



Discretionary Grants Program Policy Guide

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PART 1: Discretionary Grants Process

I. Introduction

The Charlotte Regional Transportation Planning Organization (CRTPO) is the federally designated Metropolitan Planning Organization (MPO) for the Charlotte urban area, which includes Iredell, Mecklenburg, and Union counties. The CRTPO receives direct attributable funds, also known as discretionary funds or grants, to be allocated to member jurisdictions for specific projects on a competitive basis. CRTPO is responsible for allocating federal transportation funds and ensuring funds are preauthorized as stipulated within Federal Highway Administration (FHWA) policy. This document summarizes the Discretionary Grants Program and the funding process, which supports transportation projects in the CRTPO planning area.

The Discretionary Grants Program Policy Guide (the “Policy”) was initially adopted by the CRTPO on February 13, 2019, with the current revision was adopted by the CRTPO Board on September 20, 2023. The CRTPO uses the Policy to prioritize and program all projects within the planning area that utilize discretionary funds. This process involves an annual call for new local highway, intersection, transit, bicycle, and pedestrian projects and a biannual call for existing discretionary projects that require supplemental funds. It will result in projects added to the CRTPO’s Transportation Improvement Program (TIP).

The CRTPO’s [Project Oversight Committee](#) (POC), a subcommittee of the Technical Coordinating Committee (TCC), makes project selection recommendations and monitors the progress of the CRTPO’s discretionary grant projects. The following six principles guide discretionary funding:

1. Projects must be federal funds or Strategic Transportation Investment (STI) eligible.
2. There is an annual schedule for proposing, scoring, and funding projects.
3. Project scoring is consistent with the requirements of the various funding sources.
4. The process addresses funding existing project shortfalls.
5. The process will be iterative, and the Policy may be amended.
6. The Policy is transparent and easily understood by stakeholders.

II. Funding Overview

The CRTPO is responsible for awarding discretionary grants comprised of five Federal funding sources:

1. [Surface Transportation Block Grant Direct Attributable \(STBG-DA\)](#)
2. [Congestion Mitigation & Air Quality \(CMAQ\)](#)
3. [Carbon Reduction Program \(CRP\)](#)
4. [Transportation Alternatives Program Direct Attributable \(TAP-DA\)](#)
5. Bonus Allocations (BA) Funds (Funds originate with NCDOT through STI law)

The [Strategic Transportation Investments](#) (STI) law allows the CRTPO to award federal or state BA funds. The purpose of these funds is to incentivize local funding and highway tolling projects, as well as to fund the construction of eligible highway projects.

The CRTPO can allocate Bonus Allocation funds based on the following conditions:

- The allocation is obtained through local government funding participation or highway tolling
- Local officials commit non-state or non-federal funds to leverage the commitment of state or federal transportation funds.
- BA funds must be spent within the county of the toll project and are subject to the funding ceilings identified within the STI legislation.
- Funds can only fund highway projects in the same county the tolling project was developed.

A. Funding Process

The CRTPO will offer one annual call for new projects and biannual shortfall calls in which all available discretionary federal funds will be considered for programming.

A CRTPO member jurisdiction may submit one application per project, and the CRTPO staff will evaluate the project’s eligibility and suitability for the most appropriate funding source. Although applicants are not required to identify which funding source they are applying for, there are optional questions specific to the project type and core questions for all projects.

Awarded projects will be amended into the CRTPO TIP and NCDOT’s State Transportation Improvement Program (STIP).

B. Annual Funding Timeline & Availability

Below are the typical activities and dates for the call for projects. Please see **Appendix 1** for the current fiscal year’s funding schedule. Please see **Appendix 2** for funding availability.

Date	Activity / Milestone
March, Year 1	CRTPO formally announces the Call for Projects date and other key dates
March, Year 1	CRTPO determines funding targets by mode
March, Year 1	Call for Project-Shortfall Requests opens (for existing CRTPO projects)
Spring, Year 1	Pre-Application Training
Mid-August, Year 1	Call for Projects opens
October, Year 1	CRTPO begins eligibility review/requests follow-up information
Late October, Year 1	Call for Projects closes
November, Year 1	Project scoring
November, Year 1	Selection committee meetings
December, Year 1	Scoring decisions finalized
January, Year 2	Present to TCC and CRTPO Board for information
February, Year 2	Present to TCC and CRTPO Board for approval
February, Year 2	Public Comment Period
March, Year 2	Report on comments to TCC & Board; approve the list of projects
March, Year 2	Call for Project-Shortfall Requests opens (for existing CRTPO projects)
April – May, Year 2	TIP & STIP Amendment process
May, Year 2	Announce funding list / send award letters
May, Year 2	Conduct project implementation workshop for awardees

III. Eligibility Criteria

To be eligible to apply for discretionary grants, the member jurisdiction must identify a project that satisfies the criteria outlined in this section. These project submittal criteria must meet all federal and state funding requirements, as well as the goals of the discretionary-funding policies as adopted by the CRTPO Board.

A. Federal Aid Eligibility

Projects must comply with the statutory requirements of [23 USC 133\(c\)](#). All highway projects submitted for funding improvements must be part of the [Federal Aid System](#). For example, a member jurisdiction has prepared an application for a project along a federal-aid eligible facility that has not been added to the federal aid system map. In that case, applicants must work with NCDOT and FHWA to determine if the facility can be added to the system. This process can take several months and must be completed before applying to the CRTPO for funding. A letter from FHWA confirming the project's likelihood of eligibility upon completion for new highway alignments will satisfy this requirement.

B. Adopted Plan Compliant

Proposed projects are required to be part of an adopted plan—for instance, CRTPO's 2050 Metropolitan Transportation Plan (MTP), Comprehensive Transportation Plan (CTP), or a Capital Improvement Program (CIP). Projects that are part of other locally adopted plans may also be considered.

