Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

California Walks
Stepping Up for Health, Equity, & Sustainability

OTS
CALIFORNIA OFFICE OF TRAFFIC SAFETY

July 2022

Mariposa Neighborhood, Vacaville Summary and Recommendations Report

Community Pedestrian and Bicycle Safety Training Program

Funding for this program was provided by a grant from the California Office of Traffic Safety, through the National Highway Traffic Safety Administration.

Acknowledgments

Thank you to the Planning Committee for inviting us into their community and partnering with us to make the Mariposa Neighborhood a safer place to walk and bike. Their contributions prompted meaningfully informed discussions and strengthened the workshop's outcomes.

We also want to acknowledge the Patwin peoples as the traditional land caretakers of the greater Vacaville area.

Planning Committee

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Daniel Santellan	Community Member
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This report was prepared in cooperation with the California Office of Traffic Safety (OTS). The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of OTS.

Contents

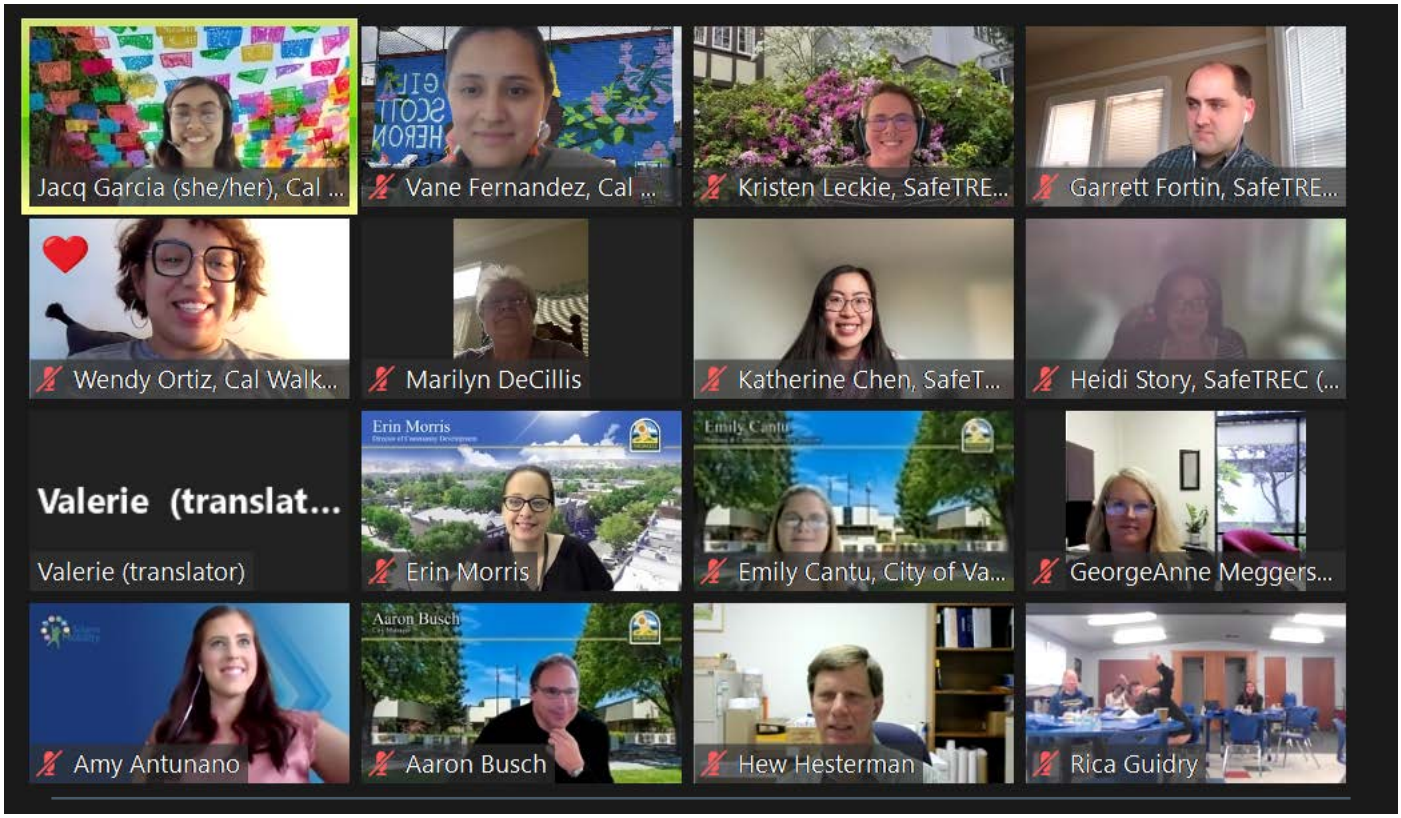
Introduction

The Community Pedestrian and Bicycle Safety Program (CPBST) is a statewide project of UC Berkeley Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks). The program uses the Safe System Approach to engage residents and safety advocates to develop a community-driven action plan to improve walking and biking safety in their communities and to strengthen collaboration with local officials and agency staff. Cal Walks and SafeTREC (Project Team) work with the local Planning Committee, a group of community stakeholders, over the course of two to three months to develop workshop goals and tailor the curriculum to address the community's needs and priorities. The virtual workshop convenes the larger local community to conduct walking and biking assessments of key areas in the community, learn about Safe System strategies to address walking and biking concerns, and develop preliminary action plans for priority infrastructure and community programs.

The Mariposa Neighborhood, Vacaville CPBST workshop was held in a hybrid format, both virtually and in-person at the Mariposa Head Start Center. It convened 26 participants on May 26, 2022, which included residents and representatives from the City of Vacaville, Solano Transportation Authority, Boys and Girls Club, and Leaven Kids. The City of Vacaville's District 4 Office requested the CPBST workshop to:

1. Increase safety for people walking and biking to essential locations like grocery stores, school, work and parks;
2. Highlight the areas of the community that needs improvement and support; and
3. Set a precedent to continue working towards walking and biking safety in the future.

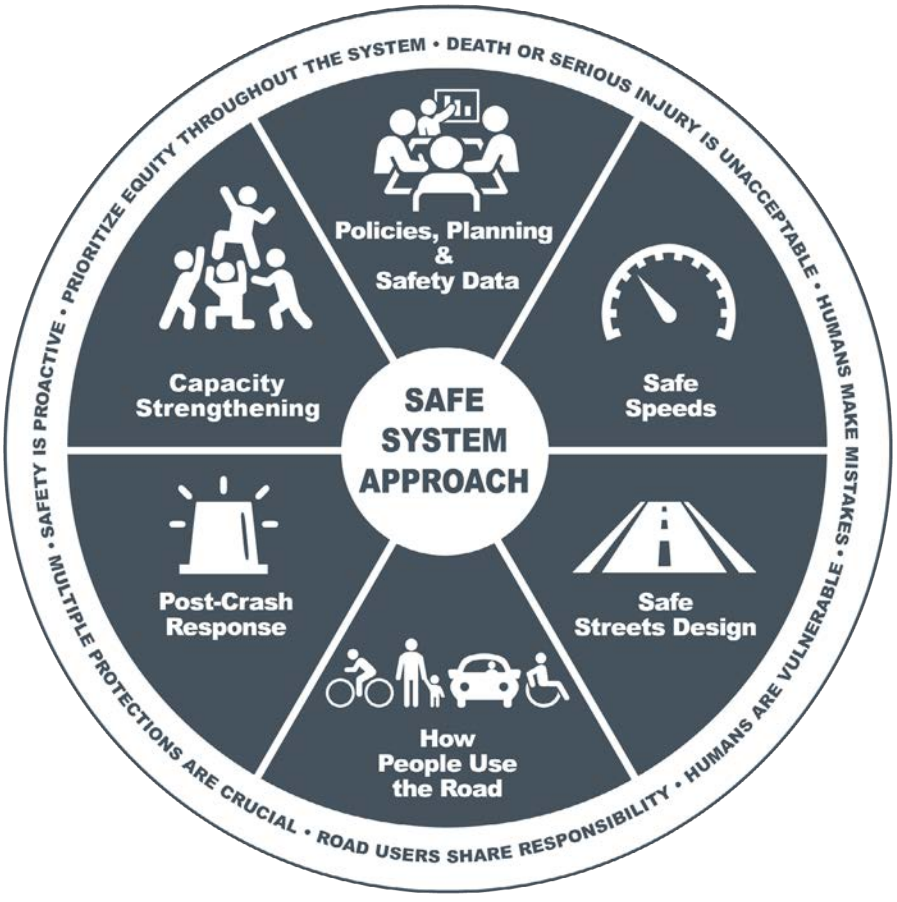
The following report summarizes the outcomes of the workshop and provides community and Project Team recommendations for continued guidance in project implementation.



Safe System Framework

The Project Team adapted the Federal Highway Administration's Safe System framework to make them more impactful for grassroots community engagement. The Safe System approach aims to eliminate all fatal and serious injuries. We emphasize equity as a central component and acknowledge the critical need to strengthen partnerships between transportation professionals and the communities they serve in order to create safe streets for everyone. Our Safe System approach improves safety for all road users through the principles and the multiple layers of protection seen in the graphic below.

For more information about the Safe System Approach, please review our policy brief available at: bit.ly/SafeSystemApproach. To learn more about Safe System strategies, please review our toolkit available at: bit.ly/CPBSTToolkit.

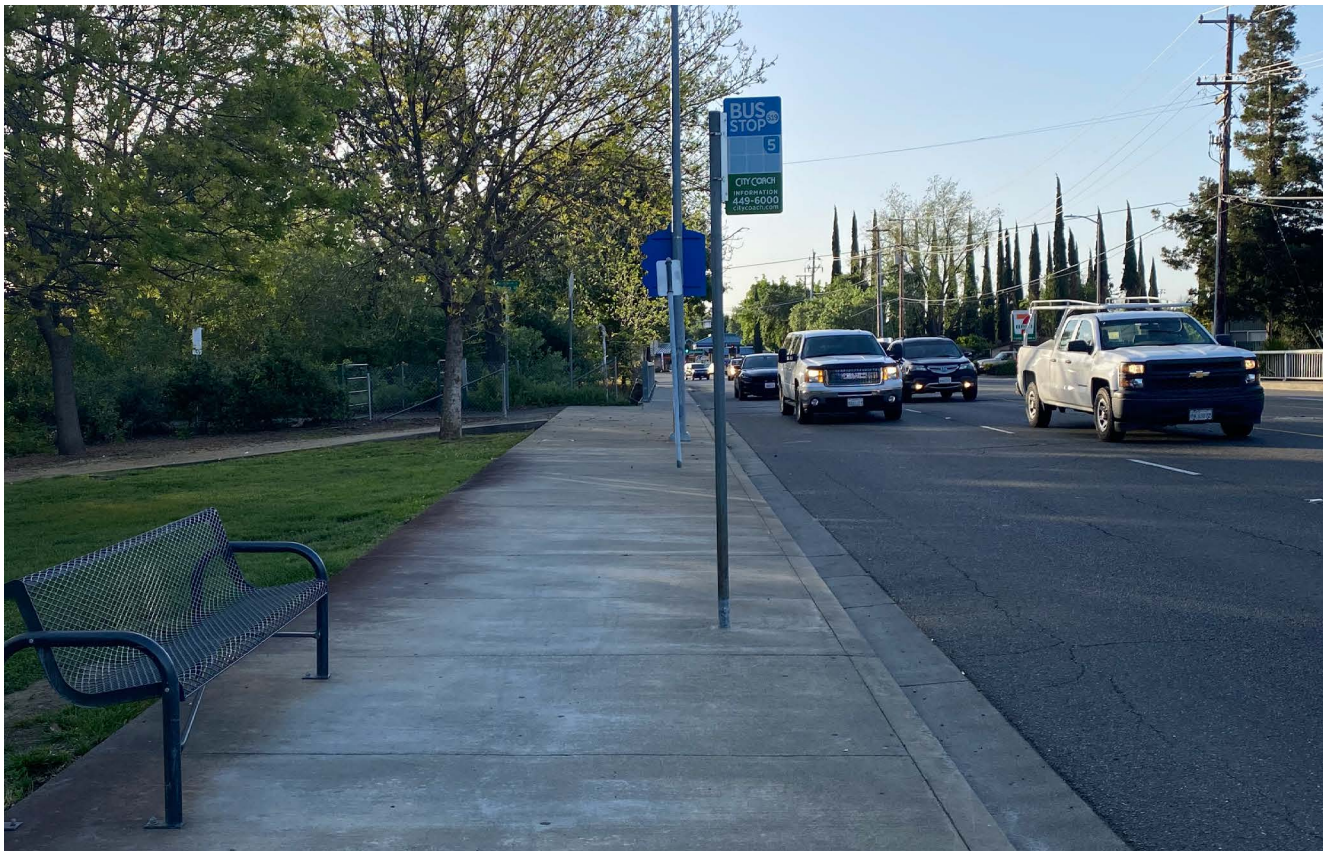


Background

The Mariposa neighborhood is a community located in the city of Vacaville in Solano County. Per OTS Crash Rankings, in 2019, Vacaville ranked 73rd out of 105 cities of similar population size for people killed or injured in a traffic crash (with a ranking of “1” indicating the worst). Even though Vacaville ranked relatively low compared to other cities of its size, participants across the board agreed that they feel unsafe walking and biking in the Mariposa Neighborhood, which impacts their day-to-day lives.

