

Grand Strand MPO

INTRODUCTION

Background

The Grand Strand Area Transportation Study (GSATS) was formed in 1985 to provide a forum for the coordination of regional transportation planning efforts affecting northeastern coastal South Carolina. In 1992, GSATS was designated as the Metropolitan Planning Organization (MPO) for the Myrtle Beach Urbanized Area (UZA). With this designation, GSATS assumed responsibilities for the development of the area's Long Range Transportation Plan (LRTP) and the identification and ranking of projects for funding through an adopted Transportation Improvement Program (TIP).

The 2010 Census reported continued growth for the area and, for the first time, the Myrtle Beach UZA (renamed the Myrtle Beach-Socastee SC/NC Urbanized Area) extended into the southern portions of Brunswick County, North Carolina. As a result, in 2012 GSATS entered into a memorandum of understanding with the North Carolina Department of Transportation (NCDOT), South Carolina Department of Transportation (SCDOT), Brunswick County, and the towns of Calabash, Carolina Shores, Holden Beach, Ocean Isle Beach, Shallotte, Sunset Beach, and Varnamtown. The effect of this memorandum was to create a bi-state MPO with expanded representation on the GSATS Policy Committee (See Chart H-1).

Chart H-1 GSATS Policy Committee Voting Membership		
South Carolina Policy Committee Members		
Jurisdiction or Agency	Jurisdiction/Agency Votes	Designated Member
Georgetown County Council	One	Chairman
Horry County Council	Two	Council Chairman and Councilman
City of Conway	One	Mayor
City of Georgetown	One	Mayor
City of Myrtle Beach	Two	Mayor and Councilman
City of North Myrtle Beach	One	Mayor
Town of Atlantic Beach	One	Mayor
Town of Briarcliffe Acres	One	Mayor
Town of Pawleys Island	One	Mayor
Town of Surfside Beach	One	Mayor
Legislative Delegation – Georgetown County	Two	Legislative Delegation Senator and one (1) house member
Legislative Delegation – Horry County	Three	Legislative Delegation Senator and two (2) house members
Waccamaw Regional Transportation Authority	One	Chairman
South Carolina Department of Transportation	Two	District Commissioner and SCDOT Secretary of Transportation or designee

Chart H-1 Continued

GSATS Policy Committee Voting Membership		
North Carolina Policy Committee Members		
Jurisdiction or Agency	Jurisdiction/Agency Votes	Designated Member
GSATS-NCTAC	Two	Two (2) NCTAC members
Brunswick County	One	County Commissioner
North Carolina Department of Transportation	One	NCBOT Member

Expansion of the GSATS' Study Area also included the creation of two review committees for the North Carolina portion of the MPO. These are the GSATS-North Carolina Technical Coordinating Committee (NCTCC) and the GSATS-North Carolina Transportation Advisory Committee (NCTAC). Representation of these committees is illustrated in Charts H-2 and H-3:

Chart H-2 GSATS-NCTCC Voting Membership		
Jurisdiction or Agency	Jurisdiction/Agency Votes	Designated Member
Brunswick County	One	Planning Director
Calabash	One	Town Administrator
Carolina Shores	One	Town Administrator
Holden Beach	One	Town Manager
Ocean Isle Beach	One	Planning Director
Shallotte	One	Planning Director
Sunset Beach	One	Town Administrator
Varnamtown	One	Planning Director
Brunswick Transit System	One	Executive Director
Cape Fear COG	One	Planning Director
FHWA NC	One	Transportation Planner, Planning and Program Development
NCDOT Division	One	Division 3 Engineer or their representative
NCDOT Transportation Planning Branch	One	TPB GSATS MPO Coordinator
WRCOG	One	GSATS MPO Director

Chart H-3 GSATS-NCTAC Voting Membership		
Jurisdiction or Agency	Jurisdiction/Agency Votes	Designated Member
Brunswick County	Two (one vote per member)	County Commission Chair County Commissioner
Calabash	One	Mayor
Carolina Shores	One	Mayor
Holden Beach	One	Mayor
Ocean Isle Beach	One	Mayor
Shallotte	Two (one vote per member)	Mayor Town Alderman

Chart H-3 Continued GSATS-NCTAC Voting Membership		
Jurisdiction or Agency	Jurisdiction/Agency Votes	Designated Member
Sunset Beach	One	Mayor
Varnamtown	One	Mayor

