



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

Introduction

NCDOT's Strategic Prioritization Process (SPOT) 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 statewide, regional, and division level transportation projects funded through a combination of federal, state, and local funds for the next ten years. The SPOT 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 (CAMPO) plays a critical role in the SPOT Process by initially submitting projects for evaluation and then assigning additional local input points to projects deemed most important for the region. This document further describes the methodology used by the MPO to identify projects to submit, and how local input points are allocated.

The CAMPO prioritization methodology is based in large part on two key principles:

1. Much of the work of identifying and prioritizing transportation projects within the region, which involves both transportation officials and the broader community, occurs during the development of the Metropolitan Transportation Plan; and,
2. Local input points are awarded to projects that are the most competitive in the SPOT Process in order to ensure as many projects of regional significance as possible are included in the STIP.

Prioritization starts at the Metropolitan Transportation Plan

The MPO's process to prioritize projects begins with the development of the region's Metropolitan Transportation Plan (MTP), and as such, inclusion in the MTP is a fundamental requirement for projects submitted by the MPO into the SPOT Process. During the development of the MTP, projects are prioritized by 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, public input, and coordination with regionally significant economic development projects. The MTP also incorporates the recommendations developed in smaller area plans and corridor studies such as the Southwest Area Study (SWAS), the Northeast Area Study (NEAS), the Southeast Area Study (SEAS), the US 64 Corridor Study, and the NC 50 Corridor Study that take up to 18 months each to develop. The development of the MTP is a long and thorough planning process that takes up to 30 months to develop and approve.

The public's participation in the MPO's prioritization process also occurs with the development of the MTP through a series of public workshops, open houses, formal public comment periods and

hearings, as well as surveys and stakeholder interviews. In addition, the above mentioned plan and study processes each have a robust set of public participation activities. All public involvement requirements and policies for the MPO, including those related to MTP development, small area plans, and prioritization are documented in the MPO's Public Participation Plan. Copies of the adopted Metropolitan Transportation Plan, the Public Participation Plan, and information on the MPO's area plans and studies are available via the CAMPO website (www.campo-nc.us).

- MTP - <https://www.campo-nc.us/transportation-plan>
- Public Participation Plan - <https://www.campo-nc.us/get-involved>

Candidate Project Selection & Prioritization Processes Overview and Schedule

The MPO's role in the SPOT Process occurs during two separate and distinct steps:

- I. The initial selection and submittal of candidate projects from the MTP to NCDOT's SPOT system, and,
- II. The allocation of local input points to those projects.

The entire SPOT Process, from submitting projects for scoring until the release of the Draft STIP, can take up to 18 months. The NCDOT published schedule is shown in Appendix A. This process is further illustrated below in Figure 1.

