

City of Bakersfield

Bicycle & Pedestrian Safety Report

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Attachments

- A. Bicycle and Pedestrian Fatality Location Map
- B. Bicycle and Pedestrian Grant Administration

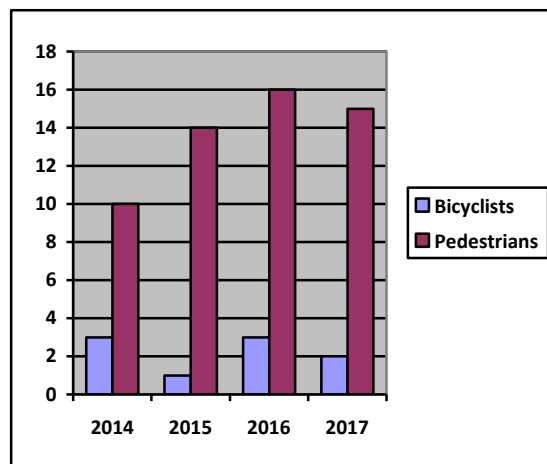
1. Introduction

The City of Bakersfield is committed to providing a safe multi-modal transportation network, especially conducive to walking and bicycling in the public right-of-way. This report summarizes Bakersfield's recent fatality history of pedestrians and bicyclists; reviews recent and upcoming projects and activities; and explores lessons learned in order to increase safety moving forward.

2. Fatality History

The data below represents pedestrian and bicyclist fatalities that occurred during calendar years 2014 through 2017 (August) in Bakersfield. The data was obtained from the Bakersfield Police Department. Collectively, there have been 64 fatalities during this period. This amount bifurcates into 55 pedestrian and nine bicyclist fatalities, which is described below by calendar year. In addition, a map of fatality locations can be found as Attachment A.

Figure 1: Fatalities by Calendar Year



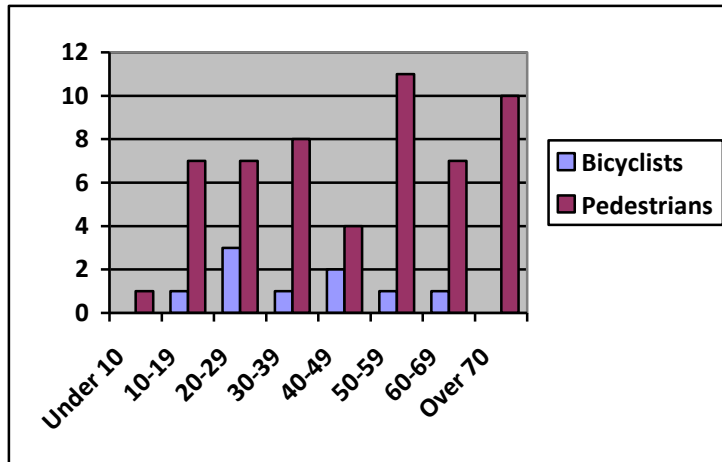
2.1. Gender

The gender of pedestrian and bicyclist fatalities include 46 males (72%) and 18 females (28%). Pedestrian fatalities by gender include 39 males (71%) and 16 females (29%). Bicyclist fatalities by gender include seven males (78%) and two females (22%).

2.2. Age

The age of pedestrian and bicyclist fatalities ranges from four years old through 89 years old. The average age is 45 years old and the median age is 46 years old. The average age of pedestrian fatalities is 46 years old and median age is 49 years old. In addition, the average age of bicyclist fatalities is 36 years old and median age is 30.5 years old. The average age range is described below.

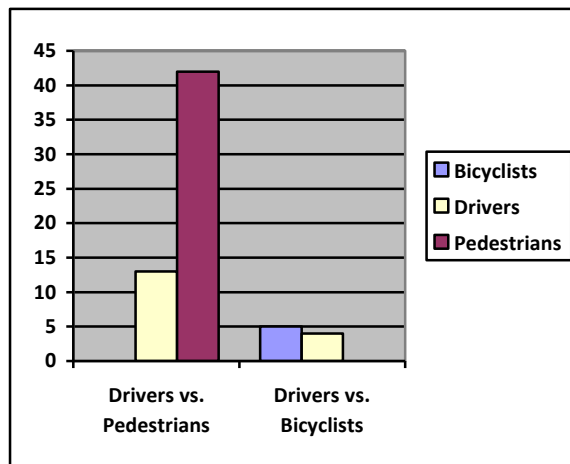
Figure 2: Fatalities by Age



2.3. Party at Fault

The party at fault includes 47 pedestrians and bicyclists (73%) and 17 drivers (27%). Fatalities by party at fault include 42 pedestrians (76%) and 13 drivers (24%). In addition, fatalities by party at fault include five bicyclists (56%) and four drivers (44%). The fatalities by party at fault are described below.

Figure 3: Fatalities by Party at Fault



2.4. Primary Factor

The primary factor of these fatalities spans across 21 different California Vehicle Code (CVC) violations issued by the Bakersfield Police Department. Below you will find the most common CVC violations, which have a frequency of at least occurrences.

Figure 4: Fatalities by Primary Factor

CVC	Description	Frequency
21954(a)	Every pedestrian upon a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway so near as to constitute an immediate hazard.	37
21802(a)	The driver of any vehicle approaching a stop sign at the entrance to, or within, an intersection shall stop as required by Section 22450. The driver shall then yield the right-of-way to any vehicles which have approached from another highway, or which are approaching so closely as to constitute an immediate hazard, and shall continue to yield the right-of-way to those vehicles until he or she can proceed with reasonable safety.	4
22107	No person shall turn a vehicle from a direct course or move right or left upon a roadway until such movement can be made with reasonable safety and then only after the giving of an appropriate signal in the manner provided in this chapter in the event any other vehicle may be affected by the movement.	3
21456(b)	Flashing or steady "DONT WALK" or "WAIT" or approved "Upraised Hand" symbol. No pedestrian shall start to cross the roadway in the direction of the signal, but any pedestrian who has partially completed crossing shall proceed to a sidewalk or safety zone or otherwise leave the roadway while the "WAIT" or "DONT WALK" or approved "Upraised Hand" symbol is showing.	2
21750(a)	The driver of a vehicle overtaking another vehicle proceeding in the same direction shall pass to the left at a safe distance without interfering with the safe operation of the overtaken vehicle, subject to the limitations and exceptions set forth in this article.	2

3. Recent Bicycle Safety Projects and Activities

The City has recently undertaken various projects and activities that promote bicycle safety. These projects and activities are described below.