Within the focus area of the Mariposa neighborhood in Vacaville, 26 percent of households include at least one resident with one or more disabilities and 10 percent of households do not own a vehicle. The majority of the community, 63 percent, are within the ages of 18 and 65, and 11 percent of the community live below the poverty level. Many residents rely on public transit, walking, biking, or carpooling to get around the neighborhood and citywide even though they feel uncomfortable given safety concerns like cars speeding and narrow sidewalks.

Less than one percent of the community walks (0.9 percent) or bikes (0.7 percent) to work while over one percent (1.4 percent) took public transportation. The largest commute pattern for the focus area was carpooling, with 11 percent of the community using this mode of travel.



Bus stop at the Alamo Drive/Davis Street intersection.

Local Policies and Plans

The Solano County Active Transportation Plan of 2020 identifies Alamo Drive and Peabody Road as hot spots for pedestrian and bicyclist crashes within the City of Vacaville. The plan, however, does not mention safety improvements for these areas.

The Solano County Pedestrian Transportation Plan identifies Alamo Drive, Peabody Road, and Marshall Road as major pedestrian routes in the City of Vacaville, yet these roads are also hotspots for pedestrian and bicycle crashes.

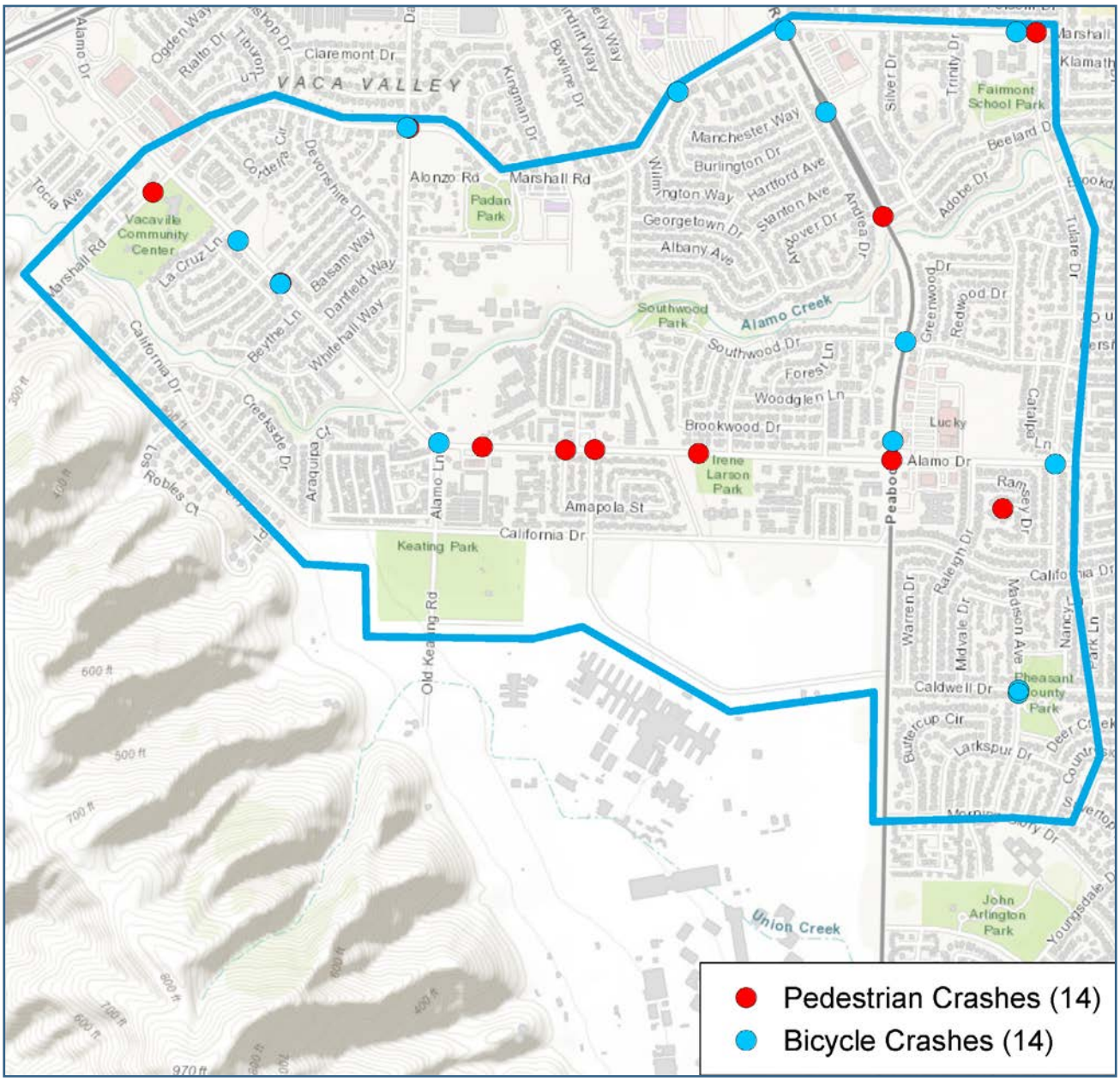
In addition to being an area highly trafficked by pedestrians and cyclists, the City of Vacaville's General Plan demonstrates the importance of Vacaville's location in connecting to the Travis Air Force Base and the City of Fairfield. The plan states that Alamo Drive, Peabody Road, and Nut Tree Road are all truck routes receiving high levels of road traffic stress. The City proposes bike lanes along Alamo Drive, east of Nut Tree Road. However the plan does not identify any bike improvements west of Nut Tree Road which is the main area of concern for workshop participants. Conversely, there are no proposals for the installment of bike facilities along Alamo Drive from Davis Street to Peabody Road or along Davis Street from Alamo Drive to I-80.

The Fairfield Train Station Specific Plan specifies the redevelopment of existing industrial uses along Peabody Road to residential, commercial and mixed-use redevelopment. Peabody Road is one of two circulation routes for the project area which proposes the development of a job center near the train station. The Train Station will give commuters a number of transportation choices, including biking, walking, park-and-ride, bus, and rail. The station is connected via bus routes to central Fairfield, Suisun City and Vacaville. Lastly, the planned railway station will serve as a regional transit hub because the Amtrak Capitol Corridor trains will connect the Vacaville and Fairfield community to regional destinations including San Jose, Oakland, San Francisco, Sacramento and Auburn.

Solano County's Safe Routes to School program conducted the Eugene Padan Elementary School Walking and Bicycling Audit. The audit identifies the multi-use pathway that runs through Padan Park as the primary bicycle and pedestrian access points to the elementary school. The pathway serves as a connection between bike lanes along Marshall Road and Padan Elementary. Furthermore, the survey study conducted in Eugene Padan Elementary School Walking and Bicycling Audit approximates that 24% of students travel to and from school in an "active" way by means of walking, biking, rolling, etc. Meanwhile, 34% travel to and from school using a sustainable mode of travel, including carpooling, public transit, rolling, biking, and walking.

The Vacaville Community-Based Transportation Plan notes that the highest concentration of people live along Alamo Drive and Nut Tree Road, to the south of I-80. In addition, one of the two census tracts with the highest concentrations of low income households is also south of I-80. It is bounded by the Putah Canal to the east, Alamo Road to the south, and Davis on the west which also happens to overlap with this workshop's focus areas.

Pedestrian and Bicycle Crash History



Pedestrian and bicycle crashes in the Mariposa Neighborhood of Vacaville between 2016 and 2020.

The following data is based on police-reported pedestrian and bicycle crashes resulting in injuries to pedestrians[1] and bicyclists in the Mariposa neighborhood of Vacaville. Data reported in this section are from the Statewide Integrated Traffic Records Systems (SWITRS) for the years 2011 to 2020. Crash data for 2020 is provisional as of March 2022. A full discussion of the pedestrian and bicycle crash data can be found in the appendix.

The map above shows all of the crashes in which a person was injured and that involved a pedestrian or bicyclist from 2016 to 2020.

1 A pedestrian is defined as any person who is afoot or using a non-motorized personal conveyance other than a bicycle. This includes skateboards, strollers, wheelchairs, and any electric assistive mobility device.

Mariposa, Vacaville Community Workshop Boundaries

The boundaries for this workshop were: Marshall Road at the north, California Drive at the south, Tulare Drive at the east and the intersection of Marshall Road and California Drive at the west. The Planning Committee chose these boundaries to include key community schools, housing complexes, and community spaces, including Eugene Padan Elementary School, Will C Wood High School, Alamo Garden Apartments, Skylark Mobile Estates, the Mariposa Head Start Center, the Alameda Creek Bike Trail, and the Three Oaks Community Center.

Pedestrian Crashes

Over the 10-year period between 2011 and 2020, pedestrian crashes appear to be steadily increasing since 2016, minus 2020 where we saw a significant drop across all crashes due to the COVID-19 shelter-in-place orders. In the most recent five years of data available, 2016 to 2020, pedestrian crashes, including one severe crash, were concentrated on Alamo Drive (seven crashes), Marshall Road (five crashes), and Peabody Road (three crashes), with multiple less severe crashes concentrated on these streets as well. There were two crashes each at the Marshall Road/Peabody Road intersection, as well as on Alamo Drive and Alamo Lane. Of the pedestrian crashes, four occurred between 3 p.m. and 5 p.m. with one crash occurring on Monday, Wednesday, Friday, and Saturday each. Mondays saw the most crashes, with five of the 14 crashes total occuring on the weekday. The primary crash factor for most of these pedestrian crashes was a driver not yielding the right-of-way to a pedestrian at a marked or unmarked crosswalk, which was associated with five crashes.

Among the 14 victims of these 14 pedestrian crashes, there were zero fatalities and one serious injury, with suspected minor injuries (seven crashes) comprising the largest number of total injured victims. Most of the working adult victims were male (83.3%), which consisted of anyone in the 19 to 59 age range. Working adults made up 42.8% of all pedestrian crash victims. School aged children, victims in the age range 5 to 18, comprised 42.8% of all crashes. Of the 14 injured victims, two of the victims were seniors, aged 60 or over.

