Congestion Mitigation and Air Quality Improvement Program (CMAQ)

Project Selection Process

Fredericksburg Area Metropolitan Planning Organization

Approved by the FAMPO Policy Committee January 24, 2022

Mission Statement

The MPO's mission is to provide a cooperative, continuous and comprehensive ("3C") transportation planning process to build regional agreement on transportation investments, that balance roadway, public transit, bicycle, pedestrian, and other transportation needs and support regional land use, economic, and environmental goals for the safe and efficient movement of people and goods. Special emphasis is placed on providing equal access to a variety of transportation choices and effective public involvement in the transportation planning process.

GWRC/FAMPO Title VI Nondiscrimination Statement

"The George Washington Regional Commission and the Fredericksburg Area Metropolitan Planning Organization fully comply with Title VI of the Civil Rights Act of 1964 and its related statutes and regulations in all programs and activities. For more information or to obtain a Discrimination Complaint Form, please visit www.gwregion.org or www.fampo.gwregion.org or call (540) 373-2890. Para información en español, llame al (540)-373-2890."

Contents

1.0 Introduction

This document describes the process the Fredericksburg Area Metropolitan Planning Organization (FAMPO) will undertake to identify and select transportation projects for inclusion in FAMPO's Transportation Improvement Program (TIP) and VDOT's Six Year Improvement Program (SYIP). The selection process outlined in this document will be used for all proposed projects using federal Congestion Mitigation and Air Quality Improvement Program (CMAQ) funding.

FAMPO's CMAQ project selection is a cooperative process between the Fredericksburg MPO, the Virginia Department of Transportation (VDOT), the Department of Rail and Public Transportation (DRPT), and the Commonwealth Transportation Board (CTB). CMAQ project recommendations are selected and prioritized by FAMPO and submitted to the CTB for final approval.

The procedure for selecting and prioritizing includes the development of a candidate project list by the FAMPO Technical Advisory Committee (TAC). A numeric scoring procedure is used to score each candidate project, and the results of the scores and project recommendations are reported to the FAMPO Policy Committee for consideration. The results of the project scores, according to established criteria, are the basis of TAC recommendations. The FAMPO Policy Committee considers the recommendations from the TAC and selects the final recommended list of CMAQ projects in coordination with the district CTB member for annual submittal to the CTB for approval as part of the SYIP. Amendments to 23 U.S.C. funded projects, particularly CMAQ funded projects, must be approved by the CTB. This project selection process, as outlined above, is consistent with 23 U.S.C. § 134.

2.0 Background

The CMAQ program was most recently continued with the Fixing America's Surface Transportation (FAST) Act in 2015 and provides a flexible funding source for projects and programs that improve air quality. CMAQ funds are suballocated to areas that do not meet the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide, or particulate matter, known as nonattainment areas. CMAQ funds are also distributed to MPOs in former nonattainment areas that are now in compliance, known as maintenance areas. The Fredericksburg region receives CMAQ funding due to its air quality status as an 8-hour ozone maintenance area according to the 1997 standard.

CMAQ funding should be allocated to transportation projects and/or programs that are likely to contribute to the attainment or maintenance of a NAAQS, with a high level of effectiveness in reducing air pollution, and that is included in the MPO's Long Range Transportation Plan (LRTP) and TIP.

More information on the CMAQ program can be found on the FHWA fact sheet here.

2.1 CMAQ Funding Requirements

The provisions for CMAQ funds state that projects funded by CMAQ funds (whole or part) shall be federally obligated within 24 months of their allocation by the board and expended within 48 months of the obligation (total six years). If the defined timeframes are not met, the CTB may use the funds for any other project eligible under 23 USC 149.

- CMAQ funds must be invested in a state's nonattainment or maintenance areas, on projects that reduce ozone (O3) precursors - volatile organic compounds (VOCs) and nitrogen oxides (NOx) - carbon monoxide (CO), or particulate matter (both PM10 and PM2.5) and the applicable precursors from transportation sources.
- VDOT is responsible for distributing CMAQ funds. All projects must conform to established CMAQ guidance.
- The Federal share for most CMAQ-eligible projects is 80 percent, but certain safety projects that include an air quality or congestion relief component may have a federal share of 100 percent.
- The CMAQ program operates on a reimbursement basis, so funds are not provided until work is completed.

