SUMMER 2021

Community of Castro Valley Summary and Recommendations Report

COMMUNITY PEDESTRIAN & BICYCLE SAFETY TRAINING PROGRAM

Creating Safer Streets for Walking and Biking

California Walks
Stepping Up for Health, Equity, & Sustainability

Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

OTS
CALIFORNIA OFFICE OF TRAFFIC SAFETY

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Acknowledgments

Thank you to the Planning Committee for inviting us into their community and partnering with us to make the Community of Castro Valley a safer place to walk and bike. In particular, their contributions prompted meaningfully informed discussions and strengthened the workshop's outcomes.

We also want to acknowledge the Muwekma, Chocenyo, and Ohlone peoples as the traditional land caretakers of the Community of Castro Valley.

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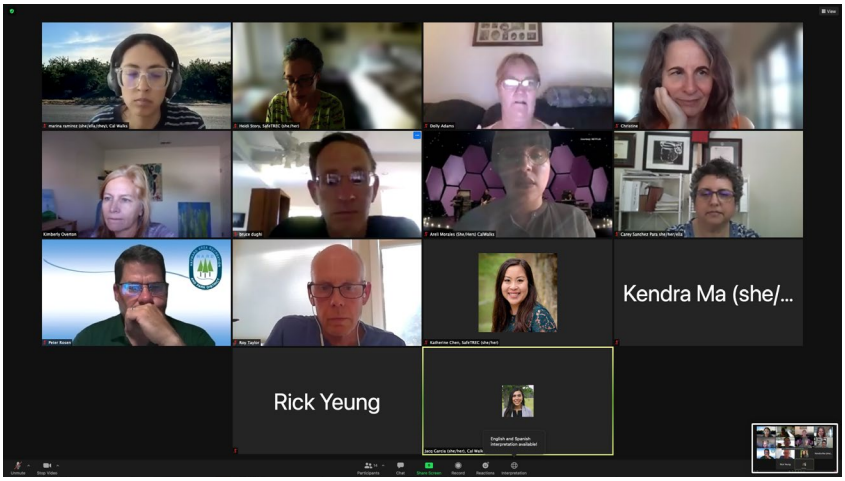

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Introduction

The Community Pedestrian and Bicycle Safety Training (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 Framework 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 & SafeTREC (The Project Team) works with the local Planning Committee, a group of local stakeholders, over the course of 6-8 weeks to develop workshop goals and tailor the curriculum to address the community's needs and priorities. The virtual training convenes the larger local community to conduct walking and biking assessments of key areas in the community, learn about Safe System strategies to alleviate walking and biking concerns and develop preliminary action plans for priority infrastructure and community programs.

The Castro Valley CPBST workshop was held virtually and convened 15 participants on June 22, 2021, including residents, and representatives from the Castro Valley Unified School District Board, Hayward Area Recreation District, Alameda County Public Works, Castro Valley Matters, and BikeWalk Castro Valley. Castro Valley Matters and BikeWalk Castro Valley requested that the Project Team conduct a CPBST in the Community of Castro Valley (Castro Valley) with the goals to:

1. Improve walking and biking accessibility to community assets, such as the downtown commercial area, the Castro Valley Community Park and the surrounding canyonlands;
2. Increase community education around safe walking, biking, and driving behaviors; and,
3. Create a welcoming streetscape which encourages more people to walk and bike in Castro Valley.

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

Background

Local Policies and Plans

As an unincorporated community, Castro Valley does not have designated funding for transportation safety improvements or traffic enforcement. Instead, they must demonstrate their need to compete with the county's other priority locations. The Alameda County Bicycle and Pedestrian Master Plan for Unincorporated Areas highlights Castro Valley's road safety needs by recommending bike lanes along Redwood Road, Heyer Road, and Somerset Avenue. The plan identifies Redwood Road as a high crash corridor and recommends sidewalk installation on this road. In regard to Lake Chabot Road, this plan recommends a separated bike lane and sidewalk installation.

Next, the Alameda County Climate Action Plan for Unincorporated Areas acknowledges that walking and biking are climate-neutral modes of travel; thus, a key strategy in the county-wide plan is making improvements for pedestrians and bicyclists. Among the suggested transportation strategies and measures are improving bicycle infrastructure near community activities (T-1), developing appropriate bicycle infrastructure for high traffic intersections and corridors (T-2), increasing the number of bicycle racks and storage facilities in underserved civic and commercial areas (T-3), enhancing pedestrian infrastructure within easy walking distance from community activity centers (T-4), expanding the Traffic Calming Program to improve pedestrian safety (T-5), improving pedestrian connectivity and route choice in neighborhoods (T-6), and working with school districts to develop School Alternative Transportation Plan to improve/expand walking school bus, safe routes to school program, and school bus services (T-7).

The Castro Valley General Plan acknowledges that the current bicycle network in Castro Valley is limited and disconnected. This plan also recommends bike lanes and buffered bike lanes along Redwood Road, Somerset Avenue, Lake Chabot Road, and Heyer Avenue. Additionally, this plan states that the streetscape in Castro Valley is primarily car-oriented, with wide roadways, high traffic levels, and discontinuous sidewalks that are not conducive to walking.

Pedestrian and Bicycle Collision History

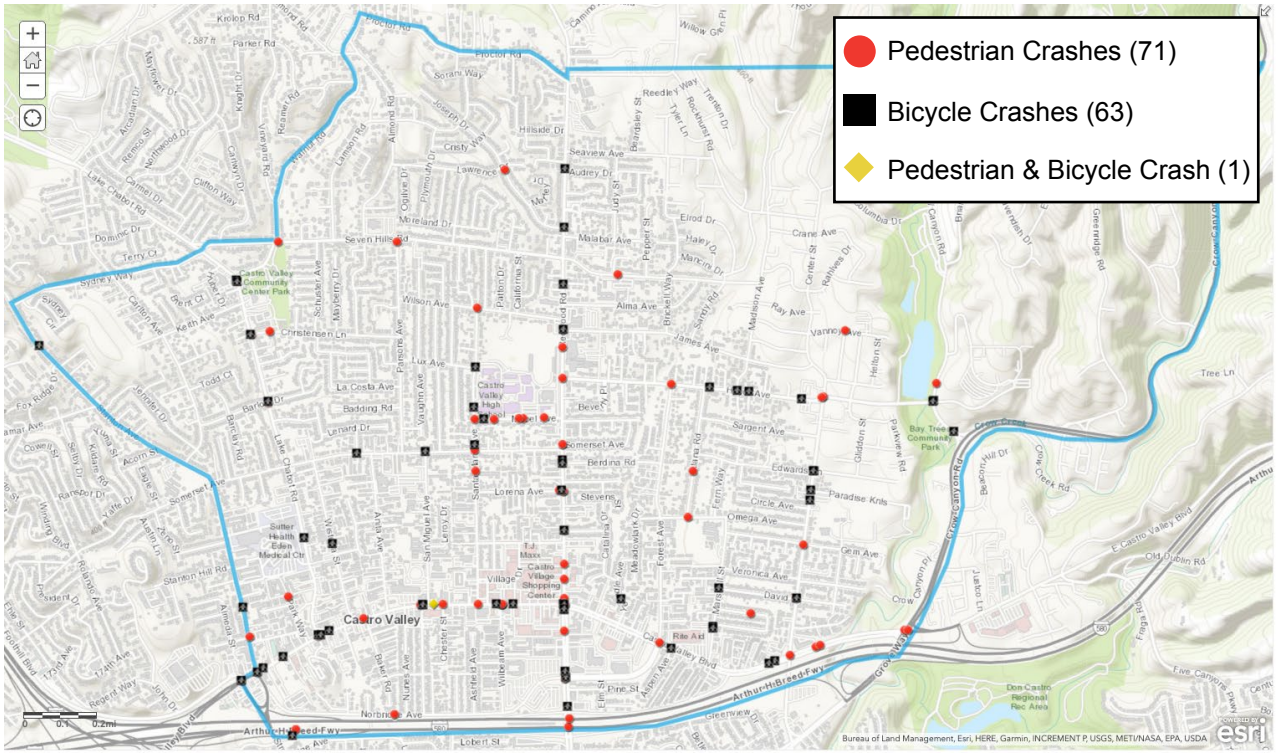
The following data is based on police-reported pedestrian and bicycle crashes resulting in injuries to pedestrians[1] and bicyclists in the workshop focus area in Castro Valley. Data reported in this section are from the Statewide Integrated Traffic Records Systems (SWITRS) for the years 2010 to 2019. Collision data for 2019 is provisional as of December, 2020. A full discussion of the pedestrian and bicycle collision data can be found in the Appendix.

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.

Community Workshop Boundaries

Castro Valley is an unincorporated community in Alameda County. The boundaries for the focus area of this workshop are seen in the map below and as listed: the area north of the BART station, from Stanton Avenue in the west to Crow Canyon Road in the east. The northern boundary follows Proctor Road to Redwood Road, and then a bird's eye path to Crow Canyon Road.

The majority of the community's crashes occurred within the workshop area, including 83.7% of pedestrian crashes and 70.3% of bicycle crashes. Nearly one-third (31.5%) of fatal and severe injury crashes involved a pedestrian or bicycle in the focus area, which was slightly higher than 24.2% in California and 28.5% in Alameda County. Furthermore, only 25.9% of fatal and serious injury crashes in the focus area involved multiple motor vehicles compared to 40.0% and 42.1% in California and Alameda County respectively.



Pedestrian and bicycle crashes in the focus area, 2015-2019. Source: SWITRS 2015-2019; data from 2019 is provisional as of March 2021.

Pedestrian crashes

Over the 10-year period between 2010 and 2019, pedestrian crashes peaked in 2016 with 20 crashes followed by a gradual decline. In the most recent five years of data available, 2015 to 2019, there were 72 pedestrian injury crashes in the focus area, including 13 serious injury crashes. The highest concentration of pedestrian crashes was on Castro Valley Boulevard (27) and Redwood Road (26), with relatively high numbers also on Santa Maria Avenue (7), Mabel Avenue (5), and Heyer Avenue (5). Six pedestrian crashes occurred near the Wilbeam Avenue/Castro Valley Boulevard intersection. Six of the serious injury crashes happened on Redwood Road between Somerset Avenue and Castro Valley Boulevard; another four of the serious injury crashes occurred on Castro Valley Boulevard.