C. Eligible Activities

The CRTPO's Discretionary Grants Program will assist member jurisdictions by funding transportation improvements that will positively impact the region's highway, bicycle/pedestrian, and transit networks. As such, capital projects may receive these funds to complete any of the following activities.

- NEPA Documentation / Design / Preliminary Engineering
- Land or Right-of-Way Acquisition
- Utility Relocation
- Construction
- Transit Capital
- Transportation air quality projects that reduce emissions

Planning projects, such as feasibility or corridor study projects, may be submitted and will be evaluated for funding through a qualitative process involving the POC.

D. Problem & Solution

Projects should address a member jurisdiction's identified need and provide a highly effective solution to a transportation problem. A significant portion of the scoring is related to the cost-effectiveness of the project.

E. Locally Funded with Minimum Match Committed

All funds are programmed through the Discretionary Grants Program and require a minimum 20% local match. Priority will be given to projects that leverage additional local funds by contributing a higher match than 20%, thus freeing up funds for use on additional projects. A greater local match contribution will result in a higher quantitative project score. Previous match commitment on a project may not be used twice if a member jurisdiction requests supplemental funding.

BA funds through NCDOT’s State Highway Trust Funds do not require a match. However, if the project using State BA funds does not have funding authorization before the STI’s five-year deadline, the project will need to be locally funded, have funds swapped, or be cancelled. New discretionary funds may be applied but require a minimum 20% match. If BA funds are unavailable for shortfalls, the applicant must pay a minimum 20% match on supplemental funds.

BA project applications will be scored with other highway projects, but the final score will be determined by the proximity to the project that resulted in creating the funds.

IV. Modal Investment Targets

A. Discretionary Grant Funding Targets by Funding Source

The CRTPO’s Discretionary Grants Program consists of STBG-DA, TAP, CMAQ, CRP, and BA funds. Unobligated balances will be given the highest priority and will be allocated before future year funds.

B. Discretionary Funding Targets by Mode

The annual modal mix recommendation is based on the assumptions made within the CRTPO’s Metropolitan Transportation Plan and the funding structure of the STI legislation regarding the percentage of total funding for the non-highway modes. In 2017, the CRTPO Board approved an 80% highway and 20% bicycle/pedestrian and transit modal funding target recommendation.

C Funding Request Amounts

Member jurisdictions may request a minimum project discretionary grant amount of \$250,000 and a maximum of not more than 25% of all available funds identified per mode (80% highway and 20% non-highway).

EXAMPLE
TOTAL FALL CALL FUNDING AVAILABLE = \$10 MILLION

FUNDING STEPS	HIGHWAY PROJECTS	NON-HIGHWAY PROJECTS
MODAL SPLIT	80% = \$8 MILLION	20% = \$2 MILLION
MAXIMUM FUNDING REQUEST PER PROJECT (25%)	\$2 MILLION	\$500,000

Generally, applications requesting less than \$500,000 of discretionary funds should be limited to active projects that need supplemental funds to address a shortfall.

D. Diversion from the Annual Modal Investment Target

If the CRTPO receives requests for funding that exceed any mode’s investment target, the CRTPO may transfer current fiscal year funds from other modes that have not reached their targets to compensate for the difference. The actual amount of recommended discretionary funds may fall below or exceed the target of 20%, depending on the type of projects received during the future call.

An **example** of the diversion of funds between modes is shown below:

Total cost estimates of non-highway projects received in the current call	\$2,000,000
Non-highway modal funding target	\$5,000,000
Non-highway funding eligible to be transferred to the highway mode	\$3,000,000

PART 2: Applying for Grants

I. Project Applications

There are five applications for new projects and a shortfall application to use in spring and fall. The applicant selects the project application that best fits the funding request:

- Highway projects
- Bicycle and pedestrian
- Transit
- Planning (i.e., feasibility studies)
- Air quality projects (projects specifically targeting CMAQ and CRP funds)
- Shortfalls (existing CRTPO projects that need supplemental funds)

All applicants must attend a pre-submittal meeting before the pre-submittal deadline of each call for projects. An agenda for the meeting is in the application packet.

Applications submitted in one call for projects that do not receive funding are not automatically considered for funding in subsequent years.

II. Funding Types

The following funding types will be allocated to projects:

Funding Type	Funding Flexibility
BA funding	Projects must comply with STI law, and the funds must be allocated to highway projects within the county(ies) where the toll project is located.
CMAQ funding	Reasonably flexible to all modes but must meet CMAQ criteria.
CRP funding	Reasonably flexible to all modes but must meet CRP criteria.
STBG-DA funding	The greatest amount of funds and the most flexible.
BA funding	Projects must comply with STI law, and the funds must be allocated to highway projects within the county(ies) where the toll project is located.
TAP funds	Primarily for bike/pedestrian projects.

III Cost Estimation Requirements

Each project application must contain the following to satisfy the CRTPO’s cost estimation requirements:

- A qualified professional, such as a Professional Engineer or Registered Landscape Architect, shall prepare the cost estimate.
- Cost estimates shall be prepared within six months from the date of the application.
- Cost estimates shall be prepared for full project implementation—including all activities, such as preliminary engineering, environmental documentation, right-of-way acquisition, utility relocation, and construction.

1. Preliminary Engineering Cost

Preliminary engineering (PE) may be estimated as 25% of the construction cost or the amount quoted by an NCDOT-prequalified engineering firm.

2. Project Phase Contingencies

Project-phase contingencies are necessary to improve the accuracy of cost estimates and lessen the need for additional funding.

