most accurate with shorter, local routes; its accuracy diminishes with longer express routes. As a result, caution and professional judgment should be used when considering the absolute ridership projections resulting from the TBEST model. In addition, as service levels increase or new service is introduced, some routes may experience ridership decreases because patrons have more service options. TBEST continues to be a work in progress and will become more and more useful as its full limitations are addressed in future updates to the model.

Table 9-3 provides TBEST projections for 2013, 2018, and 2022, the base, mid, and horizon years of implementation under this TDP. The ridership projections in Table 9-3 assume implementation of all service improvements irrespective of funding availability. TBEST provides the daily boardings for each route entered into the model. To produce the annual estimates for the three time periods in Table 9-3, it is estimated that Space Coast Area Transit will operate weekday service for 251 days per year, Saturday service for 52 days per year, and Sunday service for 52 days per year. The ten holidays currently observed by Space Coast Area Transit were deducted from weekday service although these holidays could fall on a Saturday or Sunday in future years.
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<td>Route 1 - Melbourne/Titusville Connector</td>
<td>317,373</td>
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<td>Route 2 - Titusville</td>
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<td>Route 3 - Merritt Island</td>
<td>52,005</td>
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<td>77,983</td>
<td>25,978</td>
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<td>Route 4 - 520 Connector</td>
<td>362,260</td>
<td>386,220</td>
<td>407,532</td>
<td>40,312</td>
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</tr>
<tr>
<td>Route 5 - Mims/Titusville</td>
<td>11,772</td>
<td>12,224</td>
<td>18,165</td>
<td>6,943</td>
<td>54%</td>
</tr>
<tr>
<td>Route 6 - Cocoa/Rockledge</td>
<td>208,612</td>
<td>331,676</td>
<td>358,058</td>
<td>149,446</td>
<td>72%</td>
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<tr>
<td>Route 8 - West Cocoa</td>
<td>6,551</td>
<td>10,969</td>
<td>22,543</td>
<td>15,574</td>
<td>244%</td>
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<tr>
<td>Route 9 - Beach Trolley - Cape Canaveral Loop</td>
<td>313,513</td>
<td>212,114</td>
<td>353,388</td>
<td>141,274</td>
<td>13%</td>
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<td>Route 21 - Downtown Melbourne</td>
<td>148,479</td>
<td>149,780</td>
<td>238,173</td>
<td>89,393</td>
<td>60%</td>
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<td>Route 22 - South Palm Bay</td>
<td>80,451</td>
<td>90,900</td>
<td>138,928</td>
<td>48,028</td>
<td>73%</td>
</tr>
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<td>Route 23 - West Palm Bay</td>
<td>89,397</td>
<td>90,328</td>
<td>116,347</td>
<td>26,980</td>
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<tr>
<td>Route 24 - Melbourne</td>
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<td>51,759</td>
<td>67,777</td>
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<tr>
<td>Route 25 - Palm Bay Connector</td>
<td>155,073</td>
<td>208,101</td>
<td>227,022</td>
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<tr>
<td>Route 26 - South Beach</td>
<td>42,291</td>
<td>39,378</td>
<td>50,070</td>
<td>7,692</td>
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<tr>
<td>Route 27 - East Palm Bay</td>
<td>121,106</td>
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<td>197,706</td>
<td>76,590</td>
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<td>Route 28 - North Melbourne</td>
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<tr>
<td>Viera/Rockledge</td>
<td>47,765</td>
<td>95,531</td>
<td>47,765</td>
<td>100%</td>
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<td>Alternative 1 - BCC to UCF</td>
<td>66,287</td>
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<td>62,772</td>
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<td>Alternative 3 - Grissom Parkway N/S</td>
<td>350,397</td>
<td>330,254</td>
<td>330,254</td>
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<td>Alternative 4 - US1 to Parkway via Palm Bay Road</td>
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<td>160,741</td>
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<tr>
<td>Alternative 13 - Downtown Melbourne / A1A</td>
<td>93,147</td>
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<td>Alternative 16 - OIA Express</td>
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<td>Alternative 17 - Kennedy Space Center Express</td>
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<td>Alternative 18 - BCC Connector</td>
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<td>Alternative 20 - Sebastian and South County</td>
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<td>Alternative 21 - Canaveral National Seashore</td>
<td>19,805</td>
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<td><strong>Total</strong></td>
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<td><strong>3,302,789</strong></td>
<td><strong>5,137,814</strong></td>
<td><strong>3,014,637</strong></td>
<td><strong>142%</strong></td>
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</table>
Section 10: Financial Plan

This section of the TDP presents capital and operating costs associated with implementation of the 10-year Needs Plan. Based on the current economic conditions and funding constraints, transit improvements included in the Needs Plan will not be implemented without securing additional revenue; therefore, a status quo plan is also included to present the operating and capital costs associated with maintaining the current level of service. Nevertheless, operating and capital costs for the Needs Plan have been prepared in the event that additional funding is identified.

Key Implementation Strategies

Several key strategies are identified in this section to assist in carrying out the 10-year implementation plan:

Enhance Marketing and Public Awareness – Despite limited resources, Space Coast Area Transit must seek new opportunities for public outreach. Additional resources need to be devoted to marketing to expand the countywide level of awareness regarding public transportation.

Maintain Quality of Service – As part of the TDP update, Space Coast Area Transit conducted an on-board survey in which respondents were asked to rate the system on several ridership satisfaction criteria, including service frequency, reliability, driver courtesy, and bus stop safety. It is important that on-board surveys be conducted periodically as part of service assessment and implementation so that special attention can be given to service aspects with scores of less than 4.0. Since word-of-mouth is perhaps the most effective form of marketing, the quality of service must be maintained and improved to keep existing users satisfied and to ultimately attract new users over time.

Expand Strategically – As funding becomes available, Space Coast Area Transit’s focus is to make improvements to the highest performing routes and expand service into underserved areas to meet the needs identified during the public outreach process. Existing routes are serving the transit dependent populations. Serving these markets is the first priority, while expanding to new areas and implementing new bus routes is important, but secondary over the next 10 years.

Regional Coordination – It is critical that Space Coast Area Transit staff coordinate with LYNX, Indian River County Transit, and other regional partners as part of the implementation of transit services that provide connections throughout the region.

Monitoring Program to Track Performance

A significant part of a transit agency's operation is continuously reviewing performance and effectiveness. Space Coast Area Transit staff regularly collects and summarizes ridership and
performance measures that are reviewed for effectiveness and analyzed against historical performance data. The performance monitoring program includes routine collection and reporting of the following information:

- Farebox revenues
- Passenger trips per revenue miles
- Operating cost per passenger trip
- Unlinked passenger trips for fixed-route services
- Total scheduled trips and operating costs for the ADA paratransit system
- Marketing/public outreach activities
- Route alignments/changes

Ten-Year TDP Needs

As indicated previously, transit alternatives for Brevard County were evaluated and prioritized through a number of factors, including the following:

Public involvement
- Discussions with the Review Committee and Space Coast Area Transit staff
- Situation appraisal
- Transit demand estimation and mobility needs

Ten-Year TDP Financial Plan

Numerous assumptions were made to project public transportation costs and revenues for the time period from FY 2013 through FY 2022. Assumptions made for operating and capital costs and revenues are based on a variety of factors, including NTD data, trend data, previous plans and agreements, and discussions with Space Coast Area Transit staff. These assumptions are summarized below.

Cost Assumptions

Based on the Consumer Price Index (CPI) data for the last 10 years from 2002 to 2011, the average annual inflation rate is 2.4 percent. Therefore, an annual inflation rate of 2.4 percent is used for all operating cost projections for fixed-route and paratransit service.

Annual operating cost for fixed route service is based on the estimated FY 2011 operating cost of $5,678,201. After FY 2011, an inflation rate of 2.4 percent per year thereafter is used.
The annual operating cost for existing paratransit services is based on the FY 2011 operating cost hourly rate derived from the total costs of directly operated and purchased transportation divided by the total hours of service operated as reported in the NTD. After FY 2011, an inflation rate of 2.4 percent per year thereafter is used.

The number of replacement buses is determined based on FTA guidelines and fleet management recommendations. Based on the current cost of vehicles in Florida, an average unit cost of $360,000 is assumed for a fixed-route replacement bus. The unit cost for paratransit vehicles is assumed to be $95,000 and the unit cost for vanpool vehicles is assumed at $28,000. The vehicle costs are in 2011 dollars and are assumed to increase 2.4 percent annually after FY 2011.

Revenue Assumptions

Revenues are based on varying sources including the FY 2012 Adopted Space Coast Area Transit Budget and the FY 2013 Preliminary Budget, actual revenues from FY 2011, Florida Transportation Disadvantaged Commission estimates, and the SAFETEA-LU and MAP-21 federal transportation funding bills. Federal, state, and local revenues are assumed to increase at an annual inflation rate of 2.4 percent each year after FY 2013 consistent with inflation on expenditures.

Section 5307 is utilized for operating, capitalized operating expenses, and capital expenditures as necessary to support the Space Coast Area Transit system in compliance with federal regulations and up to the amount available through the agency's annual apportionment.

It is assumed that toll revenue credits will still be available for use as local match on the purchase of vehicles with federal dollars and those figures are included in the capital match totals in the financial tables. If toll revenue credits are not available, additional local funds will be needed as match to support capital purchases.

A fare increase is assumed in 2016 and 2022 to ensure that Space Coast Area Transit maintains an adequate farebox recovery ratio.

Miscellaneous income, which includes revenue from interest, advertising, and other minor directly generated revenue from sale of disposal items, is assumed to increase at a rate of 2.4 percent.

Using these cost and revenue assumptions, the status quo financial plan and the 10-year vision financial plan for implementing the 10-year TDP recommendations are presented below.
Existing Operating and Capital Needs and Costs

Table 10-1 presents the status quo financial plan for maintaining the existing services and the projected costs associated with minimal capital improvements over the 10 year planning horizon. In some fiscal years, capital costs exceed revenues due to the vehicle replacement schedule. Space Coast Area Transit may decide to delay vehicle purchases to spread out these costs over several fiscal years versus making large, one-time vehicle purchases that would continue to have the fleet in need of replacement at the same time in the outer years. Also, capital funding can be carried forward so that funding not used in a fiscal year will be available for future fiscal year purchases. Operating revenue surpluses are not carried forward and are typically added to a reserve fund or transferred back to the general fund. As indicated previously, projected annual operating costs are adjusted to reflect an annual inflation rate of 2.4 percent.

The costs and revenues shown in Table 10-2 represent the full costs of operating and capital if all recommended alternatives were implemented. The Vision Financial plan, Table 10-2, is presented for consideration when additional revenue sources become available for the implementation of the recommended future transit services. The alternative operating and capital needs are summarized in this section, along with the projected costs associated with those needs over the next 10 years. Additional revenue sources would be necessary to cover the shortfall of $104,172,634 in operating expenses and the $25,165,634 shortfall in capital expenditures.
<table>
<thead>
<tr>
<th>Table 10-1 Cost Feasible 10-Year Financial Plan</th>
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### Operating Costs/Revenue

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<th>Operating Costs</th>
<th>Revenues</th>
<th>Surplus/Shortfall</th>
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<td>2017</td>
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<td>2022</td>
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### Capital Costs/Revenue

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<thead>
<tr>
<th>Year</th>
<th>Capital Costs</th>
<th>Revenues</th>
<th>Surplus/Shortfall</th>
</tr>
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<th>Total Revenue</th>
<th>Surplus/Shortfall</th>
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<td>2017</td>
<td>$39,252,880</td>
<td>$39,252,880</td>
<td>$39,252,880</td>
</tr>
<tr>
<td>2018</td>
<td>$39,301,870</td>
<td>$39,301,870</td>
<td>$39,301,870</td>
</tr>
<tr>
<td>2020</td>
<td>$39,400,850</td>
<td>$39,400,850</td>
<td>$39,400,850</td>
</tr>
<tr>
<td>2021</td>
<td>$39,450,840</td>
<td>$39,450,840</td>
<td>$39,450,840</td>
</tr>
<tr>
<td>2022</td>
<td>$39,500,830</td>
<td>$39,500,830</td>
<td>$39,500,830</td>
</tr>
</tbody>
</table>
## Table 10-2
Vision 10-Year Financial Plan

### Operating Costs / Revenue 2013 - 2022

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Costs</th>
<th>Revenues</th>
<th>Total Costs</th>
<th>Surplus/Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>$5,953,858</td>
<td>$3,352,703</td>
<td>$9,810,767</td>
<td>$0</td>
</tr>
<tr>
<td>2014</td>
<td>$6,096,750</td>
<td>$3,433,168</td>
<td>$10,526,733</td>
<td>($376,279)</td>
</tr>
<tr>
<td>2015</td>
<td>$6,243,050</td>
<td>$3,515,564</td>
<td>$11,174,799</td>
<td>($1,142,599)</td>
</tr>
<tr>
<td>2016</td>
<td>$6,392,906</td>
<td>$3,599,938</td>
<td>$11,442,994</td>
<td>($2,886,065)</td>
</tr>
<tr>
<td>2017</td>
<td>$6,546,336</td>
<td>$3,686,316</td>
<td>$11,717,652</td>
<td>($3,556,320)</td>
</tr>
<tr>
<td>2018</td>
<td>$6,703,448</td>
<td>$3,774,808</td>
<td>$12,138,296</td>
<td>($3,860,868)</td>
</tr>
<tr>
<td>2019</td>
<td>$6,864,211</td>
<td>$3,865,403</td>
<td>$12,729,614</td>
<td>($3,958,213)</td>
</tr>
<tr>
<td>2020</td>
<td>$7,029,075</td>
<td>$4,053,169</td>
<td>$13,334,844</td>
<td>($4,275,779)</td>
</tr>
<tr>
<td>2021</td>
<td>$7,197,772</td>
<td>$4,150,446</td>
<td>$14,446,048</td>
<td>($5,993,276)</td>
</tr>
<tr>
<td>2022</td>
<td>$7,370,519</td>
<td>$4,243,377</td>
<td>$15,613,896</td>
<td>($6,270,379)</td>
</tr>
</tbody>
</table>

### Revenues:
- **Federal 5307 for Operating and Capitalized Maintenance**
  - 2013: $3,352,703
  - 2014: $3,433,168
  - 2015: $3,515,564
  - 2016: $3,599,938
  - 2017: $3,686,316
  - 2018: $3,774,808
  - 2019: $3,865,403
  - 2020: $4,053,169
  - 2021: $4,150,446
  - 2022: $4,243,377

- **FDOT Block Grant Funds**
  - 2013: $2,699,571
  - 2014: $2,764,361
  - 2015: $2,830,706
  - 2016: $2,898,643
  - 2017: $3,012,004
  - 2018: $3,039,447
  - 2019: $3,112,394
  - 2020: $3,187,091
  - 2021: $3,263,581
  - 2022: $3,341,907

- **Capital Match**
  - 2013: $1,387,714
  - 2014: $552,872
  - 2015: $566,141
  - 2016: $579,729
  - 2017: $593,642
  - 2018: $607,899
  - 2019: $622,479
  - 2020: $637,418
  - 2021: $652,716
  - 2022: $668,381

- **ARRA Funds**
  - 2013: $95,000
  - 2014: $0
  - 2015: $0
  - 2016: $0
  - 2017: $0
  - 2018: $0
  - 2019: $0
  - 2020: $0
  - 2021: $0
  - 2022: $0

