



Charting a Course to 2040

SOUTH CAROLINA

MULTIMODAL TRANSPORTATION PLAN

Technical Memorandum

South Carolina Multimodal Transportation Plan Vision, Goals, Objectives, and Performance Measures

Prepared for:



Prepared by:



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TABLE OF CONTENTS

- 1. Introduction 1
 - 1.1 Baseline Understanding 1
 - 1.2 Plan Review 1
 - 1.3 Stakeholder Input 2
 - 1.4 Executive Workshop 1 - Vision Workshop 2
 - 1.5 Draft Strategic Plan 3
- 2. Vision and Goals 5
 - 2.1 Development of the Vision 5
 - 2.2 Development of Goals 5
 - 2.3 Executive Workshop 2 - Goal Refinement and Approval..... 6
- 3. Objectives, Guiding Principles and Performance Measures..... 11
 - 3.1 Objectives, Guiding Principles and Performance Measures Overview..... 11
 - 3.2 Objectives and Performance Measures Development 12
 - 3.3 Executive Workshop 3 – Objectives, Guiding Principles and Performance Measures Approval..... 12
 - 3.4 Stakeholder Review – Objectives, Guiding Principles and Performance Measures 13

LIST OF TABLES

- Table 2-1: Preliminary 2040 Multimodal Plan Goals Compared to Map-21 National Goals and 2030 Plan Goals..... 7
- Table 2-2: Final 2040 Multimodal Plan Goals 9
- Table 3-1: Goals, Objectives, Guiding Principles and Performance Measures..... 14
- Table 3-2: Performance Measures Descriptions..... 21

LIST OF FIGURES

- Figure 1-1: Relationship Between Strategic Plan and Multimodal Transportation Plan 4



1. INTRODUCTION

This report was prepared during development of the 2040 South Carolina Multimodal Transportation Plan. The purpose of the report is to describe the process used to develop the vision and goals that will guide and direct development of the 2040 South Carolina Multimodal Transportation Plan, as well as the Freight Plan, Rail Plan, Interstate Plan, Strategic Corridor Plan, and Transit Plan.

1.1 Baseline Understanding

The purpose of the baseline understanding task is to examine the implicit and explicit strategic direction that is currently guiding the South Carolina Department of Transportation (SCDOT). This task consisted of the following four activities:

- Analyzing current plans the Department is using to guide decision-making;
- Reviewing input received from stakeholders;
- Facilitating workshops with SCDOT executives; and,
- Analyzing the draft SCDOT Strategic Plan.

Each of these activities supported development of the vision and goals by providing insights into the critical issues, customer expectations and/or existing or emerging plans and strategies.

1.2 Plan Review

The core of the baseline understanding was the review of plans that are providing the framework for the Department's decision making. With one exception, the plans reviewed are in final form and are adopted. The exception is the draft SCDOT Strategic Plan, which is being developed in parallel with the 2040 Multimodal Plan. The following plans were reviewed in the baseline understanding process:

- 2030 Multimodal Transportation Plan, developed in 2008;
- 2030 Strategic Corridor System Plan, developed in 2008;
- 2030 Statewide Interstate Corridor Plan, developed in 2008;
- Statewide Transit Plan, developed in 2008;
- Statewide Executive Summary of the South Carolina Regional Human Services Transportation Coordination Plans, developed in 2007;
- Rail Right of Way Inventory, developed in 2008; and,
- Strategic Highway Safety Plan: The Roadmap to Safety, developed in 2007.

During the review process, the key strategic goals in the 2030 Multimodal Transportation Plan - Mobility, Accessibility, Safety, Security, Economic Vitality, Community Vitality, Environment, Equity, and Funding - were cross-referenced against any visions, missions, goals or guiding principles included in any adopted plan. A matrix was developed to capture this comparison across the plans and then a word analysis was completed to identify inconsistencies or nuances in the language used in the

various plans. The results of this analysis identified key concepts and themes serve as the foundation for the 2040 Multimodal Transportation Plan.

Concurrent to this analysis, the MAP-21¹ performance goal language and supporting documentation was reviewed and analyzed to identify areas of consistency and inconsistency with the SCDOT plan analysis. The plan analysis and the MAP-21 comparison were critical inputs used to develop the 2040 Multimodal Transportation Plan goals.

The analysis of existing plans provided an understanding of what is important to SCDOT today. However, this understanding was supplemented with insight on the future multimodal transportation direction that customers and SCDOT executives envision for South Carolina. Two executive workshops and an in-depth analysis of the draft SCDOT Strategic Plan provided more future-focused insights.