Depending on the amount of work completed for the project request, the following contingency rates must be applied to new projects and shortfalls:

Project Phase Complete	Contingency and Inflation Percent Required
Planning (0-10% of the plans are complete)	40%
Design (15-65% of the plans are complete)	30%
Right-of-way (75-95% of the plans are complete)	25%
Construction (100% of the plans are complete)	10%
NCDOT administrative charges for the total project cost	Up to 10%
Inflation – (subject to annual updating)	See rates below

Note: Project scopes that entail the purchase of buses and other vehicles under existing contracts are not subject to the requirement to add a contingency percentage.

3. Inflation

The applicant must add inflation to each project’s estimate (new project or shortfall request). Form 1 should be used to ensure the correct inflation rate has been calculated. The amount of inflation should be calculated as follows:

Federal Fiscal Year the project is programmed	Inflation Percent
FFY 2024	10%
FFY 2025	5%
FFY 2026	3%
FFY 2027	3%
FFY 2028	3%
FFY 2029	3%
FFY 2030	3%
FFY 2031	3%
FFY 2032	3%
FFY 2033	3%

The inflation rate shall be revisited each year. The inflation rate source is the Producer Price Index for Demand Construction is <https://fred.stlouisfed.org/series/PPIDCS>.

4. Construction Engineering Inspections Estimated Costs

Project cost estimates should include 20% of construction costs for Construction Engineering Inspections (CEI).

5. NCDOT Administrative Charges

Project estimates may include up to 10% for NCDOT administrative fees, which cover plan reviews and general project oversight. These fees are reimbursable by the grant, excluding the match. Large projects may include less than 10%. The applicant can discuss a lower fee amount with NCDOT and CRTPO staff during pre-submittal meetings if necessary.

6. Local Match

A minimum of 20% matching funds is required, except on BA-funded projects. The match percentage should be based on the total project cost, including the applicable contingencies and fees referenced above. Typically, a larger match will result in a higher score. A municipal resolution or official letter on the jurisdiction's letterhead should commit to funding the local match and identify the matching funds' source.

7. Shortfall Funding

The CRTPO staff works with NCDOT's STIP Unit to identify discretionary funds to be made available for active projects that have experienced an increase in their estimated project cost, resulting in a request from the project sponsor for additional discretionary funds to deliver the project successfully. The shortfall process does not allow scope changes.

Project sponsors may request additional discretionary grants for an active project experiencing a shortfall twice yearly, and the following conditions must be met:

- Shortfall requests are not allowed if a project has not started design.
- Shortfall requests are limited to 100% of the original CRTPO funding award, up to and not-to-exceed \$3 million in total additional funding per individual project. (This revision starts with 2023 fall call projects.)
- Projects experiencing shortfalls must have been previously scored through the Discretionary Grants Program Policy Guide. Projects awarded through STI, for example, must be submitted as a new project to receive additional funds.

Additional criteria are used to help guide project selection if the requests are greater than the funding available during the biannual shortfall call. The fewer the points, the more favorable of a supplemental funds award.

The Shortfall application requires the following information:

- Percent increase in CRTPO requests over the project's original budget.
- Most recent project phase completed (construction phase projects receive the highest priority).
- Percent of local funds committed for the shortfall request.
- The number of previous shortfall awards received for the project.

Criteria	Points			
	1	2	3	4
Percent Increase in CRTPO Request over Original Budget	Up to 50%	51-99%	100-149%	150+%
Highest Phase Complete	ROW	Design	Planning or less	
Local Funds Committed	More than 25% or more than \$250K	Less than 25% or less than \$250K		
Previously Received Shortfall Funds	1 time	2 times	3 or more times	

Scoring

Low Priority Project	9+ points
Evaluate for Funding	8 or fewer points

The applicant must provide documentation to substantiate the shortfall request. The local match shall be the same as the original municipal agreement and/or CRTPO’s award of the original project.

8. Programming of Funding By Project Phase

Funds programmed in the CRTPO’s TIP and NCDOT’s STIP may be moved from phase to phase. For example, if the right-of-way phase costs less than anticipated, surplus funds may be moved to the construction phase and vice versa. There is a risk of moving funds from a phase. For example, moving funds from the construction phase to the right-of-way phase could create a shortfall and supplemental funds through CRTPO are not guaranteed.

IV. Application Requirements

The following descriptions summarize the content of the project submittals. Applications will be released each year when the Call for Projects begins.

A. Problem & Solution Statement

Identify the problem and explain how the project will solve it. Explain how the project will address the goals & objectives of the MTP.

B. Local Priority / Adopted Plans

Identify whether the project is included in the MTP, CTP, CIP, small area plan, or another local plan.

C. Critical Opportunity

Describe any special circumstances related to the project’s need for funding, including but not limited to issues of time sensitivity, construction continuity, and a critical funding gap. For example, a roadway widening project is programmed for construction in the current TIP, and the member jurisdiction wants to build a pedestrian tunnel underneath; therefore, these projects should be built together.

D. Project Readiness

Points will be allocated to project applications based on the funding requests per phase, as shown in the Highway Scoring Appendix.

E. Map Attachments

Applicants must submit a GIS layer depicting the project (extent, location, length, etc.). CRTPO will assist applicants in providing shapefiles if this poses a challenge.

F. Additional Data

Applicants are encouraged to attach copies of all pertinent project documentation related to the application's responses, including road safety audits, local crash reports, and local crash data.

G. Highway & Intersection Projects

The following descriptions summarize the application content for highway and intersection project submittals. Projects will be scaled against the highest-scoring project within each modal criteria.

1. Safety

This measure uses the total crashes for a five-year period along each intersection or segment divided by the average annual daily traffic volumes.