2.2 CMAQ Eligibility

Eligible recipients of CMAQ funds in the Fredericksburg region include the City of Fredericksburg, Spotsylvania County, Stafford County, the Potomac and Rappahannock Transportation Commission (PRTC), Fredericksburg Regional Transit (FRED), Virginia Railway Express (VRE), VDOT, DRPT, the GWRideConnect program, and FAMPO.

Typically, eligible projects include:

- New bicycle & pedestrian facilities that demonstrate Single Occupancy Vehicle (SOV) reduction
- Shared ride & transportation demand management (TDM) - carpools/vanpools, marketing, public education & outreach activities
- Expanding Park & Ride lots
- Traffic signal optimization
- Traffic Operations Center
- Courtesy Patrols
- Modern roundabouts
- Dynamic Message Signs

- Intelligent Transportation Systems (ITS) deployment/expansion
- Intersection improvements that relieve congestion & do not add capacity
- Diesel retrofit & replacement projects
- Alternative fuel infrastructure
- Operating assistance for new/expanding service (including vanpools)
- Transit facilities (new stations, terminal, transfer facilities) only if associated with a new or enhanced route

Typically, ineligible projects include:

- Any project or elements of work that does not improve air quality
- Any activity that is part of a larger project that adds SOV capacity such as new roads
- Traffic signal replacement in-kind without interconnecting, optimizing, etc.
- Emergency vehicle preemption of traffic signals
- Moving roadways or intersections
- Non-motorized projects that have a strong or solely recreational purpose
- Safe Routes to School projects
- Fuel subsidies
- Road rehabilitation & reconstruction projects
- Studies (certain studies may be eligible if the study will lead to CMAQ-eligible project/program, but CMAQ is more restrictive than STBG for funding planning studies)

3.0 Selection and Allocation Process

3.1 Call for Projects

At its regularly scheduled September TAC meeting, a call for projects window will be opened. If it is anticipated by staff that there is less than $500,000 in CMAQ fund available for allocation, a call for projects process will not be opened. Available funding should be placed in an out-year reserve or used to fund existing projects. Eligible applicants are encouraged to prepare application information and supporting documentation ahead of time. To maximize impact with limited regional transportation funding through the CMAQ program, project applications will be limited in accordance with the following tables:

3.1.1 Eligible Applicants

Project Category	**Eligible Applicants**
Roadway	FAMPO jurisdictions
Transit/TDM	FAMPO jurisdictions, FAMPO area public transportation providers eligible to receive federal funds, and transportation demand management agencies
Active Transportation	FAMPO jurisdictions

3.1.2 Number of Applications

FAMPO Jurisdictions will receive five CMAQ applications, regardless of mode if they are an eligible applicant, based on section 3.1.1, they may divide the five applications by mode as they see fit.

Other Eligible Agencies will receive three CMAQ applications, regardless of mode if they are an eligible applicant, based on section 3.1.1, they may divide the three applications by mode as they see fit.

3.1.3 Typical Annual Schedule

Month	Activity
September	Call for projects
October	Project applications, ongoing
November	Project submissions by end of month; staff to email application summary to TAC
December	No FAMPO committee meetings; screening and project scoring begins
January	Presentation of draft scoring
February	Receive budgets from VDOT; Review draft scoring
March	Presentation of final scores and draft allocations
April	Approve allocations
May	Approve allocations, if not completed in April
June	Allocation approval by the CTB

3.1.4 Special Call for Projects

In the event it is deemed necessary the TAC can propose a modified call for projects that will then be approved by the FAMPO Policy Committee.

3.1.5 Application Forms and Submission

Staff will make CMAQ project application forms available on the FAMPO website, sent to FAMPO committees via email, and shared via FAMPO committee agenda packets. Forms are web-based and will allow applicants to save information and return to their applications over time. Staff will provide fillable Word or PDF application forms upon request.

