

VOLUSIA FLAGLER 2050



Long Range Transportation Plan

Introduction

Transportation system performance measures provide indications of how well the system meets needs which can be useful to inform decision making. **Appendix C – System Performance Report** provides a description of the ongoing performance measurement that guides current/short term planning efforts, the selection of funding for transportation projects and programs, and the annual evaluation of the transportation system for the Volusia-Flagler TPO.

While the System Performance Report encompasses the performance-based planning foundation to develop Volusia-Flagler 2050, this document provides a “report card” on the performance of the plan.

This **Measures of Effectiveness Summary** documents the performance of Volusia-Flagler 2050’s Cost Feasible Plan relative to the plan’s goals, objectives, and performance targets. The goal areas of Volusia-Flagler 2050 are:

- Multimodal
- Economic Development
- Connectivity
- Safety
- Livability
- Involvement

Performance Measures established through the Federal Highway Administration (FHWA) address each of the national planning goal areas. TPOs are required to conduct performance-based planning by setting data-driven performance targets for the performance measures and programmed transportation investments that are expected to contribute to achieving those targets.

Tables 1 through **3** present the adopted targets and thresholds as identified in **Appendix C** and describes the 2050 Outlook relative to each Performance Measure Category. The 2050 Outlook takes into consideration the policies and programs identified within the plan.

The **Performance Indicators** included in **Tables 4** through **9** have been established by the Volusia-Flagler TPO to document the effectiveness of the Volusia-Flagler 2050 Cost Feasible Plan in addressing each of the plan’s goals and corresponding objectives.

Table 1: Performance Measure 1 (PM1) - Safety

Volusia-Flagler 2050 Goal/Objective	Performance Measure	2025 Target	2050 Outlook
<p><u>Goal 4</u></p> <p>Objective 4.1 - Identify and prioritize improvements to reduce the frequency and severity of crashes and eliminate fatalities and serious injuries to reach Vision Zero.</p> <p>Objective 4.2 - Identify and implement safety policies, programs, enhancements, and innovations to improve the safety for all roadway users, including the most vulnerable users such as pedestrians bicyclists, motorcyclists, and those using mobility devices (e.g., wheelchairs and scooters).</p>	Number of fatalities	0	<p>The TPO:</p> <ul style="list-style-type: none"> Supports the statewide goal of Vision Zero over the long-range horizon
	Rate of fatalities	0	<p>Volusia-Flagler 2050 increases the safety of the transportation system for motorized and non- motorized users by:</p>
	Number of serious injuries	0	<ul style="list-style-type: none"> Implementing community safety programs that improve safety performance
	Rate of serious injuries	0	<ul style="list-style-type: none"> Allocating funds specific to bicycle and pedestrian enhancements, traffic operations improvements, and safety projects
	Number of non-motorized fatalities and non-motorized serious injuries	0	<ul style="list-style-type: none"> Utilizing a project prioritization and technical scoring criteria that included an assessment of fatal and serious injury crash data to evaluate the plan's cost feasible projects

Table 2: Performance Measure 2 (PM2) - Pavement & Bridge

Volusia-Flagler 2050 Goal/Objective	Performance Measure	2025 Target	2050 Outlook
<p><u>Goal 1</u></p> <p>Objective 1.6 - Adequately fund preservation of transportation assets (National Highway System Pavement Condition, Bridge Condition, and Transit Assets).</p>	Percent of Interstate pavements in good condition	≥60%	<p>The TPO:</p> <ul style="list-style-type: none"> • Supports and has adopted the statewide targets/thresholds • Currently is meeting 6 of 6 adopted targets <p>Volusia-Flagler 2050 maintains or improves upon the existing bridge and pavement conditions by:</p> <ul style="list-style-type: none"> • Setting-aside funding for operations and maintenance first prior to the funding of capital improvements. • The 2050 Revenue Forecast for the Volusia-Flagler TPO developed by FDOT includes a commitment to non-capacity programs designed to support, operate, and maintain the state transportation system.
	Percent of Interstate pavements in poor condition	<5%	
	Percent of non-Interstate NHS pavements in good condition*	≥40%	
	Percent of non-Interstate NHS pavements in poor condition	<5%	
	Percent of NHS bridges (by deck area) in good condition	≥50%	
	Percent of NHS bridges (by deck area) in poor condition	<10%	

*Target not currently met – Programming of resurfacing funds is state policy and not under the direct control of the TPO. The TPO supports FDOT in meeting this goal.

