



North Carolina Department of Transportation Strategic Prioritization and the Capital Area Metropolitan Project Prioritization Process

NCDOT's Strategic Prioritization Process is designed to evaluate transportation projects across the state and assist in the prioritization of those projects for inclusion in the State Transportation Improvement Program (STIP). The STIP contains transportation projects funded through a combination of federal, state, and local funds for the next ten years. The Strategic Prioritization Process is a transparent, data-driven process for evaluating and ranking projects for roadway, bicycle and pedestrian, rail, public transportation, ferry, and aviation. The North Carolina Capital Area Metropolitan Planning Organization plays a critical role in the Strategic Prioritization Process by initially submitting projects for evaluation and then assigning additional local priority points to projects deemed most important for the region. This document further describes the methodologies used by the MPO to identify projects to submit, and how local priority points are allocated.

Prioritization starts at the Metropolitan Transportation Plan

The MPO's project prioritization begins with the development of the region's Metropolitan Transportation Plan (MTP), which includes processes for project evaluation, prioritization, and selection for inclusion in the MTP. As such, inclusion in the MTP is a fundamental requirement for projects submitted by the MPO into the Strategic Prioritization Process. The MTP project prioritization process includes both quantitative criteria such as: delay reduction (travel time savings), cost-benefit/payback period calculations, multimodal network impacts, user benefits, safety, and environmental impacts as well as qualitative criteria such as inclusion in local transportation plans, local priority, and coordination with regionally significant economic development projects. The development of the MTP is a long and thorough planning process that takes up to thirty months to develop and approve. Furthermore, the MTP incorporates the recommendations developed in smaller area plans and corridor studies such as the Southwest Area Study (SWAS), the Northeast Area Study (NEAS), the US 64 Corridor Study, and the NC 50 Corridor Study that take up to eighteen months each to develop. The public's participation in the MPO's prioritization process also begins with the MTP through a series of public workshops, open houses, formal public comment periods and hearings as well as surveys and stakeholder interviews. All public involvement requirements and policies for the MPO, including those related to MTP development, small area plans, and prioritization are documented in the Public Participation Plan. Copies of the adopted Metropolitan Transportation Plan, the MPO Public Participation Plan, and information on the MPO's smaller area plans and studies are available via the CAMPO website (www.campo-nc.us).

Candidate Project Selection & Prioritization Processes Overview

The MPO's role in Strategic Prioritization is composed of two separate and distinct steps. First is the selection of projects from the MTP submitted for prioritization, and second is the allocation of

local priority points to those projects. The entire Strategic Prioritization process takes between nine and twelve months to complete. This process is further illustrated below in Figure 1.