Free SafeTREC Data Resources

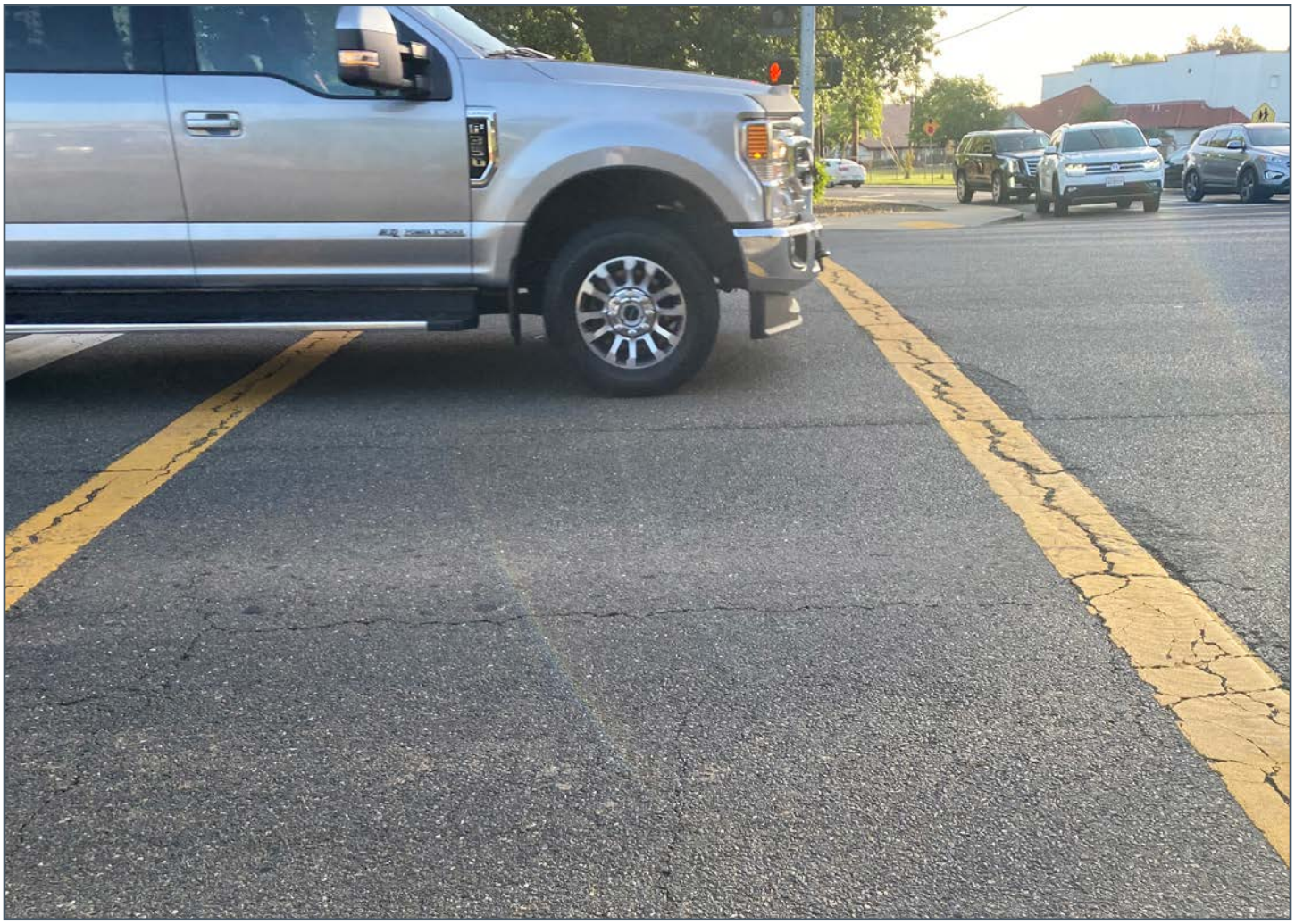
The **Transportation Injury Mapping System (TIMS)** is a web-based tool that allows users to analyze and map California crash data from the Statewide Integrated Traffic Records System (SWITRS). TIMS provides quick, easy, and free access to geocoded crash data. TIMS is available at: https://tims.berkeley.edu.

Street Story is a web-based community engagement tool that allows residents and community organizations to gather information that is important to transportation safety, including crashes, near-misses, general hazards and safe locations to travel. To promote access to the tool, SafeTREC offers technical assistance to communities and organizations interested in using Street Story. The platform and the information collected is free to use and publicly available. Street Story is available at: https://streetstory.berkeley.edu.

Bicycle Crashes

Over the 10-year period between 2011 and 2020, bicycle crashes appeared to be in a downward trend until crashes spiked in 2016, 2019, and 2020. In the most recent five years of data available, 2016 to 2020, bicycle crashes were concentrated on Alamo Drive (five crashes), Marshall Road (four crashes), and Peabody Drive (four crashes). There were no fatal bicycle crashes in the Mariposa Neighborhood of Vacaville in the past five years. Of the 15 crashes, seven of the crashes occurred between noon and 3 p.m. Four of the 15 crashes occurred on a Tuesday, with two happening on Monday, Tuesday, and Wednesday. The most common primary crash factor for most of these bicycle crashes was due to a bicyclist riding in the opposite direction on the roadway as motor vehicles, which was associated with 5 crashes.

Among the 14 victims of these 14 bicyclist crashes, there were no serious injuries. Most bicycle crash victims suffered minor injuries, comprising 8 of the 14 injured victims. Community residents reported that many bicyclists in this area are kids or working adults and the data reflects this. A majority of crashes were working adults, consisting of 57.1% of victims and most were male (75%). School aged children, victims in the age range 5 to 18, comprised 35.7% of all crashes and most were male as well (80%). Of the 14 injured victims, two were seniors, victims aged 60+.

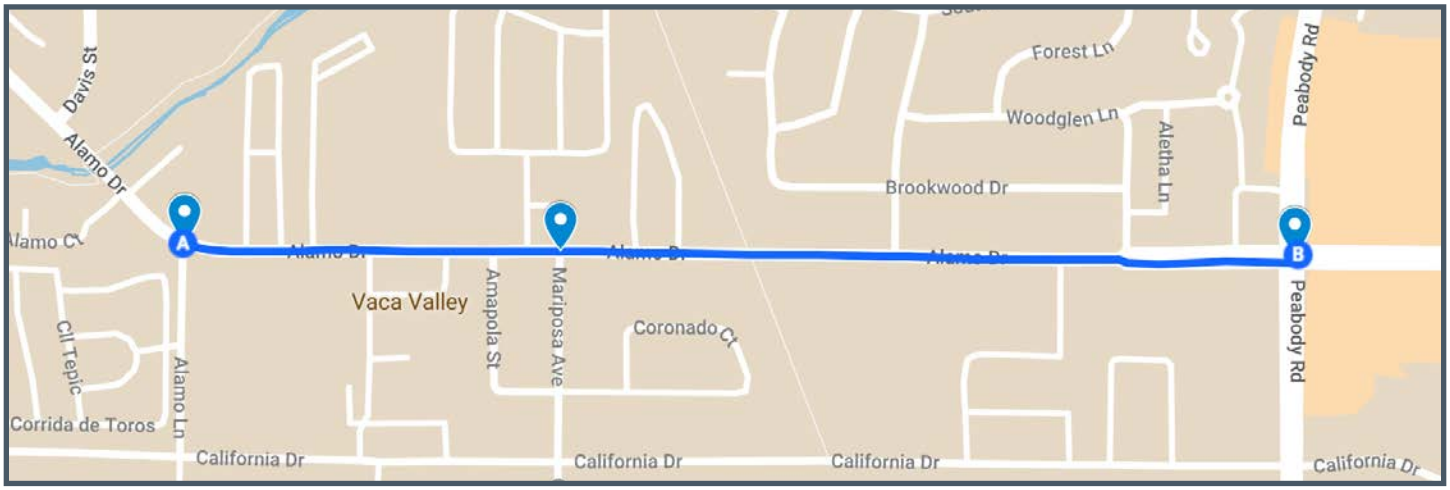


Cars regularly encroach upon the crosswalks, as seen here with a truck blocking the crosswalk at a red light.

Walking and Biking Assessment

During the workshop, the Project Team and participants took part in a virtual walking and biking safety assessment along two routes frequently traveled by community residents. Participants were asked to identify community assets, assess infrastructure conditions, and share how road users engage with the built environment. The following is a summary of the walking and biking assessment.

Route 1: Alamo Drive



Focus

This route focused on Alamo Drive, from Marshall Road to Peabody Road. Students, parents, and residents walk, bike, take transit, and travel along Alamo Drive to get to and from community assets like Eugene Padan Elementary School, Alamo Garden Apartments, the Alamo Creek Bike Trail, the Neighborhood Walmart, and more. While a popular travel path, residents had significant safety concerns along the corridor.

Strengths

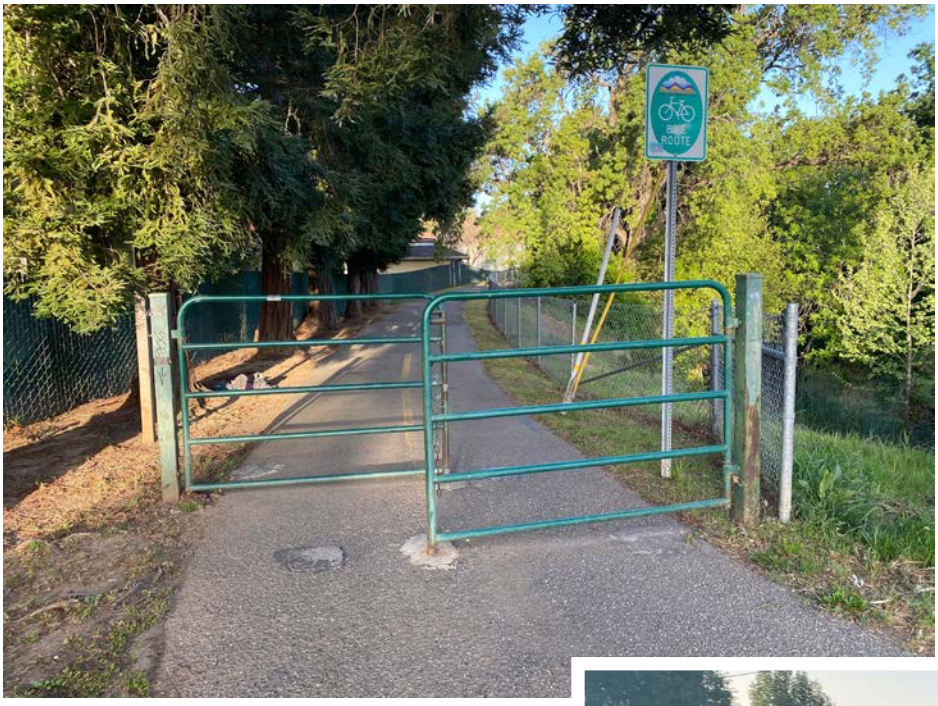
1. The local bus service, Vacaville City Coach, runs the entire length of Alamo Drive within the Mariposa Neighborhood, which provides a reliable form of transportation for anyone traveling in the neighborhood.
2. The Alamo Creek Bike Trail and the Southside Bikeway both have entrances on Alamo Drive, which provides a safe place to walk, bike, or recreate away from the heavy vehicular traffic on Alamo Drive.
3. Many community assets like shopping centers, schools, and community centers are located along Alamo Drive, creating a central hub in the neighborhood.

Route 1: Alamo Drive cont'd

Concerns

1. Residents are concerned about driver speeds along Alamo Drive. Pedestrians are oftentimes forced to share the narrow sidewalks with bicyclists who feel unsafe riding in the roadway because of speeding drivers. Children noted that they feel scared when walking along Alamo Drive because of driver speeds.
2. Sidewalks along Alamo Drive, between the Southside Bikeway and Davis Street, are too narrow for groups of children to walk comfortably and safely to and from Eugene Padan School and Vacaville Christian High School. Parents often walk closer to the road than their kids to protect them, but that also puts them in harm's way. The sidewalks along the bridge between Alamo Court and Davis Street are even more narrow than the sidewalks along Alamo Drive.
3. The majority of crosswalks along Alamo Drive are unmarked, leaving residents to cross wherever they can or wherever is closest to their destination. Even at signalized intersections, such as Peabody Road, the crossing time is too short for many people to cross the eight lanes along Alamo Drive. Furthermore there are no safe places for people to stop mid-crossing, such as pedestrian refuge islands, when crossing long distances.
4. Alamo Drive has standard marked bike lanes, yet residents do not feel comfortable using them because of speeding drivers, narrow bike lanes, discontinuous bike lanes along the corridor, and the lack of protective barriers between the bike lanes and the travel lanes. Bicyclists opt to bike facing cars so they feel visible to traffic, as noted by workshop participants.
5. Alamo Drive is a legally-recognized truck route within Vacaville, which residents highlighted as a cause of discomfort when trying to walk or bike along the corridor given their size and the speed of trucks using the road as a cut-through to outer cities like Fairfield.
6. There is a lack of pedestrian-scale lighting along Alamo Drive which creates visibility issues between pedestrians, bicyclists and drivers. Alamo Drive between Marshall Road and Mariposa Avenue, is an especially dark area at night, which many residents use to walk to and from the Walmart.

Trucks, like the one pictured here on Alamo Drive, pass school children at high speeds.