The Planning Committee attributed some of the crash risk in this area to poor lighting and drivers not yielding to pedestrians at crosswalks, which was supported by the data. One quarter of pedestrian crashes occurred in the winter months of December and January. Over half (58.3%) of pedestrian crashes occurred during the morning and evening commutes, between 6:00 a.m. and 9:00 a.m. and 3:00 p.m. and 6:00 p.m. Crashes were more likely to occur on a weekday than weekend, with highest number of crashes on Thursday followed by Tuesday. The primary crash factor in 51.4% of pedestrian crashes was the driver not yielding the right of way to a pedestrian at a marked or unmarked crosswalk (CVC 21950a); of the 13 serious injury pedestrian crashes, CVC 21950a accounted for 10 crashes or 76.9% of the serious injuries.[2]

Per the Planning Committee, the victim demographic seems to align with the pedestrian demographic in this area: students. There were 77 victims in the 72 pedestrian injury crashes and four crashes had multiple pedestrian victims. Victims were more likely to be school age five to eighteen (36.4%) or adults age sixty and older (23.4%). Of note, 18 (or 23.4%) of victims were between the ages of 14 and 16. Many of these crashes were concentrated near Castro Valley High School.

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 publically available. Street Story is available at: https://streetstory.berkeley.edu

2 Pedestrians have the right-of-way at marked and unmarked crossings, and drivers are legally required to yield to pedestrians in these instances. However, when pedestrians cross outside of a marked or unmarked crosswalk, pedestrians must yield the right-of-way to drivers. A pedestrian is legally allowed to cross outside of a marked or unmarked crossing between two intersections where one or none of the intersections is signalized but only after the pedestrian yields the right-of-way to oncoming drivers. This is not the same as "jaywalking," which refers to crossing outside of a marked or unmarked crossing between two signalized intersections.

Bicycle crashes

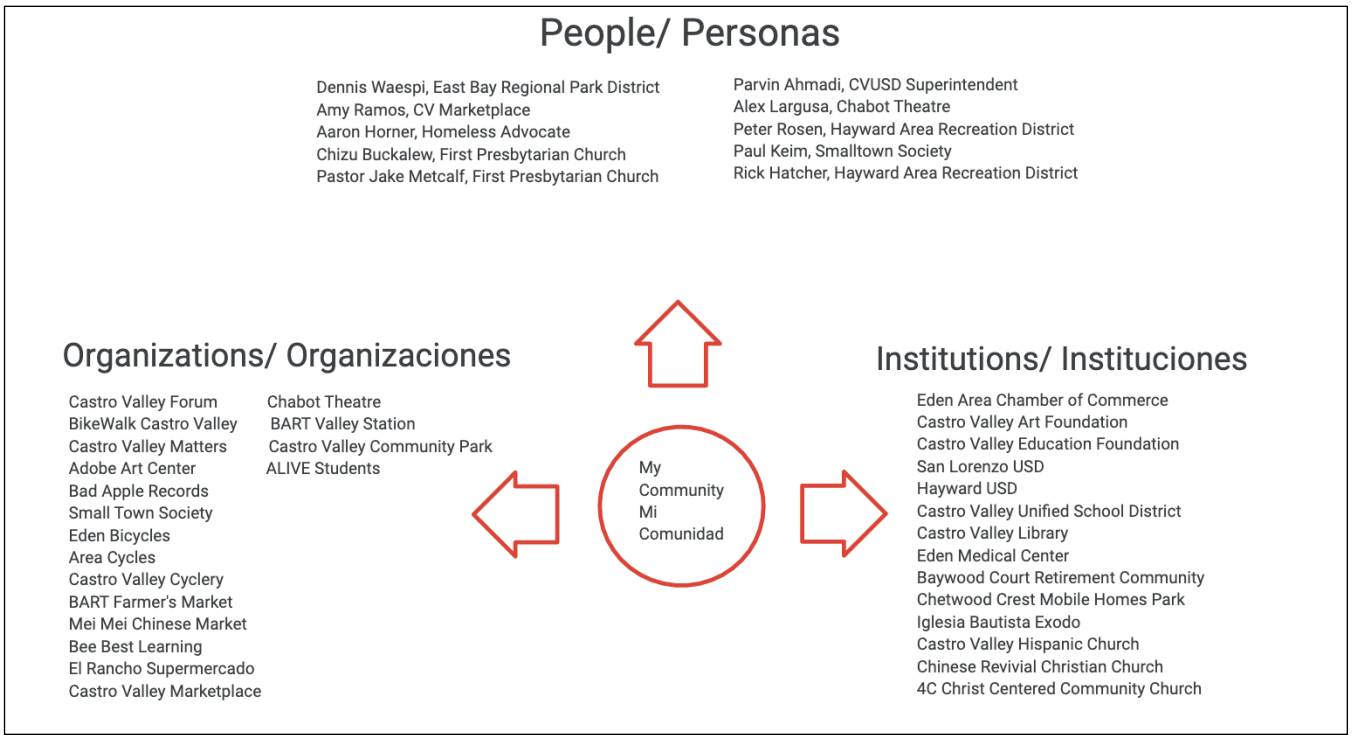
Over the 10-year period between 2010 and 2019, bicycle crashes appear to neither definitively increase or decrease, with the most recent peak of 17 crashes in 2018. In the most recent five years of data available, 2015 to 2019, there were 64 bicycle crashes, including six serious injury crashes. Similar to pedestrian crashes, the highest concentration of bicycle crashes was on Castro Valley Boulevard (22) and Redwood Road (18). There were also a relatively higher number of bicycle crashes on Center Street (8), Lake Chabot Road (8), Heyer Avenue (6), and then five each on San Miguel Avenue, Santa Maria Avenue, and Stanton Avenue. Of the six serious injury crashes, four were on Castro Valley Boulevard and two occurred on Heyer Avenue. The Planning Committee explained that most of the bike infrastructure in Castro Valley is on east-west corridors and that traveling north-south entails elevation changes which makes bicycling riskier because both drivers and bicyclists travel at higher speeds on the downhill.

Bicycle crashes peaked in June and October with nearly twice as many crashes per month as other months. Over half (59.4%) of bicycle crashes occurred during the morning and evening commutes, between 6:00 a.m. and 9:00 a.m. and 3:00 p.m. and 6:00 p.m. Thursdays (23.4%) had the highest frequency of bicycle crashes followed by Saturday afternoon and evening between 3:00 p.m. and 9:00 p.m. (12.5%). The most frequently recorded primary crash factor for bicycle crashes was unsafe lane changes (CVC 22107) which was associated with 22 crashes (or 34.4%).

There were 64 victims in these bicycle crashes, including six serious injuries. The majority of the victims (76.6%) were male. Over one-third (39.1%) of the victims were school age youth; more specifically, 14 victims (or 21.9%) were youth between the ages of 11 and 14.

Asset Map

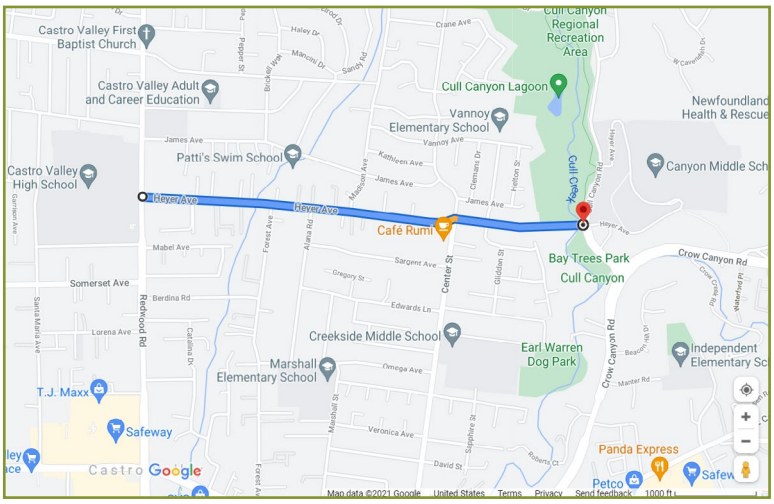
Prior to the virtual workshop, the Planning Committee identified strengths and resources that could help the community achieve their walking and biking safety goals. Assets refer to people, organizations, agencies, financial resources, community knowledge, skill sets, and political connections within the community. The Asset Map below is a visual aid to highlight the resources available, service overlaps, and potential collaborations to keep the momentum for walking and biking safety work going.



Walking & Biking Assessment

During the workshop, participants took part in a virtual walking and biking safety assessment along 3 routes frequently used by community residents. Participants were asked to identify community assets, assess infrastructure conditions, and share how road users engage with the built environment. The assessment was an informal snapshot of pedestrian and bicycle travel conditions. The next few pages provide a brief summary of the walking and biking assessment.

Route 1: Heyer Avenue



Focus

Heyer Avenue is an east-west traveling arterial that connects the only public high school in the community, Castro Valley High School, to Creekside Middle School and Canyon Middle School. Students walk along Heyer Avenue to get to and from school. Additionally, Heyer Avenue connects residents to the bustling downtown center via Redwood Road, a north-south traveling corridor.

Strengths

1. The north and south pedestrian crosswalk signals at the Heyer Avenue/Redwood Road intersection provide sufficient time for residents to safely cross the road.
2. Residents shared that the new Rectangular Rapid Flashing Beacon at the Heyer Avenue/ Alana Road intersection has effectively slowed driver speed, creating safer walking and biking conditions.
3. The sidewalk on both sides of Heyer Avenue from Center Street to Crow Canyon Road are consistent and well lit. These conditions create a safer highly trafficked route for students walking to and from Creekside Middle School and Canyon Middle Schools.

TOP LEFT: The crosswalk in front of Castro Valley High School is painted yellow and has continental markings. BOTTOM LEFT: The sidewalks and bike sharrows along Heyer Avenue, approachng Crow Canyon Road makes walking and biking more comfortable. RIGHT: The Rectangular Rapid Flashing Beacon at the Heyer Avenue/Alana Road intersection alerts drivers about the pedestrian crossing.