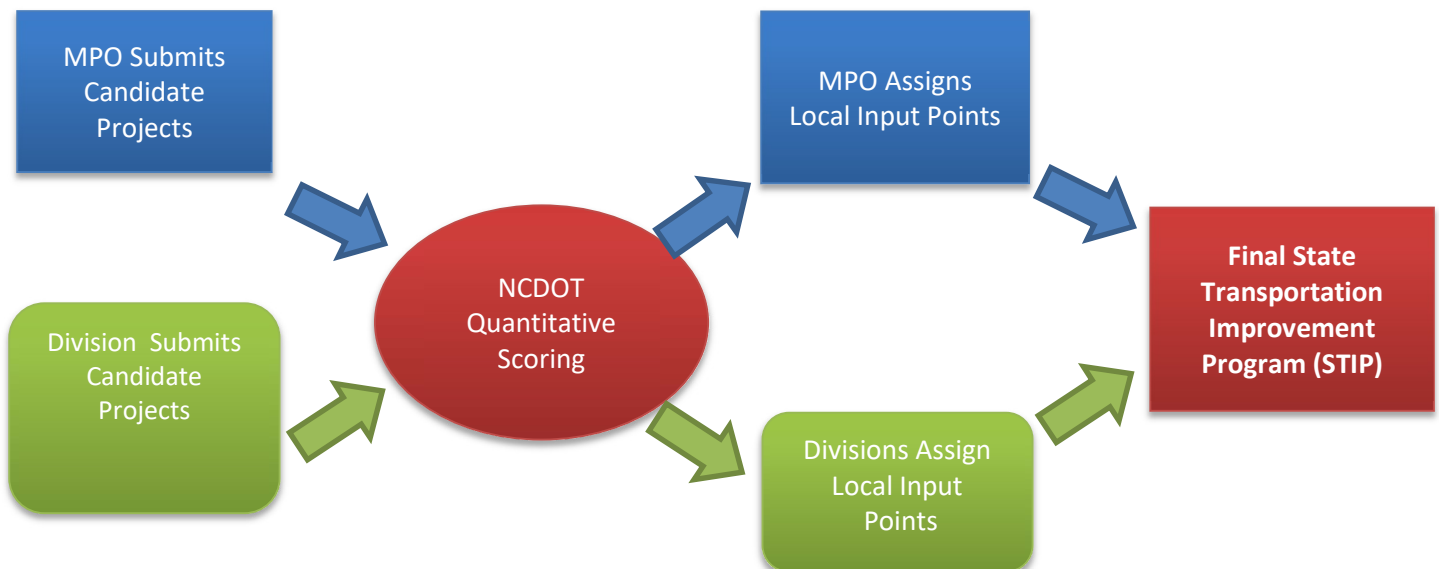


Figure 1. Strategic Prioritization Overview

I. MPO Submittal of Candidate Projects

The Capital Area MPO utilizes an internal quantitative evaluation process to select candidate projects to submit for consideration in the SPOT 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 SPOT. 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.

1. *Review criteria and call for projects.*

The MPO begins the selection process several months in advance of the announced NCDOT project submittal deadline. Initially, the MPO conducts a thorough review of the Strategic Transportation Investments law (STI) criteria and policies and issues a call for all non-roadway projects. For roadway projects, the MPO utilizes the projects list from the adopted MTP.

2. *Technical evaluation of projects*

The MPO then begins the technical evaluation of projects and creates a draft recommendation of candidate project lists by mode. This evaluation is based on quantitative data (performance measures) and qualitative data (ability to be funded or constructed).

3. *Present recommendations to MPO advisory bodies and release for public comment*

The draft recommendation is presented to both the MPO's Technical Coordinating Committee (TCC) and the Executive Board (TAC) for review and possible revisions before releasing the list for a minimum 30-day public comment period (see Public Participation Plan).

4. *Advisory bodies review comments, make revisions, approve lists*

The TCC reviews all public comments received and forwards a recommendation to the Executive Board. The Executive Board also reviews all public comments received, hosts a public hearing, and approves the candidate project lists - with possible revisions - for the MPO staff to submit to the SPOT system.

Between the MPO submittal of the candidate projects and the release of the technical quantitative scores by NCDOT, the MPO's STI/SPOT Subcommittee meets to review the MPO's current adopted prioritization methodology, how it performed during the recent project selection process, and recommends any revisions to be used in future processes. The Subcommittee also reviews and recommends any revisions to the target modal mixes for the upcoming Regional and Division local input points allocation process.

II. MPO Submittal of Local Input Point Allocations

The second step of allocating local input points is based on a combination of the quantitative technical score provided through the SPOT Process by NCDOT, 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.

1. *Analyze competitiveness of each project*

Once the NCDOT quantitative scores are released, the MPO begins analyzing the projects for their competitiveness with respect to:

- Funding potential;
- Feasibility to be completed within the upcoming TIP/STIP timeframe;
- NCDOT Division input; and,

- Competing projects within those STI categories and modes.
2. *Apply MPO's adopted methodology for prioritization*
The MPO then drafts an initial point allocation based on the Executive Board's adopted methodology centered on competitiveness, which aims to maximize the number of projects demonstrating need that score high enough to be considered for potential funding.
 3. *Present recommendations and release for public comment*
Similar to the review and input process in the candidate projects selection process, the draft recommended local input point allocation is presented to both the MPO's Technical Coordinating Committee (TCC) and the Executive Board (TAC) for review and possible revisions before releasing the list for a minimum 30 day public review and comment period (see Public Participation Plan).
 4. *Advisory bodies review comments, make revisions, approve lists*
The TCC reviews all public comments received and forwards a recommendation to the MPO Executive Board. The MPO Executive Board also reviews all public comments received, hosts a public hearing, and approves point allocations - with possible revisions - for the MPO staff to submit to the SPOT system.

