

Sacramento Area Council of Governments

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2010 BICYCLE & PEDESTRIAN FUNDING PROGRAM

**GUIDELINES AND
APPLICATION INSTRUCTIONS**

This document contains information about the Sacramento Area Council of Governments (SACOG) Bicycle and Pedestrian Funding Program. The program grants a variety of funds to local government agencies and their partners to provide facilities for walking and biking within the cities and towns of the region and to provide connections between them. Grants cycles occur approximately every two years.

Section 1 contains the revised 2010 Guidelines for the Bicycle and Pedestrian Funding Program.

Section 2 contains the revised 2010 Application Instructions for the 2010 cycle. Applications are due to SACOG 5:00 p.m. Friday, October 23, 2009.

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Section 1

GUIDELINES FOR SACOG BICYCLE AND PEDESTRIAN FUNDING PROGRAM

A. INTRODUCTION

In July 2002, the Sacramento Area Council of Governments (SACOG) adopted the *Metropolitan Transportation Plan for 2025* (the MTP for 2025). This 23-year, \$22 billion plan for the region included four federally-funded programs to be used for regional transportation and related priorities that implement the goals of the MTP (Appendix A.1). The four programs, with 23-year funding amounts are:

- Bicycle and Pedestrian \$350 million
- Air Quality \$180 million
- Transportation Demand Management \$ 44 million
- Community Design \$500 million

When the MTP for 2025 was adopted, it was the intent of SACOG to continue these four regional funding programs into the foreseeable future in each successive MTP. Since the adoption of the MTP for 2025, SACOG has adopted several other MTPs, and the funding programs have continued. Currently, the MTP 2035 is the plan that is operable in the SACOG Region.

These guidelines pertain only to the Bicycle and Pedestrian Funding Program. The other three programs each have a separate set of guidelines that are consistent with these, and the intent is to coordinate the selection of projects in all four programs with a joint recommendation for funding presented to the SACOG Board of Directors.

SACOG will periodically give public agencies the opportunity to apply for programs on a schedule that will be published before each funding round. The timing of funding rounds is dependent on the availability of the federal funding, and cannot always be predicted far in advance. Grants cycles occur approximately every two years.

SACOG is committed to using this funding for projects and programs in all parts of the region. Its goal is for each public jurisdiction to receive a fair and equitable share of the funding for these programs, combined with other SACOG-controlled regional funds, over the long term. For Placer and El Dorado Counties, a different situation applies, due to Memoranda of Understanding between the Placer County Transportation Planning Agency (PCTPA) and SACOG and the El Dorado County Transportation Commission (EDCTC) and SACOG that govern the use of federal funds in those counties. Please refer to Appendix C for an explanation of how federally-funded projects are approved in those counties.

SACOG is also committed to following federal guidance on environmental justice. The goal of environmental justice is to ensure that, when transportation decisions are made, low-income and minority communities have a full opportunity to participate in the decision-making, and that they

receive an equitable distribution of benefits and not a disproportionate share of burdens. Each project or service seeking funds from SACOG's funding programs will be evaluated for environmental justice. The grant application process will include explicit questions on environmental justice for project applicants to answer.

B. FUNDING

Financial support for these programs will come primarily from federal funding sources expected to be available to the region. The SACOG Board of Directors will approve the amounts allocated to each program before the start of the project selection process, according to the MTP and the agency's more immediate priorities.

Most of the projects selected for these programs must qualify for the three federal funding sources available to SACOG.² In most cases, a local funding match requirement of 11.47% of the total project cost applies. Federal funding requirements from the *Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) are found in Appendix D. When SACOG is able to obtain other sources of funding for the programs, different requirements may apply. In most cases, the minimum project size SACOG will consider is \$150,000.

C. GENERAL APPLICATION PROCESS

SACOG will issue a call for applications when federal funding opportunities arise, typically once every two years. Public agencies (cities, counties, and other public agencies) are the eligible applicants for these federal funds. Each time funds are made available, the call for applications will be made through SACOG's newsletter, webpage, advisory committee meetings, and letters and emails to public works and planning departments, transportation agencies, transit agencies, transportation management associations, and other organizations. An application, timeline, and these guidelines will be made available at that time.

D. PROJECT SELECTION PROCESS

The following process applies to Sacramento, Yolo, Yuba, and Sutter Counties. Placer and El Dorado Counties have their own programming process through a Memorandum of Understanding with SACOG. For Placer and El Dorado Counties, a separate process is used (see Appendix C).

The Bicycle and Pedestrian Working Group, formed from existing SACOG committees and staffed by SACOG, will make recommendations to SACOG Staff and the SACOG Board of Directors, through the appropriate Board Committee, on project selection. After SACOG staff screen project applications for eligibility, Working Group Committee members will be responsible for reading applications, and applying the ranking criteria to make recommendations for which projects to fund. Appendix E provides more detail on the process and the membership of these committees.

² These sources are currently the Regional Surface Transportation Program (RSTP), the Congestion Management and Air Quality Program (CMAQ), and Transportation Enhancements (TE).

SACOG reserves the right to fund less than the amount reserved for each funding program in a given funding cycle, as well as to fund projects in a program other than the one for which it was submitted.

E. IMPLEMENTATION

After SACOG has awarded a grant, project sponsors will be asked to follow or be aware of these requirements:

- Follow all federal funding requirements listed in Appendix D.
- Follow all federal environmental justice directives.
- Assure SACOG that the projects meet the requirements of the Americans with Disabilities Act.
- Follow SACOG's "Use It or Lose It" policy for obligating and spending the grant funds. The policy requires project sponsors to schedule fund obligation and project implementation in the Metropolitan Transportation Improvement Program (MTIP) and to honor that schedule.
- A local non-federal match of at least 11.47% of the total cost of a project is required for projects receiving federal funding in the Sacramento region, with a few exceptions that are detailed under the individual program guidelines. This does not include "in kind" match, but must be funding that is dedicated to eligible features within the project and included in its overall cost.
- For capital projects, federal funds may be used for the preliminary engineering phase, which includes environmental work and design, as well as for right-of-way and construction phases. When a project is programmed in the MTIP and is ready for implementation, the project sponsor requests an authorization (E-76) from Caltrans. Only after the project is authorized, can the sponsor incur expenses that will then be reimbursed from the grant. A project sponsor submits invoices for the entire cost incurred, and is reimbursed at 88.53% (the total cost minus local match).
- SACOG encourages project sponsors to seek other sources of funding that may be available, including Community Development Block Grants or other federal HUD funds (although for the most part, federal funds from other programs cannot be used as match).

F. BICYCLE AND PEDESTRIAN PROGRAM GOALS

The purpose of this funding program is to provide facilities for walking and biking in the cities and towns of the region, and to provide connections between them. Also, the efficiency of the transportation system is a key component of achieving the goals set forth by the Blueprint Planning Process (Appendix A.2). In the preferred Blueprint Scenario bicycling and walking are integral to the types of development patterns depicted in the Blueprint Preferred Scenario and are necessary for its successful implementation. Projects and programs funded through this program must support the implementation of the Blueprint Preferred Scenario and planning principles.

Bicycle and pedestrian facilities in new developments are expected to be paid for by developers in cooperation with cities and counties.⁵ Further, facilities that serve strictly recreational trips or equestrians are also expected to obtain other funding.

Non-capital programs and projects are eligible for funding, but are of lower priority than capital projects and master plans. Up to 10% of the program funds may be set aside in a funding cycle for non-capital programs other than master plans.

