

2025 CMAQ APPLICATION

SHOULDER PAVING PROJECT



TEHACHAPI BOULEVARD SHOULDER IMPROVEMENTS



KERN COUNCIL OF GOVERNMENTS
Congestion Mitigation and Air Quality (CMAQ) Program
PROJECT APPLICATION – Due Thursday, July 17, 2025

*Please note this is a PDF fillable form so responses may be typed. Items 1, 2, 7, and 22 are drop downs. Totals in item 6 will automatically calculate.

- (1) Is the project included in a local agency-adopted resolution supporting the project? YES NO
- (2) Does the proposed project meet basic eligibility requirements? YES NO
- (3) Project background and justification: Explain the project in terms of the existing infrastructure, its impact for service, safety or any other issue that is relevant to the project (attach to application). If the project scope relates to fueling infrastructure please provide a 3-year fleet conversion plan.
- (4) Lead Agency: _____
- (5) Project description [(Location:) + (Limits) + (;) + (Improvement/Activity)]

(6)	Funding Type	PE	R/W	Const.	Total
	Local	\$ _____	\$ _____	\$ _____	\$ _____
	Local	\$ _____	\$ _____	\$ _____	\$ _____
	State	\$ _____	\$ _____	\$ _____	\$ _____
	Federal	\$ _____	\$ _____	\$ _____	\$ _____
	Total	\$ _____	\$ _____	\$ _____	\$ _____

- (7) Programming Year by Phase: PE: _____ R/W: _____ Const: _____
- (8) VMT Reduction (annual miles): _____
- (9) VOC Reduction (kg/day): _____ Additional documentation required. See instructions.
- (10) NOx Reduction (kg/day): _____ Additional documentation required. See instructions.
- (11) PM₁₀ Reduction (kg/day): _____ Additional documentation required. See instructions.
- (12) PM_{2.5} Reduction (Kg/day): _____ Additional documentation required. See instructions.
- (13) CO Reduction (kg/day): _____ Additional documentation required. See instructions.
- (14) Cost-Effectiveness (\$/lb): _____ Additional documentation required. See instructions.
- (15) Livability and Safety: Describe how project provides the six benefits; limit to half page per benefit.
- (16) Hwy Peak Period LOS Before Project (AM/PM average): _____
- (17) Hwy Peak period LOS After Project (AM/PM average): _____
- (18) Bikeway Peak Period LOS Before Project (AM/PM average): _____
- (19) Bikeway Peak period LOS After Project (AM/PM average): _____
- (20) Pedestrian Peak period LOS Before Project (AM/PM average): _____
- (21) Pedestrian Peak period LOS After Project (AM/PM average): _____
- (22) Is the project identified as a RACM/BACM? YES NO

Application completed by: _____	Date Completed: _____
E-mail: _____	Phone Number: _____
Agency: _____	
Address: _____	

Send completed application electronically on a flash drive with transmittal letter on agency letterhead to:

Attn: Ceasar Valle ❖ Kern Council of Governments, 1401 19th Street, Suite 300, Bakersfield, CA 93301

OR send Digitally via [Dropbox, click here.](#)

APPENDIX A

LOCAL AGENCY-ADOPTED RESOLUTION



COUNCIL REPORTS

APPROVED

DEPARTMENT HEAD:

CITY MANAGER:

MEETING DATE: JUNE 16, 2025 AGENDA SECTION: CITY ENGINEER

TO: HONORABLE MAYOR POGON-CORD AND COUNCIL MEMBERS

FROM: ANDREW NORTON, C.E., CITY ENGINEER

DATE: JUNE 9, 2025

SUBJECT: CONGESTION MITIGATION AND AIR QUALITY PROGRAM FUNDING GRANT APPLICATION & RESOLUTION

BACKGROUND:

Every two years (on average) the City of Tehachapi, as a member agency of the Kern Council of Governments (Kern COG), is given an opportunity to pursue Congestion Mitigation and Air Quality Program (CMAQ) funds. This money descends from the federal highway transportation funds allocated by Congress on a periodic basis. The City of Tehachapi has used these available funds to make improvements to various roadways within the City as suggested by City Staff. A recent example of the use of these funds is the construction of the Pinon Road Extension.