- **Miscellaneous Revenues**
  - 2013: $142,033
  - 2014: $145,442
  - 2015: $148,933
  - 2016: $152,507
  - 2017: $156,167
  - 2018: $160,160
  - 2019: $164,004
  - 2020: $167,940
  - 2021: $171,971
  - 2022: $176,098

- **Fare Revenue from Existing Services**
  - 2013: $853,000
  - 2014: $873,472
  - 2015: $894,435
  - 2016: $1,065,901
  - 2017: $1,091,483
  - 2018: $1,117,679
  - 2019: $1,144,503
  - 2020: $1,171,971
  - 2021: $1,200,098
  - 2022: $1,378,900

- **Fare Revenue from Expanded Services**
  - 2013: $0
  - 2014: $54,553
  - 2015: $100,755
  - 2016: $103,173
  - 2017: $105,649
  - 2018: $1,145,868
  - 2019: $2,361,373
  - 2020: $2,920,704
  - 2021: $3,187,459
  - 2022: $3,369,959

- **Total Revenues**
  - 2013: $9,810,767
  - 2014: $10,150,455
  - 2015: $10,408,479
  - 2016: $10,699,528
  - 2017: $10,927,715
  - 2018: $12,138,296
  - 2019: $13,334,844
  - 2020: $14,452,932
  - 2021: $15,554,490
  - 2022: $17,822,533

- **Total Costs**
  - 2013: $9,810,767
  - 2014: $10,526,733
  - 2015: $11,174,799
  - 2016: $11,442,994
  - 2017: $11,717,652
  - 2018: $12,138,296
  - 2019: $13,334,844
  - 2020: $14,452,932
  - 2021: $15,554,490
  - 2022: $17,822,533

- **Total Surplus/Shortfall**
  - 2013: $0
  - 2014: ($376,279)
  - 2015: ($1,142,599)
  - 2016: ($2,886,065)
  - 2017: ($3,556,320)
  - 2018: ($3,860,868)
  - 2019: ($4,275,779)
  - 2020: ($5,993,276)
  - 2021: ($6,270,379)
  - 2022: ($6,647,488)
Potential Revenue Sources

For Space Coast Area Transit to move forward with the 10-year vision plan, additional revenue sources will be necessary to address unfunded needs. The following list provides revenue sources that Space Coast Area Transit may be eligible for during FY 2013-2022. It is important to note that during the planning horizon, additional sources of funding may surface that are not currently available. Therefore, it is important that all agencies supporting public transit improvements continue to review funding opportunities and exhaust all available sources to support public transit improvements.

- Federal Section 5309 – Space Coast Area Transit could compete for these discretionary funds from FTA for new and expanded rail and bus rapid transit that reflect local priorities to improve transportation options in key corridors. Because these funds are discretionary they are competitive and unpredictable for financial forecasting purposes.

- Mobility Fee – The County could implement a countywide mobility fee to support and fund mobility needs. The one-time payment for new development has the potential to fund transit capital and provide Space Coast Area Transit with revenue to fund new transit infrastructure necessitated by growth and development.

- Tourist Development Tax – The County could increase or reallocate the existing Tourist Development Tax for the provision of transit services to the beaches, hotels, Kennedy Space Center, and other major attractions.

- TD Trust Fund – A marketing campaign should be created to encourage Brevard County residents to voluntarily contribute to the TD Trust Fund when registering their vehicles or renewing their registrations. Funds collected in Brevard County will go towards additional trips for people using the coordinated system.

- Disabled Parking Volunteer Program – A volunteer disabled parking enforcement program will allow citizen volunteers to issue citations to those illegally using disabled parking spaces. Fines collected through the volunteer program may be used as revenue for the County’s paratransit service.

- Transportation Investment Generating Economic Recovery (TIGER) – The TIGER grant program discretionary capital funding made available to assist with the funding of projects similar to those funded under the New Starts and Small Starts federal funding programs.
• Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) – The TIGGER program is a discretionary grant program for public transportation projects that result in a decrease in a transit system’s energy use or reduce a transit system’s greenhouse gas (GHG) emissions.

• Charter County Surtax – The County may consider pursuing a sales tax up to 1 percent and outside of the 1 percent cap on other discretionary sales taxes, which must be approved by a majority vote of the electorate and can be used by a transit agency for the purposes of development, construction, equipment, maintenance, operation, supportive services, and related costs of a fixed guideway rapid transit system.

• Ad Valorem Increase – Cities and the County could increase the millage rate to generate revenues to support transit operations. The County also has the ability to create a municipal service taxing unit (MSTU) and levy a millage to support additional public transit service.

• Gas Tax – Increases to the gas tax can be applied and utilized to fund operating and capital expenditures. However, as transit use increases and the rate at which gas is consumed fluctuates, gas tax revenues may be an unstable source of funding for transit services.

• Sales Tax – The County may levy the additional ½ cent of the discretionary sales tax to raise additional funds to fund transit service costs.

• Fare Increase – Space Coast Area Transit should evaluate the fares charged for service periodically to ensure that the cost of service to users is maintained at a reasonable percentage consistent with the provision of service and also to prevent having to shock customers with a significant increase in fares due to minor increases not periodically occurring.

• Private Partnerships – Brevard County and the municipalities should work with Space Coast Area Transit to continue to support transit services through new development. As new development occurs, the County and the cities should ensure that the appropriate contributions are being secured for capital and operating costs related to providing public transit service to the development. Partnerships should be sought with major employers to create employee pass programs or make donations to support transit service to their workplaces.

• Service Development Grants (SDGs) – These grants are made available through FDOT to assist with new and innovative public transit operating and capital expenses when state funding is available for this program.
Appendix A: Private Transportation Providers
July 18, 2012

Dear Transportation Provider,

Space Coast Area Transit is developing a ten year plan that guides, assesses, and sets a vision for transit service incorporating the local operating environment, public involvement, and funding availability.

As part of the Transit Development Plan (TDP), Space Coast Area Transit must provide information on all public transportation providers within Brevard County. Your agency has been identified as a transportation provider; therefore, you are being contacted. Please take a few moments to complete the attached survey and return to our attention to assist with this effort. You may return completed surveys as follows:

E-mail: pwhitton@tindaleoliver.com
Fax: (407) 657-9106, Attn: Patricia Whitton
USPS: Tindale-Oliver & Associates, Inc.
Attn: Patricia Whitton
135 W. Central Blvd., Suite 450
Orlando, FL 32801

Thank you for your participation and support of Space Coast Area Transit. If you have any questions or need additional information, please do not hesitate to contact Patricia Whitton at (407) 657-9210, ext. 230.
Brevard County Transportation Service Provider Survey

Space Coast Area Transit is in the process of developing its ten-year Transit Development Plan (TDP) major update, in accordance with the Florida Department of Transportation (FDOT) TDP Florida Rule 14-73.001. The State of Florida requires that Space Coast Area Transit list all of the transportation providers within its geographic service area. Please take the time to fill out this survey and assist Space Coast Area Transit in providing better transportation to all of Brevard County's residents.

1. What is the name of your company? _____________________________________________

2. What type of service do you provide? (e.g., taxi, demand response, charter) _______________

3. Please list the location of your facilities:
   Name (e.g., dispatch)       Location       Age       Condition (please circle one)
   ___________________________   ___________________________   _______     Excellent   Good   Fair   Poor
   ___________________________   ___________________________   _______     Excellent   Good   Fair   Poor
   ___________________________   ___________________________   _______     Excellent   Good   Fair   Poor

4. What are the boundaries of your service area? ________________________________

5. What are your hours of operation? _________________________________________

6. What is your fare per trip? ________________________________________________

7. What is your service frequency? __________________________________________

8. What are your primary destinations? _______________________________________

9. What is your average annual ridership? _____________________________________

10. Please list your rolling stock
    Type (e.g., car, van, bus)       Age       Number of Units       Special Accessories
        ____________________________________________
        ____________________________________________
        ____________________________________________

11. Please list any other equipment used to perform daily operation (e.g., automotive repair)
    Type       Age       Number of Units       Condition (please circle one)
    _______________   _______   _______     Excellent   Good   Fair   Poor
    _______________   _______   _______     Excellent   Good   Fair   Poor

12. Please list any affiliations with groups or programs involved with public transit:

Thank you for taking the time to complete this survey. Please return the completed survey to Tindale-Oliver & Associates, Inc., 135 W Central Boulevard, Suite 450, Orlando, Florida 32801, or fax to (407) 657-9106, or email pwhitton@tindaleoliver.com. If the information is available in another format, please mail, fax, or e-mail the existing format without completing this questionnaire.
<table>
<thead>
<tr>
<th>Name</th>
<th>Type of service</th>
<th>Fare</th>
<th>Vehicles/Passengers</th>
<th>Service Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA Access Transportation</td>
<td>Charter</td>
<td>Range depending on vehicle and distance</td>
<td>Vans, Buses</td>
<td>Orlando Airport, Cocoa Beach, Cape Canaveral, Cruise Lines, Cocoa Beach Hotels, Melbourne, Orlando, Miami Airport, Sanford Airport</td>
</tr>
<tr>
<td>AAA Cruise Line Connection</td>
<td>Charter</td>
<td>Starts at $38 per person-round trip</td>
<td>Car, SUV, Van, Buses, Mini-Buses</td>
<td>Disney, Universal Studio, Kissimmee, 192 International Drive, Downtown Orlando, and all Major Orlando Hotels</td>
</tr>
<tr>
<td>Around the Clock Transportation</td>
<td>Charter</td>
<td>Starts at $40 per person-one way</td>
<td>Vans, Mini-bus</td>
<td>Orlando Airport to Port Canaveral &amp; Cocoa Beach Hotels</td>
</tr>
<tr>
<td>Bay Hill Transportation</td>
<td>Charter</td>
<td>varies</td>
<td>Town Car, Bus, Limo</td>
<td>Brevard County, Port of Miami, Miami Airport</td>
</tr>
<tr>
<td>Luxury Rides</td>
<td>Charter</td>
<td>Varies</td>
<td>Sedan, Limo, SUV, Vans, Mini Bus, Coach</td>
<td>Florida</td>
</tr>
<tr>
<td>Lake Limo</td>
<td>Charter</td>
<td>Varies</td>
<td>Limo, Mini Bus</td>
<td>Florida, mostly Miami and surrounding areas</td>
</tr>
<tr>
<td>Kennedy Tours</td>
<td>Charter</td>
<td>$60 - $105 (depending on distance)</td>
<td>Sedan, Limo, SUV, Vans, Mini Bus, Coach</td>
<td>Orlando</td>
</tr>
<tr>
<td>Executive Shuttle Service</td>
<td>Charter</td>
<td>varies</td>
<td>vans</td>
<td>Orlando Airport transportation offering door-to-door shuttle service from the Orlando Airport and many other locations in Eastern Central Florida</td>
</tr>
<tr>
<td>Franco Transportation</td>
<td>Taxi, Charter</td>
<td>varies</td>
<td>Taxi's, 10-Passenger Vans, Town Cars, Limos</td>
<td>Orlando Airport, Amtrak Station, UCF, Downtown Orlando, International Drive</td>
</tr>
</tbody>
</table>

Providers that did not respond to the questionnaire are listed below:
- Mears Transportation Group
- Superior Limo
- Superior Transportation
- Arts Shuttle
- A Busy Traveler Transport
- American Luxury Transportation
- MCO Express
- Spaceport Transport
- Travelynx
Appendix B: Public Involvement Plan & FDOT Approval
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I. INTRODUCTION

Space Coast Area Transit is in the process of developing its ten-year Transit Development Plan (TDP) major update. The ten-year TDP is a strategic guide for public transportation in the community over the next ten years. The plan also represents the transit agency’s vision for public transportation in its service area during the ten-year time period. Several public involvement activities were selected for inclusion in the TDP’s public involvement process to ensure the active participation of citizens in the community. Each of the public involvement activities are discussed in this section. The activities have been placed into two major categories: direct involvement activities and information distribution activities. Direct involvement activities refer to those that engage the public in “hands on” workshops and/or discussion about the project. The information distribution activities refer to public information materials that are used to inform the general public of project-related topics and issues.

This Public Involvement Plan (PIP) has been developed as part of the TDP in order to formally document all planned public outreach activities to be undertaken. The Plan identifies numerous opportunities for public involvement as well as involvement on the part of local agencies and organizations. In accordance with the Florida Department of Transportation (FDOT) TDP Florida Rule 14-73.001, this plan was developed to be consistent with the Space Coast Transportation Planning Organization (TPO) PIP. Activities proposed within this PIP include coordination with the TDP Review Committee, stakeholder interviews, an on-board survey, discussion group workshops, public workshops, and project presentations to governing boards and advisory committees. The results of the public involvement activities will be used in the development of the ten-year transit plan as part of the major TDP update.

Title VI of the Civil Rights Act

Space Coast Area Transit is committed to ensuring that no person shall on the basis of race, color or national origin, sex, age, disability, family or religious status, as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and the Florida Civil Rights Act of 1992, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination or retaliation under any Space Coast Area Transit program or activity.

Environmental Justice

Title VI of the 1964 Civil Rights Act and the 1994 U.S. Department of Transportation (U.S. DOT) Order on Environmental Justice requires that the transportation planning process seek to identify the needs of low-income and minority populations. Space Coast Area Transit is committed to enhancing public involvement activities to identify and address the needs of minority and low-income populations in making transportation decisions.
Limited English Proficiency (LEP)

Public transportation providers receiving federal funding from the U.S. DOT have a responsibility, under Title VI of the Civil Rights Act of 1964, to take reasonable steps to ensure Limited English Proficiency (LEP) persons have meaningful access to benefits, services, information, and other important programs and activities. Persons with LEP include individuals who have a limited ability to read, write, speak, or understand English. Space Coast Area Transit is committed to creating a positive environment for persons with LEP and ensuring that they have an opportunity for full participation in public involvement activities.

Special Accommodations

Persons who require special accommodations under the Americans with Disabilities Act (ADA) or persons who require translation service to participate in public meeting activities are requested to notify Space Coast Area Transit at least 48 hours prior to workshops or meetings. Requests for alternative-format materials or translation should be made in advance to accommodate the development and provision of these materials. Space Coast Area Transit public meeting notices will include the Space Coast Area Transit staff contact phone number and deadline date for requesting special accommodations at workshops or meetings.
II. PUBLIC INVOLVEMENT PLAN TECHNIQUES

Many public involvement techniques were selected for inclusion in the TDP PIP to maximize the potential for active participation by citizens in the community. Each of the techniques is briefly summarized in this section. Direct involvement techniques refer to those that engage the public in “hands on” workshops and/or discussion about the project. Information distribution techniques refer to those that utilize the dissemination of public information materials to inform the general public of the project.

Direct Involvement Activities

Public involvement activities involving direct interaction with agencies, organizations, and/or citizens will be used throughout the study process. The direct involvement activities selected for this TDP include the following.

- Public Information Materials
- Stakeholder Interviews
- Discussion Groups
- Public Workshops
- Review Committees Meetings
- TPO Committees and Board
- County Commission
- City Commissions/Councils
- Surveys

The following section describes each direct involvement activity in detail. In addition, the number of times each activity is programmed to be performed is noted where appropriate.

