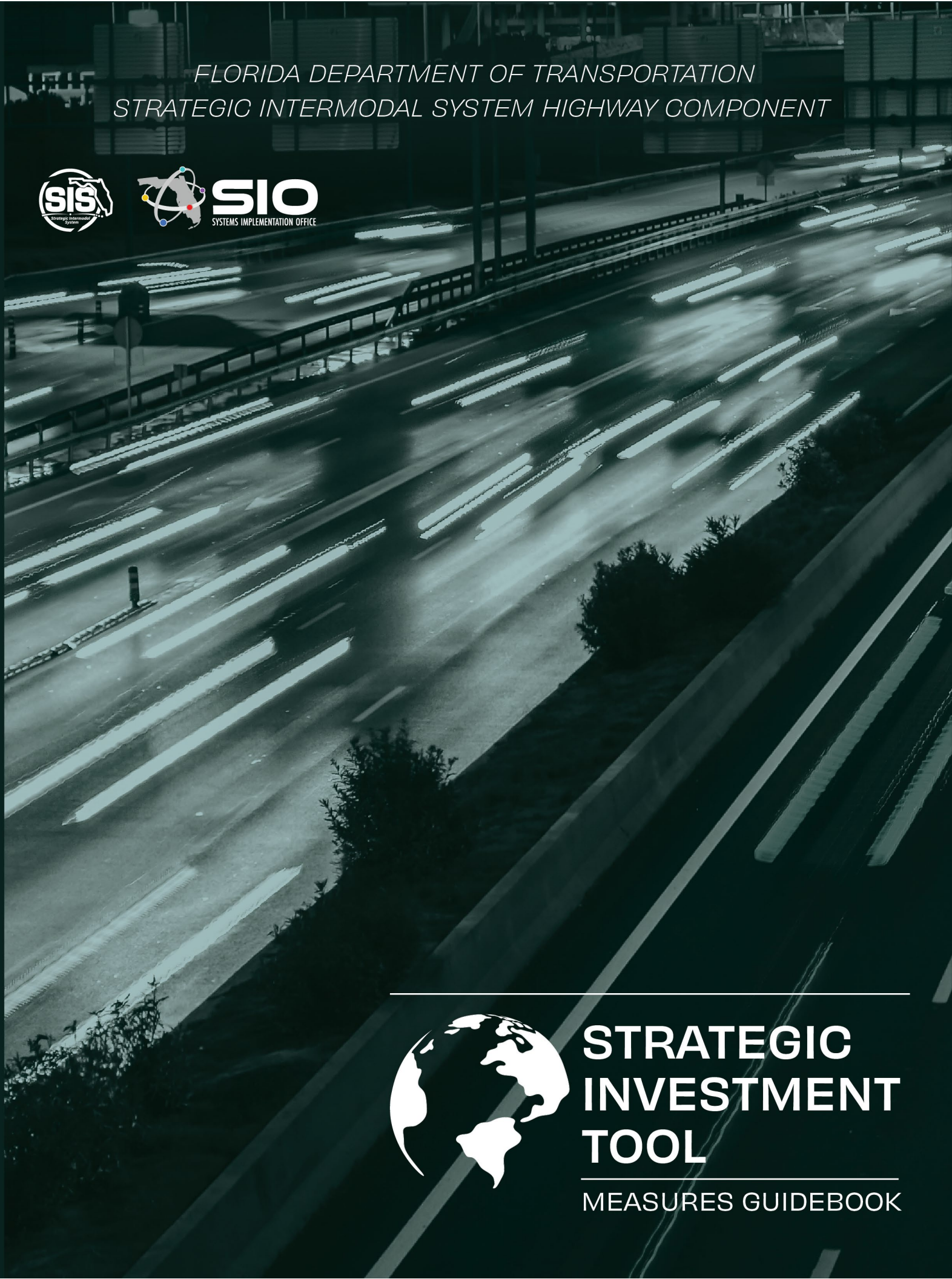
FLORIDA DEPARTMENT OF TRANSPORTATION
STRATEGIC INTERMODAL SYSTEM HIGHWAY COMPONENT
SIS
Strategic Intermodal System
SIO
SYSTEMS IMPLEMENTATION OFFICE
STRATEGIC INVESTMENT TOOL
MEASURES GUIDEBOOK

# Chapter 1 – SIS Overview and SIT Process

The 2000 Florida Transportation Plan (FTP) outlined the need for identifying a transportation system encompassing all modes of travel within Florida. In response to this need, Florida's Strategic Intermodal System (SIS) was established in 2003 and subsequently adjusted by Florida's Legislature and Governors. The SIS is composed of a statewide network of high priority transportation facilities and services including the State's largest and most significant commercial service and general reliever airports, spaceports, deepwater seaports, freight rail terminals, passenger terminals, rail corridors, waterways, and highways. The SIS is intended to enhance Florida's economic competitiveness by focusing limited state financial resources on those transportation facilities that are critical to Florida's economy and quality of life.

In 2005, the FDOT Secretary adopted Florida's Strategic Intermodal System Plan and a supporting document, *Guidance for Implementing the SIS Strategic Plan*. The Plan designated SIS facilities, preliminary investment needs, a process for setting priorities, and a finance strategy.

The SIS Strategic Plan and the Guidance document both required the FDOT to develop a policy driven, data supported project prioritization process to guide investment decisions. The SIS Strategic Investment Tool (SIT) was developed to assist with this process.

## Purpose

This document explains the SIT and how it is used as one of the tools in the project selection process. The SIT calculates and reports measures relating to SIS objectives, then prioritizes each capacity enhancement project competing for the dedicated, discretionary transportation capacity funds.

It is the intent of the FDOT that the SIT and the related process for determining project eligibility and project priorities are transparent, so all stakeholders can understand how and why projects are receiving the scores. Additionally, partners and stakeholders have an opportunity to participate in the planning process by providing information and data regarding investment needs and impacts, adopting policies and resolutions demonstrating local support for the project, or contributing funding to a project.

## SIS Funding Strategy

The process for determining which SIS investments will be funded by the FDOT and its partners (airports, seaports, Space Florida, etc.) can be broken into the following stages known as the SIS Funding Strategy:

1. The FDOT works with its partners to determine investment needs based on the performance of the transportation system relative to the objectives of the SIS. The resulting projects are compiled into the long-range SIS Unfunded Needs Plan (Needs Plan) that identifies all future needs without regard to projected future funding limitations.
2. The FDOT and partners gather detailed information about each proposed investment to help determine which should be the highest priorities for the limited funding that is likely to be available.
3. From the prioritized list of projects, the FDOT selects projects for funding within the First Five-Year Plan (Adopted Work Program), Second Five-Year Plan, collectively known as the SIS 10-Year Plan, or the SIS Cost Feasible Plan (15 years beyond SIS 10-Year Plan). The Second Five-Year Plan illustrates projects that are planned to be funded in the five years (Years 6 through 10) beyond the Adopted Work Program. Projects in this plan could advance into the First Five-Year Plan as funds become available.

4. The First Five-Year Plan illustrates capacity projects on the SIS that are funded by the Legislature in the FDOT Adopted Work Program (Year 1) and projects that are programmed for proposed funding in the next 2 to 5 Years. The FDOT requires the financial participation of partners in projects to leverage state resources and thereby raise the priority of individual projects.

These plans can be found at: www.fdot.gov/planning/systems/programs/mspi/plans/

## SIT Prioritization Process

The SIT is one of the tools the FDOT Systems Implementation Office utilizes for determining SIS project priorities. It is a unique instrument and is applicable only to evaluating and setting priorities for highway capacity projects. The SIT includes categories of prioritization criteria, or measures, corresponding to SIS objectives. Statewide priorities will also be guided by FDOT District priorities (including input from the Metropolitan Planning Organizations), funding availability, and project phasing or timing constraints.

The SIT prioritization is a formal and transparent process that is driven by policy objectives and supported by data. The FDOT has established project priorities from a statewide perspective, with an emphasis on interregional, interstate, and international travel. The source for projects to be evaluated using the SIT are existing plans in the SIS Funding Strategy or are new projects not currently in a SIS plan. The results of the prioritization process may be included as part of updates to the SIS Funding Strategy.

## SIT Eligible Projects

Projects currently eligible to be fully evaluated by the SIT include projects physically located on existing SIS Highway Corridors and Connectors, and thus identified in the FDOT's Roadway Characteristic's Inventory (RCI). These projects include providing additional travel lanes, additional throughput for passenger trips, or operational improvements that will provide for the accommodation of additional vehicles. A capacity project does not include projects such as: routine highway maintenance or repair, replacement or repair of rolling stock, basic maintenance facilities, or operating expenses, fare subsidies, and other routine expenses related to existing or expanded service.

## Changes to Scoring Process and Comment

New measures or changes to measures, including how they are calculated, measured, or the statistical breaks, will be considered as necessary. Changes to existing or new criteria will be publicized to FDOT District SIS Coordinators. Written comments on new measures or changes to existing measures will be accepted and considered at any time.

# Chapter 2 – SIT Overview and Components

The Strategic Intermodal System (SIS) Strategic Investment Tool (SIT) is an interactive web-based tool used in the SIS Highway project selection process. It and the resulting scores are intended to be used as one of the tools in the project selection process. The tool is used by the FDOT to objectively gauge a projects' ability to address Florida Transportation Plan (FTP) goals, SIS objectives, and to help the FDOT select and prioritize projects that meet these goals and objectives. The process for determining SIT scores is intended to be transparent and replicable, so stakeholders can understand how and why projects receive a specific score. Stakeholders can provide input into the process by providing additional information and data regarding investment needs and impacts, adopting policies and resolutions demonstrating local support for the project, and contributing local funding match to the project.

## SIT Components

The SIT includes two main components: the Analyzer and Reporter. Each component was developed to provide specific functions. The web interface gives the FDOT Central Office the ability to keep data and information in the SIT up-to-date and permits the FDOT District staff to have access to the same data and analysis capabilities.

### Analyzer

- Measures are used to evaluate and score projects with respect to the SIS objectives.
- The Analyzer calculates scores for each project by both individual measures and the overall SIS objective.
- Each measure is evaluated to ensure that it was linked to SIS objectives, is accountable, clear, logical, based on available data, and its calculation can be duplicated.

### Reporter

- Provides the user with Analyzer results displayed in various tabular formats for each scenario or grouping of proposed projects.
- Allows user to view various project grouping scenarios and to change the SIS objective weighting factors instantly.

## SIT Access

The SIT is housed within the Systems Implementation Office at FDOT Central Office in Tallahassee. Users can access the SIT through the Applications Menu on the FDOT Systems Implementation Office SharePoint site. Users must have access to the FDOT internal network to use the SIT.

## Analyzer

The SIT Analyzer provides a web-based interface for users to input proposed project information, create scenarios of various proposed projects, and then submit the projects for scoring. Individual measures are used in the scoring process to determine overall scores for each project for each of the SIS objectives. Each of the measures are described in detail in Chapter 3 and the Appendices of this report, including identifying the data sources and the calculation and scoring process. The data is stored in a database and accessed by the Analyzer to score each submitted project.

The first Analyzer screen is the Scenario Manager. The Scenario Manager allows the user to create new scenarios, delete a scenario, select a different scenario, or copy a scenario to modify. The copy function allows users to modify scenarios and test different groupings of projects without having to reenter all the project detail information.

Once a scenario is selected, the user can start the Scenario Editor to add, delete, or modify projects within a scenario. The Scenario Editor identifies the projects that are included in the scenario, as well as information about each project, such as:

- Project name
- Facility
- Roadway ID
- Begin/end mileposts
- Project limits (from/to)
- Roadway classification/type

Additionally, the user can click on each project to open the Project Editor screen to change information on the project or to delete the project from the scenario. A single project can include up to five segments with different roadway IDs and begin/end milepost points. In addition, the user may override the default choices for the following items:

- Road Type – Is the SIS facility an interstate, arterial, or SIS Connector?
- Interchange Type – Is the project located at an interchange of a SIS Corridor to another SIS Corridor, a SIS Corridor to a SIS Connector or Military Access Facility, or a SIS Corridor to a non-SIS facility? Or is the project not located on an interchange? A roadway widening project that only affects the mainline and does not make improvements to the interchange should be classified as Not an Interchange.
- Number of Lanes Added – How many travel lanes are added to the roadway?
- Urban Area – Is the project located in an urban area? If yes, check the box. If the project is in a rural area, do not check the box.
- Improvement – A dropdown list of all available improvement types.
- Transit – A dropdown list allowing an interpretation of the positive transit impacts of a project. If unsure, select Use Improvement Type.

The user can also import projects from the most recent Second Five-Year Plan, Cost Feasible Plan, or Needs Plan. The Import Project screen displays the projects available to import. The user simply clicks the IMPORT2SIT or ADD link next to the project they wish to import, and the Analyzer will open the Project Editor screen so the user can verify project information before adding it to the current scenario.

Once projects are added to a scenario, the user can submit the scenario to the Analyzer to compute the scores by using the Submit Scenario screen. The user can provide a description of the scenario, select the security level of the scenario, and set the time frame for analysis. This time frame incorporates planned improvements into the SIS Highway network that may be completed between present day and when the projects submitted to be analyzed are planned. The security level identifies whether the scenario is private to the user only, available to all users within the same FDOT District, available to the user's FDOT District and FDOT Central Office, or available to all users.

## Reporter

The SIT Reporter provides a web-based interface for users to review the results of the Analyzer for each scenario. The first Reporter screen allows the user to view the status of each scenario submitted in the Analyzer, as well as the date and time the analysis was completed. The default view includes only projects that were submitted by the user. Additional scenario results can be viewed by clicking on the drop-down menu and selecting from one of the following choices:

- Only analysis results that I submitted
- All analysis results for my district
- All public results for other districts
- All public results

Once the user selects a scenario to view, the Analysis Results screen is displayed. Here, the user can choose from a variety of reports or make changes to the SIS objective weighting parameters. The reports include various detailed and summary reports of the data and scores for each project. The user should always check the error report to make sure there are no fatal errors which would cause the results of the Analyzer to be invalid for certain projects.

Under the Change Parameters option, the user can change the sharing level and allow other users to see their analysis results. In addition, the user can change the description of the scenario and change the weighting of the results by SIS objective. The user can select any weighting combination, but the weighting must always add up to 100 points. It is important to note that changes to the weighting will replace the previous weighting combinations and all reports, except the unweighted, will now reflect the new weighting scheme for this scenario.

# Chapter 3 – SIT Measures

The FDOT developed the SIT to evaluate and prioritize potential SIS Highway Corridor and Connector capacity improvement projects using a series of performance measures linked to SIS objectives. This chapter describes what is looked for in performance measures used to evaluate potential projects for funding and what the SIT measures currently are for each SIS objective.

## Characteristics of Good Performance Measures

There is considerable national research regarding performance measures. The FDOT reviewed this research, as well as findings from a peer review of other state DOTs, to guide their selection of SIT measures. Following is a summary of some of the national research findings and conclusions that the FDOT considered in developing the SIT measures.