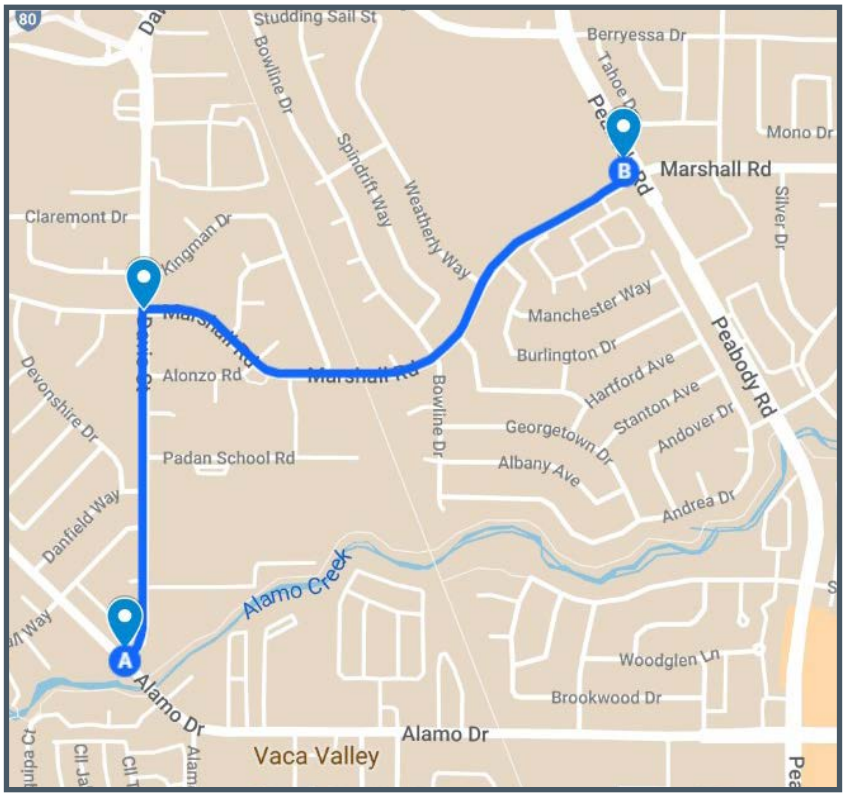


TOP: The southern entrance to the Alamo Creek Bike Trail on Alamo Drive.

MIDDLE: The bridge along Alamo Drive, between Alamo Court and Davis Street, where the sidewalk is very narrow.

BOTTOM: The bike lane markings along Alamo Drive, just east of Marshall Road, are faded and not visible when the sun is facing east.

Route 2: Davis Street and Marshall Road



Focus

Davis Street and Marshall Road in southwest Vacaville, near the city's urban growth boundary, are major routes to access the City of Fairfield and the Travis Air Force Base. Marshall Road is a 2-lane and east-west collector road which traverses three schools and connects the community to Alamo Drive and Peabody Road. Davis Street is also a 2-lane and north-south collector road that connects the community to I-80, Alamo Drive, and commercial areas, parks, schools and churches near the downtown area.

Strengths

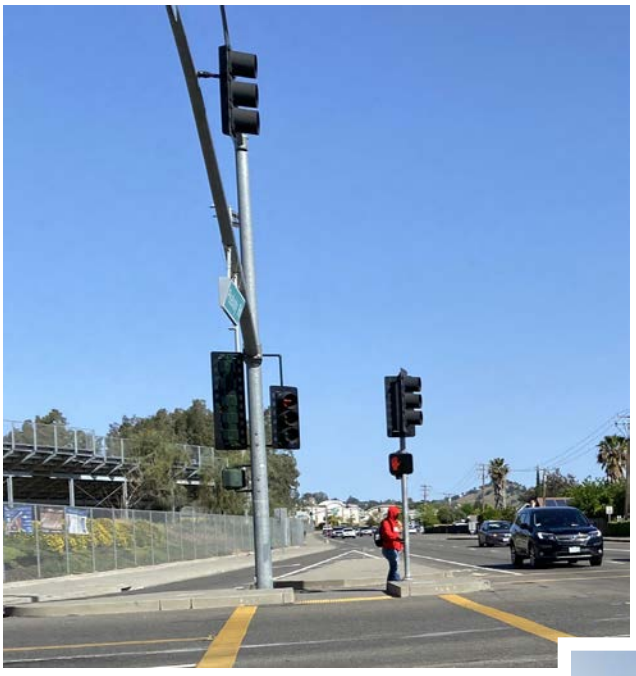
1. The City Coach bus service is punctual and runs about every 30 minutes along Marshall Road. City Coach is imperative in making multi-modal transportation in the area more practical and accessible for working families.
2. Curb ramps with truncated domes are present at all four corners of the Marshall Road/Peabody Road intersection. This makes crossing the intersection more accessible for people using assisted mobility devices and strollers.
3. Padan Park provides a green space for people to recreate and a safer alternative route for students walking and biking to and from Eugene Padan Elementary School, Vacaville Christian High School and Will C. Wood High School. Students will often byass the Davis Street/Marshall Road intersection by heading eastward toward the multi-use trail through the park. From the trail, they can access Marshall Road and continue their journey east towards the schools in the area. Additionally, many parents drop-off their elementary school students at Padan Park, near the Alonzo Road/Marshall Road intersection after which students walk along the multi-use trail to Eugene Padan Elementary School.

Route 2: Davis Street and Marshall Road cont'd

Concerns

1. There is heavy driver traffic during the morning and evening commute hours along Alamo Drive and Peabody Road. Marshall Road is commonly used as a cut-through street to bypass some of this traffic, and drivers often speed as they rush to their destinations. During the in-person site visit, Cal Walks staff members witnessed a rear end crash during arrival time on Marshall Road. As morning traffic headed west along Marshall Road, a line of vehicles formed behind the stop sign at the Marshall Road/Alonzo Court intersection. The driver lane was congested. The rear driver was driving fast when all of a sudden they hit the bumper of the driver in front of them.
2. Davis Street is often used as a cut-through street for drivers to avoid high traffic levels along Alamo Drive and Peabody Road. As such, drivers tend to speed and do not always make full stops at stop signs. These driver behaviors create potential points of conflict with people walking, biking, and rolling to Padan Elementary, Padan Park, Will C. Wood High School and Vacaville Christian High School.
3. There is a lack of shade trees and narrow sidewalks along Marshall Road. Narrow sidewalks force pedestrians onto the street when there isn't enough room to walk abreast. The lack of shade trees creates uncomfortable walking conditions especially during the hot, summer months.
4. Mariposa Avenue, is an especially dark area at night, which many residents use to walk to and from the Walmart.

Drivers collected south of the I-80 off-ramp and Alamo Drive conjunction. Morning commuters at the signalized Marshall Road/Alamo Drive intersection on Wednesday April 6th at approximately 7:30 a.m.



TOP: A community member waiting to cross at the Marshall Road/Peabody Road intersection.

MIDDLE: A Vacaville City Coach bus dropping off students at Padan Park on a weekday morning near the Marshall Road/Padan School Road intersection.

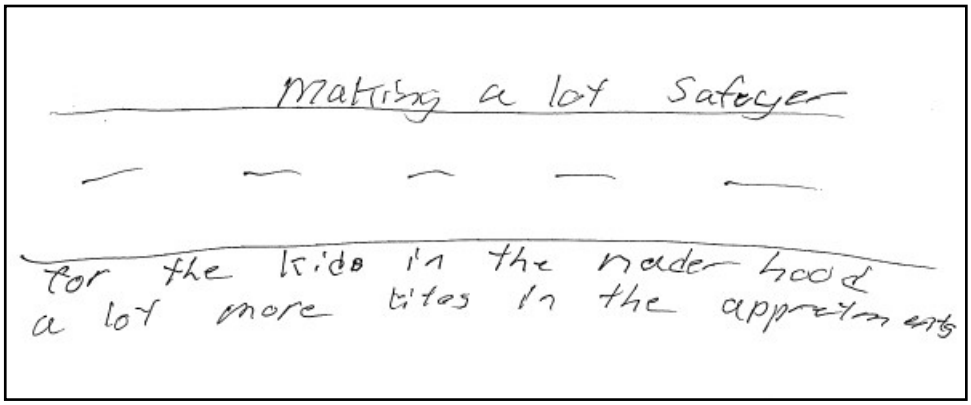
BOTTOM: A student who crossed Padan School Road walking along the multi-use trail in Padan Park towards Eugene Padan Elementary School.

Recommendations

The recommendations in this report are based on observed pedestrian and bicycle safety concerns, Safe System strategies, and workshop participants' preferences and priorities. The suggested timelines and resources needed for implementation are estimated based on general pedestrian and bicycle safety best practices and may need to be further tailored by the community.

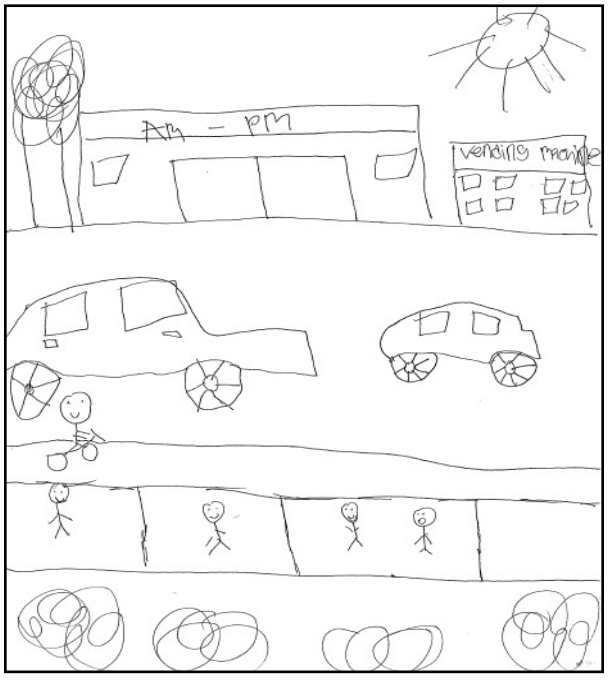
Visioning Activity

Workshop participants were asked to envision how a healthy, safe, and welcoming community looks, feels, and sounds. They generated the following visions and ideas that were used to develop the community recommendations below.



A drawing from a young participant depicting a roadway where it is safe for children in the neighborhood to play and where there is more lighting near their home.

A drawing from a young participant depicting abstract lines and words of affirmation like "Be you" and "Love yourself". Their name was removed.



A drawing from a young participant depicting a vision of a community with many happy pedestrians, a bike lane, shade trees, and easy access to food.

Visioning Activity continued

Participants also provided the quotes below when envisioning a healthy, safe, and welcoming Mariposa Neighborhood.

"When starting a bike ride from my home, I appreciate fresh, healthy air to breathe, minimal traffic, courteous drivers to share the road with."

"When I walk outside I envision trees and the sidewalk in front of me is clean, flat [with] bushes, flowers and there is sunshine warming my face. [I'm] surrounded by nature and felt safe, coffee shops and restaurants nearby, possibly somewhere to sit along the way to relax."

"In the evening, I would like light that illuminates the path [and] buffers between movement and vehicles."

Community Recommendations

Workshop participants were assigned into two groups to identify Safe System infrastructure projects and community programs to create a safer environment for walking and biking. Participants offered the following recommendations for their community. The tables below were developed by workshop participants and identified as the highest priority.

- Widen sidewalks along Alamo Drive to create a more safe and comfortable walking experience for community members;
- Implement a Neighborhood Speed Awareness Campaign to reduce driver speed and create a safer walking and bike experience for community members;
- Install more continental crosswalks across Alamo Drive, especially between Alamo Lane and Mariposa Avenue, to reduce the distance between legal crossings and minimize the points of conflicts among all road users;
- Install Rectangular Rapid Flashing Beacons along Alamo Drive to increase the number of safe crossings for pedestrians;
- Develop a Ticket Diversion Program to lessen the financial burden on community residents, while educating them about safer road behaviors; and,
- Paint the entrance gates of Southside Bike Trail to improve visibility of bicyclists and encourage trail use.