While Tehachapi has consistently executed our projects without fail over the last 10+ years, other member agencies of the Kern COG have, at times, failed to follow through on commitments to execute similar work. As such, the Kern COG has asked all its member agencies to execute resolutions in support of funding applications to help ensure the timely use of the available funds.

PROJECT DESCRIPTION:

City Staff, with Council approval, is proposing to widen and include shoulder improvements to East Tehachapi Boulevard between Bailey Court and the Pilot Travel Center. Traffic on this road is usually that of vehicles traveling through the City limits to other outlying areas of Tehachapi. Shoulders and widening of this road provide greater safety for pedestrians and drivers alike. Our initial estimate of this work is \$478,950.00. The proposed resolution commits the City to support this project including the associated matching funds of \$54,935.57. This is one of two projects where we are pursuing CMAQ funding. All federal projects require an 11.47% shared cost commitment.

RECOMMENDATION:

ADOPT RESOLUTION, AUTHORIZING THE FILING OF AN APPLICATION FOR CONGESTION MITIGATION AND AIR QUALITY PROGRAM FUNDING AND COMMITTING THE NECESSARY LOCAL MATCH AND STATING THE ASSURANCE TO COMPLETE THE PROJECT.

RESOLUTION NO. 24-25

AUTHORIZING THE FILING OF AN APPLICATION FOR CONGESTION MITIGATION AND AIR QUALITY PROGRAM FUNDING AND COMMITTING THE NECESSARY LOCAL MATCH AND STATING THE ASSURANCE TO COMPLETE THE PROJECT

The City of Tehachapi (herein referred to as APPLICANT) is submitting an application to the Kern Council of Governments (Kern COG) for up to \$478,950.00 in funding from the Congestion Mitigation and Air Quality (CMAQ) program to widen and include shoulder improvements to East Tehachapi Boulevard between Bailey Court and the Pilot Travel Center (herein referred to as PROJECT); and

APPLICANT has the financial capacity to complete, operate and maintain the project; and

APPLICANT will ensure that funds required from other sources will be reasonably expected to be available on the time frame needed to carry out the project; and

APPLICANT is authorized to execute and file an application for funding the PROJECT under the CMAQ; and

APPLICANT, by adopting this resolution, does hereby state that:

1. APPLICANT will provide necessary local matching funds; and
2. APPLICANT understands that the CMAQ funds for the Project are fixed at the approved programmed amount, and that any cost increases must be funded by the APPLICANT from other funds, and that APPLICANT does not expect any cost increases to be funded with additional CMAQ funding; and
3. APPLICANT understands the funding deadlines associated with these funds and will comply with the program implementation procedures described in the Kern COG Project Delivery Policies and Procedures manual; and
4. PROJECT will be implemented as described in the complete application and in this resolution and, if approved, for the amount programmed in the FTIP; and
5. APPLICANT and the PROJECT will comply with the requirements as set forth in the program; and

APPLICANT authorizes its Executive Director, General Manager, or designee to execute and file an application with Kern COG for CMAQ funding for the PROJECT as referenced in this resolution.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Tehachapi on the 16th day of June 2025 by the following vote:

AYES: POGON-CORD, PAUER, CHUNG, DAVIES

NOES: NONE

ABSENT: SMITH

ABSTAIN: NONE


JOAN POGON-CORD, Mayor of the
City of Tehachapi, California

ATTEST:


TORI MARSH, CMC, City Clerk of the City of
Tehachapi, California

I hereby certify that the foregoing Resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a regular meeting thereof held on the 16th day of June 2025.