Characteristics of good performance measures include measures that are:

- Understandable, logical, repeatable, and they can be presented in charts, graphs, and through calculations
- Linked to agency goals, measure how well goals are being met, and match what is important to decision makers and stakeholders
- Meaningful to customers, but are not limited to customer focus or survey results
- Have reasonable reporting cycles, show trends, and are timely (can be produced at reasonable intervals at reasonable cost)
- Based on quantitative data that is existing and easily available, with an analysis that is simple and easy to understand
- Matched to their purpose and are not in conflict with other measures

Guiding principles to follow in developing performance measures include:

- No one set of measures fits all governments or agencies
- There are no perfect measures that are applicable in all situations
- If the wrong condition is measured, that condition is what the DOT will be held accountable for, and other important considerations may be overlooked
- If too much is measured, costs will soar while focus fades
- Lasting measures have deep rooted support. They are developed involving stakeholders, can be used to tell a story, focus on opportunities not allocating blame, and are continuously improved

## SIT Measures

Measures are used to evaluate and prioritize eligible SIS Highway Corridor and Connector capacity projects. The measures are summarized in Table 3-1. The scoring value for each measure varies depending on how directly it relates to the SIS objective. In selecting the highway measures, the FDOT made considerable effort to verify and validate that the measures selected and used are valid and reliable. As stated, the FDOT conducted a national literature search and review of peer state DOTs to identify, compare, and evaluate the measures and the weighting factors. The FDOT, with the assistance of multiple transportation consultants, evaluated each measure to make certain it was linked to the goal; matched the purpose of the goal; is accountable (can demonstrate how the goal is being met); is clear and logical; can be based on quantitative data; has calculation that can be duplicated; is not in conflict with other goals, and is timely. Many measures were not used. Several reasons for not using certain

measures include: lack of available data; the high cost or excessive time required collecting data needed for the measure; the measure may not have the correct emphasis and would result in focusing the program in the wrong direction; the measure duplicated another, better measure; or the measure may result in bias.

**Table 3-1 SIT Measures**

| SIS Objective | Measure | Maximum Score |
|---|---|---|
| Safety (6 Measures) | Crash Ratio | 7 |
| | Fatal Crash Ratio | 4 |
| | Bridge Appraisal Rating | 2 |
| | Emergency Evacuation | 3 |
| | Personal Safety | 2 |
| | Adaptation | 2 |
| | *Maximum subtotal* | *20 points* |
| Interregional Connectivity (10 measures) | Volume / Capacity (v/c) Ratio | 4 |
| | Truck Percentage | 2 |
| | Vehicular Volume (AADT) | 2 |
| | System Gap | 1 |
| | Change in v/c (Mainline) or Interchange Operations (Interchanges) | 3 |
| | Bottleneck | 1 |
| | Delay | 2 |
| | Travel Time Reliability | 3 |
| | Link to Military Base | 1 |
| | Rural Areas of Opportunity (RAO) | 1 |
| | *Maximum subtotal* | *20 points* |
| Economics (5 measures) | Population | 5 |
| | Population Growth Rate | 3 |
| | Employment | 5 |
| | Employment Growth Rate | 3 |
| | Population Density | 4 |
| | *Maximum subtotal* | *20 points* |
| Environmental Stewardship (15 measures) | Farmlands | 1 |
| | Geology | 1 |
| | Archeological / Historical Sites | 1 |
| | Contamination | 1 |
| | Conservation and Preservation | 2 |
| | Wildlife and Habitat | 2 |
| | Flood Plains / Flood Control | 1 |
| | Coastal / Marine | 1 |
| | Special Designations | 2 |
| | Water Quality | 1 |
| | Wetlands | 2 |
| | Air Quality | 1 |
| | Energy and Sustainability | 2 |
| | Social Investment / Justice | 1 |
| | Residential Community Impact | 1 |
| | *Maximum subtotal* | *20 points* |

*Continued next page*

| SIS Objective | Measure | Maximum Score |
|---|---|---|
| Intermodal Connectivity (6 measures) | Connector Location | 3 |
| | Truck Volume | 6 |
| | Transit Connectivity | 3 |
| | Distance to SIS Hub | 4 |
| | Managed Lanes / Special Use | 2 |
| | Shared Use Non-motorized (SUN) Trail Proximity / Connections | 2 |
| | *Maximum subtotal* | *20 points* |
| | ***Total Maximum Score*** | ***100 points*** |

# Appendix A – Safety

| Measures | Maximum Score |
|---|---|
| Crash Ratio | 7 |
| Fatal Crash Ratio | 4 |
| Bridge Appraisal Rating | 2 |
| Emergency Evacuation | 3 |
| Personal Safety | 2 |
| Adaptation | 2 |
| *Maximum subtotal* | *20 points* |

# Crash Ratio
## Appendix A – Safety

### Description

Crash ratio is the actual crash rate for a roadway segment divided by the average crash rate for a similar type of roadway over the entire State Highway System. This measure is referred to as the crash ratio and was developed based on discussions with the FDOT Safety Office.

### Importance to Safety

Florida's highest priority is to provide a safe and secure transportation system for residents, businesses, and visitors. Crashes are an indication of a safety problem at a location. A higher-than-average number of crashes at a specific location is an indication that there may be a problem at that location. While the FDOT recognizes it is important to address all high crash locations, using the crash ratio as a prioritization factor allows the FDOT to distinguish among all projects and prioritize those at the locations with the highest proportion of crashes.

### Data Characteristics

Data Source: FDOT Safety Office
Data Type: Linear Coverage
Calculation: ACTUAL / AVERAGE (CRATIO already in the table); score = 0-7
Sample Data: See Crash Ratio (CRATIO)

| CRATETBL | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ID | COSECSUB | BMP | EMP | STROAD | LENGTH | CC | CRASHES | ADT | ACTUAL | AVERAGE | CRATIO | CONLV | FTL | INJ | PRTY |
| 1 | 86472000 | 21.709 | 21.835 | SR 869 | 0.126 | S-6DR | 36 | 17133 | 15.229 | 2.027 | 7.5131 | 99.99 | 0 | 18 | 23 |

### Measure Categorization & Scoring

| Score | CRATIO |
|---|---|
| | Crash Ratio |
| 7 | > 3.66 |
| 6 | 2.60 – 3.66 |
| 5 | 2.01 – 2.59 |
| 4 | 1.64 – 2.00 |
| 2 | 1.34 – 1.63 |
| 1 | 1.01 – 1.33 |
| 0 | ≤ 1.0 |

Weighted Average (mileage): Calculate average crash ratio for project. Null values should be ignored, along with their associated lengths.

$$Weighted\ Average = \frac{\sum SegmentValue \times SegmentLength}{TotalLength}$$

If the underlying segmentation of data layers does not match project limits, SegmentLength represents the fractional length of any given data segment occurring within the specified project limits.

# Fatal Crash Ratio
## Appendix A – Safety

### Description

The Fatal Crash Ratio measure identifies the location of fatal crashes on the State Highway System over the last three (3) years. Crashes are counted over the limits of the project and then divided by the project length. This will ensure shorter projects are not penalized. Fatal crash ratio is being used as an indication based on discussions with the FDOT Safety Office on the best measure to address critical locations.

### Importance to Safety

Fatal crashes are one indicator used to measure safety. Saving lives is a high priority for the FDOT. It is the FDOT's desire to correct conditions and designs that may result in the loss of lives through a crash. If a project's location is the site of many fatal crashes as compared to the average number of fatal crashes at a similar facility in another part of the state, it will receive a higher score. This will allow the FDOT to distinguish among projects and target those by providing points to those that recommend enhancements to locations with the highest number of fatal crashes.

### Data Characteristics

Data Source: FDOT Safety Office
Data Type: Point locations
Calculation: (Sum of TOT_FATL within limits) / (Project Length)
Sample Data:

| CSEVPTS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ID | CARNUM | MANDIST | CONTYDOT | SECTNMBR | SUBSECT | COSECSUB | LOCMP | TOT_VHCL | TOT_FATL | TOT_INJR | TOT_PEDST |
| 1 | 713698970 | 01 | 01 | 010 | 000 | 01010000 | 2.22 | 1 | 0 | 1 | 0 |

### Measure Categorization & Scoring

| | |
|---|---|
| | Fatal crashes / mile |
| 4 | > 5 |
| 3 | 4.01 – 5 |
| 2 | 3.01 – 4 |
| 1 | 2.01 – 3 |
| 0 | ≤ 2 |

Weighted Sum: Count number of fatal crashes within project limits. Divide by project length.

$$Crashes\ per\ Mile = \frac{\sum Crashes}{ProjectLength}$$

# Bridge Appraisal Rating
## Appendix A – Safety

### Description

This measure is the bridge appraisal rating for bridge width and vertical over-clearance. This measure is known as deck geometry in the bridge database. Based on discussions with the FDOT Bridge Maintenance Office, the bridge appraisal rating is one of the best measures to address safety. Bridges are broken into two categories: obsolete and deficient. The Bridge Maintenance Office addresses bridges classified as deficient due to the serious safety issues that need to be addressed. Obsolete bridges are not addressed by the Bridge Maintenance Office because there are issues related to the roadway on either side of the bridge that the Bridge Maintenance Office is not responsible for repairing. These obsolete bridges are the focus of this measure as they would be repaired along with a needed mainline capacity enhancement.

### Importance to Safety

Narrow bridges and those with low clearances can be a cause for crashes because drivers may suddenly stop or adjust their speed in response to the different geometrics from the rest of the roadway. Providing points to projects that address bridges with low appraisal ratings will help the FDOT distinguish and prioritize among needed capacity projects.

### Data Characteristics

Data Source: FDOT Bridge Maintenance Office
Data Type: Point locations
Calculation: Calculation is already in the table; score = 0 – 3
Sample Data: See Deck Geometry (DKGEOM)

| BRIDGENO | ROAD_SIDE | ROADWAY | BEGIN_POST | END_POST | MAPREF | FACTP | DKGEOM | DKCOND | SUPCOND | SUBCOND | CULVCOND |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 010059 | L | 01075000 | 17.871 | 17.915 | 404 | 11 | 1 | | 0 | 0 | N |

### Measure Categorization & Scoring

| Score | DKGEOM |
|---|---|
| | Deck geometry rating |
| 2 | 3 |
| 1.5 | 2 |
| 1 | 1 |
| 0 | 0 |

If an obsolete bridge occurs within project limits, score > 0 is awarded based on Deck Geometry. Highest score is used for projects involving more than one obsolete bridge. (DKGEOM)

# Emergency Evacuation
## Appendix A – Safety

### Description

This measure identifies county clearance time for emergency evacuations. The use of out-of-county clearance times as a safety measure will focus projects in areas where bottlenecks and capacity issues greatly impact clearance times, whether they are in coastal or inland counties. Counties with higher evacuation times will receive higher points.

### Importance to Safety

By expediting the evacuation of people during natural disasters and other emergencies, the FDOT decreases the likelihood of injury and/or death of both citizens and visitors of Florida. This expediting also increases the ability of emergency management personnel to do their job in a more effective manner.

### Data Characteristics

Data Source: Florida Department of Emergency Management
Data Type: Linear Coverage
Calculation: County clearance times are calculated by the Florida Department of Emergency Management

Sample Data:

| ID | County Name | Clearance Time (Hours) |
|---|---|---|
| 1 | Baker | 38.5 |

### Measure Categorization & Scoring

| Score | Spatial Analysis |
|---|---|
| | Project located in county with out of county clearance time |
| 2 | > 38.50 hours |
| 1.5 | 26.51 – 38.50 hours |
| 1 | 18.01 – 26.50 hours |
| 0.5 | 13.51 – 18.00 hours |
| 0 | < 13.51 hours |

If a project crosses county boundaries, then a weighted average will be used to determine the scoring where:

$$Weighted\ Average = \frac{\sum SegmentValue \times SegmentLength}{TotalLength}$$

If the underlying segmentation of data layers does not match the project limits, S*egmentLength* represents the fractional length of any given data segment occurring within the specified project limits.

# Personal Safety
## Appendix A – Safety

### Description

This measure utilizes a dataset of "conflict" segments, where the potential for unsafe interactions between pedestrians, cyclists, and motor vehicles is greatest. Using crash data maintained by the FDOT Safety Office, crashes involving highway-rail crossing or crashes relating to bike and pedestrian modes are identified. This data is then consolidated into a single dataset helping to identify historical conflict areas. Projects located along stretches of identified conflict areas would receive points.

### Importance to Safety

Increasing the mix and viability of multiple transportation options enhances livability but may introduce new safety issues if not properly planned. As Florida's transportation system evolves into a more robust multimodal network, the number of locations where modes intersect and the chances for safety-related conflicts between modes will increase. As Florida provides more options for moving people and freight, protecting the entire range of system users must remain a priority.

### Data Characteristics

Data Source: FDOT Safety Office
Data Type: Geo-referenced point
Calculation: None

### Measure Categorization & Scoring

| Score | Crash Per Mile<br># of crashes per project segment/project length | Project Type |
|---|---|---|
| 2 | $\geq 1$ | Project located on a conflict segment |
| 0 | 0 – 0.9 | Projects with little to no conflicts |

A conflict segment is determined by Crash Per Mile = (# of Crashes per Project) / (Project Length)

This scoring system relies on the assumption any project located on a conflict segment would include project designs addressing existing safety issues.

# Adaptation
## Appendix A – Safety

### Description

This measure identifies the possibility of future project segments being affected by extreme weather and climate change. This measure helps reduce the inherited risk of extreme weather and climate change. By building in a manner that reduces risk of system damage the FDOT is ensuring efficient operations and return on taxpayer investment long into the future. Making a wise investment now allows the system to adapt and will help prevent costly future investments and disruptions to operations. For the SIT measure to represent susceptibility of infrastructure to potential rising sea levels, the existing knowledge to the impacts of tropical system storm surges will be utilized. A project will receive more points for the less potential exposure risk.

### Importance to Safety

By providing roadways that will not be affected by extreme weather and climate change, the FDOT will increase the longevity of roadway surfaces and roadway structures.

### Data Characteristics

Data Source: Florida Department of Emergency Management
Data Type: Linear Coverage
Calculation: Storm surge zones are calculated by the Florida Department of Emergency Management
Sample Data:

| FID | Cat | RPC | Edited | Shape_area | Shape_len |
|---|---|---|---|---|---|
| 0 | 1 | SFRP | 11/15/2010 | 1.202913 | 15.051551 |

### Measure Categorization & Scoring

| Score | Spatial Analysis |
|---|---|
| 2 | Project located outside of surge zone |
| 1 | Project located in category 3, 4, or 5 storm surge zone |
| 0 | Project located in category 1, 2, or tropical storm surge zone |

Project Segments located within a surge zone receive the score for that zone. If a project segment travels through two or more surge zones, it receives the highest score possible out of the surge zones traveled through.

# Appendix B – Interregional Connectivity

| Measures | Maximum Score |
|---|---|
| Volume / Capacity (v/c) Ratio | 4 |
| Truck Percentage | 2 |
| Vehicular Volume (AADT) | 2 |
| System Gap | 1 |
| Change in v/c (Mainline) or Interchange Operations (Interchanges) | 3 |
| Bottleneck | 1 |
| Delay | 2 |
| Travel Time Reliability | 3 |
| Link to Military Base | 1 |
| Rural Areas of Opportunity (RAO) | 1 |
| *Maximum subtotal* | *20 points* |

# Volume to Capacity (v/c) Ratio
## Appendix B – Interregional Connectivity

### Description

Volume to capacity (v/c) ratio indicates the level of congestion versus the total capacity of the facility. The v/c ratio provides a good indication whether the facility is congested by relating whether there is "excess" capacity available, or saturated conditions exist. A v/c ratio equal to 1.0 or greater indicates that the demand volume is exceeding the available capacity of the roadway and congested conditions result. Congestion has three characteristics. These include length (how far congestion stretches); time (how long it lasts); and intensity (how many vehicles are in the space described).