1.3 Stakeholder Input

The 2040 Multimodal Transportation Plan kickoff meeting was conducted on July 31, 2012; 138 stakeholders attended representing all transportation interests from around the state. Introductory remarks on the importance of the plan and this multi-agency cooperative effort were provided by SCDOT Secretary Robert J. St. Onge Jr., Department of Commerce Secretary Bobby Hitt, South Carolina State Ports Authority Vice President Jack Ellenberg, and FHWA South Carolina Division Administrator Bob Lee. After an overview presentation describing the Multimodal Transportation Plan process and primary products, the stakeholders participated in the following three modal break-out sessions to provide input on the transportation system needs and SCDOT priorities:

- Transit and Bicycle and Pedestrian;
- Interstate and Strategic Corridors; and,
- Freight and Rail.

The discussions at each session provided valuable stakeholder expectations and perspectives on the goals that should be considered in the Multimodal Plan.

1.4 Executive Workshop 1 - Vision Workshop

On August 1, 2012, a Vision Workshop was conducted with the executives from SCDOT, Department of Commerce, South Carolina Ports Authority, and FHWA. Specific questions discussed included:

1. What was South Carolina like 25 years ago? How has SCDOT changed in response to those changes?
2. How will South Carolina be different in 2040? What will be driving those changes?
3. Other than funding, what three issues facing the state transportation system (not the Department), most concern you today?

¹ Federal legislation: Moving Ahead for Progress in the 21st Century (July 6, 2012).

4. How many of those issues will be addressed in 5 years? 10 years? 20 years? What is it about each issue that makes it such a long term question?
5. As a citizen of the state, what is important or of concern to you?
6. What would you want to be different about the state's overall transportation system now, and in 10 years?
7. In 2040, what three changes in the transportation system would make the biggest difference to South Carolina?
8. Taking off your SCDOT hat and answering on behalf of your customers, what should be different about the state's overall transportation system 5 years from now? 10 years from now?

The visioning exercise provided significant information about current and future multimodal transportation issues that are critical to SCDOT, Department of Commerce, and the Ports Authority to address. The feedback received was used to develop the draft vision and goals.

1.5 Draft Strategic Plan

The final input into the baseline understanding was reviewing the draft SCDOT Strategic Plan. The Strategic Plan is the Department's internal business plan; thus, its primary audience is the employees of the Department itself. It is intended to communicate the internal priorities for fulfilling the Department's legislative mission and serving its customers to the SCDOT staff. Simply put, for the most part it describes "how" SCDOT will deliver products and services. On the other hand, the Multimodal Transportation Plan is an externally-focused document intended to describe broadly "what" the Department will provide to its customers.

The Department's Strategic and Multimodal plans have separate audiences, but must be carefully crafted to complement each other. The draft Strategic Plan includes a vision and identifies the following six critical management areas (CMAs):

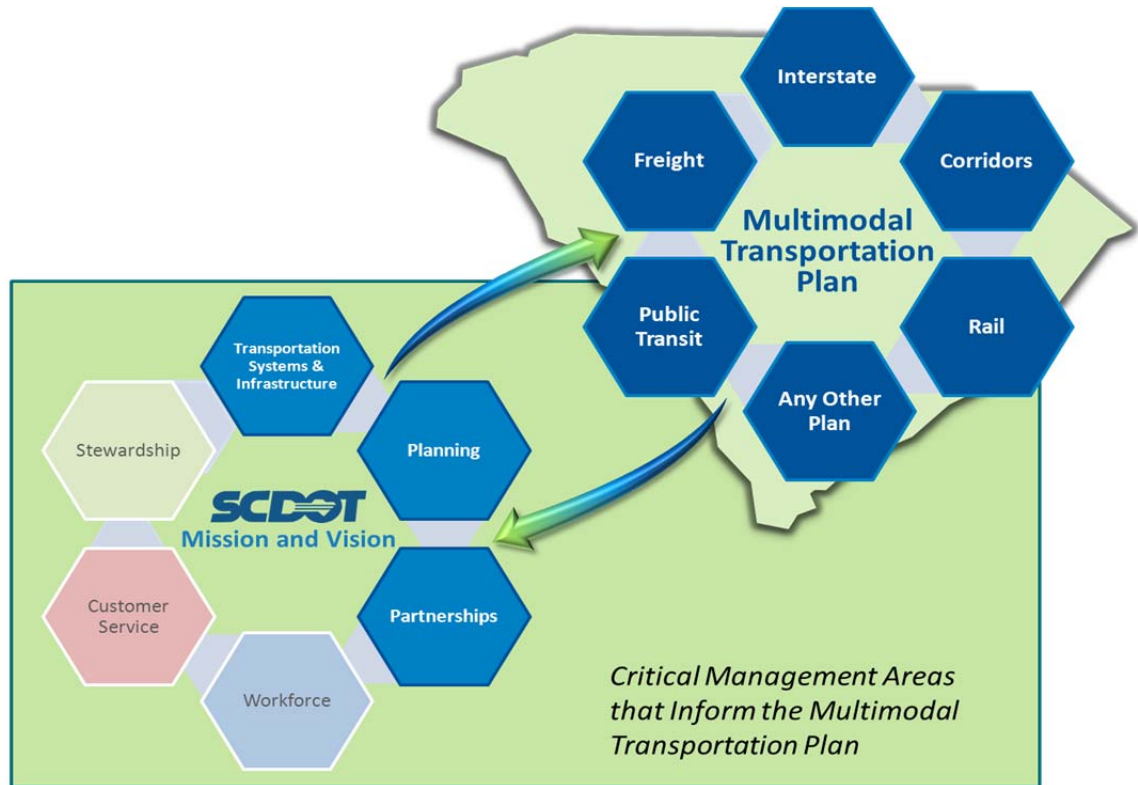
- Workforce;
- Customer Service;
- Partnerships;
- Planning;
- Stewardship; and,
- Transportation Systems and Infrastructure.

