# Performance Measures Technical Memorandum

North Carolina Department of Transportation Strategic Transportation Corridor Vision Plans

## Corridor S: Future I-795

Wilson County to I-40 in Sampson County

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In 2015, the North Carolina Department of Transportation (NCDOT) identified a network of key multimodal transportation corridors called Strategic Transportation Corridors (STC) to support smart planning, help set long-term investment decisions, and ensure that North Carolina's economic prosperity goals are achieved. The STCs are intended to promote transportation system connectivity, provide high levels of mobility, and improve access to important state and regional activity centers. A key element in the advancement of the STCs is the development of corridor master plan visions.

The purpose of the master plan visions is to:

- identify high-level corridor mobility visions and associated improvement strategies,
- guide improvements and development in a manner that defines a long-term vision and performance level for the corridors, and
- help protect the corridor's key functions as defined in the corridor profiles.

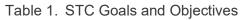
NCDOT has initiated the development of a master plan for Corridor S (Future I-795), which follows existing I-795 and U.S. 117 from I-95 in Wilson County to I-40 in Sampson County. This corridor begins on the western edge of Wilson and runs through Goldsboro, Mount Olive, and Calypso, ending west of Faison.

To assist in developing a master plan vision for Future I-795, goals and performance measures were collected from Comprehensive Transportation Plans (CTP) and Metropolitan Transportation Plans (MTP) and catalogued in this memorandum. Accurate data will serve as the foundation for master plan vision development. The information available to define the corridors and their needs depends on the availability of complete, current, and reliable data.

# 2. Goals and Objectives

### 2.1. STC Goals and Objectives

At the outset of the STC program, NCDOT established overarching goals and objectives, as identified in **Table 1**. These goals were developed to guide the master plan visions in a cohesive direction across the corridors. This memorandum compiles the transportation goals of Future I-795 to compare them with statewide and national goals, and incorporate them into the vision of the STC program.



Goals	Objectives
<b>System Connectivity:</b> Provide essential connections to national transportation networks critical to interstate commerce and national defense.	Provide a continuous, consistent network of reliable, higher speed interstate, defense, and major freight routes. For system connectivity, corridors should provide functional classification and facility type consistent with those attributes; corridors should have high capacity consistent with speed and reliability objectives.
<b>Mobility:</b> Facilitate high volume inter- regional movements of people and goods across the state.	Serve major inter-regional travel corridors with high levels of service, moving higher volumes of passenger or freight traffic, and provide multiple transportation modes or routes for the opportunity of choice and flexibility in travel or shipping in the corridor.
<b>Economic Prosperity:</b> Support efficiency of transport logistics and economic development throughout the state for economic regions and clusters of existing and emerging activity centers.	Provide high-quality access to defined intrastate activity center clusters and to nearby critical activity centers in surrounding states and ensure access to at least one strategic corridor for each multi-county region of Tier 1 Economic Development counties.*

\*The North Carolina Department of Commerce annually ranks the state's counties based on economic well-being and assigns each a Tier designation. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2 and the 20 least distressed as Tier 3.

### 2.2. Corridor Segments

Future I-795 is approximately 50 miles in length and spans from Wilson County to Sampson County. The portion of Future I-795 north of U.S. 70 is included in the National Highway System's (NHS) Eisenhower Interstate System. The portion of the corridor just south of U.S. 70 is a Major Strategic Highway Network (STRAHNET). Future I-795 is a vital trucking route from Goldsboro to I-95 in Wilson County.

From a high-level perspective, Future I-795 can be broken into three segments: 1) I-95/I-795 Interchange to U.S. 117/U.S. 70 Business Junction; 2) U.S. 117/U.S. 70 to U.S. 117/U.S. 117 Alt Junction; and 3) U.S. 117/U.S. 117 Alt Junction to I-40/U.S. 117 Interchange. The first segment is identified as an interstate and is the largest segment, encompassing the majority of the corridor. Segment 2 is located along the outskirts of Goldsboro and is characterized by the access it provides to businesses in the area. The third segment begins south of Goldsboro where it becomes the primary travel route between Goldsboro and I-40. The Future I-795 segments are shown in **Table 2**. The segments shown in this table were identified during the corridor inspection and will be further refined through the STC planning process. Segment definitions and specifications were drawn from the NCDOT Facility Types & Control of Access Definitions (2005), shown in Appendix A: Facility Type and Control of Access.