### Importance to Interregional Connectivity

Congestion slows traffic costing people and freight movers' time. It also reduces or eliminates their ability to reliably estimate on how long it will take to get from one place to another, inhibiting regional connections. Roadway segments with higher v/c ratios generally have a greater need for both maintenance and capacity enhancements.

### Data Characteristics

Data Source: FDOT District level of service (LOS) submittal
Data Type: Linear Coverage
Calculation: None
Sample Data: Data from available FDOT District LOS/future traffic

| ID | District | Access | RdwyID | BegPT | EndPT | Lanes | MSV | LOSNum | LOS | Aadt | Vc_Ratio | Truck_Aadt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | PC | 01040000 | 2.203 | 2.6 | 6 | 71600 | 2 | B | 31397 | 0.43 | 1984 |

### Measure Categorization & Scoring

| Score | VC_RATIO |
|---|---|
| | For Work Program & Cost Feasible Plan time frame |
| 4 | > 1.75 |
| 3 | 1.51 – 1.75 |
| 2 | 1.26 – 1.50 |
| 1 | 1.01 – 1.25 |
| 0 | ≤ 1.00 |

Weighted Average (mileage): Calculate average v/c ratio over project length.

$$Weighted\ Average = \frac{\sum SegmentValue \times SegmentLength}{TotalLength}$$

If the underlying segmentation of data layers does not match project limits SegmentLength represents the fractional length of any given data segment occurring within the specified project limits.

# Truck Percentage
## Appendix B – Interregional Connectivity

### Description

Truck percentage identifies the percentage of the total average daily traffic volume comprised of trucks along a segment of roadway. Measures are categorized by functional and area type to identify areas of the system with above normal truck traffic flows, relative to similar facilities throughout the state. Trucks move differently than automobiles; they require more time to accelerate and to stop, and they require more time to go up an entrance ramp and merge. Including trucks with automobile traffic can slow and alter how traffic flows. Often automobile drivers are reluctant to pass trucks, and, because of the truck's length, they require more time and greater sight distance to pass. Visibility limits of trucks often result in trucks leaving larger gaps between each other and automobiles.

Trucks are critical to the economic health of Florida. They carry the parts, products, finished goods, and raw materials needed by business and industry for Florida's economy to prosper. Manufactures and retailers demand their shipments at a specific time or "just-in-time." This means that "travel time reliability" is critical to the trucking industry.

### Importance to Interregional Connectivity

Truck percentage is used as a measure to indicate, relative to other similar types of facilities statewide, whether a facility is carrying more than its share of truck traffic. Facilities carrying higher percentages of truck traffic have a greater mobility impact due to the interaction between trucks and autos. This impact to all traffic is a detriment to the efficiency and reliability of interregional connections.

### Data Characteristics

Data Source: FDOT District level of service (LOS) submittal
Data Keeper: FDOT Systems Implementation Office
Data Type: Linear Coverage
Calculation: None
Sample Data: Data from available District LOS/future traffic

| ID | RdwyID | BegPT | EndPT | Aadt | Truck Aadt | Truck Percent | Area Type | Facility Type | PRIOCAT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 01040000 | 2.203 | 2.6 | 25920 | 1638 | 0.06319 | Urban | Highway | 2 |

# Truck Percentage (continued)

## Appendix B – Interregional Connectivity

### Measure Categorization & Scoring

Truck Percentage:

| Score | Percent Trucks (by PRIOCAT, all listed as percentages) | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | *Urban Arterial* | *Urban Highway* | *Urban Freeway* | *Rural Arterial* | *Rural Highway* | *Rural Freeway* |
| 2 | > 15.77 | > 17.59 | > 12.19 | > 16.52 | > 22.56 | > 26.34 |
| 1 | 8.80 – 15.77 | 9.60 – 17.59 | 7.44 – 12.19 | 10.69 – 16.52 | 13.06 – 22.56 | 16.80 – 26.34 |
| 0 | ≤ 8.79 | ≤ 9.59 | ≤ 7.43 | ≤ 10.68 | ≤ 13.05 | ≤ 16.79 |

Weighted Average (mileage): Average measure over project length.

$$Weighted\ Average = \frac{\sum SegmentValue \times SegmentLength}{TotalLength}$$

*If the underlying segmentation of data layers does not match project limits SegmentLength represents the fractional length of any given data segment occurring within the specified project limits.*

**Score Category Lookup:**

| Level of Service Table Lookup | | | |
|---|---|---|---|
| Area Type | Facility Type | Class Type | PRIOCAT |
| Urban | Arterial | 1 | 1 |
| Urban | Arterial | 2 | 1 |
| Urban | Highway | | 2 |
| Urban | Freeway | Core | 3 |
| Urban | Freeway | | 3 |
| Transition | Arterial | 1 | 4 |
| Transition | Arterial | 2 | 4 |
| Rural | Arterial | | 4 |
| Transition | Highway | | 5 |
| RuralDev | Highway | | 5 |
| RuralUn | Highway | | 5 |
| Transition | Freeway | | 6 |
| Rural | Freeway | | 6 |

# Vehicular Volume

## Appendix B – Interregional Connectivity

### Description

This measure uses future average annual daily traffic (AADT) to categorize volume of traffic. The measure is categorized by functional and area type to identify areas of the system with above normal traffic flows, relative to similar facilities throughout the state. There are two measures for this criterion: one for the Cost Feasible Plan timeframe and one for the Work Program timeframe. The difference is in the AADT thresholds and is based on the current level of service information provided by the FDOT Districts. This measure differs from v/c ratio as it identifies locations with significant traffic as compared to other similar facilities.

### Importance to Interregional Connectivity

Heavier volumes can slow the movement of traffic. For example, in heavy traffic locations, the actions of one driver braking or swerving will have a ripple or wave-like effect on the many vehicles surrounding them and slow all the traffic. By focusing on projects in locations with higher-than-average vehicular volumes, the FDOT is trying to improve the movement of high traffic corridors connecting regions. This indicator also considers and gives priority to projects that address problems in areas with increasing future traffic growth.

### Data Characteristics

Data Source: FDOT District level of service (LOS) submittal
Data Type: Linear Coverage
Calculation: None
Sample Data: Data from District LOS/future traffic

| ID | RdwyID | BegPT | EndPT | Aadt | Truck Aadt | Truck Percent | Area Type | Facility Type | Priocat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 01040000 | 2.203 | 2.6 | 25920 | 1638 | 0.06319 | Urban | Highway | 2 |

# Vehicular Volume (continued)

## Appendix B – Interregional Connectivity

### Measure Categorization & Scoring

Work Program Time Frame AADT:

| Score | AADT (by PRIOCAT) | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | *Urban Arterial* | *Urban Highway* | *Urban Freeway* | *Rural Arterial* | *Rural Highway* | *Rural Freeway* |
| 2 | > 70,151 | > 69,745 | > 217,227 | > 39,058 | > 25,887 | > 91,491 |
| 1 | 37,050 – 70,151 | 37,799 – 69,745 | 100,711 – 217,227 | 25,849 – 39,058 | 14,159 – 25,887 | 55,272 – 91,491 |
| 0 | ≤ 37,049 | ≤ 37,798 | ≤ 100,710 | ≤ 25,848 | ≤ 14,158 | ≤ 55,271 |

Cost Feasible Plan Time Frame AADT:

| Score | AADT (by PRIOCAT) | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | *Urban Arterial* | *Urban Highway* | *Urban Freeway* | *Rural Arterial* | *Rural Highway* | *Rural Freeway* |
| 2 | > 82,496 | > 88,001 | > 260,251 | > 49,454 | > 33,283 | > 115,462 |
| 1 | 43,479 – 82,496 | 46,167 – 88,001 | 123,008 – 260,251 | 31,572 – 49,454 | 17,241 – 33,283 | 68,187 – 115,462 |
| 0 | ≤ 43,478 | ≤ 46,166 | ≤ 123,007 | ≤ 31,571 | ≤ 17,240 | ≤ 68,186 |

**Score Category Lookup:**

| Level of Service Table Lookup | | | |
|---|---|---|---|
| Area Type | Facility Type | Class Type | PRIOCAT |
| Urban | Arterial | 1 | 1 |
| Urban | Arterial | 2 | 1 |
| Urban | Highway | | 2 |
| Urban | Freeway | Core | 3 |
| Urban | Freeway | | 3 |
| Transition | Arterial | 1 | 4 |
| Transition | Arterial | 2 | 4 |
| Rural | Arterial | | 4 |
| Transition | Highway | | 5 |
| RuralDev | Highway | | 5 |
| RuralUn | Highway | | 5 |
| Transition | Freeway | | 6 |
| Rural | Freeway | | 6 |

Weighted Average (mileage): Average measure over project length.

$$Weighted\ Average = \frac{\sum SegmentValue \times SegmentLength}{TotalLength}$$

*If the underlying segmentation of data layers does not match project limits, SegmentLength represents the fractional length of any given data segment occurring within the specified project limits.*

# System Gap
## Appendix B – Interregional Connectivity

### Description

This measure identifies if a project fills a gap in the statewide roadway transportation system. A system gap has been previously identified by the FDOT Systems Implementation Office as a segment of roadway less than 30 miles that is bordered by segments of roadway with higher number of lanes. System gap is used to determine system continuity by encouraging projects that create a unified system. Changes in number of lanes frequently are avoided.

### Importance to Interregional Connectivity

A gap in a system may be, for example, a portion of a roadway that changes from four-lanes to two-lanes. This arrangement may slow the movement of traffic and limit interregional travel. Projects that address gaps help avoid bottlenecks and allow for a seamless and continual movement of people and goods.

### Data Characteristics

Data Source: FDOT Systems Implementation Office
Data Type: Linear Coverage
Calculation: Yes/No and project adds lanes
Sample Data:

**Gap Table** (gaps will be < 30 miles in length)

| ID | RdwyID | BegPT | EndPT | Length |
|---|---|---|---|---|
| 1 | 01040000 | 0.75 | 10.35 | 9.60 |

**Project Database** (example data)

| MapID | Roadway1 | Begin_Post1 | End_Post1 | Improvement | ... |
|---|---|---|---|---|---|
| 1-105-420 | 01040000 | 2.203 | 10.67 | A2-8 | *(various other data)* |

### Measure Categorization & Scoring

| Score | System Gap Filled |
|---|---|
| 1 | Yes |
| 0 | No |

# Change in v/c Ratio – Level of Service (FOR CORRIDOR SEGMENTS)

## Appendix B – Interregional Connectivity

### Description

This measure identifies the change in volume to capacity (v/c) ratio – level of service (LOS) resulting from the addition of lanes. This measure is to be used only on mainline projects and not interchange projects. See the "interchange operations" measure for interchange or intersection improvement projects. Change in v/c ratio – LOS is used to determine a level of service change due to implementation of a project. Appropriate data varies for this criterion: projected traffic from the final year of the Approved SIS Cost Feasible Plan will be used; projected traffic from the final year of the Adopted Work Program will be used.

### Importance to Interregional Connectivity

Change in v/c ratio - LOS can be an indication of a chokepoint or condition at a location that impedes the smooth, continual flow of traffic. Providing priority to projects at locations with changes in v/c ratio – LOS will distinguish and prioritize projects the focus on improving a specific location that is impeding the smooth and continual flow of traffic along a segment, thus maximizing the efficiency and reliability of regional connections.

### Data Characteristics

Data Source: FDOT District level of service (LOS) submittal
Data Type: Linear Coverage
Calculation:

1. Ensure project is not an interchange/intersection (INT_TYPE = "NI")
2. Lookup new maximum volume at critical LOS from applicable LOS table
3. Calculate new v/c ratio
4. Evaluate new ratio versus "existing" ratio and determine percentage change

### Measure Categorization & Scoring

| Score | Change in v/c (Percent) |
|---|---|
| 3 | > 25 |
| 2 | 11 - 25 |
| 1 | 1 - 10 |
| 0 | 0 |

Weighted Average (mileage): Average new v/c and "existing" v/c

$$\textit{Weighted Average} = \frac{\sum SegmentValue * SegmentLength}{TotalLength}$$

*If the underlying segmentation of data layers does not match project limits, SegmentLength represents the fractional length of any given data segment occurring within the specified project limits.*

# Interchange Operations (FOR INTERCHANGE SEGMENTS)

## Appendix B – Interregional Connectivity

### Description

This measure identifies if a project is an interchange or intersection improvement. This measure is to be used only for intersection and interchange projects and not mainline projects. See the "Change in v/c Ratio - LOS" measure for mainline improvement projects. The specific indicator to be used to determine level of service as measures for interchanges has not yet been developed. Therefore, in the interim, this measure provides points for interchange or intersection improvement projects, as it assumes the project provides an improvement in traffic operations. The current measure identifies values based on facilities that are involved.

### Importance to Interregional Connectivity

Interchanges are locations that require automobiles and trucks to change speed to transition between two or more highway segments that are grade separated. If the change, for example, is between a limited access roadway that carries high volumes at higher speeds and a local service road with traffic signals and fewer lanes, congestion and delays can occur. These delays can also cause back-ups onto the mainline of a limited access roadway. If ramps are too short or too steep, trucks accessing or exiting at an interchange may cause congestion and delays because they need longer distances to accelerate or slow to a stop.

### Data Characteristics

Data Source: FDOT Systems Implementation Office
Data Type: Located in SIT project database
Calculation: None

### Measure Categorization & Scoring

| Score | Interchange Type |
|---|---|
| 3 | SIS Corridor at SIS Corridor or SIS Corridor ramps direct connector to hub |
| 2 | SIS Corridor at SIS Connector or SIS Corridor at SIS Military Access Facility |
| 1 | SIS Corridor at non-SIS facility |
| 0 | Not an interchange project |

# Bottlenecks

## Appendix B – Interregional Connectivity

### Description

This measure utilizes identified bottlenecks on SIS Highways and Connectors. Bottlenecks are a localized section of highway that experiences reduced speeds and inherent delays due to a recurring operational influence or a nonrecurring impacting event. Bottlenecks are a chokepoint impeding the smooth flow of traffic. This measure takes the results of the Bottleneck Study completed and routinely updated for the Systems Implementation Office and incorporates its findings of identified bottlenecks into the SIT. The Bottleneck Study relied on vehicle probe data which identified bottlenecks through a combination of planning time index and frequency of congestion.

### Importance to Interregional Connectivity

By identifying and providing points to projects that address this condition, the FDOT is striving to improve mobility and ultimately interregional connections.

### Data Characteristics

Data Source: FDOT Systems Implementation Office, Bottleneck Study
Data Type: Vehicle Probe Data
Calculation: Calculated for the Bottleneck Study

### Measure Categorization & Scoring

| Score | Bottleneck |
|---|---|
| 1 | Identified bottleneck |
| 0 | Not an identified bottleneck |

# Delay
## Appendix B – Interregional Connectivity

### Description
This measure identifies total vehicle hours of delay per vehicle (on a daily, 24-hour basis) along a given section of roadway. Delay is an indicator of the lack of mobility or a slowing of the free and smooth movement of traffic.