In November 2004 SACOG adopted the *Regional Bicycle, Pedestrian and Trails Master Plan* which was subsequently amended in 2005, 2007 and 2009. This plan provides the eligible pool of projects for this funding program. The *Master Plan* is a product of the efforts of SACOG's Bicycle and Pedestrian Advisory Committee. The *Master Plan* contains a prioritized, list of 20 years of projects from around the region ranked into "high" "medium" and "low" priority. Selection criteria ensured that the projects are forward thinking, high quality, high impact, and regionally important. Appendix C of the *Master Plan* explains in detail the selection criteria and how projects were ranked.

In selecting the best projects to fund from the higher priority projects listed in the *Master Plan*, costs, benefits and the goals listed below will be considered. The goals have been modified to reflect the Bicycle and Pedestrian Advisory Committee's intention that, within communities, providing local or intracommunity connections are a higher priority than intercommunity connections. Communities should focus their priorities on short distance trips before long distance trips.

⁵ Local agencies and developers should refer to the Federal Highway Administration's *Design Guidance for Accommodating Bicycle and Pedestrian Travel* for a list of good practices in new developments. The SACOG funding program is not intended to be used to fund these basic good practices.

Capital projects

1. For a community pursuing bicycle and pedestrian improvements, its top priority should be to provide local intracommunity bicycle and pedestrian connections, whether they are located within large, medium, or small cities and towns of the 6-county region. Bicycle and pedestrian facilities achieve the greatest good when they provide safe, comfortable, and convenient options for travel in areas where popular destinations are within short distances. Specifically, projects should:
 - a. Provide connections within or through the central business districts.
 - b. Provide connections to regional and local public transit systems, at stops, stations, and terminals.
 - c. Provide connections within, through, or to regional and local activity centers such as schools, libraries, community centers, colleges, universities, hospitals, medical offices, senior residences, parks, athletic facilities, government services, employment centers, and high-density residential or mixed-use areas.

2. Once a community attains good bicycle and/or pedestrian circulation, intercommunity bicycle and/or pedestrian projects can then become a top priority for that community. Intercommunity projects are bicycle and/or pedestrian connections that link between the large, medium, and small cities and towns of the 6-county region. In addition to local intracommunity connections, bicyclists and pedestrians also need to have options for medium and long distance travel on facilities that are safe, comfortable, and convenient. An intercommunity project should already have good bicycle and/or pedestrian circulation at both ends of the segment

For both priorities, the goals of capital projects include:

3. Fill in gaps on existing, planned, or proposed bicycle or pedestrian routes, including interregional routes.
4. Provide bicycle and pedestrian access across barriers such as arterial roads, highways, freeways, rivers, canals, creeks, and railroads.
5. Improve the time convenience of walking and bicycling, for example with shortcuts or special facilities such as bike/pedestrian boulevards.
6. Improve the safety and security of walking and bicycling.
7. Provide an aesthetic, pleasant, or more comfortable biking or walking experience.
8. Provide capital facilities that support bicycling, such as storage, parking, or bike stations.
9. Complement projects funded with other regional or state sources such as the Community Design or Safe Routes to School programs, thereby improving bicycle and/or pedestrian access provided by those programs.
10. Complement bicycle and pedestrian plans and projects in an adjacent region.

Non-capital projects and programs

1. Encourage biking and walking through public information, education, and awareness.
2. Where needed, perform studies and develop plans that support the goals for capital facilities stated above.
3. Increase the level of public agency staff expertise on bicycling and walking.

G. ELIGIBLE PROJECT TYPES

The following projects and programs may be funded wholly or in part and are not in priority order:

General bicycle and pedestrian projects

- a. New sidewalks and pedestrian paths
- b. Improvements to existing pedestrian facilities
- c. Improved street crossings, including mid-block crossings
- d. Curb extensions and median refuge islands
- e. Bicycle signals and sensors at intersections
- f. Pedestrian signal detection
- g. Lighting for bicyclists and pedestrians
- h. Signage and stenciling
- i. Traffic calming beneficial to bicyclists and pedestrians
- j. Streetscaping that shades bicyclists and pedestrians
- k. Upgrades to existing bikeways, including loop detector signal detection, pavement rehabilitation on shared-use paths, etc.
- l. Class I shared-use paths and paved trails
- m. Class II bike lanes
- n. Bike boulevards
- o. Short-cuts⁶
- p. Bicycle/pedestrian bridges, tunnels, undercrossings and additions to rail/vehicle bridges and tunnels
- q. Improvements to substandard railroad track crossings, when appropriate
- r. Portion of one-way street reversion to two-way street that benefits bicyclists or pedestrians
- s. Bicycle parking and storage
- t. Attended bicycle parking facilities or bike stations
- u. Changing and shower facilities (in limited circumstances)
- v. Project feasibility studies
- w. Land acquisition for capital projects

School-related bicycle and pedestrian projects

- a. Local school bikeway and pedestrian projects
- b. Bicycle and pedestrian access improvements to and through colleges and universities

Transit-related bicycle and pedestrian projects

- a. On-board bicycle storage
- b. Station or terminal bicycle storage
- c. Transit stop/station bicycle and pedestrian access projects
- d. Express bus services for bicyclists

⁶An example of a short-cut project is the land acquisition and a bicycle/pedestrian path that connects a neighborhood to local retail center, library, or school, shortening the travel time and providing convenient and safer access.

Bicycle and pedestrian planning, education, information and marketing

- a. Bicycle and pedestrian master plans
- b. Design manuals
- c. Motorist education about sharing the road with bicyclists and pedestrians
- d. Public agency staff training
- e. Bicycle/pedestrian coordinator positions (up to two years)
- f. Public relations campaigns
- g. Public service announcements
- h. Mapping projects
- i. Brochures and pamphlets
- j. Skills training
- k. Education on health benefits

Other projects and programs that meet the goals of this funding program will also be considered, as long as they are listed in the *Master Plan*.

Under special circumstances, SACOG will consider funding a project or program that is not listed in the *Master Plan* or is listed in the *Master Plan* but is medium or low priority. In this case, the project application must contain a detailed justification for why the project should be funded.

Projects and programs that are not eligible include facilities that serve only a recreational, rather than a transportation function, projects in new developments that are considered “good practices” according to FHWA guidelines, bicycle and pedestrian facility maintenance, school education programs, long-term staff positions, transit operations (except for bus services for bicyclists), law enforcement, and bicycle racks for carpools, vanpools, or private vehicles.

The minimum project size for this funding program is \$167,205 (\$150,000 funding award + \$17,205 local match). Public agencies applying for funding for smaller projects may want to consider combining projects to meet the \$167,205 threshold, or consider a larger, multi-year program or project. The exceptions to this rule are funding for plans, short-term bicycle and pedestrian coordinator positions, or projects that would qualify for Federal Transit Agency Enhancement funds.

The application process will be specific to the Bicycle and Pedestrian program, although SACOG staff will present a recommendation for funding to the SACOG Board of Directors for all of the funding programs together.

H. PROJECT EVALUATION

Screening criteria

To be selected for funding, a project or program must meet both of the following screen criteria:

- a. It is included in the *Master Plan* as a “high” priority project. “Medium” priority projects will be considered if not enough “high” priority projects are ready for inclusion as described below, or if the delivery of a “high” priority project as been significantly delayed or has become infeasible. Under very special circumstances, applications may be considered that are not listed in the *Master Plan* or are listed as low or medium priority.
- b. It must be ready for inclusion into the *Metropolitan Transportation Improvement Program*, with project scope and cost. The project application may include the cost of preparing environmental documents. However, for large projects that will necessitate a full Environmental Impact Statement (EIS), the EIS can be funded separately from the design and construction of the project (which should seek funding in a later round of funding).