The MPO Executive Board has sole authority to approve both the projects submitted to SPOT and the local input point assignments. The MPO Executive Board can deviate from their adopted methodology at their discretion. If the MPO Executive Board chooses to deviate from this methodology, documentation for their decision will be included on the project submittal list or point assignment.

All MPO materials related to the SPOT Process, including the CAMPO public comment periods, public hearings, Executive Board actions, NCDOT prioritization schedule, CAMPO methodology, project submittal lists, target model mixes, draft and final point assignments are posted to the MPO's website: <https://www.campo-nc.us/funding/spot>. For more information on NCDOT Strategic Prioritization and the Strategic Transportation Investments Law (STI) see <https://www.ncdot.gov/initiatives-policies/Transportation/stip/>.

Candidate Project Selection Process

For the selection of projects to be submitted to SPOT, the MPO develops a ranking process for each transportation mode included in the SPOT 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 category (statewide, regional, division). The ranking process for each mode is based on quantitative data (performance measures) and qualitative data (ability to be funded or constructed).

Roadways

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 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 SPOT 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 by the MPO. For a description of funding categories, scoring, and modal eligibility under the STI law, see Appendix B.

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.

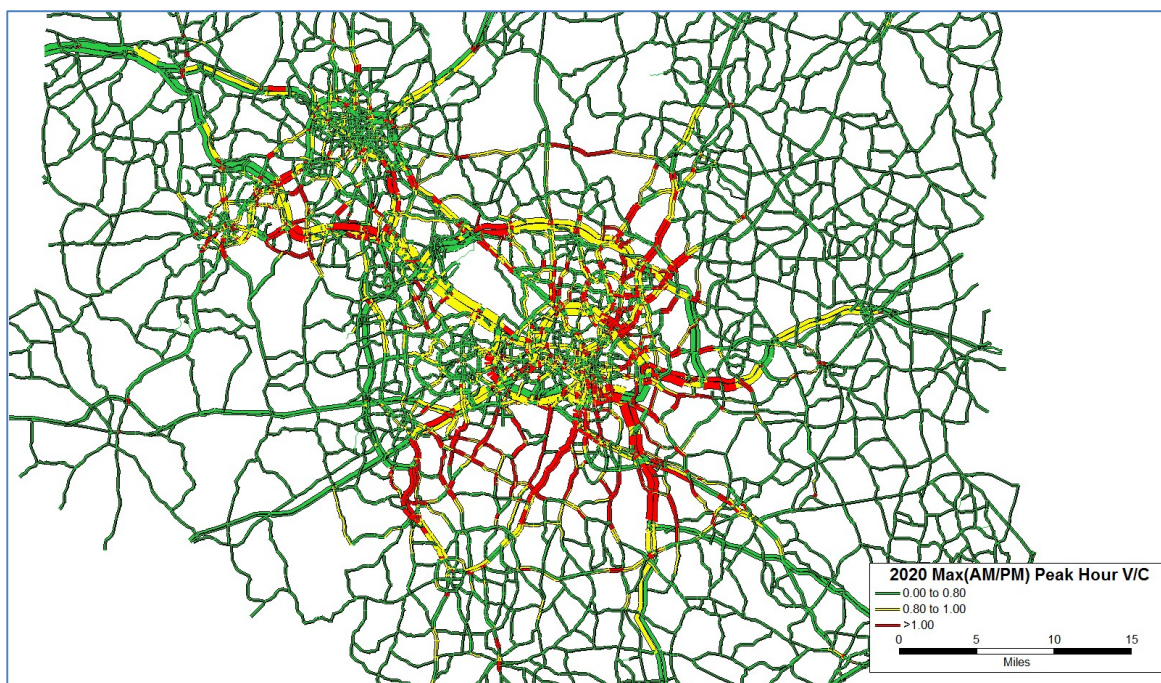


Figure 2. 2020 Volumes derived from the adopted Triangle Regional Travel Demand Model