### Importance to Interregional Connectivity
Delays to the smooth and uninterrupted movement of traffic can cost people and businesses money and time. Delays occur because of traffic conditions, design features, or special circumstances. For example, a sharp curve in a roadway as well as rush-hour traffic can cause recurring delays. Non-recurring delays may be caused by a crash because traffic slows to avoid it (or to see it) and from emergency vehicles trying to service it, or from its location blocking the flow of traffic. Delays are negative impacts to the smooth flow of traffic – or mobility. Identifying and removing conditions that cause delays, along with enhanced response programs (improvements to intelligent transportation systems (ITS) and emergency management) will help improve regional connections.

### Data Characteristics
Data Source: FDOT Transportation Data and Analytics Office
Data Type: Linear Coverage
Calculation: Delay calculations completed before data reported, but project delay must be calculated using proportional sum calculation (see below).
Sample Data:

| Roadway | Local Name | Begin Post | End Post | SIS Facility Type | SectADT | Daily Delay (vehicle hours) |
|---|---|---|---|---|---|---|
| 3175000 | SR 93 / I-75 | 60.532 | 60.55 | 11 | 60,821 | 0 |
| 3175000 | SR 93 / I-75 | 60.55 | 60.565 | 11 | 78,500 | 0.518889776 |
| 3175000 | SR 93 / I-75 | 60.565 | 60.885 | 11 | 78,500 | 11.06964855 |
| 3175000 | SR 93 / I-75 | 60.885 | 60.907 | 11 | 78,500 | 0.761038338 |
| 3175000 | SR 93 / I-75 | 60.907 | 63.504 | 11 | 78,500 | 89.83711651 |
| 4010000 | SR 31 | 0 | 1.28 | 99 | 4,500 | 0 |
| 4010000 | SR 31 | 1.28 | 1.432 | 99 | 4,500 | 0 |
| 4010000 | SR 31 | 1.432 | 1.49 | 99 | 4,500 | 0 |

# Delay (continued)

## Appendix B – Interregional Connectivity

### Measure Categorization & Scoring

| Score | **Total Daily Delay** (vehicle hours) |
|---|---|
| 2 | > 250 |
| 1 | 1 - 250 |
| 0 | 0 |

Total Daily Delay will equal the sum of the Daily Delay for all segments within the project limits.

$$Total\ Daily\ Delay = \sum SegmentValue$$

*If the project limits do not match the segment limits of the data, a proportional sum of the Total Daily Delay will be used to determine the correct value to represent ONLY the portion of the project segment that is located within the data segment. This value will be added to the remaining data segments that make up the project limits.*

$$Total\ Daily\ Delay = \sum SegmentValue * \left( \frac{SegmentInProjectLength}{TotalSegmentLength} \right)$$

*If the underlying segmentation of data layers does not match project limits, SegmentInProjectLength represents the fractional length of any given segment of delay data occurring within the specified project limits. TotalSegmentLength represents the total length of the original segment of delay data irrespective of the project.*

# Travel Time Reliability

## Appendix B – Interregional Connectivity

### Description

Travel time reliability is a measure of predictability in a transportation system. The system is performing well when users can adequately anticipate normal travel time and can therefore minimize the time needed for a buffer to arrive at a certain destination. The measure proposed for use is the travel time reliability index (TTRI). The index is calculated by dividing the 95th percentile travel time by the free flow travel time. 95th percentile travel time and free flow travel time values are determined by a predictive model which incorporates the probability of recurring congestion, incidents, weather, special events, and construction. The model was developed for the FDOT in phases, beginning with Florida's limited access roadway system.

### Importance to Interregional Connectivity

Travel time reliability is an important aspect of maintenance and operations because it is a performance measure common to freight and passenger needs, as well as across modes in a general form. One of the long-range objectives in the FTP is to optimize the efficiency of the transportation system for all modes. Travel time reliability is a way to measure operational performance in this area.

### Data Characteristics

Data Source: FDOT Transportation Data and Analytics Office
Data Type: Predictive model
Calculation: None once delivered to FDOT Systems Implementation Office
Sample Data: Data from latest available District Level of Service/future traffic

### Measure Categorization & Scoring

| Score | Delay on Roadways | Travel Time Index (TTI) or Throughput TTI Proxy |
|---|---|---|
| 3 | High | TTI 1.261 or greater or Proxy -0.80 to -2.35 |
| 1.5 | Medium | TTI 1.061 to 1.26 or Proxy -1.04 to -0.81 |
| 0 | Low | TTI 1.00 to 1.06 or Proxy -1.33 to 1.05 |

# Link to Military Base

## Appendix B – Interregional Connectivity

### Description

The link to a military base measure identifies a potential project segment's ability to enhance the connection between Florida's military installations and the SIS.

### Importance to Interregional Connectivity

For the US military to secure the nation and Florida, it is important that they be able to quickly deploy their personnel and equipment. One of the original intents of the US Interstate Highway System was to provide a network of roadways that connect US military installations across the country and allows them to move quickly to any location at which they may be needed. Providing priority for projects located near a military base supports the FTP's goal of providing a safer and more secure transportation system and improves the security of Florida.

### Data Characteristics

Data Source: Florida Geographic Data
Data Type: Polygon
Calculation: Geographic buffer

### Measure Categorization & Scoring

| Score | Project Location |
|---|---|
| 1 | On a designated SIS Military Access Facility (MAF) |
| 0.5 | Within a five-mile buffer around the main access gate |
| 0 | Beyond a five-mile buffer around the main access gate |

# Rural Areas of Opportunity (RAO)

## Appendix B – Interregional Connectivity

### Description

This measure identifies projects that take place in counties and communities that have been designated as Rural Areas of Opportunity (RAO) by the State of Florida. The areas are defined as rural communities, or a region composed of rural communities, that have been adversely affected by extraordinary economic events or natural disasters. There are three such areas in the state: Northwest, South Central, and North Central.

### Importance to Interregional Connectivity

Using RAOs as an indicator is based on FDOT District user interest to accurately account for areas of Florida that are not as economically robust as the State as a whole. For all Floridians to thrive in today's globally competitive economy, every county and municipality must be encouraged to link into our increasingly interconnected economic landscape with the aim to attract sustainable investment and tourism.

### Data Characteristics

Data Source: FDOT Systems Implementation Office geographic information system (GIS) shapefile
Data Type: Geographic overlay
Calculation: None

### Measure Categorization & Scoring

| Score | Project Location |
|---|---|
| 1 | Project located in a Rural Area of Opportunity (RAO) |
| 0 | Project not located in a Rural Area of Opportunity (RAO) |

# Appendix C – Economic Competitiveness

| Measures | Maximum Score |
|---|---|
| Population | 5 |
| Population Growth Rate | 3 |
| Employment | 5 |
| Employment Growth Rate | 3 |
| Population Density | 4 |
| *Maximum subtotal* | *20 points* |

# Population
## Appendix C – Economic Competitiveness

### Description
This measure identifies the number of people that are located within specific census block groups within Florida.

### Importance to Economic Competitiveness
Higher populated areas tend to have a more robust economy and demands on the transportation systems for both people and freight movements. A large population not only provides for an increased labor force for businesses and investors, but also larger local consumer markets for products, goods, and services.

### Data Characteristics
Data Source: United States Census
Data Type: Number of people by census tract
Calculation: None

### Measure Categorization & Scoring

| Score | Population |
|---|---|
| 5 | > 85,000 |
| 4 | 60,001 – 85,000 |
| 3 | 45,001 – 60,000 |
| 2 | 30,001 – 45,000 |
| 1 | 15,001 – 30,000 |
| 0 | < 15,000 |

# Population Growth Rate

## Appendix C – Economic Competitiveness

### Description

This measure identifies whether an area is attracting more people. Population growth creates additional opportunities for economic growth. This is because the regional economy can be reorganized around abundant labor and economies of scale. As a result, economies in rapidly growing areas may become more efficient than those of areas of declining or stable population.

### Importance to Economic Competitiveness

Strong population growth is an indicator of the attractiveness of an area to newcomers to Florida as well as residents moving within Florida. Fast growth not only provides for an increased labor force for businesses and investors, but also larger local consumer markets for products, goods, and services. Fast growth may also have detrimental impacts to the transportation network that is currently in place. Facilities originally built to handle less traffic and provide fewer connections may not be able to meet the needs of a market as it grows.

### Data Characteristics

Data Source: United States Census
Data Type: Number of people by census tract
Calculation: Averaging

### Measure Categorization & Scoring

| Score | Population Growth Rate Measure |
|---|---|
| 3 | > 0.045 |
| 2 | 0.0251 – 0.045 |
| | |
| 0 | 0 |

# Employment

## Appendix C – Economic Competitiveness

### Description

This measure identifies the size of a census tracts workforce.

### Importance to Economic Competitiveness

Labor is a fundamental driver in any economy. A strong and accessible workforce is necessary for businesses and investors of all sizes, with higher densities of workers allowing for a competitive and efficient labor market. A large labor market and a large economy place increased demands on a transportation network.

### Data Characteristics

Data Source: United States Census
Data Type: Number of workers by census tract
Calculation: None

### Measure Categorization & Scoring

| Score | Workforce Size |
|---|---|
| 5 | > 85,000 |
| 4 | 60,001 – 85,000 |
| 3 | 45,001 – 60,000 |
| 2 | 30,001 – 45,000 |
| 1 | 15,001 – 30,000 |
| 0 | < 15,000 |

# Employment Growth Rate
## Appendix C – Economic Competitiveness

### Description

This measure identifies whether an area has a growing attractiveness with more employment. Employment growth creates additional opportunities for economic growth. This is because the regional economy can be reorganized around abundant labor and up-to-date technologies. As a result, economies in rapidly growing areas may become more efficient than those in areas of declining or stable population.

### Importance to Economic Competitiveness

Strong growth is an indicator of the attractiveness of an area to new businesses to Florida as well as businesses moving within. Fast growth not only provides for an increased labor force for businesses and investors, but also larger local consumer markets for products, goods, and services.

### Data Characteristics

Data Source: United States Census
Data Type: Labor force growth by census tract
Calculation: Averaging

### Measure Categorization & Scoring

| Score | Employment Growth Rate |
|---|---|
| 3 | > 0.045 |
| 2 | 0.0251 – 0.045 |
| 1 | 0.0001 – 0.025 |
| 0 | 0 |

# Population Density
## Appendix C – Economic Competitiveness

### Description

This measure identifies census tracts with higher population densities relative to the state. The value of this measure indicates the relative size of population density in a census tract when comparing it to the state's average density. When the value of this measure equals (or is greater than) 100, it indicates that the population density in a census tract is the same as (or higher) than the state average.

### Importance to Economic Competitiveness

Transportation and the corresponding construction projects may impact the quality of life of Floridians through either the actual impacts of a project or the results of not doing a project. A population may be affected more by not constructing a project than by constructing it. This measure is designed to look at population centers as areas of active movement and trade which inherently have higher demands on the transportation system and increased congestion. Therefore, higher population density gives rise to the need for additional transportation investments to support the increased level of economic activity.

### Data Characteristics

Data Source: United States Census
Data Type: Population and land area in square miles by census tract
Calculation: Averaging

### Measure Categorization & Scoring

| Score | Population Density Measure |
|---|---|
| 4.0 | ≥ 200 |
| 3.6 | 150-199 |
| 2.4 | 100-149 |
| 1.6 | 50-99 |
| 0.8 | 1-49 |
| 0 | 0 |

# Appendix D – Environmental Stewardship

| Measures | Maximum Score |
|---|---|
| Farmlands | 1 |
| Geology | 1 |
| Archeological / Historical Sites | 1 |
| Contamination | 1 |
| Conservation and Preservation | 2 |
| Wildlife and Habitat | 2 |
| Flood Plains / Flood Control | 1 |
| Coastal / Marine | 1 |
| Special Designations | 2 |
| Water Quality | 1 |
| Wetlands | 2 |
| Air Quality | 1 |
| Energy and Sustainability | 2 |
| Social Investment / Justice | 1 |
| Residential Community Impact | 1 |
| *Maximum subtotal* | *20 points* |

# Farmlands
## Appendix D – Environmental Stewardship

### Description

The identification and subsequent preservation of actively producing farmlands throughout Florida is essential for the livability and cultural aspects for its residents, sustainability and diversity of the economy, protection for water resources through aquifer recharge, and open space connectivity for animal migration and biodiversity. This measure assesses the potential extent of productive farmland which may be impacted by a project. Each project is rated "low", "medium", or "high" based on data obtained from data sets for agricultural lands, prime farmland soil, the Soil Survey Geographic Database, and United States Geological Survey Hydrographic line features. The data sets include GIS data files from the United States Department of Agriculture, Florida Department of Environmental Protection, and the affected Florida Water Management District. In addition, prime farmland designations through the Natural Resource Conservation Service are identified. The more impact a project has on prime agricultural lands the less points that are awarded.

### Importance to Environmental Stewardship

Being a responsible steward of the environment is a goal of the FDOT. This goal can be reached, in part, by protecting and enhancing existing social and environmental character of the project area. Evaluating impacts of a project to active farmland will serve to prioritize projects that may improve the surrounding community over those that may have an unintended negative impact. Though some farming activities have environmentally negative impacts, agricultural lands also provide livability and cultural benefits to the residents of Florida, as well as aquifer recharge and open space availability, with potential benefits for animal migration connectivity. Productive farmland is limited to certain types of soils, neighbors, and climates and extra care is taken with identification and preservation of this resource when scoring impacts of SIS Highway projects.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Farmlands (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Farmland Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area is not located within productive farmland areas. | 1 |
| Medium | Less than 50 percent of the project area is located within productive farmland. | 0.5 |
| High | Greater than 50 percent of the project area is located within productive farmland. | 0 |

| Farmland Impact | Arterial (using 200' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area is not located within productive farmland areas. | 1 |
| Medium | Less than 50 percent of the project area is located within productive farmland. | 0.5 |
| High | Greater than 50 percent of the project area is located within productive farmland. | 0 |

| Farmland Impact | Connector (using 100' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area is not located within productive farmland areas. | 1 |
| Medium | Less than 50 percent of the project area is located within productive farmland. | 0.5 |
| High | Greater than 50 percent of the project area is located within productive farmland. | 0 |

The farmlands measure is scored via a buffer of the project along a segment of SIS Highway Corridor or Connector as it passes through the farmland areas identified in the database and represented geographically on a map of Florida. The buffer size varies depending on the classification of roadway, whether limited-access, arterial, or SIS Connector. If a project has a larger or higher perceived impact on productive farmlands the score will be lower.

# Geology
## Appendix D – Environmental Stewardship

### Description

Florida's predominant limestone karst topography lends itself to the development of sinkholes. Or unexpected depressions in the earth caused by water hollowing out the limestone bedrock below the surface resulting in a collapse of the surface geology. Though near impossible to predict where or when a sinkhole may form, a database of existing sinkholes does exist. This measure is based on the presence of reported sinkholes within the proposed project area from that database. The geologic sensitivity of each project is evaluated based on the presence of reported sinkholes within the proposed project. Each project is rated "low", "medium", or "high" based on data obtained from data sets identifying sinkhole locations maintained by the Florida Sinkhole Institute. There is a potential for sinkholes throughout Florida, with the highest potential in central Florida and decreasing likelihood towards the southern portion of the state.