Ranking criteria

In Sacramento, Yolo, Yuba, and Sutter Counties, projects to be funded will be chosen from the list of high priority projects included in the *Master Plan*. The Bicycle and Pedestrian Working Group will rank projects based on the following criteria, with a maximum of 100 points, and 10 additional bonus points possible. The Working Group will also take other considerations into account. The rankings will be used to determine which of the high priority projects will be funded.¹

Ranking criteria

1. Meets capital or non-capital program goals: How many of the goals the project/program addresses and how well? (60 points)
2. Cost effectiveness: The ratio of items 2a. and 2b. below (20 points)
 - a. Project costs and lifecycle costs. For analysis, all costs should be computed to present value.
 - b. Quantifiable and qualitative project benefits, including safety improvement, time savings, air quality benefits, and increases in usage by bicyclists and pedestrians.
3. Strength of commitment, degree of risk to cost and schedule, relative priority at local jurisdiction(s). (20 points)
4. Bonus - Extra local match provided. (10 points maximum, 1 point for each 5% of additional local match beyond the required 11.47%)

¹ Placer and El Dorado County projects are ranked in the Master Plan to serve as guidelines for the respective jurisdictions and do not indicate a priority relative to projects in Sacramento, Yolo, Yuba, and Sutter Counties. See Appendix C for details on project selection in those counties.

Other Considerations

Other factors SACOG will take into consideration when ranking projects are:

- Capital projects that support Blueprint implementation will be given priority over non-capital projects and programs, although up to 10% of the funding in a round may be used for non-capital projects.
- Project is closely related to local activity center/compact development area, and identified in the local general plan, that will be implemented soon but is beyond what is required of the developer to pay for.
- A bicycle or pedestrian project located in an undeveloped area that connects two developed areas with good circulation.
- Projects that benefit both public transit or roadways and bicycling/walking may be funded partially from this funding source with the expectation that transit or roadway funding sources will pay for the remainder.
- The same type of program or project has been implemented successfully elsewhere.

APPENDIX A.1

GOALS OF THE METROPOLITAN TRANSPORTATION PLAN FOR 2025

Plan adopted by the SACOG Board of Directors in July 2002

1. Overarching Goal: Quality of Life: Develop a fully integrated, multi-modal transportation system to serve as a catalyst to enhance the quality of life enjoyed by the current and future residents of the Sacramento region.
2. Access and Mobility: Improve access to goods, jobs, services, housing, and other destinations; provide mobility for people and goods throughout the region, in a safe, affordable, efficient and convenient manner.
3. Air Quality: Develop a transportation system and related strategies that contribute to achieving healthy air in the region.
4. Travel Choices: Provide affordable, convenient, safe, and integrated travel choices.
5. Economic Vitality: Enhance the economic vitality of our region by efficiently and effectively connecting people to jobs, goods, and services, and by moving goods within our region and beyond with an integrated multi-modal freight system.
6. Equity: pursue a transportation system that addresses the needs of all people in all parts of the region and assure that impacts of transportation projects don't adversely affect particular communities disproportionately.
7. Transportation and Land Use: Influence land use policies to improve access to jobs, services and housing to everyone in the region by using market forces and the regulatory process.
8. Funding and Revenue: In order to adequately fund the Plan, develop appropriate, innovative, equitable, and stable funding sources (both short- and long-term) and identify cost-reduction measures.
9. Health and Safety: Improve the health of our residents by developing systems that would encourage walking and biking, and improve the safety and security of people on all modes in all areas.
10. Environmental Sustainability: Develop the transportation system to promote and enhance environmental quality for present and future generations.

APPENDIX A.2

BLUEPRINT PLANNING PRINCIPLES

1. **Transportation Choices:** Developments should be designed to encourage people to sometimes walk, ride bicycles, ride the bus, ride light rail, take the train or carpool. Use of Blueprint growth concepts for land use and right-of-way design will encourage use of these modes of travel and the remaining auto trips will be, on average, shorter.
2. **Mixed-Use Developments:** Buildings homes and shops, entertainment, office and even light industrial uses near each other can create active, vital neighborhoods. This mixture of uses can be either in a vertical arrangement (mixed in one building) or horizontal (with a combination of uses in close proximity). These types of projects function as local activity centers, contributing to a sense of community, where people tend to walk or bike to destinations and interact more with each other. Separated land uses, on the other hand, lead to the need to travel more by auto because of the distance between uses. Mixed land uses can occur at many scales. Examples include: a housing project located near an employment center, a small shopping center located within a residential neighborhood, and a building with ground floor retail and apartments or condominiums on the upper floor(s).
3. **Compact Development:** Creating environments that are more compactly built and use space in an efficient but aesthetic manner can encourage more walking, biking, and public transit use, and shorten auto trips.
4. **Housing Choice and Diversity:** Providing a variety of places where people can live – apartments, condominiums, townhouses, and single-family detached homes on varying lot sizes – creates opportunities for the variety of people who need them: families, singles, seniors, and people with special needs. This issue is of special concern for the people with very low-, low-, and moderate-income, often our teachers, other public employees and professionals, as well as retail employees, service workers and other people for whom finding housing close to work is challenging. By providing a diversity of housing options, more people have a choice.
5. **Use of Existing Assets:** In urbanized areas, development on infill or vacant lands, intensification of the use of underutilized parcels (for example, more development on the site of a low-density retail strip shopping center), or redevelopment can make better use of existing public infrastructure. This can also include rehabilitation and reuse of historic buildings, denser clustering of buildings in suburban office parks, and joint use of existing public facilities such as schools and parking garages.
6. **Quality Design:** The design details of any land use development - such as the relationship to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design, and the design of the public right-of-way (the sidewalks, connected streets and paths, bike lanes, the width of streets) - are all factors that can influence the attractiveness of living in a compact development and facilitate the ease of walking and

biking to work or neighborhood services. Good site and architectural design is an important factor in creating a sense of community and a sense of place.

7. **Natural Resources Conservation:** This principle encourages the incorporation of public use open space (such as parks, town squares, trails, and greenbelts) within development projects, over and above state requirements; along with wildlife and plant habitat preservation, agricultural preservation and promotion of environment-friendly practices such as energy efficient design, water conservation and stormwater management, and shade trees to reduce the ground temperatures in the summer. In addition to conserving resources and protecting species, this principle improves overall quality of life by providing places for everyone to enjoy the outdoors with family outings and by creating a sense of open space.

APPENDIX B. SCHEDULE

Sep. 24, 2009	Call for projects.
Oct. 23, 2009	Project applications due 5:00 p.m.
Nov. 2, 3, 5, 2009	Working Group meets up to three times and makes project selection recommendations to SACOG staff and SACOG Board.
Nov. 6-9 2009	SACOG Staff reviews recommendations for funding and makes recommendations to the SACOG Board of Directors. Recommendations are presented for information to Bicycle and Pedestrian Advisory Committee and Regional Planning Partnership
Dec. 17, 2009	The SACOG Board holds a public hearing on the recommended projects.
Jan. 21, 2010	The SACOG Board adopts recommendations with any revisions.
May/June 2010	Projects are programmed and ready to be obligated/allocated (SACOG estimate).

APPENDIX C. THE APPLICATION AND FUNDING PROCESS IN PLACER AND EL DORADO COUNTIES

This process considers the Memoranda of Understanding (MOUs) and related resolutions approved by SACOG, the Placer County Transportation Planning Agency (PCTPA), and the El Dorado County Transportation Commission (EDCTC) that govern interagency relationships.