#### Table 2. Corridor S: Future I-795 Segments

Segment No.	Segment	Segment Length	Existing Facility Type	Control of Access	Sidewalks/Trails
1	I-95/I-795 Interchange to U.S. 117/U.S. 70 Business Junction	26.5 miles	Freeway	Full	No
2	U.S. 117/U.S. 70 to U.S. 117/U.S. 117 Alt Junction	5.0 miles	Boulevard	Partial	No
3	U.S. 117/U.S. 117 Alt Junction to I-40/U.S. 117 Interchange	17.5 Miles	Freeway	Partial	No

#### 2.3. Corridor Goals and Objectives

Future I-795 traverses Wilson, Wayne, Duplin, and Sampson counties; Highway Divisions 3 and 4; and the Goldsboro Urban Area Metropolitan Planning Organization (MPO), Upper Coastal Plain Rural Planning Organization (RPO), Eastern Carolina RPO, and Mid-Carolina RPO.

Future I-795 is primarily used to transfer freight from Goldsboro to I-95 in Wilson County. The corridor serves as a short reliever to I-95 and is an important part of the STRAHNET system as it connects Seymour-Johnson Air Force Base to I-95. Future I-795 provides the link to the economic centers of Wilson and Goldsboro and connects to I-95 and I-40. The principal expectation of the corridor is to provide safe, reliable mobility as a priority military route for Seymour Johnson Airforce Base.

To better understand priorities in the Future I-795 planning area, goals were gathered from Comprehensive Transportation Plans (CTP) and a Metropolitan Transportation Plan (MTP) that include Future I-795. The project team targeted any CTP or MTP that had been collected within 10 years of March 2020 that included goals and performance measures, including the following (plans with crosses (†) did not include performance measures):

- 2012 Wilson County CTP<sup>†</sup>
- 2014 Mount Olive CTP<sup>†</sup>
- 2017 Draft Duplin County CTP<sup>†</sup>
- 2016 Sampson County CTP<sup>†</sup>
- 2019 Goldsboro Urban Area MPO MTP

The goals found in these plans are categorized into 12 Goal Areas found at the national, state, and county/MPO levels. The national goal areas, set by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), are defined in **Tables 5 and 6**, respectively. The state goal areas, determined by the NCDOT, match the national goal areas. The county/MPO goal areas were created by organizing plan goals that did not fit in a national goal area by similar topics. **Table 3** displays the number of goals that are categorized into a given goal area per plan and **Table 4** displays the goals per plan with their corresponding objectives or strategies and goal area(s).

#### **Goal Area\*** National/State County/MPO reight Movement and Economic Vitality Socioeconomic and Quality of Life **Reduced Project Delivery Delays Cohesive and Strategic Planning** Environmental Sustainability Infrastructure Condition **Congestion Reduction** System Reliability 5 Multi-modal Security Mobility Safety Plan Wilson County CTP 1 1 1 7 1 Goldsboro Urban Area MPO MTP 1 1 1 1 1 1 1 1 Mount Olive CTP 2 2 2 2 1 1 4 4 1 **Duplin County CTP** 2 2 2 2 4 3 1 Sampson County CTP 3 2 1 1 2 2 4

#### Table 3. Count of Goal Areas Established in the Future I-795 Planning Area

\*The numbers indicate the number of goals that fell within the goal area from the identified plan



Table 4. Goals, Objectives, and Strategies Established in the Future I-795 Planning Area