2. Congestion

Congestion is measured by using the vehicular Volume to Capacity (V/C) data obtained from NCDOT. If this data is unavailable, the local jurisdiction must be prepared to provide the data during the 60-day call for projects window. The score is based on the bi-directional V/C ratio for segments or intersection V/C ratio for an intersection.

3. Crash Reduction and Equity

- A Crash Reduction Factor (CRF) is the percentage crash reduction that might be expected after implementing a given countermeasure.
 - Based on peer-reviewed articles and literature.
 - Foundation based on FHWA's *Toolbox of Countermeasures and Their Potential Effectiveness for Pedestrian Crashes*

There are many crash modifications that have been studied and analyzed to determine their CRFs; a list of applicable crash modifications is available at the end of this appendix. Applicants can select up to one modification from the Roadway Improvement list and up to five modifications from the Bike / Ped Improvement list. A toolbox of countermeasures can be found at: https://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_tctpepc/

- *Transportation Disadvantaged Index (TDI)*
 - TDI was developed by NCDOT to measure the relative level of potential transportation disadvantage in a census block group.
 - Data sourced from the American Community Survey Block Group level.
 - Rewards projects that provide solutions in communities lacking transportation investments.

The TDI score is based on the population-weighted average of TDI scores for the tracts affected by the applicant project. A TDI map may be viewed at:

<https://ncdot.maps.arcgis.com/apps/instant/sidebar/index.html?appid=4175345664ac4e10b14466223758406f>

4. Cost Effectiveness

This is the measure of the cumulative recommended points divided by the requested funds. The purpose of this criterion is to calculate a basic benefit-cost measure. For example, if a jurisdiction requested \$1 million in funding and the project scored 65 points, the cost per point would be \$15,385.

5. Bonus Allocation Funds and Project Ranking

Projects considered for BA funds are ranked by using one, two, and three-mile buffers of the tolled highway project as follows:

- Projects within the one-mile buffer will be scored and given the highest priority.
- Secondary priority will be given to projects within two miles of the express lanes project.
- Third priority will be given to projects within three miles of the tolled highway project.
- If any BA funds remain, they will be prioritized and scored for eligible highway projects throughout the remainder of the county where the tolled highway project originated.

NCDOT determines the amount of BA funds for each tolled highway project and sets the timeline to authorize the funds. Not all highway projects with a tolling component receive BA funds. Its determined by the STI criteria. Projects considered for BA funding may be programmed before other projects.

See Appendix 3 for Scoring Criteria for Highway/Intersection Projects

H. Bicycle/Pedestrian and Transportation Alternatives Projects

The Transportation Alternatives Program (TAP) Criteria Scoring Guide scores all bicycle and pedestrian projects. The TAP Criteria Scoring Guide includes definitions and available points for the following sections:

- a. Connectivity & Placemaking
- b. Safety
- c. Health & Environment
- d. Feasibility & Cost

The TAP guide can be accessed here:

<https://crtpo.org/PDFs/TransportationAlternativeProgram/TAP Active Transportation Criteria Guide.pdf>

See Appendix 4 for Scoring Criteria for Bicycle Pedestrian Projects

I. Air Quality Projects

Projects will be ranked separately for CMAQ and CRP funding based on the cost-effectiveness of pollution reduction. Member jurisdictions with a project that qualifies for CMAQ, and/or CRP funding must submit a [Federal Highway Administration CMAQ Emission Calculator](#) with their application.

The calculator can be accessed here:

https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/

CRTPO staff will review all projects for eligibility in consultation with FHWA staff. Additional projects may be considered if the funding available exceeds the funding requested. Applicants may be contacted to provide additional data to support the project and emission calculations.

1. CMAQ Funding Eligibility and Ranking

CMAQ is a federal program that began in 1991 under the Intermodal Surface Transportation Efficiency Act and continues under the current transportation funding legislation. The program's purpose is to fund projects that help achieve compliance with the national air quality standards established under the Clean Air Act. An inventory of eligible project types can be accessed here:

https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/data_dictionary/

Some of the CRTPO's planning area is designated as "maintenance" for ozone by the Environmental Protection Agency in August 2015. Additional information may be accessed here: <https://crtpo.org/PDFs/Resources/Maps/Metrolina%20NonAttainment%20Area.pdf>.

Any project proposed for CMAQ funding must be able to demonstrate that its implementation will contribute to a reduction in harmful emissions. Applications for CMAQ funds will be ranked by the cost-effectiveness of nitrogen oxide (NO_x) emission reduction and per gram of annual NO_x emission reduction.

2. CRP Funding Eligibility and Ranking

In 2021, the Infrastructure Investment and Jobs Act (IIJA) was signed into law. The IIJA authorizes CRP funds to reduce transportation emissions.

The CRP funds are available for obligation for three years after the last day of the fiscal year for which the funds are authorized. Thus, CRP funds are available for obligation for up to four years.

Applications for CRP funds will be ranked by the cost-effectiveness of carbon dioxide equivalent (CO_{2e}) emission reduction and per gram annual CO_{2e} emission reduction.

See Appendix 5 to view the Scoring Criteria for CMAQ and CRP Eligible Projects

J. Transit Projects

The following descriptions summarize the application content that applies to transit project submittals. The application will be released each year when the Call for Projects begins. This section addresses how the project would enhance the transportation/transit network. Projects will be scaled against the highest-scoring project within each field.

1. Enhanced Mobility

The ratio of both zero and one-car households to total households within ¼ mile of a proposed transit project.

2. Ridership

This measure is defined as the annual ridership on an existing route or facility or the projected ridership of a proposed facility. If the ridership is estimated, the results of a quantitative study must be provided. The transit agency submitting the project must provide this data.