Brunswick Transit System	One	Board Chair
NCDOT	One	North Carolina Board of Transportation member as designated by the Secretary of Transportation
North Carolina House of Representatives	One	District 17 Representative or, if reapportioned, House Member representing the largest geographic portion of the Study Area
North Carolina Senate	One	District 8 Senator or, if reapportioned, the Senator representing the largest geographic portion of the Study Area

Organizational Responsibilities

The functions and responsibilities of the GSATS' staff and committees are summarized below:

- MPO Planning Staff: The MPO planning staff carries out the activities of the Unified Planning Work Program (UPWP). Those activities include administration, planning, plan development, program development and maintenance.
- GSATS Study Team: The Study Team serves as a technical advisory committee and makes recommendations to the Policy Committee on proposed projects within the South Carolina portion of the study area (see page 3 of the *GSATS 2035 Long Range Transportation Plan*).
- GSATS-NCTCC: The NCTCC reviews, evaluates, and recommends action on all proposed projects within the North Carolina portion of the GSATS' Study Area. Recommendations from the NCTCC are forwarded to the NCTAC for action or recommendation to the Policy Committee.
- GSATS-NCTAC: The NCTAC serves as the principle review and recommending body to the Policy Committee on projects and issues affecting the North Carolina portion of the study area. For certain activities where issues are particular to North Carolina and/or NCDOT requirements, such as adoption of the Comprehensive Transportation Plan, the NCTAC can exercise final review and approval authority for the MPO.
- GSATS Policy Committee: The Policy Committee receives, reviews, and takes action (approves, denies, or sends back for reconsideration) on all issues and items brought to it by the MPO planning staff, the Study Team, or NCTAC. Review and approval responsibilities include the adoption of the MPO's LRTP.

Purpose of Appendix H

An important role of the MPO is the development of a LRTP, also referred to as a Metropolitan Transportation Plan (MTP). The LRTP provides an overview of the region including transportation conditions and identifies needed/priority transportation projects. GSATS adopted its LRTP in 2011 and the next full update of this plan will be completed by June 2016. As the current plan was developed prior to GSATS' expansion into North Carolina, an interim amendment to the plan is needed to address the additional study area.

The purpose of this amendment (Appendix H of the *GSATS 2035 Long Range Transportation Plan*) is to supplement the existing LRTP by providing an overview of conditions in the North Carolina portion of the study area, detailing the process by which needed projects were identified, providing a detailed summary of each, and discussing the criteria used for project evaluation and ranking. This amendment is also intended to complement NCDOT's SPOT 3.0 Prioritization by outlining the project identification and local input process.