TORI MARSH, CMC, City Clerk of the City of
Tehachapi, California

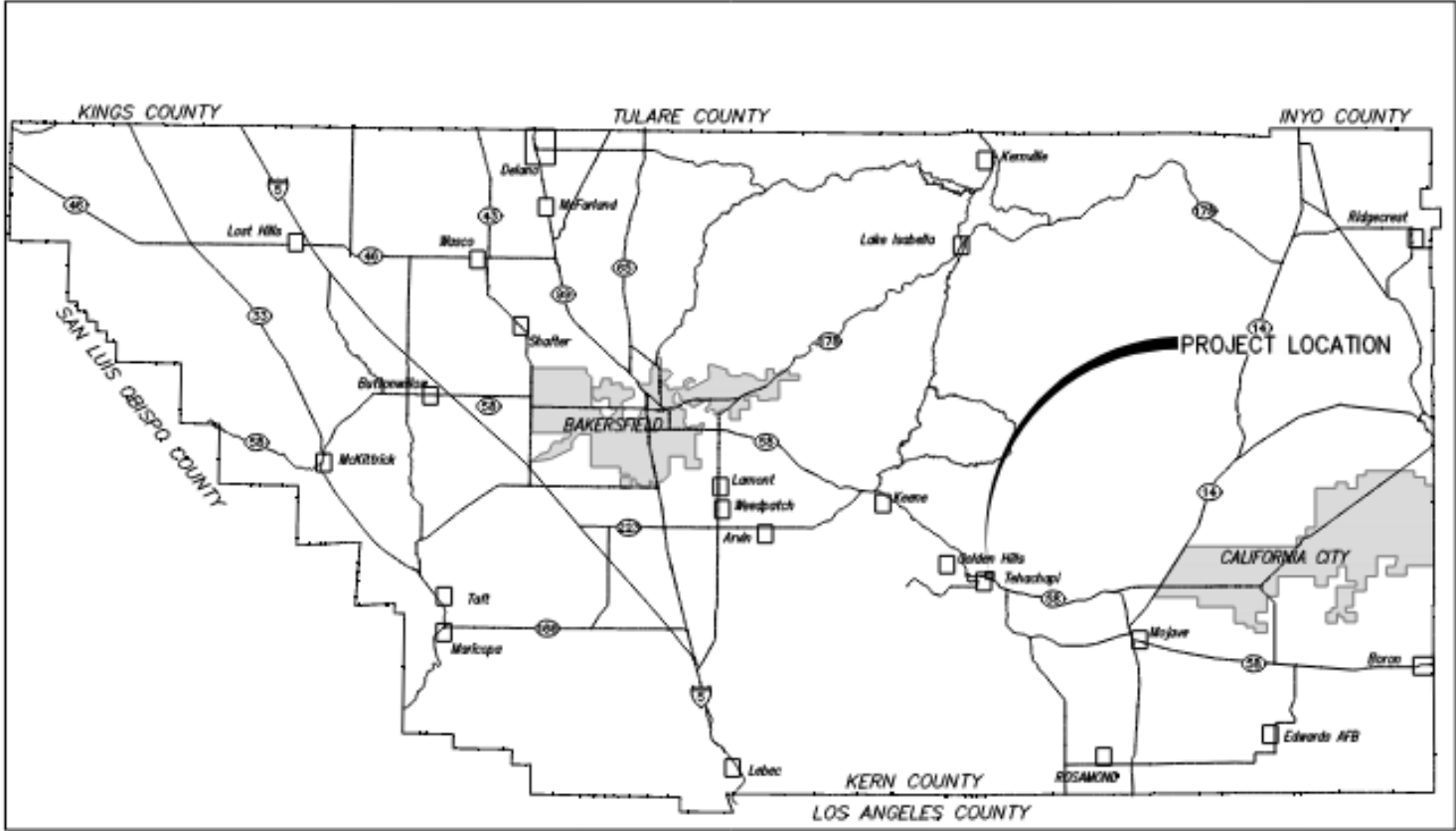
E Tehachapi Blvd - Widening and Shoulder Improvements

Pursue CMAQ funding to widen and add shoulder improvements to the south side of East Tehachapi Blvd from Bailey Road to the Pilot Travel Center.




APPENDIX B

VICINITY AND LOCATION MAP



VICINITY MAP
NOT TO SCALE



 www.provostandpritchard.com	TEHACHAPI BLVD SHOULDER IMPROVEMENTS		DESIGN ENGINEER: RMB
	CITY OF TEHACHAPI KERN COUNTY		DATE: 7/16/25
	VICINITY MAP		JOB NO: 223325002
			1 OF 1



<div>PROVOST & PRITCHARD</div> <div>www.provostandpritchard.com</div>	TEHACHAPI BLVD SHOULDER IMPROVEMENTS		DESIGN ENGINEER:
	CITY OF TEHACHAPI		RMB
	KERN COUNTY		DATE: 7/16/25
	PROJECT AREA		JOB NO: 223325002
			1 OF 1