In summary, PCTPA and EDCTC are able to choose their own projects for which to use federal transportation funding, separate from the process used at SACOG for choosing projects in Sacramento, Yolo, Sutter, and Yuba Counties. If the selected projects in Placer and El Dorado Counties meet the criteria for SACOG's funding programs, they will be added to the overall list of projects for that funding program. If not they will still be programmed, but not counted toward the regional funding program goals established in the Metropolitan Transportation Plan. (See example at end of this appendix).

For each round of federal funding (Urban RSTP and CMAQ), approximately every two to three years, state law calls for PCTPA, EDCTC, and SACOG to each receive a separate allocation, with SACOG (as Metropolitan Planning Organization) responsible to program this funding.

In the Metropolitan Transportation Plan (MTP), SACOG has established four special funding programs (Community Design, Air Quality, Bicycle and Pedestrian, and Transportation Demand Management) that use a portion of these federal funds.

In each federal funding cycle, SACOG, EDCTC, and PCTPA agree to follow this process:

1. SACOG advises PCTPA and EDCTC of their combined fair shares of Urban RSTP and CMAQ together with a statement of MTP objectives for that funding cycle. PCTPA and EDCTC agree to seriously consider SACOG's priorities as they decide which programs to forward for programming. They encourage their cities, counties and transit operators, as they have in the past, to propose projects that address SACOG's priorities and meet criteria established in the guidelines approved by the SACOG Board for each of the four regional funding programs. They will also include SACOG staff on advisory committees reviewing the project proposals and use the PLACE³S software to help evaluate Community Design proposals.
2. The SACOG Board approves an amount of federal funding to allocate for each of the four funding programs, for Sacramento, Yolo, Yuba, and Sutter Counties. If the federal funding authorization to the region is greater or less than the original estimates, PCTPA, EDCTC, and SACOG will either receive more or less federal funding on a fair share basis, and as a consequence the amounts allocated to the four regional programs may be changed.
3. Some of projects and programs funded by SACOG through the funding programs are regional in nature, for example the Regional Rideshare Program. SACOG will consult

with PCTPA and EDCTC about fair share support of these regionwide programs before the three agencies select projects for programming.

4. In the Bicycle/Pedestrian, Air Quality, and Community Design Funding Programs, SACOG solicits project proposals from qualified project sponsors within Sacramento, Yolo, Yuba, and Sutter Counties. For each of these three competitive programs, a working group of SACOG's planning partners from the four counties analyzes, evaluates, and ranks the proposals based on their technical merit. SACOG staff then reviews the recommendations from all working groups and makes a final recommendation to the Board of Directors that takes into account regional balance.
5. At the same time, PCTPA and EDCTC also conduct an evaluation and ranking process to select federally funded projects. After approval by their Boards of Directors, these lists are forwarded to SACOG for programming. It is expected that at least some of these projects will meet the goals and criteria for the regional funding programs. SACOG staff will evaluate these projects for whether they fit the programs, and will make a recommendation to the SACOG Board about whether to include them in the list of projects under the four funding programs or program them outside of the four programs.
6. If there are a greater number of highly recommended projects than there is funding available in a program, SACOG staff may seek to reduce the amount programmed to some or all projects, or may request a higher allocation for that funding program. The increase would mean a decrease in another funding program or would replace other regional priorities for federal programming.

Example of Funding for El Dorado or Placer County Project: As an example of how a project might be designated as a Community Design project from Placer County, it would work as follows. Placer County develops a project proposal that conforms to SACOG's Community Design Guidelines and submits it to the Placer County Transportation Planning Agency (PCTPA). PCTPA's Board approves the project for federal CMAQ funding under PCTPA's allocation. The project is forwarded to SACOG and screened by staff for whether it meets the goals and criteria of the Community Design Program. If it does, it is added to the list of projects in that program.

APPENDIX D. FEDERAL FUNDING REQUIREMENTS

The following federal funding requirements are derived from the State's Transportation Enhancement Activities (TE) funding program guidelines. Items "a" and "b" apply only to TE funds, but "c" through "l" apply to all federal funds, including TE. The SACOG regional funding programs can be funded from any of the types of federal funds that SACOG receives.

- a. Direct relationship to the transportation system: TE projects must be directly related to the surface transportation system. This relationship may be one of function, proximity or impact. For example, a bikeway or historic rail station still in service is a functional component of the transportation system; landscaping or restoration of a historic site alongside the highway can be related by proximity (the proximity relationship will not be eligible if tenuous or contrived); and archaeology planning or water pollution control alongside an existing highway affect the impact of the transportation system or the environment.
- b. Over and above normal work: Enhancement funds must build projects that would be over and above normal transportation work. TE projects cannot be used for mitigation specified in environmental documents, permit requirements from federal, state or local agencies for other transportation work, maintenance activities such as repaving bike lanes or repainting historic buildings on a normal life cycle schedule, and other requirements such as retrofit of drainage facilities to meet current clean water standards or retrofit of existing sidewalks for compliance with requirements of the Americans with Disabilities Act.
- c. Public benefit and access: TE projects use public funds, must provide benefit to the general public, and generally must provide for public access, except in certain cases where access might be inappropriate, such as wildlife corridors or water pollution control facilities. Improvements to private property and commercial tenant facilities are not eligible.
- d. Right of way acquisition: Any property needed for right of way for TE projects must be acquired from willing sellers, since a finding of public necessity for eminent domain cannot be made for work "over and above normal work." Whenever federal funds are used in any phase of a project, acquisition of real property for the project becomes subject to the provisions of the uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, no matter if carried out by federal, state or local agencies or by private parties. Properties to be acquired must be appraised, and an offer made to purchase at full-appraised value, although the sale may be completed for an option value or another value different from appraised value by mutual agreement. Any tenants displaced because of the project are entitled to relocation assistance benefits under the Act (funded within the project), but willing sellers are not. Improvements for tenant or commercial activities such as snack bars or retain businesses are not eligible.

- e. Historic restoration: Projects funded with federal transportation funds must comply with Section 106 of the National Historic Preservation Act, pertaining to evaluation and preservation of historic and archaeological resources. For historic property projects, all restoration work must be done in compliance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, the Secretary of the Interior's Standards for Treatment of Historic Properties, or the State Historic Building Code. Work must be managed under the direction of professionals meeting the standards published in the Code of Federal Regulations, 36 CFR, Part 61, which define minimum education and experience required to perform eligible historic preservation activities; in some cases, additional areas or levels of expertise may be needed depending on the complexity of the task and the nature of the historic properties involved. Rehabilitation work to return a property to a state that allows contemporary use while preserving the significant historic features of that property will usually be eligible. Preservation work to repair deferred maintenance that should have been done, as a condition of a prior historic preservation agreement is not eligible. Construction of replicas of historic structures or buildings is not eligible. Work related to Native American archaeological sites typically requires extra consultation with interested tribes, may require that Native Americans control the disposition of certain artifacts, and may require artifact displays to show alternative interpretations.

- f. Environmental studies and review: All TE projects are subject to the requirements of both the National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) of 1970. For NEPA, the project sponsor must make a good faith effort to study, assess and disclose environmental impacts that could be expected from the project and consult with interested federal agencies; and for CEQA, the project must mitigate any significant adverse impacts to the extent feasible. Experienced agencies can meet both the federal and state environmental requirements using a single joint process. The level of effort varies by the type of project, the amount of impacts and the degree of public controversy. While some projects may be able to use a Categorical Exemption/Categorical Exclusion, and most others will require no more than a Finding of No Significant Impact/Negative Declaration (which may include mitigation of impacts), a few TE projects will require a full Environmental Impact Statement/Environmental Impact Report, particularly those where significant public controversy arises, with all of the required agency consultation and public reviews.