						Goal	Area*	:*						
	_	1	Natio	onal/	State	1			Οοι	inty/l	MPO	1		
Plan	Congestion Reduction	Environmental Sustainability	Freight Movement and Economic Vitality	Infrastructure Condition	Safety	System Reliability	Reduced Project Delivery Delays	<b>Cohesive and Strategic Planning</b>	Mobility	Multi-Modal	Security	Socioeconomic and Quality of Life	Goal	
	Х				X								Acknowledge ways to improve safety and congestion as well as programs to educate the public on traffic safety	N/A
				х				х					Insure the integrity of the existing Transportation system by encouraging planned and strategic development	N/A
								х	x				Recognize a sustainable transportation infrastructure linking Wilson County with surrounding metropolitan areas including Raleigh, Greenville, and other areas along the Eastern United States	N/A
Wilson County CTP								х					Encourage right-of-way preservation to ensure expansion of the existing system and future roadway projects	N/A
Wilson County Off								Х					Coordinate transportation and improvement needs between multiple jurisdictions	N/A
								х					Provide means to identifying and prioritizing transportation system needs on a local and regional scale	N/A
								х		x			Enhance and expand services for alternative needs of transportation including but not limited to transit, walking and bicycling through increased funding and cooperative regional planning	N/A
*Objectives and strategies are not								Х		х			Educate the public on general transportation issues as well as alternative forms of transportation	N/A

\*Objectives and strategies are not targeted to individual goals in the Mount Olive CTP \*\*An "X" indicates the goal outlined in the plan fits within the given goal area

Objectives and Strategies*	
Objectives and Strategies*	

(Continued on next page)



#### Table 4. Goals, Objectives, and Strategies Established in the Future I-795 Planning Area (Continued)

							Area <sup>*</sup>	**						
			Natio	onal/	State				Οοι	unty/	MPO			
Plan	Congestion Reduction	Environmental Sustainability	Freight Movement and Economic Vitality	Infrastructure Condition	Safety	System Reliability	Reduced Project Delivery Delays	Cohesive and Strategic Planning	Mobility	Multi-Modal	Security	Socioeconomic and Quality of Life	Goal	
		x											Environment	Preserve a environme
				х									Maintenance	Emphasize benefits to
					Х								Safety	Limit crash and pedest
						х							Efficiency	Ensure the coordinated
Goldsboro Urban Area MTP									х				Accessibility	Ensure tha to increase
										х			Connectivity	Provide a v bicycles, ai
			x										Economic Development	Support reasons system that through the
*Objectives and strategies are not											x		Security	Provide sa Air Force E that aids th made disas

\*Objectives and strategies are not targeted to individual goals in the Mount Olive CTF

\*\*An "X" indicates the goal outlined in the plan fits within the given goal area

#### **Objectives and Strategies\***

and enhance the Goldsboro region's va;ued places and ent to provide a resilient transportation system.

ze preservation of the existing network that maximizes o the transportation system while minimizing costs shes in the region and provide safe facilities for bicyclists

strians.

e transportation system benefits from efficiency in ed policy and technology decisions

nat roads provide safe access points to local businesses se traveler safety and network efficiency.

well-connected transportation network for automobiles, and pedestrians

egional economic development with a transportation nat makes it easier to move people and goods within and he region and promotes overall job growth.

afe access to evacuation routes and Seymour Johnson Base, while maintaining a flexible transportation system the response to and recovery from natural and manasters

(Continued on next page)



Table 4. Goals, Objectives, and Strategies Established in the Future I-795 Planning Area (Continued)

