



Azusa Downtown Pedestrian & Bicycle Safety Workshop Summary and Recommendations

Community Pedestrian & Bicycle Safety Training and Action Planning
Creating Safer Streets for Walking and Biking



October 2019



Azusa Downtown, California

Acknowledgments

We would like to thank the Planning Committee for inviting us into their community to host the Community Pedestrian and Bicycle Safety Training in Azusa, California.

Planning Committee

Gerard Batista	Resident
Miki Carpenter	City of Azusa, Recreation and Family Services
Xilonin Cruz-Gonzalez	Azusa Unified School District
Robert Delgadillo	City of Azusa, Public Works
Jocelyn Estiandan	Los Angeles County, Department of Public Health
Abigail Flores	Resident
Lenore Gonzalez	City of Azusa, Senior Services
Chris Grant	City of Azusa, Police Department
Carlos Guido	City of Azusa, Transit
Rosanna Helbert	Resident
Betsy Jacoby	Los Angeles County, Department of Public Health
Mitchell Loera	Resident
Matt Marquez	City of Azusa, Economic and Community Development
Manuel Munoz	City of Azusa, Planning
Arturo Ortega	Azusa Unified School District
Diane Viera	Azusa Pacific University

Thank you to AAA of Southern California, Foothill & Azusa Starbucks, and Chick-fil-A for providing food and refreshments in support of this training. A special thank you to the City of Azusa Recreation Department for providing childcare and Key Translations International for providing simultaneous English-Spanish interpretation. Finally, thank you to the City of Azusa for providing the conference room at Azusa Light and Water Department.

This report was prepared by:

California Walks

Miha Tomuta

Wendy Ortiz

Caro Jauregui

Alma Leyva Orozco

<https://calwalks.org>

UC Berkeley Safe Transportation Research & Education Center

Garrett Fortin

Katherine L. Chen

Jill Cooper

Formatted by: Ana Lopez

<https://safetrec.berkeley.edu>



Table of Contents

3	Acknowledgments
3	Planning Committee
5	Introduction
7	Pedestrian and Bicycle Collision History
7	Pedestrian Collisions
8	Bicycle Collisions
8	Equity Concerns
10	WALKING & BIKING ASSESSMENT
10	Routes
12	Reflections
12	Crossing Conditions
14	Railroad Crossings
15	Inadequate Bike Infrastructure
16	Underutilized Public Space
16	Pedestrian-scale Lighting
17	Lack of Shade
18	Bus Shelters
19	Recommendations to Improve Walking and Biking Safety
19	Community Recommendations
26	Cal Walks & UC Berkeley SafeTREC Recommendations
28	Appendix A: Community Plans & Policies Review
29	Appendix B: Resources
30	Appendix C: Data Analysis



Workshop participant standing next to one of many utility box art in Downtown Azusa during the Walk Assessment.

Introduction

The City of Azusa, Planning Committee, California Walks (Cal Walks), and the University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC) collaboratively planned and facilitated a Community Pedestrian and Bicycle Safety Training (CPBST) in Azusa on September 14, 2019 from 9:30 a.m. to 1:00 p.m. at Azusa Light and Water Department. The CPBST is a joint project of California Walks and SafeTREC (Project Team) that works with local residents and safety advocates to develop a community-driven action plan to improve walking and biking safety in their communities by collaborating with local officials and agency staff.

The Planning Committee identified the Downtown Azusa community as the focus for the workshop and the following workshop goals:

- a) Identify and develop pedestrian and bicycle safety priorities and next steps in collaboration with Azusa community members;
- b) Help make Azusa safer for walking and biking; and
- c) Encourage the community to engage in active transportation.

The training consisted of:

1. Walking and biking assessments along four key routes;
2. An overview of strategies to improve walking and biking safety using the intersectional 6 E's framework including: Evaluation, Equity & Empowerment, Engineering, Education, Encouragement, and Enforcement; and
3. A small group action-planning session to prioritize and plan for programs, policies, and infrastructure projects.

We would like to acknowledge the 17 participants who attended the workshop including Azusa residents, the City of Azusa, KOA Corporation, the Los Angeles County Department of Public Health, the Azusa Unified School District, and Healthy Azusa. Their collective participation meaningfully informed and strengthened the workshop's outcomes.

This report summarizes the workshop proceedings, as well as recommendations for programs, policies, and infrastructure to improve walking and biking safety in Azusa.

The Planning Process



Step 1: Assemble a Planning Committee - June 2019

- Enlist key stakeholders to serve as the Planning Committee to define the CPBST workshop goals and refine curriculum to meet the community's needs



Step 2: Review and Analyze Existing Plans and Data - June 2019

- Review existing community documents (policies and plans)
- Analyze injury collision data and identify trends



Step 3: Conduct CPBST Site Visit - August 8, 2019

- Review current pedestrian and bicycle safety data and conditions
- Discuss workshop logistics
- Conduct preliminary walk assessments
- Identify instructional activities and goals for the workshop
- Develop outreach and recruitment plan for the workshop



Step 4: Conduct CPBST Workshop - September 14, 2019

- Conduct a walking and/or biking assessment
- Participate in workshop instructional activities
- Develop an action plan, including identifying actionable next steps for advancing workshop goals



Step 5: Implement CPBST Actions - Ongoing

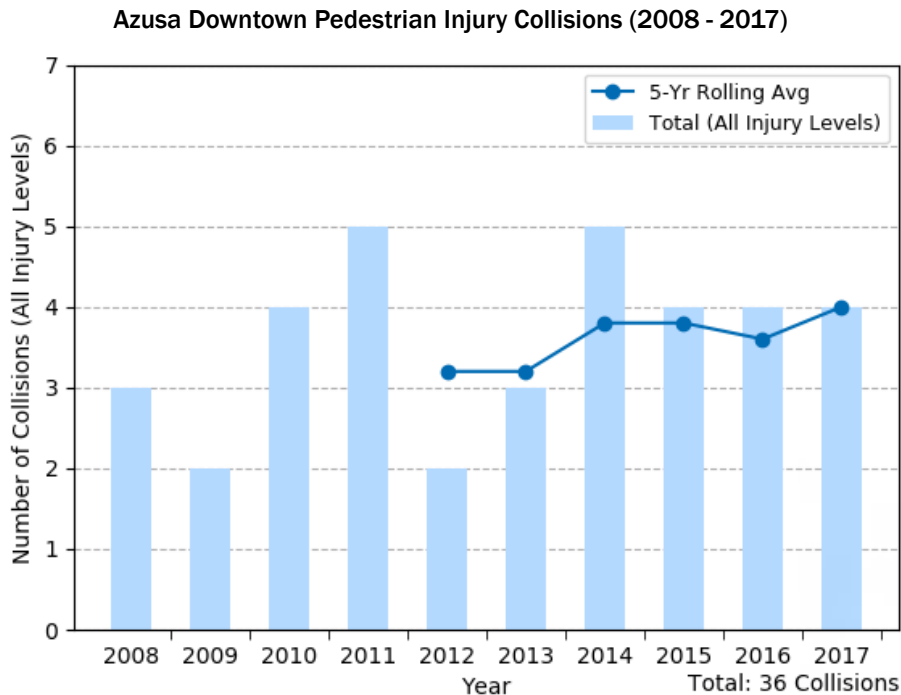
- Review CPBST report summarizing workshop proceedings and recommendations
- Work with partners to secure resources for programs/projects identified during the CPBST
- Update California Walks and SafeTREC about changes as a result of the CPBST workshop

Pedestrian and Bicycle Collision History

The following data is based on police-reported pedestrian and bicycle collisions resulting in injuries to pedestrians¹ and bicyclists within the Downtown Azusa focus area², as identified by the Planning Committee. Data reported in this section are from the Statewide Integrated Traffic Records Systems (SWITRS) for the years 2008 to 2017. Collision data for 2016 and 2017 are provisional as of June, 2019. A full discussion of the pedestrian and bicycle collision data, as well as Supplemental Data requested by the planning committee, can be found in Appendix C.

Pedestrian Collisions

Over the 10-year period from 2008 to 2017, pedestrian collisions appear to have remained relatively stable, except for a dip in 2012 and 2013. The most recent five years of data available, 2013 to 2017, shows pedestrian collisions were concentrated along major thoroughfares: Foothill Boulevard (Historic Route 66) and Azusa Avenue (State Route 39). Pedestrian collisions primarily occurred during the evening commute hours, between 6 and 9 p.m. The top primary collision factors were driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk (55%), driver failure to yield right-of-way to pedestrians on sidewalks (15%), and pedestrian failure to yield right-of-way to motorists when crossing outside of a marked or unmarked crosswalk (15%).³ There were 20 pedestrian victims in 20 pedestrian collisions, including four (4) severe injuries. Close to one half (45%) of pedestrian victims were 24 years old or younger.



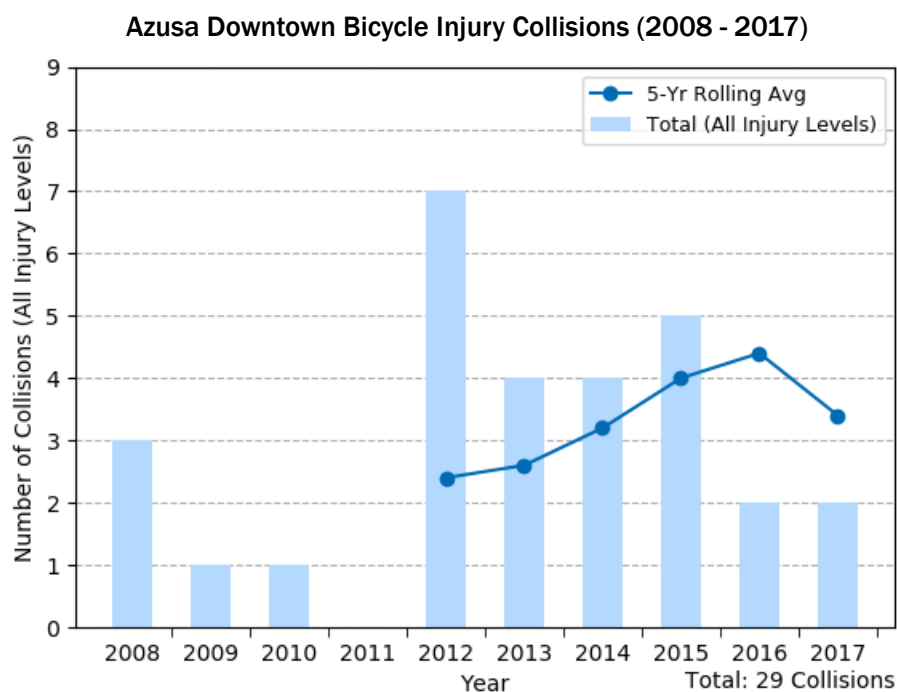
¹ A pedestrian is defined as any person who is afoot or using a non-motorized personal conveyance other than a bicycle, including skateboards, strollers, wheelchairs, and any electric assistive mobility device.

² The focus area was a rough rectangle, from San Gabriel Avenue west to Cerritos Avenue and from 9th Street south to 5th Street, with the eastern boundary cut back to Pasadena Avenue north of Foothill Boulevard.

³ 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 Collisions

Over the 10-year period from 2008 to 2017, bicycle collisions appear to be decreasing as reflected by the provisional data of 2016 and 2017. The most recent five years of data available, 2013 to 2017, shows bicycle collisions were concentrated along the main thoroughfare of Foothill Boulevard. There were clusters of bicycle collisions where Foothill Boulevard intersects Azusa Avenue and Pasadena Avenue. Bicycle collisions primarily occurred between 12 p.m. and 3 p.m. The top primary collision factors were driver failure to stop at a limit line or crosswalk at a stop sign (17.6%) and driver failure to yield right-of-way when entering/crossing a highway (11.8%).⁴ There were 17 bicyclist victims in 17 bicycle collisions, including two (2) severe injuries. Close to one half (47%) of bicyclist victims were 24 years old or younger.



Equity Concerns

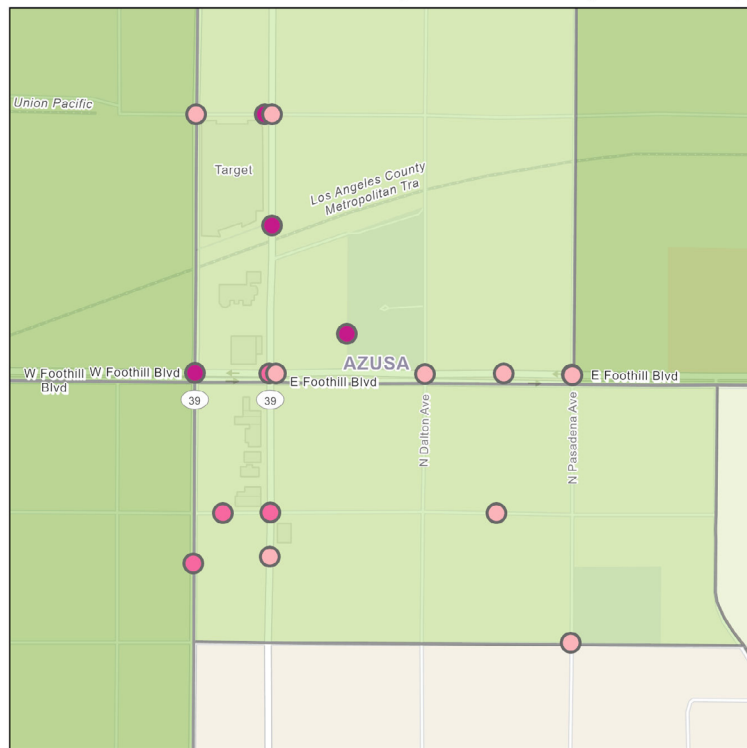
Equity in this project means working to ensure that all groups of people, regardless of age, race, gender, ability or income, are considered in planning and decision-making processes. For transportation, we aim to address inequities in vulnerable communities, which have disproportionately high levels of injuries. Improving safety requires tackling the complicated interplay between inequity, the walking and biking built environment, and driver, bicyclist, and pedestrian behaviors.