3.1. Bikeways

Metropolitan Bakersfield has approximately 260 miles of existing bikeways. This network includes approximately 32 miles of shared-use paths, 149 miles of bicycle lanes, and more than 44 miles of bicycle routes, with and without shared lane markings.

The City continuously strives to make infrastructure improvements and provide routine maintenance of bicycle facilities to ensure a comfortable and attractive bicycling environment. Since the adoption of the 2013 Bicycle Transportation Plan, the City has aggressively pursued several infrastructure improvements to make bicycling safer and more convenient. For example, the City has completed and/or received funding to construct over 35 miles of Class II and III bike lanes and routes throughout Bakersfield.

These infrastructure improvements equate to roughly a 24.7% increase in new mileage within the bicycle transportation network.

Caltrans' Local Roadway Safety Manual identifies safety countermeasures that address collisions. One of the countermeasures is "install bike lanes." Caltrans states this countermeasure reduces up to 35% of bicycle collisions.

3.2. Traffic Signal Bicycle Detection

Bakersfield is the only area in Kern County that utilizes traffic signal bicycle detection. Traffic signal bicycle detection reduces delay for bicycle travel and increases convenience and safety of bicycling. Bicycle detection occurs by use of push buttons or by automated means such as infrared detectors, in-pavement loops, or video. Detection of bicycles by traffic signals is important at cross streets, left-turn-only lanes, and other travel lanes where cyclists may encounter challenging crossings or are unable to trigger a green light.

3.3. Advocacy Groups

The City collaborates with multiple advocacy groups to promote bicycle and pedestrian safety. For example, Bike Bakersfield, a local non-profit organization and bicycle advocacy group, provides the community with bicycle education to promote safe bicycling. The City recently provided Bike Bakersfield with \$10,000 in grant funds to provide several community outreach and bicycle education events. The goal of this agency is to increase the public's awareness of bicycle and pedestrian safety, as well as to educate the community on the benefits of bicycling for health and transportation. The events are comprised of lectures, interactive bicycle skills courses, repair stations, and helmet fitting seminars. These events are open to bicyclists of all ages and skill levels at no cost. Bike Bakersfield also hosts bike education lectures at local elementary, middle, and high schools throughout the school year.

More recently, City staff has collaborated with California Walks, a nonprofit organization dedicated to creating healthy, safe, and walkable communities. For example, the City and other local agencies have partnered with California Walks and Berkley SafeTREC to hold a workshop aimed at building community education and capacity to improve pedestrian and bicycle safety. Local agencies, including City staff, joined residents to learn and identify ideas and best practices for making walking and biking safer in the community.

Finally, the City holds monthly Kern County Bicycle and Pedestrian Safety Coalition meetings at City Hall North. This coalition is comprised of stakeholders including, but not limited to, the City of Bakersfield, County of Kern, Bike Bakersfield, Golden Empire Transit (GET), and Kern Council of Governments. The coalition discusses a variety of bicycle and pedestrian related topics, which is primarily based upon the geographic boundary of the Bakersfield Metropolitan area.

3.4. Build-A-Bike Program

The City's Recreation and Parks Department offers a Build-A-Bike Program for children ages nine through 13 several days per week at the Dr. Martin Luther King Jr. Community Center. The program offers a hands-on education where children learn how to build their own bikes, as well as the fundamentals of bicycle repair, maintenance, and safety. To operate the program, the Bakersfield Police Department donates unclaimed stolen bicycles; Snider's Cyclery provides discounted parts and materials; and Bike Bakersfield provides an instructor. Participants are also able to practice their bicycling skills by participating in bike rodeos. Those who successfully complete the program may keep their customized bike. Finally, children receive safety equipment, such as bicycle locks and helmets.

3.5. Mobile Phone Application

The Bakersfield mobile application allows users to report service-related issues from their cell phones. These issues include road hazards such as traffic signal and street light outages, potholes, and other conditions that impede safety. Issues can be reported through photos, video, audio or email messages. The application uses geo-tagging technology to provide the location, simplifying the reporting process for users while increasing the reliability of the report location for the service crews.

3.6. Outreach

City staff encourages safety through conducting community outreach to solicit ideas on potential bicycle and pedestrian related projects. Outreach ensures City staff is pursuing potential projects that align with the community's needs. For example, just within the last calendar year, City staff collaborated with Bike Bakersfield, Downtown Business Association, Bakersfield Young Professionals, Public Health Institute, Kern County Public Health Department, Kern County Bicycle and Pedestrian Safety Coalition, Greater Bakersfield Chamber of Commerce, Downtown Bakersfield Development Corporation, Golden Empire Transit (GET), and Bakersfield High School District. City staff also attended and presented at events including, but not limited to, a Full Moon Ride, Bike Festival, young professional luncheon, and various board meetings.

3.7. Bakersfield Police Department Programs

The Bakersfield Police Department (BPD) has offered several programs that promote bicycle safety in the community. Bicycle rodeos are provided to various schools, local organizations, and at department functions, such as National Night Out, where attendees go through a practical road course designed to promote roadway safety. Bicycle helmets are provided to those in need during bicycle rodeos. Bicycle and pedestrian safety assemblies are offered at local elementary, middle, and high schools as a means to promote safety awareness.

Over a dozen civilian employees and officers who assist with bicycle safety programs have attended a Traffic Safety 101 course, which is taught by a League of American Bicyclists Instructor. In addition, some officers have also attended the Lifesavers National Conference on Highway Safety Priorities and POST certified Accident Investigation courses. Finally, the BPD works with the Office of Traffic Safety to obtain grant funds, which helps provide funding for these programs and activities.

4. Recent Pedestrian Safety Projects and Activities

The City has recently undertaken various projects and activities that promote pedestrian safety. These projects and activities are described below.

4.1. Sidewalk Construction

Most of the public right-of-way has sidewalks. Areas that typically lack sidewalks tend to be older neighborhoods and eligible for federal Community Development Block Grant (CDBG) Program funds. Since 2014, the City has funded over \$8,806,000 in CDBG funds for pedestrian improvements. These projects are described below.