### Importance to Environmental Stewardship

Karst topography and in particular sinkholes, due to their nature of being unstable terrain, present a unique environmental situation and demand extra care during the planning and construction of roadway projects. Avoidance of these areas can limit time and cost delays on projects. But also, existing sinkholes also provide unique ecosystems throughout Florida. They may provide areas where surface streams disappear into underground caves, aquifer recharge areas, and in some cases biological island habitats with moderate climates that are protected from the extremes of summer or winter.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Geology (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Geologic Impact | **Interstate, Turnpike, or Expressway** (using 500' buffer in all directions from centerline or point)<br>*Presence of reported sinkholes within the project buffer area* | Score |
|---|---|---|
| Low | No reported sinkholes | 1 |
| Medium | One reported sinkhole | 0.5 |
| High | More than one reported sinkhole | 0 |

| Geologic Impact | **Arterial** (using 200' buffer in all directions from centerline or point)<br>*Presence of reported sinkholes within the project buffer area* | Score |
|---|---|---|
| Low | No reported sinkholes | 1 |
| Medium | One reported sinkhole | 0.5 |
| High | More than one reported sinkhole | 0 |

| Geologic Impact | **Connector** (using 100' buffer in all directions from centerline or point)<br>*Presence of reported sinkholes within the project buffer area* | Score |
|---|---|---|
| Low | No reported sinkholes | 1 |
| Medium | One reported sinkhole | 0.5 |
| High | More than one reported sinkhole | 0 |

The geology measure is scored via a buffer of the project along a segment of SIS Highway Corridor or Connector as it passes through areas of sinkholes in karst topography identified in the database and represented geographically on a map of Florida. The buffer size varies depending on the classification of roadway, whether limited-access, arterial, or SIS Connector. If a project has a high interaction or impact with existing sinkholes the score will be lower.

# Archaeological and Historical Sites
## Appendix D – Environmental Stewardship

### Description

Research indicates Florida has been inhabited by humans for at least the past 14,000 years. For the past 500 years it has been explored and colonized by Europeans, with the first permanent European settlement in the continental United States founded at St. Augustine in 1565. Many historic sites throughout this timeframe have been documented and preserved as protected areas, others are documented but not physically marked, or are unprotected on private property. Still countless other sites remain undocumented and may be uncovered when work begins on a project. This measure evaluates proposed project areas for issues associated with archaeological and historical resources. These ratings are used for a gross level "fatal flaw" analysis only, and a "low" rating does not signify that significant archaeological deposits or built environment locations do not exist within the project area. Each project is rated "low," "medium," or "high," by combining existing data sets for archaeological sites and built environment (historic structures, bridges, and cemeteries) records from the Florida State Historic Preservation Office (SHPO) with mapped locations of those resources. For the safety and security of the preservation of these sites, no specific geographic locations of archaeological surveys are revealed to the user in this analysis.

### Importance to Environmental Stewardship

An objective of the FTP is to plan facilities and improvements to protect, and if possible, restore the function of a community and environment. Archaeological and historical sites, whether human or natural, are part of Florida's built and non-built environment. The interaction of roadway facilities and the projects upon them may have dramatic impacts on the historical and biological communities in the area and care should be taken when planning for future investments.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Archaeological and Historical Sites (continued)

## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Archaeological Sites*** | *Built Environment Locations*** | |
| Low | Absence of any unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area must contain fewer than two unevaluated, recommended eligible, or eligible built environment locations to be rated low. | 1 |
| Medium | Presence of one to two unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area must contain fewer than ten unevaluated, recommended eligible, or eligible built environment locations. | 0.5 |
| High | Presence of three or more unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area contains ten or more unevaluated, recommended eligible, or eligible built environment locations. | 0 |

| Site Impact | Arterial (using 200' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Archaeological Sites*** | *Built Environment Locations*** | |
| Low | Absence of any unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area must contain fewer than two unevaluated, recommended eligible, or eligible built environment locations to be rated low. | 1 |
| Medium | Presence of one to two unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area must contain fewer than ten unevaluated, recommended eligible, or eligible built environment locations. | 0.5 |
| High | Presence of three or more unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area contains ten or more unevaluated, recommended eligible, or eligible built environment locations. | 0 |

| Site Impact | Connector (using 100' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Archaeological Sites*** | *Built Environment Locations*** | |
| Low | Absence of any unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area must contain fewer than two unevaluated, recommended eligible, or eligible built environment locations to be rated low. | 1 |
| Medium | Presence of one to two unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area must contain fewer than ten unevaluated, recommended eligible, or eligible built environment locations. | 0.5 |
| High | Presence of three or more unevaluated, recommended eligible, or eligible archaeological sites within the project area. | Project area contains ten or more unevaluated, recommended eligible, or eligible built environment locations. | 0 |

Please note that the overall archeological and historical score for any proposed project segment is determined by the category in which that segment receives the ***lower score***. For example, if a proposed arterial is in a 'low impact' site it is eligible for a 1-point score with respect to Archeological Sites, but the project area contains ten or more problematic built environment locations (or a 'high impact'), then the Built Environment Locations score is zero points. In such a case, the overall archeological and historical score would be zero points.

**Note:** **Must ensure resources are eligible for the National Register of Historic Places

# Contamination
## Appendix D – Environmental Stewardship

### Description

This measure is based on the number of hazardous waste sites within the project area. Each project is rated "low", "medium", or "high" based on the following sites: Environmental Protection Agency National Priority List (NPL) sites, solid waste landsites (SWLF), Toxic Release Inventory sites (TRIs), and underground storage sites (UST).

### Importance to Environmental Stewardship

Avoidance of hazardous waste sites within the project buffer area limits the potential further disruptions of project schedules and potentially limits further dispersal of hazardous waste to surrounding environments.

### Data Characteristics

Data Source: Florida Geographic Data Library, Florida Department of Environmental Protection
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer. Each type of site is assigned a number of points based on the expected relative cost of remediating that type of site: NPL = 10 points, SWLF = 5 points, other = 1 point

### Measure Categorization & Scoring

| **Site Impact** | **Interstate, Turnpike, or Expressway** (using 500' buffer in all directions from centerline or point)<br>*Sum of points for identified sites within project area* | **Score** |
|---|---|---|
| Low | < 5 | 1 |
| Medium | 5 – 9 | 0.5 |
| High | ≥ 10 | 0 |

| **Site Impact** | **Arterial** (using 200' buffer in all directions from centerline or point)<br>*Sum of points for identified sites within project area* | **Score** |
|---|---|---|
| Low | < 5 | 1 |
| Medium | 5 – 9 | 0.5 |
| High | ≥ 10 | 0 |

| **Site Impact** | **Connector** (using 100' buffer in all directions from centerline or point)<br>*Sum of points for identified sites within project area* | **Score** |
|---|---|---|
| Low | < 5 | 1 |
| Medium | 5 – 9 | 0.5 |
| High | ≥ 10 | 0 |

The contamination measure is scored via a buffer of the project along a segment of SIS Highway Corridor or Connector as it passes through areas containing varying types of hazardous or contaminated sites identified in the database and represented geographically on a map of Florida. The buffer size varies depending on the classification of roadway, whether limited-access, arterial, or SIS Connector. If a project has a high interaction or impact with identified contaminated sites, the score will be lower.

# Conservation and Preservation
## Appendix D – Environmental Stewardship

### Description

The conservation and preservation measure is utilizing the resources of state agencies designed with a mission to protect environmentally sensitive lands. As transportation and the environment are intimately connected it is imperative to avoid potential conflict areas as early as possible in the planning stages to help conserve time and money. This measure assesses the potential impacts on other conservation and preservation lands not specifically included in the preceding sections. This category includes publicly owned lands which are managed for conservation or preservation purposes or multi-use areas, such as recreational areas, partially used for conservation and includes current and potential Section 4(f) resources. Each project is rated “low", “medium”, or “high” based on the data.

### Importance to Environmental Stewardship

The use of conservation and preservation as an environmental stewardship measure is based on discussions with the FDOT Environmental Management Office staff as well as other Florida environmental professionals including staff from the Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, and the Florida Water Management Districts. This measure is significant to account for and limit the impact to lands that are biologically and ecologically significant to Florida. It also helps to ensure the continuation of the quality of life for Floridians into the future. This measure addresses many of the characteristics identified to meet the FTP environmental enhancement goal.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Conservation and Preservation (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area does not pass through or is not located within 500 feet of conservation or preservation lands or Section 4(f) resources. | 2 |
| Medium | Project does not pass-through conservation or preservation lands or Section 4(f) resources but is located adjacent to (within 500 feet) of conservation or preservations lands or Section 4(f) resources. | 1 |
| High | Project area involves in a direct taking or bisection of conservation or preservation lands or Section 4(f) resources. | 0 |

| Site Impact | Arterial (using 200' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area does not pass through or is not located within 500 feet of conservation or preservation lands or Section 4(f) resources. | 2 |
| Medium | Project does not pass-through conservation or preservation lands or Section 4(f) resources but is located adjacent to (within 500 feet) of conservation or preservations lands or Section 4(f) resources. | 1 |
| High | Project area involves in a direct taking or bisection of conservation or preservation lands or Section 4(f) resources. | 0 |

| Site Impact | Connector (using 100' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area does not pass-through or is not located within 500 feet of conservation or preservation lands or Section 4(f) resources. | 2 |
| Medium | Project does not pass-through conservation or preservation lands or Section 4(f) resources but is located adjacent to (within 500 feet) of conservation or preservations lands or Section 4(f) resources. | 1 |
| High | Project area involves in a direct taking or bisection of conservation or preservation lands or Section 4(f) resources. | 0 |

The conservation and preservation measure is scored via a buffer of the project along a segment of SIS Highway Corridor or Connector as it passes through designated conservation and preservation areas identified in the database and represented geographically on a map of Florida. The buffer size varies depending on the classification of roadway, whether limited-access, arterial, or SIS Connector. If a project has a high interaction or impact with identified conservation or preservation sites, the score will be lower.

# Wildlife and Habitat

## Appendix D – Environmental Stewardship

### Description

The wildlife and habitat measure utilizes information gathered from state agencies on the locations of threatened and endangered species and strategic wildlife habitat. By analyzing the interaction between potential roadway projects and critical wildlife populations or habitats attempts can be made early in the project planning cycle to address issues to save time and money. Each project is rated "low", "medium", or "high" based on data obtained from data sets for individual species, habitats, groups of species, or special features for threatened and endangered species and data obtained from the threatened and endangered and other sensitive species habitat distribution GIS data sets for Strategic Wildlife Habitat analysis. The data sets include GIS data files from the Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, and the affected Florida Water Management Districts. The analysis at this preliminary stage distinguishes types of habitats only on a gross scale and does not identify differences in type or quality of resources or in usage by individual species. Consequently, the ratings are based primarily on the potential amount of habitat types and total natural habitat within the project area.

### Importance to Environmental Stewardship

The wildlife and habitat measure provides a means to address the occurrences of threatened and endangered species in Florida. Florida provides a unique habitat for a variety of threatened and endangered species, some of them endemic. It is also home to many and varied wildlife species which, while not endangered, create the unique natural environment that is valued by Florida residents and visitors. It is the desire of the FDOT that projects do little harm or negatively impact Florida's wildlife or their habitats. This measure provides a means to accurately address the FTP's environmental enhancement goal by preserving critical lands, water, and habitats and preserving biodiversity for future generations. Locating projects more than 500 feet from these areas is one way to avoid harming them. Scoring a project based on the impact to these features will help to prioritize projects that may avoid these critical habitats, over those that may have a negative effect on the surrounding areas. This measure addresses many of the characteristics identified to meet the FTP.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Wildlife and Habitat (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Threatened and Endangered Species* | *Strategic Habitat Conservation Area* | |
| Low | No occurrence of threatened or endangered species or species of special concern within the project area. | Less than 33 percent of the project area is characterized by FFWCC as a potential Strategic Habitat Conservation Area. | 2 |
| Medium | Less than 50 percent coverage of project area by threatened or endangered species or species of special concern. | Between 33 and 66 percent of the project area is characterized by FFWCC as Strategic Habitat Conservation Areas. | 1 |
| High | 50 percent or greater coverage of project area by threatened or endangered species or species of special concern, or project area contains an officially designated Critical Habitat or an exclusion zone. | Over 66 percent of the project area is characterized as Strategic Habitat Conservation Areas by FFWCC. | 0 |

| Site Impact | Arterial (using 200' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Threatened and Endangered Species* | *Strategic Habitat Conservation Area* | |
| Low | No occurrence of threatened or endangered species or species of special concern within the project area. | Less than 25 percent of the project area is characterized by FFWCC as a potential Strategic Habitat Conservation Area. | 2 |
| Medium | Less than 50 percent coverage of project area by threatened or endangered species or species of special concern. | Between 25 and 50 percent of the project area is characterized by FFWCC as Strategic Habitat Conservation Areas. | 1 |
| High | 50 percent or greater coverage of project area by threatened or endangered species or species of special concern, or project area contains an officially designated Critical Habitat or an exclusion zone. | Over 50 percent of the project area is characterized as Strategic Habitat Conservation Areas by FFWCC. | 0 |

| Site Impact | Connector (using 100' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Threatened and Endangered Species* | *Strategic Habitat Conservation Area* | |
| Low | No occurrence of threatened or endangered species or species of special concern within the project area. | Less than 10 percent of the project area is characterized by FFWCC as a potential Strategic Habitat Conservation Area. | 2 |
| Medium | Less than 50 percent coverage of project area by threatened or endangered species or species of special concern. | Between 10 and 20 percent of the project area is characterized by FFWCC as Strategic Habitat Conservation Areas. | 1 |
| High | 50 percent or greater coverage of project area by threatened or endangered species or species of special concern, or project area contains an officially designated Critical Habitat or an exclusion zone. | Over 20 percent of the project area is characterized as Strategic Habitat Conservation Areas by FFWCC. | 0 |

Please note that the overall wildlife and habitat score for any proposed project segment is determined by the category in which that segment receives the lower score. For example, if a proposed arterial receives a 'low impact' score of 2 points in the Threatened and Endangered Species category, but the project is in a Strategic Habitat Conservation Area, then its Strategic Habitat Conservation Area score would be lower, i.e. zero points. In such a case, the overall wildlife and habitat score would be zero points.

# Flood Plains and Flood Control
## Appendix D – Environmental Stewardship

### Description
Areas that are known to flood present unique problems for the initial planning and design of roadway projects as well as the long-term maintenance costs for upkeep of the facility.

### Investment Indicator
This measure assesses the extent of floodplains associated with each project and is based on the percentage of project area designated as a Special Flood Hazard Area by the Federal Emergency Management Agency (FEMA). Each project is rated "low", "medium", or "high" based on data obtained from the FEMA Flood Insurance Rate Map (FIRM).