Applicants will be asked to indicate the primary project type (roadway, transit/TDM, or active transportation), the funding amount requested, and provide a comprehensive set of details that will allow staff to properly score each project. In addition, applicants will be required to submit an FHWA air quality tool workbook to ensure the project will reduce emissions and thus be eligible for CMAQ funding.

At a minimum, staff will provide at least ten weeks from the start of the call for projects to the deadline for submission. A one-week grace period will follow the application submission deadline for resolutions of support in the event a governing body meets shortly after the close of the call for projects window.

3.2 Project Screening

After the submission deadline for the call for projects window, staff will first screen each project according to the criteria below and develop a list of discussion items to review with the applicant prior to full project scoring.

- Project provides air quality benefit as determined by the FHWA CMAQ Air Quality Tools
- Project meets all applicable requirements under Code of Federal Regulations and State policies
- Project is identified in the current FAMPO Long-Range Transportation Plan
- Project application is complete and all requested documentation/data is accounted for
    - FHWA air quality tool workbooks completed with data from transportation study
- Project timeline and current phase
- The project has a complete scope
- Project has a simple sketch
- Funding request is clear (i.e., applicant must indicate whether the CMAQ will be used as leveraged funding or to fund the project in whole)
- Reasonable data (including data required for the emissions analysis) and cost estimates are provided
- Committed funding is documented in a budget, CIP, other official document, or signed letter from a jurisdiction/agency chief administrative officer or finance department
- The VDOT Fredericksburg District and/or DRPT concur with the estimates provided
- A resolution of support from the local governing body in the project location
    - Multi-jurisdictional projects must have a resolution of support from all jurisdictions where the project is located or will operate
    - Transit projects require a letter of support from the governing or advisory body of the operator in addition to a resolution of support from the local government body where the project is located

Staff will complete a project screening form addressing the criteria above and schedule a meeting with each project applicant to review the screening forms. This meeting will be an opportunity to address outstanding application issues, provide additional documentation/data for the full project scoring process, and ask questions about schedule, scope, estimates, and the like.

3.3 Project Scoring

Once projects have been screened in, according to the criteria in Section 3.2, staff will score each application according to the tables in this section.

3.3.1 CMAQ Roadway Project Scoring

Measure Category	Measures	Overall %	Description	Data Source	Scoring
Air Quality Benefit	Reduces NoX	20	Using the FHWA CMAQ Emissions Calculator Toolkit (Congestion Reduction and Traffic Flow Improvements Tool), determine if and by how much the project would reduce NoX emissions	VDOT P4P, project study, project sketch, applicant	Reduces NoX: > 0.226 = 10 0.225 - 0.176 = 8 0.175 - 0.126 = 6 0.125 - 0.076 = 4 0.075 - 0.011 = 2 < 0.010 = 0 **See "H - AQ Math" sheet for details*
	Reduces VOC	20	Using the FHWA CMAQ Emissions Calculator Toolkit (Congestion Reduction and Traffic Flow Improvements Tool), determine if and by how much the project would reduce VOC emissions	VDOT P4P, project study, project sketch, applicant	Reduces VOC: > 0.101 = 10 0.100 - 0.081 = 8 0.080 - 0.061 = 6 0.060 - 0.041 = 4 0.040 - 0.010 = 2 < 0.010 = 0 **See "H - AQ Math" sheet for details*
Reduces Congestion	Change in LOS	15	Change in travel demand model base year to forecast year no-build LOS (determined by difference in V/C ratio figures)	FAMPO travel demand model	Largest change = 10 Second largest = 8 Third largest = 6 Fourth largest = 4 Fifth largest = 2 Sixth largest or worse = 0 **See "H - LOS Math" sheet for details*