Figure 5: CDBG-Funded Sidewalk Projects

Project	Funded	Fiscal Year
La France/El Toro Area Curb, Gutter, Sidewalk	\$273,441	2017-18
Union-Brundage Area Curb, Gutter, Sidewalk, Drainage	\$602,027	2017-18
Oleander Area Curb, Gutter, Sidewalk	\$301,212	2017-18
Baker/Old Town Kern Curb, Gutter, Sidewalk	\$301,212	2017-18
El Toro Area Curb, Gutter, Sidewalk	\$500,000	2016-17
Union/Brundage Area Curb, Gutter, Sidewalk, Drainage	\$520,580	2016-17
Oleander Area Curb, Gutter, Sidewalk	\$300,000	2016-17
Castro Area Curb, Gutter, Sidewalk	\$300,000	2016-17
P Area Curb, Gutter, Sidewalk	\$142,032	2016-17
Madison Area, Curb, Gutter, Sidewalk	\$300,000	2015-16
Oleander Area Curb, Gutter, Sidewalk	\$500,000	2015-16
E California Area Curb, Gutter, Sidewalk	\$365,272	2015-16
Union/Brundage Area Curb, Gutter, Sidewalk, Drainage	\$605,860	2015-16
E California Area Curb, Gutter, Sidewalk	\$853,693	2014-15
Lake Street Area Curb, Gutter, Sidewalk	\$601,593	2014-15
E California Area Curb, Gutter, Sidewalk	\$725,000	2014-15
E Truxtun Area Curb, Gutter, Sidewalk	\$600,000	2014-15
Southeast Area Schools Pedestrian Improvements	\$280,000	2014-15
Union/Brundage Area Curb, Gutter, Sidewalk, Drainage	\$735,016	2014-15

In addition, the City has partnered with Golden Empire Transit (GET) utilizing Transportation Development Act funds to construct sidewalks and access ramps near and adjacent to bus stops throughout Bakersfield. Collectively, the City has received an allocation of \$1,000,000 for these improvements in Fiscal Year (FY) 2015 and 2016. The City also incorporates access ramp improvements within roadway resurfacing and reconstruction projects to improve accessibility to sidewalks at intersections.

4.2. Sidewalk Evaluation

The City has contracted with the firm, Disability Access Consultants (DAC), as part of the City's Americans with Disabilities Act (ADA) Transition Plan. Through this plan, the City has been working towards evaluating aspects of the public right-of-way, including paths of travel, intersections, curb ramps, and sidewalks. DAC examines obstructions caused by street furniture, widths of sidewalks, ramp inclines, and other ADA issues. City staff is currently entering into the next phase of this evaluation, which includes examining approximately 200 miles of high pedestrian/traffic areas near hospitals, schools, parks, commercial centers, and issue-identified areas such as the path of travel to renovated Golden Empire Transit (GET) bus stops.

4.3. Pedestrian Countdown Signal Heads

The City has been proactively installing pedestrian countdown signal heads. A pedestrian countdown signal contains a timer display and counts down the number of seconds left to finish crossing the street. These signals encourage pedestrians to use the push button rather than jaywalk. Over the last five years, the City has successfully obtained over \$492,000 in Caltrans' Highway Safety Improvement Program (HSIP) funds toward construction of these projects. The most recent allocation of HSIP funds will convert the remaining signals citywide into pedestrian countdown signal heads.

Caltrans' Local Roadway Safety Manual identifies safety countermeasures that address collisions. One of the countermeasures is "install pedestrian signal countdown heads." Caltrans states this countermeasure reduces up to 25% of pedestrian and bicycle collisions.

4.4. School Zone Improvements

The City undertakes various activities around schools to promote pedestrian safety before the beginning of each school year. The activities include:

- The Bakersfield Police Department (BPD) increases enforcement in school zones;
- The BPD recently released a public service announcement regarding pedestrian safety. The video can be viewed on BPD's webpage and on social media such as Facebook, Twitter, and YouTube as well;
- The City continuously applies for grants to provide safe routes to school to construct flashing beacons at crosswalks, sidewalks to missing segments, and improve ADA access to curb returns;
- The Public Works Department undertakes maintenance and/or capital projects during the summer in order not to interfere with school;

- The Public Works Department, Solid Waste Division, holds its annual tailgate safety briefing where “back to school” hazards are discussed; and
- The Public Works Department, General Services Division, repaints the “slow school xing” and crosswalks around schools.

4.5. LED Street Light Retrofit

Over the past several years, the City has been retrofitting existing high-pressure sodium street light fixtures with LED fixtures. In most cases, the LED street lights are an equal replacement of the previous streetlights in terms of light measurement. However, LED fixtures reduce glare by providing better directional lighting on streets and sidewalks and improve color rendition on streets and sidewalks. The LED fixtures also shed light along the roadway, increasing visibility in dark spots between street light poles. Research shows this white light provides improved visibility, thereby creating a safer environment for all users of the City's right-of-way. Since 2014, the City has retrofitted over 800 streetlights. This includes retrofits in high traffic areas including Ming Avenue, Gosford/Coffee Road, downtown and Old Town Kern. An additional 225 streetlight LED retrofits are currently underway within the Westchester area and east Bakersfield areas that will be completed by early 2018. As of 2014, LED streetlight fixtures are required for all new development where City-owned streetlights are necessary.

5. Upcoming Bicycle and Pedestrian Safety Projects and Activities

Besides undertaking various safety projects over the last several years, the City currently has multiple upcoming activities as well. These projects and activities are further described below. Finally, please note City staff is continuously exploring additional bicycle and pedestrian safety opportunities.

5.1. Kern Region Active Transportation Plan

The City, in partnership with the Kern Council of Governments and several other jurisdictions, are developing the 2017 Kern Region Active Transportation Plan. The plan promotes walkable and bicycle friendly environments in the cities and unincorporated areas of Kern County. The plan specifically aims to:

- Identify barriers and innovative solutions to encourage walking and bicycling as viable travel modes;
- Develop safe and convenient walking and bicycling networks for people of all ages and abilities;
- Effectively build on recently completed and current active transportation planning efforts;

- Develop walking/bicycling networks supportive of existing and future land uses and projects;
- Develop an implementation strategy with practical and financially feasible projects matched to specific funding opportunities; and
- Create enthusiasm among residents to participate in this effort through a robust and multi-faceted community outreach process.

The City contributed \$30,000 in Rose Foundation grant funds toward creating this plan. In addition, City staff has been highly engaged throughout the development process. The plan will be presented for City Council consideration on November 1, 2017.

5.2. Bicycle and Pedestrian Safety Plan

Under Senate Bill 1 (Road Repair and Accountability Act of 2017), there is an annual allocation of \$25 million for sustainable communities grants to encourage local and regional transportation planning efforts. About half of these funds are allocated by formula to metropolitan planning organizations and the other half available competitively.

The City will submit a grant application to conduct a Bicycle and Pedestrian Safety Plan. The proposed plan would include, but is not limited to, identifying locations that have a high potential for collisions and recommending improvements to said locations. City staff is currently working on a grant application that is due October 20, 2017.