APPENDIX C

PROJECT BACKGROUND AND JUSTIFICATION

PROJECT BACKGROUND AND JUSTIFICATION

The City of Tehachapi is proposing the addition of a 6-foot paved shoulder along Tehachapi Boulevard, a key roadway segment starting 1000' east of Bailey Court and continuing until approximately 800' west of E Steuber Road and a Class II bike lane along Tehachapi Boulevard, between Bailey Court and E Steuber Road to improve safety, expand transportation options, and promote non-motorized travel. This corridor currently lacks adequate space for cyclists, which limits the use of active transportation and creates conflicts between non-motorized users and motor vehicles. The purpose of this project is to provide a safer, more accessible route for all roadway users and to support the City's long-term goals for multimodal connectivity, safety, and sustainability.

The City has worked to improve its active transportation infrastructure, with a focus on closing gaps in the bike and pedestrian network. This project builds on that momentum by connecting to the existing separated bike path on the northern side of Tehachapi Boulevard providing seamless access between residential areas, commercial centers, and other amenities. Although there have been no reported accidents within the project corridor over the last five years, as confirmed by the TIMS (Transportation Injury Mapping System), the narrow roadway shoulders and lack of dedicated bike facilities pose an increasing risk as population and travel demand grow.

Safety is a core driver of this project. The proposed improvements will provide physical separation between cyclists and vehicle traffic, reducing the risk of collisions and enhancing visibility. The wider shoulders will also improve conditions for vehicles and provide emergency space for disabled vehicles, further contributing to overall corridor safety.

In addition to safety benefits, the project supports regional and state air quality goals. By providing safe infrastructure for cycling, the City aims to reduce dependency on motor vehicles for short trips. Encouraging mode shift to active transportation will contribute to lower vehicle miles traveled (VMT) and associated reductions in greenhouse gas and particulate emissions—aligning with CMAQ program objectives and the San Joaquin Valley Air Pollution Control District's efforts to improve air quality. Additionally, paving the currently unpaved shoulder on Tehachapi Avenue will reduce dust generation, further supporting regional dust mitigation efforts and contributing to improved air quality.

Overall, this project addresses a critical infrastructure gap, supports community mobility, enhances safety for all users, and aligns with the City of Tehachapi's adopted transportation goals and broader sustainability commitments. It represents a cost-effective, community-driven solution to improve transportation equity and air quality while advancing regional connectivity.

APPENDIX D

COST ESTIMATE

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

CITY OF TEHACHAPI TEHACHAPI BOULEVARD - BAILEY/PILOT SHOULDER PROJECT June 9, 2025

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
1	Mobilization/demobilization, bonds & insurance	1	LS	\$ 60,000	\$ 60,000
2	Traffic Control	1	LS	\$ 62,000	\$ 62,000
3	Class II Aggregate Base	645	TON	\$ 55	\$ 35,475
4	Hot Mix Asphalt 4"	333	TON	\$ 155	\$ 51,654
5	Roadway Excavation & Subgrade Prep	956	CY	\$ 60	\$ 57,333
6	Saw Cut	2,150	LF	\$ 4	\$ 8,600
7	Manhole raise to Grade	4	EA	\$ 2,500	\$ 10,000
TOTAL BASE BID:					\$ 285,062
Contingency (15%)					\$ 42,759
TOTAL CONSTRUCTION COST:					\$ 327,821
Engineering (25%)					\$ 81,955
Right of Way					\$ 20,000
Construction Engineering (15%)					\$ 49,173
Total Project Cost					\$ 478,950

APPENDIX E

EMISSIONS BENEFIT & COST EFFECTIVENESS

Methods to Find the Cost-Effectiveness of Funding Air Quality Projects

*For Evaluating
Motor Vehicle Registration Fee Projects
and
Congestion Mitigation and
Air Quality Improvement (CMAQ) Projects*

May 2005

California Environmental Protection Agency



Air Resources Board



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:

Funding dollars

Number of operating days per year

Average length of bicycle trips

Average daily traffic volume on roadway parallel to bicycle project

City population

Project class (1 or 2)