	LOS Severity	10	Forecast year no build LOS (determined by highest V/C ratio figure)	FAMPO travel demand model	Most severe = 10 Second most severe = 8 Third most severe = 6 Fourth most severe = 4 Fifth most severe = 2 Sixth most severe or worse = 0 *See "H - LOS Math" sheet for details
	CMP Corridor	5	Determine if project is on or intersects with Congestion Management Process (CMP) corridor	Current FAMPO CMP	On or intersects with CMP Corridor: Yes = 10 No = 0
Safety Benefit	Crash Frequency	7.5	Count the number of crashes over most recent 5-year time period occurring within 0.25mi of project	VDOT P4P Crash Data Layer	Sum of 5-year crash counts (max 10): > 251 = 10 201 - 250 = 8 151 - 200 = 6 101 - 150 = 4 51 - 100 = 2 > 50 = 0 *See "H - Crash Math" sheet for details*
	Crash Severity	7.5	Breakdown of crash severity by KABCO scale weighting for crashes within 0.25mi of project over most recent 5-year period KABCO Weighted Scale: K (Fatal Injury): 949 A (Suspected Serious Injury): 55 B (Suspected Minor Injury): 17 C (Possible Injury): 11 0 (No Apparent Injury): 1 2018 FHWA Safety Program	VDOT P4P Crash Data Layer	KABCO sum annual average over 5-year period (max 10): > 2,501 = 10 2,500-1,501 = 8 1,500 - 1,251 = 6 1,250 - 1,001 = 4 1,000 - 501 = 2 < 500 = 0 *See "H - KABCO Math" sheet for details*

Project Readiness	Detailed Engineering Design and Cost Estimate	5	Does the project have a detailed sketch/engineering design? Does the project have a validated (from VDOT/DRPT) cost estimate?	Applicant	Detailed Engineering Design: Yes = 5 No = 0 Detailed Cost Estimate: Yes = 5 No = 0
	Percent of Leveraged Funding	10	Calculate total committed funding divided by project total cost	Applicant	Leveraged funding percentage: > 51 = 10 49 - 50 = 8 39 - 40 = 6 29 - 30 = 4 11 - 20 = 2 < 10 = 0

3.3.2 CMAQ Transit/TDM Project Scoring

Measure Category	Measures	Overall %	Description	Data Source	Scoring
Air Quality Benefit	Greenhouse Gas (GHG) Emissions Reduction	40	Likely reduction in GHG emissions based on project improvement type (Source)	Applicant	GHG Emissions Reduction: Commuter lot improvement (supporting vanpools) = 10 Rail capital and operating = 8 Commuter bus capital and operating = 6 Local bus capital and operating = 4
Reduces Congestion	Alternatives to SOV Travel	25	Ability of project to reduce congestion by providing alternatives to SOV travel on congested corridors	Applicant	Alternatives to SOV: Improvement provides direct alternative to trips on Interstate 95 = 10 Improvement provides direct alternative to trips on principal arterial roadways = 7 Improvement impacts only local trips = 4
	CMP Corridor	5	Determine if project is on or intersects with Congestion Management Process (CMP) corridor	Current FAMPO CMP	On or intersects with CMP Corridor or Rail Project: Rail projects = 10 CMP corridor = 8 Not on CMP corridor = 0
Mobility Benefit	Project Impact	7.5	Cost per potential user	Applicant (number of projected users that will benefit from the project and project cost)	Highest impact = 10 Second largest impact = 8 Third largest impact = 6 Fourth largest impact = 4 Fifth largest impact = 2 Sixth largest impact or worse = 0
	Multimodal Accessibility	7.5	Connections to other modes (bus stop, train station, trail, P&R lot) within 0.25mi of project	VDOT P4P	Multimodal Connections (max 10): Train station or P&R lot: 8 Transit service: 6 Trail: 4

Project Readiness	Detailed Engineering Design and Cost Estimate	5	Does the project have a detailed sketch/engineering design? Does the project have a validated (from VDOT/DRPT) cost estimate?	Applicant	Detailed Engineering Design: Yes = 5 No = 0 Detailed Cost Estimate: Yes = 5 No = 0
	Percent of Leveraged Funding	10	Calculate total committed funding divided by project total cost	Applicant	Leveraged funding percentage: > 51 = 10 49 - 50 = 8 39 - 40 = 6 29 - 30 = 4 11 - 20 = 2 < 10 = 0