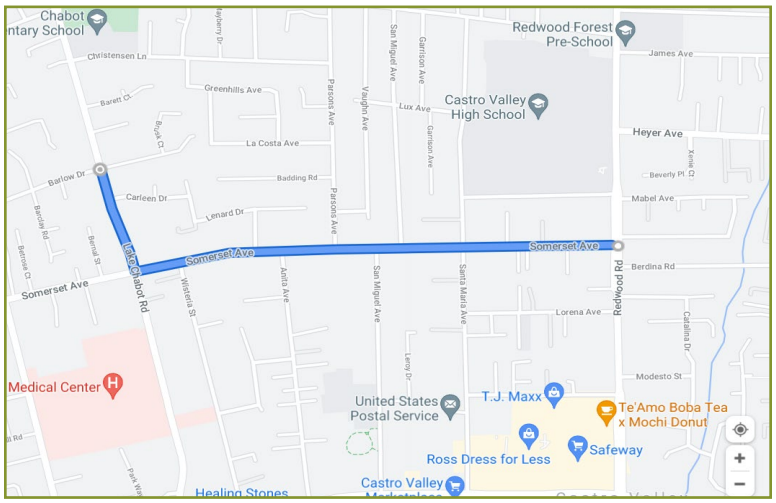
Route 1: Heyer Avenue *(continued)*

Concerns

1. Narrow road widths along most Castro Valley roadways, especially Somerset Avenue and Seven Hills Road, prevents the installment of much needed walking and biking infrastructure improvements, such as bike lanes and sidewalks.
2. Castro Valley's streets were not developed on a grid, which poses challenges for walking and biking the community. Many streets are dead-ends or do not connect to major corridors in the community. This capillary system design also poses serious challenges for connectivity when installing walking and biking safety infrastructure. Furthermore, this design concentrates all driver, pedestrian and bicyclist traffic along the few major corridors. Specifically, Castro Valley Boulevard is the only corridor that runs the entirety of the community from east to west. Conversely, only three corridors intersect the boulevard from north to south: Lake Chabot Road, Redwood Road, and Crow Canyon Road. Thus, driver traffic cannot be redirected to other corridors.
3. The rolling hills topography of Castro Valley pose serious challenges for walking and biking in the community because of high driver speeds, low visibility related to the staggering road elevation, and the lack of proper bike and pedestrian infrastructure for people walking and biking in the area. Residents noted that many parents who live in the canyonlands do not allow their teenagers to walk or bike to Castro Valley High School because of these conditions.

LEFT: A vehicle parked on the paved shoulder along Heyer Avenue obstructs the only area where pedestrians and bicyclists can travel. RIGHT: Varying elevations along Lake Chabot Road and other corridors in the community often discourage residents from walking and biking.

Route 2: Somerset Avenue & Lake Chabot Road



Focus

Lake Chabot Road is a north-south arterial that connects people to the Lake Chabot Regional Park north of Castro Valley. Somerset Avenue is one of the main east-west corridors in Castro Valley and is a primary route for students and families walking, biking, and driving to Castro Valley High School.

Strengths

1. The posted speed limit on Lake Chabot Road decreased from 40 miles per hour to 35 miles per hour in 2020, increasing participants' confidence that the lower posted speed limit will result in lower driver speeds.
2. Participants liked the new pedestrian features on Somerset Avenue/Santa Maria Avenue intersection, including the continental crosswalk markings on all legs and curb ramps with truncated domes on each corner, which improve visibility and accessibility. Residents would like to see these improvements at more intersections in the community.
3. Participants liked the new sidewalks, buffered bike lanes, bike signage, visible traffic lanes and crosswalks on Santa Maria Avenue, which clearly separates spaces for different road users. They would like to see these improvements on more roadways throughout Castro Valley

The yellow continental crosswalk markings along with the buffered bike lane, bike signage, and road markings improve visibility of students and their families crossing at the Somerset Avenue/Santa Maria Avenue intersection.

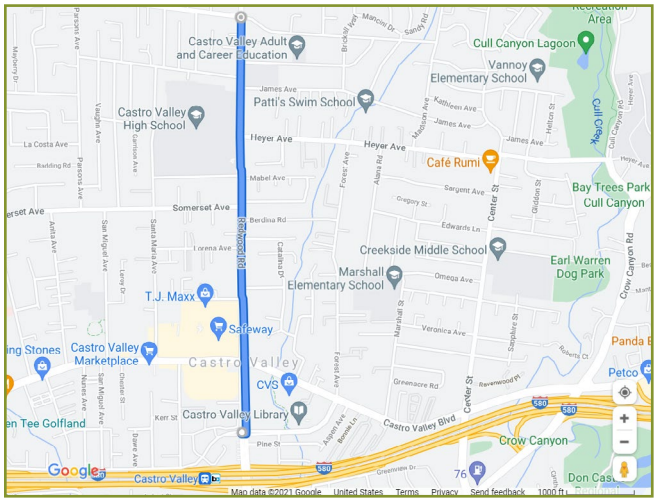
Route 2: Somerset Avenue & Lake Chabot Road *(continued)*

Concerns

1. Many bicyclists use Lake Chabot Road to access Castro Valley Community Park and Lake Chabot Regional Park. However, there are no marked bike lanes on Lake Chabot Road between Seven Hills Road and Castro Valley Boulevard. Participants reported that it is intimidating to bike here because drivers often exceed the posted speed limit of 35 miles per hour and the narrow travel lanes put bicyclists in the door zone of parked vehicles.
2. Lake Chabot Road is a four-lane corridor, about 75 feet wide, with many unsignalized intersections and unmarked crosswalks. Participants reported that drivers often do not yield the right of way to pedestrians, so they are often left to wait several minutes before being able to cross Lake Chabot Road.
3. The discontinuous and narrow sidewalks along Somerset Avenue create challenges for students walking to and from Castro Valley High School and Our Lady of Grace Catholic School and for residents walking their dogs. Utilities and trash cans on the sidewalks further exacerbate accessibility concerns, especially for people using an assisted mobility device or walking with a stroller.
4. Somerset Avenue, from Lake Chabot Road to Redwood Road, is congested during school arrival and dismissal time. Parked vehicles and residential garbage cans along the curb on trash day contribute to narrowing the road for all users. As a result, bicyclists are forced to weave in and out of traffic or ride on the narrow sidewalk, where pedestrians walk. Participants reported that they have experienced drivers exhibit hostility towards them, both as pedestrians and bicyclists, on this corridor.
5. Businesses at the Somerset Avenue/Parsons Avenue intersection encroach on the public right-of-way because buildings and parking lots extend into the sidewalk. Crosswalks at this intersection are restricted to two legs and are faded. Participants report that this area is not illuminated well in the evening.

LEFT: This northbound view of the Lake Chabot Road/Barlow Drive intersection shows a discontinuous sidewalk that becomes a dirt path, a bus stop, four travel lanes for drivers, and no marked bike lanes. CENTER: An utility pole and box narrow the walking space available on Somerset Avenue. Again, the paved sidewalk is discontinuous and becomes a dirt path. RIGHT: Standard crosswalk markings at the Somerset Avenue/Parsons Avenue intersection are faded making it more difficult for drivers to see the crosswalk.

Route 3: Redwood Road



Focus

Redwood Road is the main north-south arterial that connects Castro Valley to the Bay Area. This route goes from Norbridge Avenue at the Castro Valley Bay Area Rapid Transit (BART) station and transportation hub along Redwood Road to Seven Hills Road. Redwood Road is also the main commercial corridor to access grocery stores, shops, schools, and libraries.

Strengths

1. The Castro Valley BART station and transportation hub is an asset to the community of Castro Valley as it connects Castro Valley to the greater Bay Area and world via the San Francisco International and Oakland International Airports
2. Castro Valley Pride is working with Castro Valley High School students to advocate and fund rainbow crosswalks in front of the High School to promote pedestrian safety and celebrate equity through LGBTQ visibility in the community.
3. Leading pedestrian intervals commonly known as pedestrian head starts have been added to various signaled intersections in Castro Valley, including at the Redwood Road/Heyer Avenue, Castro Valley Boulevard/Wilbeam Avenue, and Castro Valley Boulevard/Santa Maria Ave intersections. This prioritizes pedestrian safety by providing extra time to cross and reducing points of conflict by allowing pedestrians to cross before drivers are signaled to “go.”
4. Alameda County Public Works Department has plans to install a pedestrian activated hybrid beacon at the Modesto Street/Redwood Road intersection. This pedestrian activated hybrid beacon signal will heighten crosswalk visibility and promote driver compliance with lowering speeds and stopping at the crosswalk.

A painted utility box at the corner of Norbridge Avenue/Redwood Road facing the BART station parking lot and transportation hub makes the area feel more inviting.

Route 3: Redwood Road *(continued)*

Concerns

1. Redwood Road is a four-lane corridor with on-street parking and turning lanes at signalized intersections. The large width of this road combined with multiple lanes, creates an environment that encourages drivers to exceed the posted 35 miles per hour speed limit. Speeding drivers create uncomfortable and unsafe walking and biking conditions that have resulted in many pedestrian injuries along Redwood Road.
2. The signal timing at the Castro Valley Boulevard/Redwood Road intersection feels like a “race to catch the light” according to participants. Specifically, drivers speed past the controlled intersection at Castro Valley Boulevard which makes crossing as a pedestrian or bicyclist dangerous with multiple serious injuries at the intersection as reported in SWITRS. Drivers also speed as they approach the onramp and as they descend from the off-ramp of Highway 580 along Redwood Road.
3. Participants report that drivers turning right onto Castro Valley Boulevard from Redwood Road often do not check for pedestrians and bicyclists, leading to near misses and potentially leading to the reported serious pedestrian injuries and visible bicyclist injuries summarized in SWITRS from 2015-2019.
4. The buffered bike lane ends on the north end of the Castro Valley Boulevard/Redwood Road intersection, after which a bicycle sharrow is striped on the Redwood Road northbound lane. The inconsistency in bike infrastructure along this corridor causes confusion, conflict and unsafe conditions for all road users.