Types of activity centers in the vicinity of the bicycle project

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. \geq 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 \leq 12,000 vehicles per day	\leq 1 mile	.0019	.0104
		>1 & \leq 2 miles	.0029	.0155
		$>$ 2 miles	.0038	.0207
Class 1 (bike path) & Class 2 (bike lane)	12,000 < ADT \leq 24,000 vehicles per day	\leq 1 mile	.0014	.0073
		>1 & \leq 2 miles	.0020	.0109
		$>$ 2 miles	.0027	.0145
Class 2 bike lane	24,000 < ADT \leq 30,000 vehicles per day Maximum is 30,000	\leq 1 mile	.0010	.0052
		>1 & \leq 2 miles	.0014	.0078
		$>$ 2 miles	.0019	.0104

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)
	Within 1/2 mile	Within 1/4 mile
Three (3)	.0005	.001
More than 3 but less than 7	.001	.002
7 or more	.0015	.003

Emission Factor Inputs for Auto Travel

	Default	Units	Default	Units
	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	"

For average auto emission factors, see Table 3. 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**

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

trips/year

$$\text{Annual Auto VMT Reduced} = (\text{Auto Trips}) * (L)$$

miles/year

$$\text{Annual Emission Reductions (ROG, NOx, and PM10)} =$$

lbs./year

$$\begin{aligned} & [(\text{Annual Auto Trips Reduced}) * (\text{Auto Trip End Factor}) \\ & + (\text{Annual Auto VMT Reduced}) * (\text{Auto VMT Factor})] / 454 \end{aligned}$$

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

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

Cost-Effectiveness of

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

dollars/lb.

Note: The Federal Highway Administration requests that emission reductions from CMAQ projects be reported 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.

Annual Automobile VMT Reduced =

$$(D) * (ADT) * (A+C) * (L)$$

Where,

D = days of use per year

ADT = annual average two-way daily vehicular traffic on parallel road (project-specific data, with a maximum of 30,000)

A = adjustment factor (table lookup value)

C = activity center credit (table lookup value)

L = walking trip length (1.0 miles/trip in one direction)

Annual VMT Reduction:

$$(300) * (4768) * (0.0019 + .0005) * (2) = 6,866$$

BICYCLE FACILITIES

County: Kern

Federal Number:

Approval Date:

Caltrans DIST-EA: 9

Short Description:

Project Scope: Class II Bike Lane, 3700' in length

Project Sponsor: City of Tehachapi

Private Agency: No

CMAQ Funding: \$424,015 **Annual Auto Trips Reduced:** 3,433

Local Match: \$54,936 **Annual Auto VMT Reduced:** 6,866

Capital Recovery Factor: 0.07

Project Analysis Period: 20 years

Days (D): 300 days of use/year

Average Daily Traffic (ADT): 4,768 trips per day

Adjustment (A) on ADT: 0.0019

**Credit (C) for
Activity Centers near project:** 0.0005

***EMISSION
FACTORS:***

Auto Trip End Factor

Auto VMT Factor

ROG : 0.461 *grams per trip*

0.051 *grams per mile*

NO_x : 0.275

0.056

PM_{2.5} : 0.002

0.034

***EMISSION
REDUCTIONS:***

Pounds per Year

Kilograms per Day

ROG: 4

0

NO_x: 3

0

PM_{2.5}: 1

0

Total: 8

0

COST-EFFECTIVENESS OF:

CMAQ Funds: \$3,695.21 per pound \$7,390,417 per ton

All Funding Sources: \$4,173.96 per pound \$8,347,930 per ton

Project Description

Widen road and create shoulder with bike lane on Tehachapi Blvd between Bailey Court and the Pilot travel center.

Inputs to Calculate Cost-Effectiveness:

Total Project Cost	478,950	54936
CMAQ Dollars	424,014	
Effectiveness Period (Life):	20 yrs	
Days of Use/year (D):	365 days	
Length (L) of Curb and Gutter:	0.4356 mile	Centerline miles
Annual Average Daily Traffic (ADT):	4768 vpd	

Emissions Factors (g/vehicle mile from the SJV Amended 2003 PM-10 Plan & SJV Air District):

	Before Emission Factor	After Emission Factor
PM10 Factor	907.18	1.58

← 1.58 for paved local roads
4.54 for rural local roads

Annual Emission Reductions (PM10 in pounds/year)