3.3.3 CMAQ Active Transportation Project Scoring

Measure Category	Measures	Overall %	Description	Data Source	Scoring
Air Quality Benefit	Reduces NoX	20	Using the FHWA CMAQ Emissions Calculator Toolkit (Bicycle and Pedestrian Improvements Tool), determine if and by how much the project would reduce NoX emissions	VDOT P4P, project study, project sketch, applicant	Reduces NoX: > 0.100 = 10 0.099 - 0.080 = 7 0.079 - 0.060 = 5 0.059 - 0.040 = 3 < 0.039 = 0 **See "AT - SOV Math" sheet for details*
	Reduces VOC	20	Using the FHWA CMAQ Emissions Calculator Toolkit (Bicycle and Pedestrian Improvements Tool), determine if and by how much the project would reduce VOC emissions	VDOT P4P, project study, project sketch, applicant	Reduces VOC: > 0.81 = 10 0.071 - 0.080 = 8 0.061 - 0.070 = 6 0.051 - 0.060 = 4 0.041 - 0.050 = 2 < 0.040 = 0 **See "AT - SOV Math" sheet for details*

Reduces Congestion	Potential Reduction of SOV Trips	25	Average of all non-interstate roadway segment AADT within 0.50mi of project and assume 0.05 percent to utilize project	VDOT P4P, project study, project sketch, applicant	Potential SOV Trips Reduced: > 101 = 10 81 - 100 = 8 61 - 80 = 6 41 - 60 = 4 21 - 40 = 2 < 20 = 0 +2 points if project is within 0.25mi of bus stop or train station **See "AT - SOV Math" sheet for details*
	CMP Corridor	5	Determine if project is on or intersects with Congestion Management Process (CMP) corridor	Current FAMPO CMP	On or intersects with CMP Corridor: Yes = 10 No = 0
Safety Benefit	Bike/Ped Crashes	10	Number of crashes within 0.25mi buffer of the project	P4P Bike & Pedestrian Safety Data Layer	Number of Crashes: > 5 = 10 5 = 9 4 = 8 3 = 7 2 = 6 1 = 5 0 = 0 **See "AT - Crash Math" sheet for details*
	Degree of Separation from traffic and roadway	5	Degree to which the proposed project is separated from motorized vehicles	Applicant Sketch and Description	Degree of separation: Complete separation = 10 Physical barrier = 6 Visual barrier with space = 2 No or Inadequate barrier for application = 0

Project Readiness	Detailed Engineering Design and Cost Estimate	5	Does the project have a detailed sketch/engineering design? Does the project have a validated (from VDOT/DRPT) cost estimate?	Applicant	Detailed Engineering Design: Yes = 5 No = 0 Detailed Cost Estimate: Yes = 5 No = 0
	Percent of Leveraged Funding	10	Calculate total committed funding divided by project total cost	Applicant	Leveraged funding percentage: > 51 = 10 49 - 50 = 8 39 - 40 = 6 29 - 30 = 4 11 - 20 = 2 < 10 = 0

3.4 Project Selection and Allocations

In order to establish an objective, clear process by which allocation and programming recommendations are made to the Policy Committee, the following steps and criteria will be used:

1. The VDOT Fredericksburg District will provide to the TAC a detailed document with leftover funds from completed CMAQ projects. Projects nearing completion that are likely to have excess funds in a Previous year available for transfer to another project will also be detailed by District staff. This documentation should be presented to the TAC at its February meeting.
    a. No balance should remain for previous years.
    b. Projects and studies with funds in previous years that have not begun should be reviewed by the TAC to determine whether to keep funding on the project or transfer the funding to an active project.
2. Next fiscal year (the first year of the forthcoming SYIP) will be fully funded with no CMAQ funds in the balance entry.
    a. Active projects eligible to receive funding in the first year of the SYIP can receive existing balance entry funds and donate mid- or out-year CMAQ funds on a dollar-for-dollar basis.
3. A 5% reserve set aside will be established for years 2-6 of the SYIP.
    a. In the event of a CMAQ budget decrease, this step may be skipped in order to keep existing, active projects fully funded.
4. Initial $50k set aside for the GWRideConnect program.
    a. GWRideConnect staff will submit a letter to the Policy Committee (and reviewed by the TAC) demonstrating additional needs over $50K for funding and supporting data that details how this funding will be used. The letter must address pending carryover amounts from the previous year.
5. Before adding new projects, fund existing SYIP projects up to the requested funding amount subject to the following:
    a. The most CMAQ funding any one project can receive is limited to two times the annual average existing SYIP budget.
    b. Any single project may not be allocated more than 50% of any one year's CMAQ budget.