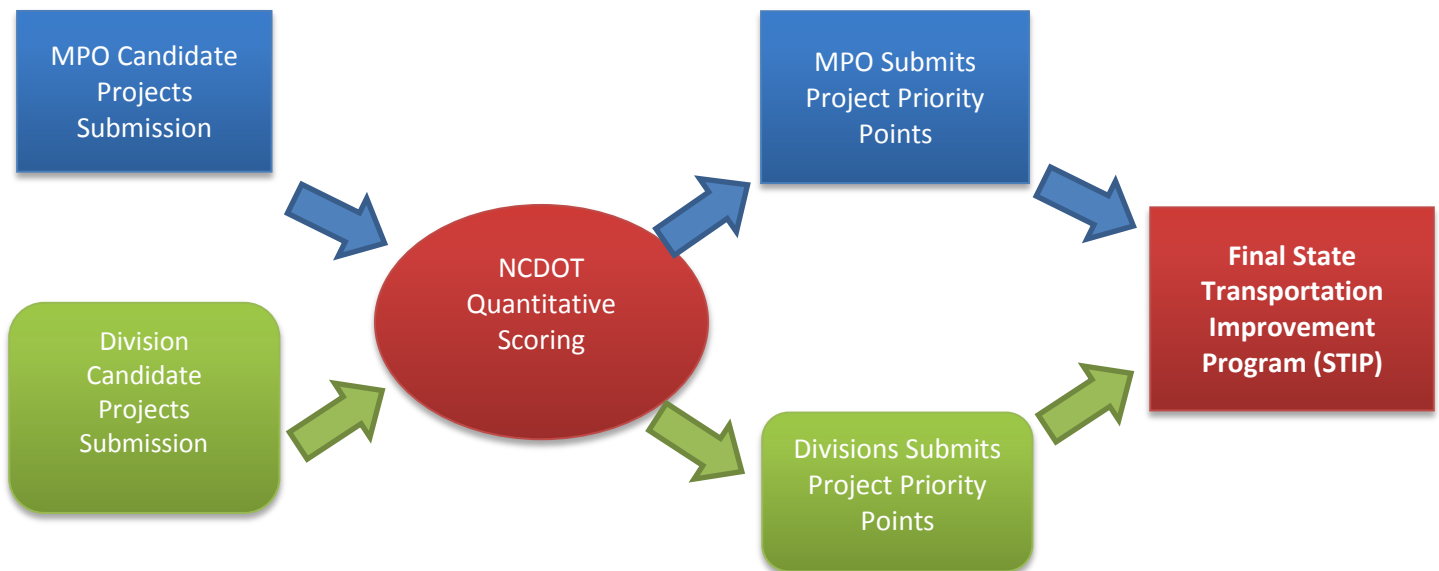


Figure 1. Strategic Prioritization Overview

The MPO begins the selection process several months in advance of the announced NCDOT project submittal deadline. The initial steps of strategic prioritization process begin with a thorough review of the STI criteria and policies. The MPO then issues a call for all non-roadway projects. The MPO begins the technical evaluation of projects by mode and creates a draft recommendation of candidate project lists for each mode. The staff recommendation is presented to the MPO Technical Coordinating Committee (TCC) for review and then sent to the MPO Executive Board (TAC). The MPO Executive Board may choose to revise the candidate lists prior to releasing the list for public review and comment for at least 30 days (see Public Participation Plan). The TCC reviews all public comments received and forwards a recommendation to the MPO Executive Board. The MPO Executive Board then approves the candidate project lists with possible revisions for the MPO staff to submit to the Strategic Prioritization system.

During the time the MPO submits the new candidate projects for prioritization and the release of the technical quantitative scores, the MPO STI/SPOT subcommittee meets to review the current adopted prioritization methodology and recommends any revisions necessary. The STI/SPOT subcommittee also reviews and recommends any changes to the target modal mixes for the Regional and Division local input points.

Once the NCDOT quantitative scores are released, the MPO begins analyzing the projects for their competitiveness with respect to their funding potential, feasibility to be completed with the upcoming TIP/STIP timeframe, NCDOT Division input, and the competing projects within those STI categories and modes. The MPO then drafts an initial point allocation based on the adopted methodology. The TCC reviews the local priority point allocation and makes a recommendation to the MPO Executive Board. The MPO Executive Board then releases the draft point allocation with possible revisions for a 30-day public comment and review period. Upon the conclusion of the 30-day public comment and review period, the TCC reviews all public comments received and forwards a recommendation to the MPO Executive Board. The MPO Executive Board then

reviews the TCC's recommendation, all public comments received, conducts a public hearing and then approves the final local priority point allocation and instructs MPO staff to submit the approved point allocation to the strategic prioritization system.

For more information on Strategic Prioritization and the Strategic Transportation Investments law see <http://www.ncdot.gov/strategictransportationinvestments/>.

Candidate Project Selection Process

The Capital Area MPO utilizes an internal quantitative evaluation process to select candidate projects to submit for consideration in the Strategic Prioritization process. This selection is based on two primary considerations: implementation of established regional goals and objectives; and compatibility with NCDOT's criteria for each round of Strategic Prioritization. Fundamentally the MPO's process endeavors to identify the severity of a transportation problem and the effectiveness of the proposed solution during the timeframe of the TIP/STIP that is under development.