Table 3: Performance Measure 3 (PM3) - System Performance and Freight

Volusia-Flagler 2050 Goal/Objective	Performance Measure	2025 Target	2050 Outlook
<u>Goal 1</u> Objective 1.2 - Minimize congestion/delay and maintain travel time reliability on roadways and intersections through projects that improve capacity, provide for the more efficient use and operation of existing transportation facilities, and reduce transportation demand.	Percent of person-miles on the Interstate system that are reliable— Level of Travel Time Reliability (Interstate LOTTR)	≥70%	The TPO: <ul style="list-style-type: none"> • Supports and has adopted the statewide targets/thresholds • Currently meets all adopted targets
	Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR)	≥50%	Volusia-Flagler 2050 maintains or improves upon the existing travel time reliability of the system by providing predictable service based on: <ul style="list-style-type: none"> • Efficient incident management • Establishing a parallel network of facilities • Data sharing • Availability of real-time data and information provided to the traveling public
<u>Goal 2</u> Objective 2.2 - Identify and support safe and efficient truck routes and other facilities that improve the movement of freight and goods.	Truck travel time reliability (Interstate only)	≤2.00	

Table 4: Volusia-Flagler 2050 Performance Evaluation – Goal 1

Goal 1 – Develop and maintain a balanced and efficient multimodal transportation system			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 1.1 - Develop a multimodal transportation system that improves accessibility and mobility to economic centers for all users (including motor vehicle, bicycle, pedestrian, transit) as well as the movement of goods.	Did the plan consider each project's accessibility to economic activity centers?	Yes	The technical criteria scoring process included an analysis of projects to determine whether they would provide additional access to downtown locations, beaches, visitor destinations, large regional shopping/entertainment centers, or other similar activity centers.
Objective 1.2 - Minimize congestion/delay and maintain travel time reliability on roadways and intersections through projects that improve capacity, provide for the more efficient use and operation of existing transportation facilities consistent with Transportation Systems Management & Operations (TSM&O) strategies, and reduce transportation demand and vehicle miles traveled.	% vehicle miles traveled (VMT) with volume to capacity (V/C) >1.0	Increase in congestion	The 2050 roadway network is expected to experience an increase in the percentage of segments with V/C > 1.0 over the base year condition.
	Does the prioritization process consider congestion on project corridors?	Yes	The technical criteria scoring process included an analysis of projects against 2050 Peak Hour volumes from the Central Florida Regional Planning Model v7. Projects located on segments with higher V/C ratios received 7.5 or 15 points contingent upon the ratio.
	Does the plan fund operational improvements?	Yes	Volusia-Flagler 2050 allocates approximately \$20 million to fund operational improvements and strategies as Local Initiatives which are prioritized on an annual basis.
	Did the plan consider improvements identified through the CMP and provide funding for short-range improvements?	Yes	

Goal 1 – Develop and maintain a balanced and efficient multimodal transportation system

Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 1.3 - Provide public transit systems that serve diverse populations and deliver efficient and convenient transit service.	% of major road network serviced by transit	Maintained	No change in transit service coverage area as funding is only sufficient to support continuation of existing service.
Objective 1.4 - Develop a plan that maximizes the use of all available existing and alternative revenue sources and is financially feasible.	Is the plan financially feasible, and does it maximize all available revenue sources?	Yes	See Cost Feasible Plan Element.
Objective 1.5 - Incorporate measures that give priority to projects that provide high benefit-to-cost value.	Did project prioritization process include criteria scoring for cost effectiveness?	Yes	The technical criteria scoring process allocated more points to projects which did not require an increase in capacity through widening and had a scope that involved primarily ITS-related improvements.
Objective 1.6 - Adequately fund preservation of transportation assets (National Highway System pavement Condition, Bridge Condition, and Transit Assets).	% of Interstate pavements in good condition	Maintained	See Table 2.
	% of Interstate pavements in poor condition	Maintained	
	% of non-Interstate NHS pavements in good condition	Maintained	
	% of non-Interstate NHS pavements in poor condition	Maintained	
	% of NHS bridges by deck area in good condition	Maintained	
	% of NHS bridges by deck area in poor condition	Maintained	
Objective 1.7 - Address incident management including improving incident response and clearance time, and mitigating impacts through development of alternative routes and other solutions.	Does the project prioritization process consider new connections and upgraded facilities to provide parallel capacity?	Yes	The technical criteria scoring process included an evaluation of projects for whether they are a new facility or, based on their location, would relieve congestion on parallel facilities and/or provide additional capacity during emergency or evacuation events. Projects were also evaluated as to whether they added lanes that would match the number of lanes of the adjacent segment of the roadway.

Table 5: Volusia-Flagler 2050 Performance Evaluation - Goal 2

Goal 2 – Support the economic development and growth of the TPO area and region			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 2.1 - Develop a transportation system that supports diverse and sustainable economic growth, advances, tourism, and improves the economic competitiveness of the region.	Does the plan prioritize projects that improve access to economic activity centers?	Yes	The technical criteria scoring process included an analysis of projects to determine whether they would provide additional access to downtown locations, beaches, visitor destinations, large regional shopping/entertainment centers, or other similar activity centers.
Objective 2.2 - Identify and support safe and efficient truck routes and other facilities that improve the movement of freight and goods.	% VMT below adopted standard on roads designated as truck routes	Increase in congestion	The 2050 roadway network is expected to experience an increase in the percentage of VMT below adopted standard on designated truck routes over the base year condition.
	Average weighted V/C ratio on roads designated as truck routes	Increase in congestion on truck routes	The 2050 roadway network is expected to experience an increase in the average weighted V/C on designated truck routes over the base year condition.
	Does the plan consider freight specific infrastructure improvements/programs?	Yes	The technical criteria scoring process included an analysis of projects for whether they were within corridors identified on the National Highway Freight Network, SIS, regional freight subsystem, and select state corridors (see Appendix I). The TPO also engaged the freight community during the planning process.
	Does the plan identify and improve high crash truck route corridors?	Yes	The technical criteria scoring process included an analysis of fatal or serious injury commercial crashes along project segments. Projects on SIS corridors with identified fatal or serious injury commercial crashes received 7.5 points.
	Does the plan reduce Highway Truck Daily Total Hours of Delay (Percent)?	No	The technical criteria scoring process included an analysis of designated freight corridors. Projects identified along these corridors received 5 points.
	% truck miles severely congested (V/C > 1.2)	Increase in truck miles severely congested	The 2050 network is expected to experience an increase in the percentage of truck miles severely congested over the base year condition.

Table 6: Volusia-Flagler 2050 Performance Evaluation - Goal 3

Goal 3 – Support the economic development and growth of the TPO area and region			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 3.1 - Provide a range of transportation alternatives to improve mobility for all residents and visitors in rural and urban areas which includes addressing the unique needs of the elderly, people with disabilities, and those unable to drive.	% of elderly population within ¼ mile of bus stops	Maintained	No change in transit service as funding only sufficient to support continuation of existing service.
	% service area coverage	Maintained	No change in transit service coverage area as funding only sufficient to support continuation of existing service.
Objective 3.2 - Maximize the interconnectivity of roadways, sidewalks, bicycle facilities, multiuse trails, transit, and other transportation system components to provide safe and convenient pedestrian, bicycle, transit, and motor vehicle mobility by utilizing data to identify gaps.	% of major road network with bicycle facilities	Increased	It is anticipated that cost feasible roadway projects will include context-appropriate bicycle and pedestrian facilities.
	% of major road network with sidewalk facilities	Increased	
	% of major road network serviced by transit	Maintained	No change in transit service coverage as funding only sufficient to support the continuation of existing service.
Objective 3.3 - Enhance regional connectivity to employment, education, health, entertainment, and other major activity centers.	Does the plan identify projects that provide access to tourism/activity centers and ecotourism locations?	Yes	The technical criteria scoring process included an analysis of projects to determine whether they would provide additional access to downtown locations, beaches, visitor destinations, large regional shopping/entertainment centers, or other similar activity centers. Projects were also evaluated in relation to ecotourism locations including public conservation lands, trails, and cultural/historic sites.
	Number of regional transit routes	Maintained	SunRail provides regional transit service from the DeBary and DeLand station linking the area to multiple stops in Seminole, Orange, and Osceola counties.