- **Review Committee** – A TDP Review Committee will be assembled to provide project oversight and technical feedback throughout the TDP development process. The Review Committee is scheduled to meet four times throughout the course of the project. Private individuals residing in Brevard County and representatives from the following agencies and organizations may be selected as Review Committee members:
  - Space Coast Area Transit
  - Space Coast TPO
  - Florida Department of Transportation District 5
  - Brevard Workforce
  - Brevard County
  - Transportation Disadvantaged Local Coordinating Board

- **Stakeholder Interviews** – Stakeholder interviews will be conducted to solicit ideas, concerns, and comments from key individuals/organizations, community leaders, and
other individuals identified by Space Coast Area Transit to obtain their opinions and ideas regarding current and future transit services in Brevard County. Interviews are planned to be held with ten stakeholders and will seek to assess the stakeholder’s views of current transit service, implementing and funding new transit projects, as well as identifying transit issues that are of greatest local concern. The interviews will be conducted both in-person and by telephone and will require between thirty minutes to an hour of the stakeholder’s time. A brief questionnaire will be developed to include several open-ended questions pertaining to the stakeholder’s perceptions of existing transit services, as well as their opinions regarding the future of public transportation in the community. The stakeholder questions can be provided in advance for review prior to the interview. Representatives from the following agencies and organizations may be selected for stakeholder interview:

- Space Coast TPO
- Brevard County Transportation Engineering (County ITS Person)
- Brevard County Board of County Commissioners
- Brevard County
- VPSI
- Brevard County Economic Development
- City of Cape Canaveral
- West Cocoa
- Brevard Alzheimer’s Foundation
- Aging Matters In Brevard
- Brevard Community College
- Melbourne Square Mall
- Florida Institute of Technology Representative
- Brevard Airport Representative
- Brevard Achievement
- Space Coast Advertising
- Palm Bay

**Transit Passenger Surveys** – A system-wide on-board survey of Space Coast Area Transit fixed-route bus patrons was designed and conducted to inquire about passenger demographics, travel behavior, satisfaction, needs, and issues. On-board surveyors helped to facilitate the survey administration process by distributing and collecting survey questionnaires.

**Public Workshops** – Public workshops have proven to be an effective technique for obtaining substantive public participation in the planning process and will be the primary mechanism to obtain input from the general public regarding the transit needs in Brevard County. The workshop locations will be selected in an attempt to distribute meetings across the Brevard geographic service area. If necessary, additional public involvement
activities may be conducted to reach the greatest number of participants throughout the Space Coast Area Transit service area.

A total of four public workshops will be conducted over the course of the project. The first two workshops will occur early in the process. The purpose of these workshops will be to acquire additional input on the perceptions of transit service and mobility needs in the study area.

The second set of public workshops is anticipated to occur later in the process once the potential transit alternative improvements and solutions have been identified. This will allow the public to provide input on the prioritization of the proposed alternatives in the final TDP implementation plan. Public workshop participants will have 15 days after each workshop to submit comments on the materials presented.

The public workshops conducted as part of the study process will be an “open-house”-style workshop and may employ one or more public participation techniques (presentations, surveys, dot polling, visual displays, and other informational materials). The types of strategies employed will depend on the workshop topics and venues.

**Open House Workshops** – An open house is typically the most flexible public workshop that allows participants to tour staged workshop stations at their own pace. Workshop stations will be designed to address separate issues. This public involvement technique is typically designed to be informal and does not require an invitation to participate. It also may be appropriate to coordinate some of the public workshops with other scheduled events to help spur attendance. This will provide opportunities for all interested parties to be actively engaged in the public involvement process for the major TDP update. Potential locations for the workshops are listed below.

- Hammock Landing
- Melbourne Square Mall
- Merritt Island
- Titusville Gazebo
- Shepard Park
- Thursday afternoon Brevard Farmer’s Market
- Wickham Park, Melbourne

The detailed schedule of the meeting times and locations will be determined in conjunction with Space Coast Area Transit staff. At a minimum, these workshops shall be given public notice in accordance with Brevard County, Space Coast Area Transit, and the TPO’s public notification requirements. However, it is anticipated that additional marketing materials will be developed to promote the public workshops and information about the public workshops will likely be posted in County government buildings, public
libraries, municipal governments, recreation centers, community centers, newspapers, websites, and on board buses within the County.

- **Discussion Group Workshops** – To supplement the information collected during the previously listed public involvement activities, four discussion groups will be held around the county to ensure representation that is geographically distributed. Two of the discussion groups will be conducted using current transit riders to help represent the “user” perspective. Participants of the transit-user discussion group will be recruited through flyers on-board the Space Coast Area Transit buses. In addition, two additional discussion group meetings will be held consisting of members from the business, health, and education communities, as well as non-profit social service agencies and local chambers of commerce, to help represent the view of informed “non-users”. Space Coast Area Transit staff will work with the Review Committee to identify and recruit potential “user” and “non-user” participants and preferred venues for the workshops. Potential locations and groups are listed below.
  - Brevard Community College
  - Rockledge High School
  - Other County High Schools
  - TPO Complete Streets
  - TPO Growth Management

- **Public Presentations** – A total of four presentations of the TDP will be made at the direction of Space Coast Area Transit staff and may include:
  - **Brevard County Board of County Commissioners** – The County Commission is the governing body for Brevard County Government. The Board is responsible for creating policies that establish the County's budget, enacting new laws, ruling on rezoning applications and other land-use cases, and appointing the County Manager and the County Attorney.
  - **TPO Board** – The TPO Board is composed of decision-makers responsible for regional transportation planning in Brevard County. Consequently, it is critical to keep them informed throughout the project and to obtain their input and guidance for the study.
  - **TPO Technical Advisory Committee** – The TAC is composed of technically qualified representatives of agencies responsible for local planning and engineering activities throughout Brevard County. It is the responsibility of the TAC:
    - To coordinate transportation planning and programming activities;
To review transportation studies and reports;
To review work programs and transportation improvement programs; and
To provide technical recommendations to the TPO on transportation issues.

- TPO Citizens Advisory Committee – The role of the CAC is to represent the views of Brevard County’s citizens in regard to transportation-related matters. The CAC is composed of citizens appointed by the TPO Board and Space Coast Area Transit representing the Community Transportation Coordinator.

Presentations may also be made to city councils or commissions in Brevard County, chambers of commerce, coalitions, and local agency boards as directed by Space Coast Area Transit staff in conjunction with the Review Committee.

- **Peer Review and Involvement** – In addition to Space Coast Area Transit, the public involvement process for the TDP update will also include the involvement of other entities, such as FDOT, the regional workforce board, and other interested parties, as appropriate. These parties will be invited to all public participation events and provided an opportunity to review and comment on the draft TDP.

### Information Distribution Activities

The information distribution activities selected for the TDP are listed and discussed below.

- **Public Involvement Plan** – The public involvement plan will be made available on the Space Coast Area Transit website.

- **Press Releases/Flyers for Public Workshops** – Press releases and flyers will be prepared, as appropriate, prior to each of the public workshops to notify citizens and encourage participation. Flyers will be made available in a variety of formats and forums to be determined by Space Coast Area Transit and the Review Committee, and will be provided to Space Coast Area Transit staff for distribution. In addition, the workshops will be noticed in a newspaper of general circulation, which may include but is not limited *Florida Today* (the local newspaper with the largest circulation).

- **Public Broadcast Radio and Television** – To the degree feasible, TDP meetings and other project announcements will be advertised on public broadcast radio and SCGTV.

- **Comment Cards and Surveys** – Comment cards will be available at public meetings as a way for the public to share comments and provide feedback in a way that may be more comfortable than voicing an opinion during an open meeting.
• **Reports and Information for Space Coast Area Transit Website** – Technical reports, study and workshop materials, and other information will be provided to Space Coast Area Transit staff for posting on the Space Coast Area Transit website.

• **Notification of General Public** – The general public will be notified of public meetings through a number of methods: legal advertisement, Space Coast Area Transit website, flyers, and press releases.

• **Mailing/Contact Lists** – The Space Coast Area Transit mailing list will enable the distribution of project-related information throughout the development of the TDP. Mailings will be designed to reach diverse populations throughout the County and the study area. Specifically, an effort will be made to reach local stakeholder groups with study materials. Such groups include the various chambers of commerce throughout the community, civic and advocacy groups, special interest groups, etc.

• **Additional Presentation and Workshop Materials** – Public involvement materials developed for the public involvement plan will be made available to Space Coast Area Transit staff and Review Committee members for use at their discretion at other public involvement events and opportunities. Materials include presentations, presentation boards, surveys, and other tools and informational resources used to gather public input throughout the study process. Visualization techniques (i.e., diagrams, maps, pictures) will be used to supplement and enhance program descriptions in order to optimize public understanding of issues and concepts.
III. MEASURES OF EFFECTIVENESS

Effectiveness measures have been established to evaluate the effectiveness of the public involvement process. For the purposes of this PIP, effectiveness measures will be defined as follows:

- **Total number of persons engaged** – This will be measured by using a sign-in/attendance log to monitor attendance for any discussion group, Review Committee meeting, and public workshop.

- **Total number of public involvement events** – The total number of public involvement events will be documented within the public involvement section of the TDP. In addition, the public meeting locations will be depicted on a map within the Space Coast Area Transit geographic service area.

- **Total number of persons surveyed** – The total number of persons surveyed will be documented in the public involvement section of the TDP.

- **Total visits to website to complete surveys** – Surveys accessed and completed on the Space Coast Area Transit website will be documented and included in the public involvement section of the TDP.

- **Review Committee Survey** – A survey will be provided to all Review Committee members to allow them to rate their participation and the value of the review committee in the TDP development process.

- **Total service recommendations in ten-year plan that result from public involvement** – Public involvement participants will be given comment forms to document comments and/or recommendations. All questions that cannot be answered at the meetings will be responded to in writing within 15 days, provided the person provides their name and address.
IV. PUBLIC INVOLVEMENT SCHEDULE

A project schedule was developed for the public participation portions of the study. This project schedule is provided in Table 1. Please note that the dates for specific meetings and public involvement activities are approximate and subject to change pending guidance from Space Coast Area Transit and the project Review Committee.

Table 1
Preliminary Project Public Involvement Schedule

<table>
<thead>
<tr>
<th>Public Involvement Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Board Survey</td>
<td>April 2012</td>
</tr>
<tr>
<td>Public Workshops (1st round – 2 workshops)</td>
<td>June 2012</td>
</tr>
<tr>
<td>Stakeholder Interviews</td>
<td>June 2012</td>
</tr>
<tr>
<td>Review Committee Meeting #1</td>
<td>June 2012</td>
</tr>
<tr>
<td>Agency Discussion Groups</td>
<td>July 2012</td>
</tr>
<tr>
<td>Transit Users Discussion Groups</td>
<td>July 2012</td>
</tr>
<tr>
<td>Review Committee Meeting #2</td>
<td>July 2012</td>
</tr>
<tr>
<td>Review Committee Meeting #3</td>
<td>July 2012</td>
</tr>
<tr>
<td>Public Workshops (2nd round – 2 workshops)</td>
<td>July 2012</td>
</tr>
<tr>
<td>Review Committee Meeting #4</td>
<td>August 2012</td>
</tr>
<tr>
<td>Presentation #1 (Direction of Space Coast Area Transit Staff)</td>
<td>August 2012</td>
</tr>
<tr>
<td>Presentation #2 (Direction of Space Coast Area Transit Staff)</td>
<td>August 2012</td>
</tr>
<tr>
<td>Presentation #3 (Direction of Space Coast Area Transit Staff)</td>
<td>August 2012</td>
</tr>
<tr>
<td>Presentation #4 (Direction of Space Coast Area Transit Staff)</td>
<td>August 2012</td>
</tr>
<tr>
<td>Presentation Draft Final TDP for Approval (TPO Board)</td>
<td>August 2012</td>
</tr>
<tr>
<td>Presentation Draft Final TDP for Approval Brevard County Commission</td>
<td>August 2012</td>
</tr>
<tr>
<td>All Public Comments Due</td>
<td>August 20, 2012</td>
</tr>
</tbody>
</table>
June 25, 2012

LaChant Barnett
Project Manager
Tindale-Oliver & Associates, Inc.
135 West Central Boulevard, Suite 450
Orlando, Florida 32801

Dear Ms. Barnett:

Subject: Public Involvement Plan
Space Coast Area Transit (SCAT) FY 2013 – 2022 Transit Development Plan

We have reviewed the Public Involvement Plan submitted for the SCAT Transit Development Plan and found it to be in compliance with Rule 14-73.001, Florida Administrative Code.

Please contact me at theodis.perry@dot.myflorida.com or 407-482-7871 if you require any additional information.

Sincerely,

[Signature]

Theodis L. Perry, Jr.
Transit Analyst
District Five
Appendix C: Public Outreach
Space Coast Area Transit is working to develop the 2013/2022 Transit Development Plan Major Update. Please join us at one of the open house-style workshops to find out more information on your areas various transportation plans and provide your input on how to make public transportation work better for our community. The workshop on July 23, 2012 will be hosted in coordination with the Space Coast Transportation Planning Organization.

Monday, July 23, 2012
4:00 PM to 6:00 PM
Brevard County Government Center
2725 Judge Fran Jamieson Way, Building C, Second Floor, Space Coast Room
Melbourne, FL

Tuesday, July 24, 2012
10:00 AM to 12:30 PM
Hammock Landing Transfer Station
225 Palm Bay Road
West Melbourne, FL

For questions or more information, please contact: Tricia Whitton, pwhitton@tindaleoliver.com or (407) 657-9210.

In accordance with the Americans with Disabilities Act of 1990, persons needing a special accommodation at a workshop because of a disability or physical impairment should contact Carmen Baez at Space Coast Area Transit, 401 South Varr Avenue, Cocoa, Florida 32922 or (321) 635-7815, ext. 201 not later than 48 hours before the workshop.
Please take the time to complete this short survey. Responses will be used to develop the Space Coast Area Transit TDP. The TDP will guide Brevard County’s public transportation over the next ten years. Please circle your answers.

1. Are you aware of Space Coast Area Transit and its services?    Yes  No

2. Do you use Space Coast Area Transit? Yes  No

3. Is there a need for additional transit service in Brevard County? Yes  No
   a. If yes, where _________________________________________________________

4. What is your perception of Space Coast Area Transit? Good  Satisfactory  Poor

5. Are you willing to pay additional local taxes for an expanded transit system? Yes  No

6. Are you willing to pay a higher fare for the existing transit service? Yes  No

7. Is more regional transportation needed to connect Brevard County with other counties or cities? If yes, which counties or cities. Yes ________________________________  No

8. What type of overall improvement do you believe would be more important for Space Coast Area Transit to pursue in the near future? (Please check (\) only one answer)
   ___ Improving the frequency of existing bus routes
   ___ Extending bus service to new areas
   ___ Increased Weekend Service
   ___ Later Evening Service

9. If you are not a current Space Coast Area Transit user, what would interest you in using the system?
   ___ Increased Frequencies
   ___ Extended Evening Service
   ___ Increased Weekend Service
   Other _________________________________________________________________________

Thank you for completing this survey. Please place your completed survey at the designated location or mail your written comments to Tindale-Oliver & Associates, Inc., Attn: Tricia Whitton, 135 W. Central Blvd, Suite 450, Orlando, Florida 32801 or pwhitton@tindaleoliver.com by August 3, 2012.
AROUND OUR COMMUNITIES

Early voting

Palm Bay

Teen charged with sex abuse

A 15-year-old Palm Bay boy has been arrested on a charge of forcing a 9-year-old boy to commit a sex act, police said.

The 15-year-old, whom FLORIDA TODAY will not identify because of his age, was charged with lewd and lascivious molestation.

The victim told police he was watching television in his aunt's house on July 13 when the incident took place.