LEFT: The Redwood Road/Castro Valley Boulevard intersection is wide, which means pedestrians have to cover a lot of distance to cross the street. RIGHT: A southbound view of the marked sharrows north of the Redwood Road/Castro Valley Boulevard intersection where bicyclists share the road with drivers.

Route 3: Redwood Road *(continued)*

Concerns *(continued)*

5. Shopping centers, like the one at the Castro Valley Boulevard/Redwood Road intersection, contribute to traffic congestion which leads to aggressive driving, blocked pedestrian sidewalk access, and potential crashes. At the marked and signalized shopping center crosswalk north of Redwood Road/Castro Valley Boulevard, a driver hit a member from Castro Valley Matters as they were walking across the crosswalk with the right of way.
6. Castro Valley High School pedestrian and bicycle access is obstructed by driver congestion around the Redwood Road/Heyer Avenue intersection. The lack of accessibility for non-motorized transportation deters students from walking and biking to school.
7. High driver speeds and drivers' failure to yield to pedestrians at the Jameson Way/Redwood Road intersection lead to many near misses between drivers, bicyclists and pedestrians. As a consequence, residents avoid crossing at this intersection, as well as at other mid-block crossings and uncontrolled intersections along Redwood Road, effectively limiting the mobility of pedestrians and bicyclists.
8. The downhill inclination of Redwood Road naturally encourages drivers to speed. Participants report that drivers appear to drive above 25 miles per hour school zone speed limit at the James Avenue/Redwood Road intersection. The high driver speeds make walking and biking intimidating, creating hesitation and fear around non-motorized transportation.

LEFT: The crosswalk for the retail center and Peet's Coffee, where the Castro Valley Matters member was struck in a hit and run crash. TOP RIGHT: The Redwood Road/Heyer Avenue intersection with the main Castro Valley High School crosswalk is often congested during arrival and dismissal. BOTTOM RIGHT: Despite the pedestrian signage and marked crosswalk at the Jameson Way/Redwood Road intersection, drivers often fail to yield.

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 knowledge and may need to be further adjusted by the community.

Community Recommendations

Workshop participants were assigned into three groups to share their ideas for creating a safer environment for walking and biking. Participants then ranked these ideas and outlined preliminary plans for implementing the highest priority project. Participants considered the following community programs and infrastructure projects:

- Launch a temporary sidewalk demonstration along Heyer Avenue as an opportunity for residents to reimagine their community with a dedicated sidewalk for pedestrians and to test out the safety enhancement;
- Develop a county-led Education Safety Messaging Campaign to educate both drivers and bicyclists of the rules of the roadways;
- Create a buffered bike lane network in Castro Valley, including along Somerset Avenue to reduce the points of conflict on the road and provide safe passage for bicyclists;
- Develop parking restriction signs along Somerset Avenue near Redwood Road at school arrival and dismissal times to reduce congestion and improve visibility between drivers, pedestrians, and bicyclists sharing the road;
- Paint a colorful Pedestrian Scramble at Heyer Avenue/Redwood Road to increase pedestrian safety and reduce wait time for pedestrians;
- Install high-visibility, reflective markings on all crosswalks and bike infrastructure to increase visibility, given the rolling hills, narrow streets, and parked vehicles on paved shoulders;
- Reconfigure Lake Chabot Road with the addition of buffered or protected bike lanes to make the road more accessible to and safe for bicyclists, as well as to enhance road user visibility by designating spaces on the road only for bicyclists;
- Install more bicycle and pedestrian fluorescent signs and road markings at large to make drivers more aware of other users in the area; and
- Expand and repair the sidewalk network to improve walkability and enhance residents' access to community activity centers.

Workshop participants developed preliminary action plans for the community programs and infrastructure projects they identified as the highest priority. The following tables are a summary of their efforts.

Project Name: Temporary Sidewalk Demonstration Project

Project Description: BikeWalk Castro Valley and Castro Valley Matters will work with community residents to plan a week-long temporary sidewalk demonstration along Heyer Avenue, from Redwood Road to the Kelly Canyon Creek.

Project Goals:

1. A trial run for residents to experience and provide feedback on a sidewalk leading to Castro Valley Creek;
2. Educate residents about safer street design and reimagining roadways for pedestrians and bicyclists; and
3. Make a statement to the county that the community needs walking and biking safety improvements and that they are eager to collaborate and participate at all levels of future projects.

Action Steps	Timeline	Responsible Party	Resources
Create a Task Force of CPBST Planning Committee members and participants to plan and execute this temporary demonstration project.	As soon as possible	BikeWalk Castro Valley CPBST Planning Committee	Joann Lauer, *Bike Walk East Bay* Go Human ToolKit (Types of Pop-Ups)
Invite the local Public Works Department to the demonstration.	As soon as possible	Task Force	Rick Yeung, CPBST Planning Committee member, Public Works liaison
Engage and inform community residents via social media campaigns, school administration and PTA's about the demonstration. Recruit volunteers to support data collection and take pictures during the demonstration.	Fall 2021	Task Force	Nick McMaster, CPBST Planning committee member & Castro Valley Unified School District liaison Stephanie Jim, Safe Routes 2 School Alameda County, can provide education materials Redwood Christian High School
Seek supplies for demonstration: cones, caution tape, paint, chalk, etc.	Fall 2021	Task Force	Alameda County Public Works Peter Rosen of the Hayward Area Recreation District may connect to the Public Works staff that worked on the Stanton Avenue pop-up.

Project Name: Temporary Marked Crosswalk Demonstration *(continued)*

Action Steps	Timeline	Responsible Party	Resources
Launch sidewalk Demonstration during an important week of school like the first week back from summer or winter break. If possible, find a way to sustain the demonstration for a week-long period.	Spring 2022	Task force and volunteers	Quick Build Guide White Paper to provide guidance and examples of demonstrations.
Evaluate sidewalk placement: Conduct pedestrian and bike counts. Gather participant reactions via a survey, photos, and videos. Organize a meeting with community leaders to review the data and feedback.	September 2022	Task Force	Conducting Bicycle and Pedestrian Counts Manual

Project Name: Bike Lanes on Somerset Avenue

Project Description: A newly formed action team will develop a community campaign to advocate for permanent bike lanes on Somerset Avenue, which may necessitate road configuration changes. The team will collaborate with Castro Valley Matters, BikeWalk Castro Valley, Alameda County Public Works, and others to develop a temporary bike lane demonstration on Somerset Avenue, from Santa Maria Avenue to Redwood Road, to introduce the concept and gain community support.

Project Goals:

1. Improve bike connectivity and safety in the neighborhood consistent with the Alameda County (Unincorporated Areas) Community Climate Action Plan; and,
2. Encourage more people to choose bicycling as their travel mode for short trips.

Action Steps	Timeline	Responsible Party	Resources
Recruit an action team and define the project scope.	Summer/Fall 2021	Bruce Dughi, residents, Castro Valley Matters and BikeWalk Castro Valley Board Member Kendra Ma, former Castro Valley Matters Board Member	Castro Valley Matters and BikeWalk Castro Valley membership and listserv
Connect with Alameda County Public Works ● Schedule a meeting with the Department of Public Works to discuss the feasibility of the permanent installment of bike lanes, including the temporary ones. ● Participate at Alameda County Public Works meetings to advocate for more bike infrastructure in Castro Valley. ● Connect with the Alameda County Unincorporated Bicycle and Pedestrian Advisory Committee to strategize approach.	Summer 2021	Action Team	Alameda County Unincorporated Bicycle and Pedestrian Advisory Committee

Project Name: Bike Lanes on Somerset Avenue *(continued)*

Action Steps	Timeline	Responsible Party	Resources
Develop engagement plan ● Collect data on the current parking usage rate and residents' readiness for road configuration change. ● Identify and connect with students, disability advocacy groups, local businesses, and non-English speaking groups to invite them to engage in the demonstration event. ● Use the Castro Valley Festival to promote the upcoming bike lane demonstration project and solicit feedback.	Summer/ Fall 2021 for development Spring 2022 for implementation	Project Team	How to do a parking study (MAPC) Alameda County Public Works Meeting Calendar Education funding from the California Office of Traffic Safety can support engagement efforts. Must be a governmental agency to apply, but non-profit agencies may be a subcontractor to funded agencies.
Plan and launch a temporary bike lane demonstration. ● Collect user experience information to support the permanent installation of the bike lanes	October/ November 2021	Project Team	Bike East Bay has experience creating pop-up bike lane projects and are relatively close to Castro Valley
Advocate for County support for bike infrastructure, including coordinating with Alameda County Public Works to secure funding for safety improvements.	Spring 2022 and beyond	Project Team	Caltrans Sustainable Transportation Planning Grants Caltrans Active Transportation Program (ATP) - Cycle 6

Project Name: Heyer Avenue Crosswalk Enhancements

Project Description: Enhance pedestrian safety at Heyer Avenue/Redwood Road and Heyer Avenue/ Cull Canyon Road with creative crosswalks, such as the proposed rainbow crosswalks, leading pedestrian interval or pedestrian scrambles.

Project Goals:

1. Improve safety at Heyer Avenue/Redwood & Heyer Avenue/Cull Canyon Road crosswalks;
2. Create more orderly movement, dedicated movement along Redwood Road and Heyer Avenue;
3. Educate drivers and pedestrians on crosswalk safety and responsibility; and
4. Engage the Castro Valley High School, and Redwood Christian Elementary School in the advocacy process.