					(	Goal /	Area*	**						
		T	Nati	onal/	State				Οοι	inty/l	MPO			
Plan	Congestion Reduction	Environmental Sustainability	Freight Movement and Economic Vitality	Infrastructure Condition	Safety	System Reliability	Reduced Project Delivery Delays	Cohesive and Strategic Planning	Mobility	Multi-Modal	Security	Socioeconomic and Quality of Life	Goal	
	X			X				x					Maximize the use of existing facilities and add capacity and connectivity strategically	
	Х				Х								Reduce traffic congestion and improve safety	<ul> <li>Establish a mul Olive to include</li> </ul>
			x		x					x		x	Provide a safe, reliable, efficient, and sustainable multi-model transportation network that enhances the quality of life within, and the economic vitality of the Town of Mount Olive and its surrounding areas	County
Mount Olive CTP			x					x		x			Promote the continued improvement of the road, bicycle, and pedestrian way networks around and within the Town of Mount Olive to create and improve a transportation network that promotes and supports economic development that is consistent with existing and future land use goals and patterns	<ul> <li>Department of Organization, a</li> <li>Enhance and e including (but n</li> <li>Make informed</li> </ul>
							Х						Promote the orderly design of new rights-of-way	adverse impact
								Х					Promote cooperative local and regional transportation planning	<ul> <li>Study automob</li> </ul>
										x		x	Plan for alternative forms of transportation taking particular note of the needs of citizens whose access to transportation is limited by health or economic issues	<ul> <li>Territorial Jurise</li> <li>Coordinate tran County and Du</li> </ul>
								X	ļ	Х	ļ		Seek increased funding for all modes of transportation	local and State
											x		Devise a plan in conjunction with Wayne County Emergency Management personnel to insure the safe movement and/or evacuation of the towns' population in the event of a natural or manmade disaster	Educate the pu alternative form

\*Objectives and strategies are not targeted to individual goals in the Mount Olive CTP

\*\*An "X" indicates the goal outlined in the plan fits within the given goal area

#### **Objectives and Strategies\***

ulti-model transportation system for the Town of Mount de the surrounding areas of Wayne County and Duplin

ansportation and land use plans among the Town of Wayne County, Duplin County, the North Carolina of Transportation, the Eastern Carolina Rural Planning , and other local and state organizations

expand services for alternative transportation needs, t not limited to) transit, walking, and bicycling

ed transportation decisions that are sensitive to possible acts on the environment

bile crashes within the Town of Mount Olive, its Extra risdiction (ETJ) and make improvement recommendations ansportation plans and recommendations with Wayne Duplin County Emergency Services and other relevant te organizations

public on general transportation issues, as well as rms of transportation

(Continued on next page)



Table 4. Goals, Objectives, and Strategies Established in the Future I-795 Planning Area (Continued)

					G	Goal /	Area*	*					
			Natio	nal/S	State				Count	/MPO	)		
Plan	Congestion Reduction	Environmental Sustainability	Freight Movement and Economic Vitality	nfrastructure Condition	Safety	System Reliability	Reduced Project Delivery Delays	<b>Cohesive and Strategic Planning</b>	Mobility Made	Security	Socioeconomic and Quality of Life	Goal	Objectives and Strategies*
Flall	X	X	<u> </u>	-	0	S	<u>u</u>	X	2 4	<u> </u>	<u></u>	Maximize the use of existing facilities and add capacity and connectivity in a strategic manner	N/A
	X				х							Use capacity analysis and crash data in order to make recommendations where needed to reduce congestion and improve safety	N/A
		Х										Make informed transportation decisions that consider impacts to sensitive environmental and existing development patterns	N/A
			х		х				>	(	х	Provide a safe, reliable, efficient and sustainable multi-modal, county-wide transportation network that enhances the quality ife and economic vitality of Duplin County, its municipalities, and the Eastern region of North Carolina	of N/A
Duplin County CTP			x					х				Promote improvement of the road and rail infrastructure that are existing or proposed in Duplin County to create a transportation network that will promote and support economic development that may be compatible with the present and future land use goals and patterns	N/A
								Х				Encourage right-of-way preservation to ensure expansion of the existing system and consideration for future new alignments	N/A
								Х				Promote cooperative local and regional planning	N/A
									>	(		Plan for all modes including public transit, rail, the airport, and bicycle and pedestrian transportation	N/A
									>	(		Educate the public on general transportation issues as well as alternative forms of transportation	N/A
			Х						Х		Х	Emphasize and ensure regional connectivity to major routes, metropolitan areas and ports	N/A
			Х									Support economic development, travel, and tourism	N/A
			Х									Preserve existing rail and support railroad regional connectivity	N/A
							Х	Х				Support the continued progress and completion of the unfunded Highway N.C. 24 through Sampson County to I-40	N/A
									>	(		Plan for pedestrian and bicycle safety on major roads	N/A
Sampson County CTP								Х				Provide a transportation system that adequately serves existing and future land use	N/A
Campson County OTF										X		Capitalize on and enhance Sampson County's unique position in the Strategic Highway Corridor Network (STRANET) in providing support for the Department of Defense	N/A
										X		Coordinate with Sampson County Emergency Management Services and other public safety organizations to ensure that the evacuation plan and other emergency plans are considered in overall development	N/A
											Х	Preserve the rural character of Sampson County while accommodating planned growth	N/A
									>	(	X	mprove public transportation accessibility for Sampson County citizens	N/A
Objectives and strategies are not t											Х	Promote and encourage public involvement through education and communication	N/A