- g. Parks: Since TE projects must have a direct relationship to transportation, park improvements such as park benches, park landscaping and recreational trails are not eligible, although the same scope of project might be eligible in a streetscape setting. TE projects that may provide an ancillary recreational experience or may be located on parkland can be eligible as bicycle or pedestrian facilities if the projects also provide through access from one point to another. Section 4(f) of the Department of Transportation Act of 1966 applies to projects funded with federal enhancement funds, even though it is an odd fit with the enhancements program; it prohibits building a project on land in a publicly owned park, recreation area, wildlife or waterfowl refuge, or significant historic site unless the applicant can demonstrate that there is no prudent and

feasible alternative to the use of park property, and can minimize damage to the park property from the transportation use. The state expects Section 4(f) should be waived for most enhancements projects, but does not have the power to ensure this.

- h. Permits: Depending on the nature of the project, TE projects may require permits or clearance from a wide range of federal and state agencies with environmental responsibilities, covering at least water quality, floodplain encroachment, wetlands protection, endangered species (both federal and state listed) and habitat protection, and historic or archaeological resources. In particular, wetlands protection and floodplain encroachment require a no-practicable-alternative finding. The list of interested agencies usually includes, but is not limited to, the U.S. Army Corps of Engineers, the U.S. Fish & Wildlife Service (or National Marine Fisheries Service), California Department of Fish & Game, California Coastal Commission, State Historic Preservation Office, and Advisory Council on Historic preservation. The most common applicable federal legal requirements can be found in:
 1. Section 404 of the Clean Water Act of 1977,
 2. Executive order 11990, "protection of Wetlands," May 24, 1977,
 3. Executive Order 11991, "Floodplain Management," May 24, 1977,
 4. Section 7 of the Endangered Species Act of 1973, and
 5. Section 106 of the National Historic Act of 1966.

Many TE projects will end up involving no permits, but that must be determined project-by-project through studies and consultation.

- i. Transportation project requirements: TE projects are transportation projects and, thus, must meet any applicable federal or state standards for transportation projects. For example, bicycle facilities generally must meet federal and state standards for width, grade and signing; state highway landscaping must comply with state landscaping policies on Nation Highway System routes; and removal of nonconforming billboards must follow federal and state procedures, including local ordinances to control subsequent outdoor advertising in the area. Projects sharing or crossing railroad rights of way must have railroad agreements, which can be time-consuming to negotiate and get approved. Walkways and buildings must include handicapped access (Americans with Disabilities Act (ADA)). Agencies unfamiliar with the requirements and costs of constructing to the design standards required for federal-aid projects should consult in advance with their Caltrans District Local Assistance Engineer.
- j. Other federal contract requirements: TE projects use federal funds and so must comply with various federal contracting requirements, which apply if consultants are to be used for environmental or design studies, to right of way activities (including utility work) done under contract, and for the project construction contract. The most ubiquitous of these requirements include competitive bidding, pre-award audits, minority business participation (DBE/WBE), and prevailing wage rates (Davis-Bacon Act).

- k. Metropolitan Transportation Plan, MTIP and air quality conformity. All projects using federal transportation funds must be consistent with the regional transportation plan, known as the Metropolitan Transportation Plan (MTP), covering that area; if the plan is not specific enough to list every small project, the project must be consistent with the general policy direction and priorities of the plan and not inconsistent with any of its provisions. All projects using federal transportation funds must also be added to the federal Metropolitan Transportation Improvement Program (MTIP) the document describing the slate of projects approved for federal funding by the Federal Highway Administration (FHWA). In the SACOG region, SACOG is the designated metropolitan planning organization responsible for drawing up the MTP and MTIP and amending it when necessary; SACOG must also assess the air quality implications of the whole slate of projects and make a finding that total pollutant emissions from all projects collectively do not exceed federal clean air standards; that finding must be reassessed each time the MTIP is formally amended, which can be an arduous three- to five-month process. While TE projects by themselves rarely would have any significant effect on air quality, MTIP amendments often contain a package of projects, including some highway projects that force a time-consuming re-evaluation of clean air impacts. In the end, FHWA must approve the MTIP (and any amendments), and the U.S. Environmental Protection Agency (EPA) must approve the findings of air quality conformity before funds can be released for the project. SACOG programs bicycle and pedestrian projects in a lump sum and, thus, in some cases, can avoid the need to process formal amendments.

- l. Maintenance Agreement: The project applicant must guarantee that the TE project will be maintained for the normal project life cycle, by the sponsoring agency or via contract with a third party, as a condition of receiving federal enhancement funds. The Caltrans' master agreement typically will hold the applicant liable up to the amount of federal funding if maintenance is not kept up. The project applicant should understand that the use of federal enhancement funds for a project brings all of these federal and state requirements that may apply to bear on the entire project, not necessarily just the part funded by enhancement funds (unless the project consists of distinct and separable phases done as separate projects by separate contracts). The project applicant should build into the project application enough funding to deal with these many requirements and build into the project schedule enough time to carry out the work, most of which must be completed before project construction can be started.

APPENDIX E. PROJECT SELECTION PROCESS

Project applicants (sponsors) may be any agency or organization that holds a master agreement with Caltrans to administer federal transportation funds. The following process applies to Sacramento, Yolo, Yuba, and Sutter Counties, but not to Placer and El Dorado Counties. For Placer and El Dorado Counties, a separate process is used (see Appendix C).

Steps in the Process

1. SACOG staff reviews the applications and screens them for eligibility. Ineligible applications are discarded, based on ineligibility for federal funds, lack of funding of the appropriate type, or on the program guidelines.
2. SACOG staff forwards the applications to the Bicycle and Pedestrian Working Group (see below for the composition of the Working Group).
3. The Bicycle and Pedestrian Working Group scores and ranks the applications, according to its own process, but does not discard any applications. Working Group members will not vote or comment on applications from their own organizations. The Working Group makes its recommendations to SACOG staff and the Board of Directors and also presents its recommendations as information to the Regional Planning Partnership and Bicycle and Pedestrian Advisory Committee.
4. SACOG staff reviews the ranking recommendations of all funding program working groups and makes its own ranking recommendations. These staff recommendations will take into consideration the availability and requirements of appropriate funding sources and will balance the ranking of projects based on geographic location. These ranking recommendations will then be communicated back to each of the working groups.
5. If the Bicycle and Pedestrian Working Group recommendations are different from the SACOG staff recommendations, then both sets of recommendations are made to the SACOG Board of Directors.

Membership of the Bicycle and Pedestrian Working Group

Members should represent diverse geography. A SACOG staff member will staff each meeting. The group will select a Chairperson.

Expertise	Appointed by	Number
Planners	Planner's Committee	1
Project Engineers	Regional Planning Partnership	2
Bike/Ped	Bike/Ped Advisory Committee	4 (2 advocates, 2 professionals)
Air Quality	Air Districts	1
TDM	TDM Task Force	1
Transit	Transit Coordinating Committee	1
Community Groups	Regional Planning Partnership	1
TOTAL		11

Section 2: APPLICATION INSTRUCTIONS

This section directly addresses the requirements for applying for a Bicycle and Pedestrian Grant. Please read the instructions in this section with the background information from the Guidelines in Section 1 when considering and preparing your grant application.