For the selection of projects to be submitted to SPOT, the MPO develops a ranking process for each transportation mode included in the Strategic Prioritization process. Each project is evaluated for consistency with the MTP, eligibility requirements within STI, feasibility for programming within the STIP cycle in development, and relative competitiveness within the appropriate STI categories. The ranking process for each mode is based on quantitative data (performance measures) and qualitative data (ability to be funded or constructed). For the selection of roadway projects, the MPO uses a combination of quantitative criteria including: delay reduction (travel time savings), cost-benefit/payback period calculations, multimodal network impacts, user benefits, safety, and environmental impacts. The MPO's methodology for the bicycle and pedestrian projects utilizes quantitative criteria similar to NCDOT's in addition to locally available data such as coordination with roadway projects and private development. Public transportation projects are selected and initially prioritized by the region's transit providers. The MPO recognizes that the bulk of capital transit projects are funded through a majority share of federal or local funds. Since most of the federal funds are designated to specific recipients through established agreements and local match funds subject to local transit agency approval, the MPO focuses public transportation project submission and subsequent point allocation to capital projects in the first four years of the new TIP/STIP cycle. In other words, transit projects are initially ranked based on the transit system implementation schedules and local match availability.

Roadway

The MPO only considers projects that are included in the region's adopted Metropolitan Transportation Plan (MTP). The MTP includes several hundred regional priority projects that have demonstrated regional need, air quality conformity and fiscal constraint over the next three decades. This list of potential candidate projects is further refined by removing projects included in the TIP/STIP and not subject to reprioritization as well as projects that had been submitted during previous SPOT cycles and are automatically carried forward to the next prioritization cycle. Projects in the first two decades of the adopted MTP are given priority for submission to the Statewide Prioritization process.

The MPO recognizes that the STIP and thus Strategic Prioritization focus on higher-order facilities, primarily those that qualify for the Statewide Mobility and Regional Impact categories under the Strategic Transportation Investments Law (STI). As such, these higher-order facilities are also given priority for submission to the Statewide Prioritization process.

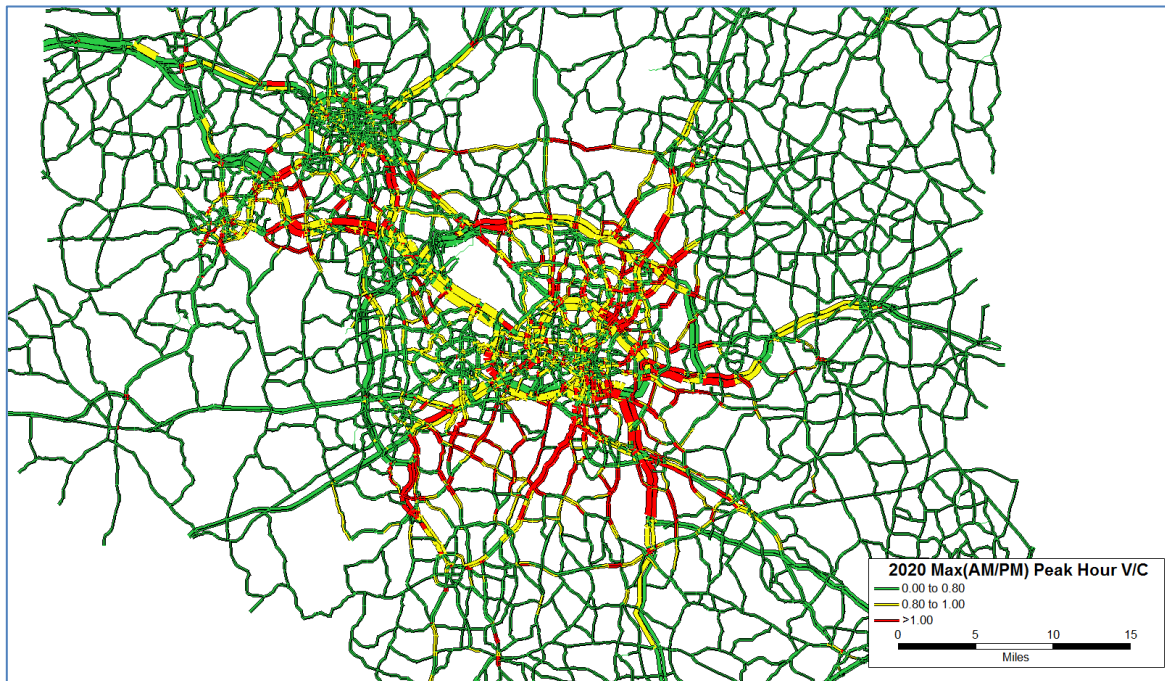


Figure 2. 2020 Volumes derived from the adopted Triangle Regional Travel Demand Model

The primary evaluation criteria for selecting projects includes regional travel demand model derived volume to capacity ratios (Figure 2), travel time and delay metrics (Figure 3), as well as socio-economic growth patterns and user benefit calculations in the base year and future horizon years. These technical results are reviewed by the TCC and the public prior to approval by the TAC for submission to NCDOT. As noted above, the public is provided opportunities to comment through the regular TCC and TAC meetings, including a formal 30 day comment period and a public hearing, as well as through submission of comments to the MPO.