Protected High-Visibility Bike Lanes on Alamo Drive

Project Goals:

1. Provide a protected and comfortable bike lane along Alamo Drive.
2. Provide wider sidewalks along Alamo Drive.

Project Description:

This project would create high-visibility protected bike lanes on Alamo Drive, especially between Marshall Road and Peabody Road. The corridor is a major route for the Mariposa community to access commercial centers, schools, and other key destinations.

Proposed Plan:

Activate Community & Decision-Makers	1. The Planning Committee will work alongside Councilmember Nolan Sullivan to present the project to the City Council and Public Works. Discuss funding opportunities. 2. The Planning Committee, Councilmember Nolan Sullivan, and City staff can hold community meetings for the project to gather feedback and generate additional ideas for how to improve biking and walking along Alamo Drive. 3. Implement a quick-build project to test out potential safety infrastructure and see what works for the specific needs of the corridor. a. Use the California Bicycle Coalition's Quick Build Guide for reference.
Project Team Recommendations	1. The Planning Committee can collaborate with local community-based organizations like Head Start, The Leaven After School Tutoring Center, and REACH Youth Coalition to hold listening and feedback sessions for the project in community spaces like the Mariposa Center. 2. City officials can use dignity-infused community engagement throughout the process and work alongside the Planning Committee to make sure a diverse group of community residents are able to give their feedback on the project. 3. City planning staff can work alongside local schools and after-school programs to provide art in the project where able to.

Alamo Drive Reconfiguration Project

Project Goals:

1. Extend the middle turning lane along Alamo Drive, from the Alamo Garden Apartments to Alamo Lane.
2. Create a dedicated turning lane for drivers traveling east along Alamo Drive, to prevent them from entering Alamo Garden Apartments to head west on Alamo Drive.

Project Description:

This project would extend the existing middle turning lane along Alamo Drive, from Alamo Lane to Amapola Street, in order to create dedicated turn lanes for drivers entering Alamo Garden Apartments, Skylark Mobile Estates, and other commercial areas. Residents and children at Alamo Garden Apartments, see eastbound cars making left turns into the complex because there is a no u-turn sign at the dedicated left turn lane on Alamo Drive. Children use the driveway at Alamo Garden Apartments as a play space, given the lack of recreational space, which creates near misses between speeding drivers attempting to make a quick u-turn in the driveway and the children. By extending the middle turning lane all the way to Alamo Lane, drivers would be able to make a u-turn on Alamo Drive instead and make the Alamo Garden driveway safer for children playing.

Continued on next page

Alamo Drive Reconfiguration Project continued

Activate Community & Decision-Makers	1. City staff work alongside residents from the Alamo Gardens Apartments and Skylark Mobile Estates to better understand their concerns with the current road configuration. 2. City staff work with residents from the Alamo Gardens Apartments and Skylark Mobile Estates to create a safer recreational space for the neighborhood children. 3. The Planning Committee and local residents can meet with City planners to discuss the feasibility of the project and the funding needed to implement it. 4. City staff can host a workshop to gather feedback on safety concerns, preferred safety improvements, and create relationships with community residents.
Project Team Recommendations	1. City staff should use dignity-infused community engagement throughout the process to make sure that residents are supported throughout the process and the project reflects their unique needs. 2. City staff can create better visibility for those driving and walking into and out of the driveway entrance to Alamo Garden Apartments with elements like daylighting, signage and other elements. 3. Residents can use the CPBST Toolkit as a starting place to figure out what infrastructure is needed to create a safer recreational space for children. where able to.

Alamo Drive Pedestrian Safety Project

Project Goals:

1. Install pedestrian safety infrastructure along Alamo Drive, between Marshall Road and Peabody Road, including high-visibility crosswalks, pedestrian refuge islands at intersections with short crossing times, and traffic calming measures to slow driver speeds.
2. Create a partnership between Councilmember Nolan Sullivan and residents in the Mariposa Neighborhood to further safety goals for this project and others that create a more walkable, bikeable neighborhood.

Project Description:

This project would install high-visibility crosswalks, pedestrian refuge islands, and traffic calming measures along Alamo Drive, between Marshall Road and Peabody Road, in order to create a safer walking and biking experience along the corridor. Children at Alamo Garden Apartments do not feel safe traveling along Alamo Drive given the lack of marked crosswalks, drivers speeds, and insufficient crossing times at intersections.

Proposed Plan:

Activate Community & Decision-Makers	1. The Planning Committee and other interested community residents can meet with City planners to discuss the feasibility of the project and the funding needed to implement it. 2. The Planning Committee, Councilmember Nolan Sullivan, and the City of Vacaville can host community feedback sessions with an emphasis on reaching residents from the Alamo Gardens Apartments and the Skylark Mobile Estates to gather feedback on how to improve this portion of Alamo Drive. 3. City of Vacaville staff can partner with the Planning Committee to develop an accessible way to garner feedback from residents on what they envision for the future of Alamo Drive.

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Alamo Drive Pedestrian Safety Project continued

Project Team Recommendations	1. Utilize the CPBST Toolkit to choose project-relevant traffic calming measures to create a safer place for children to recreate. 2. Consider the possibility to host temporary demonstrations along the corridor to try out potential traffic calming measures and garner resident feedback. 3. Work alongside local schools and after-school programs to create messaging on pedestrian safety to post along Alamo Drive.

From Pedestrians to Drivers: High School Driver Education Campaign

Project Goals:

1. Educate new teenage drivers at Vacaville Christian High School and Will C. Wood High School about safe driving behaviors and sharing the roadway with pedestrians and bicyclists.
2. Make safe driving in the City a part of community standards and culture.

Project Description:

This project addresses community concerns related to speed by educating the community on safe driver behaviors and targeting education towards the newest and youngest drivers. This project includes a safety messaging campaign and a safety assembly event for 11th and 12th graders at Vacaville Christian High School and Will C. Wood High School. Students would learn about safely navigating and sharing the roadways with all road users.

Proposed Plan:

Activate Community & Decision-Makers	1. Planning Committee will contact the Vacaville Sheriffs Youth Roundtables to leverage their connections to youth leadership in the community. 2. Planning Committee will contact Principal Adam Rich and Principal Terra Golden to engage Will C. Wood High School and Vacaville Chrsitian High School, respectively.

Continued on next page

From Pedestrians to Drivers: High School Driver Education Campaign continued

Project Team Recommendations	1. Develop curriculum for the safety assembly event including education on multi-modal transportation. Walking, biking, and taking transit are all great means of transport because they can help reduce traffic levels, are more sustainable, active and, in many instances more affordable. As such, the curriculum should encourage more walking, biking and rolling in the community in addition to addressing safe driving behaviors. The following resources are examples of multi-modal curriculum and safety messaging strategies: a. Bike East Bay: Bike Education and b. Effective Messaging for Promoting Biking and Walking. 2. The safety messaging campaign may engage the high school students along with their families through art. The following resources are from communities who have used art as an opportunity for students to participate in safety messaging campaign designs: a. Example: City of Portland "Bikes to Books Digital Design" Contest and b. High School Youth Video Voice for Transportation Equity Engagement. 3. Consider how to best display the safety messaging campaigns for this community's communication style. Safety messages may be displayed in a variety of formats, including flyers, on merchandise and gear, and lawn signs. The following resource demonstrates the various methods that can be used to display a safety messaging campaign. a. Example: City of Eureka "Heads Up" Campaign

Continued on next page

From Pedestrians to Drivers: High School Driver Education Campaign continued

Project Team Recommendations	4. If safety messaging is aimed towards drivers, the campaign should include messaging around the top primary crash factors: drivers not yielding the right-of-way to pedestrians at marked or unmarked crosswalks, unsafe turning or moving by drivers on roadways or turning without signaling, and drivers failing to stop at a limit line or crosswalk at a red light. 5. Safety messaging should be developed with the community to reflect cultural and language needs. The following is an example of a safety public service announcement in Spanish. a. Example: "¡Precaución! Tu familia también usa la bicicleta" PSA 6. The following funding opportunities may help support this project: a. Environmental Justice Small Grants; b. Sustainable Transportation Equity Project (STEP); c. Sustainable Communities Program; and, d. Transformative Climate Communities (TCC).

Neighborhood Speed Awareness Program

Project Goals:

1. Encourage driver compliance with posted speed limits, especially near schools.
2. Encourage active transportation to and from school by reducing the safety risks students face when confronted with speeding drivers.

Project Description:

This project calls for the installation of speed feedback trailers in key locations around the community to reduce safety risks associated with speeding drivers. Participants emphasized the need for this infrastructure improvement in local school zones along and around Davis Street and Marshall Road.

Proposed Plan:

Activate Community & Decision-Makers	1. Planning Committee will partner with Safe Routes to School of Solano County to acquire feedback trailer signs since they have previously implemented feedback signs in the East Monte Vista area. 2. The Planning Committee will elevate safety concerns to the Solano Transportation Authority, which has a Bike Safety Committee who can address them. 3. City staff will engage residents by posting information about these resources on the City website and local school newsletters.
Project Team Recommendations	1. Host a Temporary Demonstration Project with a speed feedback trailer in a key area to test if this intervention will serve the community well. The following resources are examples and guides for temporary infrastructure improvement strategies: a. How To Create Pop-Up Safe Routes to School Projects; b. Using Tactical Urbanism to Promote Safe Routes to School Programs; and, c. Quick Builds for Better Streets. 2. The following funding opportunities may help support this project: a. Office of Traffic Safety Grant Program; b. Solutions for Congested Corridors; and, c. Active Transportation Program.

Project Team Recommendations

The Project Team submits the following additional recommendations for consideration. Local stakeholders, such as City staff and the Planning Committee, may need to refine the recommendations to ensure they are appropriate for the current walking and biking environment.

Fill the City of Vacaville's Vacancy on the Solano Transportation Authority's Pedestrian Advisory Committee

The Project Team recommends Planning Committee members, along with other residents, parents, and local leaders to apply to be the City of Vacaville's representative on the Solano Transportation Authority's Pedestrian Advisory Committee. Advisory Committees may help bridge gaps between practitioners (city engineers, planners, local officials, etc.) and communities. In particular, this Pedestrian Advisory Committee is a designated space to elevate safety concerns and provide feedback on safety improvements and future projects. As such, this committee is an important tool in ensuring that community concerns and feedback are considered at the county level of transportation planning.

Street Story and Safe Routes To School Data Collection

The Project Team recommends the Planning Committee partner with UC Berkeley SafeTREC to use Street Story to engage residents, community groups, and agencies to collect information about transportation crashes, near-misses, general hazards, and safe routes to travel to Eugene Padan Elementary School, Vacaville Christian High School, and Will C. Wood High School. Workshop participants mentioned there is an underreporting of crashes because they are not reported to local law enforcement. Street Story could capture these experiences. These recorded experiences can then be used as qualitative data to support transportation safety initiatives, such as improvements at the dangerous intersections. Street Story may provide a way for the Planning Committee to make connections directly with those impacted by traffic violence and can bolster community outreach efforts for the projects listed above and other City-led projects. SafeTREC works directly with community organizations across California to incorporate the Street Story tool into their existing projects and programs. They also provide workshops, webinars, and one-on-one technical assistance.

Alamo Drive Pedestrian-Scale Lighting Project

The Project Team recommends the Planning Committee partner with Councilmember Nolan Sullivan, City planners, and residents to identify key portions of Alamo Drive, especially between Marshall Road and Peabody Road, that need pedestrian-scale lighting. Currently, lighting along Alamo Drive is oriented towards the street for drivers. The lack of pedestrian-scale lighting at night poses visibility issues between pedestrians, bicyclists, and drivers traveling through the corridor.

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The Planning Committee may refer to Pedestrian and Bicycle Information Center's "Lighting Strategies to Improve Pedestrian Safety" Webinar to better understand the potential benefits of pedestrian-scale lighting, understand the costs associated with their implementation, and learn about the possible options to determine which work best for the Mariposa Neighborhood. They may also reference the US Federal Highway Administration's Pedestrian Lighting Primer to understand how to assess current lighting conditions, how to design pedestrian-scale lighting, and how to implement pedestrian-scale lighting once the preferred design is chosen.

