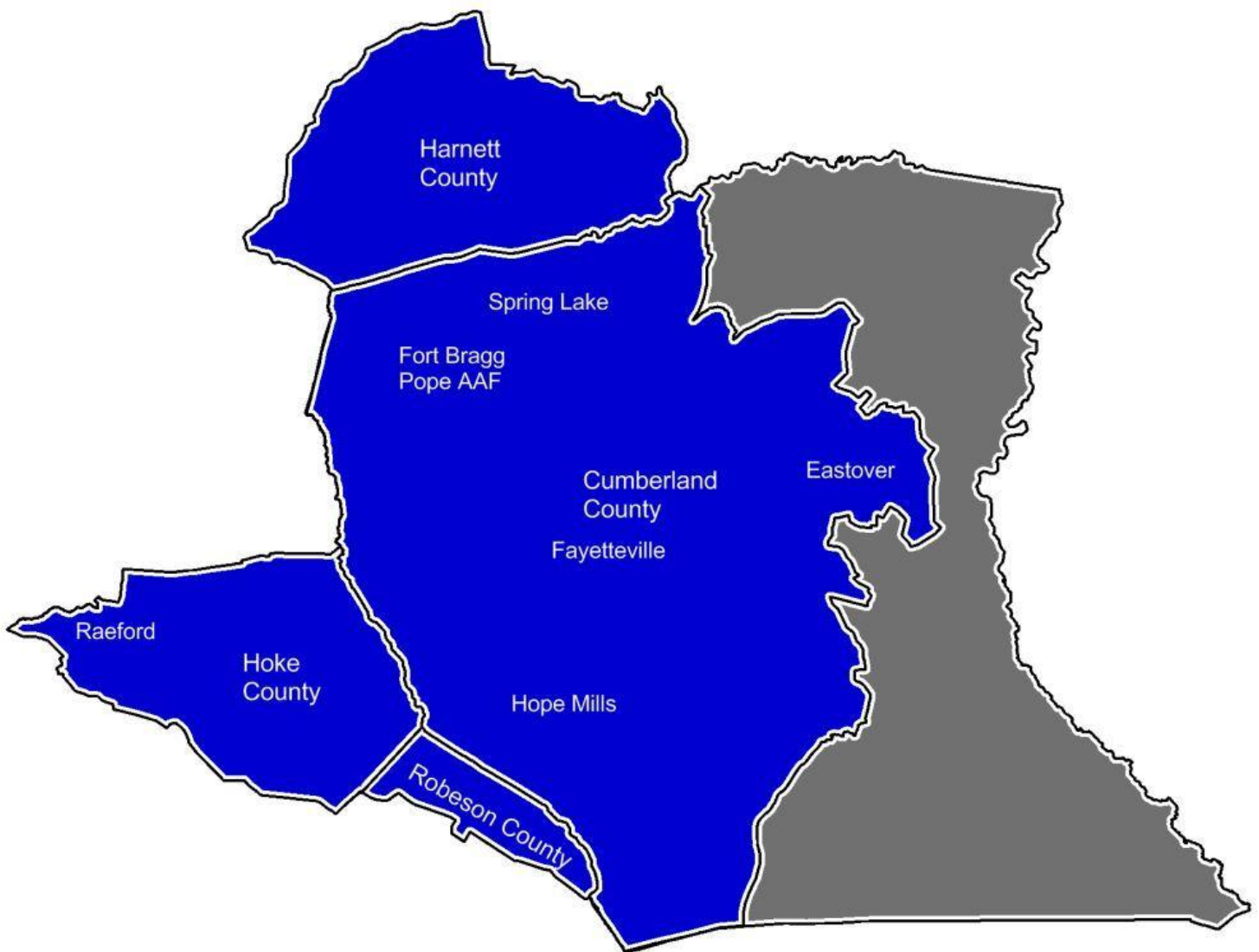


# FAMPO

**Fayetteville Area Metropolitan Planning Organization**

**Implementation of Strategic Prioritization 5.0**

## **PROJECT RANKING PROCESS**



**January 24, 2018**

**Continuing · Comprehensive · Cooperative · Transportation Planning**



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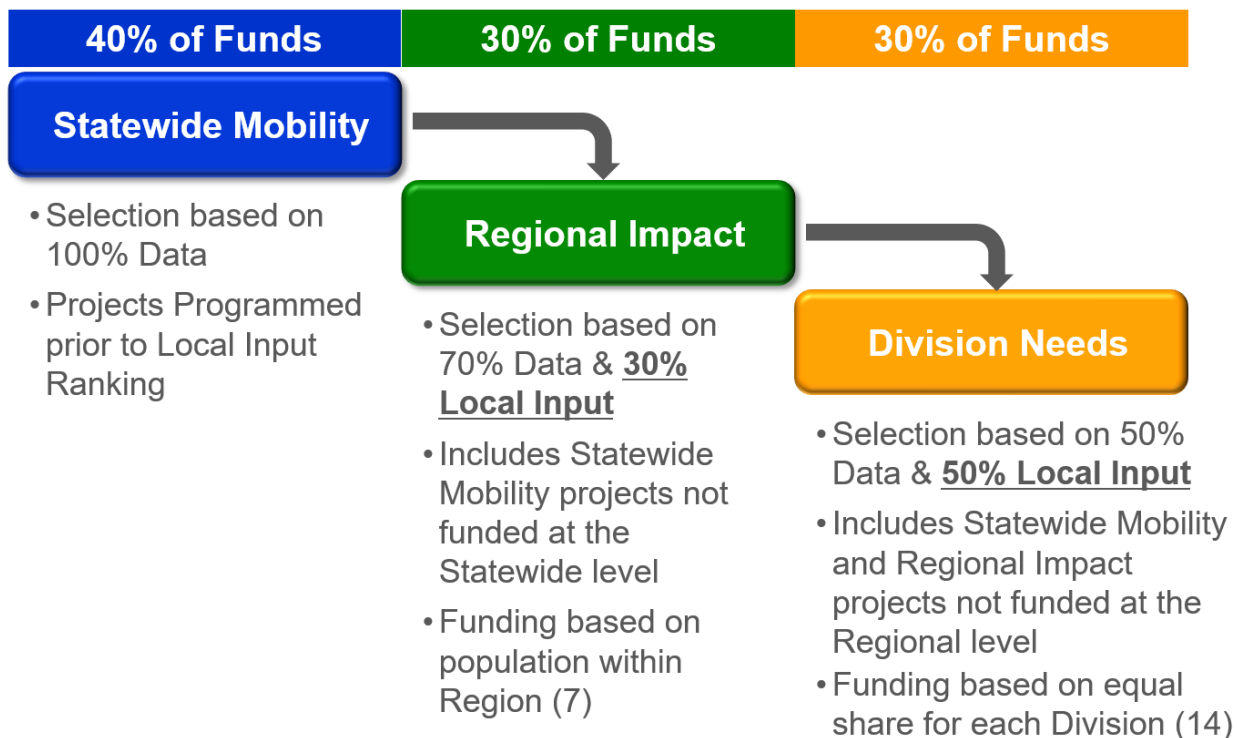
## Introduction

The Strategic Transportation Investments (STI) law (GS 136-189.10 and .11), enacted in 2013, directs NCDOT to select and fund major capital improvement projects using a data-driven prioritization process in combination with local input. Under STI, all major capital mobility/expansion and modernization projects across all six modes of transportation compete for funding. Each project is classified into one of three funding categories – Statewide Mobility, Regional Impact, or Division Needs – where it competes for funds with other eligible projects.

## Applicability

Statewide Mobility eligible projects compete against all other projects in this category across the state, and project selection is based 100% on the data-driven quantitative score. Regional Impact projects compete against all other projects in this category within the same funding region (consisting of two NCDOT Transportation Divisions), and selection is based 70% on the quantitative score and 30% on local input (15% MPO/RPO priority and 15% NCDOT Division Engineer priority). Division Needs projects compete against all other projects within the same NCDOT Transportation Division, and selection is based 50% on quantitative score and 50% on local input (25% MPO/RPO priority and 25% NCDOT Division Engineer priority).

The STI law includes an innovative component known as cascading, where projects not funded in the Statewide Mobility category are eligible for funding in the Regional Impact category. Similarly, projects not funded in the Regional Impact category are eligible for Division Needs funds. Projects that cascade down are then subject to the scoring criteria and local input for the respective funding category.



Project eligibility for each STI category, as defined in law, is shown below.