Goal 3 – Support the economic development and growth of the TPO area and region			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 3.4 - Enhance transportation connectivity between local government jurisdictions within the region.	Does the plan identify projects that provide connectivity within the region?	Yes	<p>The technical criteria scoring process included an evaluation of projects for whether they are a new facility or, based on their location, would relieve congestion on parallel facilities and/or provide additional capacity during emergency or evacuation events.</p> <p>Projects were also evaluated as to whether they added lanes that would match the number of lanes of the adjacent segment of the roadway.</p>
Objective 3.5 - Plan for transportation infrastructure resiliency to maintain and ensure system connectivity during extreme events.	Did the plan consider transportation infrastructure resiliency and identify potentially vulnerable corridors?	Yes	<p>The technical criteria scoring process included an analysis projects in relation to evacuation routes as delineated by the Florida Department of Emergency Management and local government comprehensive plans.</p>

Table 7: Volusia-Flagler 2050 Performance Evaluation - Goal 4

Goal 4 – Eliminate crash-related fatalities and serious injuries and improve safety and security throughout the transportation network			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 4.1 – Identify and prioritize improvements to reduce the frequency and severity of crashes and eliminate fatalities and serious injuries to reach Vision Zero.	Does the plan use crash data to prioritize projects?	Yes	Project prioritization and technical scoring criteria process included an evaluation of crash data within the TPO's Vision Zero Action Plan.
Objective 4.2 - Identify and implement safety policies, programs, enhancements, and innovations to improve the safety for all roadway users, including the most vulnerable users such as pedestrians bicyclists, motorcyclists, and those using mobility devices (e.g., wheelchairs and scooters).	Does the plan consider safety programs for multimodal facilities?	Yes	Safety is the focus of the TPO's Bicycle and Pedestrian Plan (2018) and the Vision Zero Action Plan (2025). See pages 6-16 – 6-19.
Objective 4.3 - Enhance the safety and security of transit systems and other modes such as airports through appropriate design, monitoring, and enforcement programs.	Are security plans considered for transit systems serving the planning area?	Yes	Volusia-Flagler 2050 supports the security of transit systems in the planning area. See Appendix C .
Objective 4. 4 - Develop a transportation plan that supports emergency evacuation, response, and post-disaster recovery, and improves national, state, and local security and emergency management functions.	Does the plan identify evacuation routes?	Yes	The technical criteria scoring process included an analysis of projects in relation to evacuation routes as delineated by the Florida Department of Emergency Management and local government comprehensive plans.
	Does the plan consider projects that maintain or enhance evacuation routes?	Yes	
	Total lane miles of evacuation routes	Increased	Projects include additional lanes on existing evacuation routes, including SIS and State Highway System (Non-SIS) Cost Feasible projects.
	Is an evacuation plan in place?	Yes	The TPO supports the Florida Statewide Regional Evacuation Study Program and the Emergency Management Plans of Volusia and Flagler counties.