Daily PM10 Reductions (kg/day)	=	1.49	(After Factor / 2)*(ADT *L)*0.91*(1,000 g / kg)
Annual Emission Reductions (lbs/yr)	=	1199.0	Reductions (kg/day)* 2.2 lbs/kg* 365 days/year

Capital Recovery Factor (CRF)

$$= \frac{(1+i)^n \times i}{(1+i)^n - 1} \quad \text{where } i = \text{Discount Rate (3\%)} \text{ and } n = \text{Project Life (20 years)}$$

So, the capital recovery factor = 0.07

Cost - Effectiveness of Funding Dollars

$$= (\text{CRF} \times \text{Funding}) / (\text{Annual PM10 Reductions})$$

$$= 24.755$$

Thus,

$$\text{Calculated Cost - Effectiveness} = 24.76$$

APPENDIX F

LIVABILITY AND SAFETY

LIVABILITY AND SAFETY

15(1) WILL ENHANCE OR REDUCE THE AVERAGE COST OF USER MOBILITY THROUGH THE CREATION OF MORE CONVENIENT TRANSPORTATION OPTIONS FOR TRAVELERS.

The proposed project in Tehachapi will reduce the average cost of user mobility by providing a safer and more convenient transportation option for cyclists, and vehicle users. By adding a 6' shoulder and a buffered Class II bike lane, users will be able to travel more efficiently and safely along areas that were previously lacking adequate infrastructure. The creation of the bike lane will facilitate non-motorized transportation, offering a low-cost mobility alternative to driving, which will reduce fuel for users who choose cycling as a mode of travel. Additionally, with better access to the existing separated bike path on the North side of Tehachapi Blvd, residents and visitors can connect more easily to other parts of Tehachapi, thereby encouraging walking and biking for short trips. This can lower travel costs for residents, especially those in lower-income households, who may rely on alternatives to personal vehicles.

15(2) WILL IMPROVE EXISTING TRANSPORTATION CHOICES BY ENHANCING POINTS OF MODAL CONNECTIVITY, INCREASING THE NUMBER OF MODES ACCOMMODATED ON EXISTING ASSETS, OR REDUCING CONGESTION ON EXISTING MODAL ASSETS.

The project will significantly improve transportation choices in Tehachapi by enhancing the connectivity of existing transportation assets. By adding a bike lane that connects to the separated bike path system, the project will increase the number of active transportation options available to users, particularly cyclists. This will help address the gap in multimodal connectivity, which currently limits the ability of residents to travel safely by bike around the city. Moreover, the improved shoulder will benefit all travelers, including vehicles, by providing more room for safe passing and reducing the risk of accidents. By offering safer routes for cyclists, the project may also reduce the congestion on vehicular roads, especially during peak hours, as more people may opt for non-motorized travel. As such, the project not only enhances accessibility but also promotes the use of environmentally friendly transportation modes.

15(3) WILL IMPROVE TRAVEL BETWEEN RESIDENTIAL AREAS AND COMMERCIAL CENTERS AND JOBS.

One of the primary benefits of the project is its ability to improve travel to Tehachapi's residential areas and commercial centers. Many residents in the city rely on their vehicles for daily commuting and errands, but the addition of the bike lane will offer an alternative for residents who prefer cycling. By providing safer, more accessible routes, the project helps to integrate residential neighborhoods with commercial areas. This will enhance the overall mobility of the population, making it easier for residents to access jobs, services, and amenities without solely relying on cars. Additionally, for those who do use cars, the project will alleviate some of the traffic congestion in these areas by providing safer alternatives for non-motorized users, reducing pressure on existing infrastructure.

15(4) WILL IMPROVE ACCESSIBILITY AND TRANSPORTATION SERVICES FOR ECONOMICALLY DISADVANTAGED POPULATIONS, NON-DRIVERS, SENIOR CITIZENS, AND PERSONS WITH DISABILITIES, OR MAKE GOODS, COMMODITIES, AND SERVICES MORE READILY AVAILABLE TO THESE GROUPS.