3. Cost Effectiveness

Cost effectiveness measures the cumulative recommended points divided by the requested funds. For example, if a jurisdiction requested \$1 million in funding and the project received a score of 65 points, the cost per point would be \$15,385. The purpose of this criterion is to calculate a basic benefit-cost measure.

See Appendix 6 for Scoring Criteria for Transit Projects

K. Planning Projects

FHWA and NCDOT allocate planning (PL) funds to MPOs in North Carolina each year based on a formula approved by NCDOT and FHWA and dependent upon the MPO population.

It should be noted that CRTPO chooses to sub-allocate PL funds to member jurisdictions to allow opportunities for transportation planning activities. However, CRTPO's primary duty is to ensure sufficient funds are available to carry out mandated tasks. The CRTPO is not obligated to provide PL funds for local projects.

There are ongoing reporting responsibilities for using PL funds. The Awardee will be required to comply with various state and federal requirements and certifications.

V. Project Selection and Approval

Following approval by the CRTPO Board, the approved project is submitted to the NCDOT to amend the STIP upon approval by the North Carolina Board of Transportation (BOT). If amendments to the MTP are necessary, they will also be made through this process.

PART 3: Administering Local Projects

I. Project Administration and Oversight

NCDOT's Local Programs Management Handbook and Updates will guide the project through the project steps and can be accessed here:

<https://connect.ncdot.gov/municipalities/Funding/Pages/LPM%20Handbook.aspx>

The project sponsor will be asked to provide CRTPO updates on the project status and identify revisions to the project schedule.

If an application requests funding for construction, for instance, and earlier stages of the project, such as preliminary engineering and right-of-way have already been completed, then those activities must have followed Federal guidelines.

II. Municipal Agreement Execution

The project sponsor and NCDOT will execute a municipal agreement that includes the project schedule and addresses the relevant federal and state regulations governing the implementation of the project. The applicant must pay 100% of the project costs and then request reimbursement from NCDOT. Federal funds awarded to projects that cannot be completed are subject to rescission.

Federal fiscal year changes to the schedule will require TIP and STIP amendments and potentially a supplement agreement with NCDOT. The CRTPO staff coordinates the amendment process.

Additional information can be accessed here:

<https://connect.ncdot.gov/municipalities/Funding/Documents/REIMBURSEMENT.pdf>

III. Funding Authorization Overview

Funding authorization is how federal and state funds are obligated for use on the project. Any costs incurred for work performed before the authorization of funds will not be eligible for reimbursement. NCDOT will notify the project sponsor in writing when funding is authorized, and expenses can be incurred.

Three phases receive authorization:

- Preliminary engineering
- Right-of-way
- Construction

IV. Environmental Documentation

All federally funded projects must comply with the National Environmental Policy Act (NEPA) before permitting right-of-way or construction funds. An environmental document ensures that the project has been reviewed for potential impacts on the natural, cultural, and human environment. Project sponsors are responsible for undertaking the environmental review, obtaining appropriate clearances or approvals, and submitting documentation to NCDOT for final review and signatures.

Additional information can be accessed here:

<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>

V. Preliminary Engineering & Design

Preliminary Engineering (PE) authorization allows the project sponsor or municipality to be reimbursed for costs related to preconstruction activities, including planning, environmental documentation, design, and surveys. PE funding may be adjusted after the review and approval of a consultant contract. PE expenses should be monitored to stay within this range; additional funds may not be available.

VI. Right-of-Way Acquisition & Certification

The project sponsor is responsible for ensuring sufficient right-of-way (ROW) for the project.

If it is necessary to acquire the right of way, the project sponsor must comply with the Uniform Act (49 CFR 24 – Uniform Relocation Assistance & Real Property Acquisition for Federal & Federally Assisted Programs.). NCDOT's ROW Agent issues ROW Certification for the county where the project is located after receiving a request from the project sponsor accompanied by required documentation.

Forms and additional information can be accessed here:

<https://connect.ncdot.gov/business/ROW/Pages/ROW-Support.aspx>

VII. Construction

Construction (CON) contracts are typically awarded to the lowest responsible, responsive bidder after advertisement and solicitation of competitive bids. NCDOT must concur in the award of a construction contract by the LGA.

Additional information can be accessed here:

<https://connect.ncdot.gov/projects/construction/Pages/default.aspx>

VIII. Closeout

Closeout refers to obtaining a final inspection of the project from NCDOT. After the final inspection, the project sponsor may request final reimbursement. The approval of the final inspection is the start of the records retention period. The FHWA and the State of North Carolina require that records relevant to the project be maintained for at least three years.

Additional information can be accessed here:

<https://connect.ncdot.gov/projects/construction/Pages/default.aspx>

IX. Contact Information

A. Project Development and Project Management Assistance

Topics	Contact Name and Email Address	Title and Agency
Overview of CRTPO's Call for Projects	Jennifer Stafford jennifer.stafford@charlottenc.gov	Development Planner, CRTPO
Federal Funds and Air Quality Projects	Loretta Barren Loretta.barren@dot.gov	FHWA – NC Division Office
NCDOT Division Local Administration Coordinators	Jeff Burleson (Division 10) jaburleson@ncdot.gov Jackie McSwain (Division 12) jackie.mcswain@volkert.com	Locally Admin. Projects Engineer, NCDOT
Agreements and On-boarding Consultants	Marta Matthews mtmatthews@ncdot.gov	Local Programs Manager, NCDOT
Environmental Documentation	Joel Howard jmhoward@ncdot.gov	PDEA Engineer, NCDOT
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APPENDIX

- Appendix 1 – Annual Funding Timeline 2023 – 2024
- Appendix 2 – Discretionary Funding Amounts FY 2024 – 2028
- Appendix 3 – Highway Scoring Criteria and Guide
- Appendix 4 – Bicycle and Pedestrian Scoring Criteria
- Appendix 5 – Air Quality Improvements Scoring Criteria
- Appendix 6 – Transit Scoring Criteria

Appendix 1

FY-2023-2024 Funding Timeline

The next call for projects is scheduled to open in August 2023. Additional important dates related to the application process and the awarding of funds are listed below.