Each CMA includes separate goals, objectives and metrics. While primarily internally focused, the following three CMAs overlap with externally-focused products and services:

- Partnerships;
- Planning; and,
- Transportation Systems and Infrastructure.

The Strategic Plan and Multimodal Plan are being developed in parallel. It is important, therefore, to communicate clearly the relationship between these efforts to SCDOT staff and customers. **Figure 1-1** identifies the three CMAs that are directly relevant to the Multimodal Plan and clearly indicates how information will flow between the two plans to maintain consistency.

Figure 1-1: Relationship Between Strategic Plan and Multimodal Transportation Plan



A more in-depth analysis of the July version of the draft Strategic Plan was conducted to “connect the dots” and identify the potential linkages between the draft Strategic vision, goals, and objectives and those being developed for the 2040 Multimodal Transportation Plan.

In summary, these four activities, the plan analysis, stakeholder break-out sessions, Executive Team Workshop and Strategic Plan analysis, constitute the baseline understanding that informed the development of the 2040 Multimodal Transportation Plan’s vision and goals.



2. VISION AND GOALS

2.1 Development of the Vision

A vision communicates the future in clear and definitive language. The purpose of a vision is to align an organization's internal and external expectations, plans, and actions. Typically visions describe the "what" and "why" for an organization. The draft SCDOT Strategic Plan includes this vision:

Striving to provide safe, reliable surface transportation systems and infrastructure and effective support for a healthy South Carolina economy through smart stewardship of all available resources.

This vision describes the "what" (safe and reliable transportation systems and infrastructure) and the "why" (effective support for a healthy South Carolina economy), but also adds the "how" (striving to provide ... through smart stewardship of all available resources).

An effective vision should be the same, or very nearly the same, internally and externally. The initial step in the development of the 2040 Multimodal Transportation Plan vision considered the ability of the Strategic Plan vision to communicate the Department's vision to external audiences. It was determined that, with minor modification, the Strategic Plan vision accomplished this. It has a clearly stated and explicit "what" and "why," the primary messages the vision needs to communicate to customers. The recommended vision was presented to the Executive Team at a workshop held on November 13, 2012. There was consensus that this will be the vision for the 2040 Multimodal Transportation Plan:

Safe, reliable surface transportation and infrastructure that effectively supports a healthy economy for South Carolina.

2.2 Development of Goals

The baseline understanding provided a strong foundation for the development of the 2040 Multimodal Transportation Plan goals. The over-arching conclusion from the analysis of the baseline understanding is that both South Carolina and the nation are facing significantly different issues than in 2008 when the 2030 Multimodal Transportation Plan was adopted. Therefore, the goals should not be just a trend on the past, but should reflect the new challenges the state is facing. There is recognition that transportation plans need to be tied more tightly to the state's economy. There is a desire for the Department to articulate its support for a more multimodal transportation system, even though resources to support non-highway investments are highly constrained. Finally, the Department needs to communicate that one of its primary responsibilities is managing and maintaining the current state transportation system.

2.3 Executive Workshop 2 - Goal Refinement and Approval

Using the information gathered during the baseline understanding task, a set of “strawman” 2040 Multimodal Transportation Plan goals was developed. These preliminary goal statements were then compared to the 2030 Multimodal Transportation Plan goals and the national goal areas included in MAP-21; adjustments in both goal categories and content were made based on this initial cross-referencing (see **Table 2-1**).

On November 13, 2012 the preliminary SCDOT goals were presented to executives from SCDOT, Department of Commerce, South Carolina Ports Authority and FHWA – the Executive Leadership Team. The Executive Team discussed each goal and made thoughtful revisions that more accurately reflect their intended strategic direction for SCDOT, Department of Commerce, and the Ports Authority.

Following this workshop the changes discussed by the Executive Team were incorporated and final goals were sent to the SCDOT project manager for review. He concurred that the final version of the goals shown in **Table 2-2** accurately reflected the Executive Team discussions. These final goals were compared to both the MAP-21 national goals and Federal planning factors, as shown in **Table 2-3**.