This project will significantly improve transportation services for economically disadvantaged populations, non-drivers, senior citizens, and persons with disabilities. Tehachapi, like many smaller cities, has a population that may not have access to private vehicles, especially among seniors and lower-income residents. The addition of the bike lane and shoulder area will make it safer and easier for these groups to travel by foot or bicycle, connecting them to key areas of the city, including commercial centers and public

services. Furthermore, bike lanes and wider shoulders provide a safer environment for pedestrians and cyclists with disabilities. Ultimately, this project contributes to improving the equity of transportation options in Tehachapi.

15(5) IS THE EXISTING ACCIDENT RATE HIGHER THAN THE AVERAGE RATE FOR A SIMILAR FACILITY, AND DOES THE PROJECT REDUCE THE ACCIDENT RATE TO THE AVERAGE RATE OR LOWER? YES OR NO AND IF YES, PROVIDE RATES AND SUPPORTING DOCUMENTATION.

Yes, the project will help reduce the accident rate in Tehachapi. The existing roadways, especially in areas with minimal shoulder space, pose a risk to cyclists, pedestrians, and vehicle drivers. By adding a 6-foot shoulder and dedicated bike lanes, the project will provide a safer space for non-motorized users, minimizing potential conflicts with vehicles. These improvements will reduce the likelihood of collisions between cyclists, pedestrians, and motor vehicles by clearly delineating travel space for each mode. Although the California Office of Traffic Safety has noted elevated crash rates in Tehachapi overall, based on data from the TIMS (Transportation Injury Mapping System), there have not been any reported accidents within the project area over the past five years. The proposed improvements will help maintain this strong safety record while also accommodating future increases in active transportation use. Enhancing safety features now ensures continued protection for all road users and supports a proactive approach to accident prevention.

15(6) IS THE EXISTING FATALITY RATE HIGHER THAN THE AVERAGE RATE FOR A SIMILAR FACILITY, AND DOES THE PROJECT REDUCE THE FATALITY RATE TO THE AVERAGE RATE OR LOWER? YES OR NO AND IF YES, PROVIDE RATES AND SUPPORTING DOCUMENTATION.

Yes, the project will help reduce the fatality rate in the area. Fatalities are often more likely in areas where cyclists and pedestrians are forced to share the same space as motor vehicles without dedicated lanes or shoulders. This project will reduce the risk of fatal accidents by providing a safer space for non-motorized travelers. According to recent crash data from the California Highway Patrol, Tehachapi has seen fatalities and serious injuries in areas lacking bike lanes. By adding dedicated space for cyclists and improving shoulder widths, the project will help to lower the fatality rate to or below the average for similar rural facilities. The design of the bike lane and shoulder area provides greater protection for vulnerable users, which is expected to directly contribute to the reduction of fatal accidents and injuries.

APPENDIX G

LEVEL OF SERVICE

BICYCLE AND PEDESTRIAN LEVEL OF SERVICE

EXISTING LEVEL OF SERVICE WITHOUT PROJECT

BLOS and PLOS for the following road segment

Lanes per direction:	1
Outside lane width:	12 ft
Paved shoulder/bike lane/marked parking width:	2 ft
Bidirectional ADT traffic volume:	4768 (veh/day)
Posted speed limit:	45 mph
Heavy vehicle percentage:	3.4%
FHWA's pavement condition rating:	4
% of segment with occupied parking:	0%
% of segment with sidewalks:	0.13%
Sidewalk width:	5 ft
Sidewalk buffer/parkway width:	2 ft

	Score	Level-of-service	Compatibility Level
BLOS:	3.62	D (3.51-4.50)	Moderately Low
PLOS:	4.17	D (3.51-4.50)	Moderately Low

LEVEL OF SERVICE WITH PROJECT

BLOS and PLOS for the following road segment

Lanes per direction:	1
Outside lane width:	12 ft
Paved shoulder/bike lane/marked parking width:	8 ft
Bidirectional ADT traffic volume:	4768 (veh/day)
Posted speed limit:	45 mph
Heavy vehicle percentage:	3.4%
FHWA's pavement condition rating:	4
% of segment with occupied parking:	0%
% of segment with sidewalks:	0.13%
Sidewalk width:	5 ft
Sidewalk buffer/parkway width:	2 ft

	Score	Level-of-service	Compatibility Level
BLOS:	0.98	A (below 1.50)	Extremely High
PLOS:	3.73	D (3.51-4.50)	Moderately Low