5.3. Friant Kern Canal Multi-Use Path

The City, with the Bureau of Reclamation's approval, is proposing to construct a six-mile shared-use path along the Friant Kern Canal from the Kern River Parkway to Seventh Standard Road. The path increases connectivity to parks, schools, community centers, and major commercial/retail centers. In addition, the proposed path creates a north-south connection to the Kern River Parkway, which is already an existing east-west connection. Essentially, residents could traverse from the northwest to the downtown area (and beyond) almost entirely on a completely separated pathway.

City staff is working with the Bureau of Reclamation on conducting the environmental clearance. In addition, City staff will be submitting an application for a railroad crossing in the near future. These activities are anticipated to be completed by spring 2018. Construction of the project is contingent upon available funds.

Caltrans' Local Roadway Safety Manual identifies safety countermeasures that address collisions. An applicable countermeasure for the project is "install sidewalk/pathway." Caltrans states this countermeasure reduces up to 80% of bicyclist and pedestrian collisions.

5.4. Downtown Bakersfield Bicycle Connectivity Project

The City will receive \$1,367,000 in Caltrans' Active Transportation Program grant funds for the Downtown Bakersfield Bicycle Connectivity Project. The project includes adding 19.05 miles of new Class II bicycle lanes and Class III bicycle routes; installing 80 bicycle parking and storage racks; and establishing a bicycle sharing program with 20 to 25 stations for 100 smart bicycles.

Caltrans' Local Roadway Safety Manual identifies safety countermeasures that address collisions. One of the countermeasures is "install bike lanes." Caltrans states this countermeasure reduces up to 35% of bicycle collisions. Project funds are available beginning July 2019; however, the City may have the ability to access funds sooner.

5.5. Downtown Bakersfield Pedestrian Connectivity Project

The City will receive \$1,032,000 in Caltrans' Active Transportation Program grant funds for the Downtown Bakersfield Pedestrian Connectivity Project. The project closes gaps, provides connections, and encourages pedestrians to use active modes of transportation within the downtown area by adding 128 access ramps, constructing 3,615 linear feet of sidewalks, and improving a pedestrian island and median at Chester Avenue and 22nd Street.

Caltrans' Local Roadway Safety Manual identifies safety countermeasures that address collisions. An applicable countermeasure for the project is "install sidewalk/pathway." Caltrans states this countermeasure reduces up to 80% of pedestrian collisions. In addition, another applicable countermeasure is "install raised medians (refuge islands)." This countermeasure reduces up to 45% of pedestrian collisions. Project funds are available early next calendar year.

5.6. A Street Improvement Project

The City will receive \$1,055,000 in Caltrans' Active Transportation Program grant funds for the A Street Improvement Project. The project includes adding approximately 42,000 square feet of sidewalks, 29 handicap access ramps, and 1,000 lined feet of curb and gutter. The project is located primarily along A Street between Brundage Lane and San Emidio Street.

Caltrans' Local Roadway Safety Manual identifies safety countermeasures that address collisions. An applicable countermeasure for the project is "install sidewalk/pathway." Caltrans states this countermeasure reduces up to 80% of pedestrian collisions. The project should be completed this calendar year.

5.7. Future LED Street Light Retrofit

City staff is currently evaluating opportunities to retrofit the remaining streetlight fixtures in two phases. The first phase involves evaluating the City's ability to utilize Pacific Gas

and Electric's on-bill financing program to begin to retrofit over 1,100 streetlights at City-operated intersections. The second phase is projected to retrofit the remaining 14,000 streetlights. City staff is researching available funding mechanisms to complete the second phase, including an energy efficiency financing program offered through the California Energy Commission.

5.8. Grant Opportunities

The City continuously pursues grant opportunities that support bicycle and pedestrian safety. The City has successfully obtained grants from agencies and corresponding programs that include, but are not limited to:

- Caltrans' Highway Safety Improvement Program;
- Caltrans' Congestion Mitigation and Air Quality Improvement Program;
- Caltrans' Active Transportation Program;
- San Joaquin Valley Air Pollution Control District's Remove II Program;
- Rose Foundation's Kern County Air Pollution Mitigation Fund;
- Kern Council of Governments' Transportation Development Act Article 3;
- Office of Traffic Safety's Bicycle and Pedestrian Safety Program;

Recent bicycle and pedestrian grant efforts can be found on Attachment B.

6. Lessons Learned

After reviewing the data and recent and upcoming projects and activities, there are multiple lessons learned and follow-up actions moving forward, which are described below.

6.1. Continuation of Existing Projects and Activities

First and foremost, City staff has learned it should continue to pursue its existing bicycle and pedestrian programs and activities, including:

- Install Bikeways: The City has multiple grant-funded projects in progress to increase bikeways in Bakersfield. City staff will continue to move these projects forward and aggressively pursue other grant funds as well. In addition, following the upcoming review and approval the draft 2017 Kern Region Active Transportation Plan, City staff will have additional bikeway options to pursue grant funds. Finally, besides continuing bikeways, City staff will explore other design options, including:
 - Class II Buffered Bicycle Lanes: Buffered bicycle lanes are bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bicycle lanes are designed to increase the space between the bicycle lane and the travel lane and/or parked cars, with a goal of providing more comfortable conditions for bicyclists. This treatment is appropriate for bicycle lanes on

roadways with high motor vehicle traffic volumes and speeds, adjacent to parking lanes, or a high volume of truck or oversized vehicle traffic.

Figure 6: Class II Buffered Bicycle Lanes in Cleveland, OH (Left), and Portland, OR (Right)



- Class III Bicycle Boulevards: Bicycle boulevards are usually low-volume, low-speed neighborhood streets modified to enhance bicyclist comfort and safety by adding signage, pavement markings, traffic calming and/or traffic reduction. These improvements allow through bicycle movements while discouraging motorized through-traffic. They are typically comprised of signed shared routes, but also may include segments of bike paths, lanes, or cycle tracks.

Figure 7: Class III Bicycle Boulevard in Palo Alto, CA



- Class IV Cycle Tracks: A separated bikeway, or cycle track, is an exclusive bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bicycle lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Separated bikeways have different forms, but all share common elements: they provide space exclusively intended or primarily used by bicycles, and physically separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed, cycle tracks may be situated on the curbside of the parking.