The older boy was arrested Aug. 1 and taken to the Juvenile Detention Center.

Rockledge

Police identify robbery suspect

Police on Thursday identified the suspected getaway driver in an Aug. 1 robbery at a Kennedy Space Center Federal Credit Union branch as 34-year-old Levon Powell.

Police continue to seek information on three other men involved in the robbery at 634 Barnes Blvd. in Rockledge.

Powell faces charges of robbery with a firearm and conspiracy to commit robbery with a firearm, and police said he is not cooperating with an investigation that might lead them to the other suspects.

Anyone with information is asked to contact Cpl. Nick Galluzzi at 321-690-3988 ext. 3194. Tips can also be given through CRIMELINE at 1-800-423-TIPS (8477).

Callers can remain anonymous and may be eligible for a reward.

Sharpses

Jail supervisors gain certification

Fifteen Brevard County Jail supervisors were recently certified by the American Correctional Association, a program that improves staff training and development, according to a release from the Brevard County Sheriff's Office.

Lt. George Fayson, Lt. Ronald Tomblin and Lt. James Dodson were certified as corrections managers.


Brevard County

Public meetings set on transit plan

Space Coast Area Transit will hold two public meetings this month as part of its 2013/2022 Transit Development Plan Major Update initiative.

The public is invited to these open house-style workshops to learn about various area transportation plans and to provide input on how to make public transportation work better in Brevard County communities.

The meetings are from 1 to 3 p.m. today at Space Coast Area Transit in Cocoa and from 5 to 7 p.m. at Searstown Mall in Titusville.

Those who would like to offer comments, but are unable to attend a workshop, may do so by submitting written comments to the attention of Patricia Whitten at Tindale-Oliver & Associates Inc., 135 W. Central Blvd., Suite 450, Orlando, FL 32801.

Titusville

Aviation enthusiasts plan gathering

Valiant Air Command plans its monthly Warbird Ramp Fly-In/Drive-In breakfast from 8 to 11 a.m. Saturday.

This is an opportunity for pilots and the public to enjoy the camaraderie in Valiant Air Command's vintage warbird environment.

The museum admission is waived for pilots and passengers who arrive by air.

For those who drive, breakfast is free with a regular paid admission.

For information or to RSVP, call 321-268-1941, or email vacwarbirds@bellsouth.net.

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Thank You

Dr. Ashok Shah

The staff and residents of Titusville Rehabilitation and Nursing Center would like to thank our Medical
Appendix D: On-Board Survey Instrument and Results
Survey Approach

The method utilized for surveying bus riders was the distribution of a self-administered questionnaire to all persons boarding surveyed Space Coast Area Transit bus routes. One standard survey was distributed on all Space Coast Area Transit local fixed-routes. The standard survey instrument was translated into a Spanish language version for distribution to Spanish speaking patrons who were not able to complete the English version.

The on-board survey was distributed by a team of trained survey personnel. Prior to sending surveyors out on Space Coast Area Transit buses, an orientation session was conducted in order to instruct surveyors about their duties and responsibilities and to address any issues or concerns that they may have had about the survey process.

The surveys were distributed on 50 percent of all Space Coast Area Transit fixed bus runs for one full weekday and Saturday, respectively. Bus runs reflect operator work shifts and were used to identify the 50 percent service coverage and corresponding surveyor work plan.

On-Board Survey Results

The following section documents the results of the on-board survey. A total of 1,935 Space Coast Area Transit bus riders responded to the survey. Tables 4-1, 4-2, and 4-3 present the response rate by question, completed surveys by language versions, and completed surveys by day of week, respectively, for the survey effort.

As shown in Table 4-1, an average response rate by question of 84.0 percent was achieved for the survey effort. Weekday completed surveys are more than triple the number of Saturday completed surveys. The predominant portion of respondents (96.8%) responded to English-version surveys.
### Table 4-1
Survey Response Rate by Question

<table>
<thead>
<tr>
<th>Question #</th>
<th>Valid</th>
<th>Total</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>1,914</td>
<td>1,935</td>
<td>98.9%</td>
</tr>
<tr>
<td>Q2</td>
<td>1,907</td>
<td>1,935</td>
<td>98.6%</td>
</tr>
<tr>
<td>Q3</td>
<td>1,553</td>
<td>1,935</td>
<td>80.3%</td>
</tr>
<tr>
<td>Q4</td>
<td>1,886</td>
<td>1,935</td>
<td>97.5%</td>
</tr>
<tr>
<td>Q5</td>
<td>1,889</td>
<td>1,935</td>
<td>97.6%</td>
</tr>
<tr>
<td>Q6</td>
<td>1,759</td>
<td>1,935</td>
<td>90.9%</td>
</tr>
<tr>
<td>Q7</td>
<td>1,761</td>
<td>1,935</td>
<td>91.0%</td>
</tr>
<tr>
<td>Q8</td>
<td>1,753</td>
<td>1,935</td>
<td>90.6%</td>
</tr>
<tr>
<td>Q9</td>
<td>1,753</td>
<td>1,935</td>
<td>90.6%</td>
</tr>
<tr>
<td>Q10</td>
<td>1,758</td>
<td>1,935</td>
<td>90.9%</td>
</tr>
<tr>
<td>Q11</td>
<td>1,653</td>
<td>1,935</td>
<td>85.4%</td>
</tr>
<tr>
<td>Q12</td>
<td>1,615</td>
<td>1,935</td>
<td>83.5%</td>
</tr>
<tr>
<td>Q13</td>
<td>1,433</td>
<td>1,935</td>
<td>74.1%</td>
</tr>
<tr>
<td>Q14</td>
<td>1,409</td>
<td>1,935</td>
<td>72.8%</td>
</tr>
<tr>
<td>Q15a</td>
<td>1,567</td>
<td>1,935</td>
<td>81.0%</td>
</tr>
<tr>
<td>Q15b</td>
<td>1,539</td>
<td>1,935</td>
<td>79.5%</td>
</tr>
<tr>
<td>Q15c</td>
<td>1,535</td>
<td>1,935</td>
<td>79.3%</td>
</tr>
<tr>
<td>Q15d</td>
<td>1,532</td>
<td>1,935</td>
<td>79.2%</td>
</tr>
<tr>
<td>Q15e</td>
<td>1,525</td>
<td>1,935</td>
<td>78.8%</td>
</tr>
<tr>
<td>Q15f</td>
<td>1,503</td>
<td>1,935</td>
<td>77.7%</td>
</tr>
<tr>
<td>Q15g</td>
<td>1,513</td>
<td>1,935</td>
<td>78.2%</td>
</tr>
<tr>
<td>Q15h</td>
<td>1,524</td>
<td>1,935</td>
<td>78.8%</td>
</tr>
<tr>
<td>Q15i</td>
<td>1,538</td>
<td>1,935</td>
<td>79.5%</td>
</tr>
<tr>
<td>Q15j</td>
<td>1,520</td>
<td>1,935</td>
<td>78.6%</td>
</tr>
<tr>
<td>Q15k</td>
<td>1,516</td>
<td>1,935</td>
<td>78.3%</td>
</tr>
<tr>
<td>Q16</td>
<td>1,601</td>
<td>1,935</td>
<td>82.7%</td>
</tr>
<tr>
<td>Q17</td>
<td>1,498</td>
<td>1,935</td>
<td>77.4%</td>
</tr>
<tr>
<td>Q18</td>
<td>1,567</td>
<td>1,935</td>
<td>81.0%</td>
</tr>
<tr>
<td>Q19</td>
<td>1,524</td>
<td>1,935</td>
<td>78.8%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>1,625</td>
<td>1,935</td>
<td>84.0%</td>
</tr>
</tbody>
</table>

### Table 4-2
Completed Survey Summary by Language

<table>
<thead>
<tr>
<th>Language</th>
<th>Number of Completed Surveys</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>1,873</td>
<td>96.8%</td>
</tr>
<tr>
<td>Spanish</td>
<td>62</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,935</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Table 4-3
Completed Survey Summary by Day of the Week

<table>
<thead>
<tr>
<th>Day</th>
<th>Number of Completed Surveys</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday</td>
<td>1,469</td>
<td>75.9%</td>
</tr>
<tr>
<td>Saturday</td>
<td>466</td>
<td>24.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,935</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
The following is a summary of on-board survey results. For analysis purposes, the 19 questions on the survey were divided into 3 major categories. Analysis categories include travel characteristics, rider demographics, and customer service and satisfaction. An additional subsection that includes the cross-tabulation analysis of selected question results is also included in this section.

**Travel Characteristics**

Travel characteristics questions were designed to ask respondents about their individual trip attributes and their travel behavior. Topics covered by the travel characteristics questions on the survey include:

- Trip origin type
- Trip destination type
- Fare type used
- Transit stop access and egress travel mode
- Transfers
- Frequency of transit use
- Frequent shopping destination names and locations

Questions 1 and 4 asked respondents about the type of place they were coming from to start their one-way trip and the type of place they were going to on the same one-way trip, respectively. Figures 4-1 and 4-2 present the results to these two questions. As shown in Figure 4-1, most respondent trips originated at home. The second highest trip origin indicated by respondents was work. Similarly, the two highest destinations were work and home. The trip destination results are shown in Figure 4-2.
Table 4-4 presents a trip purpose matrix, which combines trip origin and destination types to better display the relationship between trip origin and destination locations. Based on the information in that table, home-to-work and work-to-home trips were the most common trip pairs. Shopping/Errand trips also were indicated by respondents as a common trip type. Of valid response pairs for the origin and destination questions, 413, or 22 percent, indicated they were traveling to or from shopping/errands.
Questions 2 and 5 asked respondents to describe how they access the bus stop before boarding the bus and how they will reach their final destination after disembarking the bus. If respondents indicated walking or bicycling, they were asked to note the number of blocks they traveled. If driving was selected, respondents were asked to indicate the number of miles they drove to access the transit system or to reach their final destination. The responses reveal how transit users often must combine various modes of travel in order to complete their individual trip. As shown in Figures 4-3 and 4-4, the majority of Space Coast Area Transit bus customers walk to and from the bus stop. The second most common mode of travel used to access the bus stop prior to boarding the bus or access the final destination after disembarking the bus is bicycling.
Figures 4-5 and 4-6 illustrate responses regarding the distance traveled for respondents who indicated "Walked," “Bicycled," or “Drove & Parked" to access a bus stop. As indicated in Figure 4-5, approximately 78 percent and 80 percent of respondents indicated they walked 3 blocks or less and bicycled 6 blocks or less, respectively, to access the bus stop.
Figures 4-7 and 4-8 illustrate responses regarding the distance traveled for respondents who indicated “Walked,” “Bicycled,” or “Drive” to their final destinations. Figure 4-7 shows that approximately 80 percent and 79 percent of respondents noted they walked 3 blocks or less and bicycled 6 blocks or less, respectively, to get to their final destinations after disembarking the bus. Combining with the results shown in Figure 4-5, it is evident that 3 blocks and 6 blocks are the
generally acceptable distances for respondents indicated as using walking and bicycling, respectively, to access or egress the bus stop.

Figure 4-7
Number of Blocks Traveled to Final Destination

Figure 4-8
Number of Miles Driven to Final Destination

A transfer analysis was performed utilizing the results of Question 3 on the on-board survey. That question asked respondents to list all bus routes to be used, in the exact order of use, to complete
their one-way trip. Responses to this question reveal the number of transfers each respondent will make in order to get to their destination.

To conduct the transfer analysis, a series of data cleaning and quality control steps had to be performed. Filtered data were then utilized to examine the number of transfers between routes and to assess transfer combinations for persons utilizing three buses to complete their one-way trip. The data cleaning and filtering process can be summarized in five major steps.

- Eliminate same route transfer information from database
- Verify transfer combination possibilities and eliminate unreasonable transfer combinations from database. For example, transfer activity cannot occur between two routes without connections.
- Close examination of responses reveal that some respondents misunderstood the one-way trip concept as they listed duplicate routes or described circuitous travel patterns ending in the place of origin. Consequently, three-transfer activity data, i.e., persons indicated having to use four or more buses, were not recorded.
- Extract records that indicate at least two routes were used to complete trip
- Sum the total number of records by transfer combination

After applying the data cleaning steps, total valid responses were 957. Based on the total number of valid responses received for Question 3 (1,553), 62 percent of respondents indicated that they would need at least one or more transfers to complete their trip. Table 4-5 notes the distribution of transfer types by day of week.

<table>
<thead>
<tr>
<th>Transfer Type</th>
<th>Weekday</th>
<th>Saturday</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Transfer</td>
<td>434</td>
<td>162</td>
<td>596</td>
</tr>
<tr>
<td>One Transfer</td>
<td>536</td>
<td>171</td>
<td>707</td>
</tr>
<tr>
<td>Two Transfers</td>
<td>184</td>
<td>66</td>
<td>250</td>
</tr>
<tr>
<td>Total</td>
<td>1,225</td>
<td>415</td>
<td>1,553</td>
</tr>
</tbody>
</table>

Further analysis was conducted on the cleaned database to obtain the top one-transfer route combinations and top two-transfer route combinations. Table 4-6 shows the top one-transfer route combinations for weekday, Saturday, and both weekday and Saturday. As shown in that table, the top 3 one-transfer route combinations, regardless of day of week, include Route 4 and Route 9, Route 23 and Route 27, and Route 4 and Route 6. The top one-transfer activities for route
combinations shown in Table 4-6 represent 72 percent of system-wide one-transfer activity for weekday and 70 percent for Saturday, respectively.