### Importance to Environmental Stewardship
Flood plains provide unique habitats which may be easily disturbed by roadway construction, which may result in increased risk of catastrophic flood damage to life and property as a result of degradation of the natural mechanisms in place to cushion the effects of large-scale storms and storm surge. This measure emphasizes the preservation of quality habitats and improvements in water quality in coordination with the FTP environmental stewardship goal.

### Data Characteristics
Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Flood Plains and Flood Control (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | **Interstate, Turnpike, or Expressway**<br>(using 500' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area contains less than 30 percent FEMA designated Special Flood Hazard Area (SFHA) zones and no designated floodways. | 1 |
| Medium | Project area contains between 30 and 70 percent FEMA designated SFHA zones or project area contains a FEMA designated floodway (FW). | 0.5 |
| High | More than 70 percent of the project area is within a FEMA designated SFHA floodplain zone. | 0 |

| Site Impact | **Arterial**<br>(using 200' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area contains less than 25 percent FEMA designated Special Flood Hazard Area (SFHA) zones and no designated floodways. | 1 |
| Medium | Project area contains between 25 and 50 percent FEMA designated SFHA zones or project area contains a FEMA designated floodway (FW). | 0.5 |
| High | More than 50 percent of the project area is within a FEMA designated SFHA floodplain zone. | 0 |

| Site Impact | **Connector**<br>(using 200' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area contains less than 10 percent FEMA designated Special Flood Hazard Area (SFHA) zones and no designated floodways. | 1 |
| Medium | Project area contains between 10 and 20 percent FEMA designated SFHA zones or project area contains a FEMA designated floodway (FW). | 0.5 |
| High | More than 20 percent of the project area is within a FEMA designated SFHA floodplain zone. | 0 |

The flood plains and flood control measure is scored via a buffer of the project along a segment of SIS Highway Corridor or Connector as it passes through designated areas identified in the database and represented geographically on a map of Florida. The buffer size varies depending on the classification of roadway, whether limited-access, arterial, or SIS Connector. If a project has a high interaction or impact with identified areas the score will be lower.

# Coastal and Marine

## Appendix D – Environmental Stewardship

### Description

Florida coastlines and waterways are a unique blend of water and land that function not just for economic benefits for tourism, agriculture, and real estate, but also as unique biological habitats, hurricane and storm protection, and promoters of residents' quality of life. This measure is based on the distance between the project area and designated coastal and marine habitat and boundaries. Each project is rated "low", "medium", or "high" based on data obtained from data sets for National Oceanic and Atmospheric Administration (NOAA) coastlines, seagrass areas, National Marine Sanctuaries, environmental sensitive shorelines, and navigable waterways. The data sets include GIS data files from NOAA Coastal Service Center, Florida Marine Research Institute, Bureau of Transportation Statistics, and the Florida Department of Environmental Protection.

### Importance to Environmental Stewardship

By comparing data regarding coastlines, National Marine Sanctuaries, seagrass areas, sensitive shorelines, and navigable waterways versus potential roadway projects the tool can try and avoid areas that tend to be susceptible to disturbances and at a great cost to the ecological habitat as well as the economic benefits of the areas. By utilizing the coastal and marine measure it addresses the FTP goal of environmental enhancement.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Coastal and Marine (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area is not located within 500' of a NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline, or navigable waterway. | 1 |
| Medium | Project area is located within 500' of a NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline, or navigable waterway. | 0.5 |
| High | Project area is within NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline, or navigable waterway. | 0 |

| Site Impact | Arterial (using 200' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area is not located within 500' of a NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline or navigable waterway. | 1 |
| Medium | Project area is located within 500' of a NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline or navigable waterway. | 0.5 |
| High | Project area is within NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline, or navigable waterway. | 0 |

| Site Impact | Connector (using 100' buffer in all directions from centerline or point) | Score |
|---|---|---|
| Low | Project area is not located within 500' of a NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline or navigable waterway. | 1 |
| Medium | Project area is located within 500' of a NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline, or navigable waterway. | 0.5 |
| High | Project area is within NOAA coastline, National Marine Sanctuaries, seagrass, sensitive shoreline, or navigable waterway. | 0 |

The coastal and marine measure is scored via a buffer of the project along a segment of SIS Highway Corridor or Connector as it passes through designated areas identified in the database and represented geographically on a map of Florida. The buffer size varies depending on the classification of roadway, whether limited-access, arterial, or SIS Connector. If a project has a high interaction or impact with identified areas the score will be lower.

# Special Designations
## Appendix D – Environmental Stewardship

### Description

The special designation measure analyzes the impacts of roadway projects on Outstanding Florida Waters as well as barrier islands within Florida. This measure evaluates the potential effects to Coastal Barrier Island Resources and Aquatic Preserves and Outstanding Florida Waters. Each project is rated "low", "medium", or "high" based on data obtained from the Aquatic Preserves and Outstanding Florida Waters GIS data sets obtained from the Florida Department of Environmental Protection and Florida Fish and Wildlife Conservation Commission. In addition, the project area is reviewed to determine if the project may be subject to the implementing procedures for the Federal Coastal Barrier Resources Act (CBRA) and the Governor's Executive Order 81-105 concerning Coastal Barrier Areas. Section 5 of CBRA specifies that Federal funding, with limited exceptions, is prohibited for activities within the designated boundaries of a coastal barrier unit. The Governor's Executive Order directs State executive agencies to discourage inappropriate coastal barrier development by withholding State funds for projects leading to or within coastal barriers of the state.

### Importance to Environmental Stewardship

Outstanding Florida Waters are water bodies worthy of special protection because of their natural beauty and ecological significance. These water bodies are identified by the Florida Department of Environmental Protection. Barrier islands act as protection of the mainland coast from storms and are naturally intended to migrate over time. The habitat found on barrier islands are also typically different than the mainland. This measure addresses the environmental stewardship goal through preservation of critical land and water habitats, conservation of water, and improving the quality of water within Florida.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Special Designations (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Aquatic Preserves and Outstanding Florida Waters* | *Coastal Barrier Island Resources* | |
| Low | Project area does not cross watersheds of aquatic preserves or Outstanding Florida Waters, does not cross major tributaries of Outstanding Florida Waters, and is not within 0.5 mile of aquatic preserve or Outstanding Florida Waters. | Project area is not within 500' of a designated CBRA coastal barrier unit. | 2 |
| Medium | Project area contains a portion of an aquatic preserve or Outstanding Florida Waters but does not cross it or is within 0.5 mile of aquatic preserve or Outstanding Florida Waters. | Project area: is partially within a designated CBRA coastal barrier unit or is within 500' of a designated CBRA coastal barrier unit. | 1 |
| High | Project area crosses at least 1 designated or proposed portion of aquatic preserve or Outstanding Florida Waters. | Project area is completely within a designated CBRA coastal barrier unit. | 0 |

| Site Impact | Arterial (using 200' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Aquatic Preserves and Outstanding Florida Waters* | *Coastal Barrier Island Resources* | |
| Low | Project area does not cross watersheds of aquatic preserves or Outstanding Florida Waters, does not cross major tributaries of Outstanding Florida Waters, and is not within 0.5 mile of aquatic preserve or Outstanding Florida Waters. | Project area is not within 500' of a designated CBRA coastal barrier unit. | 2 |
| Medium | Project area contains a portion of an aquatic preserve or Outstanding Florida Waters but does not cross it or is within 0.5 mile of aquatic preserve or Outstanding Florida Waters. | Project area: is partially within a designated CBRA coastal barrier unit or is within 500' of a designated CBRA coastal barrier unit. | 1 |
| High | Project area crosses at least 1 designated or proposed portion of aquatic preserve or Outstanding Florida Waters. | Project area is completely within a designated CBRA coastal barrier unit. | 0 |

| Site Impact | Connector (using 100' buffer in all directions from centerline or point) | | Score |
|---|---|---|---|
| | *Aquatic Preserves and Outstanding Florida Waters* | *Coastal Barrier Island Resources* | |
| Low | Project area does not cross watersheds of aquatic preserves or Outstanding Florida Waters, does not cross major tributaries of Outstanding Florida Waters, and is not within 0.5 mile of aquatic preserve or Outstanding Florida Waters. | Project area is not within 500' of a designated CBRA coastal barrier unit. | 2 |
| Medium | Project area contains a portion of an aquatic preserve or Outstanding Florida Waters but does not cross it or is within 0.5 mile of aquatic preserve or Outstanding Florida Waters. | Project area: is partially within a designated CBRA coastal barrier unit or is within 500' of a designated CBRA coastal barrier unit. | 1 |
| High | Project area crosses at least 1 designated or proposed portion of aquatic preserve or Outstanding Florida Waters. | Project area is completely within a designated CBRA coastal barrier unit. | 0 |

The overall special designations score for any proposed project segment is determined by the category in which that segment receives the lower score. For example, if a proposed arterial receives a high score of 2 in the Aquatic Preserves and Outstanding Florida Waters category, but the project area is completely within a designated coastal barrier unit, then its Coastal Barrier Island Resources score is the worst possible, i.e., zero points. In such a case, the overall Special Designations score would be zero points.

# Water Quality
## Appendix D – Environmental Stewardship

### Description

Water quality refers to the biological, chemical, and physical characteristics of water. This is a measure often used to rate the safety to human consumption as well as the health of ecosystems. The health of Florida's water bodies has a direct impact on the economy and the overall quality of life of its residents. This measure is based primarily on the distance between the project and surface water resources/supplies or ground water resources. Each project is rated "low", "medium", or "high" based on a combination of hydrography, Aquatic Preserves, and Outstanding Florida Waters, public water supply wells, and other GIS data sets obtained from the Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, and from other sources describing potable water supplies, surface water classification, and other issues. The analysis at this preliminary stage identifies impacted water resources only on a gross scale.

### Importance to Environmental Stewardship

The water quality measure is utilized for human health concerns as well as the health of ecosystems. This measure addresses the FTP environmental enhancement goal. Identifying projects early in the planning process that minimize impacts to water quality will provide for more defendable and appropriate projects moving forward, and will save time and money as the planning process progresses.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Water Quality (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway | | Score |
|---|---|---|---|
| | *Surface Water – Resources* | *Ground Water – Wells* | |
| Low | Project alignment is not within 0.5 mile of an aquatic preserve, Outstanding Florida Waters, Class I, or Class II water. | No more than two public water supply wells have been identified within, or within 500' of the project alignment. | 1 |
| Medium | Project alignment is within 0.5 mile and in the watershed of an aquatic preserve or Outstanding Florida Waters, but does not cross it, or is within 0.5 mile of a Class I, or Class II water. | Project alignment contains or has within 500' of its borders, between three and five public water supply wells from the above data set. | 0.5 |
| High | Project alignment crosses at least one designated or proposed portion of aquatic preserve, Outstanding Florida Waters, Class I, or Class II waters. | Project alignment contains or has within 500' of its borders, six or more public water supply wells from the above data set. | 0 |

| Site Impact | Arterial | | Score |
|---|---|---|---|
| | *Surface Water – Resources* | *Ground Water – Wells* | |
| Low | Project alignment is not within 0.5 mile of an aquatic preserve, Outstanding Florida Waters, Class I, or Class II water. | No more than two public water supply wells have been identified within, or within 500' of the project alignment. | 1 |
| Medium | Project alignment is within 0.5 mile and in the watershed of an aquatic preserve or Outstanding Florida waters, but does not cross it, or is within 0.5 mile of a Class I, or Class II water. | Project alignment contains or has within 500' of its borders, between three and five public water supply wells from the above data set. | 0.5 |
| High | Project alignment crosses at least one designated or proposed portion of aquatic preserve, Outstanding Florida Waters, Class I, or Class II waters. | Project alignment contains or has within 500' of its borders, six or more public water supply wells from the above data set. | 0 |

| Site Impact | Connector | | Score |
|---|---|---|---|
| | *Surface Water – Resources* | *Ground Water – Wells* | |
| Low | Project alignment is not within 0.5 mile of an aquatic preserve, Outstanding Florida Waters, Class I or Class II water. | No more than two public water supply wells have been identified within, or within 500' of the project alignment. | 1 |
| Medium | Project alignment is within 0.5 mile and in the watershed of an aquatic preserve or Outstanding Florida Waters, but does not cross it, or is within 0.5 mile of a Class I or Class II water. | Project alignment contains or has within 500' of its borders, between three and five public water supply wells from the above data set. | 0.5 |
| High | Project alignment crosses at least one designated or proposed portion of aquatic preserve, Outstanding Florida Waters, Class I or Class II waters. | Project alignment contains or has within 500' of its borders, six or more public water supply wells from the above data set. | 0 |

The Water Quality score for any project segment is determined by the category in which that segment receives the lower score. For example, if an arterial receives a score of 1 in the Surface Water category, but the project alignment contains seven publicly owned water supply wells, then its Ground Water score is the worst possible, i.e., zero points. In such a case, the overall water quality score would be zero points.

# Wetlands
## Appendix D – Environmental Stewardship

### Description

Wetlands are generally used to describe any type of land that acts in transition from aquatic to terrestrial. The area may sit wet for any period but are not permanently bodies of water. This measure is based primarily on the extent of wetlands within each project and not on the quality of the wetlands. Each project is rated "low", "medium", or "high" based on a combination of the National Wetlands Inventory (NWI) data and Florida Water Management District land use/cover data for the project area. The analysis at this preliminary stage distinguishes types of wetlands only on a gross scale and does not identify differences in type or quality of wetland resources.