PROGRAM MANAGER

Please direct any questions regarding the Bicycle and Pedestrian Funding Program or the application process to the SACOG Program Manager:

José Luis Cáceres, Associate Planner
Sacramento Area Council of Governments
1415 L Street, Suite 300
Sacramento, CA 95814
phone (916) 340-6218
fax (916) 321-9551
email jcaceres@sacog.org

APPLICATION FORMAT AND CONTENTS

Applications are required to stay within the prescribed format and on forms provided by SACOG so that there is uniformity for the Bicycle and Pedestrian Working Group to review.

Format

The overall application format requirements are:

- All narrative text shall have at least 1 inch margins on all sides, and use no less than 11 point font size. Footers and headers are exempt from margin and font size requirements.
- Narrative pages may only be written on 8.5" x 11" paper. Graphics, photos and maps may be printed only on 8.5"x11" or 11"x17" paper; either size counts only as one page.
- Divider pages are allowed if they are made of colored paper that can be recycled. These do not count toward the page limits. Please do not insert plastic or non-recyclable tabs on the divider page. The divider page may show section titles; no other narrative or graphic content is allowed.
- Please do NOT include a separate cover, comb-binding or any plastic materials; stapling or clipping the document will suffice; the signed letter from the primary applicant described below shall serve as the cover for the application. One blank white sheet of paper may serve as the back page.
- Submit 1 original signed application and 12 copies of each application. E-mailed applications are not acceptable.

- Submit 1 compact disc with a PDF of the application, including support materials. Scanned images are acceptable in the PDF file.

Application Contents

Applications must contain the following elements with page limits as listed:

Max Pages	Content Element	Content Description
1	Cover Memo	Signed cover memo on letterhead of lead applicant jurisdiction by chief elected official of governing body or designated individual by that official. Memo acknowledges that the application is officially authorized by the jurisdiction. Please address cover letter to the SACOG Program Manager listed above.
1-2	Partner Commitment Letters	Letters from partners explaining responsibilities and contributions to the project
4	Uniform Project Application	Complete form provided by SACOG (see below)
1- 4	Maps or Exhibits	
1	Cost Estimate	Complete form provided by SACOG (see below)
1-2	Capital/Non-Capital Program Goals	Use methodology provided by SACOG (see below)
1	Project Benefit Estimate	Use methodology provided by SACOG (see below)
1-2	Emissions Calculations for CMAQ Funding	Follow California Air Resources Board methodology (see below)
1	Environmental Justice	Include your response to the following: What kind of outreach to the community and to other stakeholders do you plan to undertake? Will low-income or minority members of the community be given an opportunity to fully participate in this outreach? Evaluate the benefits and burdens of this project with regard to low income and minority members of the community.
1	Miscellaneous	In this space you may address anything we didn't provide space for, such as explaining why the project is not listed correctly in the Bike/Ped Master Plan.

Total Maximum: 19 Pages

SACOG UNIFORM PROJECT FUNDING APPLICATION

Application Instructions

Format

The overall application format requirements are:

- Key section of application is the two-page Project Summary, focused on project scope, schedule, and cost, common to all SACOG programs, usually with a map or exhibit. Other calculation, information, certification, and support pages are required for some programs that use specific project review and selection processes, as described below.
- All narrative text shall have at least 1 inch margins on all sides, and use no less than 11 point font size. Footers and headers are exempt from margin and font size requirements.
- Narrative pages may only be written on 8.5” x 11” paper. Graphics, photos and maps may be printed only on 8.5”x11” or 11”x17” paper; either size counts only as one page.
- Divider pages are allowed if they are made of colored paper that can be recycled. These do not count toward the page limits. Please do not insert plastic or non-recyclable tabs on the divider page. The divider page may show section titles; no other narrative or graphic content is allowed.
- Please do NOT include a separate cover, comb-binding or any plastic materials; stapling or clipping the document will suffice; the signed letter from the primary applicant described below shall serve as the cover for the application. One blank white sheet of paper may serve as the back page.

CONTENTS OF APPLICATION PACKAGES

<u>Program:</u>	<u>Regional</u>	<u>Bike&Ped</u>	<u>Comm.Design</u>	<u>AirQuality</u>	<u>TDM</u>
Pre-Submittal	No	No	Yes	No	No
Cover Memo or Letter	Optional	Yes	Yes	Yes	Yes
Responsibility Statements	No	No	Yes	No	No
Project Summary	Yes	Yes	Yes	Yes	Yes
Map or Exhibits (if applicable)	Usually	Yes	Yes	Optional	Optional
Project Schedule/Timeline	Optional	Yes	Yes	No	No
Cost Estimate Summary	Optional	Yes	Yes	Yes	Yes
Benefit Estimate/Evaluation	No	Yes	Yes	Yes	Yes
CMAQ Calculation Info.	Maybe	Yes	Maybe	Yes	Yes
Match Funds Commitment	Maybe	Yes	Yes	Yes	Yes
Partner/Support Letters	Optional	Optional	Optional	Optional	Optional
Enviro. Justice Statement	No	Yes	Yes	Yes	Yes

PROJECT SUMMARY

Project Title	
SACOG ID number (if available)	
PPNO and/or EA number (if applicable)	
Project Location (Also attach a map)	
Project Scope	
Project Schedule (estimated month & year): 1. Start environmental/preliminary engineering 2. Final ED approved - Start engineering/design 3. Start R/W acquisition & utilities 4. Complete plans, R/W, & permits – Ready to advertise for construction/procurement	1. 2. 3. 4.
Total Cost Estimate (by phase) 1. Environmental/preliminary engineering 2. Engineering/design 3. R/W acquisition & utilities 4. <u>Construction/procurement</u> TOTAL	1. 2. 3. 4. _____
Funding committed from other sources 1. Environmental/preliminary engineering 2. Engineering/design 3. R/W acquisition & utilities 4. <u>Construction/procurement</u> TOTAL	1. 2. 3. 4. _____
Funding requested from this application 1. Environmental/preliminary engineering 2. Engineering/design 3. R/W acquisition & utilities 4. <u>Construction</u> TOTAL	1. 2. 3. 4. _____
Preferred Funding Type(s)	

<ul style="list-style-type: none"> • RSTP (federal) • CMAQ² (federal) • STIP TE (enhancements) (federal) • STIP (non-federal) 	
Project Title	
Responsible Project Manager/Contact Name: Position: Address: Phone: E-mail:	
Co-sponsor/partner agencies	
Itemize committed funding and sources:	
Can you build a usable partial stage of this project? If so, describe scope and cost.	
Have you identified any significant and reasonably likely risks to the project? Describe: <ul style="list-style-type: none"> • Risks that would change scope • Risks that would change schedule • Risks that would change cost 	

Note:

If STIP or STIP-TE funding is being requested, then a Project Study Report (PSR) or PSR equivalent must be completed. Has a PSR or PSR equivalent been completed? If not, when is it expected to be complete?

² If Congestion Mitigation and Air Quality (CMAQ), emission reduction calculation is required. Methodology available online at www.arb.ca.gov/planning/tsaq/eval/eval.htm

OVERALL PROJECT FUNDING

Federal Fiscal Year (FFY) – for funds is the year in which funds will be obligated by the sponsor (e.g. FFY 2010 is October 1, 2009-September 30, 2010)

Fund Type – source of funds (be as specific as possible: i.e. county general funds, local developer funds, mitigation fees, etc.)

Phase - environmental/engineering/design, right-of-way, construction (ROW support is part of ROW and CON support is part of CON)

Source of matching funds and amount (match must be non-federal, and at least 11.47% of total project cost – not 11.47% of federal funds)

FFY	Fund Type	ENV/ENG	ROW	CON	Total
Totals					

CAPITAL OR NON-CAPITAL PROGRAM GOALS:

How many of the goals the project/program addresses and how well?