Action Items	Timeline	Responsible Party	Resources
Organize a Traffic Pattern study on Heyer Avenue and Redwood Road. Analyze the feasibility and cost of installing: ● Pedestrian scramble ● Creative crosswalks ● Pedestrian leading intervals	Fall 2021	Planning Committee Castro Valley Matters	Guide for the preparation of Traffic Impact Studies Pedestrian Safety Guide and Countermeasure Selection System
● Create student involvement opportunities, educational campaigns and crosswalks designs	Fall 2021	Planning Committee Castro Valley Matters Castro Valley HS	Bike to Books Digital Design Contest | Portland.gov Video Voice Case Study “¡Precaución! Tu familia también usa la bicicleta” PSA Education funding from the Office of Traffic Safety

Project Name: Heyer Avenue Crosswalk Enhancements *(continued)*

Action Items	Timeline	Responsible Party	Resources
Ask students to fill out Street Story of their experiences using the Heyer Avenue/ Redwood Rood & Heyer Avenue/Cull Canyon Road Consider organizing/ leading a volunteer-run Bike and Pedestrian count, to determine if these intersections are eligible for diagonal crosswalk enhancement based on current foot traffic.	Fall-Winter 2021	Planning Committee Castro Valley Matters Castro Valley HS	UC Berkeley SafeTREC Street Story NACTO's The Enhanced Pedestrian Experience
Research and advocate for funding. Getting various clubs involved in organizing, and fundraising efforts: ● Key club ● Sustainability Club	Fall-Winter 2021	Planning Committee Castro Valley Matters	Active Transportation Program (ATP) | Caltrans Highway Safety improvement program Alameda County Transportation Commission Education funding from the Office of Traffic Safety

Project Team Recommendations

The Project Team submits the following recommendations for consideration based on our observations. The suggested timelines are included for reference, but implementation may take more or less time depending on specific community factors. Ultimately, 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.

Short-Term Recommendations

Robust Educational Campaign for a Proposed Hybrid Pedestrian Beacon (HAWK) Signal

The Project Team would recommend the County of Alameda develop a robust education campaign to pair with the proposed HAWK signal improvements at Redwood Road/Modesto Street intersection, Lake Chabot Road/Keith Avenue, and Lake Chabot Road/Congress Way. HAWK signals have a long educational curve. Drivers are often unaware of the proper behavior around HAWK signals. This could potentially create more conflict, as opposed to safer crossing conditions for pedestrians. The Project Team recommends the County of Alameda review the City of San Ramon's HAWK Brochure as an example of possible educational materials. Other educational materials include but are not limited to: social media campaigns, explainer videos, lawn signs near signals, flyers and pamphlets. The County is eligible to apply for funding from the California Office of Traffic Safety to support such efforts.

Creative Crosswalk Art Campaign

The Project Team recommends the County of Alameda repaint crosswalks in the community with creative crosswalk art. A crosswalk art campaign will materialize multiple benefits including: encouraging residents to walk around their community more by beautifying the neighborhood, improving pedestrian visibility and safety by making crosswalks more conspicuous to drivers and less able-bodied residents while they cross intersection, and engaging community residents in the process to garner a sense of place and ownership of shared spaces. In the past, the community has responded well to crosswalk art, stating that they felt more comfortable using these crosswalks.

In this example, the crosswalk at the Heyer Avenue/ Alana Road intersection is painted a white, geometric design.

Further, the Project Team recommends the County of Alameda specifically include the Somerset Avenue/ Parsons Avenue intersection crosswalks in this campaign. Because this arterial is narrow, it is especially important to clearly designate pedestrian, bicycle, and driver spaces on the roadway. The crosswalks at this intersection are very faded; thus, they do not provide enough visibility for pedestrians as they cross on either leg of the intersection. This particular intersection is especially important to enhance because it is highly trafficked by students from Castro Valley High School and Our Lady of Grace Catholic School and residents accessing the grocery store on the northwestern corner.

Long-Term Recommendations

Educational Bike Diversion Program

The Project Team recommends the Planning Committee and the County of Alameda partner with Bike East Bay to develop a bike violation diversion program to reduce financial burdens and educate the community about proper road behavior. The participants have stressed that points of conflict between road users are escalated by a lack of education. A diversion program would proactively engage residents in active transportation by properly educating them about the rules of the road. In one specific example presented by participants, drivers often park on the paved shoulders and bicyclists thus ride on the intermittent sidewalk network. When a parked vehicle obstructs a bicyclist's path, the bicyclist merges onto the roadway. As a result, bicyclists weave in and out of the road. This creates potential conflict points between drivers and bicyclists because bicyclists' riding is not predictable. Further, many bicyclists in the community are unaware that they are legally allowed to share the road with drivers. The California Bike Coalition, or CalBike, hosted a webinar in which they presented various ticket diversion programs around the state. This can be used as a resource to develop a program tailored to Castro Valley's road user needs and concerns.

Improve Safety at Crossings along Redwood Road

The Project Team recommends the County of Alameda explore various low-cost options to increase visibility between road users along Redwood Road, including but not limited to Modesto Street, Heyer Avenue, and James Avenue. Crash data for 2015-2019 shows 26 crashes involving pedestrians and 18 crashes involving bicyclists making Redwood Road one of the most dangerous corridors for pedestrians and bicyclists in Castro Valley. Some low-cost solutions could be maintaining vegetation to improve pedestrian and bicyclist visibility and restriping pavement markings along this corridor.

Apply for Grant Funding to Improve Pedestrian and Bicyclist Safety

In addition, the Project Team recommends that the County of Alameda apply for funding from Caltrans' Active Transportation Program (ATP) or the California Office of Traffic Safety (OTS). The ATP provides funding to communities throughout California to support infrastructure and non-infrastructure projects and plans to further active modes of transportation like walking and biking. OTS supports non-infrastructure educational and engagement efforts.

The Project Team also recommends the Planning Committee review the Costs for Pedestrian and Bicyclist Infrastructure Improvements guide developed in 2013, which can be used as a resource to gauge varying road enhancements costs. Knowing this information can help the community strategize and advocate for cost-effective walking and biking safety infrastructure.

Appendix

- CPBST Workshop Data Fact Sheet
- CPBST Site Visit Data Presentation

Castro Valley Pedestrian & Bicycle Data Analyses

Community Pedestrian and Bicycle Safety Training Workshop (CPBST)
Castro Valley, CA | June 22, 2021

In California, almost one in three people who died in a crash is a pedestrian or bicyclist. There was a 0.6 percent decrease in pedestrian deaths from 2018 to 2019 and a 19.4 percent decrease in bicycling deaths (FARS 2018 and 2019). In this workshop, we provide you with local crash data so that we can identify ways to make walking and biking safer in your community.

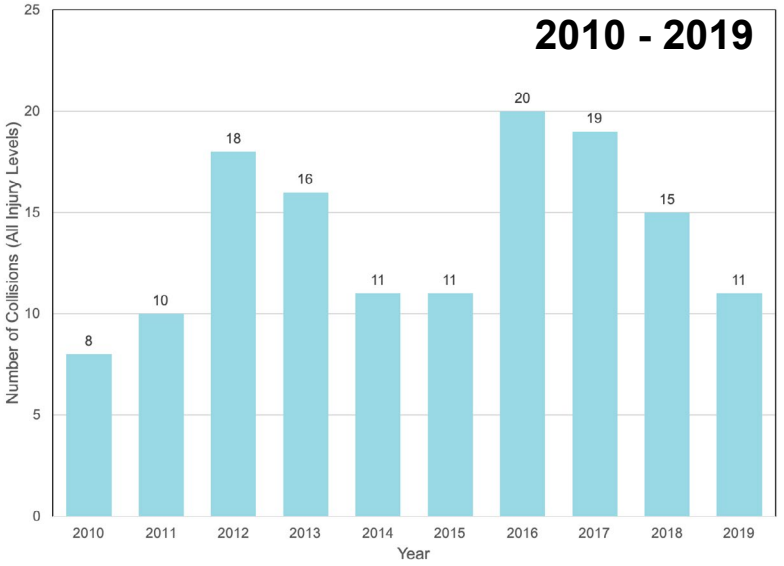
The local data seen below reflects the most current crash data within the focus area in Castro Valley. The focus area is: north of the Castro Valley BART station, east of Stanton Avenue, west of Crow Canyon Road, and along Proctor Road to Redwood Road and a bird's eye path to Crow Canyon.

Pedestrian Collisions Over Time

The number of collisions appears to be ***decreasing.***

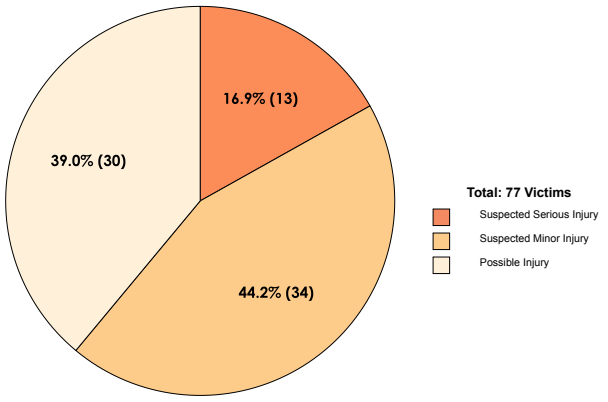
153 people injured

139 pedestrian collisions



Victim Injury Severity

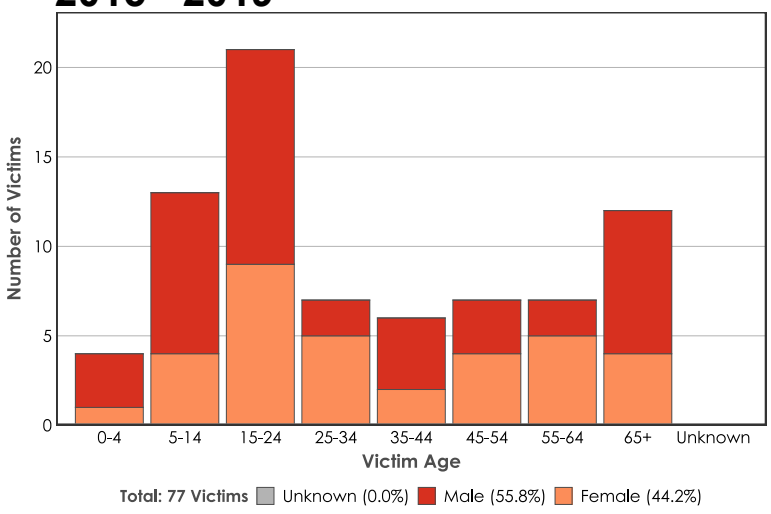
2015 - 2019



16.9% of victims suffered serious injuries

Victim Demographics

2015 - 2019



36.4% of victims were school-age (age 5-18)

23.4% of victims were older adults (age 60+)

Data Source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS) 2015-2019. Collision data for 2019 are provisional as of March 2021. Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Traffic Safety Administration.