### Importance to Environmental Stewardship

Wetlands are significant and varied hydrological and ecological geographic areas. They act as significant nurseries for aquatic life both fresh and saltwater depending on location. They act as filters of runoff from the land into the open water often absorbing pollution and large amounts of fresh water which may affect the pH balance of adjacent open bodies of water. Wetlands act as buffers for the damaging effects of mainland for storm surge and flooding incidents. These factors have dramatic impacts on the environment, the residents' quality of life, and the economy of a region. The wetlands measure addresses the FTP goal of environmental enhancement. Wetland impacts are of concern to many regulatory agencies as they are impacted by construction projects. Identifying and limiting the possible impacts to wetlands early in the planning process may help save time and money for a project as it moves forward.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis with use of buffer

# Wetlands (continued)

## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Site Impact | Interstate, Turnpike, or Expressway (using 500' buffer in all directions from centerline or point) | | | | Score |
|---|---|---|---|---|---|
| | *Wetlands* | *Forested Wetlands* | *Estuarine (mangrove or salt marsh)* | *Wetland Crossing* | |
| Low | Less than 33 percent of the project area is composed of wetlands. | Less than 20 percent of the project area is composed of forested wetlands. | There are no wetlands that are estuarine in type. | No wetlands extend across the entire project area such that a single wetland crossing of greater than 5 percent of the length of the project would be required regardless of right of way alignment within the project area. | 2 |
| Medium | Between 33-66 percent of the project area is composed of wetlands. | Between 20-40 percent of the project area is composed of forested wetlands. | Wetlands that are estuarine in type are present in less than 20 percent of the project area. | Wetlands extend across the entire project area such that a single wetland crossing of 5-10 percent of the project would be required regardless of right of way alignment. | 1 |
| High | Over 66 percent of the project area is composed of wetlands. | Over 40 percent of the project area is composed of forested wetlands. | Wetlands that are estuarine in type comprise over 20 percent of the project area. | Wetlands extend across the entire project area such that a single wetland crossing of greater than 10 percent of the project would be required regardless of right of way alignment. | 0 |

| Site Impact | Arterial (using 200' buffer in all directions from centerline or point) | | | | Score |
|---|---|---|---|---|---|
| | *Wetlands* | *Forested Wetlands* | *Estuarine (mangrove or salt marsh)* | *Wetland Crossing* | |
| Low | Less than 25 percent of the project area is composed of wetlands. | Less than 10 percent of the project area is composed of forested wetlands. | There are no wetlands that are estuarine in type | No wetlands extend across the entire project area such that a single wetland crossing of greater than 5 percent of the length of the project would be required regardless of right of way alignment within the project area. | 2 |
| Medium | Between 25-50 percent of the project area is composed of wetlands. | Between 10-20 percent of the project area is composed of forested wetlands. | Wetlands that are estuarine in type are present in less than 10 percent of the project area. | Wetlands extend across the entire project area such that a single wetland crossing of 5-10 percent of the project would be required regardless of right of way alignment. | 1 |
| High | Over 50 percent of the project area is composed of wetlands. | Over 20 percent of the project area is composed of forested wetlands. | Wetlands that are estuarine in type comprise over 10 percent of the project area. | Wetlands extend across the entire project area such that a single wetland crossing of greater than 10 percent of the project would be required regardless of right of way alignment. | 0 |

# Wetlands (continued)
## Appendix D – Environmental Stewardship

| Site Impact | Connector (using 100' buffer in all directions from centerline or point) | | | | Score |
|---|---|---|---|---|---|
| | *Wetlands* | *Forested Wetlands* | *Estuarine (mangrove or salt marsh)* | *Wetland Crossing* | |
| Low | Less than 10 percent of the project area is composed of wetlands. | Less than 5 percent of the project area is composed of forested wetlands. | There are no wetlands that are estuarine in type. | No wetlands extend across the entire project area such that a single wetland crossing of greater than 5 percent of the length of the project would be required regardless of right of way alignment within the project area. | 2 |
| Medium | Between 10-20 percent of the project area is composed of wetlands. | Between 5-10 percent of the project area is composed of forested wetlands. | Wetlands that are estuarine in type are present in less than 5 percent of the project area. | Wetlands extend across the entire project area such that a single wetland crossing of 5-10 percent of the project would be required regardless of right of way alignment. | 1 |
| High | Over 20 percent of the project area is composed of wetlands. | Over 10 percent of the project area is composed of forested wetlands. | Wetlands that are estuarine in type comprise over 5 percent of the project area. | Wetlands extend across the entire project area such that a single wetland crossing of greater than 10 percent of the project would be required regardless of right of way alignment. | 0 |

The overall wetlands score for any proposed project segment is determined by the category in which that segment receives the lower score. For example, if a proposed arterial receives exemplary scores in the first three categories, but a single wetland crossing of greater than 10 percent of the project area would be required, then its Wetland crossing score is the worst possible, i.e., zero points.

# Air Quality
## Appendix D – Environmental Stewardship

### Description

The Clean Air Act (CAA), passed in 1970, regulates air emissions and authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. Under the Clean Air Act, the EPA sets limits on certain air pollutants, including setting limits on how much pollutant can be in the air anywhere in the United States. Congress required "conformity" in the CAA Amendments of 1990 to ensure federal funding and approval are given to highway and transit projects consistent with the air quality goals established by a state air quality implementation plan (SIP). Location (attainment area versus non-attainment area) is used as a measure for air quality per the goals outlined in the CAA. Conformity ensures transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the national ambient air quality standards. Conformity determination confirms total emissions projected for local transportation plans in each non-attainment area are within the emissions limits established by a state air quality implementation plan. A geographic area with air quality cleaner than the primary standard is called an "attainment" area; areas not meeting the primary standard are called "non-attainment" areas.

### Importance to Environmental Stewardship

The FTP identifies the promotion of environmental enhancement as a goal. All projects evaluated in the SIT are intended to add capacity to a highway facility. Although promoting roadway expansion is not always perceived as improving air quality, capacity expansion projects provide congestion relief and improve traffic flow; the immediate impacts improve air quality in the area surrounding a project. Although expansion projects are unlikely to permanently reduce congestion, short term localized air quality benefits result from improved traffic flow and a reduction in idling caused by heavy congestion.

### Data Characteristics

Data Source: United States Environmental Protection Agency
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis

### Measure Categorization & Scoring

| Score | Florida County Location |
|---|---|
| 1 | In EPA designated **non-attainment** area county |
| 0 | In an EPA designated **attainment** area county |

Projects located in non-attainment areas are held to certain procedures not required for projects located in attainment areas. In order to proceed with construction, non-attainment area projects must be projected to eliminate or reduce the severity and number of NAAQS violations in the affected area.

# Energy and Sustainability
## Appendix D – Environmental Stewardship

### Description

A sustainable transportation system is one meeting the needs of today's population without jeopardizing the health of future generations. The American Association of State Highway and Transportation Officials (AASHTO) define sustainability as consisting of three dimensions including environmental preservation, social equity, and economic efficiency. Sustainable highway projects are projects helping to fulfill transportation needs and address development and economic growth, while also reducing environmental impacts and resource consumption.

There are several ways to consider highway capacity projects to be sustainable. The first consideration is the types of facilities to be constructed, whether they be simply the construction of general-purpose lanes on a limited access facility, the construction of a "complete street" with sidewalks and bicycle facilities to promote short distance neighborhood movements, the placement of managed lanes to move select traffic efficiently longer distances, or the construction of dedicated transit facilities offering efficient movements for larger numbers of users. These all have differing levels of creating a sustainable economy and environment. They all affect the built environment around the highway network which inevitably affects the sustainability and livability of the communities themselves. The fundamental connection between land use and transportation is pivotal in the potential sustainability discussion for transportation facilities.

Secondly, the technology used on the facility may be of a varying sustainability. Whether the modes of transport are fueled by gasoline, electric, hydrogen, or manual power; or if the technology transports one user or 100 users. They all have varying levels of sustainability.

Thirdly, the materials used in the construction of the facility.

And finally, the ability of the FDOT to share right-of-way with alternative uses for power transmission or other means help in the potential for projects and the entire highway network to be considered sustainable for the future.

For use in the SIT, the energy and sustainability measure will be scored by integrating population and employment density figures surrounding potential highway capacity projects. Sustainability is measured here by the housing/jobs balance in the census tracts surrounding a project site. This balance is considered indicative of sustainable development patterns and efficient use of available land. This balance will be used as an indicator of overall more sustainable development practices, led by a transportation network that promotes such an environment.

In addition, other previously mentioned sustainability factors are incorporated into other measures within the SIT.

# Energy and Sustainability (continued)
## Appendix D – Environmental Stewardship

### Importance to Environmental Stewardship

The FTP includes responsible environmental stewardship as a goal and specifically identifies sustainability and energy as critical considerations to achieve that goal. The measure identified for the SIT is an attempt to reward projects by scoring them higher that advance this goal.

### Data Characteristics

Data Source: United States Census
Data Type: Table, geo-referenced onto Florida
Calculation: Spatial analysis, GIS Layer SIT_CENTRACT

### Measure Categorization & Scoring

Projects will be scored based on a matrix which evaluates the population and employment densities surrounding the project. The maximum number of points is given to projects located in a balanced, high-density employment/high-density population area. Zero points will be given to projects in dramatically unbalanced areas such as high-density employment/low-density population areas, or low-density employment/high-density population areas.

| Score | ES_SCORE |
|---|---|
| 2 | > 1.825 |
| 1.75 | 1.626 – 1.825 |
| 1.5 | 1.376 – 1.625 |
| 1.25 | 1.126 – 1.375 |
| 1.00 | 0.826 – 1.125 |
| 0.75 | 0.626 – 0.825 |
| 0.50 | 0.367 – 0.625 |
| 0.25 | 0.126 – 0.375 |
| 0 | < 0.125 |

# Social Investment and Justice

## Appendix D – Environmental Stewardship

### Description

This measure is based primarily on the risk of undesirable effects on four identified demographic groups. Historically, certain transportation projects have been considered as undesirable land uses. As such they would tend to be built in communities that lacked organization and funding to defend from such investments. The social investment and justice measure is designed to provide a bonus to projects that avoid negatively impacting certain demographics. Each project is rated "low", "medium", or "high" by assessing existing data sets which indicate the potential for effects to special population groups including low income and minority groups and the aged and youth populations.

### Importance to Environmental Stewardship

Each project is rated "low", "medium", or "high" by assessing existing data sets which indicate the potential for effects to special population groups including low income and minority groups and the aged and youth populations.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table
Calculation: Geographic spatial analysis with use of buffer

### Measure Categorization & Scoring

| Score | **Interstate, Turnpike, or Expressway** (Using a one-mile buffer in all directions from centerline or point) | | | |
|---|---|---|---|---|
| | Low-Income Population | Minority Population | Aged Population | Youth Population |
| 1 | The percentage of the low-income population within the one-mile buffer is less than the countywide percentage for this population. | The percentage of the minority population within the one-mile buffer is less than the countywide percentage for this population. | The percentage of the age 65 or older population within the one-mile buffer is less than the countywide percentage for this population. | The percentage of the age 17 or younger population within the one-mile buffer is less than the countywide percentage for this population. |
| 0.5 | The percentage of the low-income population within the one-mile buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the minority population within the one-mile buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the age 65 or older population within the one-mile buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the age 17 or younger population within the one-mile buffer is between 100 and 149 percent of the countywide percentage for this population. |
| 0 | The percentage of the low-income population within the one-mile buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the minority population within the one-mile buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the age 65 or older population within the one-mile buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the age 17 or younger population within the one-mile buffer is 150 percent or more of the countywide percentage of this population. |

# Social Investment and Justice (continued)

## Appendix D – Livable Communities

| Score | Arterial (Using a 0.5-mile buffer in all directions from centerline or point) | | | |
|---|---|---|---|---|
| | Low-Income Population | Minority Population | Aged Population | Youth Population |
| 1 | The percentage of the low-income population within the 0.5-mile buffer is less than the countywide percentage for this population. | The percentage of the minority population within the 0.5-mile buffer is less than the countywide percentage for this population. | The percentage of the age 65 or older population within the 0.5-mile buffer is less than the countywide percentage for this population. | The percentage of the age 17 or younger population within the 0.5-mile buffer is less than the countywide percentage for this population. |
| 0.5 | The percentage of the low-income population within the 0.5-mile buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the minority population within the 0.5-mile buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the age 65 or older population within the 0.5-mile buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the age 17 or younger population within the 0.5-mile buffer is between 100 and 149 percent of the countywide percentage for this population. |
| 0 | The percentage of the low-income population within the 0.5-mile buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the minority population within the 0.5-mile buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the age 65 or older population within the 0.5-mile buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the age 17 or younger population within the 0.5-mile buffer is 150 percent or more of the countywide percentage of this population. |

| Score | Connector (Using a 500’ buffer in all directions from centerline or point) | | | |
|---|---|---|---|---|
| | Low-Income Population | Minority Population | Aged Population | Youth Population |
| 1 | The percentage of the low-income population within the 500’ buffer is less than the countywide percentage for this population. | The percentage of the minority population within the 500’ buffer is less than the countywide percentage for this population. | The percentage of the age 65 or older population within the 500’ buffer is less than the countywide percentage for this population. | The percentage of the age 17 or younger population within the 500’ buffer is less than the countywide percentage for this population. |
| 0.5 | The percentage of the low-income population within the 500’ buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the minority population within the 500’ buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the age 65 or older population within the 500’ buffer is between 100 and 149 percent of the countywide percentage for this population. | The percentage of the age 17 or younger population within the 500’ buffer is between 100 and 149 percent of the countywide percentage for this population. |
| 0 | The percentage of the low-income population within the 500’ buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the minority population within the 500’ buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the age 65 or older population within the 500’ buffer is 150 percent or more of the countywide percentage of this population. | The percentage of the age 17 or younger population within the 500’ buffer is 150 percent or more of the countywide percentage of this population. |

The overall measure score for any proposed project segment is determined by the demographic group for which that segment receives the lowest score. For example, if a proposed arterial receives high scores in the first three categories, but the percentage of the age 17 and younger population within the half mile buffer is twice the countywide percentage, then its youth population score is the lowest score, i.e., zero points. In such a case, the overall social investment and justice measure score would be zero points.

# Residential Community Impacts
## Appendix D – Environmental Stewardship

### Description

This measure categorizes land use features into an index of desirability and sensitivity to possible effects of a completed roadway project. This measure is based primarily on the risk of the completed project damaging the use or enjoyment of desirable land uses. Each project is rated "low," "medium," or "high" by assessing existing data sets that serve as indicators of desirable community land uses in the project study area. Data sets for assessing potential effects on these resources include residential lands and hospitals as indicators of noise sensitive sites; eye clinics as indicators of vibration sensitive sites; and community focal points (cultural points of interest).

### Importance to Environmental Stewardship

Transportation and construction projects may either impact the community environmental quality of life of Floridians in two different ways, the short-term and long-term actual impacts of a project or the results of not doing a project. A population may be affected more by not constructing a project than by constructing it. This measure is designed to look at the impacts to existing residential populations by constructing a project.