STI Project Eligibility			
Mode	Statewide Mobility	Regional Impact	Division Needs
Highway	<ul style="list-style-type: none"> <li>Interstates (existing &amp; future)</li> <li>NHS routes (as of July 1, 2012)</li> <li>STRAHNET Routes</li> <li>ADHS Routes</li> <li>Uncompleted Intrastate projects</li> <li>Designated Toll Facilities</li> </ul>	Other US and NC Routes	All County (SR) Routes
Aviation	Large Commercial Service Airports (\$500K cap)	Other Commercial Service Airports not in Statewide (\$300K cap)	All Airports without Commercial Service (\$18.5M cap)
Bicycle-Pedestrian	N/A	N/A	All projects (\$0 state funds)
Public Transportation	N/A	Service spanning two or more counties (10% cap)	All other service, including terminals, stations, and facilities
Ferry	N/A	Ferry expansion	Replacement vessels
Rail	Freight Capacity Service on Class I Railroad Corridors	Rail service spanning two or more counties not Statewide	Rail service not included on Statewide or Regional

MPOs/RPOs and Divisions indicate priority by applying local input points to projects. Each organization receives a baseline of 1,000 local input points, with additional points (up to 2,500) based on population. FAMPO has a total of 1,800 points to apply to projects in the Regional Impact category and a total of 1,800 points to apply to projects in the Division Needs category. State law requires NCDOT to approve how each organization will assign points to projects, in a document known as their Local Input Point Methodology.

### Schedule and Public Involvement

FAMPO issued a new candidate projects solicitation in August 2017 to all member jurisdictions. Member jurisdictions were requested to submit new candidate projects to FAMPO by September 29, 2017.

Local methodology will be presented at the January 2018 Citizen Advisory Committee (CAC), Technical Coordinating Committee (TCC), and Transportation Policy Board (TPB) meetings, and delivered to SPOT offices for their comment. The January TPB Meeting will be advertised via multiple media outlets as well as through the FAMPO newsletter and website and public input will be welcome. In addition, a 30 day public comment period on the methodology will open on February 12, 2018 to gain citizen input into the process and will be advertised via the local newspaper. The methodology will be available on our website ([www.fampo.org](http://www.fampo.org)) as well as in our offices during normal

business hours. The methodology will also be distributed via our Citizen Notification Database (approximately 400 citizens).

If changes are needed after receiving and considering comments from the public, FAMPO's committees, and the SPOT offices, the local methodology will be re-presented for approval at special March 2018 CAC, TCC, and TPB meetings.

The window to assign regional impact points opens in April and closes at the end of June 2018. The window to assign division needs local input points opens in September and closes at the end of October 2018. Local input points will be assigned according to this methodology. The results will be made available on FAMPO's website and at our offices for public comment for 30 days. The results will also be distributed via our Citizen Notification Database. A summary of comments received will be presented to TPB for consideration.

All local point assignments will be reviewed by the CAC, TCC, and TPB for final approval before being submitted to the SPOT office. All final point assignments per project for Regional Impact and any final adjustments made to the scoring by the FAMPO TPB will be posted on our website no later than May 25<sup>th</sup>, 2018. All final point assignments per project for Division Needs will be posted on our website no later than October 24th, 2018.

## Ranking Process

### Introduction

The proposed process outlined on the following pages will be used to assign local input points to all projects within the FAMPO Metropolitan Planning Area. FAMPO receives 1800 points to distribute to Regional Level projects and 1800 points to distribute to Division Level projects.

### Scoring Criteria Descriptions

- **Existing Congestion:** a measure of the volume/capacity ratio of a facility or transit service taken from SPOT P5.0 quantitative score data.
- **Safety Score:** a calculation based on the crash frequency, severity, and safety benefits along sections of a particular roadway. The safety score is the score generated in the quantitative scoring process and is calculated in accordance with the SPOT P5.0 quantitative score calculation detailed in Attachment 1 of this document.
- **Freight Volume:** the number of trucks or equivalent vehicles that utilize the facility on a daily basis. Percentage of truck volume of average daily traffic converted to a number of trucks or equivalent. Data generated by NCDOT Traffic Survey Unit offices will be used for this measure.
- **Transportation Plan Consistency:** a yes or no question to determine if the proposed project is found in an existing adopted transportation plan for the area.
- **Corridor Continuity:** a measure of the project completing or continuing improvements on a defined highway or roadway route which are being completed or in which improvements are ongoing.
- **Multimodal Accommodations:** a yes or no measure of the incorporation of pedestrian, bicycle or transit elements into a project.
- **Public Support:** Public support for the project as documented through feedback received through public outreach efforts, including surveys, Citizen Advisory Committee input, and public meetings.
- **Supports Environmental Justice, Land Use, or Economic Development:** a qualitative measure of EJ, land use and transportation integration, and local economic development benefits gauged by coordination with technical experts from the respective areas (E.G.