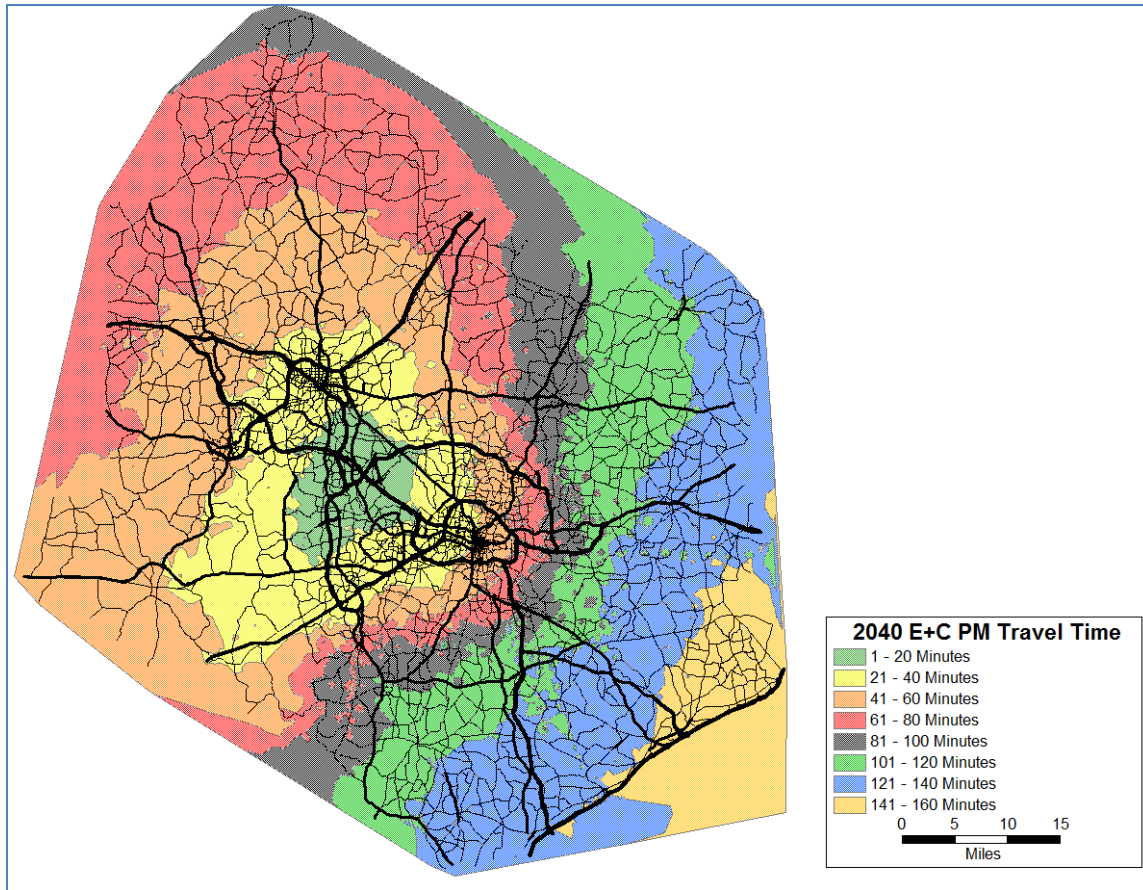


Figure 3. Regional travel time benefits from the adopted Triangle Regional Model

Bicycle & Pedestrian

The first step of the MPO Bicycle/Pedestrian Candidate Project selection process is a call for projects. This is due to the Strategic Prioritization process requirements for local match and the guidance from NCDOT that restricts requests for right-of-way acquisition through this process. Without a local project funding partner, a project cannot be considered for submission. MPO member governments submit project request forms for each bicycle and pedestrian project. Upon the close of the call for projects, the MPO calculates a project selection score based largely on the NCDOT bicycle/pedestrian prioritization criteria and weights. The NCDOT prioritization criteria and weights are shown in Appendix A.