Table 4-6
Top One-Transfer Route Combination Summary

<table>
<thead>
<tr>
<th>Route Combinations</th>
<th>Weekday Transfers</th>
<th>System-wide Weekday Transfers</th>
<th>Percent of System-wide Weekday Transfers</th>
<th>Saturday Transfers</th>
<th>System-wide Saturday Transfers</th>
<th>Percent of System-wide Saturday Transfers</th>
<th>Total Weekday and Saturday Transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&amp;9</td>
<td>41</td>
<td>536</td>
<td>7.6%</td>
<td>27</td>
<td>171</td>
<td>15.8%</td>
<td>68</td>
</tr>
<tr>
<td>23&amp;27</td>
<td>40</td>
<td>536</td>
<td>7.5%</td>
<td>14</td>
<td>171</td>
<td>8.2%</td>
<td>54</td>
</tr>
<tr>
<td>4&amp;6</td>
<td>35</td>
<td>536</td>
<td>6.5%</td>
<td>19</td>
<td>171</td>
<td>11.1%</td>
<td>54</td>
</tr>
<tr>
<td>22&amp;27</td>
<td>43</td>
<td>536</td>
<td>8.0%</td>
<td>8</td>
<td>171</td>
<td>4.7%</td>
<td>51</td>
</tr>
<tr>
<td>1&amp;28</td>
<td>32</td>
<td>536</td>
<td>6.0%</td>
<td>19</td>
<td>171</td>
<td>11.1%</td>
<td>51</td>
</tr>
<tr>
<td>25&amp;27</td>
<td>33</td>
<td>536</td>
<td>6.2%</td>
<td>10</td>
<td>171</td>
<td>5.8%</td>
<td>43</td>
</tr>
<tr>
<td>22&amp;23</td>
<td>27</td>
<td>536</td>
<td>5.0%</td>
<td>7</td>
<td>171</td>
<td>4.1%</td>
<td>34</td>
</tr>
<tr>
<td>23&amp;25</td>
<td>28</td>
<td>536</td>
<td>5.2%</td>
<td>5</td>
<td>171</td>
<td>2.9%</td>
<td>33</td>
</tr>
<tr>
<td>1&amp;21</td>
<td>28</td>
<td>536</td>
<td>5.2%</td>
<td>1</td>
<td>171</td>
<td>0.6%</td>
<td>29</td>
</tr>
<tr>
<td>1&amp;6</td>
<td>23</td>
<td>536</td>
<td>4.3%</td>
<td>1</td>
<td>171</td>
<td>0.6%</td>
<td>24</td>
</tr>
<tr>
<td>21&amp;25</td>
<td>21</td>
<td>536</td>
<td>3.9%</td>
<td>0</td>
<td>171</td>
<td>0.0%</td>
<td>21</td>
</tr>
<tr>
<td>22&amp;25</td>
<td>19</td>
<td>536</td>
<td>3.5%</td>
<td>1</td>
<td>171</td>
<td>0.6%</td>
<td>20</td>
</tr>
<tr>
<td>21&amp;28</td>
<td>13</td>
<td>536</td>
<td>2.4%</td>
<td>7</td>
<td>171</td>
<td>4.1%</td>
<td>20</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td><strong>383</strong></td>
<td><strong>536</strong></td>
<td><strong>71.5%</strong></td>
<td><strong>119</strong></td>
<td><strong>171</strong></td>
<td><strong>69.6%</strong></td>
<td><strong>502</strong></td>
</tr>
</tbody>
</table>

Table 4-7 shows the top two-transfer route combinations. The most frequent two-transfer activities were found occurring from Route 6 to Route 4 to Route 9. When disregarding the order of route transfer, the top 3 two-transfer activities occurred on route combinations of Routes 6-4-9, Routes 28-25-27, and Routes 27-25-21.
Table 4-7
Top Two-Transfer Route Combination Summary

<table>
<thead>
<tr>
<th>Route Combinations</th>
<th>Number of Transfers</th>
<th>Total Transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-4-9</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td>9-4-6</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>27-25-28</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>28-25-27</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>27-25-21</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>21-25-27</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1-4-9</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>9-4-1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>23-25-28</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>28-25-23</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total Two-Transfer Activities</td>
<td>250</td>
<td></td>
</tr>
</tbody>
</table>

Question 6 asked respondents if they have access to a car or other personal vehicle that could have been used to make the trip. The purpose of this question is to gauge the number of “choice” or discretionary riders using Space Coast Area Transit services. As shown in Figure 4-9, approximately 16 percent of respondents indicated they could have used a vehicle to complete the trip.

Figure 4-9
Availability of Personal Vehicle to Complete the Trip Other Than Taking Bus
Figure 4-10 illustrates the results to Question 7 that asked the respondent how he/she would make the one-way trip if not by bus. The results to this question were compared with those in the 2004 and 2008 on-board surveys. The most common response provided in 2012 and 2008 is “Wouldn’t make trip,” followed by “Ride with someone.” These responses, along with the large distribution of individuals who would walk or bicycle, reflect that a significant proportion of Space Coast Area Transit riders rely on the transit service as their primary mode of transportation. The results also give an indication of the number of “choice” or discretionary riders who are currently using Space Coast Area Transit bus service. Approximately 9 percent of 2012 survey respondents indicated that they would drive to complete their trip if they could not complete it by bus.

Respondents were asked to indicate how many days a week they ride the bus in Question 8. As shown in Figure 4-11, the percentage of respondents who indicated riding the bus 4 or more days per week increased from 51.0 percent in 2004 to 72.3 percent in 2012, while the percentage of respondents who indicated riding the bus a few times a month experienced a drop from 14.8 percent 2004 to 4.2 percent in 2012.
Question 14 asked the respondents to list three store names and locations where they most often shop. The answers to this question assist Space Coast Area Transit in gauging the most frequent shopping destinations of respondents so that potential service changes, improvement, or expansions can be arranged accordingly. Table 4-8 presents the results to this question. Of the stores referenced by respondents 10 times or more, the Wal-Mart, located at 1000 N. Wickham Road, Melbourne, ranked at the top of the list. The last row of the table indicates the total number of frequency counts for stores referenced by respondents 2 times or more.
**Table 4-8**

**Frequent Shopping Destinations Summary**

<table>
<thead>
<tr>
<th>Store Name</th>
<th>Location</th>
<th>Frequency Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wal-Mart</td>
<td>1000 North Wickham Road, Melbourne, FL</td>
<td>37</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>1040 Malabar Road Southeast, Palm Bay, FL</td>
<td>23</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>845 Palm Bay Road Northeast, West Melbourne, FL</td>
<td>23</td>
</tr>
<tr>
<td>Winn Dixie</td>
<td>190 Malabar Road SW # 110, Palm Bay, FL</td>
<td>23</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>1500 East Merritt Island Causeway, Merritt Island, Florida</td>
<td>22</td>
</tr>
<tr>
<td>Publix</td>
<td>4711 Babcock Street Northeast, Palm Bay, FL</td>
<td>19</td>
</tr>
<tr>
<td>Publix</td>
<td>125 East Merritt Island Causeway, Merritt Island, FL</td>
<td>15</td>
</tr>
<tr>
<td>Publix</td>
<td>145 Palm Bay Road Northeast #117, West Melbourne, FL</td>
<td>13</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>1001 E Eau Gallie Blvd, Indian Harbor Beach, FL</td>
<td>13</td>
</tr>
<tr>
<td>Publix</td>
<td>1411 South Babcock Street, Melbourne, FL</td>
<td>12</td>
</tr>
<tr>
<td>Melbourne Square Mall</td>
<td>1700 Melbourne, Florida 32904</td>
<td>11</td>
</tr>
<tr>
<td>Target</td>
<td>4305 Norfolk Parkway #102, West Melbourne, FL</td>
<td>11</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>2700 Clearlake Road, Cocoa, FL</td>
<td>11</td>
</tr>
<tr>
<td>Publix</td>
<td>3450 Bayside Lakes Boulevard Southeast, Palm Bay, FL</td>
<td>10</td>
</tr>
<tr>
<td>Publix</td>
<td>3265 Garden Street, Titusville, FL</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total Number of Responses</strong></td>
<td></td>
<td><strong>1,409</strong></td>
</tr>
</tbody>
</table>

**Rider Demographics**

The demographic portion of the survey includes a variety of questions that queried respondents about their household income levels, age, gender, and ethnicity, among other things. Other topics covered by the demographic questions include reasons for using Space Coast Area Transit service and how long riders have been using Space Coast Area Transit service.

When asked how long respondents have been using the Space Coast Area Transit bus service, the on-board survey results reveal that a large proportion of Space Coast Area Transit riders are loyal, long-time customers. As shown in Figure 4-12, approximately 50 percent of respondents indicated that they have been using Space Coast Area Transit bus service for two or more years. This number is higher than the number in the 2008 on-board survey (18.2%) and the number in the 2004 on-board survey (31.7%).
Question 10 asked respondents to indicate the type of fare they usually pay to ride the bus. Figure 4-13 illustrates the results to this question. Full Fare and Reduced Full Fare are the top two fare payment methods as indicated by 2004, 2008, and 2012 on-board survey respondents. For those 240 respondents who indicated "Other" as a fare payment method, 170, or 71 percent, indicated that they use a Brevard Community College Card to ride the bus.
Question 11 on the survey asked respondents to indicate the most important reason why they ride the bus. As shown in Figure 4-14, the number one reason selected by respondents is “I do not have access to a car/vehicle (34.4%), followed by “I do not have a driver's license (30.6%)” and “I do not drive (14.6%).” The indication of these three reasons by respondents suggests that the majority of Space Coast Area Transit riders have limited transportation options and, therefore, rely heavily upon the bus service.
The demographics section of the survey also asked respondents to provide some information about themselves. The information includes age, gender, race, and household income levels. These types of questions enable Space Coast Area Transit to construct a profile of the average Space Coast Area Transit bus rider. Table 4-9 provides a profile of the average Space Coast Area Transit bus rider. The age and annual household income profile are based on weighted averages. Figure 4-15 presents the distribution for all responses to several demographics questions on the survey.

Table 4-6
The Average Space Coast Area Transit Bus Rider (2012)

<table>
<thead>
<tr>
<th>Category</th>
<th>Average Rider Demographic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td>Ethnic Origin</td>
<td>White</td>
</tr>
<tr>
<td>Age</td>
<td>38.8 years</td>
</tr>
<tr>
<td>Annual Household Income</td>
<td>$13,250</td>
</tr>
</tbody>
</table>
**Figure 4-15**
Space Coast Area Transit Rider Demographics

- **Income***
  - Under $15k: 2010 Census 12.1%, 2008 46.8%, 2012 39.8%
  - $15k-$24k: 2010 Census 13.2%, 2008 20.0%, 2012 28.0%
  - $25k-$49k: 2010 Census 10.1%, 2008 11.5%, 2012 28.1%
  - $50k+: 2010 Census 8.5%, 2008 3.4%, 2012 46.6%
  - Do not work: 2010 Census 10.2%
  - Refuse to respond: 2010 Census 14.8%

- **Ethnicity***
  - White: 2010 Census 62.8%, 2008 54.3%, 2012 65.2%
  - Black: 2010 Census 16.8%, 2008 29.5%
  - Hispanic: 2010 Census 8.1%, 2008 6.3%, 2012 9.7%
  - Asian: 2010 Census 2.0%, 2008 2.1%, 2012 1.2%
  - Native American: 2010 Census 0.3%, 2008 8.8%
  - Other: 2010 Census 2.3%, 2008 0.8%, 2012 3.0%

- **Gender***
  - Male: 2010 Census 48.2%, 2008 51.7%, 2012 48.3%
  - Female: 2010 Census 49.0%

- **Age***
  - 18 or under: 2010 Census 7.6%, 2008 8.5%
  - 19-24: 2010 Census 7.9%, 2008 12.8%
  - 25-44: 2010 Census 21.5%, 2008 35.7%
  - 45-59: 2010 Census 15.3%, 2008 23.8%
  - 60-74: 2010 Census 17.2%
  - Over 74: 2010 Census 2.1%

*“Do not work” and “Refuse to respond” were not included in the 2008 on-board survey. The 2010 Census income data were not available at the time this report was developed; therefore, 2010 American Community Census data were used for that category.*
As shown in Figure 4-15, Space Coast Area Transit is experiencing a declining share of white ridership when compared to the 2008 survey results. By contrast, African American and Hispanic riders are increasing. Compared with county-wide demographic composition as reflected in 2010 Census data, the black cohort and cohort of riders with a household income of less than $15,000 are disproportionately represented in these survey results.

Customer Service and Satisfaction

Customer service and satisfaction questions queried respondents regarding improvements to Space Coast Area Transit services and about their general satisfaction levels with various aspects of Space Coast Area Transit service. In addition, an effort was made to cross-tabulate selected demographic characteristics with satisfaction levels, as appropriate.

Question 12 asked respondents to select from a list of eight potential service improvements which they believed would make Space Coast Area Transit better for them to use. In addition, a blank space was provided on the survey as a response category so that respondents could input their own improvement if needed. Figure 4-16 displays the results to this question. Percentage totals do not sum to 100 percent because survey respondents were allowed to select more than one improvement.

![Figure 4-16 Preferred Service Improvements Summary](image)

- More frequent service on existing routes: 55.9%
- Later service on existing routes: 52.5%
- Sunday service: 50.9%
- More benches and shelters at bus stops: 43.3%
- Earlier service on existing routes: 25.3%
- More bike racks at bus stops: 12.0%
- Improved security at stops and on buses: 6.9%
- Express service: 5.8%
- Other: 11.0%
As shown in Figure 4-16, “More frequent service on existing routes,” “Later service on existing routes,” and “Sunday Service” were the top three preferred improvements by respondents. Respondents who indicated “Sunday Service” were further given an opportunity to indicate which routes they prefer for a Sunday service improvement. A total of 184 respondents responded to this follow-up question. Figure 4-17 illustrates the most frequent referenced routes for Sunday service improvement. Route 1, Route 6, and Route 25 are referenced by respondents for 78, 72, and 58 times, respectively.

As part of the “Express service” response category, respondents were asked to specify where they would like to see express service. Answers to this question varied widely. However, one express route referenced frequently by respondents is express service connecting Melbourne to Cocoa Beach.

Some of the most frequently referenced write-in improvement requests in the “Other” category include the following. They are listed in descending order by the number of responses.

- More bus stops
- Improved on-time performance
- Improvement in driver courtesy

Question 12 asked respondents to select from a list of five potential technology improvements that they believed would make Space Coast Area Transit better for them to use. In addition, a blank space was provided on the survey as a response category so that respondents could input their own
The top three technology improvements mentioned by the respondents include real-time schedule information on buses, real-time schedule information at terminals, and electronic bus stop announcements on buses.

**Figure 4-18**
**Preferred Technology Improvements Summary**

- **Real-time schedule information on buses**: 69.9%
- **Real-time schedule information at terminals**: 45.7%
- **Electronic bus stop announcements on buses**: 43.6%
- **Wireless internet service on buses**: 40.8%
- **Smartphone trip planner**: 15.4%
- **Other**: 7.3%

The following two technology improvements, listed in descending order by the number of responses, were the most frequently written-in responses for the “other” category.

- TV on buses
- Power outlets on buses

Question 23 on the survey asked riders to indicate their satisfaction levels with various aspects of the bus service provided by Space Coast Area Transit. Respondents were given a list of eleven service-related criteria to rate as either “Very Unsatisfied,” “Unsatisfied,” “Neutral,” “Satisfied,” or “Very Satisfied.” The respondents could select their response by circling a number from 1 to 5, with 1 being “Very Unsatisfied” and 5 being “Very Satisfied.” The ratings of all the respondents were then averaged to obtain a final overall satisfaction score for each criterion. The highest scores were given to cleanliness and comfort of the bus, availability of bus route information, courtesy of the bus driver, safety on the bus and at bus stops, and convenience of transferring. Each of those categories received average rating scores above the average overall satisfaction rating score. Travel time on
buses, days of service, on-time performance, service frequency, and hours of service each received ratings below 4.0. The final criterion, the rider’s overall satisfaction with Space Coast Area Transit received an average score of 4.0. Figure 4-19 shows all 11 categories and their respective average rating scores.

**Figure 4-19**

**Service Satisfaction Level**

1. Cleanliness and comfort of the bus
2. Availability of bus route information
3. Courtesy of the bus driver
4. Safety on bus and at bus stops
5. Convenience of transferring
6. Overall satisfaction with SCAT
7. Travel time on buses
8. Days of service
9. How often the buses are on time
10. How often the buses run
11. Hours of service

Figures 4-20 through 4-23 display Space Coast Area Transit customer satisfaction ratings by age, gender, ethnic heritage, and household income. As shown in Figure 4-20, the highest overall ratings were given by respondents over the age of 74. The overall service satisfaction levels tend to be higher with the increase in respondent age. Figure 4-21 displays the average overall system service rating by respondent gender. Males rated the system slightly higher than females, with an average overall service rating of 4.1, compared to an average rating of 3.9 for females. Figure 4-22 provides the average overall Space Coast Area Transit system service rating by respondents of different ethnic heritages. Hispanic respondents gave the highest rating to the system. Respondents indicating “Asian,” “Native American,” and “Other” as their ethnic heritage gave the system an average rating of below 4.0. Figure 4-23 displays the average overall Space Coast Area Transit system service ratings stratified by income level. Average overall satisfaction was highest among the respondent group with an annual household income of $50,000 or more (average overall rating of 4.2). Those who refused to respond to the household income question rated the system lowest, with an average overall rating of 3.8.
Figure 4-20
Rider Satisfaction by Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 or under</td>
<td>3.9</td>
</tr>
<tr>
<td>19-24</td>
<td>3.9</td>
</tr>
<tr>
<td>25-44</td>
<td>3.9</td>
</tr>
<tr>
<td>45-59</td>
<td>4.1</td>
</tr>
<tr>
<td>60-74</td>
<td>4.1</td>
</tr>
<tr>
<td>Over 74</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Figure 4-21
Rider Satisfaction by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>3.9</td>
</tr>
<tr>
<td>Male</td>
<td>4.1</td>
</tr>
</tbody>
</table>
Cross-Tabulation Analysis

Efforts were made to cross-tabulate results of some questions to provide an in-depth look at important aspects of Space Coast Area Transit services. For example, cross tabulation of fare types with respondent annual household income assists in understanding the relationship between fare type paid and respondent household income.