At the national level, pedestrian fatality rates in lower-income communities are more than twice that of higher income communities.⁵ SafeTREC used SWITRS, U.S. Census Bureau, and American Community Survey (ACS) data to overlay pedestrian and bicycle collisions with income data to understand how collisions are distributed in this area based on income level. This analysis revealed that a disproportionately high number of collisions occurred in the lower income areas within the workshop focus area.

⁴ These violations could have either been committed by a motor vehicle driver or bicyclist, since bicycles are considered vehicles and therefore must follow all the same rules of the road as vehicles.

⁵ Pedestrian Deaths in Poorer Neighborhoods Report," Governing, August 2014. Available at <http://www.governing.com/gov-data/pedestrian-deaths-poor-neighborhoods-report.html>

Azusa Downtown Pedestrian Collision Map with Income (2013 - 2017)



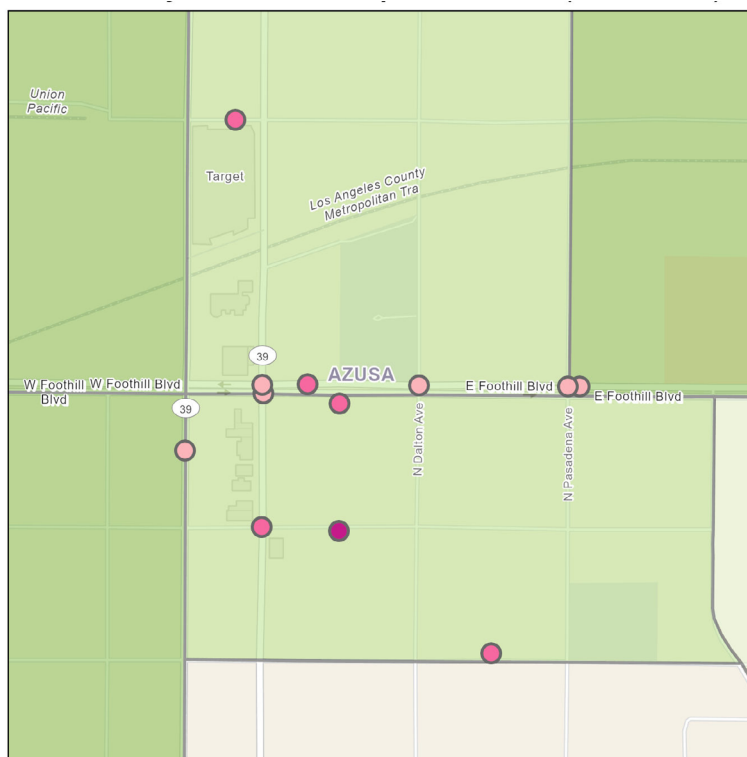
Collision Severity (2013-2017)

- Injury (Severe) (5)
- Injury (Other Visible) (5)
- Injury (Complaint of Pain) (10)

2017 Median Household Income

- < 35K
- 35K - 50K
- 50K - 75K

Azusa Downtown Bicycle Collision Map with Income (2013 - 2017)



Collision Severity (2013-2017)

- Injury (Severe) (2)
- Injury (Other Visible) (8)
- Injury (Complaint of Pain) (7)

2017 Median Household Income

- < 35K
- 35K - 50K
- 50K - 75K

Top: Pedestrian collision map with income. Right: Bicycle collision map with income. Data source: SWITRS 2013-2017, ESRI, US Census Bureau, and ACS.

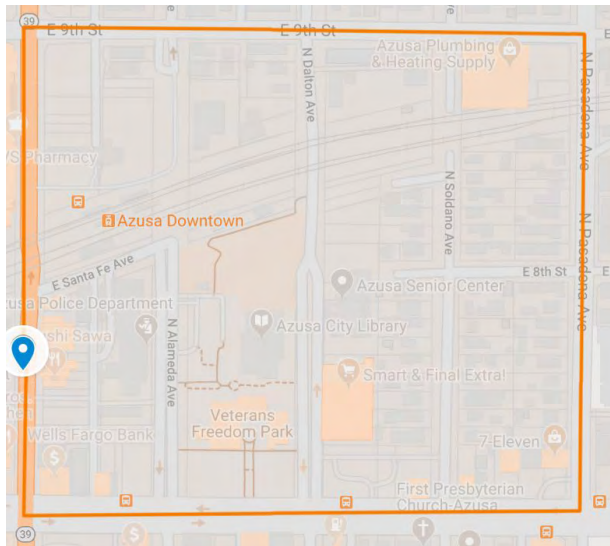
WALKING & BIKING ASSESSMENT

Routes

Workshop participants conducted walking and biking assessments along four key routes. Participants were asked to:

1. Observe infrastructure conditions and the behavior of all road users;
2. Assess the qualitative and emotional experience of walking or biking along the route;
3. Identify positive community assets and strategies which can be built upon; and
4. Consider how the walking and biking experience might feel different for other vulnerable users.

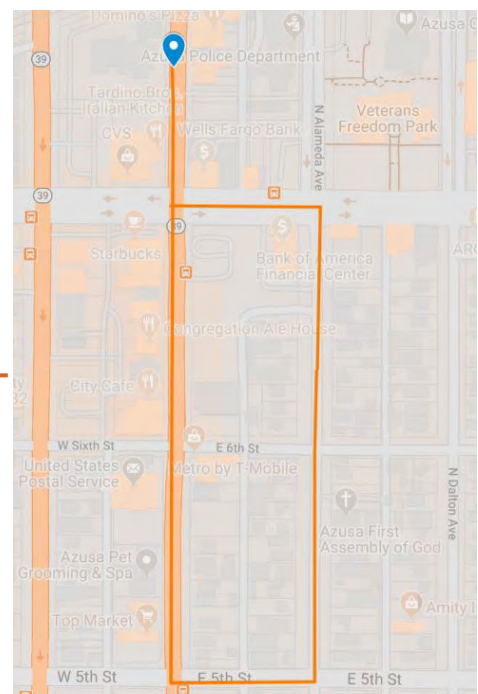
Route 1: City of Azusa Community Services



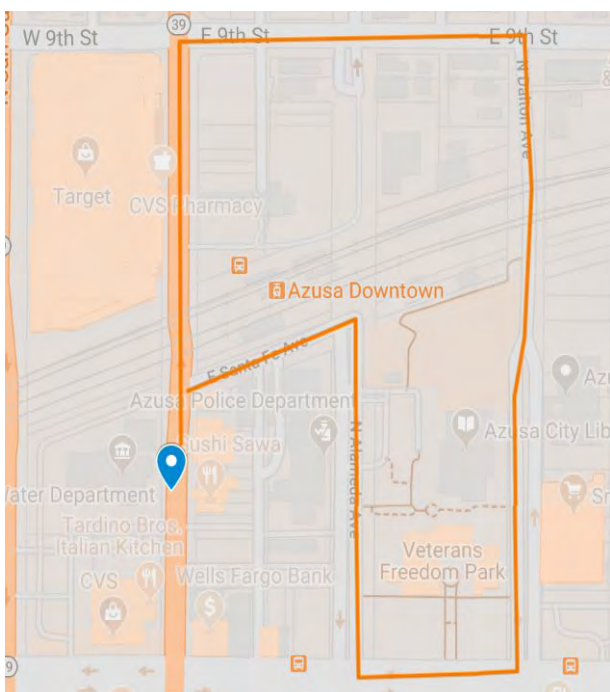
The first route focused on the main thoroughfares leading to Azusa City Hall, Azusa Library, Azusa Senior Center, Veteran's Freedom Park, and other City services and community spaces, including: East 9th Street, North Pasadena Avenue, West Foothill Boulevard, and North Azusa Avenue.

Route 2: North Azusa Commercial Area

The second route focused on the commercial area along North Azusa Avenue and the residential area along North Alameda Avenue.

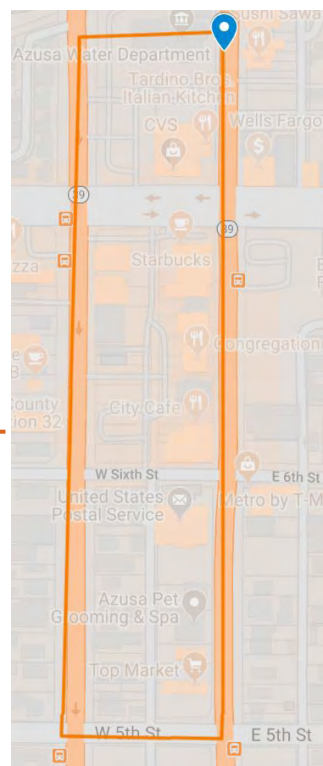


Route 3: Shopping Center, Metro Transit Center, and Surrounding Neighborhood



The third route focused on the Target shopping center, Metro light rail station, and surrounding community.

Route 4: Downtown North-South Corridors



The fourth route focused on the main north-south corridors in the Downtown area, North San Gabriel Avenue and North Azusa Avenue.

Reflections

Following the walking and biking assessments, participants shared the following reflections:

Crossing Conditions

- Colored concrete crosswalks blended in with the concrete road and were difficult for pedestrians and motorists to see. Locations included: the intersections of North Azusa Avenue/West Foothill Boulevard, East 5th Street/West Foothill Boulevard, North Azusa Avenue between West Foothill Boulevard and East Santa Fe Avenue adjacent to the CVS, and on North Dalton Avenue in front of the Azusa Senior Center. These crosswalks also lack advanced stop and yield markings such as stop bars. Stop bars are solid white lines that extend across all vehicle lanes and indicate to road users where to stop in advance of the crosswalk.
- Participants commended the City on the bulb-outs along North Azusa Avenue in Downtown Azusa. They shared that these improvements made them feel more visible to oncoming traffic when crossing North Azusa Avenue between West Foothill Boulevard and East 5th Street.



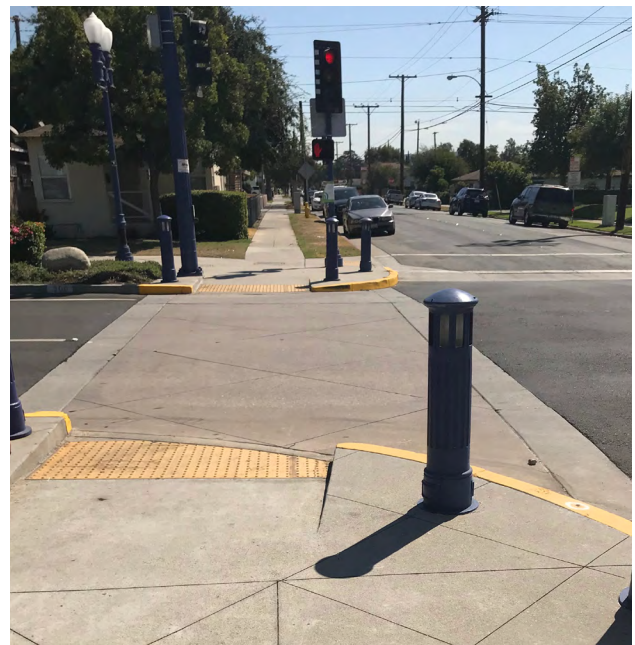
Top Left: West Foothill Boulevard and East 5th Street crosswalks lacks stop lines stop bars; this adds to unsafe conditions for all road users. *Top Right:* Various road users travel across North Azusa Avenue and West Foothill Boulevard where there are no stop bars that clearly demonstrate where cars should stop. *Bottom:* Bulb outs along North Azusa Avenue between West Foothill Boulevard and East Santa Fe Avenue adjacent to the CVS shorten the crossing distance for pedestrians.

- Motorists appear to regularly travel at speeds higher than the posted speed limit of 35 miles per hour (mph) along Foothill Boulevard and do not give priority to pedestrians waiting to cross or already in the crosswalks. Participants shared that despite high-visibility marked crosswalks at North Soldano Avenue, they still feel unsafe and find the crosswalks difficult to cross. During the Site Visit, the Project Team observed a group of youth crossing Foothill Boulevard at North Soldano Avenue when a motorist who was a considerable distance away approached the intersection at a high speed and failed to yield or even slow down. Several of the youth ran forward and took refuge near the center median while others stepped back towards the curb.



Motorist blocks crosswalk at Foothill Boulevard and North Soldano Avenue.

- Participants appreciated the bulb-outs with parallel curb ramps when crossing North Azusa Avenue at East 5th Street. Parallel curb ramps run in the same direction as the pedestrian path of travel and do not require pedestrians to orient themselves when crossing the street. Older diagonal curb ramps require pedestrians to orient themselves in the direction of travel and can be difficult to navigate for those with vision impairments and those using assisted mobility devices.



Left: Aerial view parallel and diagonal curb ramps at North Azusa Avenue/East 5th Street. Right: Parallel curb ramps are oriented towards a crosswalk and another curb ramp on the opposite side of the street along North Azusa Avenue from West Foothill Boulevard to East 5th Street.

- There are standard marked crosswalks at the North Alameda Avenue/East 9th Street and the North Dalton Avenue/East 9th Avenue intersections. Participants observed motorists making rolling stops at both intersections, as well stopping in the middle of the crosswalk, because the standard crosswalk markings are difficult to see from afar.
- At the Santa Fe Avenue/North Azusa Avenue intersection, curb extensions and landscape areas obstruct the unmarked east-west crosswalk across North Azusa Avenue. Pedestrians traveling on the west side of North Azusa Avenue often cross at this unmarked crosswalk to get to the Metro Transit Center.