Table 8: Volusia-Flagler 2050 Performance Evaluation - Goal 5

Goal 5 – Promote livability through a multimodal transportation system that fosters quality communities and protects natural resources			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 5.1 - Promote compact, walkable, mixed-use, and transit-oriented development and redevelopment opportunities that encourage a range of transportation options and maximize the effectiveness of the transportation system.	Does the plan identify corridors that support compact, walkable, and mixed-use development and redevelopment opportunities?	Yes	The technical criteria scoring process included an evaluation of projects based on criteria related to Multimodal/Complete Streets elements and in support of Economic and Community Development.
	Are alternative modes of transportation considered when developing operational management strategies?	Yes	Strategies listed in the TPO's Congestion Management Process include measures to encourage the use of non-traditional modes such as bicycle facilities, pedestrian facilities, and ferry service.
Objective 5.2 - Develop a transportation plan with components planned and designed to preserve and enhance the existing character of both urban and rural communities.	Does the plan preserve and enhance the existing character of surrounding areas and corridors?	Yes	Improvements on the State Highway System are required to be appropriate for the assigned Context Classification.
Objective 5.3 - Support local visioning and planning principles by developing a plan that is consistent with local government comprehensive plans to the maximum extent feasible.	Are projects identified consistent with local government comprehensive plans?	Yes	The adopted Comprehensive Plans of the local governments in the TPO planning area were reviewed as part of the planning process and Volusia-Flagler 2050 was developed to be consistent with these plans.
Objective 5.4 - Locate and design transportation facilities to avoid or minimize the impact to natural resources including environmentally sensitive areas and critical lands, waters, and habitats.	Does the plan consider the potential environmental impacts of project corridors and include appropriate mitigation strategies?	Yes	Environmental mitigation was considered throughout the development of this plan and is discussed further in Chapter 5 and Appendix J .
Objective 5.5 - Develop and support a multimodal transportation system that reduces or mitigates vehicle greenhouse gas emissions or stormwater impacts.	% miles severely congested ($V/C > 1.2$)	Increase in the % of miles severely congested	The percentage of miles severely congested on the 2050 network is expected to increase over the base year condition.
Objective 5.6 - Locate and design transportation facilities to avoid or minimize impacts to historic and cultural assets.	Does the plan identify those projects in the Cost Feasible Plan that previously had not been screened in the ETDM process?	Yes	Appendix J addresses the status of ETDM screening for appropriate projects in Volusia-Flagler 2050.

Table 9: Volusia-Flagler 2050 Performance Evaluation - Goal 6

Goal 6 – Promote livability through a multimodal transportation system that fosters quality communities and protects natural resources			
Objective	Performance Indicator	Volusia-Flagler 2050	Comments
Objective 6.1 - Provide opportunities for public participation that are open, inclusive, and accessible for all members of the community; and develop outreach programs to engage all jurisdictions as well as the traditionally underserved and underrepresented.	Do projects identified consider the input obtained from an inclusive and accessible public involvement process?	Yes	A variety of public involvement opportunities were available throughout development of the plan for members of the community, local and agency representatives, and other stakeholders to provide their perspective, input, and feedback.
Objective 6.2 - Include provisions to identify the needs of low-income populations and ensure that projects in the plan do not disproportionately burden these populations, and include measures to avoid, minimize, or mitigate adverse impacts.	Do projects identified consider potential benefits and adverse impacts to Disadvantaged Populations?	Yes	Potential benefits and adverse impacts on disadvantaged populations were considered throughout the development of this plan and is discussed in detail in Chapter 4 and Chapter 5.
Objective 6.3 - Support transportation investments that improve public transit services for low income and transit-dependent populations to gain access to jobs, schools, health services, and other needed services.	% of major road network serviced by transit	Maintained	No change in transit service coverage area as funding only sufficient to support continuation of existing service.

Network Performance

Travel Demand Model Results

In addition to identifying the current and projected transportation demand of persons and goods, the travel demand model was used to evaluate the performance of the plan against identified performance targets and indicators, as well as the performance of the highway network in different scenarios. The travel demand model provides an indication of how effective the Volusia-Flagler 2050 Cost Feasible Plan network is in managing congestion and travel delay. An overall analysis of volume to capacity (V/C) ratios for the roadway network was conducted to demonstrate the level of congestion expected in 2050.

While the overall performance of the road network is satisfactory, there are some individual corridors in the planning area that are anticipated to have V/C ratios greater than 1.0. These roads are depicted in **Figure 2** which highlights the V/C ratios of the 2050 roadway network. Additional maps depicting the 2050 roadway network are included on the following pages, including the number of directional lanes (**Figure 1**) and annual average daily traffic (**Figure 3**).