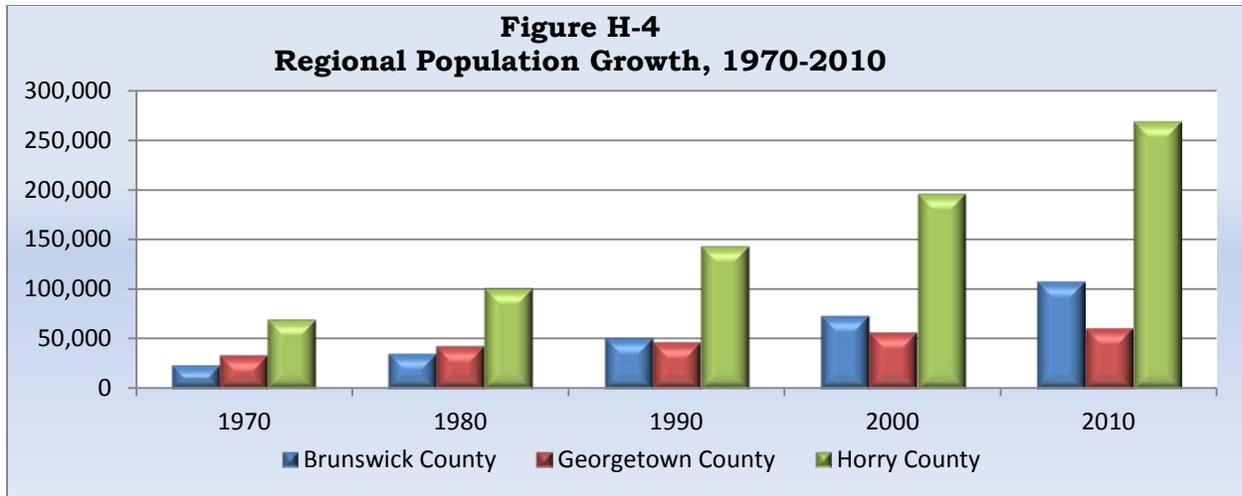
SECTION II. AREA OVERVIEW

The North Carolina portion of the GSATS Study Area extends from the South Carolina state line northward to the Lockwood Folly River and from the Atlantic Ocean westward to just beyond US 17 to include the Town of Shallotte. The GSATS' North Carolina planning area is illustrated by Map H-1.

Population

The *GSATS 2035 Long Range Plan* provides an overview of population growth affecting Horry and Georgetown counties in South Carolina (see page 4 of GSATS' 2035 LRTP). Similar to the Grand Strand area of South Carolina, communities along the southeast region of North Carolina have also experienced steady population growth over the past few decades.

As displayed in Figure H-4 and Table H-5 below, out of the three counties, Horry County has historically had the largest base population. Brunswick County outgrew Georgetown County beginning in the 1990s and has continued its growth since that time. Georgetown County has had slower growth over the past few decades; however, population has steadily increased in the southern portion of the GSATS' Study Area as well.



**Table H-5
County Population Trend Assessment**

	1970	1980	1990	2000	2010	% Increase 1970-2010
Brunswick, NC	24,223	35,777 47.7% increase	50,985 42.5% increase	73,143 43.4% increase	107,431 46.9% increase	343%
Georgetown, SC	33,500	42,461 26.7% increase	46,302 9.0% increase	55,797 20.5% increase	60,158 7.8% increase	80%
Horry, SC	69,992	101,419 44.9% increase	144,053 42.0% increase	196,629 36.5% increase	269,291 36.9% increase	285%
Entire Region	127,715	179,657 40.6% increase	241,340 34.3% increase	325,569 34.9% increase	436,880 34.2% increase	242%

Census Minor Civil Division Trends

The expanded GSATS' Study Area in North Carolina consists of three Minor Civil Divisions (MCD) as recognized by the US Census Bureau. These geographic units, also referred to as townships, allow for demographic comparison between different areas within a county. MCDs also allow for long-term trend analysis on a smaller scale, rather than projecting data for the entire county. Table H-6 below summarizes the population changes in the Waccamaw, Shallotte, and Lockwood Folly townships of Brunswick County.

**Table H-6
Brunswick County
Census Minor Civil Division- Population Trends**

MCD	1970	1980	1990	2000	2010	% increase 1970-2010

Waccamaw	1,681	1,982	2,260	2,859	3,448	105%
		17.9% increase	14.0% increase	26.5% increase	20.6% increase	
Shallotte	4,877	6,582	11,818	18,420	26,545	444%
		34.9% increase	79.5% increase	55.9% increase	44.1% increase	
Lockwood Folly	4,748	7,361	10,705	16,100	23,248	390%
		55.0% increase	45.4% increase	50.4% increase	44.4% increase	

Long-term Population Projections

The growth of the GSATS' study region is likely to continue into the foreseeable future. Table H-7 outlines population projections for Horry, Georgetown, and Brunswick counties in five year intervals until 2035. These projections are used as one of the inputs into GSATS' regional traffic model.

Table H-7 Long-term County-level Population Projections 2015-2035						
County	2010	2015	2020	2025	2030	2035
Brunswick, NC	107,431	126,038	141,797	157,556	173,314	189,072
Georgetown, SC	60,158	66,130	69,650	73,180	76,880	80,500
Horry, SC	269,629	291,080	316,810	342,530	367,680	393,160

Population projections in five year intervals for the Waccamaw, Shallotte, and Lockwood Folly townships were incorporated as one of the inputs into GSATS' regional traffic model. By 2035, it is estimated that the Waccamaw Township will have a population of 4,187, the Shallotte Township will have a population of 35,550, and the Lockwood Folly Township will have a population of 37,623.

Traffic Conditions

Traffic on area roads has increased due to population growth and increased tourism. Appendix I, the *Congestion Management Process for the Grand Strand Area Transportation Study*, provides a discussion of traffic conditions on the area's National Highway System (NHS) roadways.