Public Transportation

The MPO issues a call for projects to all transit agencies upon receiving the Statewide Prioritization schedule from NCDOT. Upon the close of the call for projects, the MPO calculates a project selection score based largely on the NCDOT public transportation criteria and weights. The NCDOT prioritization criteria and weights are shown in Appendix A.

Aviation

The Capital Area MPO region contains two public airports, Raleigh-Durham International airport (RDU) and Triangle North Executive Airport (LHZ). Due to its size and commercial service, Raleigh-Durham International airport is classified in the Statewide Mobility STI category. Triangle North

Executive Airport is considered a general aviation airport and as such is categorized in the Division Needs STI category. The MPO works closely with the staff from both airports along with NCDOT Division of Aviation to select projects from their long-range plan. A project selection score is calculated for all aviation projects submitted to the MPO. The selection score is based largely on the NCDOT aviation criteria and weights. The NCDOT prioritization criteria and weights are shown in Appendix A.

Rail

Like the other non-highway modes, a call for projects is issued for rail projects once the MPO receives the statewide prioritization schedule from NCDOT. The MPO works closely with the NCDOT Rail Division to review all projects submitted for consistency and eligibility with regard to Statewide Prioritization requirements. A selection score is calculated for each project submitted based largely on the NCDOT rail criteria and weights. Priority is given to those rail projects classified under the Statewide Mobility category. The NCDOT prioritization criteria and weights are shown in Appendix A.

Strategic Prioritization Point Allocation Process

The second step of assigning local priority points is based on a combination of the quantitative technical score provided by SPOT, an evaluation of the competitiveness of each project with respect to its potential funding category, and qualitative factors that reflect established regional goals and objectives. Every project in the strategic prioritization is classified into one of three categories: Statewide Mobility, Regional Impact, and Division Needs. Furthermore, NCDOT's methodology includes a weighting of the MPO's and Division's points by category. The MPO's ranking points contribute more towards a project's final score in the Division Needs category than the Regional Impact category. The Statewide Mobility category scoring is 100 percent quantitative. Table 1 below displays the contribution towards the final score for the NCDOT's quantitative data, Division points, and MPO/RPO points.

Category	Quantitative Data	Division Ranking Points	MPO/RPO Ranking Points
Statewide Mobility	100%	-	-
Regional Impact	70%	15%	15%
Division Needs	50%	25%	25%

Table 1. NCDOT Strategic Prioritization Categories

The Strategic Transportation Investments law (STI) states that projects in the Statewide Mobility category that are not programmed with funds from that category will also compete within the Regional Impact category. Likewise, projects that are not programmed at the Regional Impact category will also compete for the remaining funds in the Division Needs category. This aspect of the STI law is commonly referred to as "cascading".

It is the policy of the North Carolina Capital Area Metropolitan Planning Organization that the MPO will, by default, not assign points to any cascading project, but reserves the right to address cascading projects on a case-by-case basis, and will provide written explanation and justification for any cascading project that justifies exception.

NCDOT assigns the number of local prioritization points for each MPO, RPO, and Division based on the area's population. The allotment of local prioritization points for each MPO, RPO, and Division is shown in Appendix B. Each MPO, RPO, and Division can assign a maximum of 100 points and a minimum of 4 points to each project; however, projects receiving zero priority points are still included in the prioritization with their total scores being based solely on their quantitative data points. For projects that span multiple MPOs/RPOs, the maximum points each organization can submit is equal to the percentage of the project in the organization (for a high priority, CAMPO would allocate 45 points for a project 45% within the CAMPO region). Organizations are allowed to donate points to a neighboring MPO/RPO for a project outside of their area that is a high priority.