c. In assessing the existing funding allocation outlay, projects with CMAQ and STBG funds can receive/donate either funding type for flexibility in keeping projects fully funded and on schedule.

6. After assessing existing CMAQ projects, the following budgets by mode will be utilized for new project applications:

    a. Roadway – 65%; Transit/TDM – 15%; Active Transportation – 20%

    b. These percentage budgets will generally be for the out-year of the SYIP, but should funding be available in a mid-year (between years 2-5), that amount of funding will be accounted for in developing the percentage breakdown by mode.

7. Utilizing the amounts of funding established from the percentage breakdown by mode in Step 6, fund top-scoring projects up to their requested amounts first.

    a. The most funding any one project can receive is limited to two times the annual average existing SYIP CMAQ budget.

        i. If only one project is submitted for any one mode, there is no maximum amount of funding in any single year that project can receive.

    b. Any single project may not be allocated more than 50% of any one year's CMAQ budget.

8. If the top-scoring project in each mode can be funded up to its requested amount, continue to fund new projects in accordance with the remaining funds by mode.

    a. When there is no longer enough funding to cover new projects (by mode), the TAC will recommend the sum of the remaining CMAQ funding be placed in the out-year balance entry for future allocation or added to a new project in any mode.

The TAC may establish a one-time subcommittee workshop to develop draft allocations for consideration by the full TAC and the other FAMPO committees.

4.0 Funding Shortfalls and Unused Funding

If the cost/annual allocation and/or scope of a project change by less than 10% on any one CMAQ funded project, the project sponsor should notify the TAC Chairman and FAMPO Administrator with a request

and justification for a change in funding. The TAC must review the request and recommend use of the reserve account or, if possible, commit future year funding to preserve the project.

If the cost/annual allocation and/or scope of the project change by more than 10% on any one CMAQ funded project, the locality/agency should notify the TAC Chairman and FAMPO Administrator with a request and justification for a change in funding and/or scope. The TAC and FAMPO Policy Committee must review the request and may recommend one or any combination of the following:

1. Scale back the project
2. Use Local funds
3. Use CMAQ reserve account funds
4. Use existing CMAQ funds from another project
5. Use future CMAQ allocations
6. Drop the project

If there are unused CMAQ funds allocated to a project that has been completed or canceled, within 180 days after the project has been completed or canceled, the project sponsor (locality or agency) will request that the available funds be transferred to the CMAQ balance entry.

Should a surplus of CMAQ allocations on a project occur as a result of an award of funding from other programs, such as SMART SCALE, Revenue Sharing, Transportation Alternatives, etc., within 90 days after VDOT or DRPT confirms that an approved CMAQ project is overfunded due to receipt of funds from other programs, the project sponsor (locality or agency) will request any CMAQ funds in excess of what is needed to fully fund the project be transferred to the CMAQ balance entry.

In the event a project has been allocated CMAQ from FAMPO and those allocations are subsequently removed due to the project being fully funded from other sources, the project will retain its status as a previously-approved CMAQ project should it require additional funding from the FAMPO CMAQ balance entry at a later date to cover a cost overrun. The project will not be rescored and may receive funding approval upon recommendation of the TAC and approval of the Policy Committee.

Any institution receiving an annual allocation via the CMAQ Project Selection Process that does not spend the full allocation by the end of the fiscal year will have the unspent balance transferred to the balance entry for reallocation by the TAC to other projects in the next call for project cycle unless a request is approved the Policy Committee to extend funding past the end of the fiscal year.