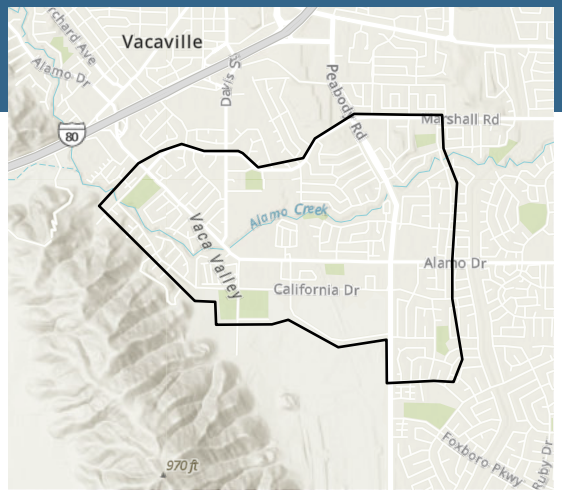
High-Intensity Activated Crosswalk Beacon (HAWK) Community Education

The Project Team recommends the Planning Committee partner with residents at the Alamo Garden Apartments, Councilmember Nolan Sullivan and City planners to create an educational program to help drivers, pedestrians, and bicyclists understand how to use the HAWK signal at the Alamo Drive/Southside Bikeway intersection. Drivers often fail to yield to pedestrians when the HAWK signal is activated by a pedestrian, which renders the signal less effective than it could be at keeping pedestrians and bicyclists safe while crossing. The City of San Ramon's HAWK Brochure is an example of possible educational materials. Other educational materials include, but are not limited to: social media campaigns, tutorial videos, lawn signs, flyers and pamphlets. The City is eligible to apply for funding from the California Office of Traffic Safety to support such efforts.

Appendix

- ***Mariposa Neighborhood Infographic***
- ***CPBST Site Visit Data Presentation***

Mariposa Neighborhood Infographic



Vacaville

Community Pedestrian and Bicycle Safety Program

esri

Key Facts

Vulnerable Population

26% Households with 1+ Persons with a Disability

14% Population 65+

10% Households without a vehicle

11% Households Below the Poverty Level

Commute Profile

1.4% Took Public Transportation

11.3% Carpooled

0.9% Walked to Work

0.7% Bike to Work

Race and Ethnicity

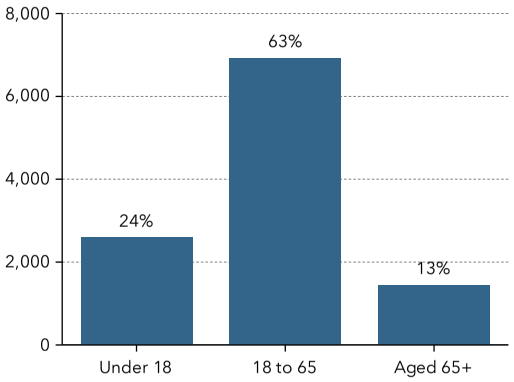
The largest group: White Alone (58.85)

The smallest group: Pacific Islander Alone (0.85)

Indicator ▲	Value	Diff
White Alone	58.85	+10.80
Black Alone	8.49	-5.43
American Indian/Alaska Native Alone	1.25	+0.46
Asian Alone	6.16	-9.50
Pacific Islander Alone	0.85	-0.06
Other Race	14.60	+2.46
Two or More Races	9.79	+1.26
Hispanic Origin (Any Race)	33.35	+5.32

Bars show deviation from Solano County

Population by Age



Household Income (2021)		
Median Household Income	$71,070	
Household Income less than $15,000	296	7%
Household Income $15,000-$24,999	184	5%
Household Income $25,000-$34,999	282	7%
Household Income $35,000-$49,999	437	11%
Household Income $50,000-$74,999	951	23%
Household Income $75,000-$99,999	563	14%
Household Income $100,000-$149,999	933	23%
Household Income $150,000-$199,999	253	6%
Household Income $200,000 or greater	190	5%

Source: Esri forecasts for 2021, U.S. Census Bureau 2015-2019 American Community Survey (ACS) Data,

Alamo Drive, Vacaville Pedestrian and Bicycle Crash History

CPBST Site Visit – March 28, 2022

Kristen Leckie, kristenmleckie@berkeley.edu

What is a pedestrian crash?

Pedestrian-motor vehicle crash

- Includes a person afoot, on a skateboard, stroller, wheelchair, electric assistive mobility device

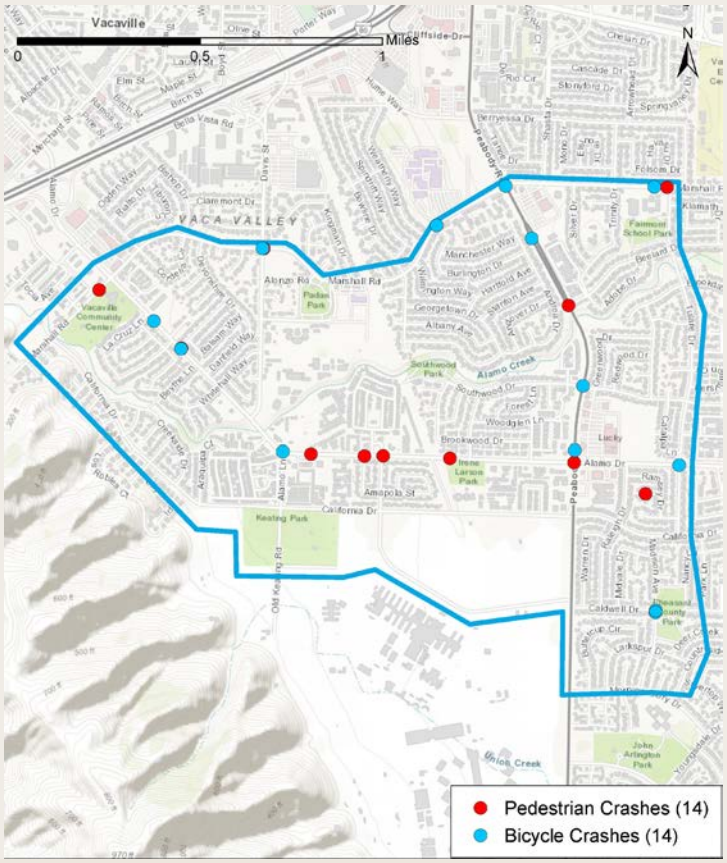
One crash may result in multiple pedestrian victims.

What is a bicycle crash?

Bicycle-motor vehicle crash

- Bicycles are considered vehicles and therefore violations committed by a “driver” could have been committed by a motor vehicle driver or bicyclist.

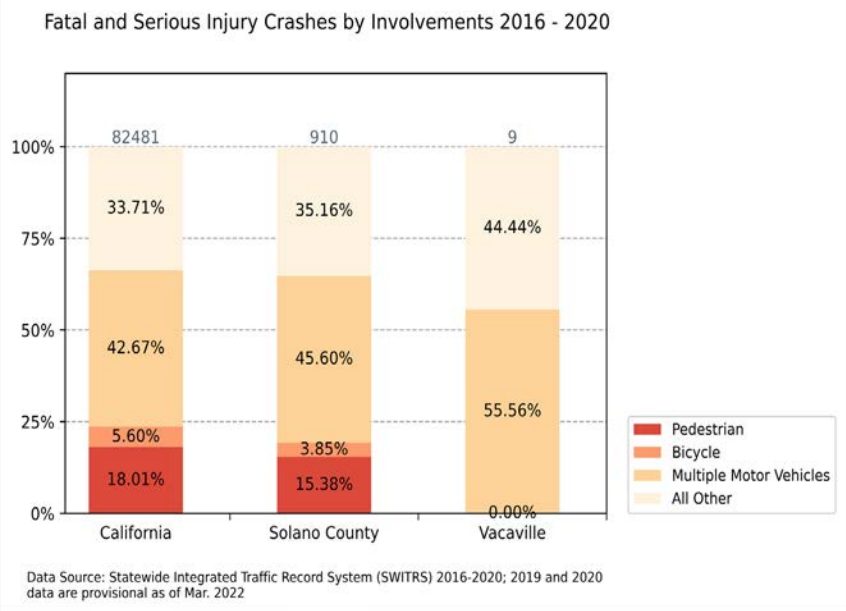
Overview of crashes in Vacaville 2016-2020



Data source: Statewide Integrated Traffic Record System (SWITRS) 2016-2020

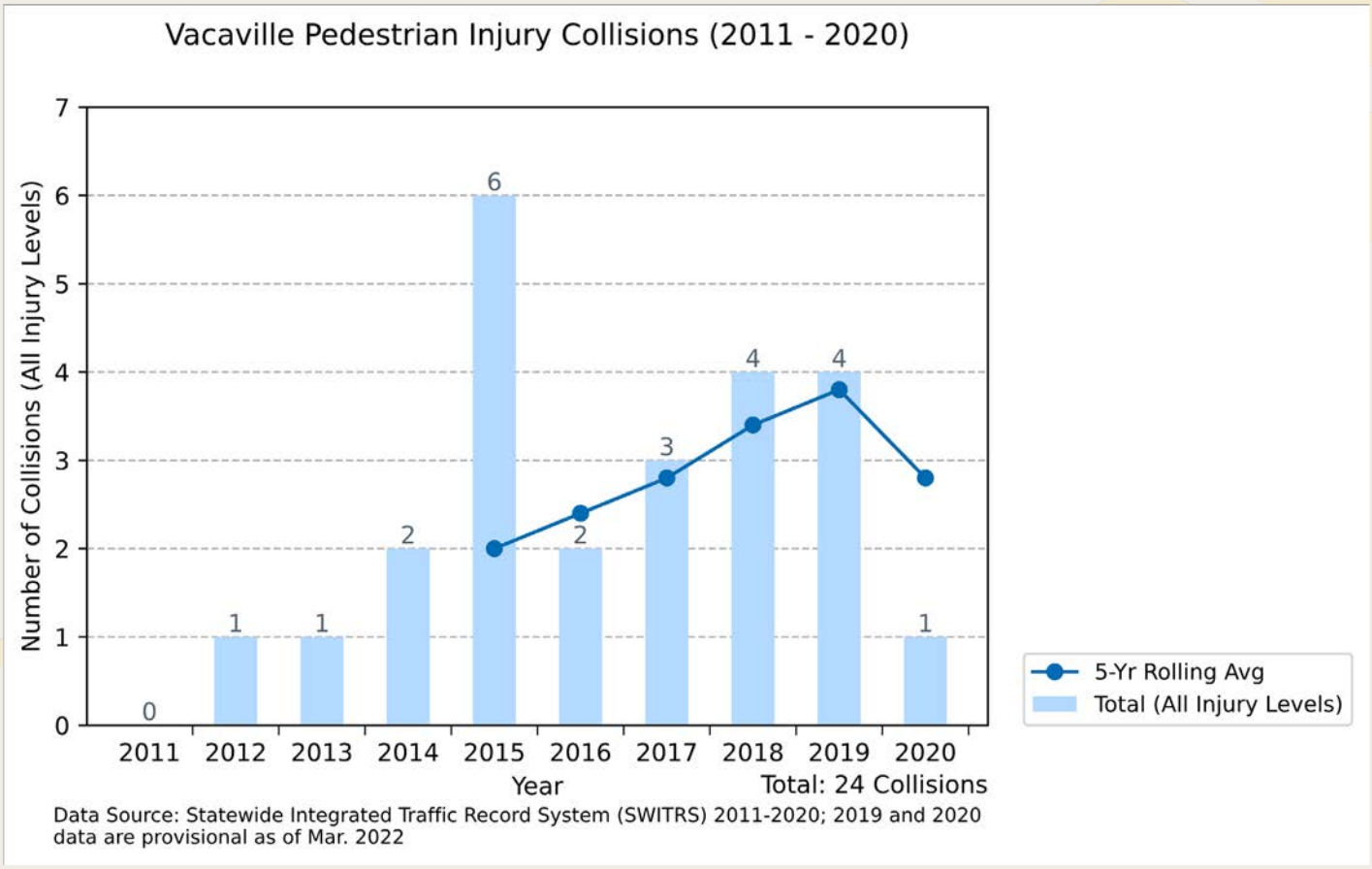
How does Vacaville compare to other areas?

Fatal and Serious Injury Crashes by Involvement 2016-2020



- Citywide, Vacaville had five fatal pedestrian or bicycle crashes between 2016 and 2020. Within our focus area, there were no fatalities and one serious injury crash.
- Solano County has relatively less pedestrian and bicycle fatal and serious injury crashes than California as a whole.
- Citywide, Vacaville has relatively more multi-vehicle fatal and serious injury crashes than both Solano County and the state.