\*Objectives and strategies are not targeted to individual goals in the Mount Olive CTP \*\*An "X" indicates the goal outlined in the plan fits within the given goal area



# **3. Performance Measures**

#### 3.1. National Performance Measures

Consistent with the vision set for the STC network, it is in the public interest that the primary facilities on the STC network provide long-term, high-quality levels of service in terms of safety, travel speed, and reliability. To understand whether the STC goals and objectives are being met, it is necessary to define expectations and measure performance. NCDOT is strongly aligned with recent rulemaking by the FHWA and FTA to adopt performance measures to assess system performance. National and state performance measures and their respective state targets are included in **Table 5**. Performance measures provided by the FTA are in **Table 6**.

Goal Area	Goal	Performance Measure	NCDOT Targets
		Number of Fatalities	1,227.8 (2020)
	To achieve a significant	Rate of Fatalities	1.084 (2020)
Safety*	reduction in traffic fatalities	Number of Serious Injuries	2,812.8 (2020)
Curcty	and serious injuries on all	Rate of Serious Injuries	2.462 (2020)
	public roads	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	426.6 (2020)
		Percentage of Pavements in Good Condition (Interstate)	>=37.0% (4 year)
		Percentage of Pavements in Poor Condition (Interstate)	<=2.2% (4 year)
Infrastructure Condition	To maintain the highway infrastructure asset	Percentage of Pavements in Good Condition (Non-Interstate National Highway System [NHS])	>=21.0% (4 year)
Condition	system in a state of good repair	Percentage of Pavements in Poor Condition (Non-Interstate NHS)	<=4.7% (4 year)
		Percentage of Bridges in Good Condition (NHS)	>=30.0% (4 year)
		Percentage of Bridges in Poor Condition (NHS)	<=9.0% (4 year)
System Polishility	To improve the efficiency of the surface	Percent of Reliable Person-Miles Traveled (Interstate)	>=75.0% (4 year)
System Reliability	transportation system	Percent of Reliable Person-Miles Traveled (Non-Interstate NHS)	>=70.0% (4 year)

 Table 5. Federal Highway Administration and State Performance Measures

\*NCDOT safety targets are established in the Highway Safety Improvement Program 2019 Annual Report. (Continued on next page) \*\*This performance measure only applies to the Charlotte maintenance area.

\*\*\*This performance measure only applies to the Charlotte urbanized area.

<sup>++</sup>This performance measure is specific to NCDOT. FHWA does not have a defined performance measure for this goal.

<sup>&</sup>lt;sup>†</sup>This performance measure is specific to NCDOT. High index values indicate unreliable truck travel times while low values indicate more reliable travel times.



Table 5. Federal Highway Administration and State Performance Measures (Continued)

Goal Area	Goal	Performance Measure	NCDOT Targets
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment	Total Emissions Reduction**	4-year target: CO: 23.044 kg/day VOC: 0.504 kg/day NOx: 4.720 kg/day
Congestion Reduction	To achieve a significant reduction in congestion on	Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita on the NHS***	<=34.0% (4 year)
Reduction	the NHS	Percent of Non-Single Occupancy Vehicle (SOV) Travel***	>=21.0% (4 year)
Freight Movement & Economic Vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development	Interstate Truck Travel Time Reliability Index <sup>†</sup>	>=1.7 (4 year)
Reduced Project Delivery Delays		STIP and non-STIP planned projects that are let to contract on schedule <sup>††</sup>	<= 90%

\*NCDOT safety targets are established in the Highway Safety Improvement Program 2019 Annual Report. \*\*This performance measure only applies to the Charlotte maintenance area. \*\*\*This performance measure only applies to the Charlotte urbanized area.