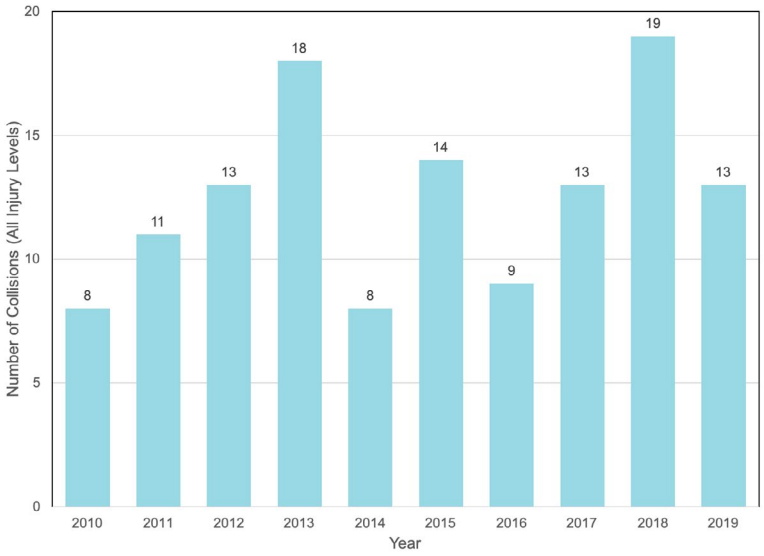
Bicycle Collisions Over Time

2010 - 2019

The number of collisions appears to be ***decreasing.***

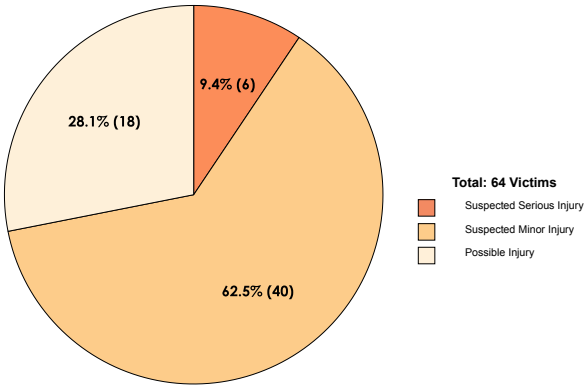
126 people injured

126 bicycle collisions



Victim Injury Severity

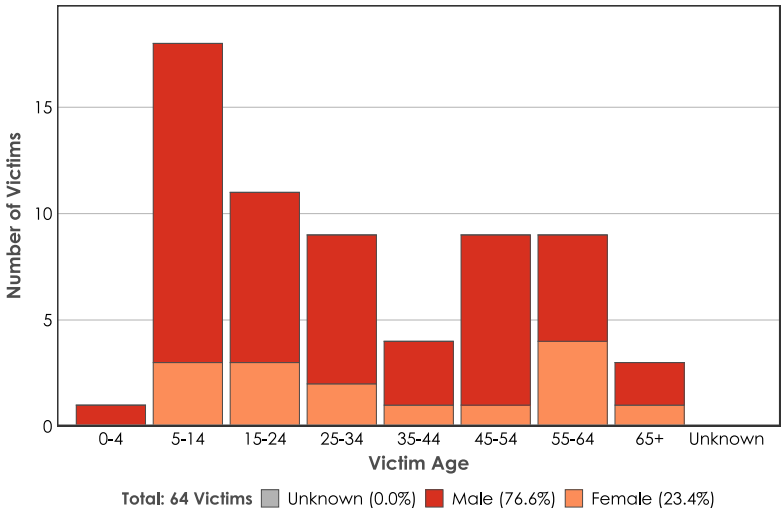
2015 - 2019



9.4% of victims suffered serious injuries

Victim Demographics

2015 - 2019



39.1% of victims were school-age (age 5-18)

12.5% of victims were older adults (age 60+)

What other data could help inform decision-making?
While these numbers do not tell the whole story, do they resonate with your experience?
What kinds of improvement do you think could help make walking and biking safer in your community?

To learn more about collision data in your community, visit the free tools available through the Transportation Injury Mapping System (tims.berkeley.edu).
For additional assistance, email us at safetrec@berkeley.edu.

Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

OTS CALIFORNIA OFFICE OF TRAFFIC SAFETY

California Walks
Stepping Up for Health, Equity, & Sustainability

Data Source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS) 2015-2019. Collision data for 2019 are provisional as of March 2021. Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Traffic Safety Administration.

Castro Valley Pedestrian Collision Map (2015 - 2019)

Data Source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS) 2015-2019. Collision data for 2019 are provisional as of March 2021. Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Traffic Safety Administration.

Castro Valley Bicycle Collision Map (2015 - 2019)

Data Source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS) 2015-2019. Collision data for 2019 are provisional as of March 2021. Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Traffic Safety Administration.

Castro Valley Pedestrian & Bicycle Crash History

CPBST Virtual Site Visit | May 25, 2021

Katherine Chen, kchen@berkeley.edu

Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

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.

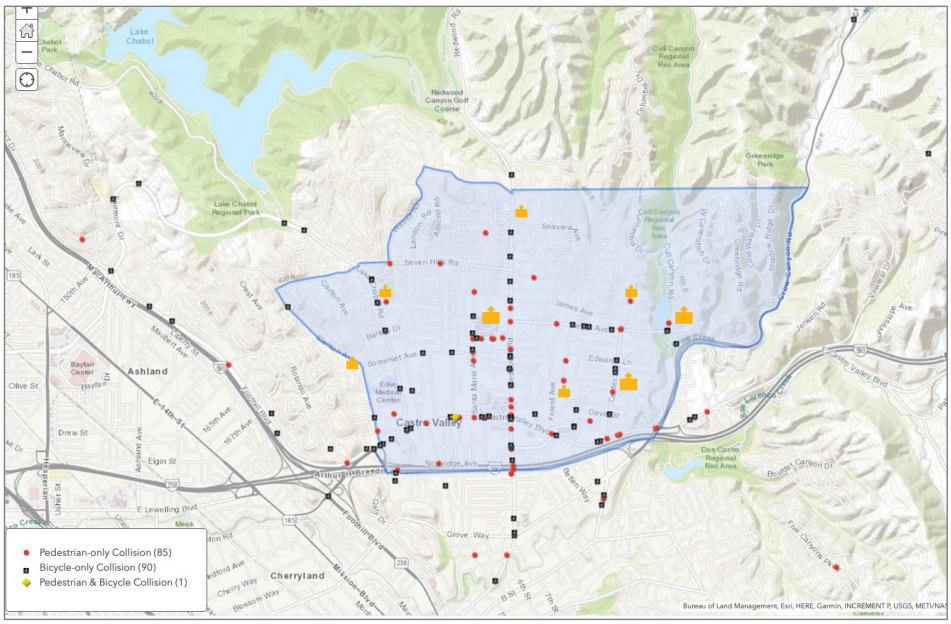
Crashes Overview 2015-2019

Castro Valley

- 86 pedestrian crashes
- 91 bicycle crashes

Focus Area

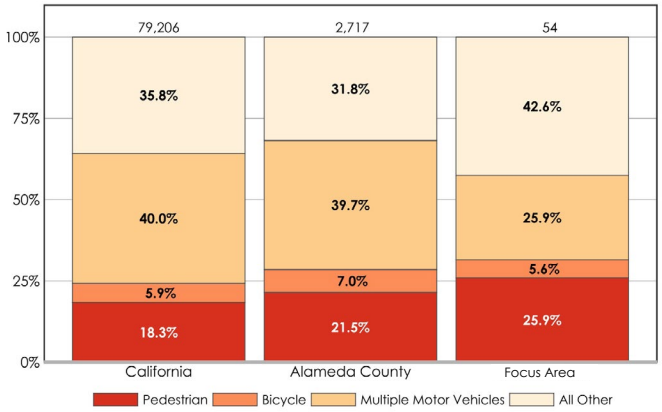
- 83.7% of pedestrian crashes
- 70.3% of bicycle crashes



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

How does Castro Valley compare to other areas?

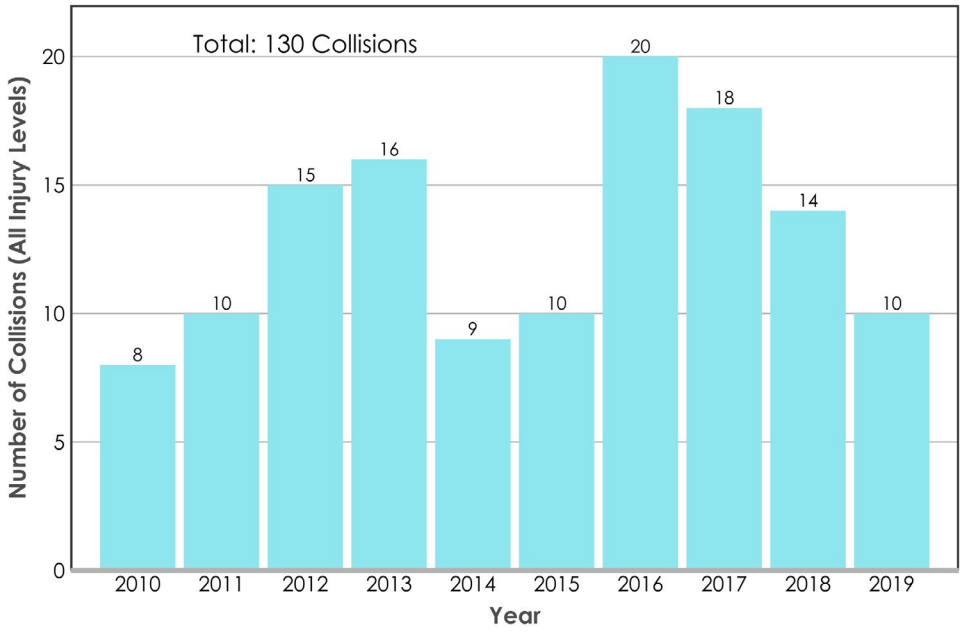
Fatal and Severe Injury Crashes by Involvement 2015-2019



- Relatively **more pedestrian** fatal and severe injury crashes than the County and the State.
- Relatively **fewer multi-vehicle** fatal and severe injury crashes than the County and the State.