TABLE 2

Generalized Annual Average Daily Volumes for Florida's
Transitioning Areas and
Areas Over 5,000 Not In Urbanized Areas¹

January 2020

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	14,400	16,200	**
4	Divided	*	34,000	35,500	**
6	Divided	*	52,100	53,500	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	6,500	13,300	14,200
4	Divided	*	9,900	28,800	31,600
6	Divided	*	16,000	44,900	47,600

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
-	-	-	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE²

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage

	B	C	D	E
0-49%	*	2,600	6,100	19,500
50-84%	1,900	5,500	18,400	>19,500
85-100%	7,500	19,500	>19,500	**

PEDESTRIAN MODE²

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,400
50-84%	*	1,600	8,600	15,600
85-100%	3,800	10,500	17,100	>19,500

BUS MODE (Scheduled Fixed Route)³

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
4	45,100	59,000	70,300	72,600
6	65,300	86,600	104,100	108,900
8	85,900	114,500	138,100	145,300
10	101,600	135,600	161,900	181,800

Freeway Adjustments

Auxiliary Lanes	Ramp
Present in Both Directions	Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	11,300	17,300	23,400	31,600
4	Divided	34,600	49,900	63,000	71,700
6	Divided	51,700	74,800	94,600	107,400

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

¹Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

²Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

³Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable le for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Implementation Office
<https://www.fdot.gov/planning/systems/>

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 Systems Implementation Office
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Counts Unlimited, Inc

City of Tehachapi
Tehachapi Boulevard
W/ Stueber Road
24 Hour Directional Classification Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

THP003
Site Code: 999-25561

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/28/25	0	24	1	0	0	0	0	0	4	0	0	0	0	29
01:00	0	17	1	0	0	0	0	0	0	0	0	0	0	18
02:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
03:00	0	25	1	0	0	0	0	0	1	0	0	0	0	27
04:00	0	60	8	1	0	0	0	0	1	0	0	0	0	70
05:00	0	111	43	0	0	2	0	0	7	0	0	0	0	163
06:00	1	190	68	2	6	1	1	0	0	0	0	0	0	269
07:00	1	223	82	1	4	3	4	2	0	0	0	0	0	320
08:00	0	152	86	2	4	5	2	0	4	0	0	0	0	255
09:00	0	128	80	2	4	3	0	0	4	0	0	0	0	221
10:00	0	175	76	1	8	1	1	1	2	0	0	0	0	265
11:00	4	173	85	0	7	5	0	1	2	0	0	0	0	277
12 PM	1	191	83	2	3	1	0	1	5	0	0	0	0	287
13:00	4	200	93	2	3	4	0	0	2	0	0	0	0	308
14:00	3	207	71	4	5	5	0	1	0	0	0	0	0	296
15:00	3	253	119	0	4	4	1	1	2	0	0	0	0	387
16:00	3	283	93	0	1	0	2	0	0	0	0	0	0	382
17:00	5	270	92	2	2	0	0	0	3	0	0	0	0	374
18:00	2	182	62	1	4	0	0	0	0	0	0	0	0	251
19:00	0	152	40	0	4	0	0	0	1	0	0	0	0	197
20:00	0	133	23	0	3	2	1	0	0	0	0	0	0	162
21:00	0	71	5	1	1	1	0	0	0	0	0	0	0	79
22:00	0	64	2	0	0	0	0	0	4	0	0	0	0	70
23:00	0	51	1	0	0	0	0	0	0	0	0	0	0	52
Total	27	3343	1216	21	63	37	12	7	42	0	0	0	0	4768
Percent	0.6%	70.1%	25.5%	0.4%	1.3%	0.8%	0.3%	0.1%	0.9%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	07:00	08:00	06:00	10:00	08:00	07:00	07:00	05:00					07:00
Vol.	4	223	86	2	8	5	4	2	7					320
PM Peak	17:00	16:00	15:00	14:00	14:00	14:00	16:00	12:00	12:00					15:00
Vol.	5	283	119	4	5	5	2	1	5					387
Grand Total	27	3343	1216	21	63	37	12	7	42	0	0	0	0	4768
Percent	0.6%	70.1%	25.5%	0.4%	1.3%	0.8%	0.3%	0.1%	0.9%	0.0%	0.0%	0.0%	0.0%	