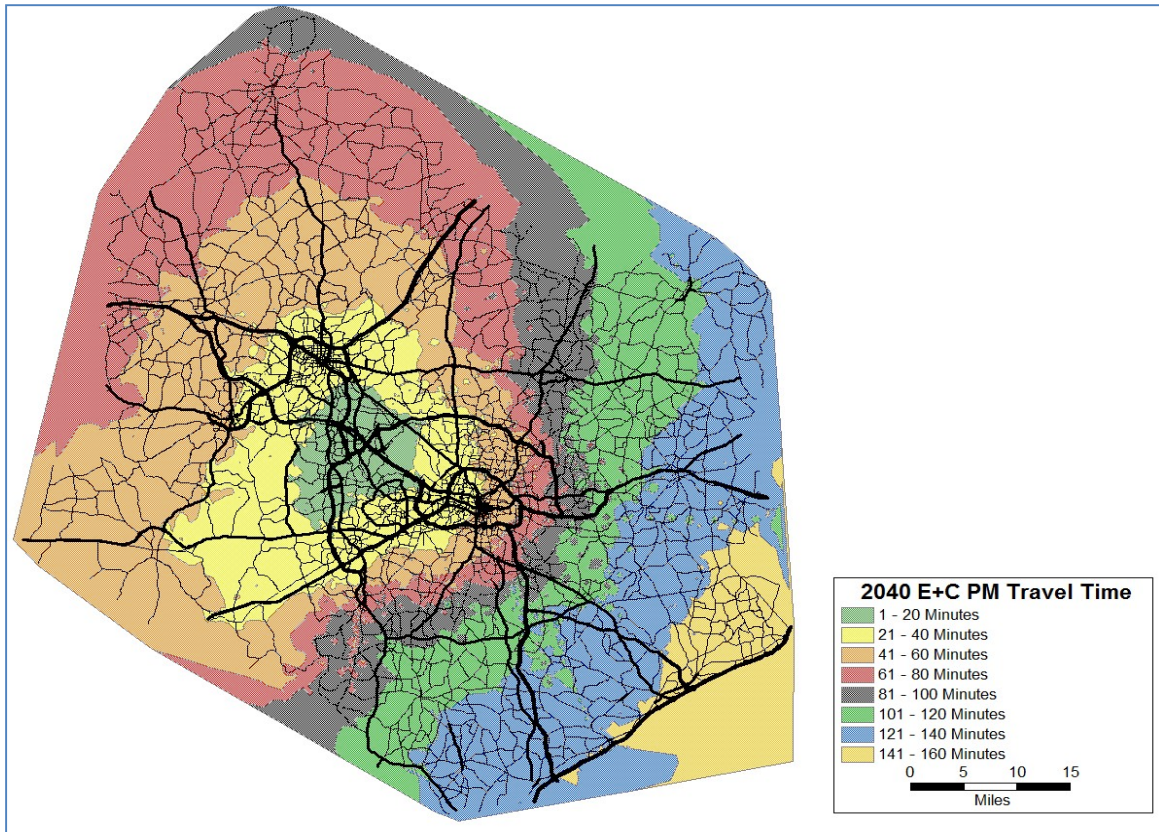


Figure 3. Regional travel time benefits from the adopted Triangle Regional Model

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 20 percent 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 MPO's methodology for the selection of 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. The first step of the MPO's bicycle/pedestrian candidate projects selection process is a call for projects. This is due to the SPOT Process requirements for local matching funds. 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 verifies that the project is consistent with the MTP and then calculates a project selection score based largely on the NCDOT bicycle/pedestrian prioritization criteria and weights shown in Appendix C.

Public Transportation

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.

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 verifies that the project is consistent with the MTP and then calculates a project selection score based largely on the NCDOT public transportation criteria and weights as shown in Appendix C.

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 based largely on the NCDOT rail criteria and weights as shown in Appendix C. Priority is given to those rail projects classified under the Statewide Mobility category.