NCDOT Transportation Planning Branch, local government planning departments and economic development departments.)

- **Transit Expansion:** a yes or no measure of the project expanding passenger service on existing routes or opening new routes for increased service
- **Serves Activity Center(s):** a yes or no measure of the project serving a large employment center, trauma center, institution of higher learning, tourist center or other high traffic facility/site.
- **Connectivity:** a measure of the project which continues multimodal improvements across a fixed route for non-highway projects which are already completed or planned.

## Regional Needs Ranking

Certain highway, aviation, transit, and rail projects are scored at the regional impact level, as well as any projects that cascade into the regional impact category from the statewide mobility category. FAMPO's methodology allows for non-highway projects to be scored independently, thus the table below applies only to highway projects.

<b>Highway Project Regional Ranking – Criteria and Weights</b>					
<b>Criteria</b>	<b>0 Points</b>	<b>5 Points</b>	<b>10 Points</b>	<b>15 Points</b>	<b>20 Points</b>
<b>Existing Congestion (20 Max)</b>	Volume to capacity less than 0.5	Volume to capacity between 0.51 and 0.75	Volume to capacity between 0.76 and 0.9	Volume to capacity between 0.91 and 1.0	Volume to Capacity over 1.0
<b>Safety Score (20 Max)</b>	SPOT safety points less than 20	SPOT safety points between 21-40	SPOT safety points between 41-60	SPOT safety points between 61-80	SPOT safety scores over 81 points
<b>Freight Volume (5 Max)</b>	Less than 400 trucks/equivalent per day	More than 400 trucks/equivalent per day			
<b>Transportation Plan Consistency (10 Max)</b>	Project is not in CTP or MTP or other approved plan		Project is in CTP or MTP or other approved plan		
<b>Corridor Continuity (10 Max)</b>	Project does not complete or continue corridor improvement		Project does continue corridor improvement		
<b>Multimodal Accommodations (10 Max)</b>	Project does not include ped/bike/transit facilities		Project does include ped/bike/transit facilities		
<b>Public Support (5 Max)</b>	No Public Support	Some Public Support			
<b>Supports Environmental Justice, Land Use, or Economic Development (20 Max)</b>	Project adds capacity or accessibility where growth is not encouraged		Project adds some new capacity or accessibility in support of EJ, land use, <b>or</b> economic developments		Project adds new capacity or accessibility in support of EJ, land use, <b>and</b> economic development

## Division Needs Ranking

Certain highway, aviation, bicycle and pedestrian, transit, and rail projects are scored at the division needs level, as well as any projects that cascade into the division needs category from the regional impact category. FAMPO's methodology allows for non-highway projects to be scored independently, thus the table below applies only to highway projects.

Highway Project Division Impact Ranking – Criteria and Weights						
Criteria	0 Points	5 Points	10 Points	15 Points	20 Points	25 points
<b>Existing Congestion (25 Max)</b>	Volume to capacity less than 0.5	Volume to capacity between 0.51 and 0.65	Volume to capacity between 0.66 and 0.8	Volume to capacity between 0.81 and 0.9	Volume to capacity between 0.91 and 1.0	Volume to Capacity over 1.0
<b>Safety Score (25 Max)</b>	SPOT safety points less than 20	SPOT safety points between 21-35	SPOT safety points between 36-50	SPOT safety points between 51-65	SPOT safety points between 66-80	SPOT safety scores over 81 points
<b>Transportation Plan Consistency (10 Max)</b>	Project is not in CTP or MTP or other approved plan		Project is in CTP or MTP or other approved plan			
<b>Multimodal Accommodations (20 Max)</b>	Project does not include ped/bike/transit facilities		Project includes minor ped/bike/transit improvements		Project includes major ped/bike/transit improvements	
<b>Public Support (5 Max)</b>	No Public Support	Some Public Support				
<b>Supports Environmental Justice, Land Use, or Economic Development (15 Max)</b>	Project adds capacity or accessibility where growth is not encouraged		Project adds some new capacity or accessibility in support of EJ, land use, <b>or</b> economic developments	Project adds new capacity or accessibility in support of EJ, land use, <b>and</b> economic development		