Figure 8: Class IV Cycle Tracks in Davis, CA (Left), and Washington, DC (Right)



- Collaborate with Advocacy Groups: The City will continue to collaborate with bicycle and pedestrian advocacy groups on education and safety related matters. As previously mentioned, City staff currently works with advocacy groups including, but not limited to, Bike Bakersfield, California Walks, and the Kern County Bicycle and Pedestrian Safety Coalition.
- Build-A-Bike Program: The City will continue to fund the Build-A-Bike Program at Martin Luther King Jr. Community Center. Again, the program offers a hands-on education where children learn how to build their own bikes, as well as the fundamentals of bicycle repair, maintenance, and safety. The City will continue to provide funding for the program, and complement said program with grant funds. For example, the City recently received \$6,000 in Transportation Development Act Article 3 grant funds, which will be used to purchase equipment including, but not limited to, helmets, gloves, and spare parts (e.g., chains and tires).
- Outreach: The City will continue to conduct outreach to those interested in bicycle and pedestrian safety within the community. Besides collaborating with advocacy groups, City staff will outreach to schools, residents, and other groups to determine the scope of various grant opportunities. For example, Caltrans' Active Transportation Program has historically required outreach to identify and/or revise the scope of grant applications in order to ensure jurisdictions are meeting community needs. City staff will continue this outreach; especially, considering the upcoming appropriation of grant funds through this program.
- Bakersfield Police Department Programs: The Bakersfield Police Department (BPD) will continue to offer several programs that promote bicycle safety in the community. Bicycle rodeos are provided to various schools, local organizations, and at department functions, such as National Night Out, where attendees go through a practical road course designed to promote roadway safety. Bicycle and pedestrian safety assemblies are offered at local elementary, middle, and high schools as a means to promote safety awareness. Finally, the BPD will continue to apply for grants from the Office of Traffic Safety, which helps provide these programs and activities.

- Sidewalk Construction: The City has allocated over \$8,806,000 in Community Development Block Grant (CDBG) Program funds for pedestrian improvements over the last four years. City staff will continue to identify CDBG-eligible sidewalk projects annually. In addition, the City has partnered with Golden Empire Transit (GET) to construct \$1,000,000 worth of sidewalks and access ramps adjacent to bus stops throughout Bakersfield. The City will continue to construct these pedestrian improvements in a timely manner. Finally, the City will continue to incorporate access ramp improvements to roadway resurfacing and reconstruction projects to improve accessibility to sidewalks at intersections.
- Sidewalk Evaluation: The City will continue to be contracted with the firm, Disability Access Consultants, as part of the City's Americans with Disabilities Act (ADA) Transition Plan. City staff is currently entering into the next phase of this evaluation, which includes examining approximately 200 miles of high pedestrian/traffic areas near hospitals, schools, parks, commercial centers, and issue-identified areas such as the path of travel to renovated Golden Empire Transit (GET) bus stops.
- School Zone Improvements: The City will continue to make school zone improvements prior to the beginning of school years. Improvements include, but are not limited to, increasing enforcement, providing maintenance and/or capital projects during the summer months, and repainting "slow school xing" and crosswalks around schools.
- Future LED Street Light Retrofit: City staff is evaluating opportunities to retrofit the remaining streetlight fixtures in two phases. The first phase involves evaluating the City's ability to utilize Pacific Gas and Electric's on-bill financing program to begin to retrofit over 1,100 streetlights at City-operated intersections. The second phase is projected to retrofit the remaining 14,000 streetlights. City staff is researching available funding mechanisms to complete the second phase, including an energy efficiency financing program offered through the California Energy Commission.

6.2. Bicycle and Pedestrian Fatality Investigation Team

Following a bicyclist or pedestrian fatality, City staff across multiple departments should collaborate on each accident. A Bicycle and Pedestrian Fatality Investigation Team (Team) should include, but is not limited to, City staff from the City Manager's Office, Bakersfield Police Department, and Public Works Department. The purpose of the Team is to examine the cause of each accident and identify ways to mitigate future accidents at the same location through environmental design, enforcement, etc. Team recommendations would be provided to the City Manager in form of a memorandum. Implementation of recommendations would be contingent upon available funds.

6.3. Additional Education Programs

As previously mentioned, pedestrians and bicyclists are the parties at fault for 73% of the fatalities over the last four years. In fact, a vast majority of the fatalities are caused by not using proper crosswalks and/or crossing procedures. City staff will explore grant opportunities for bicycle and pedestrian education programs. The draft 2017 Kern Region Active Transportation Plan recommends supporting and expanding existing programs, and establishing new programs to create a larger toolkit of non-infrastructure activities. In addition to existing efforts, additional programs may include:

- Promote Good Road User Behavior Programs: A public awareness campaign encourages road users to abide by local laws, to be courteous to other users, and promote safe behaviors and actions. They can be targeted at just one user type (e.g., cyclists) or multiple users. Local resources for conducting a public awareness campaign can be maximized by assembling a group of local experts, law enforcement officers, business owners, civic leaders, and dedicated community volunteers. These allies could assist with successful safety campaign goals based on the local concerns and issues. It may be necessary to develop creative strategies for successful media placement in order to achieve campaign goals.
- Offer Bicyclist/Pedestrian Legal Training: Legal training and education allows pedestrians and bicyclists to learn about their rights and responsibilities as road users. These programs offer free legal clinics, handouts and legal guides, and provide information on state and local laws. This information is valuable to all road users and creates an informed community around important bicycle and pedestrian laws.

6.4. Bicycle and Pedestrian Safety Plan

After reviewing the Bicycle and Pedestrian Fatalities Map, many of the accidents occurred along the same roadways and/or general vicinity. As previously mentioned, City staff will pursue Caltrans' Sustainable Communities Grant Program for a Bicycle and Pedestrian Safety Plan. The proposed plan would include, but is not limited to, identifying locations that have a high potential for collisions and recommending improvements to said locations. City staff is currently working on a grant application that is due on October 20, 2017.