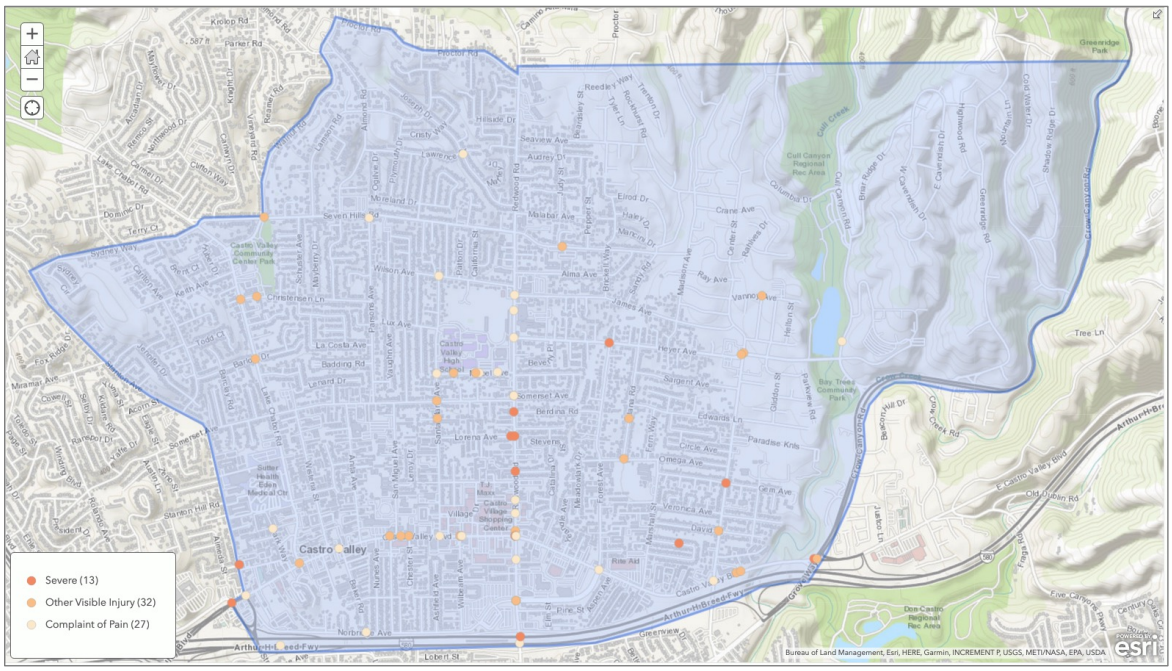
Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Pedestrian Crashes 2010-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

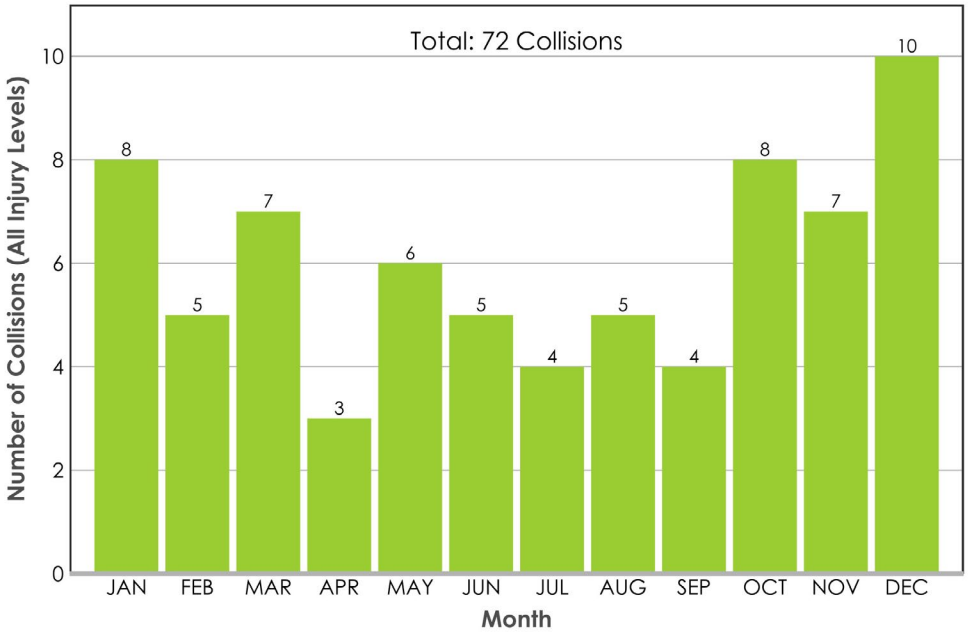
Pedestrian Crashes 2015-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Pedestrian Crashes 2015-2019

By month



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Pedestrian Crashes 2015-2019

By time of day & Day of Week

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
Midnight-3AM	0	0	0	0	0	0	0	0
3-6AM	0	1	0	0	0	0	0	1
6-9AM	1	6	1	7	5	0	0	20
9AM-Noon	0	0	1	1	3	2	0	7
Noon-3PM	1	1	1	2	0	0	1	6
3-6PM	3	4	6	3	2	3	1	22
6-9PM	4	2	1	1	2	2	0	12
9PM-Midnight	0	0	1	1	1	0	0	3
Unknown	0	0	0	0	0	0	1	1
TOTAL	9	14	11	15	13	7	3	72

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

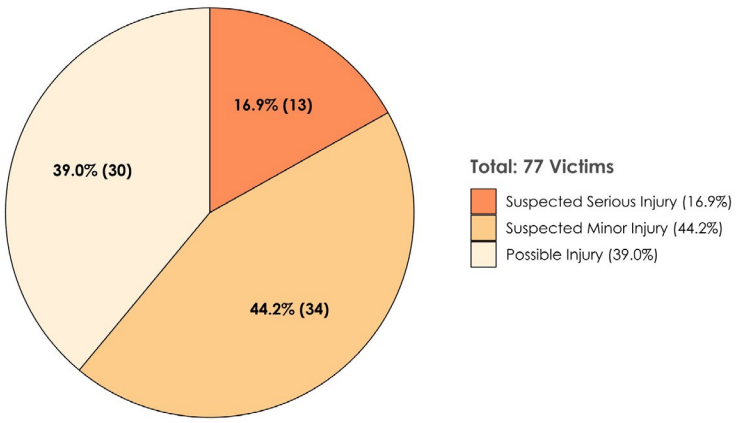
Pedestrian Crashes 2015-2019

By injury severity

77 victims were injured in 72 pedestrian crashes

- 76 victims were pedestrians
- 4 crashes had multiple pedestrian victims

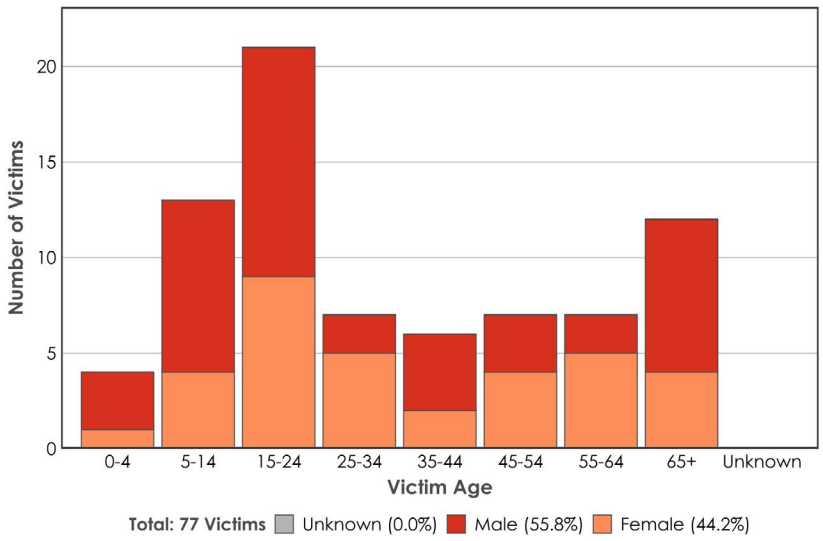
All serious injury victims were pedestrians



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Pedestrian Crashes 2015-2019

By victim age & gender



36.4% of victims were school age (age 5-18).

- 92.9% suffered minor injuries.
- 18 victims were between age 14-16

23.4% of victims were older adults (age 60+).

- 22.2% suffered a serious injury.

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Pedestrian Crashes 2015-2019

Most frequently cited violations in injury crashes

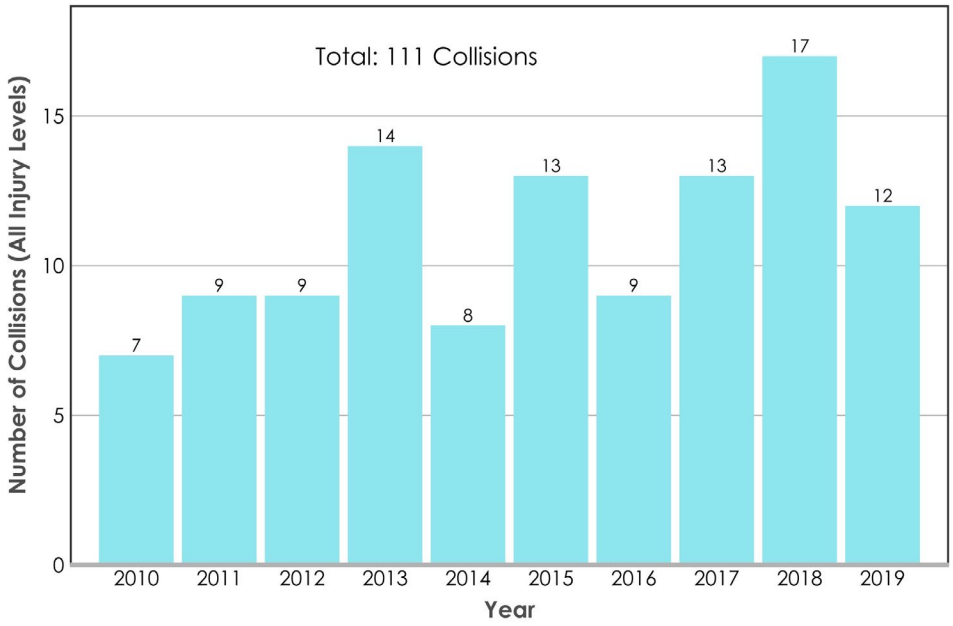
37 crashes — **21950a.** Driver does not yield the right-of-way to a pedestrian at a marked or unmarked crosswalk.