PROJECT BENEFIT ESTIMATE (If Applicable)

Quantifiable Benefits Methodology

- Estimate of Existing Usage = x (Can be zero)
- Estimate of Increase in Usage = y (Can be zero)
- Length of Project (miles) = a
- Quantifiable Benefits = (x (a/10 mph) (\$5/hr)) + (y(a/10 mph) (\$10/hr))
- = \$ benefits

Qualitative Benefits Methodology

In one or two paragraphs, are there benefits to the project that are not measured by the dollar figure above?

COST ESTIMATE SUMMARY

Please address all applicable tasks as completely as possible.

Funding Categories	Task	Cost Estimate
Environmental	Environmental Studies	
Engineering	Engineering & Design	
Right-of-Way*	Right-of-Way acquisition	
	Utility relocation & lighting	
Construction*	Environmental mitigation	
	Grading	
	Foundation & Pavement	
	Bridges &/or tunnels	
	Drainage, curb/gutter, street furniture, planting & irrigation	
	Signage, signals, & striping	
	Bicycle storage/parking	
	Buildings/structures	
	Non-capital staff activities	
	Non-capital materials (maps, brochures, manuals, printing, etc)	
Misc.*	Other project components	

*If project applicant is Caltrans, please provide cost estimate for the following additional two components:

- Right of Way Support: _____
- Construction Support: _____

PROJECT BENEFIT ESTIMATE

Quantifiable Benefits Methodology

Estimate of Existing Usage	= x (Can be zero)
Estimate of Increase in Usage	= y (Can be zero)
Length of Project (miles)	= a
Quantifiable Benefits	= (x (a/10 mph) (\$5/hr)) + (y(a/10 mph) (\$10/hr))
	= \$ benefits

Qualitative Benefits Methodology

In one or two paragraphs, are there benefits to the project that are not measured by the dollar figure above?

EMISSIONS BENEFIT CALCULATIONS FOR CMAQ FUNDING

Projects funded under this program may be candidates for funding under the Congestion Mitigation and Air Quality (CMAQ) program. CMAQ funds are intended to support projects that result in measurable reductions in emissions of carbon monoxide (CO), ozone precursors including volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), or particulate matter (PM). To show that air quality objectives are being met, state and local governments must demonstrate the benefits of individual CMAQ projects. Therefore, project applicants must submit a calculation of emissions reductions showing each pollutant, CO (if measurable), VOC, NO_x, and PM₁₀ in kilograms/day. While quantitative analysis is required whenever possible, a qualitative analysis is also considered acceptable when project benefits cannot be quantified.

To assist in calculating the quantitative emission benefits reductions and the cost effectiveness of the reductions, the California Air Resources Board (CARB) has produced a hard copy manual and an automated Microsoft Access database file. The manual and database are available online at: <http://www.arb.ca.gov/planning/tsaq/eval/eval.htm>

Below is an excerpt from the CARB manual, [Methods to Find the Cost-Effectiveness of Funding Air Quality Projects](#). It shows the inputs and methods for calculating the emissions benefits of bike paths. Emission factors are available on the ARB website above, or directly at <http://www.arb.ca.gov/planning/tsaq/eval/eftdec2008.pdf>

Bicycle Facilities

Project definition: Bicycle paths (Class 1) or bicycle lanes (Class 2) that are targeted to reduce commute and other non-recreational auto travel. Class 1 facilities are paths that are physically separated from motor vehicle traffic. Class 2 facilities are striped bicycle lanes giving preferential or exclusive use to bicycles. Bike lanes should meet Caltrans' full-width standard depending on street facility type.

How emissions are reduced: Emission reductions result from the decrease in emissions associated with auto trips replaced by bicycle trips for commute or other non-recreational purposes.

Need to know:

1. Funding dollars
2. Number of operating days per year
3. Average length of bicycle trips
4. Average daily traffic volume on roadway parallel to bicycle project
5. City population
6. Project class (1 or 2)
7. Types of activity centers in the vicinity of the bicycle project
8. Length of bicycle path or lane

Inputs	Default	Units	Comments
Funding Dollars (Funding)		Dollars	
Effectiveness Period (Life)	15	Years	Class 1 projects - 20 years Class 2 projects - 15 years
Days (D)	200	Days of use/year	Consider local climate in number of days used.
Average Length (L) of bicycle trips	1.8	Miles per trip in one direction	Default is based on the National Personal Transportation Survey
Annual Average Daily Traffic (ADT)		Trips per day	Two-direction traffic volumes on roadway parallel to bike project. MAXIMUM IS 30,000.
Adjustment (A) on ADT for auto trips replaced by bike trips from the bike facility.	.0020		See Adjustment Factors table on the next page. Adjustments are based on facility class, ADT, project length, and community characteristics.
Credit (C) for Activity Centers near the project.	.0005		See Activity Centers table on the next page.

ADJUSTMENT FACTORS				
Bike Facility Class	Average Daily Traffic (ADT)	Length of Bike Project (One Direction)	Adjustment Factors for Cities with Pop. > 250,000 And Non-University Towns < 250,000	Adjustment Factors for University Towns with Pop. < 250,000
Class 1 (bike path)& Class 2 (bike lane)	ADT < 12,000 vehicles per day	< 1 mile	.0019	.0104
		>1 & < 2 miles	.0029	.0155
		> 2 miles	.0038	.0207
Class 1 (bike path)& Class 2 (bike lane)	12,000< ADT <24,000 vehicles per day	< 1 mile	.0014	.0073
		>1 & < 2 miles	.0020	.0109
		> 2 miles	.0027	.0145
Class 2 bike lane	24,000< ADT <30,000 vehicles per day Maximum is 30,000	< 1 mile	.0010	.0052
		>1 & < 2 miles	.0014	.0078
		> 2 miles	.0019	.0104

ACTIVITY CENTERS

When evaluating the impact of a new bike project, it is important to consider the location of the bike facility. What types of destinations are accessible from the project? How many of these activity centers are within one-half mile of the facility? How many are within a quarter of a mile? Examine the activity centers in the vicinity of the project and compare them to the list below. Select the credit factor that corresponds to the number of activity centers in the surrounding area.

ACTIVITY CENTERS CREDITS		
<i>Types of Activity Centers: Bank, church, hospital or HMO, light rail station (park & ride), office park, post office, public library, shopping area or grocery store, university or junior college.</i>		
Count your activity centers. If there are...	Credit (C)	Credit (C)
	<u>Within 1/2 mile</u>	<u>Within 1/4 mile</u>
Three (3)	.0005	.001
More than 3 but less than 7	.001	.002
7 or more	.0015	.003

For average auto emission factors, see the [ARB website](#). Use factors that correspond to the life of the project: 11-15 year factors for Class 2 facilities and 16-20 year factors for Class 1 facilities. Defaults are for a project life of 15 years.