### Data Characteristics

Data Source: Florida Geographic Data Library
Data Type: Table, with contingencies for nature of facility (existing vs. new)
Calculation: Spatial analysis with use of buffer

# Residential Community Impacts (continued)
## Appendix D – Environmental Stewardship

### Measure Categorization & Scoring

| Score | Land Use Impact | **Interstate, Turnpike, or Expressway** (using 500' buffer in all directions from centerline or point) | | | | |
|---|---|---|---|---|---|---|
| | | *Residential Land Use (Existing facility increasing to more than four lanes)* | *Residential Land Use (New facility) ** | *Community Focal Points (New facility) ** | *Noise Impacted Residential Land Use (All facilities)* | *Noise Sensitive Uses (All facilities)* |
| 1 | Low | Project is on an existing facility and a 500' buffer is comprised of less than 33 percent residential land use | Project is a new facility and a 500' buffer is comprised of less than 33 percent residential land use | Project is a new facility, and no community focal points are within the 500' buffer | 500' buffer is comprised of less than 33 percent residential land use | 500' buffer contains no locations with noise sensitive, nonresidential uses |
| 0.5 | Medium | Project is on an existing facility and a 500' buffer is comprised of 33 - 66 percent residential land use | Project is a new facility and a 500' buffer is comprised of 33 - 66 percent residential land use | Project is a new facility and at least one community focal point is between a 200' – 500' buffer | 500' buffer is comprised of 33 - 66 percent residential land use | 500' buffer contains one to five locations with noise sensitive, nonresidential uses |
| 0 | High | Project is on an existing facility and a 500' buffer is comprised of greater than 66 percent residential land use | Project is a new facility and a 500' buffer is comprised of greater than 66 percent residential land use | Project is a new facility and at least one community focal point is within the 500' buffer | 500' buffer is comprised of greater than 66 percent residential land use | 500' buffer contains five or more locations with noise sensitive, non-residential issues |

# Residential Community Impacts (continued)
## Appendix D – Environmental Stewardship

| Score | Land Use Impact | **Arterial** (using 200' buffer in all directions from centerline or point) | | | | |
|---|---|---|---|---|---|---|
| | | *Residential Land Use (Existing facility increasing to more than four lanes)* | *Residential Land Use (New facility) ** | *Community Focal Points (New facility) ** | *Noise Impacted Residential Land Use (All facilities)* | *Noise Sensitive Uses (All facilities)* |
| 1 | Low | Project is on an existing facility and a 200' buffer is comprised of less than 25 percent residential land use | Project is a new facility and a 200' buffer is comprised of less than 25 percent residential land use | Project is a new facility, and no community focal points are within the 200' buffer | 200' buffer is comprised of less than 25 percent residential land use | 200' buffer contains no locations with noise sensitive, nonresidential uses |
| 0.5 | Medium | Project is existing facility and 200' buffer is comprised of 25 to 50 percent residential land use | Project is new facility and 200' buffer is comprised of 25 to 50 percent residential land use | Project is a new facility and at least one community focal point is between a 200' – 500' buffer | 200' buffer is comprised of 25 to 50 percent residential land use | 200' buffer contains one to five locations with noise sensitive, nonresidential uses |
| 0 | High | Project is existing facility and 200' buffer is comprised of greater than 50 percent residential land use | Project is new facility and 200' buffer is comprised of greater than 50 percent residential land use | Project is a new facility and at least one community focal point is within the 100' buffer | 200' buffer is comprised of greater than 50 percent residential land use | 200' buffer contains five or more locations with noise sensitive, non-residential issues |

# Residential Community Impacts (continued)
## Appendix D – Environmental Stewardship

| Score | Land Use Impact | Connector (using 100' buffer in all directions from centerline or point) | | | | |
|---|---|---|---|---|---|---|
| | | *Residential Land Use (Existing facility increasing to more than four lanes)* | *Residential Land Use (New facility) ** | *Community Focal Points (New facility) ** | *Noise Impacted Residential Land Use (All facilities)* | *Noise Sensitive Uses (All facilities)* |
| 1 | Low | Project is on and existing facility and 100' buffer is comprised of less than 10 percent residential land use | Project is a new facility and 100' buffer is comprised of less than 10 percent residential land use | Project is a new facility, and no community focal points are within the 100' buffer | 100' buffer is comprised of less than 10 percent residential land use | 100' buffer contains no locations with noise sensitive, nonresidential uses |
| 0.5 | Medium | Project is existing facility and 100' buffer is comprised of 10 to 20 percent residential land use | Project is new facility and 100' buffer is comprised of 10 to 20 percent residential land use | Project is a new facility and at least one community focal point is between a 200' – 500' buffer | 100' buffer is comprised of 10 to 20 percent residential land use | 100' buffer contains one to five locations with noise sensitive, nonresidential uses |
| 0 | High | Project is existing facility and 100' buffer is comprised of greater than 20 percent residential land use | Project is new facility and 100' buffer is comprised of greater than 20 percent residential land use | Project is a new facility and at least one community focal point is within the 50' buffer | 100' buffer is comprised of greater than 20 percent residential land use | 100' buffer contains five or more locations with noise sensitive, non-residential issues |

Applications of this measure depend on the nature of the facility. The first category only applies to projects on existing facilities proposed to be wider than four lanes; the second and third categories only apply to projects on new facilities; and the fourth and fifth categories apply to projects on all facilities.

* Project must have improvement code of "NR" or "NCON" to be considered a new facility.

# Appendix E – Intermodal Connectivity

| Measures | Maximum Score |
|---|---|
| Connector Location | 3 |
| Truck Volume | 6 |
| Transit Connectivity | 3 |
| Distance to SIS Hub | 4 |
| Managed Lanes / Special Use | 2 |
| Shared Use Non-motorized (SUN) Trail Proximity / Connections | 2 |
| *Maximum subtotal* | *20 points* |

# Connector Location

## Appendix E – Intermodal Connectivity

### Description

This measure highlights SIS Connectors and provides additional points for projects that provide enhancements to the highway link between a SIS Hub and a SIS Highway Corridor.

### Importance to Intermodal Connectivity

People and freight often move on several modes of transportation. Goods may arrive by ocean and need to be transferred to truck or rail to reach their destination. People may travel by rail or bus and need to walk or transfer to a car to reach their destination. Intermodal connectors serve to facilitate the transfer of goods or people between two modes or connect two levels of such modes. Providing points to projects related to improving connectors supports a smooth and efficient transfer of people and freight on the SIS, with a focus on the 'last mile'.

### Data Characteristics

Data Source: FDOT Transportation Data and Analytics Office Roadway Characteristics Inventory (RCI) – Feature 147
Data Type: Connector locations – identified in RCI
Calculation: None

### Measure Categorization & Scoring

| Score | Connector | Feature 147 (FACTP) = 21, 22, 23, 27, 28, or 29 |
|---|---|---|
| 3 | Yes | 21 (SIS Connector)<br>22 (SIS Connector Planned Add)<br>27 (Strategic Growth (SG) Connector)<br>28 (SG Connector Future) |
| 0 | No | 23 (SIS Connector Planned Drop)<br>29 (SG Connector Planned Drop) |

# Truck Volume
## Appendix E – Intermodal Connectivity

### Description

Average annual daily truck traffic (AADTT) is a measure of the number of trucks traveling on a given section of roadway in both directions during an average day. For this objective the measure is categorized by functional and area type to identify areas of the system with above normal truck traffic flows, relative to similar facilities throughout the state. AADTT is used as a measure for connectivity as the number of trucks on a facility degrades the condition of the roadway at a greater rate than passenger vehicles. There are two measures for this criterion: one for the Cost Feasible Plan (CFP) timeframe and one for the Work Program timeframe. The difference is in the thresholds used and is based on the current level of service information provided by the FDOT Districts.

### Importance to Intermodal Connectivity

Providing priority of resources to projects at locations with higher truck volumes can focus on preserving these facilities that function as integral connections between intermodal facilities and markets and will begin to address the special needs at these locations.

### Data Characteristics

Data Source: District level of service (LOS) submittal
Data Type: Linear coverage
Calculation: None
Sample Data: Data from latest available District LOS/future traffic

| ID | RDWYID | BEGPT | EndPT | Aadt | Truck_aadt | Truck_percent | AreaType | FacilityType | priocat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 01040000 | 2.203 | 2.6 | 25,920 | 1638 | 0.06319 | Urban | Highway | 2 |

# Truck Volume (continued)
## Appendix E –Intermodal Connectivity

### Measure Categorization & Scoring

*Work Program timeframe AADTT:*

| Score | Truck AADTT (by PRIOCAT) | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | *Urban Arterial* | *Urban Highway* | *Urban Freeway* | *Rural/Transition Arterial* | *Rural/Transition Highway* | *Rural/Transition Freeway* |
| 6 | > 6,688 | > 7,177 | > 17,501 | > 4,804 | > 4,248 | >16,154 |
| 3 | > 3,245 and ≤ 6,688 | > 3,641 and ≤ 7,177 | > 7,488 and ≤ 17,501 | > 2,768 and ≤ 4,804 | > 1,846 and ≤ 4,248 | > 9,284 and ≤ 16,154 |
| 0 | < 3,245 | < 3,641 | < 7,488 | < 2,768 | < 1,846 | < 9,284 |

*Cost Feasible Plan AADTT:*

| Score | Truck AADTT (by PRIOCAT) | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | *Urban Arterial* | *Urban Highway* | *Urban Freeway* | *Rural/Transition Arterial* | *Rural/Transition Highway* | *Rural/Transition Freeway* |
| 6 | > 7,967 | > 8,988 | > 21,226 | > 5,939 | > 5,440 | > 20,036 |
| 3 | > 3,835 and ≤ 7,967 | > 4,434 and ≤ 8,988 | > 9,414 and ≤ 21,226 | > 3,378 and ≤ 5,939 | > 2,248 and ≤ 5,440 | > 11,419 and ≤ 20,036 |
| 0 | < 3,835 | < 4,434 | < 9,414 | < 3,378 | < 2,248 | < 11,419 |

**Score Category Lookup:**

| Level of Service Table Lookup | | | |
|---|---|---|---|
| Area Type | Facility Type | Class Type | PRIOCAT |
| Urban | Arterial | 1 | 1 |
| Urban | Arterial | 2 | 1 |
| Urban | Highway | | 2 |
| Urban | Freeway | Core | 3 |
| Urban | Freeway | | 3 |
| Transition | Arterial | 1 | 4 |
| Transition | Arterial | 2 | 4 |
| Rural | Arterial | | 4 |
| Transition | Highway | | 5 |
| RuralDev | Highway | | 5 |
| RuralUn | Highway | | 5 |
| Transition | Freeway | | 6 |
| Rural | Freeway | | 6 |

Weighted Average (mileage): Average measure over project length.

$$\text{Weighted Average} = \frac{\sum SegmentValue * SegmentLength}{TotalLength}$$

If the underlying segmentation of data layers does not match project limits, SegmentLength represents the fractional length of any given data segment occurring within the specified project limits.

# Transit Connectivity
## Appendix E – Intermodal Connectivity

### Description

This measure scores highway capacity projects according to their potential in providing increased transit service and benefits. Highway capacity projects will be looked at and classified as a project providing benefits towards improved transit service. The most points would be awarded for highway projects specifically designed for use by transit, while others involving transit indirectly would receive less points. Although highway improvements are not often associated with transit, some highway improvement types could benefit transit. By rewarding projects with a multimodal nature, transit systems and the SIS network will benefit.

### Importance to Intermodal Connectivity

Transit systems are intended for moving large volumes of people efficiently. This emphasis on moving groups of people reduces congestion significantly during peak hour travel. By reducing congestion especially in local urban bottlenecks, the quality of the long-distance trip is improved and the movement of freight on the roadway network is also improved. Transit is also significant in the promotion of livable communities to provide transportation alternatives for those who cannot or choose not to use an automobile. The reduction of automobiles in urban areas has the additional benefit of reducing pollution and noise and improves safety for other travelers.

### Data Characteristics

Data Source: FDOT Systems Implementation Office
Data Type: Roadway project improvement type
Calculation: None

### Measure Categorization & Scoring

| Score | Improvement Type Codes |
|---|---|
| 3 | TSTWAY: Transitway |
| | MODAL: Intermodal |
| | Improvement is Null and Transit Impact selected 'High' * |
| 2 | A2-SUL: Add 2 special use lanes (add or improve bus lane) |
| | A4-SUL: Add 4 special use lanes (add or improve bus lane) |
| | Improvement is Null and Transit Impact selected 'Medium' * |
| 1 | UP: Ultimate plan (includes sidewalks, bike lanes, transitways, or multi-use paths) |
| | CU: Corridor upgrade (includes sidewalks, bike lanes, transitways, or multi-use paths) |
| | Improvement is Null and Transit Impact selected 'Low' * |
| 0 | Improvement is Null and Transit Impact selected 'No Impact' * |
| | All other Improvement Types |

* If an improvement type is not included the SIT Analyzer user interface allows for selection of perceived impacts that transit will receive from this project.

# Managed and Special Use Lanes
## Appendix E – Intermodal Connectivity

### Description

This measure categorizes managed lanes and special use lanes in highway capacity projects by both project type and project phase. Scoring is based on project improvement type. If a project involves the creation of managed lanes (which may include lanes described as high occupancy vehicle, high occupancy toll, reversible, bus, truck, priced queue jumps, congestion pricing, etc.), the maximum number of points are given. No value is assigned for all other projects. The Systems Implementation Offices' assigned improvement type code will be used to identify managed lane projects.

### Importance to Intermodal Connectivity

Managed lanes help to increase the overall capacity of the entire highway corridor by using alternative traffic management techniques to improve the flow of traffic and potentially limit the impacts of further financial or environmental impacts resulting from a physical expansion of the roadway. Tolls may be used to manage traffic levels in the managed lanes to ensure a certain quality of the trip. Managed lanes designed for high occupancy users will encourage more passengers to travel in fewer vehicles and all will provide more person throughput on a fixed amount of transportation infrastructure. Certain managed lanes enhance transit system's ability to perform and provide increased opportunities for people with non-automobile mobility needs. By shifting away from the single-occupant automobile, managed lanes help to reduce overall energy consumption, improve air quality, and reduce emissions. In addition, managed lanes have the benefit of improving the flow of traffic on the existing general-purpose lanes. They can be a cost-effective, highly viable transportation alternative, providing improved connections between modal hubs.

### Data Characteristics

Data Source: FDOT Systems Implementation Office
Data Type: Project improvement type
Calculation: None

### Measure Categorization & Scoring

| Score | Project Type |
|---|---|
| 2 | Managed lane or special use lane project |
| 0 | Non-managed lane projects |

# Distance to SIS Hub Facilities
## Appendix E – Intermodal Connectivity

### Description
This measure highlights the significance of the SIS as an interconnected network of corridors and hubs across Florida. Scoring is based on the proximity of a SIS Highway project to a SIS Hub. The closer a project is to a SIS Hub boundary the more points the project scores.

### Importance to Intermodal Connectivity
The impacts of SIS Hubs do not stop at the boundaries of the facilities. The transportation network that feeds the hubs from the major interregional corridors to the last mile connectors has an impact on the ability of a hub to function effectively in moving people and freight through their operations. With that in mind, highway projects that may enhance a SIS Corridor or Connector also have the added benefit of assisting the capacity and operations at a nearby SIS Hub.

### Data Characteristics
Data Source: FDOT Systems Implementation Office geographic information system (GIS) shapefile
Data Type: Geographic overlay
Calculation: Buffer of SIS Hub to project intersect

### Measure Categorization & Scoring

| Score | Distance to SIS Hub |
|---|---|
| 4 | < 5 miles |
| 3 | 5 – 10 miles |
| 2 | 11 – 20 miles |
| 1 | 21 – 50 miles |
| 0 | > 50 miles |

# Shared Use Non-motorized (SUN) Trail Proximity / Connections

## Appendix E – Intermodal Connectivity

### Description

This measure capitalizes on the goals of mutual multimodal FDOT transportation networks. The Shared Use Non-motorized (SUN) Trail is a statewide system of high-priority paved trail corridors for bicyclists and pedestrians. This network, which includes a combination of existing, planned, and conceptual trails, is a refined version of the Florida Greenways and Trails System (FGTS) Plan's Land Trails Priority Network. The FGTS defines the role of the statewide trail system in advancing Florida's economy, tourism, health, transportation choices, recreation, conservation, and quality of life. Implementing projects which support the SUN Trail network increases the reliability and multimodal options of Florida's entire transportation system. Points are only provided to a SIS Highway project within 1,000 feet of a SUN Trail corridor.

### Importance to Intermodal Connectivity

SIS Highway projects that are within a certain distance of SUN Trail facilities allow for enhanced connectivity between the transportation modes. Both the SIS and the SUN Trail programs are designed for enhancing mobility options, improving quality of life, and providing economic enhancements to Florida.

### Data Characteristics

Data Source: FDOT Systems Implementation Office geographic information system (GIS) shapefile
Data Type: Geographic overlay
Calculation: Buffer of Shared-use Non-motorized (SUN) Trail to project intersect

### Measure Categorization & Scoring

| Score | Spatial Analysis |
|---|---|
| 2 | Within 1000' of shared-use non-motorized (SUN) Trail |
| 0 | Not within 1000' buffer of SUN Trail |



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