8 crashes — **21954a.** Pedestrian shall yield the right-of-way to vehicles when not within a marked/unmarked crosswalk at an intersection.

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

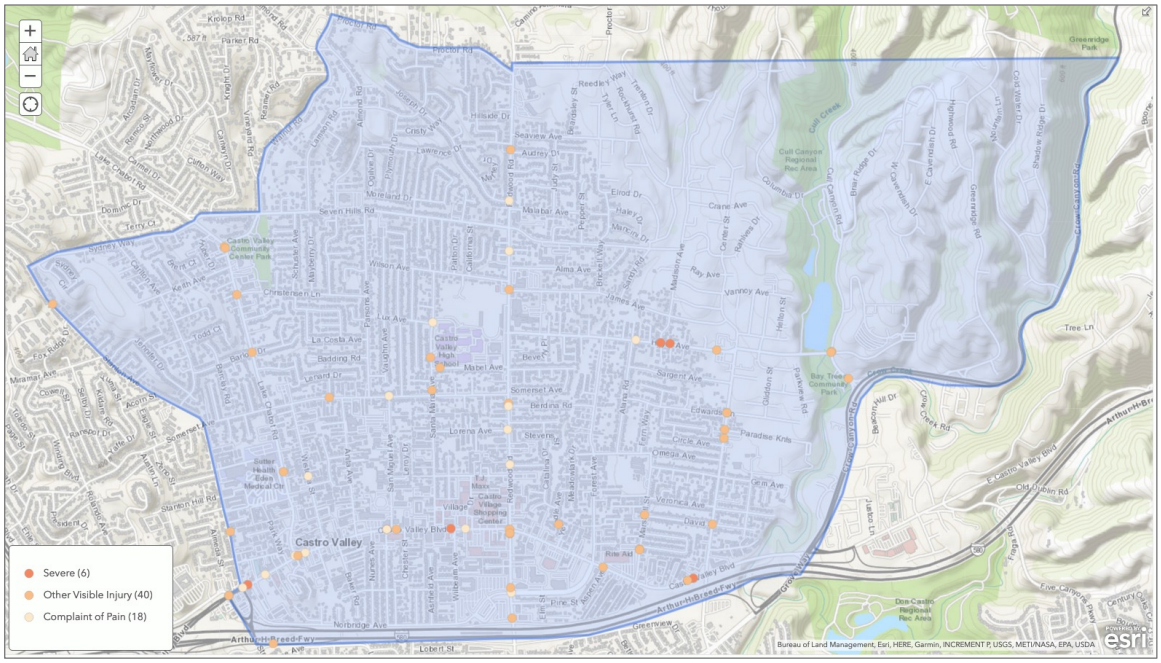
Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Bicycle Crashes 2010-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

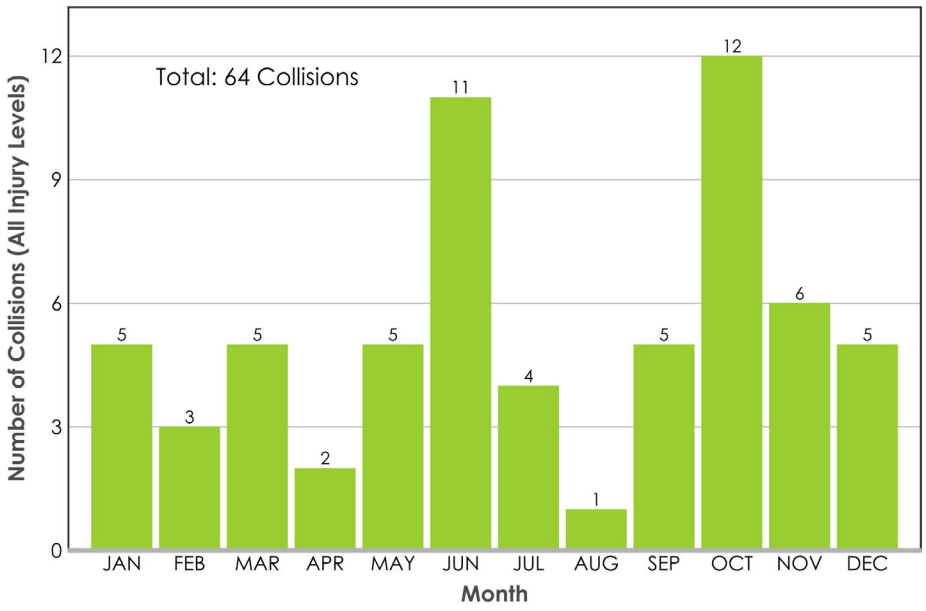
Bicycle Crashes 2015-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Bicycle Crashes 2015-2019

By month



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Bicycle Crashes 2015-2019

By time of day & Day of Week

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
Midnight-3AM	0	0	1	0	0	0	0	1
3-6AM	0	0	0	0	0	0	0	0
6-9AM	2	3	3	8	4	0	0	20
9AM-Noon	0	0	0	2	1	1	0	4
Noon-3PM	3	1	3	1	0	2	0	10
3-6PM	3	3	1	4	2	3	2	18
6-9PM	1	1	0	0	0	5	2	9
9PM-Midnight	0	1	0	0	1	0	0	2
Unknown	0	0	0	0	0	0	0	0
TOTAL	9	9	8	15	8	11	4	64

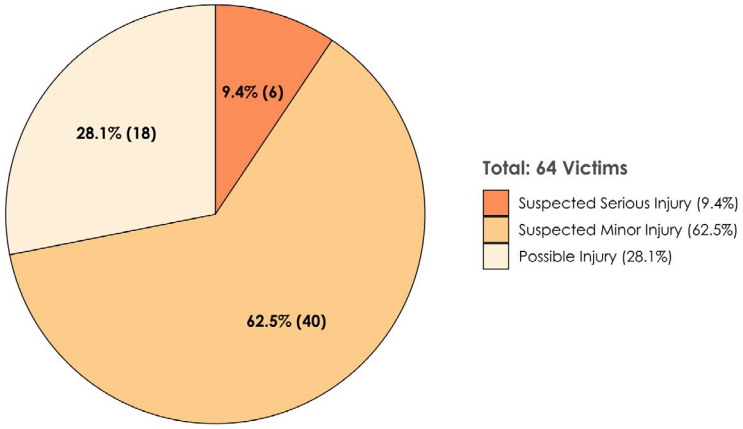
Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Bicycle Crashes 2015-2019

By injury severity

64 victims were injured in 64 bicycle crashes

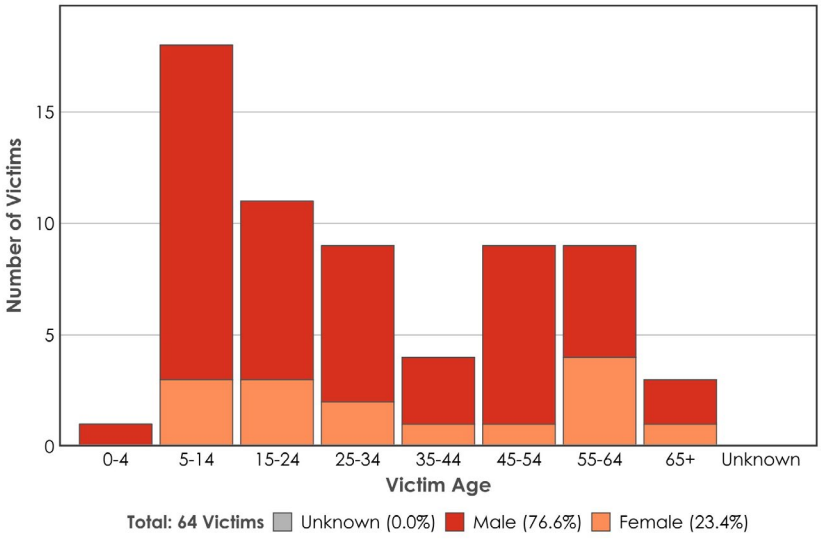
- 63 victims were bicyclists
- 1 crash had no bicyclist victims



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Bicycle Crashes 2015-2019

By victim age & gender



39.1% of victims were school age (age 5–18).

- 92.0% suffered minor injuries.
- 14 victims were between age 11–14

12.5% of victims were older adults (age 60+).

- 25.0% suffered a serious injury.

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

Bicycle Crashes 2015-2019

Most frequently cited violations in injury crashes

22 crashes	**22107.** Unsafe turning or moving right or left on a roadway or turning without signaling.
8 crashes	**22350.** Speeding or driving at a dangerously high speed given conditions.
4 crashes	**21453a.** Failure to stop at a limit line or crosswalk at a red light.
4 crashes	**22106.** Unsafe starting or backing of a vehicle on a highway.

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019
2019 data is provisional as of March 2021.

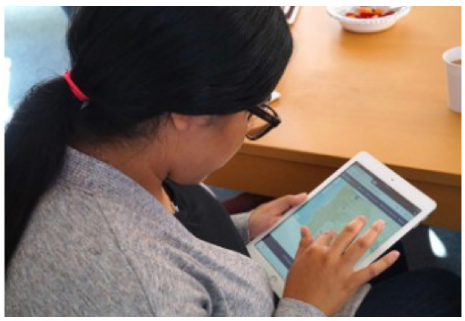
Additional Resources

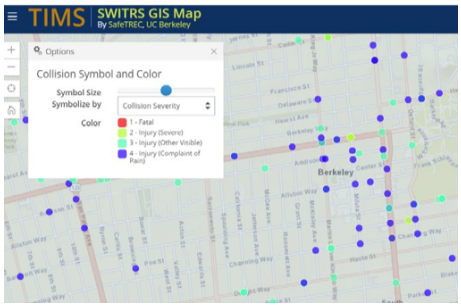
Street Story

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 Program. For more information, please visit:

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

safetrec@berkeley.edu or cpbst@calwalks.org