Figure 1: Number of Directional Lanes (2050 Network)



Figure 2: Volume-to-Capacity (2050 Network)

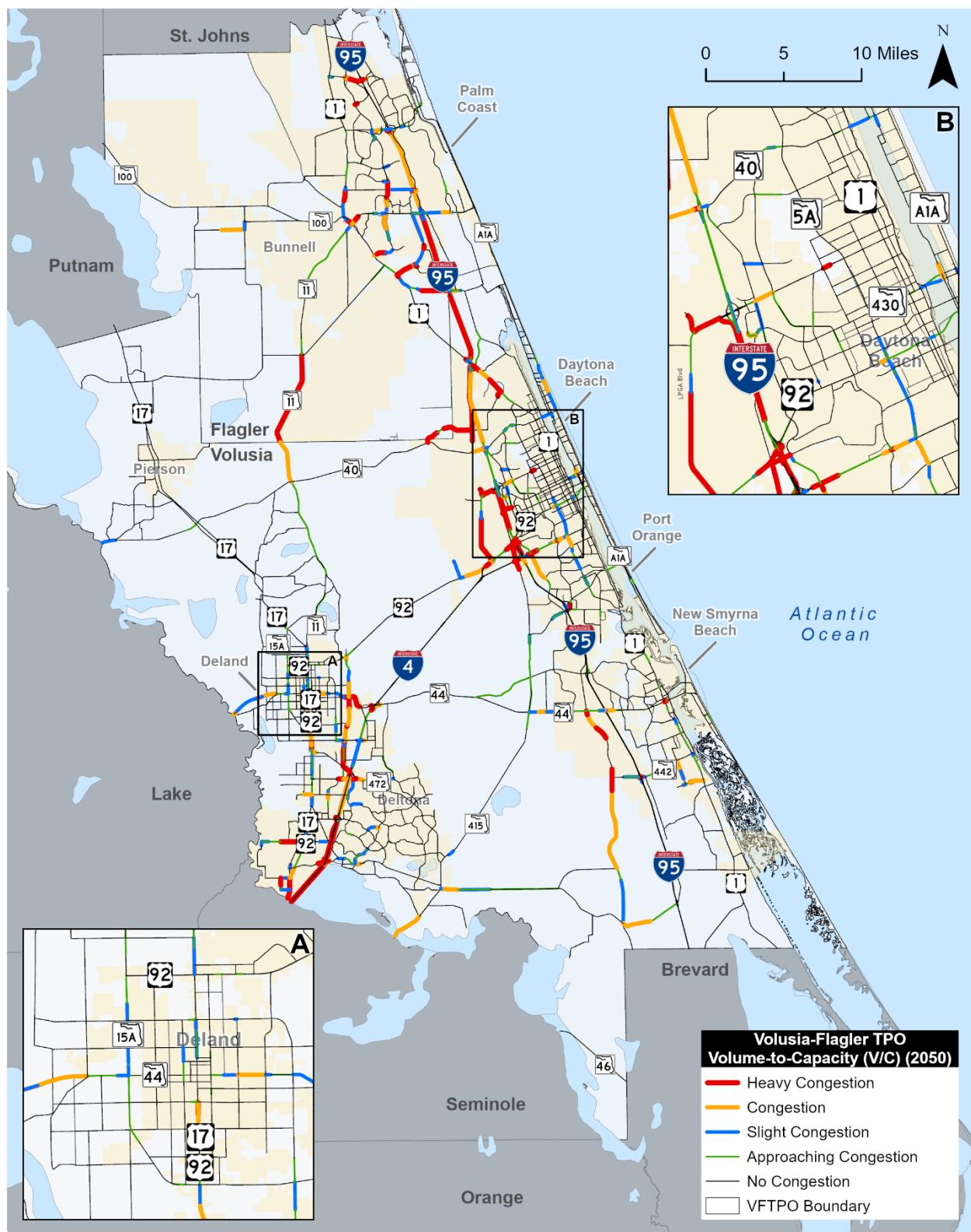


Figure 3: Annual Average Daily Traffic (2050 Network)