Table 2-1: Preliminary 2040 Multimodal Plan Goals Compared to Map-21 National Goals and 2030 Plan Goals

PRELIMINARY 2040 MULTIMODAL PLAN GOALS	MAP-21 National Goals						2030 MULTIMODAL PLAN GOALS	Performance Measurement	
	Congestion Reduction	System Reliability	Safety	Infrastructure Condition	Freight and Economic Vitality	Environmental Sustainability		Quantitative	Subjective
Mobility and System Reliability - Provide transportation infrastructure and services that will ensure the efficient and reliable movement of people and goods throughout the state.	✓	✓			✓		Mobility - Promote efficient movement of people and freight and reduced travel times for all modes of transportation.	✓	
Safety and Security - Improve the safety and security of the transportation system by implementing transportation improvements that reduce fatalities and serious injuries and ensure efficient coastal evacuation routes.			✓				Safety - Minimize crashes and fatalities and ensure efficient coastal evacuation routes. Security - Increase security of the transportation system for the motorized and non-motorized users.	✓	✓
Infrastructure Condition - Maintain, preserve and extend the service life of the state transportation infrastructure				✓				✓	

PRELIMINARY 2040 MULTIMODAL PLAN GOALS	MAP-21 National Goals						Performance Measurement		
	Congestion Reduction	System Reliability	Safety	Infrastructure Condition	Freight and Economic Vitality	Environmental Sustainability	2030 MULTIMODAL PLAN GOALS		
							Quantitative	Subjective	
<p>Economic and Community Vitality - Provide an efficient and effective interconnected transportation system that is coordinated with land development patterns to support thriving communities and South Carolina’s economic competitiveness in regional, national and international markets.</p>					✓		<p>Economic Vitality - Provide an efficient, interconnected transportation system to maintain economic competitiveness. Community Vitality - Minimize and mitigate community disruptions resulting from existing and future transportation facilities and ensure that citizens have appropriate, accessible, multi-modal transportation choices to serve their mobility needs. Accessibility - Ensure that transportation facilities and services are coordinated with land development patterns and community needs to ensure that all citizens can easily reach important destinations.</p>	✓	✓
<p>Environment - Protect South Carolina’s natural and cultural resources by partnering to minimize the impacts of state transportation investments.</p>						✓	<p>Environment – Avoid, Minimize, and mitigate transportation system impacts on water resources, natural habitats, cultural resources and air quality and ensure transportation investments are consistent with efforts to preserve and improve environmental quality.</p>		✓
<p>Equity – Develop a transportation system that recognizes and accommodates the demographic and geographic diversity of the state.</p>							<p>Equity - Develop a transportation system that meets the needs of all citizens, recognizing that variations in income, age, ability and regional location produce different mobility needs.</p>		

Table 2-2: Final 2040 Multimodal Plan Goals

2040 Multimodal Plan Goals	
Mobility and System Reliability	Provide surface transportation infrastructure and services that will advance the efficient and reliable movement of people and goods throughout the state.
Safety and Security	Improve the safety and security of the transportation system by implementing transportation improvements that reduce fatalities and serious injuries as well as enabling effective emergency management operations.
Infrastructure Condition	Maintain surface transportation infrastructure assets in a state of good repair.
Economic and Community Vitality	Provide an efficient and effective interconnected transportation system that is coordinated with state and local planning efforts to support thriving communities and South Carolina's economic competitiveness in global markets.
Environment	Partner to sustain South Carolina's natural and cultural resources by avoiding, minimizing and mitigating the impacts of state transportation improvements.
Equity	Manage a transportation system that recognizes the diversity of the state and strives to accommodate the mobility needs of all of South Carolina's citizens.

Table 2-3: Final 2040 Multimodal Plan Goals Compared to MAP-21 National Goals and SAFETEA-LU Planning Factors

FINAL 2040 MULTIMODAL PLAN GOALS	MAP-21 National Goals						SAFETEA-LU Planning Factors							
	Congestion Reduction	System Reliability	Safety	Infrastructure Condition	Freight and Economic Vitality	Environmental Sustainability	Economic Vitality	Safety	Security	Accessibility and Mobility	Environment, Energy, Quality of Life, Consistency	Integration and Connectivity	System Management and Operation	Preservation
Mobility and System Reliability - Provide surface transportation infrastructure and services that will advance the efficient and reliable movement of people and goods throughout the state.	✓	✓			✓		✓			✓		✓	✓	
Safety and Security - Improve the safety and security of the transportation system by implementing transportation improvements that reduce fatalities and serious injuries as well as enabling effective emergency management operations.			✓					✓	✓					✓
Infrastructure Condition - Maintain surface transportation infrastructure assets in a state of good repair.				✓									✓	✓
Economic and Community Vitality - Provide an efficient and effective interconnected transportation system that is coordinated with state and local planning efforts to support thriving communities and South Carolina’s economic competitiveness in global markets.					✓		✓		✓		✓	✓		
Environment - Partner to sustain South Carolina’s natural and cultural resources by minimizing and mitigating the impacts of state transportation improvements.						✓					✓			
Equity - Manage a transportation system that recognizes the diversity of the state and strives to accommodate the mobility needs of all of South Carolina’s citizens.										✓	✓	✓		



3. OBJECTIVES, GUIDING PRINCIPLES AND PERFORMANCE MEASURES

3.1 Objectives, Guiding Principles and Performance Measures Overview

Objectives and performance measures are the foundation for tying the more conceptual elements of a long range plan, Vision and Goals, to program and project implementation. Objectives for the 2040 Multimodal Transportation Plan define the outcomes that SCDOT intends to achieve related to each goal. Performance measures “operationalize” that objective and define how that outcome will be measured, monitored, and reported.