Figure 4-24 illustrates the method of fare payment used by riders in different age groups. Full fare is the dominant fare payment method in the age cohort 25-44. Respondents age 18 or under and 60 or over are more likely to pay reduced full fare when compared to other fare payment options. This
is consistent with reduced fares offered by Space Coast Area Transit to those populations. When excluding the age cohort 60 or over, the unlimited monthly pass use increases with the rider age.

Figure 4-24
Fare Type Paid by Respondent Age

<table>
<thead>
<tr>
<th>Fare Type Paid by Respondent Age</th>
<th>18 or under</th>
<th>19-24</th>
<th>25-44</th>
<th>45-59</th>
<th>60-74</th>
<th>Over 74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>22%</td>
<td>33%</td>
<td>8%</td>
<td>8%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Reduced Unlimited Monthly Pass</td>
<td>5%</td>
<td>2%</td>
<td>5%</td>
<td>9%</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Unlimited Monthly Pass</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>8%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Reduced Fare 10-Ride Pass</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Full Fare 10-Ride Pass</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Reduced Full Fare</td>
<td>55%</td>
<td>24%</td>
<td>18%</td>
<td>30%</td>
<td>67%</td>
<td>69%</td>
</tr>
<tr>
<td>Full Fare</td>
<td>12%</td>
<td>35%</td>
<td>60%</td>
<td>39%</td>
<td>6%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Figure 4-25 shows the method of fare payment used by riders with different income levels. Except for the “do not work” respondent group, the full fare experiences the largest share of responses regardless of income levels. It also should be noted that rider household income levels increase as
full fare payment type use decreases. On the contrary, except for the “refuse to respond” group, respondents are more likely to use the unlimited monthly pass as the household income increases.

**Figure 4-25**

Fare Type Paid by Respondent Annual Household Income Levels

![Bar chart showing fare type paid by respondent annual household income levels.](chart.png)

- **Other**: 10% (Under $15k), 13% ($15k-$24k), 16% ($25k-$49k), 12% ($50k or greater), 27% (Do not work), 15% (Refuse to respond)
- **Reduced Unlimited Monthly Pass**: 6% (Under $15k), 5% ($15k-$24k), 8% ($25k-$49k), 12% ($50k or greater), 11% (Do not work), 5% (Refuse to respond)
- **Unlimited Monthly Pass**: 5% (Under $15k), 6% ($15k-$24k), 10% ($25k-$49k), 10% ($50k or greater), 2% (Do not work), 5% (Refuse to respond)
- **Reduced Fare 10-Ride Pass**: 2% (Under $15k), 3% ($15k-$24k), 2% ($25k-$49k), 2% ($50k or greater), 1% (Do not work), 0% (Refuse to respond)
- **Full Fare 10-Ride Pass**: 1% (Under $15k), 2% ($15k-$24k), 2% ($25k-$49k), 8% ($50k or greater), 3% (Do not work), 2% (Refuse to respond)
- **Reduced Full Fare**: 32% (Under $15k), 26% ($15k-$24k), 24% ($25k-$49k), 21% ($50k or greater), 37% (Do not work), 29% (Refuse to respond)
- **Full Fare**: 43% (Under $15k), 45% ($15k-$24k), 39% ($25k-$49k), 37% ($50k or greater), 19% (Do not work), 43% (Refuse to respond)
On-Board Regular Survey General Conclusions

Results from the on-board survey provide insight into various aspects of the Space Coast Area Transit fixed-route bus service. Salient conclusions drawn from the on-board survey analysis are summarized in this section.

- Bus riders are satisfied with Space Coast Area Transit service. The average overall satisfaction rating was 4.0 out of 5.0. However, special attention should be given to those service aspects with less than 4.0 ratings. These include travel time on buses, days of service, on-time performance, service frequency, and hours of service.
- The largest share of Space Coast Area Transit trips are home-to-work/work-to-home trips. Approximately 30 percent of respondents indicated they either made home-to-work trips or work-to-home trips.
- Bus riders are primarily regular users of the service. Over 72 percent of respondents indicated that they ride the bus at least four days per week. In addition, 50 percent indicated that they have been using Space Coast Area Transit service for more than two years.
- Survey respondents indicated more frequent service on existing routes as the most desirable service improvement for Space Coast Area Transit. In addition to more frequent service on existing routes, other notable desirable service improvements include later service on existing routes, Sunday service, and more benches and shelters at bus stops.
- Survey respondents rated “real-time schedule information on buses” as the most desirable technology improvement to be implemented by Space Coast Area Transit. Other technology improvements that ranked high include real-time schedule information at terminals, electronic bus stop announcements on buses, and wireless internet service on buses.
- The majority of survey respondents are transit-dependent populations. Less than 10 percent of respondents identified themselves as discretionary transit riders.
- The full fare payment type is used by approximately 40 percent of respondents. Only 16 percent of respondents use passes, including the full and reduced 10-ride pass and the full and reduced monthly pass, as their fare payment type.
Space Coast Area Transit On-Board Survey

Space Coast Area Transit strives to continually improve its service and passenger amenities. Please help us serve you better by completing this survey. Thank you.

This survey is about the ONE-WAY transit trip you are making now!

Example of ONE-WAY Bus Trip

1. What TYPE OF PLACE are you COMING FROM NOW? (Please ✓ the starting place of this ONE-WAY TRIP) (Please ✓ only one)
   - 1__ Work
   - 2__ Medical
   - 3__ Social/Personal
   - 4__ School (K-12)
   - 5__ College/Tech
   - 6__ Recreation
   - 7__ Shopping/Errands
   - 8__ Home
   - 9__ Other (specify) ___________________

2. How did you get to the first bus stop for this ONE-WAY TRIP? (Please ✓ only ONE)
   - 1__ Walked # blocks? ______
   - 2__ Bicycled # blocks? ______
   - 3__ Drove & parked # miles? ______
   - 4__ Was dropped off
   - 5__ Rode with someone who parked
   - 6__ Other (specify) ___________________

3. LIST ALL of the BUS ROUTES in the EXACT ORDER you will use to make THIS ONE-WAY TRIP:
   - FIRST Bus Route
   - SECOND Bus Route
   - THIRD Bus Route
   - FOURTH Bus Route

4. What TYPE OF PLACE are you GOING TO NOW on this ONE-WAY TRIP? (Please ✓ the ending place of this ONE-WAY TRIP) (Please ✓ only ONE)
   - 1__ Work
   - 2__ Medical
   - 3__ Social/Personal
   - 4__ School (K-12)
   - 5__ College/Tech
   - 6__ Recreation
   - 7__ Shopping/Errands
   - 8__ Home
   - 9__ Other (specify) ___________________

5. After you get off the last bus you will use to complete this ONE-WAY TRIP, how will you get to your FINAL DESTINATION? (Please ✓ only ONE)
   - 1__ Walk # blocks? ______
   - 2__ Bicycle # blocks? ______
   - 3__ Drive # miles? ______
   - 4__ Will be picked up
   - 5__ Rode with someone who parked
   - 6__ Other (specify) ___________________

6. Do you have access to a car or other personal vehicle that you could have used to make THIS trip?
   - 1__ Yes
   - 2__ No

7. How would you make this one-way trip if not by bus? (Please ✓ only ONE)
   - 1__ Drive
   - 2__ Taxi
   - 3__ Walk
   - 4__ Wouldn't make trip
   - 5__ Bicycle
   - 6__ Other (specify) ___________________

8. On average, how many days a week do you ride the bus?
   - 1__ 1
   - 2__ 2
   - 3__ 3
   - 4__ 4
   - 5__ 5
   - 6__ 6
   - 7__ Once a month or less
   - 8__ First time riding

9. How long have you been using Space Coast Area Transit bus service?
   - 1__ This is the first day
   - 2__ Less than 6 months
   - 3__ 6 months to 2 years
   - 4__ 2 to 5 years
   - 5__ More than 5 years

10. What type of fare do you usually pay when you ride the bus?
    - 1__ Full Fare ($1.25)
    - 2__ Reduced Full Fare (60¢)
    - 3__ Full Fare 10-Ride Pass
    - 4__ Reduced Fare 10-Ride Pass
    - 5__ Unlimited Monthly Pass ($35.00)
    - 6__ Reduced Unlimited Monthly Pass ($17.00)
    - 7__ Other (specify) ___________________

PLEASE CONTINUE ON BACK OF SURVEY
11. What is the most important reason you ride the bus? (Please ✓ only one)

1. I do not have a valid driver’s license
2. I do not have access to a car/vehicle
3. Parking is too expensive/difficult
4. I do not drive
5. The bus is more convenient
6. The bus fits my budget better
7. The bus is safer/less stressful
8. Other (specify) ____________

12. Which three of the following service improvements would make Space Coast Area Transit better for you to use? (Please ✓ THREE)

1. More frequent service on existing routes
2. More benches and shelters at bus stops
3. More bike racks at bus stops
4. Earlier service on existing routes
5. Later service on existing routes
6. Improved security at stops and on buses
7. Sunday service on Route(s) ________________
8. Express service. Where? ________________
9. Other (Specify) __________________

13. Which three of the following technology improvements would make Space Coast Area Transit better for you to use? (Please ✓ THREE)

1. Real-time schedule information on buses
2. Real-time schedule information at terminals
3. Wireless internet service on buses
4. Electronic bus stop announcements on buses
5. Smartphone trip planner
6. Other (specify) __________________

14. Indicate three store names and locations where you most often shop. (Example: Publix-Cocoa Beach, Walmart-Merritt Island)

1. _______________________________________________________________
2. _______________________________________________________________
3. _______________________________________________________________

15. How satisfied are you with each of the following? Circle a score for each characteristic.

Please indicate . . . .

<table>
<thead>
<tr>
<th>Very Satisfied</th>
<th>Neutral</th>
<th>Very Unsatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Your overall satisfaction with Space Coast Area Transit</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>b. Days of service</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>c. Hours of service</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>d. How often the buses run</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>e. How often the buses are on time</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>f. Travel time on buses</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>g. Availability of bus route information (maps &amp; schedules)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>h. Cleanliness and comfort of the bus</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>i. Courtesy of the bus driver</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>j. Safety on bus and at bus stops</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>k. Convenience of transferring between buses</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

16. Your age is?

1. 18 or under
2. 19 to 24
3. 25 to 44
4. 45 to 59
5. Over 74

17. What is your gender?

1. Male
2. Female
3. Other ____________

18. What is your race or ethnic heritage? (Please ✓ only ONE)

1. White
2. Black
3. Hispanic
4. Asian
5. Native American
6. Other ____________

19. What was the range of your total household income for 2011?

1. Under $15,000
2. $15,000 to $24,999
3. $25,000 to $49,999
4. $50,000 or greater
5. Do Not Work
6. Refuse to Respond

THANK YOU FOR COMPLETING THE SURVEY!
Encuesta de Usuarios de Space Coast Area Transit

Space Coast Area Transit está continuamente mejorando su servicio de transporte y amenidades. Por favor ayúdenos a completar esta encuesta para servirle mejor. Gracias por su cooperación.

Esta encuesta se trata del viaje que esta haciendo ahora

Ejemplo de un Viaje de Autobús

![Diagrama de viaje con paradas CASA, AUTOBUS, TRABAJO]

1. ¿Donde COMENZO este viaje? Marque con (✓) una sola respuesta
   - 1. Trabajo
   - 2. Medico
   - 3. Social/Personal
   - 4. Escuela (K-12)
   - 5. College/Universidad
   - 6. Casa
   - 7. Compras
   - 8. Recreo
   - 9. Otro

2. ¿Como hizo para llegar al paradero para este viaje? Marque con (✓) una sola respuesta
   - 1. Camino # cuadras? __
   - 2. Bicicleta # cuadras? __
   - 3. Manejo y estaciono # millas? __
   - 4. Alguien me trajo en vehículo
   - 5. Alguien me trajo y estaciono su carro
   - 6. Otro

3. ANOTE TODAS las RUTAS en el ORDEN EXACTO que usted usará para completar este VIAJE

<table>
<thead>
<tr>
<th>PRIMERA Ruta</th>
<th>SEGUNDA Ruta</th>
<th>TERCERA Ruta</th>
<th>CUARTA Ruta</th>
</tr>
</thead>
</table>

4. ¿Cuál es el destino final para este viaje? Marque con (✓) una sola respuesta
   - 1. Trabajo
   - 2. Medico
   - 3. Social/Personal
   - 4. Escuela (K-12)
   - 5. College/Universidad
   - 6. Casa
   - 7. Compras
   - 8. Recreo
   - 9. Otro

5. ¿Como piensa llegar a su DESTINO FINAL después de bajarse del autobús? Marque con (✓) una sola respuesta
   - 1. Caminar # cuadras? __
   - 2. Bicicleta # cuadras? __
   - 3. Manejo y estaciono # millas? __
   - 4. Alguien me recogerá
   - 5. Viajo con alguien que estaciono su carro
   - 6. Otro

6. ¿Tiene usted acceso a un carro u otro vehículo el cual pudo utilizar para realizar este viaje?  
   - 1. Sí  
   - 2. No

7. ¿Como harías este viaje si no por autobús?
   - 1. Manejando
   - 2. En Taxi
   - 3. Bicicleta
   - 4. Caminando
   - 5. Otro

8. ¿Cuántos días a la semana usas el autobús? Marque con (✓) una sola respuesta
   - 1. 1  
   - 2. 2  
   - 3. 3  
   - 4. 4  
   - 5. 5  
   - 6. 6  
   - 7. 7

9. ¿Cuanto tiempo llevas usando los servicios de Space Coast Area Transit?
   - 1. Este es mi primer día  
   - 2. Menos de 6 meses  
   - 3. 6 meses a 2 años
   - 4. 2 a 5 años  
   - 5. Menos de 5 años

10. ¿Qué tipo de tarifa generalmente utilizas cuando montas en autobús?
   - 1. Tarifa Full ($1.25)
   - 2. Tarifa Reducida (60¢)
   - 3. Tarifa Full de 10-Ride Pass
   - 4. Tarifa Reducida de 10-Ride Pass
   - 5. Pase de Mes Ilimitado ($35.00)
   - 6. Pase de Mes Ilimitado Reducido ($17.00)

POR FAVOR CONTINÚE LA ENCUESTA EN LA SIGUIENTE PAGINA
11. ¿Cuál es la razón más importante por la cual utilizas el autobús? Marque con (✓) una sola respuesta
1. No tengo una licencia de conducir válida
2. No tengo acceso a un carro
3. Estacionamiento es muy caro
4. No manejo
5. El autobús es más conveniente
6. El autobús está en mi presupuesto
7. El autobús es más seguro
8. Otro ___________

12. ¿Cuáles TRES de los siguientes arreglos piensas tu que son más importantes? Marque con (✓) TRES respuestas
1. Servicio más frecuente en las rutas existentes
2. Más asientos y refugios de sombras en las paradas
3. Más estacionamiento para bicicletas
4. Servicios más tempranos en las rutas existentes
5. Servicios más tarde en las rutas existentes
6. Más seguridad en los paraderos y autobuses
7. Más servicios los domingos en las Ruta(s)
8. Servicio Express (paradas limitadas) ¿Donde? ___________
9. Otro ___________

13. ¿Cuáles TRES de las siguientes mejoras tecnológicas harían Space Coast Area Transit mejor para tu uso? Marque con (✓) TRES respuestas
1. Información actual de los horarios en los autobuses
2. Información actual de los horarios en los terminales
3. Servicio Wireless de Internet en los autobuses
4. Anuncio de paradas electrónicas
5. Opción de Planear tu viaje con tu Smartphone
6. Otro ___________

14. Indica TRES tiendas y su ubicación donde generalmente sales de compras
(Ejemplo: Publix-Cocoa Beach, Walmart-Merritt Island)
1. _______________________________________________________________________
2. _______________________________________________________________________
3. _______________________________________________________________________

15. ¿Que satisfecho estas con cada una de las siguientes preguntas? Marque con un círculo su respuesta
Por favor indique...