Pedestrian Crashes 2011-2020



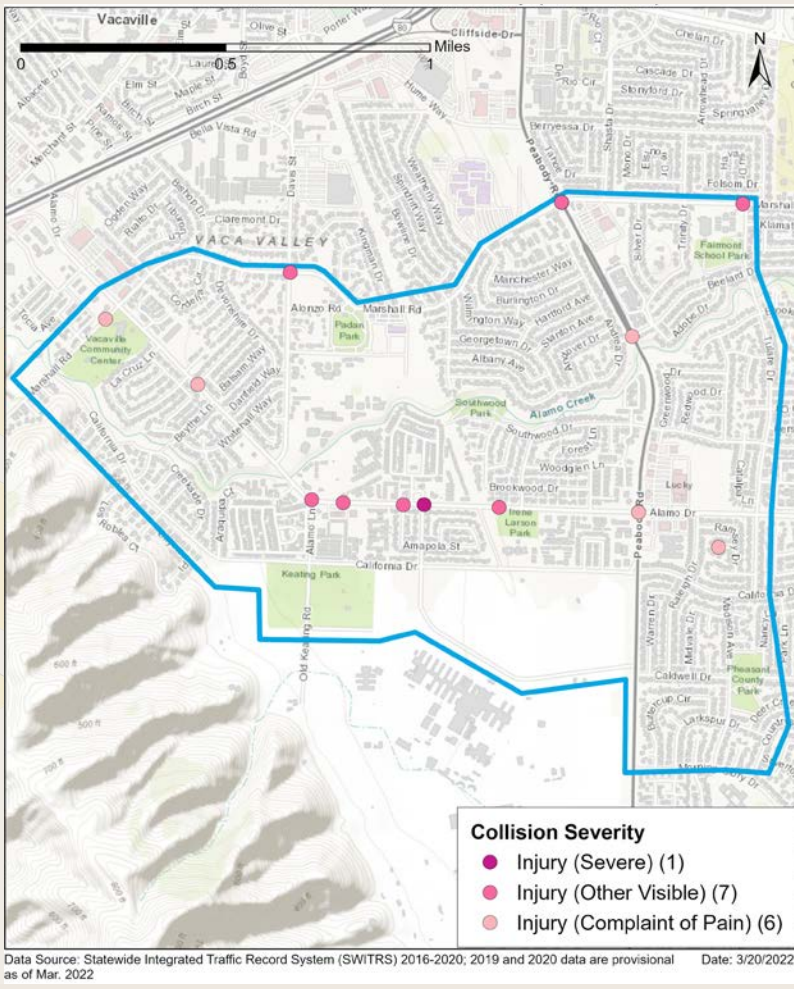
Pedestrian Crashes 2016-2020

Crashes were concentrated along:

- Alamo Drive (7 crashes)
- Marshall Road (5 crashes)
- Peabody Drive (3 crashes)

Top crashes intersections were

- Marshall Road and Peabody Drive (2 crashes)
- Alamo Drive and Alamo Lane (2 crashes)



Data Source: Statewide Integrated Traffic Record System (SWITRS) 2016-2020; 2019 and 2020 data are provisional as of Mar. 2022 Date: 3/20/2022

Pedestrian Crashes 2016-2020

By time of day & week

Vacaville Pedestrian Collisions by Time of Day and Day of Week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM	0	0	1	1	0	0	0	2
06:00PM-08:59PM	2	0	1	0	0	0	0	3
03:00PM-05:59PM	1	0	1	0	1	1	0	4
Noon-02:59PM	2	0	0	0	0	0	0	2
09:00AM-11:59AM	0	1	0	1	0	0	0	2
06:00AM-08:59AM	0	0	0	0	1	0	0	1
03:00AM-05:59AM	0	0	0	0	0	0	0	0
Midnight-02:59AM	0	0	0	0	0	0	0	0
Total	5	1	3	2	2	1	0	14

Data Source: Statewide Integrated Traffic Record System (SWITRS) 2016-2020; 2019 and 2020 data are provisional as of Mar. 2022

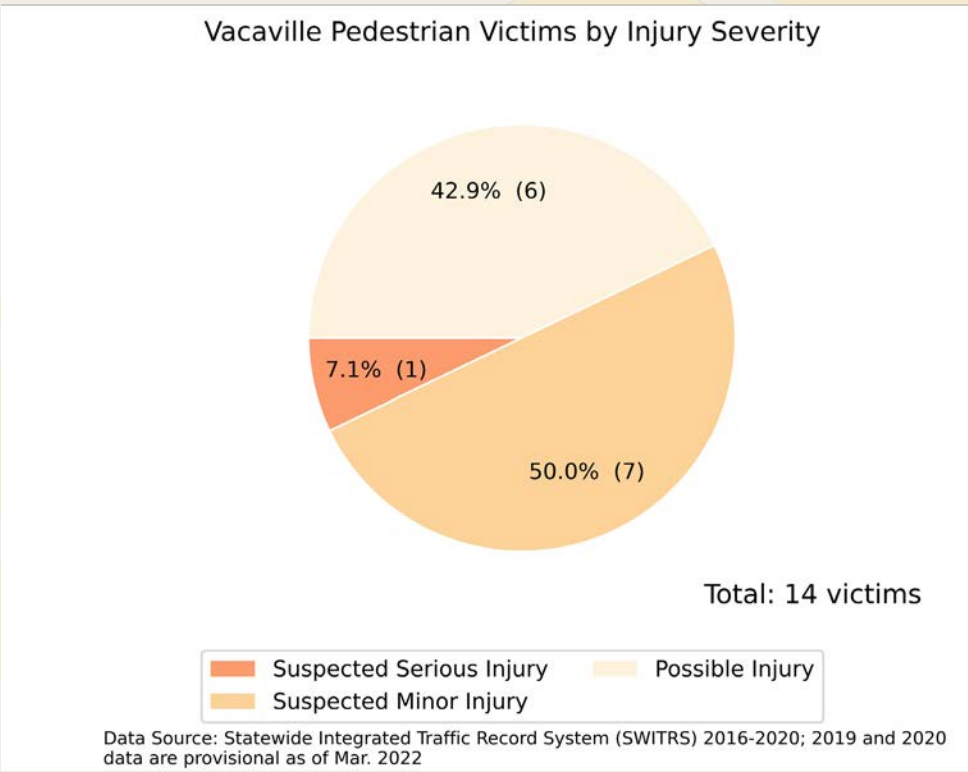
Pedestrian Crashes 2016-2020

By injury severity

14 victims were injured in 14 pedestrian crashes.

- All victims were pedestrians, with one crash also injuring a bicyclist.

The 1 serious injury victim was a pedestrian.



Pedestrian Crashes 2016-2020

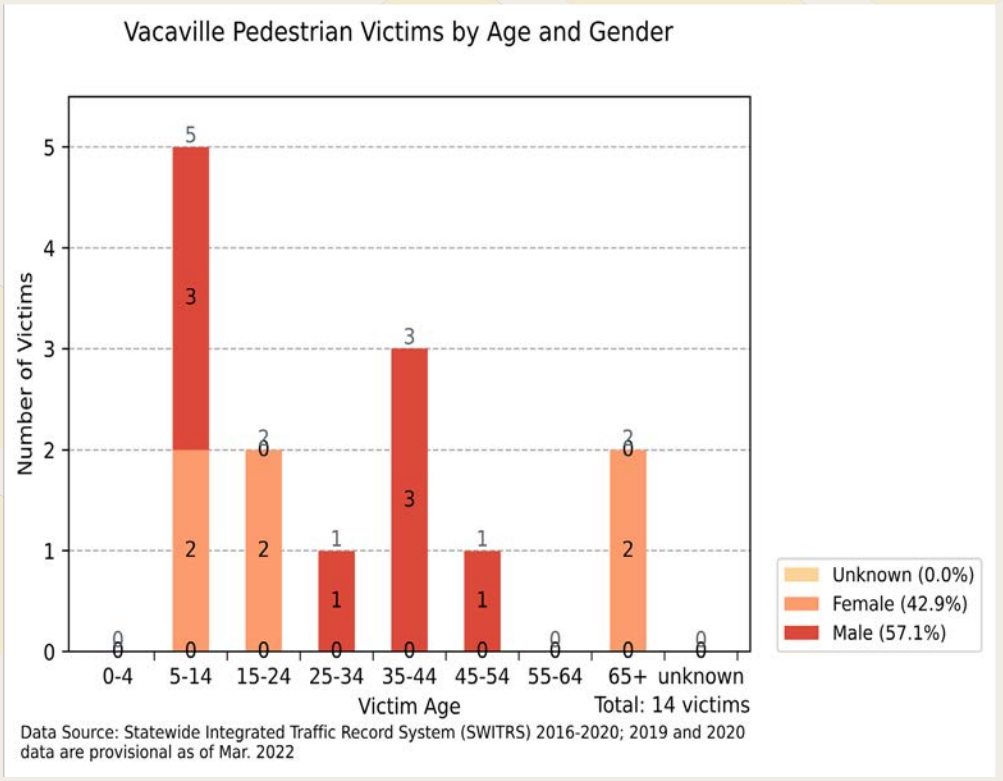
By victim age & gender

42.8% victims were working adults (ages 19-59).

- All suffered minor injuries.
- 83.3% were male.

42.8% victims were school-age (ages 5-18).

- Most suffered minor injuries with 1 victim suffering serious injuries.
- 50% were female, 50% were male.



Pedestrian Crashes 2016-2020

Most frequently cited violations in injury crashes

5 crashes

21950a. Driver does not yield the right-of-way to a pedestrian at a marked or unmarked crosswalk.

2 crashes

21954a. Pedestrian does not yield the right-of-way when not within a marked or unmarked crosswalk at an intersection.

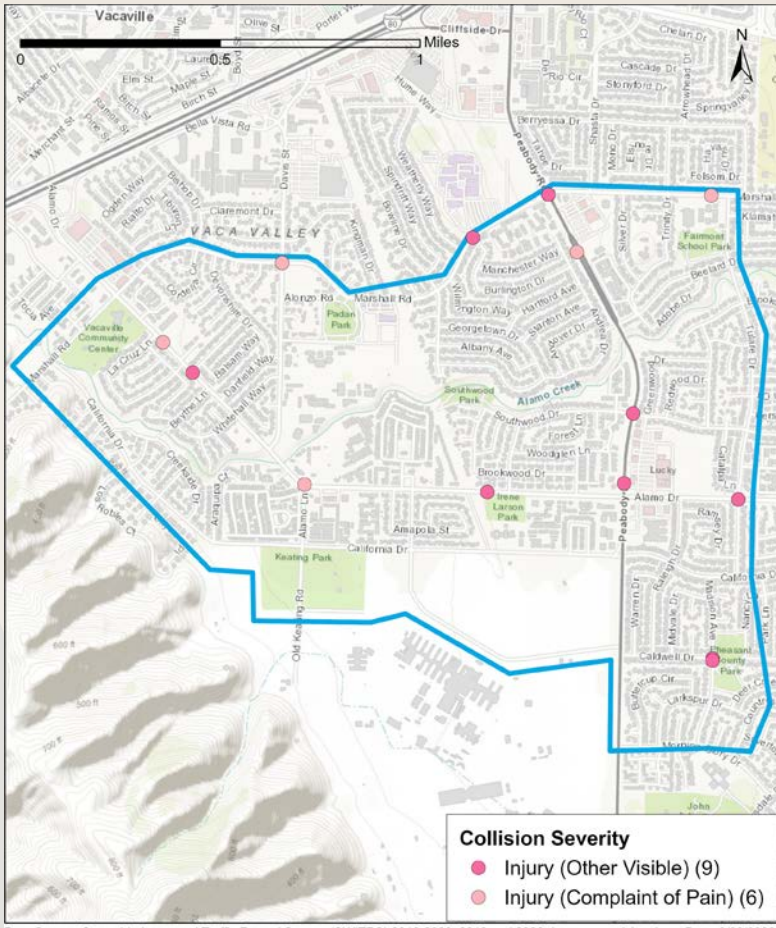
Bicycle Crashes 2016-2020

Crashes were concentrated along:

- Alamo Drive (5 crashes)
- Marshall Road (4 crashes)
- Peabody Drive (4 crashes)

Top crashes intersections were

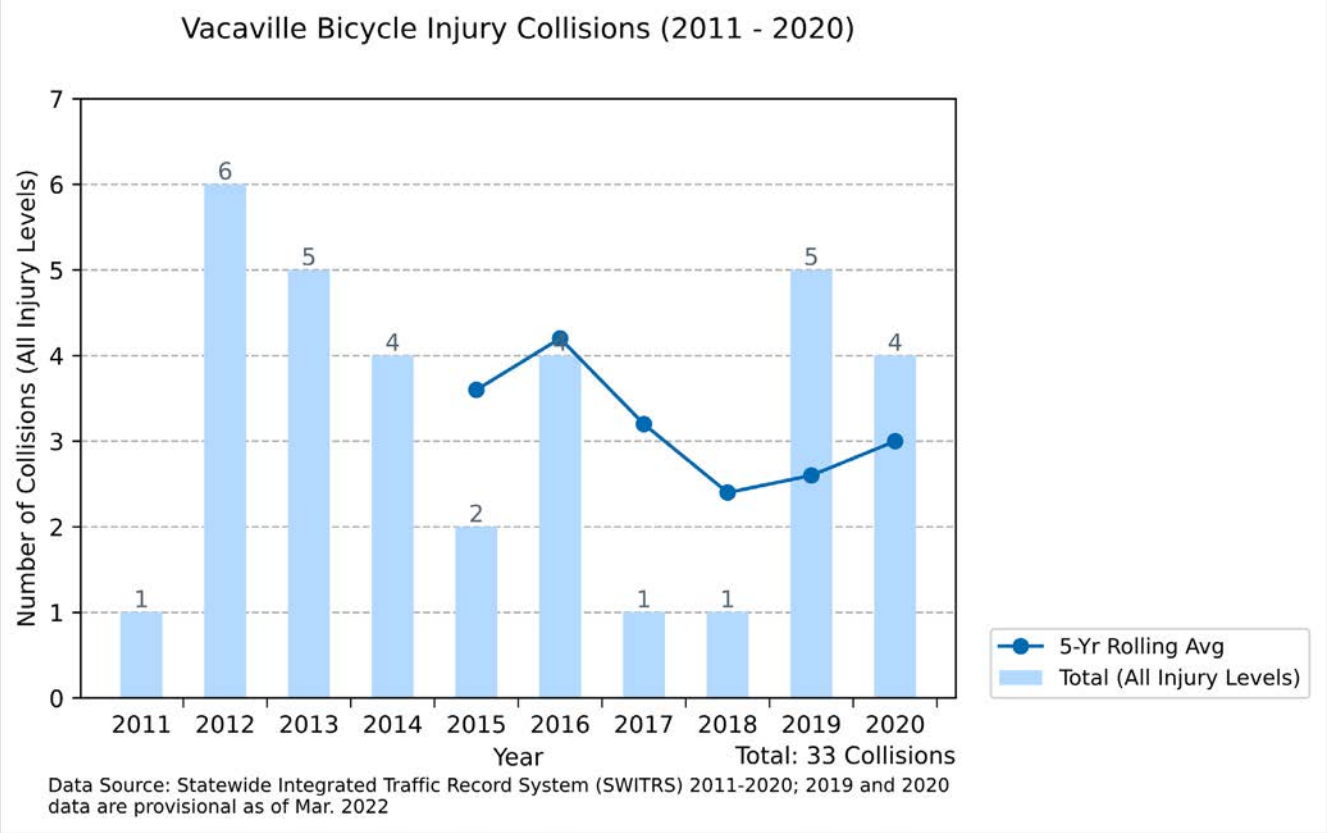
- Madison Avenue and Caldwell Drive (2 crashes)
- Peabody Drive and Marshall Road (3 crashes)



Data Source: Statewide Integrated Traffic Record System (SWITRS) 2016-2020; 2019 and 2020 data are provisional as of Mar. 2022

Date: 3/20/2022

Bicycle Crashes 2011-2020



Bicycle Crashes 2016-2020

By time of day & week

Vacaville Bicycle Collisions by Time of Day and Day of Week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM	0	0	0	0	0	1	0	1
06:00PM-08:59PM	0	0	1	0	0	0	0	1
03:00PM-05:59PM	0	1	0	0	0	0	0	1
Noon-02:59PM	2	2	2	0	1	0	0	7
09:00AM-11:59AM	0	0	0	1	0	1	0	2
06:00AM-08:59AM	0	1	0	1	1	0	0	3
03:00AM-05:59AM	0	0	0	0	0	0	0	0
Midnight-02:59AM	0	0	0	0	0	0	0	0
Total	2	4	3	2	2	2	0	15

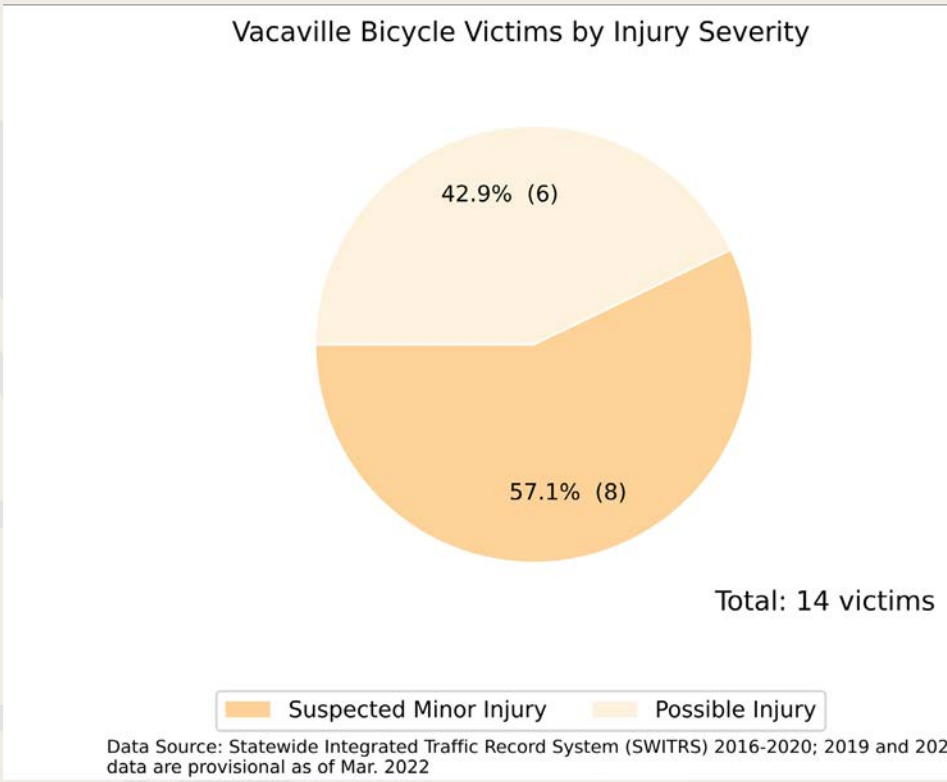
Data Source: Statewide Integrated Traffic Record System (SWITRS) 2016-2020; 2019 and 2020 data are provisional as of Mar. 2022

Bicycle Crashes 2016-2020
By injury severity

14 victims were injured in 14 bicycle crashes

- All victims were bicyclists, with one crash also injuring a pedestrian.

There were zero fatal or serious injury victims.



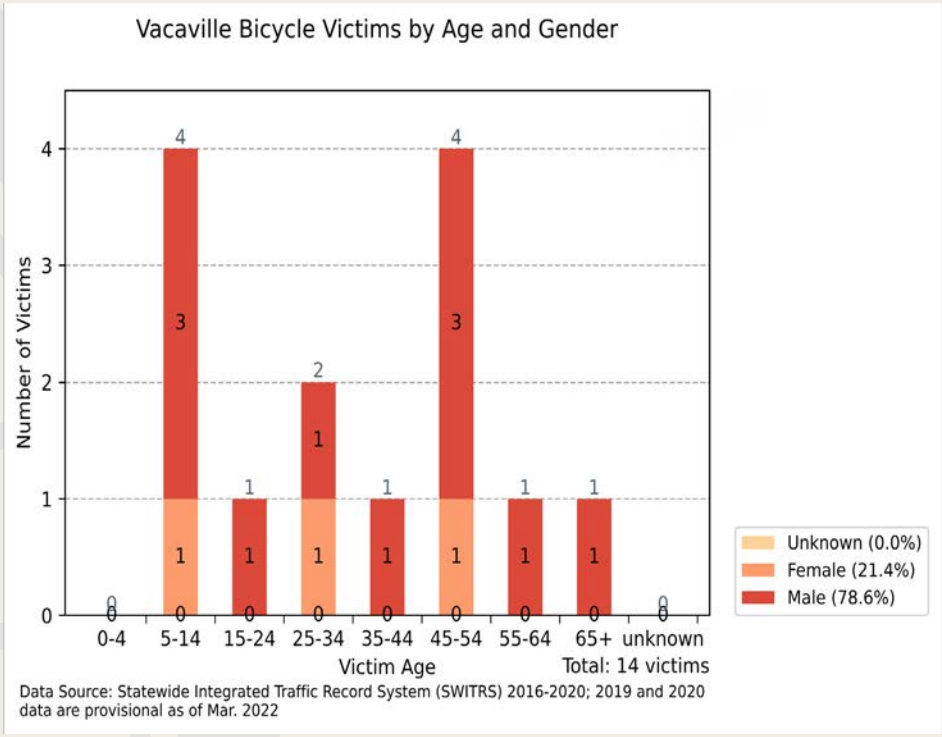
Bicycle Crashes 2016-2020
By victim age & gender

35.7% of victims were school age (5-18)

- They all suffered minor injuries.
- No victims were seriously injured.
- 80% were male.

57.1% of victims were working adults (ages 19-59)

- They suffered minor injuries.
- No victims were seriously injured.
- 75% were male.



Bicycle Crashes 2016-2020

Most frequently cited violations in injury crashes

5 crashes — **21650.1** Failure to ride a bicycle in the same direction on the roadway as vehicles are driven.

3 crashes — **21202a.** Bicyclist failure to ride on right-hand edge of roadway if riding below the normal speed of traffic.

3 crashes — **22107.** Unsafe turning or moving right or left on a roadway or turning without signaling.

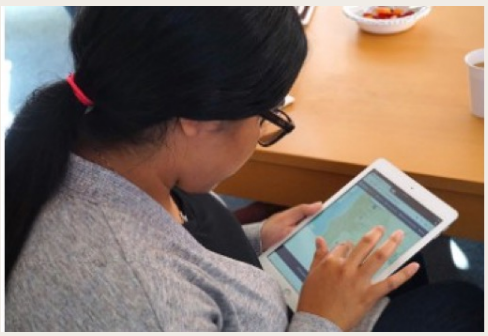
Additional Resources

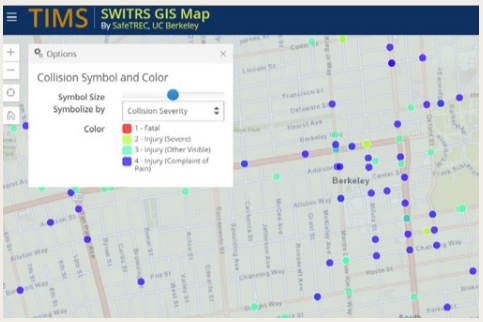
Street Story

Street Story is a tool for collecting community feedback on transportation safety issues.

Share stories on Street Story of where you've been in a crash or near miss, or where you feel safe or unsafe traveling.

https://streetstory.berkeley.edu





Transportation Injury Mapping System (TIMS)

TIMS is a web-based tool that allows users to analyze and map data from California's Statewide Integrated Traffic Records System (SWITRS).

To further explore collision data, register for a free account to access the tools and resources on TIMS.

https://tims.berkeley.edu

Thank you for your interest in the Community Pedestrian and Bicycle Safety Training Program.

For more information, please visit:

https://safetrec.berkeley.edu/programs/cpbst or https://www.calwalks.org/cpbst

Berkeley SafeTREC

SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

California Walks

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CALIFORNIA OFFICE OF TRAFFIC SAFETY