

Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*



SPOT 4.0 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 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 4.0 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



Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*

the adopted criteria had to be approved by MPOs and RPOs in the region and/or division. A revised set of criteria was approved by the members of Region B and Division 3. These revised criteria include:

❖ **Regional Projects Evaluation Criteria:**

Criteria	P4.0 Default	Region B
• Cost Benefit	20%	10%
• Congestion	20%	10%
• Accessibility/Connectivity	10%	10%
• Safety	10%	25%
• Freight	10%	10%
• Multimodal	0%	5%
• Local Input 30%		

❖ **Division Projects Evaluation Criteria:**

Criteria	P4.0 Default	Division 3
• Cost Benefit	15%	0%
• Congestion	15%	10%
• Accessibility/Connectivity	5%	5%
• Safety	10%	15%
• Freight	5%	10%
• Multimodal	0%	10%
• Local Input 50%		

These alternate criteria were approved by the TAC at their August 24, 2015 meeting. 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%20JLTOC.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 4.0. 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.

Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*



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.

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.

The P4.0 non-motorized project score provided by NCDOT will be used, along with local input, to evaluate non-motorized projects.

Note: Direct apportionments of federal funds to GSATS for non-motorized projects will be evaluated with the GSATS' Transportation Alternatives 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' TCC and TAC 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 the deadline established by the SPOT Office.

Public Input Process: This prioritization methodology, along with the project rankings and point assignments, will be made readily available to the public. Notice of TAC meetings will be provided to the study area's major newspaper. The notices will also let it be known that this methodology and project prioritization will be discussed and that the information will be available on 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 TCC and TAC 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



Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*

Engineer and Division Planning 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 TCC, TAC, and Policy Committee has developed prioritization criteria that allows for the quantitative assessment and

Insert H-8 GSATS' Project Prioritization Criteria		
	Criteria	Maximum Points
Widening and Interchange / Large Intersection Improvement Project Criteria*	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
	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
	TOTAL	100

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.

Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*



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					



Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*

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.

Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*



Project Type	Environmental Impact			
	Points			
	0 to 1	2 to 4	5 to 8	9 to 10
Widening and Interchange/ Large Intersection	Environmental Impact Statement (EIS) with major mitigation	Environmental Impact Statement (EIS)	Environmental Assessment (EA) and Finding of No Significant Impact (FONSI)	Categorical Exclusion
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.

Scoring Ranges: The specific number represents the minimum result of the project’s performance to score within the range of points. Projects scores are based on the scale with actual scores rounded to whole numbers (except financial viability, which is rounded to the hundreds place). See example of a project that was scored during P 3.0 on page 8 “Ranking Criteria”.

Project Prioritization for SPOT 4.0

for the *Grand Strand Area Transportation Study*

Project Name Main St.

Route or State Road#	17 B
2012 AADT/2035ADT	22,000/32,613
2035 V/C Ratio	1.89
Length	3.49 miles
Reference#	MA9
SpotID	H140881
Jurisdiction	Shallotte
Improvement	Bridge W/Sidewalk
Cost	\$9,000,000
Crash Rate	0.0015
Functional Class	Major Thoroughfare
Ranking Criteria	
Scoring	
Financial Viability Points	7.79
Safety Points	3
2035 Traffic Volumes/Points	30
Truck Traffic Points	1
Environmental Factor Points	5
Livability	11
Local Land Use	4
Total Score	61.79

Tier-2 Subregional Impact Category



Livability	Scoring
School	2
Public Building	2
Park	0
Library	1
Hospital	0
Transit	0
Other Destinations	2
Walkable Neighborhoods	2
Complete Streets	2
Improve Connectivity	0



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GSATS Schedule of Key Dates for P4.0

Date	Activity
June 3, 2016	<ul style="list-style-type: none">Regional Impact Local Input Point Assignment
June 8, 2016	<ul style="list-style-type: none">Approval of Regional Impact Local Input Point Assignment
Mid-August 2016	<ul style="list-style-type: none">Divisional Impact Local Input Point Assignment
Early September 2016	<ul style="list-style-type: none">Approval of Divisional Impact Local Input Assignment
Mid September 2016	<ul style="list-style-type: none">Public Comment for Local Input Points
Early October 2016	<ul style="list-style-type: none">Final GSATS Local Input Scores