Left: Standard crosswalk markings at the Alameda Avenue/East 9th Street intersection. Right: This crosswalk leads to the Metro Transit Center and is on the east side of the North Azusa Avenue intersection and lacks stop bars. Stop bars indicate to drivers when they should stop to allow pedestrians enough space to cross.

Railroad Crossings

- Railroad crossing gates on North Dalton Avenue, just south of East 9th Street, actively block motorists from crossing the train tracks when a train is approaching, but the gates do not restrict access for pedestrians.



Railroad crossing gates impede motorists but not pedestrian traffic on the sidewalk when a train is approaching.

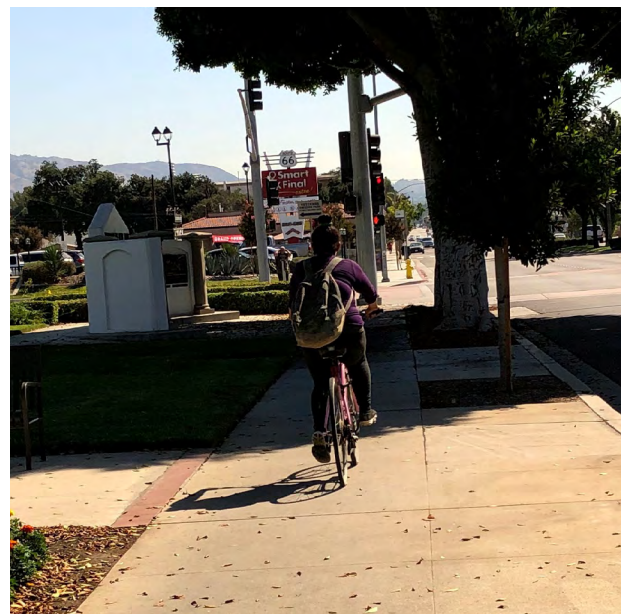
Inadequate Bike Infrastructure

- Participants encountered multiple bicyclists riding on the sidewalk in Downtown Azusa along North Azusa Avenue, North San Gabriel Avenue, West Foothill Boulevard, and East Ninth Street, where it is not legally permitted.⁶ When asked, one of these bicyclists shared that he felt unsafe riding on Azusa Avenue due to the large traffic volumes and a k-rail next to The Orchard development project that narrowed the street. He felt more comfortable riding on the sidewalk rather than on the street with high-speed motorists.



Left: Bicyclists riding on the sidewalk say they feel unsafe riding in the street. Right: Azusa's Municipal Code, 74.83 on the Southwest corner of the North Azusa/West Foothill Boulevard intersection reads that no bike riders are allowed to ride on the sidewalk, but many are forced to due to construction projects narrowing streets, large traffic volumes, and speeding motorists.

- Many bicyclists, including commuters and those cycling for recreational purposes, travel along North Azusa Avenue both on the street and on the sidewalk. Despite this high level of biking, North Azusa Avenue, from West Foothill Boulevard to East Fifth Street lacked Class II bike lanes. Class II Bike Lanes are designated spaces for bicyclists to ride along a roadway. They are marked by striping, signage, or pavement markings and are typically installed on larger thoroughfares with higher volumes of motorists and higher speeds.
- Despite being designated as bike routes, North Azusa Avenue, East 9th Street, North Dalton Avenue, West Foothill Boulevard, North Alameda Avenue, and South Santa Fe Avenue lacked bike signage or wayfinding signage for bicyclists. North Azusa Avenue, East Ninth Street, and West Foothill Boulevard are highly used by bicyclists traveling as their main source of transportation, as well as recreational bicyclists.



Bicyclist traveling on the sidewalk facing vehicle traffic.

⁶ Azusa Municipal Code, 74.83: https://library.municode.com/ca/azusa/codes/code_of_ordinances?nodeId=MUCO_CH74TRVE_ARTIIIBI_DIV1GE_S74-83OPRE

Underutilized Public Space

- Participants discussed that Edwards Park⁷ on North Azusa Avenue and East 6th Street is underutilized. They shared that the park is usually empty perhaps due to it being gated. According to the City's website, the park has benches, a drinking fountain, a jungle gym, and swings.



Edwards Park is empty on a Saturday morning.

Pedestrian-scale Lighting

- Beautiful and antique-style light posts line North Azusa Avenue from East 9th Street to East 5th Street. Participants identified the lighting as a community asset and expressed their wish for additional lighting south of North Azusa Avenue/East 5th Street, at bus stops, and streets leading to and from the Metro Transit Center, where pedestrians and bicyclists could benefit from additional lighting, especially pedestrian-scale lighting.
- Bus stops along West Foothill Boulevard, North Dalton Avenue, North Azusa Avenue, and North San Gabriel Avenue in the workshop focus area lacked lighting and pedestrian-scale lighting.



Pedestrian-scale lighting is visible on North Azusa Avenue from East 9th Street to East 5th Street.

Lack of Shade

- The Downtown Azusa community benefits from some fully developed shade trees, mostly around City Hall and in Veteran's Freedom Park. However, the majority of trees are smaller, younger trees and palm or decorative trees that do not provide shade. There are many empty tree wells and sidewalk buffers where shade trees can be planted to fill in the shade gaps in the Downtown.



Top and Middle Row: Various types of trees, shade canopies, and tree planting opportunities. Bottom Row: Residents carry umbrellas to provide shade while waiting to cross at North Azusa Avenue near the light rail station.

Bus Shelters

- Some bus stops along West Foothill Boulevard, North Dalton Avenue, North Azusa Avenue, and North San Gabriel Avenue do not provide shelters, exposing riders to the elements. Participants shared that this is particularly uncomfortable during the hot summer months when temperatures regularly exceed 90 degrees Fahrenheit.



The bus stop along North Dalton Avenue in front of Veteran's Freedom Park lacks a shelter to provide shade and protect riders from the elements.

- North Azusa Avenue, between West Foothill Boulevard and East 5th Street, has sidewalk amenities like benches and trash bins, but few are located near trees for shade.



Benches line North Azusa Avenue, providing pedestrians with a resting place to enjoy the Azusa Downtown area.

Recommendations to Improve Walking and Biking Safety in Downtown Azusa

Participants engaged in small-group action planning discussions to identify community programs and infrastructure projects aimed at increasing the health and safety of the community. Small groups were separated into four thematic areas: encouragement, education, enforcement, and engineering, to brainstorm a list of programs and projects. Each small group then chose one recommendation to prioritize and expand on via preliminary planning. The other results of the brainstorm are listed by theme below.

Encouragement:

- Install a temporary demonstration of conventional bike lanes on Foothill Boulevard near Azusa City Hall in Downtown Azusa.
- Host more open street events similar to 626 Golden Streets.
- Implement an Earn-a-bike program in partnership with Active San Gabriel Valley (Active SGV).

Engineering:

- Install wayfinding signage in the downtown area leading to popular destinations.
- Plant trees to provide shade on streets with high pedestrian traffic.
- Install street furniture such as benches, tables, shelters at parks and in the downtown area.
- Install traffic circles/roundabouts as a speed calming measure.
- Install a pedestrian scramble at intersection(s) with high pedestrian traffic.
- Install wider sidewalks.
- Prioritize first and last mile improvements.
- Install bike lanes throughout the City to complete the surrounding bike network.

Enforcement:

- Create city policies to encourage enforcement, such as 15 mph speed limits in designated areas.
- Post signs within the commercial zone bearing the municipal code that “expressly prohibits” cycling on sidewalks because enforcement can only occur near signs clarifying the law.
- Implement a neighborhood watch or block captain program to encourage safer speeds in the neighborhood.
- Install speed feedback signs to control speeding on wide streets in coordination with PD speed enforcement.

Community Recommendations

Participants discussed and planned temporary demonstrations around Citrus College and Azusa Pacific University, a walking and biking safety community festival, citywide crossing improvements, and enhance Downtown wayfinding with traffic safety messages.

The following tables summarize the community recommendations developed by the community.

Encouragement Project: Temporary Demonstrations around Citrus College and Azusa Pacific University

Project Description: North Citrus Avenue, from West Foothill Boulevard to East Alosta Avenue, is an area that encompasses both Citrus College and Azusa Pacific University and has high volumes of pedestrian, bicyclist, and motorist traffic. This area may benefit from high-visibility crosswalks, conventional bike lanes, bulb-outs, and a dedicated end of line bus stop. Involving various invested partners, such as the local higher education institutions, can improve road conditions for both commuters and locals who drive, walk, scooter, and/or bike in this area. While this area is complex, hosting a temporary demonstration of some or all of the above listed treatments can provide necessary feedback to City engineers and increase safety in this corridor

Project Goals:

- Demonstrate safety benefits of various walking and biking safety improvements;
- Evaluate all road user behaviors and responses to the temporary demonstration(s);
- Educate the community about a potential upcoming project(s) and how they increase road safety;
- Encourage permanent installation of crossing treatments and bike lanes; and
- Encourage safe travel behaviors by all road users.

Action Steps	Timeline	Responsible Party	Resources
Develop and Execute Advocacy Campaign: Azusa walking and biking advocates with the support of Citrus College and Azusa Pacific University work to approve hosting temporary demonstrations of high-visibility crosswalks and conventional bike lanes on North Citrus Avenue from West Foothill Boulevard to East Alosta Avenue.	Fall 2019	Planning Committee Pedestrian and Bicycle Safety Advocates Cycling Clubs City of Azusa	AARP Pop-Up Demonstration Toolkit
Host Temporary Demonstration: Temporary demonstrations of high-visibility crosswalks and conventional bike lanes are installed. The Azusa Planning Department and Public Works Department will conduct a study to assess the effectiveness of the temporary safety improvements to determine if they will be installed permanently.	Winter 2020 - Spring 2020	City of Azusa Planning Department City of Azusa Public Works Department	Measuring and Evaluating Streets
Release Study Results: Results of the study and observations will be made public and the City of Azusa will announce findings and if the temporary treatments will be permanently installed.	Summer 2020	City of Azusa Planning Department City of Azusa Public Works Department	Low-cost, Temporary Changes Make for a Safer and Friendlier Street in Provo, Utah

Education Project: Walking and Biking Safety Community Festival

Project Description: Community walking and biking education and encouragement event to provide hands-on walking and biking safety education to children, youth, and adults in the community. Event will include other health and wellness and art and culture activities for the community to encourage participation. Event will be based off a successful 2012 Cycle Azusa community event but will expand the walking and biking education and encouragement activities to address community safety concerns and target education towards those experiencing high rates of pedestrian and bicycle injuries and fatalities.

Project Goals:

- Provide targeted walking and biking safety education to Azusa community members and residents;
- Increase awareness of safe walking and biking behaviors;
- Encourage community to participate in active transportation for health, wellness, recreation, and transportation; and
- Reduce pedestrian and bicycle collisions.



Action Steps	Timeline	Responsible Party	Resources
Reconvene the Healthy Azusa coalition of partners to discuss and plan events: <ul style="list-style-type: none"> • Invite partners to a 1-hour preliminary planning meeting to discuss the event. • Identify a date, time, and location for the meeting and develop meeting agenda. • Host preliminary meeting and identify potential event dates, times, and locations to coincide with May is Bike Month and School District Safe Routes to School activities. Check with Active SGV for their Ciclaviva "Golden Streets event schedule to avoid conflicts. • Potential Locations: Local park or school 	Fall 2019	Healthy Azusa coalition lead Alexandra Muniz California Walks City of Azusa SafeTREC Azusa Unified School District	Emails Facebook Invitation Pedestrian and Bicycle Collision Data Workshop Recommendations Report

Education Project: Walking and Biking Safety Community Festival

Action Steps	Timeline	Responsible Party	Resources
Secure event location and partner organizations: <ul style="list-style-type: none"> Identify and invite local health and wellness and art and culture organizations and partners to participate in and sponsor the event. <ul style="list-style-type: none"> Bike Shops Wellness Centers Gyms and Exercise Classes Music Artists 	Winter 2019-2020	Healthy Azusa California Walks City of Azusa Azusa Unified School District	List of partners/vendors Budget/funding sources Layout and location of activities
Develop walking and biking education activities: <ul style="list-style-type: none"> 2-3 Bike Tours/Bike Assessment routes, Youth Bike Rodeo and Crosswalk Education 	Winter 2019-Spring 2020	California Walks Healthy Azusa Azusa Unified School District	Route maps Rodeo and Assessment materials Liability Release Form Flyer Registration Link for on-bike assessment
Host event in the Spring: <ul style="list-style-type: none"> Advertise event to Azusa community <ul style="list-style-type: none"> Flyers Social Media City Website School Peachjar Finalize event details with partners and host event. 	April or May 2020	Healthy Azusa California Walks City of Azusa Azusa Unified School District Community Partners	Materials for education activities Signage Tables and Chairs

Engineering Project Name: Citywide Crossing Improvements

Project Description: Install crossing improvements at key locations throughout the City to improve visibility and safety between motorists and pedestrians in the crosswalk

Project Goals:

1. Improve visibility between motorists and pedestrians in marked and unmarked crosswalks;
2. Decrease crashes between motorists and pedestrians in marked and unmarked crosswalks; and
3. Improve safety for the most vulnerable pedestrians, including children and seniors.