Aviation

The Capital Area MPO region contains three public airports, Raleigh-Durham International airport (RDU), Triangle North Executive Airport (LHZ), and North Harnett Executive Airport (HRJ). Due to its size and commercial service, Raleigh-Durham International airport is classified in the Statewide Mobility STI category. Triangle North Executive Airport and North Harnett Executive Airport are considered a general aviation airport and as such are categorized in the Division Needs STI category. For this mode, there is no call for projects. The MPO works directly with the staff from the airports along with NCDOT Division of Aviation to select projects from their respective long-range plans. A project selection score is then calculated for these projects based largely on the NCDOT aviation criteria and weights as shown in Appendix C.

All of these technical results and lists are compiled by the MPO and reviewed by the TCC and the public prior to approval by the Executive Board for submission to the NCDOT SPOT system. As noted above, the public is provided opportunities to comment through the regular TCC and MPO Executive Board meetings, including a formal 30-day comment period and a public hearing, as well as through submission of comments to the MPO.

Strategic Prioritization Point Allocation Process

The second step of assigning local input points is based on a combination of the quantitative technical score provided by NCDOT, 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.

Background

Every project in SPOT is classified into one of three categories: Statewide Mobility, Regional Impact, and Division Needs. Furthermore, the STI law includes a weighting of the MPO's and Division Engineer's points by category. The MPO's local input 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 SPOT quantitative data, Division Engineer points, and MPO/RPO points.

Category	Quantitative Data	Division Engineer Local Input Points	MPO/RPO Local Input 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”. For more information on STI funding categories including how final scores are calculated see Appendix B.

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 input points for each MPO, RPO, and Division based on the area’s population, shown in Appendix D. There is a separate set of points for Regional and Division categories. Each MPO, RPO, and Division can assign a maximum of 100 points to each project. Projects receiving zero local input 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.

CAMPO’s Points Allocation Process – Competitiveness Criteria

The MPO recognizes that no single project is a silver bullet that solves all of the major transportation challenges in a region as large and diverse as ours. The MPO’s project prioritization process is based on the Executive Board’s 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 methodology recognizes that a high score in the SPOT Process is the first step towards programming the TIP/STIP. 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 the other transportation projects competing for funding within a given STI category.

After reviewing all relevant factors, the MPO estimates the minimum SPOT score a project would need for consideration for programming. This is considered to be the competitive threshold. In

some cases, a project's quantitative score may be so low that even with the maximum number of local input points (100 points), it may not meet the competitive threshold. In these cases, the project is deemed uncompetitive and local input points are not assigned. In addition, the competitive threshold varies across STI categories and modes because the amount of funding and the number and types of projects competing changes with each SPOT Process. 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 each STI Region and Division within its boundaries, as well as for each mode.

The MPO assigns local input points to the projects just under the competitive threshold to raise them over the estimated minimum score in order to maximize the number of projects that meet the competitive threshold. The following figures are from Prioritization 2.0 and illustrate this notion of competitiveness. Figure 4 shows projects plotted by their NCDOT calculated quantitative scores. For Prioritization 2.0, the MPO estimated the competitive threshold to be approximately 41, shown as the *red line*. Projects already exceeding a score of 41 are already deemed competitive and thus do not benefit from additional local input points.