Date	Activity
Fall Call for Projects	
August 14, 2023	CRTPO formally announces Fall Call for Projects dates and other key dates
August 2023	CRTPO determines funding targets
August 2023	Pre-Application Training Webinar
August - October 2023	CRTPO conducts pre-submittal meetings with applicants
October 31, 2023	Call for Projects closes
November 2023	Project scoring
November 2023	(Optional) Applicant presentations to POC
December 2023	Scoring finalized and POC recommends projects
January 2024	Present to TCC and CRTPO Board for information
February 2024	Present to TCC and CRTPO Board for approval (including TIP amend)
February - March 2024	Announce funding list
March - April 2024	TIP Amendments sent to NCDOT to update STIP
Spring Shortfall Call for Existing CRTPO Projects	
March 2024	CRTPO determines Shortfall funding targets
March 2024	Call for Project-Shortfall Requests opens (for existing CRTPO projects)
April 2024	Shortfall call closes
June 2024	Present to TCC and CRTPO Board for information
July 2024	Present to TCC and CRTPO Board for approval
July - Aug. 2024	TIP & STIP Amendment process
July - Aug 2024	Announce funding list

Appendix 2

CRTPO Discretionary Funding Availability for 2023 Fall Call

Federal Funding Source	Eligible Modes	Next Available Allocation Year (in thousands)					CRTPO Annual Allocation Amount by Source
		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	
Surface Transportation Block Grant – Direct Attributable (STBG-DA)	Highway and Non-highway	-	\$1,747	\$18,393	\$17,199	\$18,781	\$56,120
Transportation Alternatives Program (TAP)	Non-highway	-	-	-	-	-	-
Carbon Reduction Program Funds (CRP)	Highway, non-high, transit and other	\$864	\$2,697	\$2,697	-	-	\$6,258
Congestion Mitigation Air Quality (CMAQ)	Highway, non-high, transit and other	-	-	-	-	-	
Bonus Allocation Funds (BA)	Highway	-	-	-	-	-	
Estimated Annual Total of CRTPO’s Discretionary Funds for 2023 Fall Call							\$62,378

Appendix 3. Highway/Intersection Projects Criteria Scoring Guide

Highway/Intersection Criteria	Max Points
Problem & Solution Statement	N/A
Local Priority / Adopted Plans	N/A
<p>Local Match Points are awarded based on the amount of local match provided by the applicant.</p> <ul style="list-style-type: none"> • 20% match – 0 points • 25% match – 5 points • 30% match – 10 points • 35% match – 15 points • 40% match – 20 points • 50% match – 25 points 	25
<p>Critical Opportunity Points are awarded based on whether or not the opportunity is stated and documented in an adopted plan.</p>	5
<p>Project Funding Request Points are awarded based on the project’s phase of completion.</p> <ul style="list-style-type: none"> • Funding all phases – 0 points • Funding Engineering Only – 5 points • Funding Right-of-Way and Construction Phase – 10 points • Funding Construction Phase – 15 points 	15
<p>Safety Points are based on the following equation: <i>5-year crash total divided by the average annual daily traffic volume</i>¹ The applicant project with the highest safety score based on the above equation is awarded a maximum of 15 points. All other applicant projects are scaled based on the highest-scoring project.</p>	15
<p>Congestion Points are based on the following equation: <i>Volume to Capacity (V/C) ratio</i>¹ The applicant project with the highest congestion score based on the above equation is awarded a maximum of 15 points. All other applicant projects are scaled based on the highest-scoring project.</p>	15
<p>Crash Reduction & Equity There are two subcategories for this criterion: <i>Crash Reduction Factors (CRF)</i> There are a large number of crash modifications that have been studied and analyzed to determine their CRFs; a list of applicable crash modifications is available at the end of this appendix. Applicants can select up to 1 modification from the Roadway Improvement list and up to 5 modifications from the Bike / Ped Improvement list. The applicant project with the highest total CRFs is awarded a maximum of 6 points. All other applicant projects are scaled based on the highest-scoring project. <i>Transportation Disadvantaged Index (TDI) Score – maximum of 4 points</i> The TDI score is based on the population-weighted average of TDI scores for the tracts affected by the applicant project. There are four discreet categories that determine points:</p> <ul style="list-style-type: none"> • TDI <= 4.5 – 1 point • TDI <= 9 – 2 points • TDI <= 13.5 – 3 points • TDI > 13.5 – 4 points 	10
<p>Cost Effectiveness After all other scoring has been completed, the applicant project’s total points are divided by the requested funding amount.</p>	15

¹ Data provided by NCDOT

CRTPO's Methodology

Staff from the CRTPO and Mecklenburg County Public Health as well as the CRTPO's Project Oversight Committee (POC), are responsible for the development and updating of this *Criteria Scoring Guide*. The update began in the Winter of 2022 and concluded in the Summer of 2023.

The 2023 update includes two changes to the criteria:

1. The Safety category has been increased from a maximum of 10 points to a maximum of 15 points.
2. The Equity & Crash Reduction category has been added for Highway/Intersection projects. This category is worth a maximum of 10 points. It integrates the North Carolina Department of Transportation's (NCDOT) Transportation Disadvantaged Index (TDI) as well as Crash Reduction Factors (CRF) studied by the Federal Highway Administration (FHWA) and other authorities. More information on the TDI and on CRFs is available in Appendix 5.