Objectives and performance measures fall into two major categories --- plan level and implementation level.

Plan level objectives and measures will be used to evaluate alternative investment scenarios during the development of the Multimodal Plan. The objectives and measures require data that can be projected over the 25-year timeframe of the plan and provide the information needed for the SCDOT to consider trade-offs in what can be accomplished given limited funding resources.

Implementation level objectives and measures tie the plan to implementation. The objectives and measures are used after the plan is adopted to help guide project selection and monitor progress toward achieving the plan goals once projects and services are implemented.

It is important to recognize that plans often include commitments that cannot be quantified by data. SCDOT does not own the state’s entire transportation infrastructure nor operate all of its services yet it has a significant interest in how well all modes work together to serve the state’s citizens and businesses. Therefore, in addition to measureable objectives, this plan includes Guiding principles to describe SCDOT’s interest in infrastructure and services it does not control.

Guiding Principles are implemented through process or policy changes or through enhanced relationships with local government, other state agencies, modal owners and operators.

Plan and implementation level objectives and measures as well as any associated Guiding principles must be aligned and consistent for successful implementation of the Multimodal Plan. In addition these foundational pieces of the Multimodal Plan need to be supported at all levels of SCDOT as well as partners and stakeholders externally. Therefore, the process for developing this portion of the Multimodal Plan has been iterative and has involved executive and staff at SCDOT, key partners and stakeholders.

3.2 Objectives and Performance Measures Development

Objectives for the 2040 Multimodal Transportation Plan are drawn from two primary sources. A preliminary draft of the objectives was developed based on information gathered during the plan review process and MAP-21 analysis described in **Section 1.2**. The plan review process provided a rich source of outcome-based objectives that have been vetted through internal and external planning processes. Objectives consistent with the 2040 Multimodal Plan goals were carried forward and sorted into two categories -- those that can be measured quantitatively and those that are more qualitative. Quantitative objectives drawn from prior plans were included in the list of preliminary objectives for this plan. Those that were more qualitative were evaluated as potential Guiding principles. Additions and modifications were made based on information gathered during Executive Workshop 1 (**Section 1.4**).

A set of Performance Measure Criteria were developed to help SCDOT Executives and staff focus on selecting the most relevant and practical performance measures. These criteria are:

- Support strategic objectives;
- Provide predicative, diagnostic and reporting value;
- Work within the available data and existing measures whenever possible;
- Be as simple as possible;
- Focus on what SCDOT can control and measure;
- Build on SCDOT staff input and direction; and
- Maintain some flexibility.

A series of meetings held with department staff during the fall of 2012 provided the foundation for the plan's proposed performance measures. The purpose of these meetings was to establish a baseline diagnostic of SCDOT's existing performance measure efforts and assess data availability. Individual meetings were held with SCDOT staff from Environment, Traffic/Operations/Safety, Maintenance, Bicycle/Pedestrian, Freight and Transit.

The Draft Objectives (including the Guiding principles) and the Potential Performance Measures were reviewed by the SCDOT senior leadership team on February 14, 2013. During this meeting, changes were made to both the substance and the wording of the objectives and Guiding principles. Additional feedback was received regarding the relevance and consistency of the potential measures to current data sources and measurement initiatives.

3.3 Executive Workshop 3 – Objectives, Guiding Principles and Performance Measures Approval

On March 25, 2013 a third Executive Workshop was held. The purpose of this meeting was to review and endorse the final Objectives, Guiding Principles and Performance Measures for the 2040 Multimodal Transportation Plan. This endorsement constituted conditional approval of these portions of the plan pending review and comment by stakeholders. Executives from SCDOT, Department of Commerce, South Carolina Ports Authority, and FHWA attended this meeting. Final revisions to the objectives and Guiding principles were made.

3.4 Stakeholder Review – Objectives, Guiding Principles and Performance Measures

On April 10 and 11, 2013 three modal webinars were conducted with stakeholders to review the products and status of the 2040 Multimodal Plan development to date. The three webinars were:

- Freight and Rail;
- Interstate and Strategic Corridors; and
- Public Transportation and Bicycle and Pedestrian.