<sup>†</sup>This performance measure is specific to NCDOT. High index values indicate unreliable truck travel times while low values indicate more reliable travel times.

<sup>++</sup>This performance measure is specific to NCDOT. FHWA does not have a defined performance measure for this goal.



Goal Area	Performance Measures	NCDOT Target
	Total number of reportable fatalities and rate per total vehicle revenue miles by mode	N/A
Safety*	Total number of reportable injuries and rate per total vehicle revenue miles by mode	N/A
	Total number of reportable events and rate per total vehicle revenue miles by mode	N/A
	Mean distance between major mechanical failures by mode	N/A
	Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)**	20% (2020)
Infrastructure Condition	Percentage of revenue vehicles within a particular asset class that have met or exceeded their $ULB^\dagger$	20% (2020)
Condition	Percentage of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale	20% (2020)
	Percent of track segments under performance restriction	N/A

#### Table 6. Federal Transit Administration and State Performance Measures

\*The NCDOT Transit Asset Management Plan does not discuss FTA safety performance measures.

\*\*The NCDOT identifies a ULB of 8 years for the following asset classes: non-revenue/service automobiles, steel wheel vehicles,

and trucks and other rubber tire vehicles. For all other asset classes, the NCDOT has left it up to individual agencies to determine the ULB.

<sup>†</sup>The NCDOT identifies ULBs for each asset class as follows: 14 years for buses, 10 years for cutaway buses and mini-buses, and 8 years for automobiles, mini-vans, sport utility vehicles, vans, and others.

### 3.2. Corridor Performance Measures

The project team compiled performance measures that were developed in CTPs and MTPs along Future I-795. The Goldsboro Urban Area MPO MTP was the only plan that provided performance measures as shown in **Table 7**. **Table 7** identifies the plans that align with the performance measures that fall under the national goal areas.

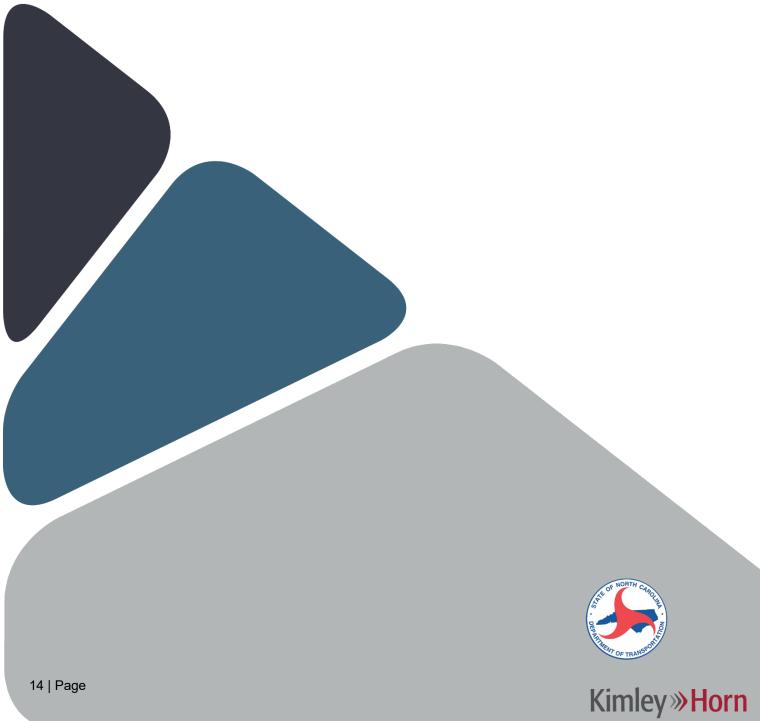


Table 7. National and State Performance Measures Established in the Future I-795 Planning Area