Additionally, Transit Projects have been split into their own appendix (Appendix 6) for clarity purposes.

Crash Reduction Factors (CRF)

The FHWA's [Toolbox of Countermeasures and Their Potential Effectiveness for Pedestrian Crashes](#) provides a summary overview of CRFs, which the FHWA describes as estimates of crash reduction that might be expected if a specific countermeasure or group of countermeasures is implemented with respect to bicycle and pedestrian crashes. For example, a CRF of .27 would mean that the countermeasure would be expected to result in a 27% reduction in pedestrian crashes. A CRF is the percentage crash reduction that might be expected after implementing a given countermeasure; these percentages are derived from peer-reviewed literature sourced by the FHWA.

Staff will be evaluating two types of crash modifications: roadway-focused countermeasures as well as bicycle and pedestrian-focused countermeasures.

The Crash Reduction Factors Table on the following page identifies these countermeasures and their CRF values.

NCDOT's Transportation Disadvantaged Index (TDI)

The [TDI tool](#) is a customized approach to support a high-level assessment of equity impacts. The TDI tool focuses on race (Black, Indigenous, and persons of color), income, personal vehicle access, people with mobility impairments, the elderly, and youth. The TDI allows users to see where transportation-disadvantaged communities potentially exist and compare neighboring communities' needs. This map identifies areas with higher proportions of disadvantaged populations by symbolizing the TDI score for each block group in the state. The TDI is a composite score based on the six indicators of potential transportation identified above.

Table. Crash Reduction Factors

Roadway-Focused Countermeasures		Bicycle & Pedestrian-Focused Countermeasures	
Facility Improvement	CRF	Facility Improvement	CRF
Add intersection lighting	0.21	Add exclusive pedestrian phasing	0.34
Add segment lighting	0.2	Install a pedestrian hybrid beacon (PHB or HAWK)	0.83
Convert permissive or permissive/protected to protected only left-turn phasing	0.99	Install bicycle boulevard	0.37
Convert unsignalized intersection to roundabout	0.27	Install cycle tracks	0.9
Install dynamic speed feedback sign	0.95	Install enhanced rectangular rapid flashing beacon (RRFB) pedestrian crossing at mid-block crossing location	0.64
Install raised median	0.25	Install pedestrian hybrid beacon (PHB or HAWK) with advanced yield or stop markings and signs	0.82
Install refuge islands	0.36	Install pedestrian overpass/underpass (unsignalized intersection)	0.13
Narrow roadway cross-section from four lanes to three lanes (two through lanes with center turn lane)	0.29	Install raised median with marked crosswalk (uncontrolled)	0.54
Prohibit left-turns	0.1	Install raised median with or without marked crosswalk (uncontrolled)	0.74
Prohibit right-turn-on-red	0.03	Install raised median with unmarked crosswalk (uncontrolled)	0.61
Provide paved shoulder (of at least 4 ft)	0.71	Install raised pedestrian crosswalk	0.7
Replace two-way left-turn lane with a raised median	0.79	Install rectangular rapid flashing beacon (RRFB)	0.53
		Install separated bicycle lane	0.92
		Install sidewalk (to avoid walking along roadway)	0.88
		Installation of a cycle track 0 - 6 ft from the side of the main road with cyclist priority at intersections	1.03
		Installation of a cycle track 6 - 15 ft from the side of the main road with cyclist priority at intersections	0.55
		Installation of a cycle track over 15 ft from the side of the main road with cyclist priority at intersections	0.93
		Installation of a two-way cycle path with cyclist priority at intersections	1.75
		Modify signal phasing (implement a leading pedestrian interval)	0.05
		Moving a separate bicycle crossing to a four-legged intersection	1.28
		Moving a separate bicycle crossing to a three-legged intersection	0.83
		Provide paved shoulder of at least 4 ft	0.71
		Replace existing WALK / DON'T WALK signals with pedestrian countdown signal heads	0.25
		Replacement of traditional intersection with roundabout with a grade separated separated cycle path	0.56
		Replacement of traditional intersection with roundabout with separated cycle path	0.83

Source Summaries

Below is a selection of sources that CRTPO and Mecklenburg County Health staff relied upon in developing the Crash Reduction & Equity scoring criteria.

The US Department of Transportation (USDOT) & FHWA – [Health in Transportation](#)

The FHWA recognizes that transportation has a significant impact on the health of the community and emphasizes that engaging with health stakeholders is vital to both the planning and project implementation processes. The comprehensive Health in Transportation Decision Guide was created in partnership with leading health organizers to develop a robust toolkit specifically for transportation practitioners.

The Centers for Disease Control and Prevention (CDC) - [Transportation Recommendations Brief & Toolkit](#)

The Transportation Recommendations Brief & Toolkit introduces and outlines the Transportation Health Impact Assessment Toolkit that was jointly created with leading transportation organizations (including the FHWA) to allow transportation practitioners to complete a High Injury Network Assessment (HIA) without relying on staff support from health officials. The toolkit provides information on what health metrics are relevant to transportation planning and how different variables can impact each other in specific models and frameworks.

The USDOT Volpe Center – [Transportation Equity for All \(TransportSE\)](#)

TransportSE is a geospatial tool that introduces equity in transportation concepts, providing an interactive GIS tool that allows the user to examine residential demographics in correlation to transportation data. This tool is an important proof of concept that provides links to key materials used to inform staff's decision to integrate NCDOT's TDI.

The World Health Organization (WHO) – [Transportation Toolkit](#)

The WHO's Transportation Toolkit is another key resource staff referenced when integrating health equity into transportation efforts, one that examines a wide variety of challenges faced by cities in numerous countries. This toolkit provides a robust resource selection that offers many approaches to addressing safety and equity issues in transportation planning.