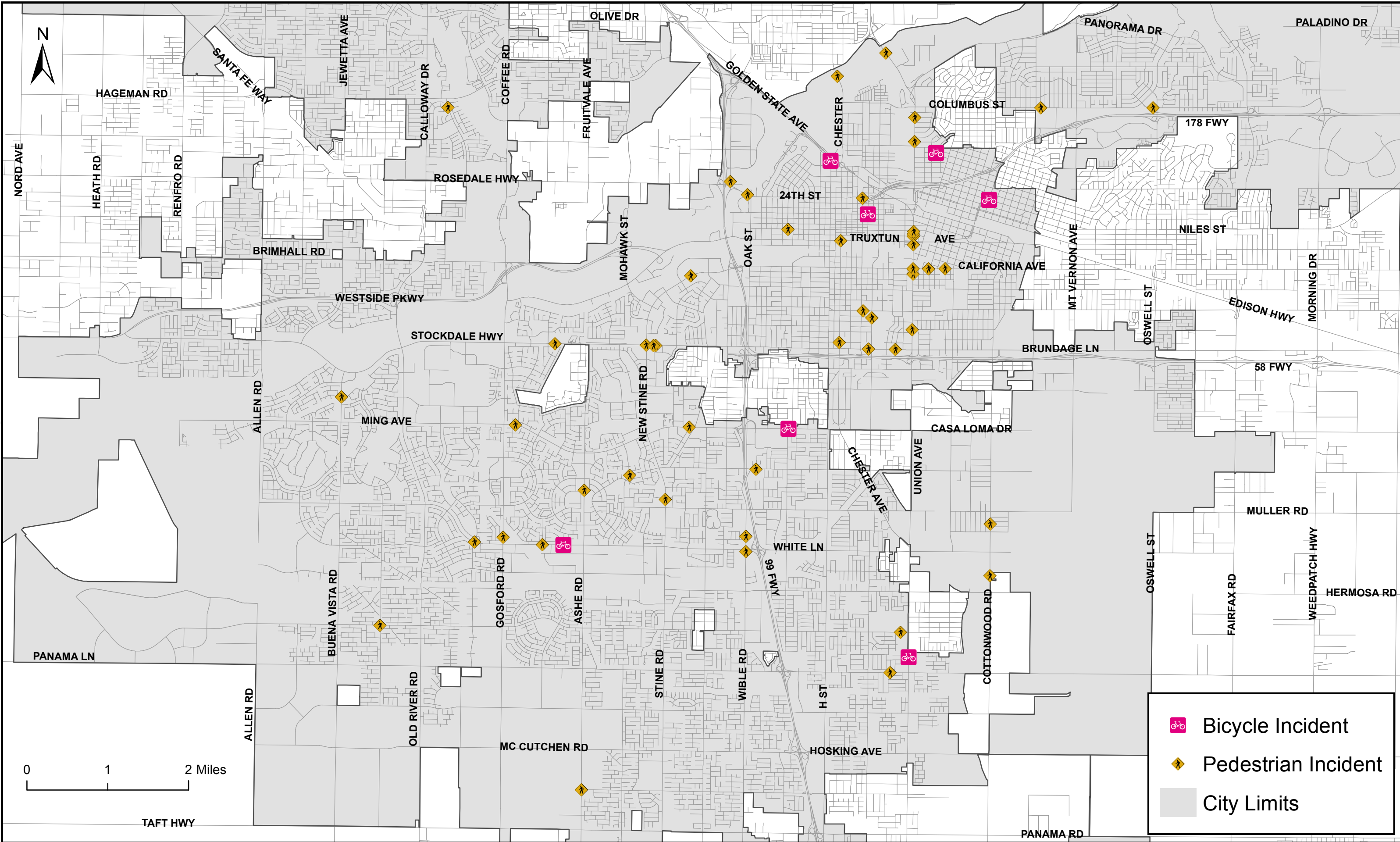
6.5. Interagency Collaboration

After reviewing the Bicycle and Pedestrian Fatalities Map, a concentration of the accidents occurred along Union Avenue. Since Union Avenue crosses both City and Caltrans boundaries, City staff recommends interagency collaboration between both parties to identify potential safety countermeasures. This recommendation may be included as part of the proposed Bicycle and Pedestrian Safety Plan; however, City staff will collaborate with Caltrans staff regardless if the plan is funded or not.

6.6. Pursue Additional Grant Opportunities

As previously mentioned, the City aggressively pursues grant opportunities related to active transportation programs and activities. City staff will continue to pursue additional grant opportunities. For example, due to SB 1 funds, City staff anticipates a tremendous opportunity to receive grant funds through Caltrans' Active Transportation Program. City staff will submit multiple grant applications for bicycle and pedestrian programs and activities next cycle. Applications are likely due in May or June 2018.

Bicycle & Pedestrian Fatalities Map (2014 - Present)



**City of Bakersfield
Bicycle and Pedestrian Grant Administration**

Grant Active Transportation Program (ATP)						
Funding Agency: Caltrans						
Purpose: To encourage increased use of active modes of transportation by achieving the following goals: increase the proportion of trips accomplished by biking and walking; increase safety and mobility for non-motorized users; advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals; enhance public health; ensure that disadvantaged communities fully share in the benefits of the program; and provide a broad spectrum of projects to benefit many types of active transportation users.						
Future Grants: Call for projects (Spring 2018) and deadline (May or June 2018)						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Downtown Bicycle Connectivity Project	Various	Bike share program; 19.05 miles of bike lanes; bike parking and storage	FY 19/20	\$1,367,000	\$1,367,000	Grant awarded
Downtown Pedestrian Connectivity Project	Various	Install 128 access ramps, 3,615 linear feet of sidewalks, and ped island	FY 17/18	\$1,032,000	\$1,032,000	Grant awarded
Street Improvements - A Street	SW, C&G	Install sidewalks and handicap ramps on A St. from Brundage to Chester	FY 16/17	\$1,100,000	\$1,100,000	Estimated completion: 12/17
North Bakersfield Bicycle Connectivity Project	Class II and III	Construct 17.5 miles of bicycle lanes and routes in and around downtown	FY 16/17	N/A	\$522,000	Did not receive grant
School District Trans. Enhancement Program	Program	Bike education and encouragement program (Bike Bakersfield)	FY 16/17	N/A	\$85,000	Did not receive grant
Street Improvements - Frank West Elementary	SW, C&G	Install sidewalk and handicap ramps along Benton and Wilson	FY 15/16	\$311,850	\$311,850	Completed 2016
Street Improvements - Roosevelt Elementary	SW, C&G	Install sidewalk and handicap ramps along A St.	FY 15/16	N/A	\$602,750	Did not receive grant
Bike Lane and Route Projects - Group A	Class II and III	Baker, Bernard, Pacheco, Potomac, Belle Terrace, M, 17th, and Beale	FY 15/16	N/A	\$425,000	Did not receive grant
Bike Lane and Route Projects - Group C	Class II and III	Kentucky, Flower, Niles, 4th St, Watts, Bernard, 22nd, Madison, and King	FY 15/16	N/A	\$405,000	Did not receive grant
Bike Lane and Route Projects - Group B	Class II and III	Berkshire, Haley, Sillect, Pin Oak, Westwold, Haggin Oaks, Laurelglen	FY 15/16	N/A	\$270,000	Did not receive grant
Street Flash Beacon - Liberty High	Flash Beacon	Install yellow flashing beacon on Jewetta near Brimhall	FY 14/15	N/A	\$171,800	Did not re-apply: Included in FY 15/16 CIP (completed in 2016)
Street Improvements - Stockdale High	Flash Beacon	Install yellow flashing beacon on White near Buena Vista	FY 14/15	N/A	\$389,000	Did not receive grant