The goals, objectives, Guiding Principles and performance measures were presented during these webinars and stakeholders were provided the opportunity during the call and through the project website to provide comments. One substantive suggestion was received and has been incorporated into the final version of the 2040 Multimodal Plan Goals, Objectives, Guiding Principles and Performance Measures that is included in **Table 3.1**. This summary documents the work completed as well as indicates which objectives and Guiding principles will be incorporated into each of the five modal plans being developed as a part of the 2040 Multimodal Transportation Plan. This linkage between the overall plan objectives and Guiding principles and those included in each modal plan assures that these efforts will be consistent and coordinated during both plan development and implementation. In addition to the summary tables presented below, a brief description of the proposed performance measures can be found in **Table 3.2**.

Table 3-1: Goals, Objectives, Guiding Principles and Performance Measures

Mobility and System Reliability Goal

Provide surface transportation infrastructure and services that will advance the efficient and reliable movement of people and goods throughout the state.

Background: Improved mobility and reliable travel times on South Carolina’s transportation system are vital to the state’s economic competitiveness and quality of life. National MAP-21 legislation makes highway system performance a national goal and requires states to report on their performance. SCDOT uses a combination of capital improvements and operations strategies to accommodate demand for travel. Data on congestion is rapidly becoming more sophisticated, but estimating needs based on this data and linking investment strategies to congestion outcomes remains a challenge.

Plan Coordination*

Proposed Objective	OP	I	SC	F	T	R	Potential Measures
Plan Level							
Reduce the number of system miles at unacceptable congestion levels	X	X	X	X			Miles of NHS and state Strategic Corridor system above acceptable congestion levels (INRIX density, LOS, etc.)
Utilize the existing transportation system to facilitate enhanced modal options for a growing and diverse population and economy					X		% of transit needs met
Implementation Level							
Improve travel time reliability (on priority corridors or congested corridors)	X	X	X	X	X		Average or weighted buffer index or travel time on priority corridors
Reduce the time it takes to clear incident traffic		X	X				Average time to clear traffic incidents in urban areas
Utilize the existing transportation system to facilitate enhanced modal options for a growing and diverse population and economy				X	X		% increase in transit ridership Commuter travel time index on urban interstates ¹ Truck travel time index on the freight corridor network
Potential Guiding Principles							
Encourage availability of both rail and truck modes to major freight hubs (for example ports, airports and intermodal facilities)	X	X	X	X		X	

¹ Measure identified by SCDOT in Strategic Plan. Is there data available to calculate this measure?

***Legend:** OP – Overall Plan; I – Interstate; SC – Strategic Corridors; F – Freight; T – Transit; R - Rail

Safety Goal

Improve the safety and security of the transportation system by implementing transportation improvements that reduce fatalities and serious injuries as well as enabling effective emergency management operations.

Background: Safe travel conditions are vital to South Carolina’s health, quality of life and economic prosperity. SCDOT partners with other safety on the state’s transportation system. SCDOT maintains extensive data on safety; however, even state-of-the-art planning practices often cannot connect investment scenarios with safety outcomes.

Proposed Objective	OP	I	SC	F	T	R	Potential Measures
Plan Level							
Improve substandard roadway.	X	X	X				% of substandard roadway improved
Implementation Level							
Reduce highway fatalities and serious injuries.	X	X	X				Number or rate of fatalities and serious injuries
Reduce bicycle and pedestrian fatalities and serious injuries.	X		X				Number or rate of bike/pedestrian fatalities and injuries
Reduce roadway departures.	X	X	X				Number of roadway departure crashes involving fatality or injury
Reduce head-on and across median crashes.	X	X	X				Number of head on and cross median fatal and serious injury crashes
Reduce preventable transit accidents.					X		Number of accidents per 100,000 service vehicle miles
Reduce rail grade crossing accidents.						X	% of crossings with active safety warning devices installed
Potential Guiding Principles							
Better integrate safety and emergency management considerations into project selection and decision making.	X						
Better integrate safety improvements for bicycle, pedestrian, and other non-vehicular modes in preservation programs by identifying opportunities to accommodate vulnerable users when improvements are included in an adopted local or state plan.	X		X		X		
Work with partners to encourage safe driving behavior.	X				X		

Infrastructure Condition Goal

Maintain surface transportation infrastructure assets in a state of good repair.

Background: Preserving South Carolina’s transportation infrastructure is a primary element of SCDOT’s mission. This goal promotes public sector fiscal health by minimizing life-cycle infrastructure costs, while helping keep users’ direct transportation costs low. Maintaining highway assets in a state of good repair is one of the national MAP-21 goals and requires states and transit agencies to report on asset conditions. SCDOT maintains fairly extensive data and analytical capabilities associated with monitoring and predicting infrastructure condition.