Smart Growth America (SGA) – [Complete Streets Policy Toolbox](#)

The SGA Complete Streets Policy Toolbox is widely referenced as a robust resource for policies that have been adopted and tested for success. It recognizes challenges introduced from both the health and the transportation angles in implementing systems that benefit the well-being of the community while also achieving transportation goals.

Appendix 4
Bicycle/Pedestrian Projects
Application Scoring Criteria

(Colors coordinated with the Transportation Alternatives Program Criteria Scoring Guide:
<https://crtpo.org/PDFs/TransportationAlternativeProgram/TAP Active Transportation Criteria Guide.pdf>)

Criteria	Y/N	0 points	5 points	10 points	15 points	20 points	25 points	30 points
Problem & Solution Statement								
Local Priority / Adopted Plans								
Critical Opportunity		N/A	Critical opportunity					
Project Readiness		All other projects	Design / Survey Complete	Right-of-Way Acquired	Bid Phase			
Destinations of Interest		Scaled up to 30 points						
Connections to Existing Facilities		0 connections	1 connection	2 connections	3+ connections			
Adopted Plans and Policies		None	County	Regional				
Placemaking Amenities		Up to 5 points						
Demonstrated Need/Desire		Documented <u>or</u> observed	Documented <u>and</u> observed					
Documented Safety Challenge		None	1	2	3	4		
Reduce Human Exposure		No Reduced Exposure - to reduced (3pts)	Defined Space	Physical Separation / Barrier				
Traffic Calming		No	Yes					
Vehicle Traffic - AADT		<1,000	1001 to 10,000	10,001 to 22,000	22,001 to 40,000	>40,000		

Emission & Pollutant Reduction			Up to 99 Daily Vehicle Miles	100-199 Daily Vehicle Miles	200-299 Daily Vehicle Miles	300+ Daily Vehicle Miles		
Social Equity		None to Low (2 pts)	Moderate	High				
Carless Household		No	Yes					
Environmental Quality		No	Yes					
Health Equity		<5% to 11.9 (3 pts)	>12%					
Cost Benefit		.4 or Lower	.41 to 1.0	1.01 to 2.0	2.01 or Higher			
Effectiveness of Federal Funds		\$4,000,000 plus	\$0 to \$1,000,000	\$2,000,000 to \$4,000,000		\$1,000,000 to \$2,000,000		
Funds Requested		>51%	36 to 50%	21 to 35%		1 to 20%		
Local Match		Match % = Point Total (Maximum of 50%)						
Right-of-way Previously Required/Available		0 to 20%	21 to 50%	51 to 75%	76 to 100%			

Please consider using the Bicycle and Pedestrian Scoring Workbook to estimate your score:
<https://crtpo.org/PDFs/Resources/DiscretionaryProjects/ActiveTransportationWorksheet.xlsx>

Bike & Ped Criteria - Total Possible Points

1	Critical Opportunity	5	
2	Project Readiness	15	
3	Destinations of Interest	30	Trip Generation & Connectivity
4	Connection to Existing Facilities	15	
5	Adopted Plans & Policies	10	
6	Place-making Amenities	5	
7	Demonstrated Need/Desire	5	
8	Documented Safety Challenge	20	Safety
9	Reduce Human Exposure	10	
10	Traffic Calming	5	
11	Vehicle Traffic	20	
12	Emissions & Pollutant Reduction	20	Health & Environment
13	Social Equity	10	
14	Carless Household	5	
15	Environmental Quality	5	
16	Health Equity	5	Feasibility & Cost
17	Effective Use of Federal Funds	20	
18	Amount Available Funding Requested	20	
19	Local Match Commitment	50	
20	Right-of-Way Previously Acquired/Available	15	
21	Cost Benefit	15	
	Total	305	

Appendix 5

Air Quality

Application Ranking Criteria

Projects will be ranked separately for Congestion Mitigation and Air Quality (CMAQ) or Carbon Reduction Program (CRP) funding based on cost-effectiveness of pollution reduction. Projects that want to be considered specifically for CMAQ, or CRP funding, or both must submit a [Federal Highway Administration CMAQ Emission Calculator](https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/) with their application. The calculator may be accessed here: https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/

Applications for CMAQ funds will be ranked by the cost-effectiveness of nitrogen oxide (NO_x) emission reduction.

Applications for CRP funds will be ranked by the cost-effectiveness of carbon dioxide equivalent (CO₂e) emission reduction.

OUTPUT	
Emission	Total (kg/day)
Carbon Monoxide (CO)	2.863
Nitrogen Oxide (NO _x)	16.584
Particulate Matter <2.5 μm (PM _{2.5})	0.349
Particulate Matter <10 μm (PM ₁₀)	0.360
Volatile Organic Compounds (VOC)	0.939
<i>See User Guide for more information on CO₂e and TEC.</i>	
Carbon Dioxide Equivalent (CO ₂ e)	329.372
Total Energy Consumption (MMBTU/day)	N/A

○ Input for CMAQ ranking

➔ Input for CRP ranking

Appendix 6

Transit Projects

Application Scoring Criteria

Criteria	Y/N	0 points	5 points	10 points	15 points	20 points	25 points
Problem & Solution Statement							
Local Priority / Adopted Plans							
Local Match		20% match	25% match	30% match	35% match	40% match	50% match or greater
Critical Opportunity		N/A	States & documents opportunity				
Project Funding		All Phases	Engineering Only	Right-of-Way & Construction	Construction Phase only		
Enhanced Mobility		Ratio of 0 and 1 car households to total households in ¼ mile of proposed transit project					
Ridership		Scaled based on highest value submitted					
Cost Effectiveness		\$ Amount requested divided by total points					