In 2010 and 2013, land use data for the North Carolina portion of the study area was collected and incorporated into GSATS' travel demand model. This allows for the projection of traffic volumes for the future year 2035. Existing traffic volumes and future levels of service are illustrated on Map Exhibits H-2.

SECTION III. PROJECT IDENTIFICATION AND PRIORITIZATION

The development of this LRTP amendment coincides with and complements NCDOT's SPOT 3.0 Prioritization Process. A discussion of the SPOT process and its relationship to LRTP identified projects is provided in this section.

LRTP Project Identification

Projects listed in Section IV and prioritized using the criteria of this section were identified from various sources. These sources include:

- NCDOT Prioritization 2.0
- Brunswick County Transportation Plan
- NCDOT State Transportation Improvement Program
- GSATS 2035 Long Range Transportation Plan
- Non-motorized CTP and East Coast Greenway Components
- Projects submitted by jurisdictions

In addition, the I-74 Feasibility Study, the US 17 Corridor Study, and the Carolina Bays Parkway Extension in South and North Carolina Feasibility Study were consulted. The “most favorable alternatives (E, B, and D)” in the Carolina Bays Parkway Feasibility Study were compared to development that has occurred since the study’s adoption and alternative B was accepted as the most constructible alternative. Alternative B does not follow the existing SC-57 alignment in South Carolina. Build alternatives considered in the Carolina Bays Parkway Feasibility Study are illustrated by Map H-3.

The 2035 LRTP projects adopted in 2011 included project N - 6: Extension of SC 31 (Carolina Bays Parkway) to US 17 in N. Carolina (Hwy 57 / NC1303 improvements) (Tier: 2, Priority: B). The recommendations contained in this LRTP amendment, separates N-6 into two projects:

- (1) Extension of SC 31 (Carolina Bays Parkway) to US 17 in N. Carolina (Tier: 2, Priority: B)- a new 4-lane freeway; and
- (2) SC-57: Widen to a multi-lane facility from State Line to SC-31 (Tier: 2, Priority: B)” a widening project to 4-lanes with a median.

SPOT 3.0 Prioritization Process

The Strategic Transportation Investments (STI) is a process to determine how the North Carolina Department of Transportation, in partnership with local governments, will fund and prioritize transportation projects in the state of North Carolina. Under the STI, all modes will compete for the same funding. This means that roadway projects will compete with ferry projects which will compete with public transportation projects, etcetera.

The STI places projects into three categories: Statewide, Regional, and Division levels. Metropolitan Planning Organizations (MPOs), Rural Planning Organizations (RPOs), and division engineers will assign local input points to projects in the Regional and Division levels. MPOs and RPOs are required to develop a methodology for the assignment of local input points. Funding levels are designated according to the 2013 Strategic Transportation Investments law. Each of the three categories identified under the new Strategic Transportation Investments have their own criteria:

➤ *Statewide Level*

- Projects of statewide significance will receive 40% of the available revenue; and
- The project selection process will be 100% data-driven/quantitative scoring.

➤ **Regional Level**

- Projects of regional significance will receive 30% of the available revenue based on regional population. Projects on this level compete within specific regions made up of two NCDOT Divisions. GSATS is located in Region B; and
- Data / quantitative scoring will comprise 70% of the decision-making process and local rankings will comprise of the remaining 30%.

➤ **Division Level**

- Projects that address local concerns such as safety, congestion and connectivity will receive 30% of the available revenue shared equally over NCDOT's 14 Transportation Divisions. GSATS is located in NCDOT Division 3; and
- The department will choose projects based 50% on data and 50% on local rankings.

The Strategic Prioritization Office of Transportation (SPOT) will develop quantitative scores for all projects based on the adopted methodology. Default criteria were recommended by the Prioritization 3.0 work group and agreed to by NCDOT to quantitatively score projects across all modes.