Formulas**Units**

$$\text{Annual Auto Trip Reduced} = (D) * (ADT) * (A + C) \quad \text{trips/year}$$

$$\text{Annual Auto VMT Reduced} = (\text{Auto Trips}) * (L) \quad \text{miles/year}$$

$$\text{Annual Emission Reductions (ROG, NOx, and PM10)} = \quad \text{lbs./year}$$

$$\frac{[(\text{Annual Auto Trips Reduced}) * (\text{Auto Trip End Factor}) + (\text{Annual Auto VMT Reduced}) * (\text{Auto VMT Factor})]}{454}$$

$$\text{Capital Recovery Factor (CRF)} = \frac{(1 + i)^n (i)}{(1 + i)^n - 1}$$

where: i = discount rate (Assume 3 percent)
 n = project life

Cost-Effectiveness of

$$\text{Funding Dollars} = (\text{CRF} * \text{Funding}) / (\text{ROG} + \text{NOx} + \text{PM10}) \quad \text{dollars/lb.}$$

Note: The Federal Highway Administration requests that emission reductions from CMAQ projects be reported by pollutant as kilograms/day. The conversion is

$$(\text{lbs. per year}) / [(2.2) * (365)] = \text{kilograms/day}$$

Documentation: Adjustment factors were derived from a limited set of bicycle commute mode split data for cities and university towns in the southern and western United States (Source: FHWA National Bicycling And Walking Study, 1992). This data was then averaged and multiplied by 0.7 to estimate potential auto travel diverted to bikes. On average, about 70% of all person trips are taken by auto driving (Source: 2000-01 Statewide Travel Survey), and it is these trips that can be considered as possible auto trips reduced. Finally, this number was multiplied by 0.65 to estimate the growth in bicycle trips from construction of the bike facility. Sixty-five percent represents the average growth in bike trips from a new bike facility as observed in before and after data for bike projects in U.S. DOT's "A Compendium of Available Bicycle and Pedestrian Trip Generation Data in the United States." Benefits are scaled to reflect differences in project structure, length, traffic intensity, community size, and proximity of activity centers. The scale has been adapted from a method developed by Dave Burch of the Bay Area Air Quality Management District (BAAQMD).

Note 1: Because ADT represents vehicles passing a single point, it may neglect vehicles that travel only a short distance on the corridor and, as a result, underestimate total vehicle trips. Therefore, the number of vehicles diverted to bicycles may be underestimated in this method. If actual vehicle trips in the corridor are known, this number should be used in place of ADT.

Note 2: Bicycle usage data is limited. From the data currently available, a positive correlation has been observed between the percentage of an area's arterials that have full width bike lanes, and the percentage of commuters who bike to work. Simply put, more bike lanes are associated with more bike commuting. More specifically, for an area with a given ratio of bike lanes to arterials, we observe that roughly one-fourth of that ratio is equal to the percentage of commuters that bike to work. More research and data are needed to confirm this relationship and to clarify the causes of this positive correlation.

Bicycle Facilities

EXAMPLE

Class 2 Bikeway Facility

The new Class 2 bike lanes are a critical link in the city bike system, allowing residents bicycle access to education, employment, shopping, and transit. Within one-quarter mile of the project, there is a college, a shopping center, a light rail station, and an office building. The project includes installation of new pavement, signage, and Class 2 bike lane striping along both sides of 1.13 miles of arterials. This is primarily a college town, with a population of 128,000.

Inputs to Calculate Cost-Effectiveness:

Funding Dollars (Funding): \$40,000

Effectiveness Period (Life): 15 years

Days (**D**): 200

Average Length (**L**) of bicycle trips: 1.8 miles

Annual Average Daily Traffic (**ADT**): 20,000

Adjustment (**A**) on ADT for auto trips replaced by bike trips from the bike facility: 0.0109

Credit (**C**) for Activity Centers near the project: 0.002

Emissions Factors (From Table 3, for a 15-year Life):

	Auto Trip End Factor	Auto VMT Factor
ROG Factor	1.020 grams/trip	0.266 grams/ mile
NOx Factor	0.458	0.319
PM10 Factor	0.016	0.219

Calculations:

$$\begin{aligned}\text{Annual Auto Trip Reduced} &= (D) * (ADT) * (A + C) \\ &= (200) * (20,000) * (0.0109 + 0.002) \\ &= 51,600\end{aligned}$$

$$\begin{aligned}\text{Annual Auto VMT Reduced} &= (\text{Auto Trips}) * (L) \\ &= (51,600) * (1.8) \\ &= 92,880\end{aligned}$$

Annual Emission Reductions (ROG, NOx and PM10) in lbs. per year

$$\begin{aligned}&= [(\text{Annual Auto Trips Reduced}) * (\text{Auto Trips End Factor}) \\ &\quad + (\text{Annual Auto VMT Reduced}) * (\text{Auto VMT Factor})] / 454 \\ \text{ROG:} &\quad [(51,600 * 1.020) + (92,880 * 0.266)] / 454 = 170 \text{ lbs. per year} \\ \text{NOx:} &\quad [(51,600 * 0.458) + (92,880 * 0.319)] / 454 = 117 \text{ lbs. per year} \\ \text{PM10:} &\quad [(51,600 * 0.016) + (92,880 * 0.219)] / 454 = 47 \text{ lbs. per year}\end{aligned}$$

Bicycle Facilities, Continued . . . EXAMPLE

Capital Recovery Factor (CRF): $\frac{(1 + i)^n(i)}{(1 + i)^n - 1} = 0.08$ Where n = project life (15 years)
 (From Table 8) and i = discount rate (3%)

Cost-Effectiveness of Funding Dollars: $(CRF * Funding) / (ROG + NOx + PM10)$
 $= [.08 * 40,000] / [334]$
= \$9.58 per lb.

FOR CMAQ PROJECTS ONLY:

Once emissions reductions have been calculated, for each pollutant convert lbs. of emissions reductions per year to kg/day:

$\frac{\text{lbs. reduced per year}}{2.2 \text{ lbs./kg} * 365 \text{ days/year}}$	=	$\frac{170}{2.2 * 365}$	=	0.2 kg/day ROG
$\frac{\text{lbs. reduced per year}}{2.2 \text{ lbs./kg} * 365 \text{ days/year}}$	=	$\frac{117}{2.2 * 365}$	=	0.1 kg/day NOx
$\frac{\text{lbs. reduced per year}}{2.2 \text{ lbs./kg} * 365 \text{ days/year}}$	=	$\frac{47}{2.2 * 365}$	=	0.1 kg/day PM10

CHECKLIST OF APPLICATION REQUIREMENTS

- ❑ **Eligibility:** Potential applicants may check with the SACOG Program Manager regarding the eligibility of their project or their eligibility as an applicant (project sponsor) for federal transportation funding.
- ❑ **Program Schedule:** Review the program schedule in the Guidelines for important dates.
- ❑ **Application contents:** Review pages for all needed elements. Review the section of the Guidelines on Project Evaluation and check that the application contains the information necessary to evaluate using the screening and ranking criteria.
- ❑ **Implementation Requirements:** Review the Implementation section in the Guidelines and evaluate your ability to meet all federal and SACOG requirements, including providing local matching funds of at least 11.47% of the total project cost and following SACOG's "Use it or Lose It" policy.
- ❑ **Submittal Deadline:** Please submit one (1) signed original and twelve (12) copies of the grant application by no later than **5:00 p.m. Friday, October 23, 2009** to:

José Luis Cáceres, Associate Planner
Sacramento Area Council of Governments
1415 L Street, Suite 300
Sacramento, CA 95814

E-mailed applications are not acceptable. This deadline will be strictly enforced.

PDF File Submittal: Also, please submit one compact disc with a PDF file of all the application contents. Scanned materials into the PDF file are acceptable, such as maps, graphics, etc. The compact disc is due the same time as the applications.

POST-SUBMITTAL MATERIALS

SACOG reserves the right to contact applicants during the project selection process and request up to one written e-mail page to clarify questions the Bicycle and Pedestrian Working Group may have. Applicants are not required to respond to these questions. Applicants will be given five calendar days to submit their responses via e-mail from the time they are contacted by the Program Manager. If no response is provided, the selection committees will make their own assumptions regarding the questions.