<table>
<thead>
<tr>
<th></th>
<th>Muy Satisfecho</th>
<th>Neutral</th>
<th>Muy Insatisfecho</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Su satisfacción con servicios de Space Coast Area Transit</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Días de servicio</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Horas de servicio</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Frecuencia de servicio</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. La puntualidad del autobús</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. El tiempo que se demora en hacer su viaje</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Disponibilidad de mapas e información de los horarios</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Limpieza y comodidad del autobús</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. La cortesía del conductor</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Seguridad en el autobús y paraderos</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Conveniencia de cambiar de autobuses</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. ¿Tu edad es?
1. 18 o menor
2. 19 a 24
3. 25 a 44
4. 45 a 59
5. 60 a 74
6. Más de 74

17. ¿Cuál es tu sexo? 1. Masculino 2. Femenino

18. ¿Cuál es tu raza o herencia étnica? Marque con (✓) una sola respuesta
1. Anglo
2. Negro
3. Hispano
4. Asiático
5. American Indígena
6. Otro ___________

19. ¿Cuál fue el ingreso total de su casa en el año 2011?
1. Menos de $15,000
2. $15,000 a $24,999
3. $25,000 o más

GRACIAS POR COMPLETAR ESTA ENCUESTA
Appendix E: Demand Response Trend Analysis and Peer Review
Demand Response Trend Analysis

A trend analysis was conducted to examine the performance of Space Coast Area Transit's directly-operated demand response service. Specific data relating to the operating environment of contracted demand response transportation service is not available; therefore, trends for those services could not be analyzed. This trend analysis reviews only directly-operated demand response data that were retrieved from the FTIS INTDAS system.

Performance Indicators

Selected demand response performance indicators are presented in Table E-1, as reported to FTA's NTD program.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>% Change 2006-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>504,891</td>
<td>551,030</td>
<td>554,560</td>
<td>5,554,698</td>
<td>554,354</td>
<td>9.8%</td>
</tr>
<tr>
<td>Service Area Size (square miles)</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>0.0%</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>143,771</td>
<td>139,547</td>
<td>133,986</td>
<td>119,504</td>
<td>127,620</td>
<td>-11.2%</td>
</tr>
<tr>
<td>Passenger Miles</td>
<td>2,240,091</td>
<td>1,534,473</td>
<td>1,514,951</td>
<td>1,558,440</td>
<td>1,445,935</td>
<td>-35.5%</td>
</tr>
<tr>
<td>Vehicle Miles</td>
<td>811,607</td>
<td>796,716</td>
<td>788,493</td>
<td>796,878</td>
<td>813,275</td>
<td>0.2%</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>646,226</td>
<td>628,291</td>
<td>636,544</td>
<td>635,466</td>
<td>649,998</td>
<td>0.6%</td>
</tr>
<tr>
<td>Vehicle Hours</td>
<td>66,908</td>
<td>61,206</td>
<td>60,556</td>
<td>62,624</td>
<td>59,587</td>
<td>-10.9%</td>
</tr>
<tr>
<td>Revenue Hours</td>
<td>54,389</td>
<td>51,226</td>
<td>52,078</td>
<td>53,000</td>
<td>46,576</td>
<td>-14.9%</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>$4,189,200</td>
<td>$3,753,550</td>
<td>$3,831,039</td>
<td>$3,517,663</td>
<td>$3,282,062</td>
<td>-21.7%</td>
</tr>
<tr>
<td>Total Operating Expense (of 2006 $)</td>
<td>$4,189,200</td>
<td>$3,646,851</td>
<td>$3,570,415</td>
<td>$3,291,756</td>
<td>$3,017,034</td>
<td>-28.0%</td>
</tr>
<tr>
<td>Total Maintenance Expense</td>
<td>$998,108</td>
<td>$824,572</td>
<td>$884,799</td>
<td>$894,692</td>
<td>$810,714</td>
<td>-10.8%</td>
</tr>
<tr>
<td>Total Maintenance Expense (of 2006 $)</td>
<td>$998,108</td>
<td>$801,133</td>
<td>$824,606</td>
<td>$837,234</td>
<td>$745,248</td>
<td>-25.3%</td>
</tr>
<tr>
<td>Total Employee FTEs</td>
<td>43.48</td>
<td>37.26</td>
<td>34.89</td>
<td>36.95</td>
<td>41.13</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Vehicles Available for Maximum Service</td>
<td>69</td>
<td>41</td>
<td>42</td>
<td>41</td>
<td>67</td>
<td>-2.9%</td>
</tr>
<tr>
<td>Vehicles Operated in Maximum Service</td>
<td>55</td>
<td>35</td>
<td>40</td>
<td>37</td>
<td>35</td>
<td>-36.4%</td>
</tr>
<tr>
<td>Total Gallons Consumed</td>
<td>139,233</td>
<td>136,335</td>
<td>165,078</td>
<td>147,622</td>
<td>151,685</td>
<td>8.9%</td>
</tr>
</tbody>
</table>

Trends that are evident among the performance indicators are summarized below:

- The passenger trips have decreased from 143,771 in 2006 to 127,620 in 2010, a decrease of 11 percent.
- The passenger miles have decreased from 2,240,091 in 2006 to 1,445,935 in 2010, a decrease of 36 percent.
- Vehicle miles of service and revenue miles of service have remained relatively stable, increasing by 0.2 percent and 0.6 percent, respectively.
• Vehicle hours and revenue hours have decreased by 11 percent and 14 percent, respectively.

• Total operating expense decreased from $4,189,200 in 2006 to $3,282,062 in 2010, a decrease of 22 percent.

• The number of vehicles available for maximum service decreased about 3 percent overall, but increased significantly from 2009 (41) to 2010 (67). Concurrently, vehicles operated in maximum service decreased more than 36 percent between 2006 and 2007, but remained relatively stable thereafter through 2010.

The decreases in passenger trips, passenger miles, vehicle hours, revenue hours, and operating expense, as well as the increase in the vehicles available for maximum service, may indicate that Space Coast Area Transit has transitioned passengers from the directly-operated demand response service to other contracted transportation services, including agency coordinated vanpool service. Some of the demand response patrons also may be making better use of the fixed-route service, thereby helping spur some of the growth in its ridership.

**Effectiveness Measures**

Effectiveness measures indicate the extent to which service-related goals are being met. Selected effectiveness measures are presented in Table E-2.

**Table E-2**

<table>
<thead>
<tr>
<th>Effectiveness Measures</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>% Change 2006-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Miles Per Capita</td>
<td>1.61</td>
<td>1.45</td>
<td>1.42</td>
<td>0.14</td>
<td>1.47</td>
<td>-8.7%</td>
</tr>
<tr>
<td><strong>Service Consumption</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger Trips Per Capita</td>
<td>0.28</td>
<td>0.25</td>
<td>0.24</td>
<td>0.02</td>
<td>0.23</td>
<td>-17.9%</td>
</tr>
<tr>
<td>Passenger Trips Per Revenue Mile</td>
<td>0.22</td>
<td>0.22</td>
<td>0.21</td>
<td>0.19</td>
<td>0.2</td>
<td>-9.1%</td>
</tr>
<tr>
<td>Passenger Trips Per Revenue Hour</td>
<td>2.64</td>
<td>2.72</td>
<td>2.57</td>
<td>2.25</td>
<td>2.74</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Quality of Service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Speed (RM/RH)</td>
<td>11.88</td>
<td>12.27</td>
<td>12.22</td>
<td>11.99</td>
<td>13.96</td>
<td>17.5%</td>
</tr>
<tr>
<td>Average Age of Fleet (in years)</td>
<td>7.76</td>
<td>11.2</td>
<td>9.47</td>
<td>9.04</td>
<td>8.97</td>
<td>15.6%</td>
</tr>
<tr>
<td>Number of Vehicle System Failures</td>
<td>35</td>
<td>51</td>
<td>70</td>
<td>45</td>
<td>67</td>
<td>91.4%</td>
</tr>
<tr>
<td>Revenue Miles Between Failures</td>
<td>18,463.60</td>
<td>12,319.43</td>
<td>9,093.49</td>
<td>14,121.47</td>
<td>9,701.46</td>
<td>-47.5%</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekday Span of Service (in hours)</td>
<td>19.5</td>
<td>18.17</td>
<td>18.17</td>
<td>18.17</td>
<td>22.08</td>
<td>13.2%</td>
</tr>
</tbody>
</table>

Trends that are evident among the effectiveness measures include the following.

• Vehicle miles per capita decreased by 9 percent from 2006 to 2010.
• Passenger trips per capita decreased from 0.28 in 2006 to 0.23 in 2010, a decrease of 18 percent.
• Passenger trips per revenue mile decreased from 0.22 in 2006 to 0.20 in 2010, a decrease of 9 percent.
• Passenger trips per revenue hour increased from 2.64 in 2006 to 2.74 in 2010, an increase of 4 percent.

These measures indicate that Space Coast Area Transit is providing less directly-operated demand response service per service area resident.

Efficiency Measures

Efficiency measures are designed to measure the level of resources necessary to achieve a given level of output. Efficiency measures are presented in Table E-3. Many of the measures show that the cost for operating the demand response service has decreased.

Table E-3
Efficiency Measures
Space Coast Area Transit Demand Response Trend Analysis (2006-2010)

<table>
<thead>
<tr>
<th>Efficiency Measures</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>% Change 2006-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expense Per Capita</td>
<td>$8.30</td>
<td>$6.81</td>
<td>$6.91</td>
<td>$0.62</td>
<td>$5.92</td>
<td>-28.7%</td>
</tr>
<tr>
<td>Operating Expense Per Peak Vehicle</td>
<td>$76.17</td>
<td>$107,244</td>
<td>$95,776</td>
<td>$95,072</td>
<td>$93,773</td>
<td>23.1%</td>
</tr>
<tr>
<td>Operating Expense Per Passenger Trip</td>
<td>$29.14</td>
<td>$26.90</td>
<td>$28.59</td>
<td>$29.44</td>
<td>$25.72</td>
<td>-11.7%</td>
</tr>
<tr>
<td>Operating Expense Per Passenger Mile</td>
<td>$1.87</td>
<td>$2.45</td>
<td>$2.53</td>
<td>$2.26</td>
<td>$2.27</td>
<td>21.4%</td>
</tr>
<tr>
<td>Operating Expense Per Revenue Mile</td>
<td>$6.48</td>
<td>$5.97</td>
<td>$6.02</td>
<td>$5.54</td>
<td>$5.05</td>
<td>-22.1%</td>
</tr>
<tr>
<td>Operating Expense Per Revenue Hour</td>
<td>$77.02</td>
<td>$73.27</td>
<td>$73.56</td>
<td>$66.37</td>
<td>$70.47</td>
<td>-8.5%</td>
</tr>
<tr>
<td>Maintenance Expense Per Revenue Mile</td>
<td>$1.54</td>
<td>$1.31</td>
<td>$1.39</td>
<td>$1.41</td>
<td>$1.25</td>
<td>-18.8%</td>
</tr>
<tr>
<td>Maintenance Expense Per Operating Exp</td>
<td>23.83</td>
<td>21.97</td>
<td>23.1</td>
<td>25.49</td>
<td>24.7</td>
<td>3.7%</td>
</tr>
<tr>
<td>Cost Efficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Ratios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farebox Recovery (%)</td>
<td>4.2</td>
<td>7.2</td>
<td>6.5</td>
<td>6.8</td>
<td>7.0</td>
<td>65.2%</td>
</tr>
<tr>
<td>Vehicle Utilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Miles Per Peak Vehicle</td>
<td>14,756.49</td>
<td>22,763.31</td>
<td>19,712.33</td>
<td>21,537.24</td>
<td>23,236.43</td>
<td>57.5%</td>
</tr>
<tr>
<td>Vehicle Hours Per Peak Vehicle</td>
<td>1,216.51</td>
<td>1,748.74</td>
<td>1,513.90</td>
<td>1,692.54</td>
<td>1,702.49</td>
<td>39.9%</td>
</tr>
<tr>
<td>Revenue Miles Per Vehicle Mile</td>
<td>0.8</td>
<td>0.79</td>
<td>0.81</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0%</td>
</tr>
<tr>
<td>Revenue Hours Per Total Vehicles</td>
<td>788.25</td>
<td>1,249.41</td>
<td>1,239.95</td>
<td>1,292.68</td>
<td>695.16</td>
<td>-11.8%</td>
</tr>
<tr>
<td>Labor Productivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue Hours Per Employee FTE</td>
<td>1,251</td>
<td>1,375</td>
<td>1,493</td>
<td>1,434</td>
<td>1,133</td>
<td>-9.5%</td>
</tr>
<tr>
<td>Energy Utilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue Hours Per Employee FTE</td>
<td>5.8</td>
<td>5.8</td>
<td>4.8</td>
<td>5.4</td>
<td>5.4</td>
<td>-8.1%</td>
</tr>
<tr>
<td>Fare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Fare</td>
<td>$1.23</td>
<td>$1.94</td>
<td>$1.86</td>
<td>$1.98</td>
<td>$1.79</td>
<td>45.5%</td>
</tr>
</tbody>
</table>
The following is a summary of the trends that are evident among the cost efficiency measures.

- Operating expense per capita decreased by 29 percent, from $8.30 in 2006 to $5.92 in 2010.
- Operating expense per passenger trip decreased from $29.14 in 2006 to $25.72 in 2010, a decrease of 12 percent.
- Farebox recovery increased by 65 percent, from 4.2 percent in 2006 to 7.0 percent in 2010.
- Revenue miles per vehicle miles remained stable at 0.8 throughout the trend. Minimizing deadhead is a key goal; therefore, the ratio of the two measures should be as close to 1.0 as possible.
- The average fare increased from $1.23 in 2006 to $1.79 in 2010, an increase of 46 percent.

The trend analysis is only one aspect of the transit performance evaluation; however, when combined with the peer review analysis, the results provide a starting point for understanding the trends in the transit system performance over time and compared to other transit systems with similar characteristics.