MPOs, RPOs and the NCDOT's division engineers were given flexibility to develop their own highway criteria and formulas for the quantitative evaluation and project scoring in the Regional Projects and Division Projects. SPOT required that any deviation from the adopted criteria had to be approved by MPOs and RPOs in the region and/or division by July 1, 2013. A revised set of criteria was approved by the members of Region B and Division 3. These revised criteria include:

❖ **Regional Projects Evaluation Criteria:**

- Multi-modal 25%
- Safety 25%
- Benefit-Cost 20%
- Local Input 30%

❖ **Division Projects Evaluation Criteria:**

- Safety 20%
- Congestion 20%
- Multi-modal 10%
- Local Input 50%

The percentages and weights adopted by Region B and Division 3 are used for the roadway mode only and all non-roadway projects will use the same criteria statewide. For additional definitions of these criteria and the scalability across

factors, please consult the NCDOT's SPOT *Report to the Joint Legislative Transportation Oversight Committee* accessible at:

[https://connect.ncdot.gov/projects/planning/MPORPODocuments/Report%20to%20the%20JLT
OC.pdf](https://connect.ncdot.gov/projects/planning/MPORPODocuments/Report%20to%20the%20JLT%20OC.pdf).

GSATS' Local Input Point Assignment

The following process, along with the prioritization criteria outlined in Insert H-8 and local input, are used by GSATS to allocate local input points in NCDOT's prioritization process. It has been developed by the GSATS MPO for the purposes of participating in determining transportation funding priorities in the regional and division funding level in Prioritization 3.0. This process will be used to rank all projects within the GSATS boundary in Brunswick County and is designed to be both data-driven and responsive to local needs. Local input can come in the form of surveys; comment periods; historical documentation that supports a priority project important to the community; nearby RPO, MPO, or Division priorities; or other evidence made available to the TAC.

The methodology has been developed to meet the requirements of North Carolina Session Law 2012-84 (NC Senate Bill 890), which requires that MPOs and RPOs have a process including both quantitative and qualitative elements for determining project prioritization. The MPO's participation in the Strategic Transportation Investments consists of the following steps: (1) select projects for consideration in the Statewide, Regional and Division levels; (2) develop draft qualitative scoring of projects and ranking; (3) seek public involvement and (4) finalize project scoring and ranking.

Schedule: GSATS proposed a schedule to solicit for projects on October 7, 2013 with the electronic application for candidate projects being due on November 25, 2013. GSATS requested projects from the local member governments (counties, towns, transit departments, airports, and etcetera). NCTCC meetings were held on November 1, 2013, December 13, 2013, and January 3, 2014 to evaluate candidate projects. The NCTAC met on January 10, 2014 and the Policy Committee met on January 17, 2014 to approve the draft prioritized project list and point allocation pending public comment. New projects were submitted to the North Carolina Department of Transportation's Strategic Prioritization Office of Transportation online on March 3, 2014. A 30 day public comment period, as prescribed in the GSATS Public Participation Process, is scheduled for March 21 - April 21, 2014 to be followed by NCTCC, NCTAC, and Policy Committee meetings to consider the public comments and any suggested modifications to the point allocation.

Local Point Methodology: Points are allocated to projects in order of their LRTP quantitative ranking. Projects partially located within the study area can be given up to 100 points and the balance of points necessary to provide 100 points can be shared with the neighboring MPO/RPO. If a points sharing

arrangement is approved, both parties must agree to the amount of points donated and provide this agreement in writing to the SPOT Office. High priority projects that are expected to cascade to the Regional or Division funding levels can be awarded GSATS' local input points at the discretion of the NCTAC.

Non-highway projects will be evaluated when received. The only non-highway candidate projects received during the LRTP solicitation in 2013 were non-motorized. Point allocation for non-motorized projects will only be made when local matching funds can be reasonably expected. The P3.0 non-motorized project score provided by NCDOT will be used, along with local input, to evaluate non-motorized projects. Non-motorized projects were accepted as a priority to the NCTCC and NCTAC during the development of the 2035 LRTP and, for this reason, it is expected that GSATS local input points will be assigned to non-motorized projects.

Note: Direct apportionments of federal funds to GSATS for non-motorized projects will be evaluated with the GSATS' Enhancement Ranking Criteria (see Insert 7.4 of the GSATS 2035 LRTP Appendix I - *Congestion Management Process for the Grand Strand Area Transportation Study (CMP)*).

Project Rankings: The GSATS' NCTCC and NCTAC will evaluate all projects with their respective funding designation upon their release from the SPOT Office. Final approval and point assignment will take place no later than July 31, 2014.