The MPO recognizes that no single project is a silver bullet that solves all the major transportation challenges in a region as large and diverse as the Capital Area MPO. The MPO developed a methodology for distribution of prioritization points that maximizes the number of projects deemed to be competitive for advancement into the fiscal constraint phase of the process and that addresses as many quantified regional transportation needs as possible. This process is based on the TAC decision to maximize the number of projects demonstrating need that score high enough to be considered for potential funding. This approach ensures that the maximum overall improvement to our regional network can be prioritized and potentially funded in the TIP/STIP after fiscal constraint, STI funding requirements, and regulatory compliance are met. This notion of maximizing funding potential and the number of competitive projects is the fundamental principle guiding the MPO's local priority point allocation.

This methodology recognizes that a high score in the Strategic Prioritization process is the first step towards programming the TIP/STIP, with many other major contributing factors impacting the TIP/STIP project funding decisions. In part, these include fiscal constraint (both state/federal and local/private), cash flow, regulatory compatibility and funding source availability/eligibility for the region. Competitiveness is a relative term that simply describes the likelihood of a project advancing to the next step of programming. The MPO estimates competitiveness based on a number of factors such as the projected revenue for the upcoming programming period, the priorities of neighboring MPOs and RPOs, how Division Engineers prioritized projects in previous cycles, and certainly the other transportation projects competing for funding within a given STI category. After reviewing all relevant factors, the MPO estimates the minimum SPOT score needed for consideration for programming. The MPO then examines the NCDOT calculated quantitative scores and assigns local priority points to the highest scoring projects in order to maximize the number of projects that meet the competitive threshold.

It should be noted that in some cases a project's quantitative score may be so low that even with the maximum number of local priority points (100 points), it may not meet the competitive threshold. In these cases the project is deemed uncompetitive and local priority points are not assigned. Competitiveness varies across STI categories and modes because the amount of funding changes as does the number and types of projects competing for funding. A quantitative score of 50 in Johnston County (Region A, Division 4) may be deemed more competitive than a quantitative score of 60 in Wake County (Region C, Division 5) because of the competition and funding for those two different Regions and Divisions. Therefore, the MPO estimates competitive thresholds for all STI Regions, Divisions, and modes.

To achieve maximum funding potential for the maximum number of projects, the local prioritization points per category are applied where they have the greatest overall impact to the network, thus making a group of projects that are highly effective potentially competitive for TIP/STIP programming. Point allocation for each STI category is evaluated separately because funding levels are set by STI category, and projects are initially prioritized with other projects of the same category. Once the competitive threshold is determined, points are applied to the highest-scoring projects to meet the threshold for each STI category. This approach ensures that the MPO is prioritizing a suite of improvements that provide for the maximum network benefit.

To address prioritization across all modes of transportation, the MPO establishes target modal mixes for both the Regional Impact and Division Needs categories. These target point mixes are flexible but provide the initial budget of points per mode. Projects that are unable to meet the competitive threshold are deemed “uncompetitive” within the Strategic Prioritization system and do not receive local prioritization points. In the absence of a competitive project(s) for a mode, the target modal points are redistributed across the other modes based on the original distribution percentages. The target modal mixes adopted by the MPO are illustrated in Appendix C.

The MPO’s STI/SPOT subcommittee reviews the target modal mixes for each Strategic Prioritization cycle and recommends adjustments to the targets as necessary. The TCC and MPO Executive Board approve the target modal mixes, which allows staff to begin the recommended point allocation. The final point allocation is determined by the MPO Executive Board. To determine the modal mix, the MPO’s STI/SPOT subcommittee reviews the past transportation investments summits, previous cycles of Strategic Prioritization, historic funding by mode, and the goals and objectives set forth in the MTP.

The following sections describe the methodology and criteria used by the MPO to allocate points to each projects across all modes.

Roadway

The roadway projects eligible for local prioritization points include: projects carried over from previous prioritization cycles, new projects submitted by the MPO, new projects submitted by the NCDOT Division, and projects that may have been submitted by a neighboring RPO or MPO that cross over into part of the Capital Area MPO. The list includes both capacity widening projects and modernization projects. Many modernization projects are for adding bicycle facilities, sidewalks, transit amenities, shoulders, and/or curb-and-gutter to two-lane roads (over \$1 million cost). These roadway projects are scored using the criteria illustrated in Appendix A. Each criterion is scored out of 100 points. The criteria are weighted to produce the total score. The maximum total score is 100 points. The criteria and weighting vary by STI category. Furthermore, the MPOs, RPOs, and Divisions have the option of agreeing to use alternate criteria and weighting for each Region and Division.