			Plan*
National/State Goal Area		Performance Measure	Goldsboro Urban Area MPO MTP**
		Number of Fatalities	Х
		Rate of Fatalities	Х
	National/State	Number of Serious Injuries	Х
	(Highway)	Rate of Serious Injuries	X
Safety		Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	X
		Total number of reportable fatalities and rate per total vehicle revenue miles by mode	Х
	National/State (Transit)	Total number of reportable injuries and rate per total vehicle revenue miles by mode	Х
	(Therioity	Total number of reportable events and rate per total vehicle revenue miles by mode	Х
		Mean distance between major mechanical failures by mode	X
		Percentage of Bridges in Good Condition (NHS)	Х
		Percentage of Bridges in Poor Condition (NHS)	Х
	National/State	Percentage of Pavements in Good Condition (Interstate)	Х
		Percentage of Pavements in Poor Condition (Interstate)	Х
	(Highway)	Percentage of Pavements in Good Condition (Non-Interstate NHS)	Х
Infrastructure Condition		Percentage of Pavements in Poor Condition (Non-Interstate NHS)	Х
		Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Х
	National/State (Transit)	Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB	Х
	(Tranoly	Percentage of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale	Х
		Percent of track segments under performance restriction	
System Reliability	National/State	Percent of Reliable Person-Miles Traveled (Interstate)	<u>X</u>
	(Highway)	Percent of Reliable Person-Miles Traveled (Non-Interstate NHS)	Х
Environmental Sustainability	National/State (Highway)	Total Emissions Reduction	Х
Congestion Reduction	National/State (Highway)	Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita on the NHS	Х
		Percent of Non-Single Occupancy Vehicle (SOV) Travel	Х
Freight Movement & Economic Vitality	National/State (Highway)	Interstate Truck Travel Time Reliability Index	Х
Reduced Project Delivery Delays	State (Highway)	STIP and non-STIP planned projects that are let to contract on schedule	Х

\*The Wilson County, Duplin County, Sampson County, and Mount Olive CTPs are not listed because they do not identify \*\*An "X" indicates the performance measure is included in the plan

# **Appendix A**



# **Appendix A. Facility Type and Control of Access**

#### A.1. NCDOT Facility Type

Roadways can be categorized into facility types based on their purpose, design classification, speed limit, and control of access. These facility types are listed below in **Table A-1**.

	Freeways	Expressways	Boulevards	Thoroughfares
Functional Purpose	High Mobility, Low	High Mobility, Low to	<b>,</b>	Moderate to Low
·	Access	Moderate Access	to Moderate Access	Mobility, High Access
AASHTO Design Classification	Interstate or Freeway	Arterial	Arterial or Collector	Collector or Local
Speed Limit	55 mph or greater	45 mph to 60 mph	30 mph to 55 mph	25 mph to 55 mph
Control of Access	Full	Limited or Partial	Limited or Partial	None
Traffic Signals	Not Allowed	Not Allowed	Allowed	Allowed
Driveways	Not Allowed	Connection per Parcel; Consolidate and/or Share Driveways and Limit Access to Connecting Streets or	Limited Control of Access - Not Allowed Partial Control of Access - One Driveway Connection per Parcel; Consolidate and/or Share Driveways and Limit Access to Connecting Streets or Service Roads; Restrict to Right-in/Right-out	Allowed with Full Movements; Consolidate or Share Connections, if possible
Cross-Section	Minimum 4 Lanes with a Median	Minimum 4 Lanes with a Median	a Median	Minimum 2 Lanes; No Median; Includes Facilities with Two Way Left Turn Lane
Connections	Provided only at Interchanges; All Cross Streets are Grade- Separated	Provided only at Interchanges for Major Cross Streets and At- Grade Intersections for Minor Cross Streets; Use of Acceleration and Deceleration Lanes for At-Grade Intersections	At-Grade Intersections for most Major and Minor Cross Streets (Occasional Interchange at Major Crossing); Use of Acceleration and Deceleration Lanes	Primarily At-Grade Intersections
Median Crossovers	Public-use Crossovers Not Allowed; U-turn Median Openings for Use by Authorized Vehicles Only when Need is Justified	Allowed; Alternatives to All Movement Crossovers Encouraged; Minimum Spacing between All- Movement Crossovers is 2000 feet (posted speed limit of greater than 45 mph) or 1200 feet (posted speed limit of 45 mph or less)	Allowed; Minimum Spacing between All- Movement Crossovers is 2000 feet (posted speed limit of greater than 45 mph) or 1200 feet (posted speed limit of 45 mph or less)	Not Applicable