Action Steps	Timeline	Responsible Party	Resources
<p>City of Azusa Planning Department to determine if the suggested crossing improvements are eligible for implementation:</p> <ul style="list-style-type: none"> ● Raised Crosswalks <ul style="list-style-type: none"> ○ West 6th Street/North Azusa Avenue intersection ○ All along San Gabriel Avenue, and Azusa Avenue, near schools ● Passive Detection Rectangular Rapid Flashing Beacons (RRFB) <ul style="list-style-type: none"> ○ East 9th Street/North Alameda Avenue ○ East 9th Street/North Azusa Avenue intersection ● High-visibility Marked Crosswalks <ul style="list-style-type: none"> ○ Throughout the City, adjacent to schools ● High-Visibility Creative Crosswalks <ul style="list-style-type: none"> ○ North Citrus Avenue/East Foothill Boulevard intersection ● Pedestrian Hybrid Beacon <ul style="list-style-type: none"> ○ At unsignalized intersections near schools and senior zones ● Pedestrian Safety Islands <ul style="list-style-type: none"> ○ Throughout the City, near schools and senior zones 	Fall 2019	City of Azusa Planning Department	

Engineering Project Name: Citywide Crossing Improvements

Action Steps	Timeline	Responsible Party	Resources
<p>City of Azusa Planning Department to host a community focus group to prioritize treatments and locations:</p> <ul style="list-style-type: none"> Identify local stakeholders at key locations, including residents, schools, and businesses. 	Spring 2020	<p>City of Azusa Planning Department</p> <p>Project Team</p> <p>Planning Committee</p>	CPBST Follow-up Activity
City of Azusa Planning Department to apply for funding for the installment of prioritized crossing improvements.	Spring - Summer 2020	City of Azusa Planning Department	<p>Active Transportation Program (ATP) - Cycle 5</p> <p>Sustainable Transportation Planning Grants</p> <p>Funding Navigation for California Communities</p>

Enforcement Project Name: Enhance Downtown Wayfinding with Traffic Safety Messages

Project Description: Some road users practice unsafe behaviors in the area of Downtown Azusa, including speeding and cycling on sidewalks. As this area grows more dense from future housing projects, pedestrian and bike traffic may increase and create additional conflicts. The city will use signage and art as Preventative Enforcement to educate road users as part of the planned downtown wayfinding program. This will help to establish community standards of proper road use in the downtown area to improve safety for pedestrians and bicyclists.

Project Goals:

1. Support safer behavior by road users by posting information on local laws and expectations
2. Create a safer environment for pedestrians and cyclists in downtown Azusa
3. Adapt to changing mix of road users by collecting community feedback and modifying signage

Action Steps	Timeline	Responsible Party	Resources
Develop Traffic Safety Signage: Identify the problems that should be addressed by signage and the locations where signage should be installed, as well as opportunities for murals, street paint, and other artwork.	Winter 2019	City of Azusa	Azusa TOD Specific Plan Azusa TOD Environmental Impact Report Azusa Municipal Code Collision Data
Installation of Signage: Post signage, continue to collect feedback as downtown Azusa changes, and update signage to reflect changing road users or traffic safety-related behaviors.	Summer 2020 - Ongoing	City of Azusa	Community input and feedback Caltrans Metro

Cal Walks & UC Berkeley SafeTREC Recommendations

Establish a City of Azusa Bicycle and Pedestrian Advisory Committee

The Project Team recommends the City of Azusa Planning Department works within the City to establish a Bicycle and Pedestrian Advisory Committee (BPAC) that can provide input to decision makers on bicycle and pedestrian projects, programs, and policies. While the City plans for future projects, a BPAC could provide constructive guidance on bicycle and pedestrian issues and ensure that bicycle and pedestrian issues are being addressed during all future projects. A BPAC could also serve as a bridge to community residents and ensure they have an opportunity to give input and receive a response from the City.

Install Pedestrian Safety Improvements around the Metro Transit Center

With the increased focus on transit-oriented development, Azusa anticipates an influx of residents – and with that more pedestrians and bicyclists. The Project Team recommends improving pedestrian safety infrastructure around the Azusa Downtown Metro Transit Center, specifically high-visibility crosswalks on Azusa Avenue and on all four crossings at East 9th Avenue and North Alameda Avenue by the Transit Center's parking structure. While the crosswalks on Azusa Avenue are currently pigmented a brick orange tone, the color is muted, and the crosswalks lack any type of high-visibility markings. High-visibility markings are more easily seen by motorists and are demonstrated to reduce pedestrian-motorist collisions. These crossings would also benefit from the installation of upgraded pedestrian signal heads with countdown signals that inform pedestrians about the time remaining in the pedestrian change interval.

Conduct Bike Counts

The Project Team recommends the City of Azusa Planning Department conduct bike counts on Azusa's main corridors to determine bike ridership patterns. This information will supplement previous bike count data collection gathered by Active SGV⁸. The Planning Department can then analyze all these observations and community feedback to assess how well they align with the proposed bike lane and bike route installations in Downtown Azusa.

Pedestrian and Bicycle Improvements along Foothill Boulevard

With many of the pedestrian and bicycle collisions in downtown Azusa occurring along Foothill Boulevard, the Project team recommends that workshop participants collaborate with the City of Azusa Planning and Public Works Departments to explore options to redesign Foothill Boulevard for all users to include pedestrian refuge islands and bicycle lanes, focusing on the segment from Azusa Venue to Pasadena Avenue. Suggested improvements also include more pedestrian-scale lighting and more shade trees along the corridor as well as higher-visibility crosswalks at the intersections with Solano Avenue (specifically, the crosswalks across Solano) and Pasadena Avenue.

8 Active SGV's Data Collection Project, contains specific data about Azusa:
<https://www.activesgv.org/sgvcounts.html>

Adopt an Equity Lens in the Development of the Pedestrian Master Plan

The Project Team recommends the City approach the development of its Pedestrian Master Plan with an equity lens. Tactics aligned with an equity lens include:

- Prioritizing outreach and community engagement in low-income communities and communities of color;
- Providing education, workshop, and training materials in multiple languages;
- Accommodating participants with mobility and developmental impairments; and
- Actively informing stakeholders, especially active transportation users, on the planning processes and expected project outcomes.

Appendix A: Community Plans & Policies Review

Community Plans and Policies Review: Cal Walks conducted a review of current community planning documents to inform the training and prepare to build off existing efforts. The following documents were reviewed prior to the site visit:

1. [Azusa General Plan](#), 2004
2. [Azusa Transit-Oriented Development Specific Plan](#), 2018
3. [Approval for Transit-Oriented Development Specific Plan](#), 2015
4. [Bike Tours Flyer](#), 2011
5. [Azusa Intermodal Transit Facility Draft Environmental Impact Report](#), 2012
6. [Azusa Capital Improvement Projects](#), 2017
7. [City of Azusa ADA Compliance](#)

Appendix B: Resources

List/Links of Resources

1. [Funding Navigation for California Communities](#)
2. [How to Conduct Bicycle and Walking Audits](#)
3. [Urban Bikeway Design Guide](#)
4. [Making Bicycling and Walking a Norm for Transportation Agencies: Best Practices for Bicycle and Pedestrian Advisory Committees](#)

For a summary of outcomes from past CPBST workshops, please visit:

www.calwalks.org/cpbst and <https://safetrec.berkeley.edu/programs/cpbst>

Appendix C: Data Analysis

Pedestrian and Bicycle Collision Data Analysis

- Downtown Azusa CPBST Workshop Data Factsheet
- Downtown Azusa CPBST Site Visit Data Presentation
- Downtown Azusa CPBST Site Visit Data Follow-Up

Pedestrian & Bicycle Data Analyses for Downtown Azusa

Community Pedestrian and Bicycle Safety Training Workshop (CPBST)

Azusa, CA | September 14, 2019

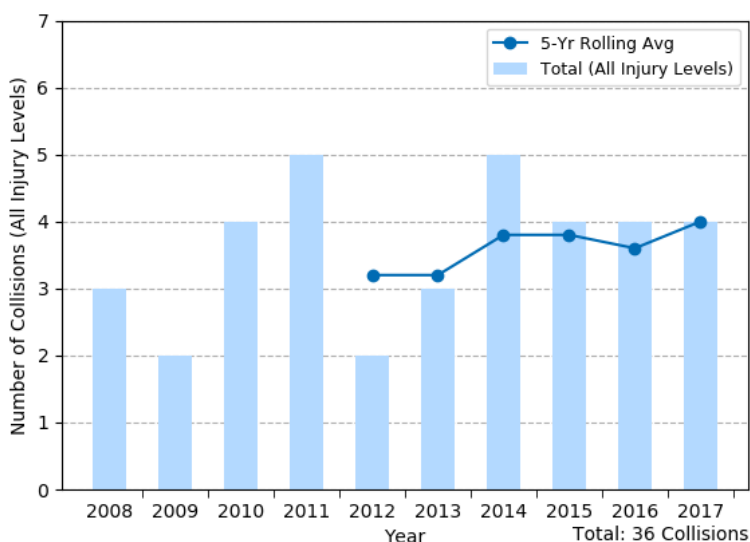
In California, more than one in four people who died in a collision is a pedestrian or bicyclist. There was a 13.9 percent increase in pedestrian deaths from 2015 to 2016 and a 14.0 percent increase in cycling deaths (FARS 2015 and 2016). In this workshop, we provide you with local collision data so that we can identify ways to make walking and biking safer in your community.

The local data seen below reflects collisions within Downtown Azusa, as determined per the workshop's planning committee.

PEDESTRIANS

How are pedestrian collisions changing over time?

What could have caused an increase or decrease in collisions?



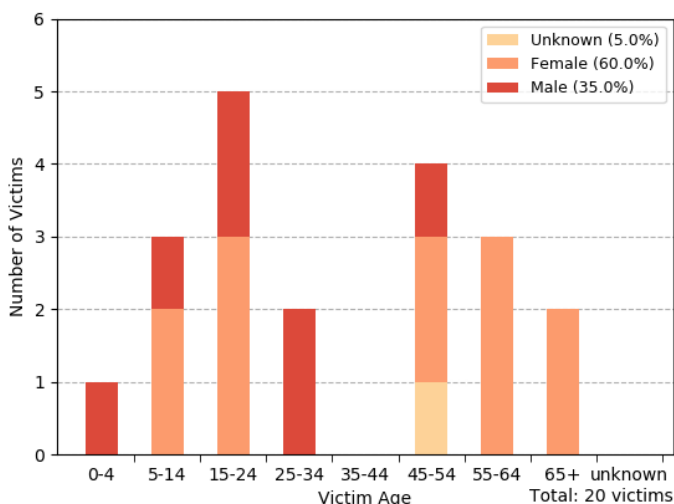
36 people were killed or injured in 36 pedestrian collisions in the last 10 years (2008-2017)

The number of pedestrian collisions appear to remain stable, after a slight increase in 2014 (based on the five year rolling average*).

* The five-year rolling average is the average of five consecutive years of data. It provides an overall collision trend over time that accounts for the significant changes in the number of collisions per year.

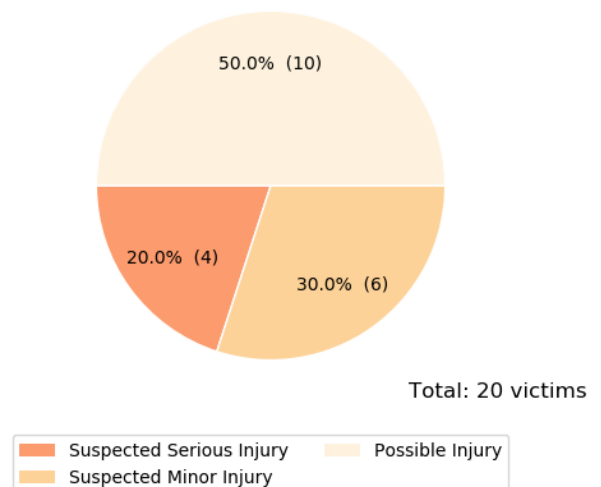
The following are based on pedestrian collision data for the years 2013-2017:

Who were the victims in these collisions?



35.0% of victims were age 18 or younger
60.0% of victims were female

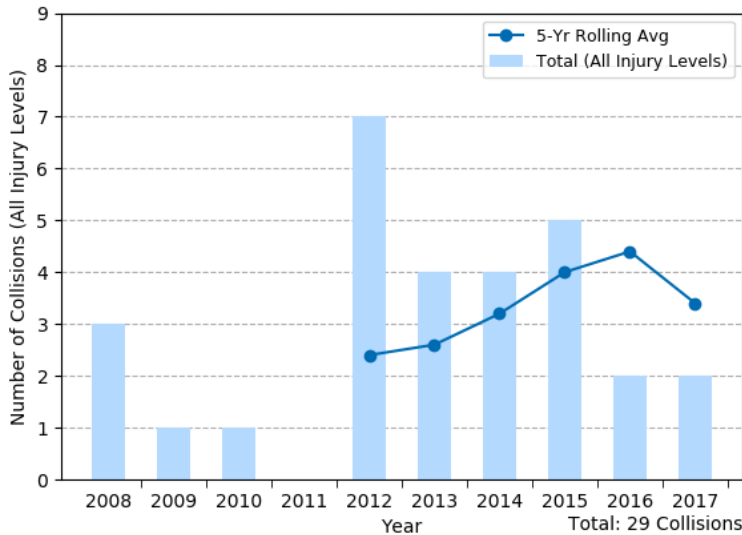
How severe were the victims' injuries?



80.0% of victims suffered minor injuries

..... *How are bicycle collisions changing over time?*

What could have caused an increase or decrease in collisions?



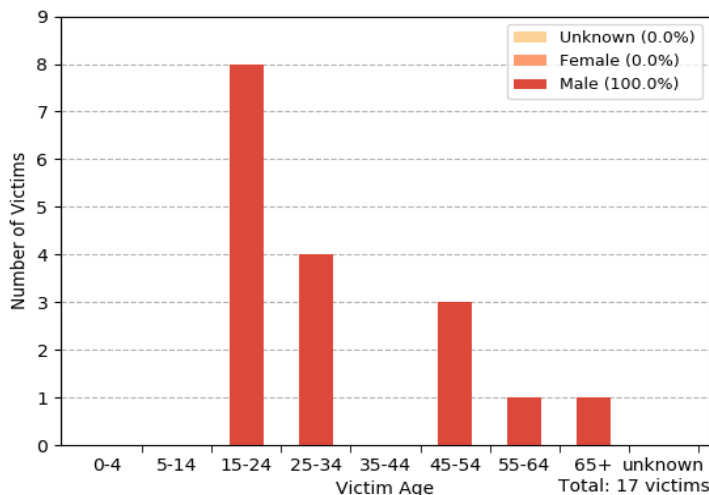
29 people were killed or injured in
29 bicycle collisions in
the last 10 years (2008-2017)

The number of bicycle collisions
appear to be **decreasing** based
on the five year rolling average*.