Proposed Objective	OP	I	SC	F	T	R	Potential Measures
Plan and Implementation Level							
Maintain or improve the current state of good repair for the NHS.	X	X	X				Number of miles of interstate and NHS system rated at “good” or higher condition ³
Reduce the percentage of remaining state highway miles (non-interstate/strategic corridors) moving from a “fair” to a “very poor” rating while maintaining or increasing the % of miles rated as “good”.	X	X	X				% of miles moving from “fair” to “very poor” condition % of miles rate “good” condition
Improve the condition of the state highway system bridges	X	X	X	X			Percent of deficient bridge deck area
Improve the state transit infrastructure in a state of good repair.					X		# and % of active duty transit vehicles past designated useful life
Potential Guiding Principles							
Recognize the importance of infrastructure condition in attracting new jobs to South Carolina by considering economic development when determining improvement priorities.	X	X	X	X			
Encourage availability of both rail and truck modes to major freight hubs (for example ports, airports and intermodal facilities).	X	X	X	X		X	
Coordinate with the SC Public Railways to consider road improvements needed to support the efficient movement of freight between the Inland Port and the Port of Charleston.			X	X		X	
Comply with Federal requirements for risk-based asset management planning while ensuring that State asset management priorities are also addressed.	X	X	X				

³ The modal plan draft splits the Strategic Plan pavement condition objective into two tiers --- one for the NHS and one for all other roads. In keeping with MAP-21 the objective for the NHS system reflects maintaining or improving current condition while the objective for the remainder of the system is consistent with the Strategic Plan approach of “managing deterioration”.

Economic and Community Vitality Goal

Provide an efficient and effective interconnected transportation system that is coordinated with state and local planning efforts to support thriving communities and South Carolina’s economic competitiveness in global markets.

Background: Transportation infrastructure is vital to the economic prosperity of South Carolina. Good road, rail, transit and air connections across the state help businesses get goods and services to markets and workers get to jobs. Communities often cite desire for economic growth as a reason for seeking additional transportation improvements and public officials frequently justify transportation spending on its economic merits. State-of-the-art planning practices, however, offer limited potential for connecting investment scenarios with travel choices outcomes.

Proposed Objective	OP	I	SC	F	T	R	Potential Measures
Plan Level							
Improve access and interconnectivity of the state highway system to major freight hubs (road, rail, marine and air).	X		X	X			% of freight bottlenecks addressed
Implementation Level							
Utilize the existing transportation system to facilitate enhanced freight movement to support a growing economy.	X	X		X			Truck travel time index on the freight corridor network
Potential Guiding Principles							
Work with economic development partners to identify transportation investments that will improve South Carolina’s economic competitiveness.	X	X	X	X	X	X	
Work with partners to create a project development and permitting process that will streamline implementation of SCDOT investments associated with state-identified economic development opportunities.	X						
Partner with state and local agencies to coordinate planning.	X						
Encourage local governments and/or MPOs to develop and adopt bicycle and pedestrian plans.	X						
Partner with public and private sectors to identify and implement transportation projects and services that facilitate bicycle and pedestrian movement consistent with adopted bike/pedestrian plans.	X						
Encourage coordination of transit service within and among local jurisdictions.					X		
Partner with public and private sectors to identify and implement transportation projects and services that facilitate freight movement.	X	X	X	X		X	

Proposed Objective	OP	I	SC	F	T	R	Potential Measures
Encourage rail improvements that will improve connectivity and reliability of freight movement to global markets.				X		X	
Encourage availability of both rail and truck modes to major freight hubs (for example ports, airports and intermodal facilities).	X	X	X	X		X	

⁴ Meeting notes with SCDOT are not entirely clear. Confirm this objective with SCDOT.

Environmental Goal

Partner to sustain South Carolina’s natural and cultural resources by avoiding, minimizing, and mitigating the impacts of state transportation improvements.

Background: The goal is consistent with SCDOT current environmental policies and procedures. MAP-21 includes an Environmental Sustainability goal which requires states “to enhance the performance of the transportation system while protecting and enhancing the environment.” Other than air quality quantitative measures for impacts to the environment are difficult to calculate at the plan level. For the most part the environmental goal will be measured as projects are selected, designed, constructed and maintained over time.

Proposed Objectives	OP	I	SC	F	T	R	Potential Measures
Plan Level							
None							
Implementation Level							
Plan, design, construct and maintain projects to avoid, minimize and mitigate impact on the state’s natural and cultural resources.							Demonstrate conformity in non-attainment areas of the state Wetland/habitat acreage created/restored/impacted
Proposed Guiding Principles							
Partner with public and private sectors to identify and implement transportation projects and services that facilitate bicycle and pedestrian movement consistent with adopted bike/pedestrian plans.	X						
Partner to be more proactive and collaborative in avoiding vs. mitigating environmental impacts.	X	X	X	X			
Encourage modal partners to be proactive in considering and addressing environmental impacts of their transportation infrastructure investments.					X	X	
Work with environmental resource agency partners to explore the development of programmatic mitigation in South Carolina.	X	X	X	X			
Partner with permitting agencies to identify and implement improvements to environmental permitting as a part of the department’s overall efforts to streamline project delivery.							