Public Input Process: This prioritization methodology, along with the project rankings and point assignments, will be made readily available to the public. Notice of NCTAC meetings will be provided to the study area's major newspapers. The notices will also let it be known that this methodology and project prioritization will be discussed and will include the GSATS' Website (<http://www.gsats.org>), which will include links to all of these documents and interactive mapping. The notice and website also provide contact information for the public to reach GSATS' staff and members for input.

Use of Public Input: GSATS will gladly accept public comments. The comments will be documented and filed by the MPO and will be shared with the NCTCC and NCTAC for their information in current and future prioritization processes and transportation planning.

Final Ranking and Local Points Assignment: Points are assigned to each project based on project LRTP score and local input. GSATS has 1100 points to assign toward Regional Projects and another 1100 points to assign toward Division Projects. Each project can receive a maximum of 100 points. Consultation with the RPO, Division Engineer, Division Planning Engineer, and District Engineer for each project to gauge Division priority will occur prior to final point allocation. Any justification/rationale for point assignments made by the TAC which deviate from this local methodology will be placed on the GSATS website.

Ranking Formula: GSATS through the NCTCC, NCTAC, and Policy Committee has developed prioritization criteria that allows for the quantitative assessment and ranking of projects. This prioritization criterion will be used to rank all highway projects within the GSATS boundary in Brunswick County. These criteria are illustrated and further described in Chart H-8.

Insert H-8
GSATS' Project Prioritization Criteria

Widening and Interchange / Large Intersection Improvement Project Criteria*	Criteria	Maximum Points
	Traffic Volume and Congestion	30
	Public Safety	20
	Livability	20
	Financial Viability	10
	Environmental Impact	10
	Functional Class (Truck Traffic)	5
	Consistency with Local Land Use Plans	5
	Alternative Transportation Solutions	Livability
	Potential for Economic Development	Livability
	Pavement Quality Index, Cost, and Total Reduction in Vehicle Miles Traveled	Considered when funding becomes available
	TOTAL	100
New Location Project Criteria*	Criteria	Maximum Points
	Traffic Volume and Congestion	40
	Livability	20
	Financial Viability and Maintenance Cost	20
	Environmental Impact	10
	Functional Class (Truck Traffic)	5
	Consistency with Local Land Use Plans	5
	Alternative Transportation Solutions	Livability
	Potential for Economic Development	Livability
	Cost and Total Reduction in Vehicle Miles Traveled	Considered when funding becomes available
	TOTAL	100

*Intersection Improvement, Transportation Alternatives projects, and Corridor Studies with an estimated cost of less than \$1 million may not be ranked in the 2035 LRTP project list. It is, however, expected that these types of projects will be funded on the GSATS Transportation Improvement Program. When funds become available for the Intersection or Alternatives

program, project locations will be provided by member jurisdictions and the ranking procedure currently in place will be used.

Ranking Criterion Descriptions

Traffic Volume and Congestion – a quantifiable criterion based on future traffic volumes and the associated level-of-service condition (functionality and operational characteristics). Future traffic volume and congestion will be used to evaluate the long-term performance of the highway network, along with the identification of deficiencies and recommended projects. Prior to programming projects in the GSATS’ Transportation Improvement Program (TIP), current day traffic volumes and congestion will also be considered in the ranking process for the cost constrained portion of the long-range plan as well as any other candidate projects in an effort to support a “worst-first” approach to project selection. Point assignment is based on projected 2035 volume to capacity ratio from the GSATS 2035 model, with more points going to the more congested roadways.

Traffic Volume and Congestion Points Assignment								
Project Type	Points							
	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40
Widening and Interchange/ Large Intersection	0.105154	0.368039	0.630924	0.893809	1.156694	1.419579		
New Location	0.013487	0.134870	0.296714	0.404610	0.539480	0.674350	0.809220	0.944090

Public Safety – a quantifiable criterion based on accident rate. Point assignment is based on the number of crashes for existing roads from 2008-2005 divided by the length in feet of the improvement. Projects to improve roads with high crash rates receive more points.

Public Safety					
Project Type	Points				
	0 to 0.999	1 to 5.999	6 to 10.999	11 to 15.999	16 to 20
Widening and Interchange/ Large Intersection	0.00000	0.000468	0.002808	0.005148	0.007956
New Location					

Livability – a quantifiable criterion based on distance from defined public facilities/destinations and the project’s ability to improve access, connectivity, and mobility for other modes of travel. Point assignment is based on a project’s distance from defined public facilities/destinations and the project’s ability to improve access, connectivity, and mobility for other modes of travel. Two points maximum each for being within 1/2 mile and one point maximum each for being within one mile of schools, public buildings, parks, libraries, hospitals, transit, or other destinations. A maximum of two points each is possible for each project’s ability to support and a maximum one point each for “somewhat” ability to support: complete streets, improve connectivity, and create walkable neighborhoods.