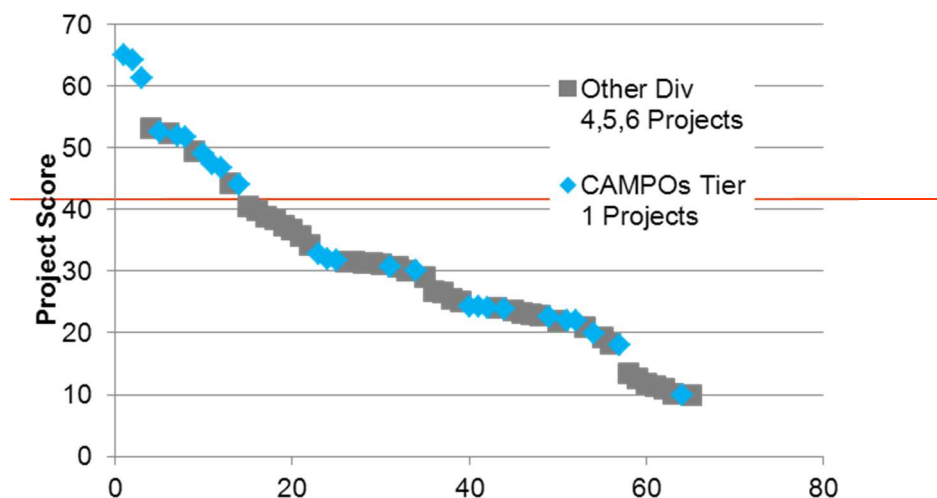


Figure 4. CAMPO Projects plotted by quantitative score and estimated “Red line”

Figure 5 below shows the results of assigning local input points to those projects just under the competitive threshold. Using this methodology results in more MPO projects ultimately being considered for the next step of project programming.

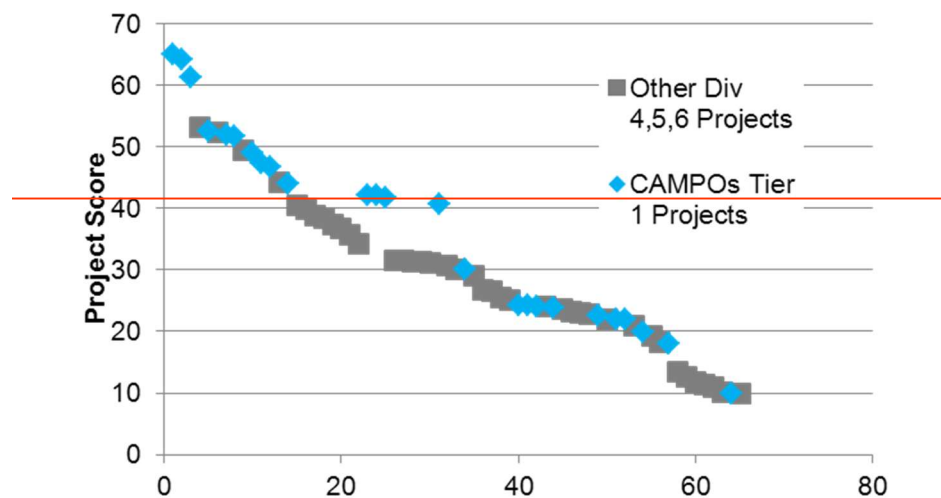


Figure 5. Highlighted projects are assigned local input points and elevated above the “Red Line” thus maximizing number of competitive projects

To achieve maximum funding potential for the maximum number of projects, the local input 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.

CAMPO Points Allocation Process - Target Modal Mix Criteria

To address prioritization across a variety of transportation modes, the MPO establishes target modal mixes for both the Regional Impact and Division Needs categories. As mentioned in the Overview, the MPO’s STI/SPOT Subcommittee reviews the target modal mixes for each SPOT cycle and recommends adjustments to the targets as necessary. To determine the modal mix, the Subcommittee reviews the past transportation investments submittals, previous cycles of SPOT, historic funding by mode, and the goals and objectives set forth in the MTP. The MPO Executive Board approves the target modal mixes, enabling staff to begin the technical analysis needed to develop a draft recommended point allocation. The target modal mixes adopted by the MPO are illustrated in Appendix E.

These target point mixes are flexible but provide the initial budget of points per mode. 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.

Additional Information and Materials Sharing

All MPO materials related to the SPOT Process, including the NCDOT prioritization schedule, CAMPO methodology, project submittal lists, target model mixes, draft and final point assignments are posted to the MPO's website: <https://www.campo-nc.us/funding/spot>.

Additional information regarding the NCDOT Strategic Prioritization process and the Strategic Transportation Investments Law can be found here <https://www.ncdot.gov/initiatives-policies/Transportation/stip>.

NCDOT presentations, training materials, project technical scores, and other resources for prioritization can be found here

<https://connect.ncdot.gov/projects/planning/pages/prioritizationresources.aspx>

For questions or comments related to the MPO's Methodology or specific project information please contact CAMPO staff at (984) 952-3601 or comments@campo-nc.us