* The five-year rolling average is the average of five consecutive years of data. It provides an overall collision trend over time that accounts for the significant changes in the number of collisions per year.

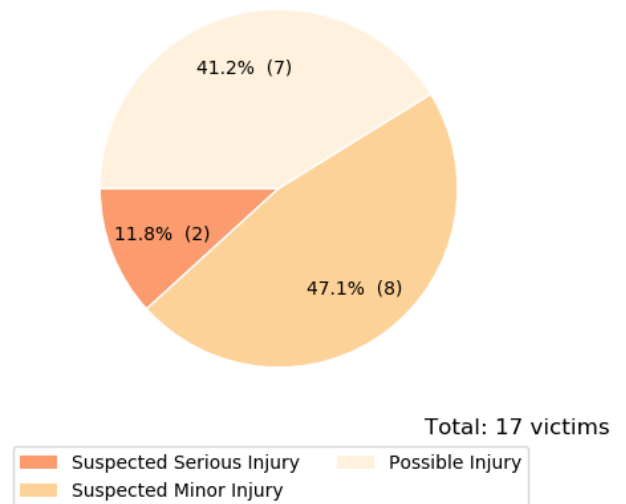
The following are based on bicycle collision data for the years 2013-2017:

..... *Who were the victims in these collisions?*



About 1/3 of victims (**31.0%**) were age 18 or younger
All victims were male

..... *How severe were the victims' injuries?*

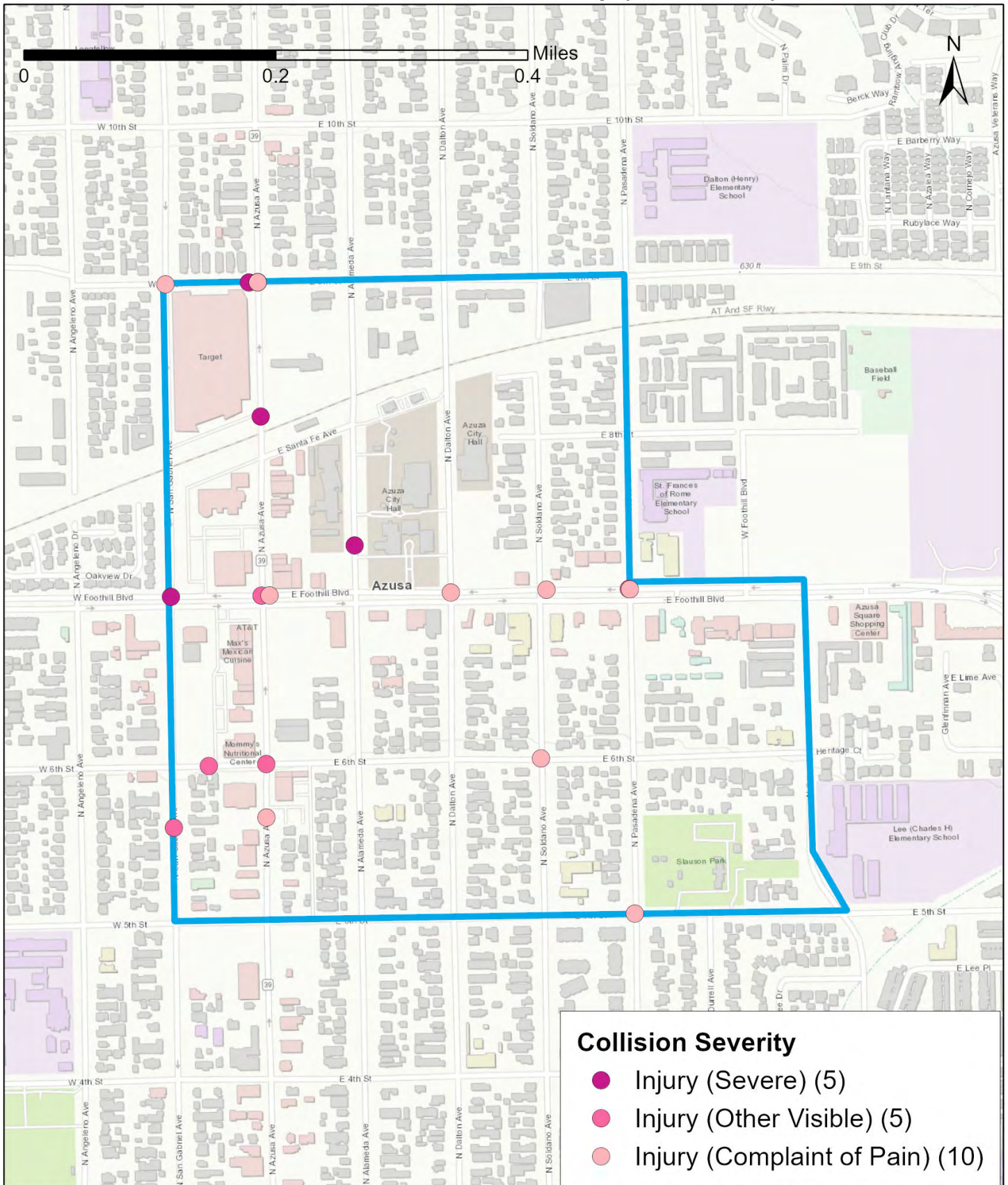


58.9% of victims suffered a serious or minor injury

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

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

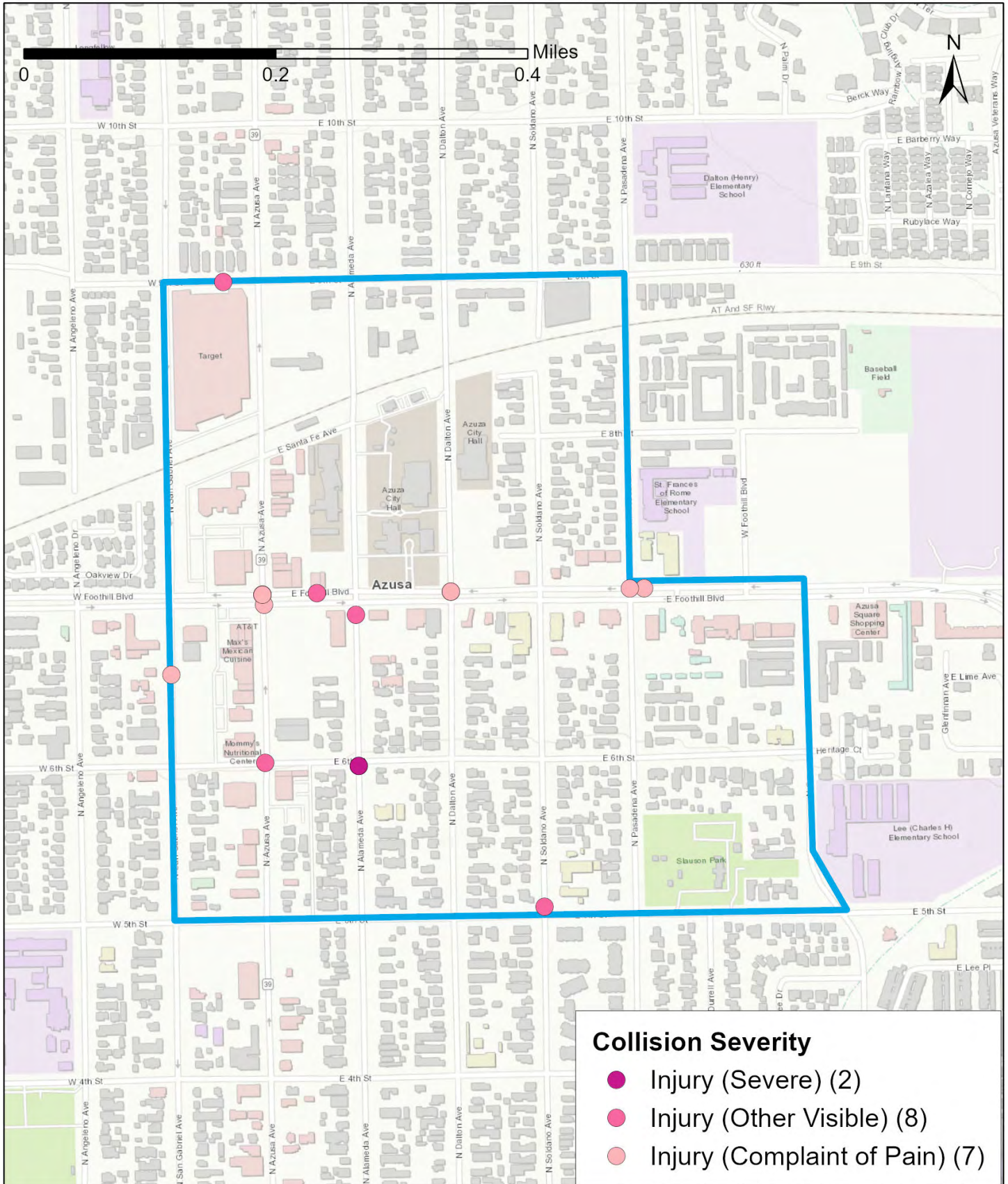
Azusa Pedestrian Collision Map (2013 - 2017)



Data Source: Statewide Integrated Traffic Record System (SWITRS) 2013-2017; 2016 and 2017 data are provisional as of March 2019

Date: 9/3/2019

Azusa Bicycle Collision Map (2013 - 2017)



Data Source: Statewide Integrated Traffic Record System (SWITRS) 2013-2017; 2016 and 2017 data are provisional as of March 2019

Date: 9/3/2019

Pedestrian Injury Collisions (2013-2017)

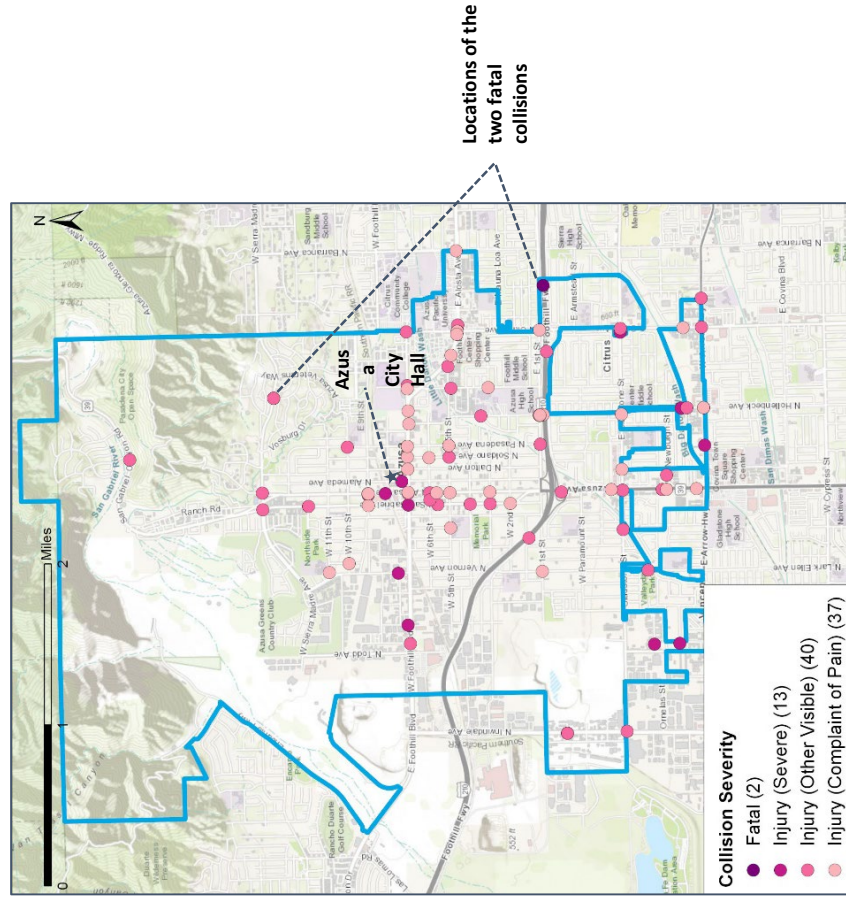
96 pedestrian injury collisions

Mostly concentrated along the main corridors:
Azusa Ave/SR-39 (16), Foothill Blvd (14), and San Gabriel Ave (8).

Two-third of collisions are north of Foothill Freeway/SR-210.