**Demand Response Peer Analysis**

A peer review analysis was conducted for the directly-operated demand response service provided by Space Coast Area Transit. The peer review was conducted using 2010 NTD data, the most current validated NTD data available for the peer group. Selected performance indicators, effectiveness measures, and efficiency measures are provided throughout this section in tabular format to illustrate the performance of the demand response system relative to the peer group. For each selected indicator and measure, the tables provide the Space Coast Area Transit value, the minimum value among the peer group, the maximum value among the peer group, the mean of the peer group, and the percent that the Space Coast Area Transit values are away from the mean. The peer systems selected are the same as the fixed-route peer systems used in the peer review analysis included in Section 3 of this report. The same peer systems were used in order to compare how similar fixed-route systems respond to the ADA requirement and how Space Coast Area Transit’s performance measures in comparison.

**Performance Indicators**

Table E-4 presents the performance indicators for the Space Coast Area Transit directly-operated demand response peer review analysis.
Table E-4
Performance Indicators
Space Coast Area Transit Demand Response Peer Review Analysis (2010)

<table>
<thead>
<tr>
<th>General Indicators</th>
<th>Space Coast Area Transit</th>
<th>Peer Group Minimum</th>
<th>Peer Group Mean</th>
<th>Space Coast Area Transit % from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>554,354</td>
<td>103,000</td>
<td>554,354</td>
<td>407,520</td>
</tr>
<tr>
<td>Service Area Size (square miles)</td>
<td>432</td>
<td>90</td>
<td>1,207</td>
<td>638</td>
</tr>
<tr>
<td>Passenger Trips</td>
<td>127,620</td>
<td>27,443</td>
<td>156,773</td>
<td>94,357</td>
</tr>
<tr>
<td>Passenger Miles</td>
<td>1,445,935</td>
<td>176,814</td>
<td>2,053,923</td>
<td>1,002,795</td>
</tr>
<tr>
<td>Vehicle Miles</td>
<td>813,275</td>
<td>217,205</td>
<td>1,245,299</td>
<td>733,255</td>
</tr>
<tr>
<td>Revenue Miles</td>
<td>649,998</td>
<td>178,959</td>
<td>1,136,034</td>
<td>620,476</td>
</tr>
<tr>
<td>Vehicle Hours</td>
<td>59,587</td>
<td>12,199</td>
<td>80,507</td>
<td>48,152</td>
</tr>
<tr>
<td>Revenue Hours</td>
<td>46,576</td>
<td>9,794</td>
<td>67,314</td>
<td>41,165</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>$3,282,062</td>
<td>$957,226</td>
<td>$3,712,753</td>
<td>$2,763,835</td>
</tr>
<tr>
<td>Total Maintenance Expense</td>
<td>$810,714</td>
<td>$97,773</td>
<td>$941,692</td>
<td>$665,427</td>
</tr>
<tr>
<td>Total Employee FTEs</td>
<td>41.1</td>
<td>16.0</td>
<td>65.1</td>
<td>39.7</td>
</tr>
<tr>
<td>Employee Operating FTEs</td>
<td>38.7</td>
<td>12.0</td>
<td>41.1</td>
<td>30.2</td>
</tr>
<tr>
<td>Administrative Employee FTEs</td>
<td>2.5</td>
<td>2.0</td>
<td>12.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Vehicles Available for Maximum Service</td>
<td>67</td>
<td>16</td>
<td>67</td>
<td>34</td>
</tr>
<tr>
<td>Vehicles Operated in Maximum Service</td>
<td>35</td>
<td>7</td>
<td>35</td>
<td>24</td>
</tr>
<tr>
<td>Total Gallons Consumed</td>
<td>151,685</td>
<td>28,311</td>
<td>151,685</td>
<td>91,779</td>
</tr>
</tbody>
</table>

The following is a summary of the peer review analysis performance indicators, based on the information presented in Table E-4.

- Service area population for Space Coast Area Transit is greater than the peer group average, 36 percent above the mean. The square miles of service area is below the peer group average, 32 percent below the mean.
- The passenger trips for Space Coast Area Transit are 35 percent above the peer group mean.
- Revenue miles for Space Coast Area Transit are 5 percent above the peer group mean.
- Space Coast Area Transit’s demand response vehicles operated in maximum service are 46 percent above the peer group mean.
- Operating expense for Space Coast Area Transit is 19 percent greater than the peer group average.

Effectiveness Measures

Categories of effectiveness measures include service supply, service consumption, and quality of service. Table E-5 represents the effectiveness measures for the Space Coast Area Transit directly-operated demand response peer review analysis.
Table E-5
Effectiveness Measures
Space Coast Area Transit Demand Response Peer Review Analysis (2010)

<table>
<thead>
<tr>
<th>Effectiveness Measures</th>
<th>Space Coast Area Transit</th>
<th>Peer Group Minimum</th>
<th>Peer Group Maximum</th>
<th>Peer Group Mean</th>
<th>Space Coast Area Transit % from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Miles Per Capita</td>
<td>1.47</td>
<td>0.45</td>
<td>6.68</td>
<td>2.40</td>
<td>-38.7%</td>
</tr>
<tr>
<td><strong>Service Consumption</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger Trips Per Capita</td>
<td>0.23</td>
<td>0.06</td>
<td>0.83</td>
<td>0.30</td>
<td>-24.1%</td>
</tr>
<tr>
<td>Passenger Trips Per Revenue Mile</td>
<td>0.20</td>
<td>0.12</td>
<td>0.21</td>
<td>0.16</td>
<td>22.8%</td>
</tr>
<tr>
<td>Passenger Trips Per Revenue Hour</td>
<td>2.74</td>
<td>1.91</td>
<td>2.82</td>
<td>2.40</td>
<td>14.1%</td>
</tr>
<tr>
<td><strong>Quality of Service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Speed (RM/RH)</td>
<td>14.0</td>
<td>11.1</td>
<td>18.3</td>
<td>15.1</td>
<td>-7.5%</td>
</tr>
<tr>
<td>Average Age of Fleet (in years)</td>
<td>9.0</td>
<td>3.4</td>
<td>9.0</td>
<td>5.1</td>
<td>75.7%</td>
</tr>
<tr>
<td>Number of Vehicle System Failures</td>
<td>67</td>
<td>10</td>
<td>1474</td>
<td>295</td>
<td>-77.3%</td>
</tr>
<tr>
<td>Revenue Miles Between Failures</td>
<td>9,701</td>
<td>424</td>
<td>17,896</td>
<td>7,783</td>
<td>24.6%</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekday Span of Service (in hours)</td>
<td>22.1</td>
<td>9.0</td>
<td>22.1</td>
<td>15.5</td>
<td>42.5%</td>
</tr>
</tbody>
</table>

The following is a summary of the effectiveness measures for the peer review analysis:

- Vehicle miles per capita for Space Coast Area Transit are 39 percent below the peer group mean.
- Passenger trips per revenue mile for Space Coast Area Transit are 23 percent above the peer group mean.
- Weekday span of service for Space Coast Area Transit is 43 percent above the peer group mean.

Efficiency Measures

Categories of efficiency measures include cost efficiency and operating ratios. Table E-6 presents the efficiency measures for the Space Coast Area Transit directly-operated demand response peer review analysis.
Table E-6  
Efficiency Measures  
Space Coast Area Transit Demand Response Peer Review Analysis (2010)

<table>
<thead>
<tr>
<th>Efficiency Measures</th>
<th>Space Coast Area Transit</th>
<th>Peer Group Minimum</th>
<th>Peer Group Mean</th>
<th>Peer Group Maximum</th>
<th>Space Coast Area Transit % from the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expense Per Capita</td>
<td>$5.92</td>
<td>$2.03</td>
<td>$25.27</td>
<td>$8.98</td>
<td>-34.1%</td>
</tr>
<tr>
<td>Operating Expense Per Peak Vehicle</td>
<td>$93,773</td>
<td>$87,021</td>
<td>$265,894</td>
<td>$131,938</td>
<td>-28.9%</td>
</tr>
<tr>
<td>Operating Expense Per Passenger Trip</td>
<td>$25.72</td>
<td>$20.90</td>
<td>$45.41</td>
<td>$32.53</td>
<td>-20.9%</td>
</tr>
<tr>
<td>Operating Expense Per Passenger Mile</td>
<td>$2.27</td>
<td>$1.60</td>
<td>$10.53</td>
<td>$4.08</td>
<td>-44.4%</td>
</tr>
<tr>
<td>Operating Expense Per Revenue Mile</td>
<td>$5.05</td>
<td>$3.08</td>
<td>$9.35</td>
<td>$5.39</td>
<td>-6.3%</td>
</tr>
<tr>
<td>Operating Expense Per Revenue Hour</td>
<td>$70.47</td>
<td>$48.68</td>
<td>$128.26</td>
<td>$78.42</td>
<td>-10.1%</td>
</tr>
<tr>
<td>Maintenance Expense Per Revenue Mile</td>
<td>$1.25</td>
<td>$0.55</td>
<td>$3.09</td>
<td>$1.28</td>
<td>-2.0%</td>
</tr>
<tr>
<td>Maintenance Expense Per Operating Exp</td>
<td>$24.70</td>
<td>$10.21</td>
<td>$33.08</td>
<td>$23.23</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Operating Ratios

| Farebox Recovery (%) | 7.0% | 1.4% | 7.0% | 4.2% | 66.7% |

Vehicle Utilization

| Vehicle Miles Per Peak Vehicle | 23,236 | 20,514 | 35,580 | 29,693 | -21.7% |
| Vehicle Hours Per Peak Vehicle | 1,702   | 1,109  | 2,402  | 1,961  | -13.2% |
| Revenue Miles Per Vehicle Mile | 0.8     | 0.7    | 0.9   | 0.8    | -4.8%  |
| Revenue Mile Per Total Vehicle | 9,701   | 9,701  | 28,766 | 18,307 | -47.0% |
| Revenue Hours Per Total Vehicles | 695     | 576    | 1,819  | 1,218  | -42.9% |

Labor Productivity

| Revenue Hours Per Employee FTE | 1,133 | 611 | 1,315 | 980 | 15.5% |
| Revenue Mile Per Total Vehicle | 3,103 | 1,712 | 3,103 | 2,306 | 34.5% |

Energy Utilization

| Revenue Hours Per Employee FTE | 5.4 | 5.4 | 10.3 | 8.1 | -33.6% |

Average Fare

| $1.79 | $0.48 | $22.48 | $5.27 | -66.1% |

The following is a summary of the efficiency measures for the peer review analysis:

- Operating expense per capita for Space Coast Area Transit is 34 percent below the peer group mean.
- Operating expense per passenger trip for Space Coast Are Transit is 21 percent below the peer group mean. Operating expense per revenue mile for Space Coast Area Transit is 6 percent below the peer group mean and operating expense per revenue hour is 10 percent below the peer group mean.
- Farebox recovery for Space Coast Area Transit is above the peer group average by nearly 67 percent.
Appendix F: 10-Year Vision - Alternatives Map Series
Existing and Future ADA Service Area

Existing ADA Service Area: 219.23 sq. mi.

Additional New ADA Service Area: 103.96 sq. mi.
Space Coast Area Transit TDP
Alternative 1
BCC to UCF Express

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area
Transit TDP
Alternative 7
SR 520 to Port Canaveral

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area Transit TDP
Alternative 9
Minuteman Causeway East-West Connector

Proposed Transit Alternatives
Existing Transit Routes
Municipalities
Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area Transit TDP

Alternative 11
Babcock Road

Proposed Transit Alternatives
Existing Transit Routes
Municipalities
Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area Transit TDP
Alternative 15
St. John’s Heritage Parkway Corridor

Proposed Transit Alternatives
Existing Transit Routes
Municipalities
Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area Transit TDP
Alternative 17
Kennedy Space Center Express

Proposed Transit Alternatives
Existing Transit Routes
Municipalities
Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area Transit TDP
Alternative 18
BCC Connector

Proposed Transit Alternatives
Existing Transit Routes
Municipalities
Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Space Coast Area
Transit TDP
Alternative 20
Sebastian and South County

Proposed Transit Alternatives
Existing Transit Routes
Municipalities
Brevard County

Prepared by:
Tindale-Oliver & Associates, Inc.
Aug 2012
Appendix G: Farebox Recovery Ratio Report
CURRENT FAREBOX RECOVERY RATIO
The farebox recovery ratio (FRR) for SCAT, the public transportation provider for Brevard County, was 17.2 percent for all fixed-route, paratransit, and vanpool services in FY 2010. This number shows a 0.9 percent increase in FRR from FY 2009. The background with regard to the farebox recovery ratio includes the following.

PRIOR YEAR FARE STUDIES AND CHANGES
A Space Coast Area Transit Fare Study analysis was completed in 2005. At the time of the study, the fares for fixed-route service in Brevard County were $1.00 for full fare and $0.50 for reduced fare, the same amounts that had been implemented when the transit system was created in 1991. Though the results of the fare study indicated that Space Coast Area Transit's base fare should continue at the same level, staff decided that a fare increase was needed due to high fuel costs. The Brevard County Board of County Commissioners approved an increase to $1.25 for full fare and $0.60 for reduced fare, and these changes were implemented on June 1, 2006. Since the fare increase, Space Coast Area Transit has also developed an interlocal agreement with Brevard Community College (BCC) to provide free rides for students. Fares for paratransit are $2.50 for full fare and $1.25 for reduced fare. The fare for vanpools is based on the cost of the vanpool lease (including maintenance and insurance) plus the cost of gas, divided by the number of passengers. The expense varies based on commute distance, the total number of passengers, and the type of van.

STRATEGIES THAT WILL AFFECT THE FAREBOX RECOVERY RATIO
The 2013-2022 Transit Development Plan (TDP) update identifies strategies that will be used to maintain or increase the farebox recovery ratio, including the following:

- Monitor key performance measures for individual fixed-routes.
- Ensure that transit serves major activity centers, potentially increasing the effectiveness of service.
- Increase ridership by continuing to transition transportation disadvantaged and ADA patrons to fixed-route service.
- Increase ridership through enhanced marketing and community relations activities.
- Provide local employers with incentives for transit use.
- Minimize costs required to operate and administer transportation services.
- Determine the most cost-effective service type on all major corridors given demand, routings, and coverage areas.

### SCAT FIXED-ROUTE FARE STRUCTURE (FY 2012)

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Fare Type</th>
<th>Current Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adult - Regular Fare</strong></td>
<td>Cash Fare</td>
<td>$1.25</td>
</tr>
<tr>
<td></td>
<td>10-Ride Pass</td>
<td>$10.00</td>
</tr>
<tr>
<td></td>
<td>Monthly Pass</td>
<td>$35.00</td>
</tr>
<tr>
<td></td>
<td>Student Semester Pass</td>
<td>$60.00</td>
</tr>
<tr>
<td><strong>Discount Fare</strong></td>
<td>Cash Fare (Reduced Fare)</td>
<td>$0.60</td>
</tr>
<tr>
<td></td>
<td>10-Ride Pass (Reduced Fare)</td>
<td>$5.00</td>
</tr>
<tr>
<td></td>
<td>Monthly Pass (Reduced Fare)</td>
<td>$17.00</td>
</tr>
</tbody>
</table>

*Those eligible for Reduced Fare include: Seniors (60+), Disabled, Veterans, and Students; BCC Students ride for free with a valid BCC Student ID. Medicare cards are accepted as proof for reduced fare. There is no charge for children under the age of five (5), or for transfers.*