Equity Goal

Manage a transportation system that recognizes the diversity of the state and strives to accommodate the mobility needs of all of South Carolina’s citizens.

Background:

Transportation is essential to support individual and community quality of life. As a public agency SCDOT has a public stewardship responsibility that requires it to evaluate needs and priorities in a way that recognizes the diversity of the state’s geographic regions and traveling public. There are no quantitative measures identified to evaluate the Equity goal.

Proposed Objectives	OP	I	SC	F	T	R	Potential Measures
Plan Level							
None							
Potential Guiding Principles							
Ensure planning and project selection processes adequately consider rural accessibility and the unique mobility needs of specific groups.	X	X	X	X	X		
Partner with local and state agencies to encourage the provision an appropriate level of public transit in all 46 South Carolina counties.					X		
Ensure broad-based public participation is incorporated in to all planning and project development processes.	X	X	X	X	X	X	

Table 3-2: Performance Measures Descriptions

Mobility and System Reliability	Description
Plan Level Measures	
Mileage of NHS and State Strategic Corridor system above acceptable congestion levels	This applies a congestion measure, such as volume to capacity ratios (V/C) or roadway density, to different road classes to assess how well the overall highway system will accommodate current and future travel demand under different investment scenarios.
Percent of transit needs met	This measure provides an output-based assessment of how future spending strategies might meet the estimated transit needs, which can be estimated using the regional transit plans.
Implementation Level Measures	
Reliability indices: <ul style="list-style-type: none"> Average or weighted buffer index or travel time index on priority corridors Commuter travel time index on urban interstates Truck travel time index on the freight corridor network (also found in the Economic and Community Vitality Goal) 	Buffer and travel time indices provide a measure of reliability, i.e. the predictability, of trip times. This measure works particularly well in urban areas where drivers may be accustomed to everyday congestion. Although congestion is not welcomed, most travelers are less tolerant of unexpected delays than everyday congestion because they anticipate it.
Average time to clear traffic incidents in urban areas	Traffic incidents are a leading cause of nonrecurring congestion and clearing the roadway quickly (and safely) helps minimize the impacts to mobility.
Percent increase in transit ridership	Ridership provides a method of measuring transit demand and availability in which the data is easy to collect and analyze and the metrics are easy to communicate.
Safety	
Plan Level Measures	
Percent of substandard roadway improved	This measure provides a system-level look at the number of highways that can be improved under various investment strategies
Implementation Level Measures	
A variety of fatality and injury measures, including: <ul style="list-style-type: none"> Number or rate of fatalities and serious injuries Number or rate of bike/pedestrian fatalities and injuries Number of roadway departure crashes involving fatality or injury Number of head on and cross median crashes Number of accidents per 100,000 service vehicle miles Number of rail grade crossing incidents 	Due to the importance of improving safety, it is appropriate to track overall safety performance with respect to fatalities and injuries, as well as those associated with specific modes and crash types.
Infrastructure Condition	
Plan and Implementation Level Measures	
Pavement health: <ul style="list-style-type: none"> Number of miles of interstate and NHS system rated at “good” or higher condition Percent of all miles moving from “fair” to “very poor” condition Percent of all miles rated “good” 	The pavement health index account for factors such as pavement smoothness, rutting and cracking, and roll them up into an assessment of overall pavement health. This method of measurement permits the overall health of the system to be evaluated under a variety of investment scenarios. The definitions of “good”, “fair”, and “poor” will coincide with those already in use at the Department.
Percent of deficient bridge deck area	Structural deficiency is a common, basic measure of bridge condition that indicates the need for maintenance, rehabilitation, or replacement. Weighting by deck area helps account for the fact that larger bridges cost more to repair

Number and percent of active duty transit vehicles past designated useful life	This key indicator of transit system fleet condition measures the health of the transit fleet and allows for variance for vehicle type and usage.
Economic and Community Vitality	
Description	
Plan Level Measures	
Percent of freight bottlenecks addressed	This planning level measure can be weighted by number of bottlenecks, the amount of travel, or the costs of improvements. It is intended to give a high-level estimation of how well freight bottlenecks can be relieved under various investment strategies.
Implementation Level Measures	
Truck travel time index on the freight corridor network	This simple speed metric is an indicator of how efficiently freight is moving along the freight network. Higher average speeds indicate a more efficient system, which reduces transportation costs for business.
Economic and Community Vitality	
Description	
Implementation Level Measures	
Demonstrate conformity in non-attainment areas of the state	Air quality impacts are an important consideration when making transportation investment decisions. This standard metric will be monitored in conjunction using transportation models currently being run in partnership with the Department of Health and Environmental Control.
Wetland/habitat acreage created/restored/impacted	Impacts to wetland and wildlife habitats are an important consideration when planning for a transportation improvement. This measure quantifies the affected acreage and mitigation methods.