Fatal pedestrian collisions:

- Lemon Swirl Drive/Sierra Madre Ave (2014)
- SR-210/Galanto Ave (2015)



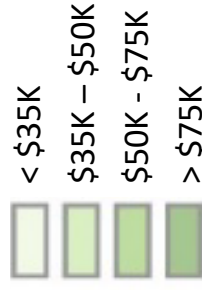
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Injury Collisions (2013-2017)

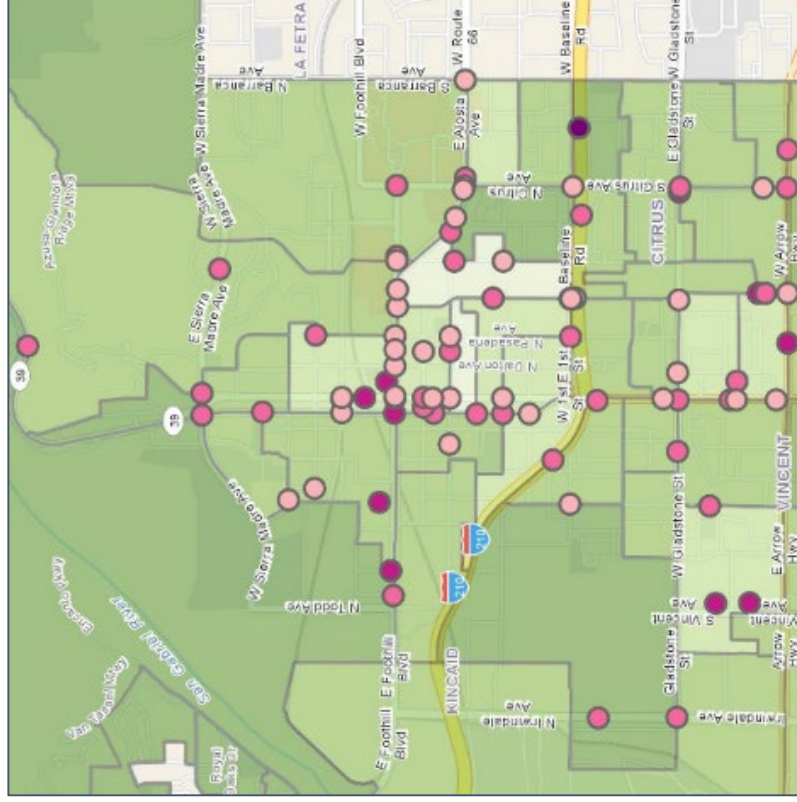
Collision Severity (2013-2017)

- Fatal (2)
- Severe Injury (13)
- Other Visible Injury (40)
- Complaint of Pain (37)

2017 Median Household Income

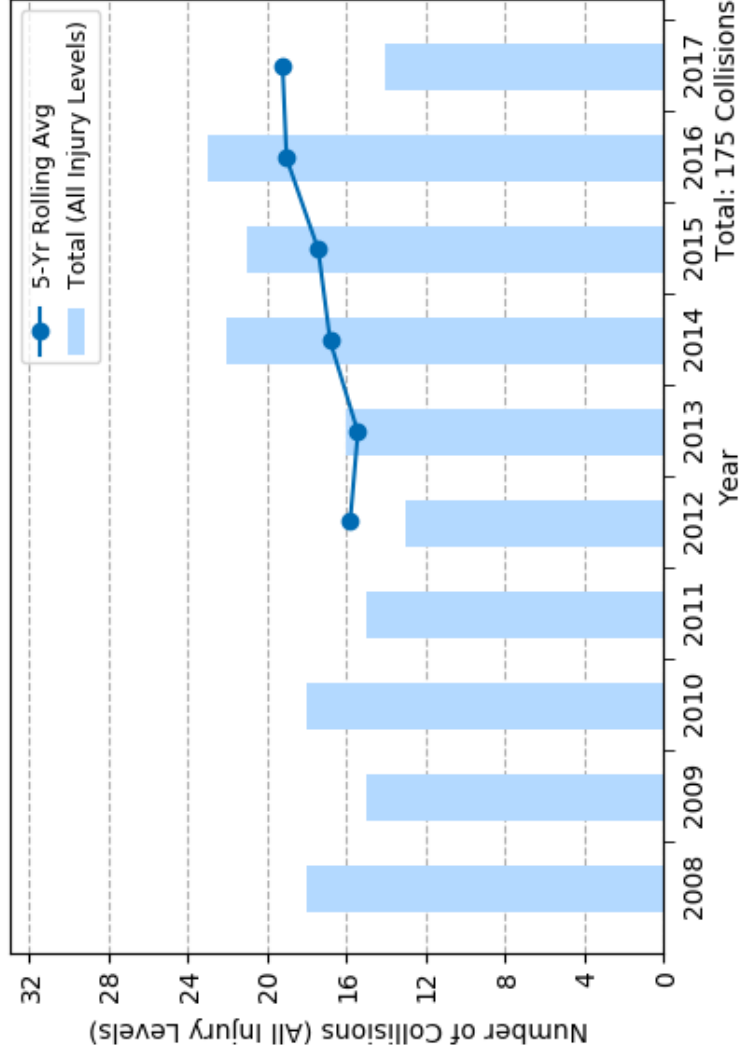


Collisions are more concentrated in lower income census block groups along the main corridors.



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Collisions Trend with 5-year rolling average



Data source: Statewide Integrated Traffic Records System (SWITRS), 2008-2017.
Collision data for 2016 and 2017 are provisional as of March 2019.

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Collisions

by Time of Day and Day of Week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM -	1	1	1	2	2	1	1	9
06:00PM-08:59PM -	5	2	1	2	4	3	2	19
03:00PM-05:59PM -	4	3	2	3	1	5	0	18
Noon-02:59PM -	0	3	0	4	1	2	1	11
09:00AM-11:59AM -	3	0	1	3	0	3	1	11
06:00AM-08:59AM -	2	2	6	2	5	3	3	23
03:00AM-05:59AM -	0	0	1	1	0	0	0	2
Midnight-02:59AM -	0	0	0	1	1	1	0	3
Total	15	11	12	18	14	18	8	96

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Collisions by Top 9 Types of Violation

Total: 96 Collisions

CVC No.	Description	Number of Collisions
21950	Driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk	42 (43.8%)
21954	Pedestrian failure to yield right-of-way to vehicles when crossing outside of a marked or unmarked crosswalk	16 (16.7%)
21952	Driver failure to yield right-of-way to pedestrians on sidewalks	8 (8.3%)
22107	Unsafe turning or moving right or left on a roadway Turning without signaling	4 (4.2%)
20001	Failure to stop in a collision resulting in injury or death (commonly known as hit-and-run)	3 (3.1%)
21456	Pedestrian failure to yield right-of-way at traffic signal / Failure of pedestrian to yield right-of-way to vehicles already in intersection Failure to obey crosswalk symbols or finish crossing before "countdown" ends	2 (2.1%)
21804	Driver failure to yield right-of-way when entering/crossing a highway	2 (2.1%)
22106	Unsafe starting or backing of a vehicle on a highway	2 (2.1%)
22350	Speeding on the highway / Driving at a dangerously high speed given highway conditions like weather, visibility, traffic, and highway measurements, or driving at a speed that endangers people or property	2 (2.1%)

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

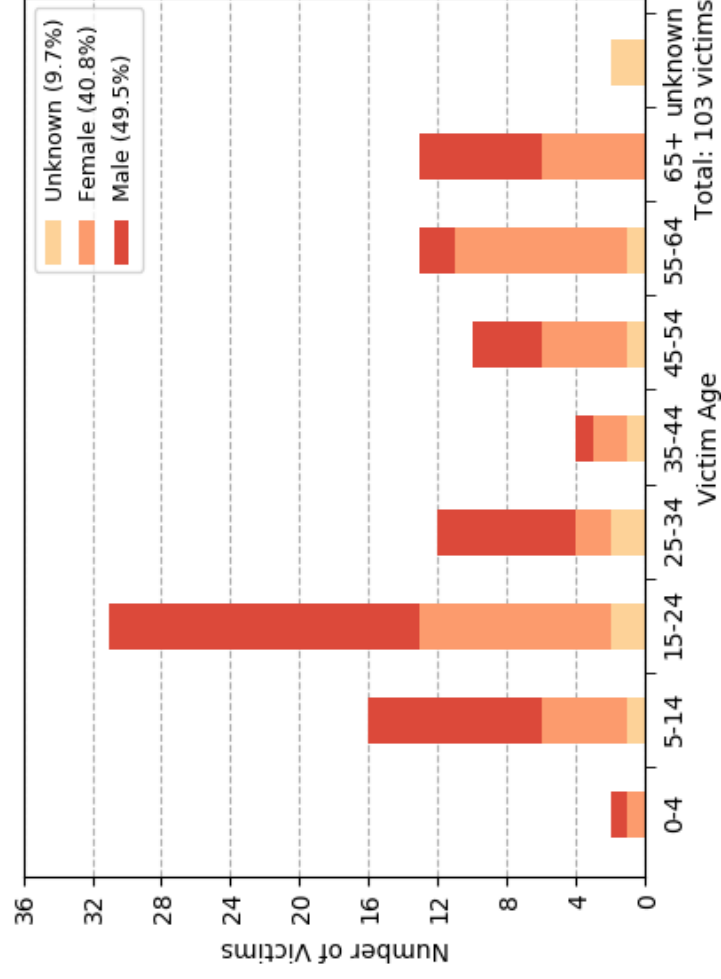
Pedestrian Victims by Age and Gender

103 pedestrian victims in 96 pedestrian collisions between 2013–2017

45.6% of pedestrian victims are between the ages of 5 and 24

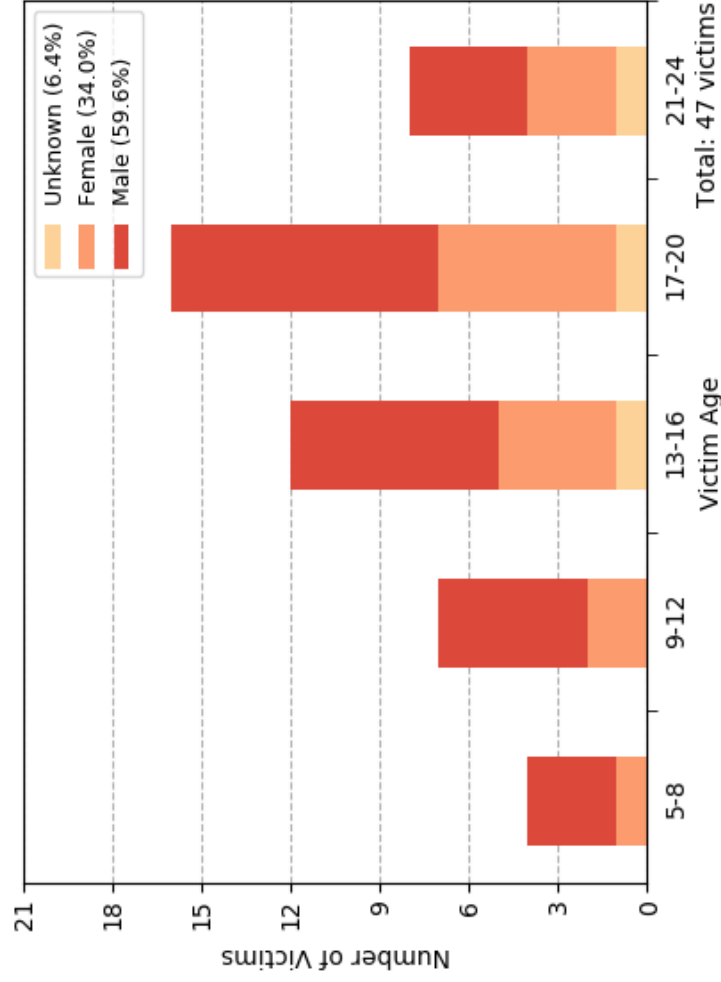
Of pedestrian victims age 65+:

- 5 victims age 65-74 (1 severe)
- 8 victims age 75-84 (1 fatal; 2 severe)



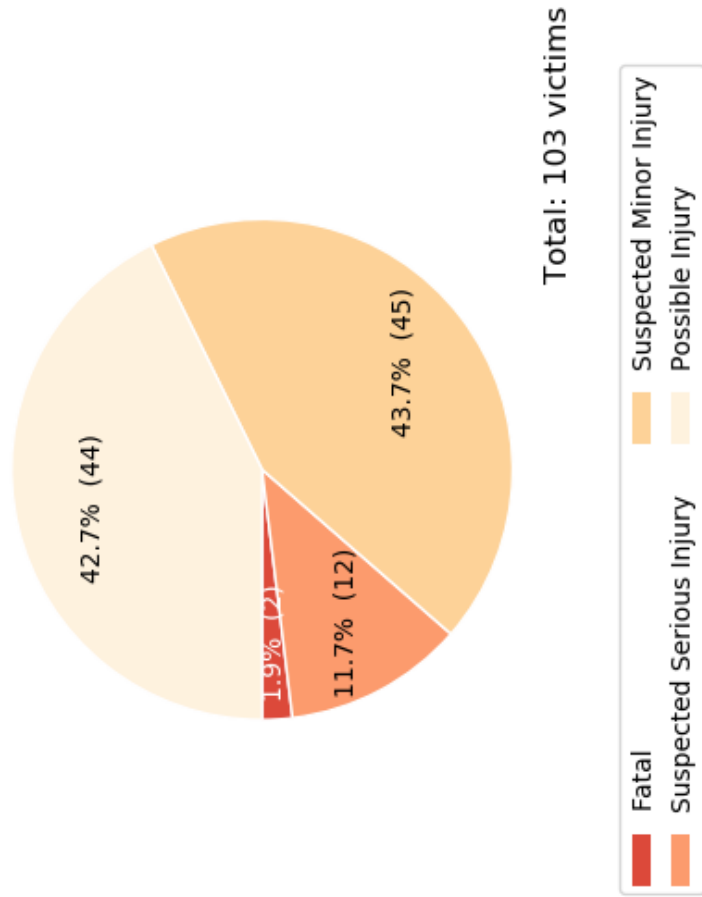
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Victims by Age and Gender (child + youth)