Grant Congestion Mitigation and Air Quality Improvement Program (CMAQ) Grant						
Funding Agency: U.S. Department of Transportation, Federal Highway Administration (funding appropriated to Kern COG on formula basis)						
Purpose: To reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide, or particulate matter-nonattainment areas, and for areas that were out of compliance but have now met the standards-maintenance areas. Eligible activities related to bicycles include projects or programs that shift travel demand to nonpeak hours or other transportation modes, increase vehicle occupancy rates, or otherwise reduce demand through initiatives; and non-recreational bicycle transportation and pedestrian improvements that provide a reduction in single-occupant vehicle travel.						
Future Grants: TBD						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
New Traffic Signal (Stine and McKee)	Traffic Signal	Traffic signal at Stine and McKee	FY 17/18	\$250,000	\$250,000	Received grant
Truxtun Widening	Traffic Lanes	Operational improvements along Truxtun between Empire and Oak	FY 16/17	\$3,000,000	\$3,000,000	Received grant
New Traffic Signal (District and Grissom)	Traffic Signal	New traffic signal at District and Grissom	FY 16/17	\$250,000	\$250,000	Received grant
Brundage Signal Interconnect	Interconnect	Interconnect on Brundage between H and P Streets	FY 17/18	N/A	\$150,000	Did not receive grant
Brimhall Signal Interconnect	Interconnect	Interconnect from Jewetta and Calloway and Harvest Creek and Coffee	FY 17/18	N/A	\$350,000	Did not receive grant
New Traffic Signal (Brimhall and Reina)	Traffic Signal	Traffic signal at Brimhall and Reina with interconnect (Reina and Alan)	FY 17/18	N/A	\$670,000	Did not receive grant
Cottonwood, Morning, and Old River	C I II/shoulder	Install 6' paved shoulder on Cottonwood, Morning, and Old River	FY 14/15	\$692,000	\$785,700	Completed 2015
Bike Lanes: Belle Terrace, Hughes, and East 21st	Class II	Install Class II bike lanes on Belle Terrace, Hughes, and E 21st	FY 12/13	\$35,000	\$35,000	Completed 2014
Bike Lanes: Alta Vista, Haley, and 30th	Class II	Install Class II bike lanes on Alta Vista, Haley, and 30th	FY 12/13	\$60,000	\$60,000	Completed 2014

**City of Bakersfield
Bicycle and Pedestrian Grant Administration**

Grant Highway Safety Improvement Program (HSIP)						
Funding Agency: U.S. Department of Transportation, Federal Highway Administration						
Purpose: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads. Eligible activities must be a highway safety improvement project that is any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem. Workforce development, training, and education activities are also an eligible use of HSIP funds.						
Future Grants: TBD						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Ped Countdown heads - 60 intersections	Ped Sig Heads	Install Pedestrian Countdown Heads at 60 intersections - Northwest	FY 16/17	\$183,000	\$183,000	Grant awarded
Ped Countdown heads - 60 intersections	Ped Sig Heads	Install Pedestrian Countdown Heads at 60 intersections - Southeast	FY 16/17	\$158,600	\$158,600	Grant awarded
Ped Countdown heads - 60 intersections	Ped Sig Heads	Install Pedestrian Countdown Heads at 60 intersections - various locations	FY 15/16	\$72,660	\$150,000	Completed 2015
Ped Countdown heads - 20 intersections	Ped Sig Heads	Install Pedestrian Countdown Heads at 20 intersections - various locations	FY 13/14	\$41,040	\$60,000	Completed 2014
Ped Countdown heads - 20 intersections	Ped Sig Heads	Install Pedestrian Countdown Heads at 20 intersections - various locations	FY 12/13	\$37,422	\$60,000	Completed 2013

Grant Public Benefit Grant						
Funding Agency: San Joaquin Valley Air Pollution Control District						
Purpose: To secure long-term air quality benefits by introducing clean-air technology and strategies on the local level. Accordingly, support regional projects that reduce emissions generated from mobile sources to help the District reach its attainment goals and improve the Valley's air quality for its residents. Eligible activities related to bicycles include further developing a regional bicycle commuting network.						
Future Grants: TBD						
Proposed Future Grant Submissions: TBD						
City's Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Centennial/Westside Park Multi-Use Path (TRIP)	Class I	Construct multi-use path	FY 15/16	N/A	\$3,549,177	Did not receive grant
Baker Street: California to Bernard	Class II	Install Class II bike lane along Baker from California to Bernard	FY 15/16	\$11,307	\$78,000	Declined; will apply under different grant
Belle Terrace: Stine to Madison	Class II	Install Class II bike lane along Belle Terrace from Stine to Madison	FY 15/16	\$11,307	\$129,000	Declined; will apply under different grant
Calloway Weir Bike Path	Class I	Construct bike path over Calloway Weir for Kern River crossing	FY 14/15	\$39,374	\$50,200	Completed 2016

**City of Bakersfield
Bicycle and Pedestrian Grant Administration**

Grant Remove II						
Funding Agency: San Joaquin Valley Air Pollution Control District						
Purpose: To encourage the development and expansion of bicycle transportation facilities that promotes the use of bicycles as a safe and viable transportation alternative. Eligible activities include constructing Class I bicycle trails/paths and striping Class II bicycle lanes.						
Future Grants: Ongoing						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Noriega Road and Verdugo Lane	Class II	Noriega Road (Jewetta to Calloway) / Verdugo (Olive to Hageman)	FY 15/16	\$94,200	\$94,200	Grant awarded
Riverlakes Drive - Olive to Coffee	Class II	Riverlakes Drive - Olive to Coffee	FY 15/16	\$65,500	\$66,200	Grant awarded
Clay Patrick Farr Way And Meacham Road	Class II	CPF Wy. (Hageman to Rosedale) / Mecham Rd. (CPF Wy. To Calloway)	FY 15/16	\$61,600	\$66,600	Estimated completion: 11/17
Harris Road - Wible to Gosford	Class II	Harris Rd. Bike Lane - Wible to Gosford	FY 14/15	\$57,710	\$80,000	Estimated completion: 11/17
Harris Road - Gosford to Buena Vista	Class II	Harris Rd. Bike Lane - Gosford to Buena Vista	FY 14/15	\$47,000	\$47,000	Estimated completion: 11/17