To assign the local priority points for the roadway mode, the MPO first estimates the competitive threshold for each STI category, region, and division. Points are then allocated in order to maximize the funding potential and the maximum number of competitive projects for each STI category, region, and division. In some cases, the quantitative score for a project may be too high or possibly too low to warrant additional local priority points.

Public Transportation

Public Transportation projects submitted for Strategic Prioritization are categorized into the Statewide Mobility, Regional Impacts, and Division Needs categories as defined by House Bill 817 (STI). NCDOT-PTD has developed an approach that creates a quantitative score for each candidate project submitted. The criteria and weights for calculating the quantitative score are shown in Appendix A.

Like roadway and other modes, each MPO prioritizes transit projects by assigning up to 100 local priority points per project. Projects that are in multiple MPOs get the cumulative score provided by the MPOs for that project with a 100 point maximum per project. One major difference from the prioritization of other modes is that most transit projects in the Capital Area MPO region are only competing for a state match that typically does not exceed 10 percent of the project cost. The majority of the federal funds for public transportation are designated to specific recipients through established agreements. Furthermore, required local match funds are subject to local transit agency approval. As such, a greater influence in the priority point allocation is given to qualitative criteria such as transit operator capital improvement program priorities and potential impact to service in major regional transit corridors. The MPO initially ranks all submitted public transportation projects based on the transit systems' implementation schedules and local match availability. The MPO then allocates local priority points to maximize the number of potentially competitive projects based on the relative competitiveness across STI categories, regions, and divisions.

Bicycle & Pedestrian

The Strategic Transportation Investments law (STI) only allows bicycle and pedestrian projects to be programmed from the Division Needs category. STI also sets a required twenty percent (20%) local match for all bicycle and pedestrian projects and prohibits state funds for stand-alone bicycle and pedestrian projects outside of Powell Bill funds. Additional requirements for bicycle and pedestrian projects include a minimum project cost of \$100,000 and inclusion in a locally adopted bicycle or pedestrian plan. The criteria and weights used to calculate the quantitative score for bicycle and pedestrian projects is shown in Appendix A. Each of the quantitative criteria are scored out of 100 and weighted to produce the total quantitative score. Like other modes, bicycle and pedestrian projects can receive up to 100 local priority points from the MPO and additional priority points from the NCDOT Division.

The MPO initially ranks the submitted bicycle and pedestrian projects based on their NCDOT calculated quantitative scores. Local priority points are then allocated in order to maximize the number of potentially competitive projects in the Division Needs category across all three NCDOT Divisions.

Aviation

The Capital Area MPO region contains two public airports, Raleigh-Durham International airport (RDU) and Triangle North Executive Airport (LHZ). Due to its size and commercial service, Raleigh-Durham International airport is classified in the Statewide Mobility STI category. As such, the only RDU projects that are subject to local prioritization points are those that “cascade” down to the Regional Impact or Division Needs STI categories. The Triangle North Executive Airport is considered a general aviation airport and as such is categorized in the Division Needs STI

category. The criteria and weights used to calculate the quantitative score for aviation projects is shown in Appendix A. Each of the quantitative criteria are scored out of 100 and weighted to produce the total quantitative score. Like other modes, aviation projects can receive up to 100 local priority points from the MPO and additional priority points from the NCDOT Division.

The MPO initially ranks the aviation projects with respect to their quantitative scores, reviews the projects for competitiveness within the STI categories and assigns local prioritization points in order to maximize funding potential and the number of potentially competitive projects with respect to the target modal mixes.

Rail

The Strategic Prioritization process categorizes all rail projects as: Freight Track & Structures; Freight Intermodal; Intercity Passenger Track & Structures; or Intercity Passenger Service & Stations. The Strategic Transportation Investments law (STI) also defines which project types are eligible for each STI category along with the criteria and weighting (see Appendix A).

The MPO initially prioritizes the rail projects for the region based on the quantitative score calculated by NCDOT and then allocates prioritization points in order to maximize the funding potential and potential competitiveness of projects across the STI categories with respect to the target modal mixes.