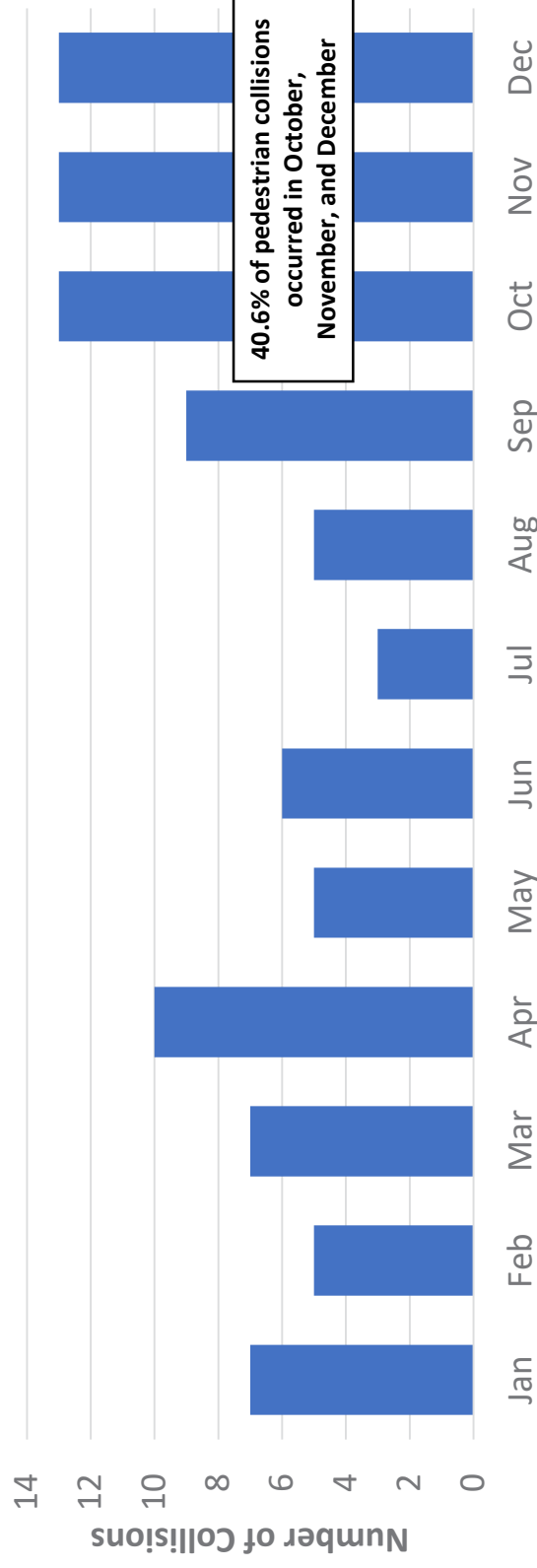
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Victims by Injury Severity



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Pedestrian Collisions by Month (2013-2017)



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Injury Collisions (2013-2017)

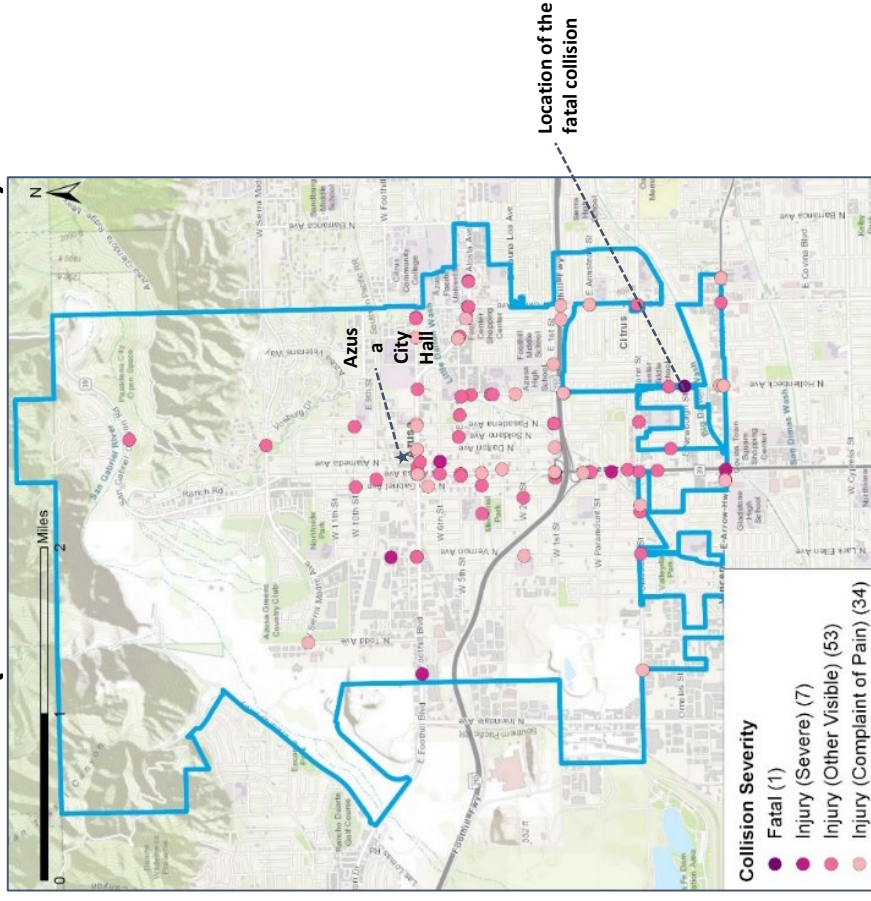
106 bicycle injury collisions (89.6% mapped)

Mostly concentrated along the main corridors:
Azusa Ave/SR-39 (23), Foothill Blvd (18),
East First St/Baseline Rd (10), Arrow Highway (8),
and Gladstone Street (7).

Over 60% of collisions were north of Foothill
Freeway/SR-210.

Fatal bicycle collision:

- Cerritos Ave/Newburgh St (2013)



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Injury Collisions (2013-2017)

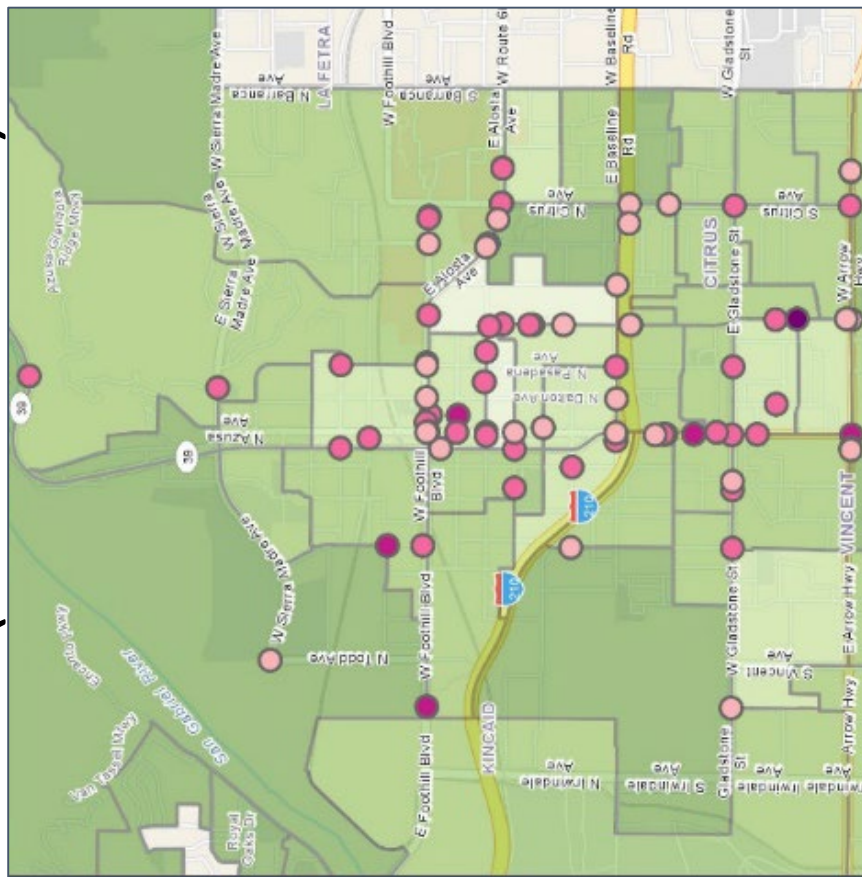
Collision Severity (2013-2017)

- Fatal (1)
- Severe Injury (7)
- Other Visible Injury (53)
- Complaint of Pain (34)

2017 Median Household Income

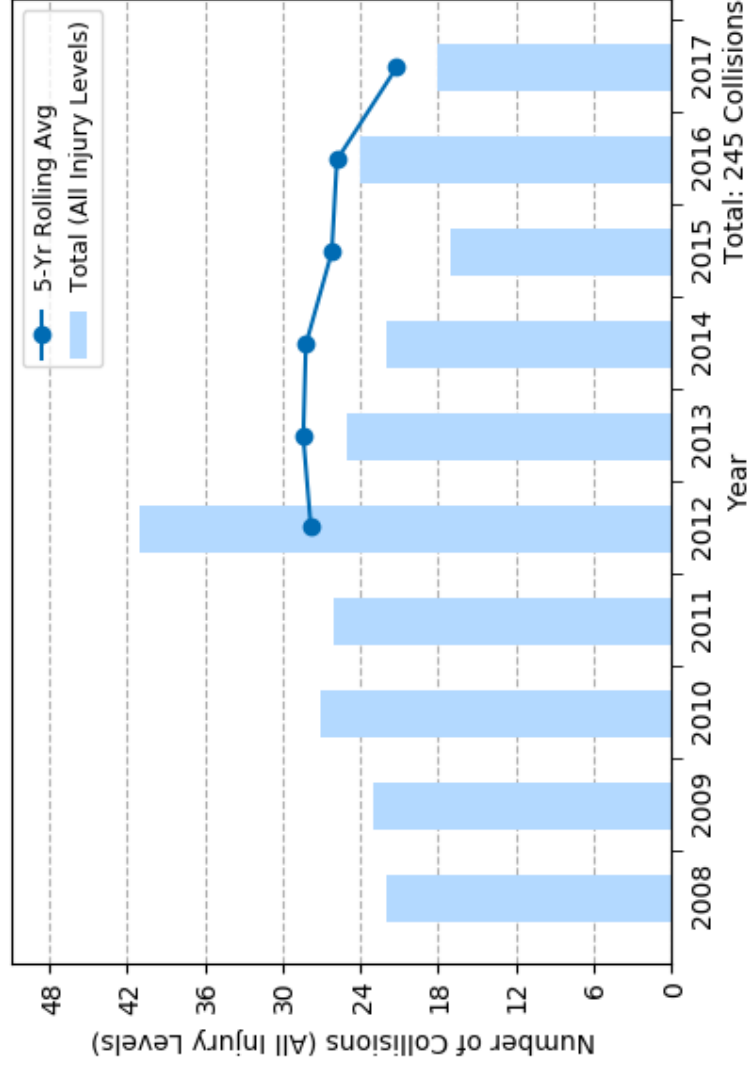
- < \$35K
- \$35K – \$50K
- \$50K - \$75K
- > \$75K

Collisions are more concentrated in lower income census block groups along the main corridors.



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Collisions Trend with 5-year rolling average



Data source: Statewide Integrated Traffic Records System (SWITRS), 2008-2017.
Collision data for 2016 and 2017 are provisional as of March 2019.

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Collisions

by Time of Day and Day of Week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM -	1	0	1	1	0	2	2	7
06:00PM-08:59PM -	3	3	3	1	2	2	2	16
03:00PM-05:59PM -	3	2	3	9	6	3	5	31
Noon-02:59PM -	1	6	2	5	5	3	0	22
09:00AM-11:59AM -	0	3	2	0	1	4	6	16
06:00AM-08:59AM -	2	3	2	1	3	2	0	13
03:00AM-05:59AM -	0	0	0	0	0	0	0	0
Midnight-02:59AM -	0	0	0	1	0	0	0	1
Total	10	17	13	18	17	16	15	106

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Collisions by Top 8 Types of Violation

Total: 106 collisions

CVC No.	Description	Number of Collisions
Not Stated		21 (19.8%)
21804	Driver failure to yield right-of-way when entering/crossing a highway	17 (16.0%)
21650	Failure to drive/ride on right half of the roadway (with some exceptions)	13 (12.3%)
22107	Unsafe turning or moving right or left on a roadway Turning without signaling	9 (8.5%)
22350	Speeding on the highway / Driving at a dangerously high speed given highway conditions like weather, visibility, traffic, and highway measurements, or driving at a speed that endangers people or property	8 (7.5%)
22450	Driver failure to stop at a stop sign before a limit line at a crosswalk, intersection, or railroad.	8 (7.5%)
21453	Failure to stop at a limit line or crosswalk at a red light Failure to yield right-of-way to pedestrian when turning on a red light	7 (6.6%)
21950	Driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk	6 (5.7%)
21802	Failure to stop or yield right-of-way at a stop sign	3 (2.8%)