Financial Viability and Maintenance Cost – a quantifiable criterion based on estimated project cost and estimated 20-year maintenance cost in comparison to the six-year Transportation Improvement Program (TIP) budget. Additional consideration will be given to projects supplemented with local project funding and/or other federal and state funding. Point assignment is based on the ratio of the Planning Level Cost Estimate to the current level of funds available in the TIP over a six year period, which is \$39,132,685. This results in high-cost projects receiving fewer points than low-cost projects.

Financial Viability and Maintenance Costs					
Project Type	Points				
	0	1 to 5	6 to 10	11 to 15	16 to 20
Widening and Interchange/ Large Intersection	\$39,132,685	\$35,219,417	\$15,653,074		
New Location	\$39,132,685	\$37,176,051	\$27,392,880	\$17,609,708	\$7,826,537

Functional Class (Truck Traffic) – a quantifiable criterion based on functional class (Expressway, Ramp, Principal Arterial, Minor Arterial, and Collector). In situations where facilities that provide an alternative to a level of service “F” route, the failing route's functional classification will be used. Point assignment is based on the functional class of the road being improved or constructed. Five points for an Expressway, four points for a Ramp, three for a Principal Arterial, two for a Minor Arterial, and one point for a road classified as a Collector.

Functional Class (Truck Traffic)						
Project Type	Points					
	0	1	2	3	4	5
Widening and Interchange/ Large Intersection	Local	Collector	Minor Arterial	Principal Arterial	Ramp	Expressway
New Location	Local	Collector	Minor Arterial	Principal Arterial	Ramp	Expressway

Environmental Impact – a quantifiable criterion based on an assessment of potential impacts to natural, social, and cultural resources (22 Environmental Criteria). Point assignment is based on a number of environmental criteria, including the potential for impacting threatened and endanger species, forested habitat, wetlands, drainage crossings, floodplains, outstanding resource water, uplands, HAZMAT sites, Parks/Refuges/WMA 4(f)/6(f), historic structures, archeological sites, farmland, communities, residencies, planned residence, commercial sites, other relocations, environmental justice impacts, noise receptors, and visual impacts.

Environmental Impact				
Project Type	Points			
	0 to 1	2 to 4	5 to 8	9 to 10
Widening and Interchange/ Large Intersection	Environmental Impact	Environmental Impact	Environmental Assessment (EA) and Finding of No	Categorical Exclusion

Large Intersection	Statement (EIS) with major mitigation	Statement (EIS)	Significant Impact (FONSI)	
New Location	Environmental Impact Statement (EIS) with major mitigation	Environmental Impact Statement (EIS)	Environmental Assessment (EA) and Finding of No Significant Impact (FONSI)	Categorical Exclusion

Consistency with Local Land Use Plans – a quantifiable criterion based on support of future land use, comprehensive plan objectives, and established communities. Point assignment is based on the local government’s (city, town, or county) response to a project’s compatibility with the adopted future land use map, comprehensive plan, contribution to walkable communities, open space, or established communities. With each of the five factors offered, one point is possible.

Pavement Quality Index, Cost, and Total Reduction in Vehicle Miles Traveled (Considered when funding becomes available in the TIP) - Based on the State DOT’s schedule for resurfacing in relation to a project’s scope, funding available compared with funding required, and the total reduction in Vehicle Miles Traveled when a project is included in the GSATS Existing and Committed Travel Demand Model.

Unless otherwise available, cost presented in the LRTP Appendix H for the GSATS study area in North Carolina are Planning Level Cost Estimates (PLCE) derived from a project’s length. A contingency and civil engineering and inspections rate of 45 percent was also added. When observed in the field, cost for other factors such as bridging or utility relocation was added on a project by project basis. No right-of-way acquisition cost was added for any project although it can be assumed for all. An exception to the use of PLCE is that alternatives analysis and more refined cost estimates were available for the US 17 improvements and the Carolina Bays Parkway extension.