#### Table A-1. Highway Functional Class Definitions

Information taken from NCDOT Facility Types & Control of Access Definitions (2005)

#### A.2. Highway Access Control

Roadways are categorized into different levels of control of access describing the amount of connectivity provided to adjacent land uses and other roadways. These levels are listed below in **Table A-2** in order of mobility function.

#### Table A-2. Control of Access Definitions

Classification	Description	
Full Control	Connectivity provided only via ramps at interchanges. All cross-streets are grade separated and no driveway connections are allowed. A control of access fence is placed along the entire length of the facility and at a minimum of 1000 feet beyond the ramp intersections on the minor facility at interchanges if possible.	
Limited Control	Connectivity provided only via ramps at interchanges for major crossings and at-grade intersections for minor crossings and service roads. No driveway connections allowed. A control of access fence is placed along the entire length of the facility, except at intersections, and at a minimum of 1000 feet beyond the ramp intersections on the minor facility at interchanges if possible.	
Partial Control	Connectivity provided via ramps at interchanges, at-grade intersections, and driveways. Private driveway connections are generally at a maximum of one per parcel. The use of shared or consolidated connections is highly encouraged, and connections may be restricted or prohibited if alternate access is available through adjacent public facilities. A control of access fence is placed along the entire length of the facility, except at intersections and driveways, and at a minimum of 1000 feet beyond the ramp terminals on the minor facility at interchanges if possible.	
No Control	Connectivity provided via ramps at interchanges, at-grade intersections, and driveways. No physical restrictions (i.e., a control of access fence) exist. Private driveway connections are generally at a maximum of one per parcel. Additional connections may be considered if they are justified and if such connections do not negatively impact traffic operations and public safety.	
nformation taken from NCDOT Facility Type & Control of Access Definitions: https://connect.ncdot.gov/projects/planning/TPB%20Documents/NCDOT%20Facility%20Types%20-		

%20Control%20of%20Access%20Definitions.pdf

# **Appendix B**



# Kimley **»Horn**

### **Appendix B. Goal Areas**

B.1. Goal Areas

The goals in this report are found at the national, state, and county/MPO levels. The national goal areas are set and defined by the FHWA and FTA. The county/MPO goal areas represent additional goals found in the MTPs and CTPs included this document that did not fit in a national goal area. The county/MPO goal areas are defined by NCDOT for the purposes of the STC Vision Plan development. These definitions of the goal areas are listed below in **Table B-1**.

Goal Area	Definition		
National			
Congestion Reduction	To achieve a significant reduction in congestion on the National Highway System.		
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.		
Freight Movement and Economic Vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.		
Infrastructure Condition	FHWA: To maintain the highway infrastructure asset system in a state of good repair.		
	FTA: The strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation.		
Safety	FHWA: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.		
	FTA: To improve the safety of all public transportation systems that receive Federal financial assistance.		
System Reliability	To improve the efficiency of the surface transportation system.		
Reduced Project Delivery Delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.		
County/MPO			
Cohesive and Strategic Planning	To promote the integration of transportation, land use, and policy planning through the cooperation and communication between local and regional agencies.		
Mobility	To increase the transportation network's ability to move people and goods locally and regionally.		
Multi-Modal	Promote the ability to travel using a variety of transportation methods, such as walking, biking, and using transit, in addition to personal vehicle.		
Security	To enhance a transportation system that provides access to evacuation routes, facilitates disaster response, and protects access to military bases.		
Socioeconomic and Quality of Life	To provide transportation options and access to destinations for all user groups regardless of socioeconomic status or physical ability.		

#### Table B-1. Goal Area Definitions