## Non-Highway Projects Ranking

Non-Highway Projects Division Impact Ranking – Criteria and Weights						
Criteria	0 Points	5 Points	10 Points	15 Points	20 Points	25 Points
<b>Transit Expansion (20 max)</b>	Project does not expand passenger service				Project expands passenger service	
<b>Transportation Plan Consistency (25 Max)</b>	Project is not in CTP or TP					Project is in CTP or TP
<b>Public Support (5 Max)</b>	No Public Support	Some Public Support				
<b>Supports Environmental Justice, Land Use, or Economic Development (20 Max)</b>	Project adds capacity or accessibility where growth is not encouraged		Project adds some new capacity or accessibility in support of EJ, land use, <b>or</b> economic developments		Project adds new capacity or accessibility in support of EJ, land use, <b>and</b> economic development	
<b>Serves Activity Center(s) (20 Max)</b>	Project does not serve activity center		Project does serve activity center		Project serves multiple activity centers	
<b>Connectivity (10 Max)</b>	No Connectivity		Some Connectivity			

## Point Assignment Process

The Fayetteville Area MPO proposes giving the top ranked projects in the Regional Funding Category and the top ranked projects in the Division Category the maximum points each, until the 1800 total points per category have been met. The remaining projects will receive no local input points from the MPO, but will receive their only points based upon the SPOT assigned quantitative scoring system.

Due to the inherent difficulties in comparing highway projects to other modes, FAMPO proposes assigning a minimum number of points to non-highway modes, including rail, transit, bicycle and pedestrian, and aviation projects. A minimum of 400 of the 1800 Division points (22%) will be assigned to non-highway modes. The projects will be ranked based on the previous table and **the top scoring project in each mode will receive 100 points**. Any remaining points will be assigned to the top ranking project after the top project in each category receives its points.

The TPB are free to deviate from the preliminary point assignment when making the final point assignments to compensate for situations where the methodology does not accurately reflect their priorities and to ensure appropriate projects at the relevant category. Any variation in point assignments from the preliminary point assignments must have justifications documented in the meeting minutes and posted on the FAMPO's website

## Materials Shared

After the points are assigned, the scoring matrix and point assignments will be available on the FAMPO website ([www.fampo.org](http://www.fampo.org)), as well as the FAMPO office (130 Gillespie St, Fayetteville NC, 28301).

## SAFETY SCORES FOR PRIORITIZATION 5.0

The calculation of safety scores varies depending on whether the project is located along a roadway segment or at an intersection:

**Segments = (Crash Density x 20%) + (Severity Index x 20%) + (Critical Crash Rate x 20%) + (Safety Benefits x 40%)**

**Intersections = (Crash Frequency x 30%) + (Severity Index x 30%) + (Safety Benefits x 40%)**

Safety scores for segment projects will be calculated automatically in the SPOT Online tool, based on a GIS safety score data layer provided by the Mobility and Safety Division. The layer contains the Crash Density, Severity Index, and Critical Crash Rate scores for all segments on state-maintained roadways (each safety component is scored using a 0-100 point scale). Scores are based on a 3-year moving average of crash data.

Intersection safety scores will be calculated manually by the Mobility and Safety Division.

Definitions for each safety component are as follows:

- **Crash Density:** Number of reported crashes per mile.
- **Severity Index:** Locations with a high severity index have higher than average injury rates and/or more severe injuries. This index uses the “Crash Severity” data as described below. NCDOT has established “Equivalent Property Damage Only” (EPDO) coefficients which are used to compare crash severity types among each other. One “B-injury” crash or “C-injury” crash is equivalent to 8.4 “PDO” crashes. One “K-injury” crash or “A-injury” crash is equivalent to 76.8 “PDO” crashes. The severity index of a location is equal to the total EPDO divided by the number of crashes.
  - **Crash Severity:** Crash severity is reported based on the “KABCO” scale. The crash injury status is the most severe injury to a person involved in the crash.
    - K-Fatal – A death results from injuries with 12 months after the crash.
    - A-Disabling – Prevents the person from performing normal activities for at least one day
    - B-Evident – Obvious injury.
    - C-Possible – No visible injury may have momentary loss of consciousness.
    - O-Property Damage Only (PDO).

- **Critical Crash Rate:** A statistically derived number, which is often used as a screening tool to identify locations where crash rates are higher than should be expected for a given facility type and where further engineering investigations may be considered. Crash Rate is defined for a section of highway as the number of crashes per 100 million vehicle miles travelled.
- **Crash Frequency:** The number of reported crashes during a given timeframe.
- **Safety Benefits:** Assesses a project's effect on existing safety deficits. This includes an additional / re-examination of Safety Benefit Factors, including:
  - a) New Location Projects on Primary Routes (Interstate, US, NC)
  - b) New Location Projects on Secondary Routes (SR)
  - c) Superstreets
  - d) Roundabouts – split from Intersection Improvements