Grant Transportation Development Act (TDA) - Article 3						
Funding Agency: Caltrans (appropriated to region by formula; competitive within region)						
Purpose: To develop and support public transportation needs that exist in California through two major funding sources: the Local Transportation Fund (LTF) and the State Transit Assistance fund (STA). A portion of the funds are allocated for the exclusive use of pedestrians and bicycles, including bicycle safety education programs.						
Future Grants: TBD						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Pedestrian Improvements: Brundage Lane	Ped Improv.	Pedestrian improvements on Brundage from Oak to Pine Street	FY 17/18	\$113,400	\$113,400	Grant awarded (funded over two years)
Kern River Bike Path Rehab	Class I	Bikepath between the Kern River Bikepath and 21 Street	FY 17/18	\$39,980	\$39,980	Grant awarded
Kern River Bike Path Rehab	Class I	Bikepath between Manor to Alfred Harrell Highway	FY 17/18	\$102,589	\$102,589	Grant awarded
Downtown Bike Parking	Bike Parking	Install decorative bike parking in the downtown area	FY 17/18	\$6,000	\$6,000	Grant awarded
Build-A-Bike Program	Program	Equipment for bike safety and education program	FY 17/18	\$6,000	\$6,000	Grant awarded
Bike Lanes: Bakersfield College Area	Class II & III	Install Class II and III around the Bakersfield College area	FY 16/17	\$107,450	\$107,450	Grant awarded
Bike Program: Bike Bakersfield	Program	Various bicycle education activities through Bike Bakersfield	FY 16/17	\$10,000	\$10,000	Grant awarded
Downtown Bike Parking	Bike Parking	Install decorative bike parking in the downtown area	FY16/17	\$15,000	\$15,000	Grant awarded
Bike Lanes: A Street and Brundage Lane	Class II & III	Install Class II bike lane on Stockdale Hwy from Renfro to Allen	FY 15/16	\$138,000	\$138,000	Estimated design completion: 08/16
Kern River Bike Path Rehab	Class I	Buena Vista Rd. to Coffee Rd.	FY 15/16 - 16/17	\$125,000	\$125,000	Estimated design completion: 08/16
Downtown Bike Parking	Bike Parking	Install decorative bike parking in the downtown area	FY 15/16	\$12,000	\$12,000	Completed 2016
Build-A-Bike Program	Program	Equipment for bike safety and education program	FY 15/16	\$1,000	\$1,000	Completed 2016
Bike Lanes: Various in Southwest	Class II	Install Class II bike lane on Laurelglan, Half Moon, Westwold, etc.	FY 15/16	\$48,333	\$48,333	Completed 2016
Bike Lanes: Akers - McKee to Wilson	Class II	Install Class II bike lane on Akers from McKee to Wilson	FY 14/15	\$111,051	\$123,200	Completed 2015
Bike Lanes: Haggin Oaks - Ming to Camino Media	Class II	Install Class II bike lane on Haggin Oaks from Ming to Camino Media	FY 14/15	\$12,500	\$12,500	Completed 2016
Bike Lanes: Stockdale - Renfro to Allen	Class II	Install Class II bike lane on Stockdale Hwy from Renfro to Allen	FY 14/15	\$25,100	\$25,100	Completed 2016
Bike Lanes: Snow - Allen to Norris	Class II	Install Class II bike lane on Snow from Allen to Norris	FY 14/15	\$25,200	\$25,200	Completed 2016
Ped Countdown Sig Heads: 50 locations	Ped Sig Heads	Install pedestrian countdown heads at 50 intersection - various locations	FY 14/15	\$52,090	\$79,060	Completed 2015

**City of Bakersfield
Bicycle and Pedestrian Grant Administration**

**Grant
Office of Traffic Safety - Bicycle/Pedestrian Safety and Education**

Funding Agency: State Office of Traffic Safety (OTS)						
Purpose: To fund educational and enforcement programs related to alcohol and drug impaired driving, distracted driving, emergency medical services, motorcycle safety, occupant protection, older drivers, pedestrian and bicycle safety, education, and police traffic services.						
Future Grants: TBD						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Bicycle/Pedestrian Safety and Education	Education	Provide bicycle/pedestrian safety and education courses	FY 15/16	\$62,335	\$62,335	Grant awarded
Bicycle/Pedestrian Safety and Education	Education	Provide bicycle/pedestrian safety and education courses	FY 14/15	\$96,322	\$96,322	Contract courses with Bike Bakersfield

**Grant
Rose Foundation**

Funding Agency: Rose Foundation (under the Kern County Air Pollution Mitigation Fund)						
Purpose: To reduce particulate or ozone air pollution in the Valley portion of Kern County. An emphasis is placed on projects that benefit disadvantaged or sensitive populations in the most polluted parts of Kern County. Projects must be designed to directly reduce pollution emissions, or to change institutional or individual behavior in ways that will lead to reductions in air pollution emissions.						
Future Grants: TBD						
Proposed Future Grant Submissions: TBD						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Countywide Active Transportation Plan	Plan	Countywide ATP that includes a Bakersfield Metropolitan Area	FY15/16	\$35,000	\$50,000	Received grant (to be completed Fall 2017)
Calloway Weir Bike Path	Class I	Construct bike path over Calloway Weir for Kern River crossing	FY 14/15	\$39,374	\$50,200	Completed 2016
Bike Transportation Plan	Study/Report	Document to guide future development of bicycle facilities	FY 12/13	\$150,000	\$150,000	Completed 2013

**Grant
Affordable Housing and Sustainable Community (AHSC)**

Funding Agency: California Strategic Growth Council						
Purpose: To provide funds for land-use, housing, transportation, and land preservation projects to support infill and compact development that reduces greenhouse gas ("GHG") emissions. These projects must facilitate the reduction of the GHG emissions by improving mobility options and increasing infill development.						
Future Grants: TBD						
Proposed Future Grant Submissions: Must include the construction of affordable housing in order to be competitive for grants funds. Community Development examining if any potential projects are in the pipeline.						
Application History: See below						
Street/Project	Project Type	Description	Funding Year	Award Amount	Engineer Estimate	Notes
Creekview Villas and Bicycle Network Improv.	Class III	Construct 15 units in the Creekview Villas and Class III bike routes	FY 15/16	Pending	\$3,830,814	Did not receive grant
Kern River Parkway Multi-Use Trail Improvements	Class I/II, etc.	Construct two miles of new Class I/II bicycle paths and lanes; create accessibility improvements at up to 22 key entrances; construct up to 11.5 miles of pedestrian walkways; resurface up to 11.5 miles of existing Class I bicycle paths; brand and subsequently add up to 47 signs and wayfinding markers; construct up to 30 solar power streetlights; add up to four bike lockers at key locations; and construct up to a 40,000 square foot park-and-ride facility for carpool parking and future vanpools use	FY 14/15	N/A	\$3,010,000	Did not receive grant