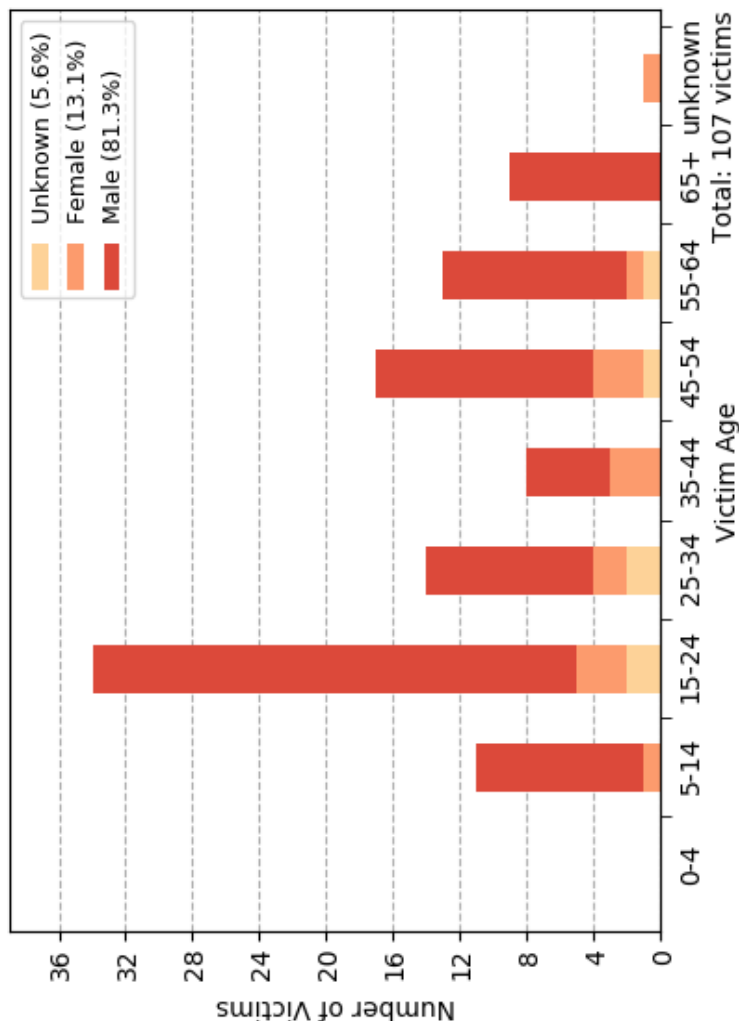
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Victims by Age and Gender

107 bicycle victims in 106 bicycle collisions between 2013–2017

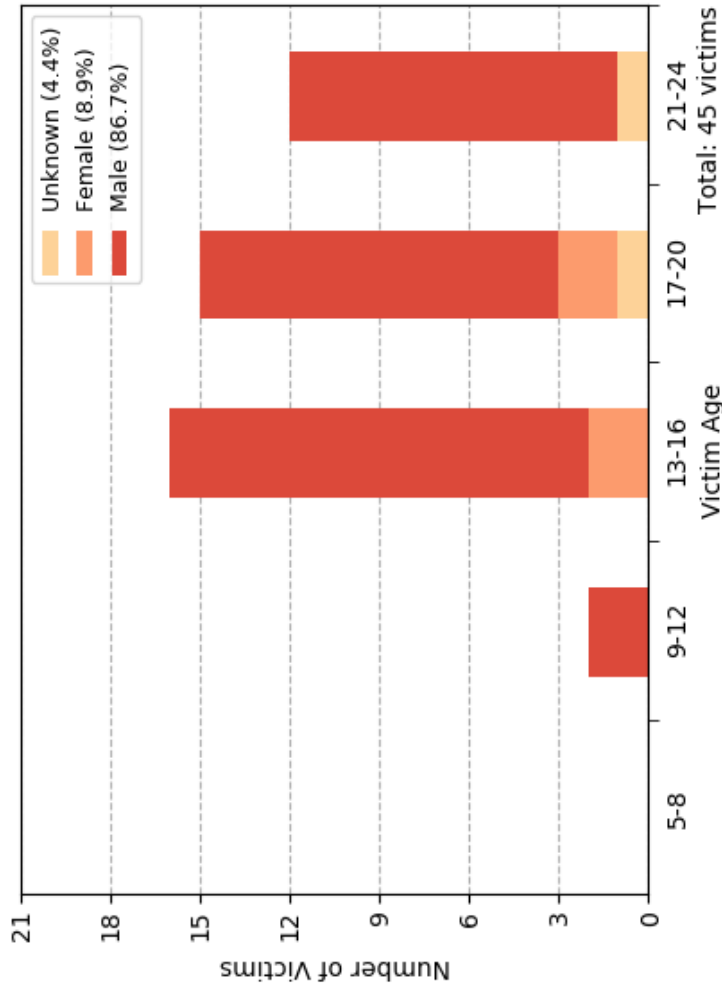
42.1% of bicycle victims were between the ages of 11 and 24

Of bicycle victims age 65+, all were under age 75



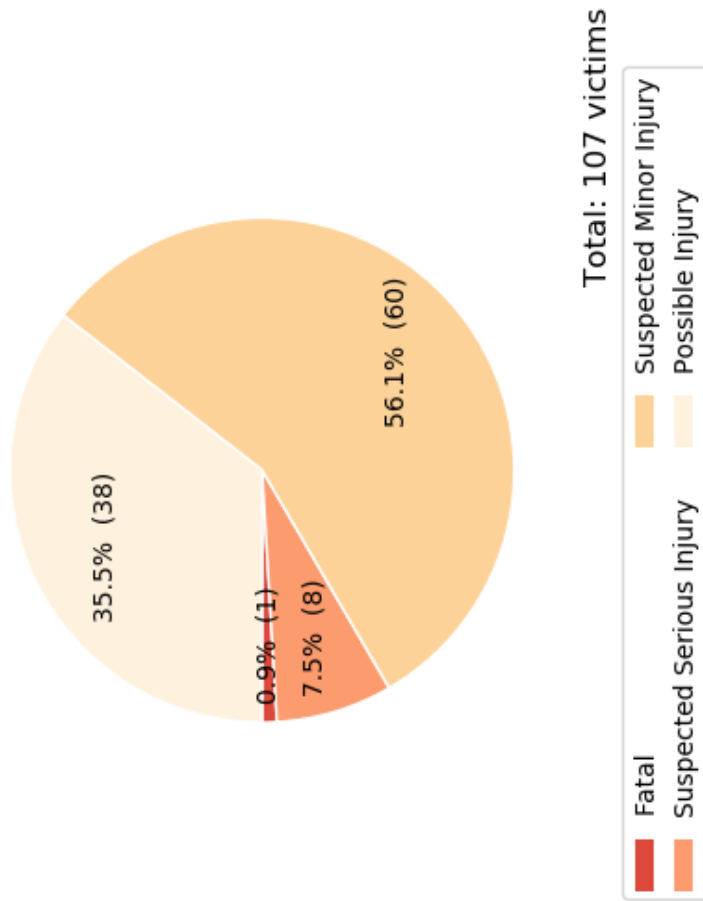
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Victims by Age and Gender (child + youth)



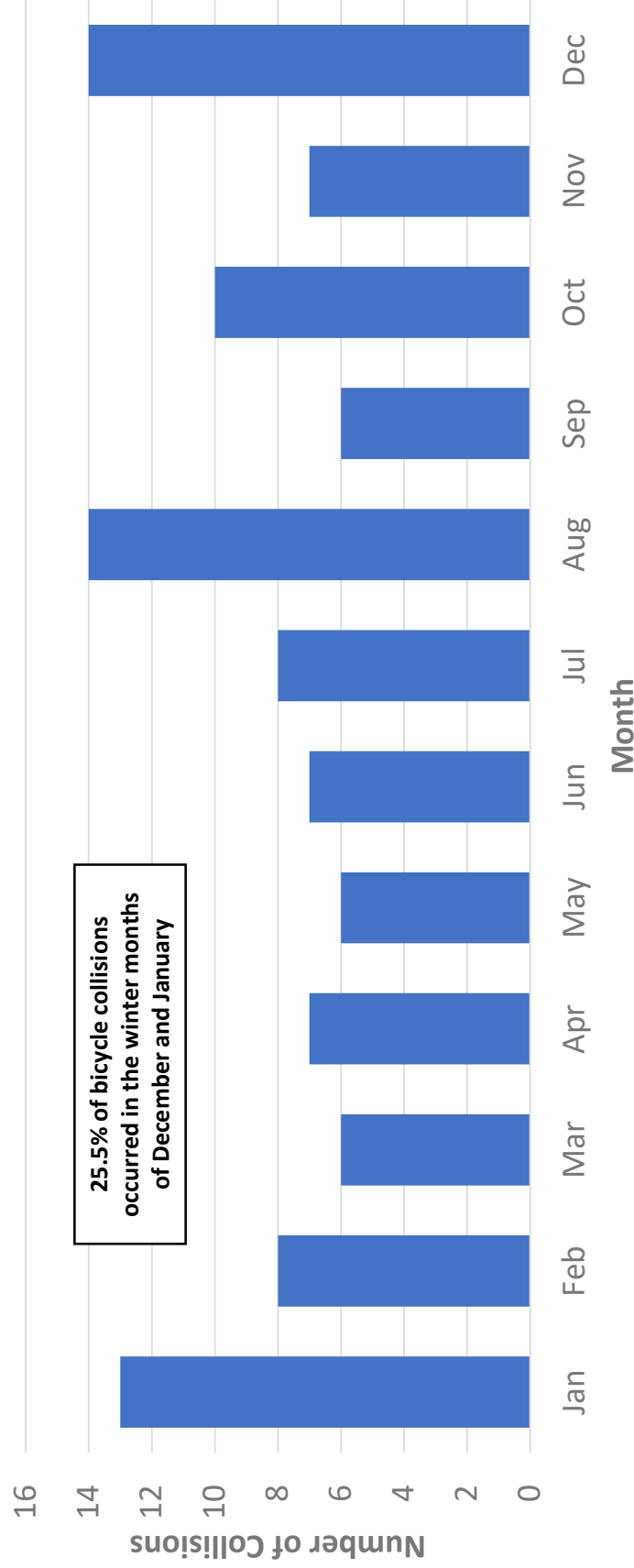
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Victims by Injury Severity



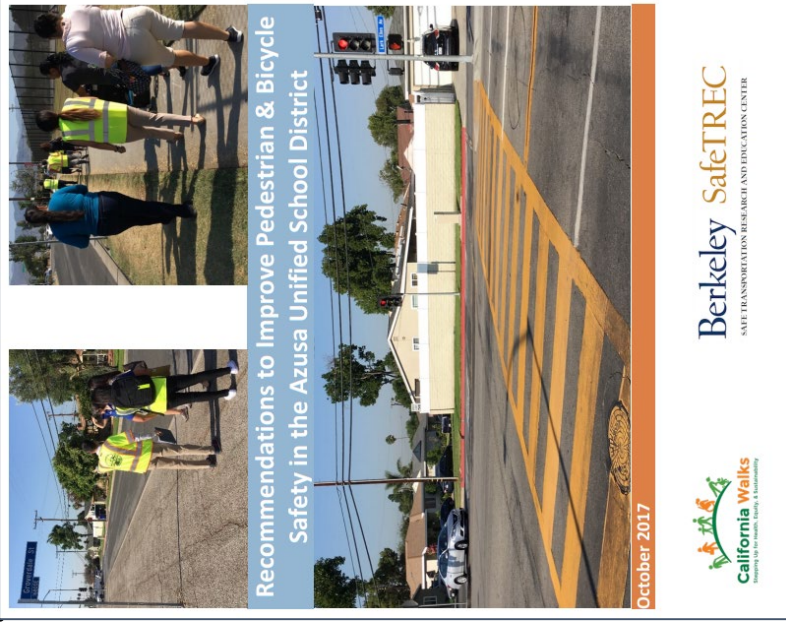
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

Bicycle Collisions by Month (2013-2017)



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of March 2019.

2017 CPBST Workshop with Azusa Unified School District



Summary of Recommendations

City/County Recommendations

- Traffic calming along Arrow Highway & Lark Ellen Ave
- Apply for infrastructure funding near Gladstone High School
- Crossing enhancements at Enid Avenue & Arrow Highway

AUSD Recommendations

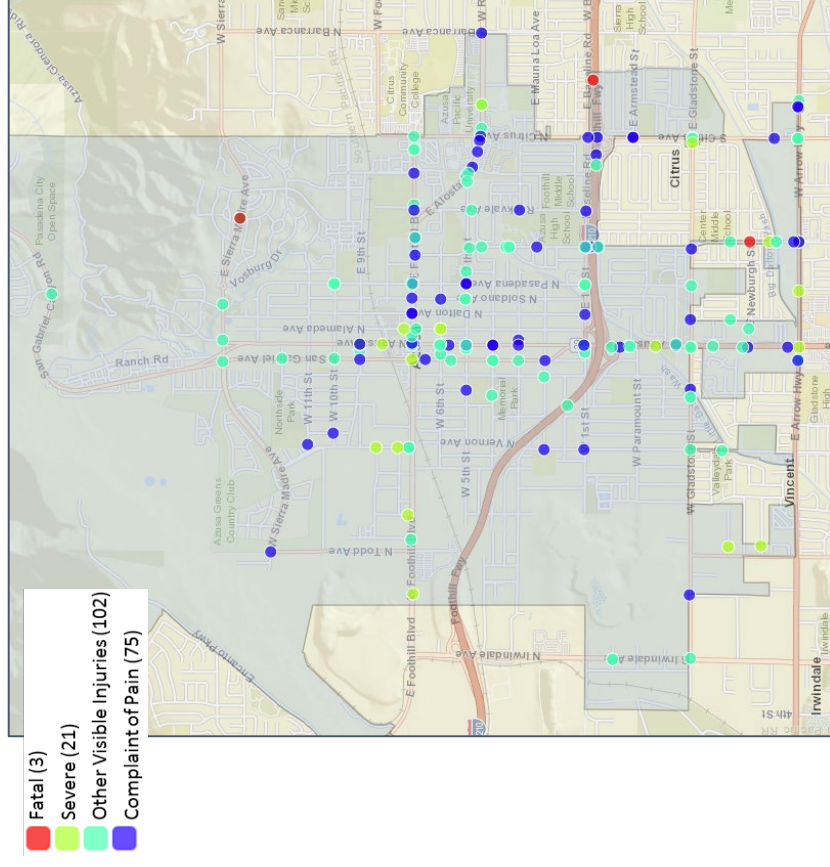
- Improve Gladstone High School pick-up and drop-off zone
- Establish a district SRTS Task Force
- Develop Community Bicycle Plan

Pedestrian + Bicycle Injury Collisions (2013-2017)

201 collisions

- 95 pedestrian collisions
- 106 bicycle collisions
- 1 pedestrian and bicycle collision

88.1% of all pedestrian and bicycle collisions between 2013-2017 were minor injury collisions

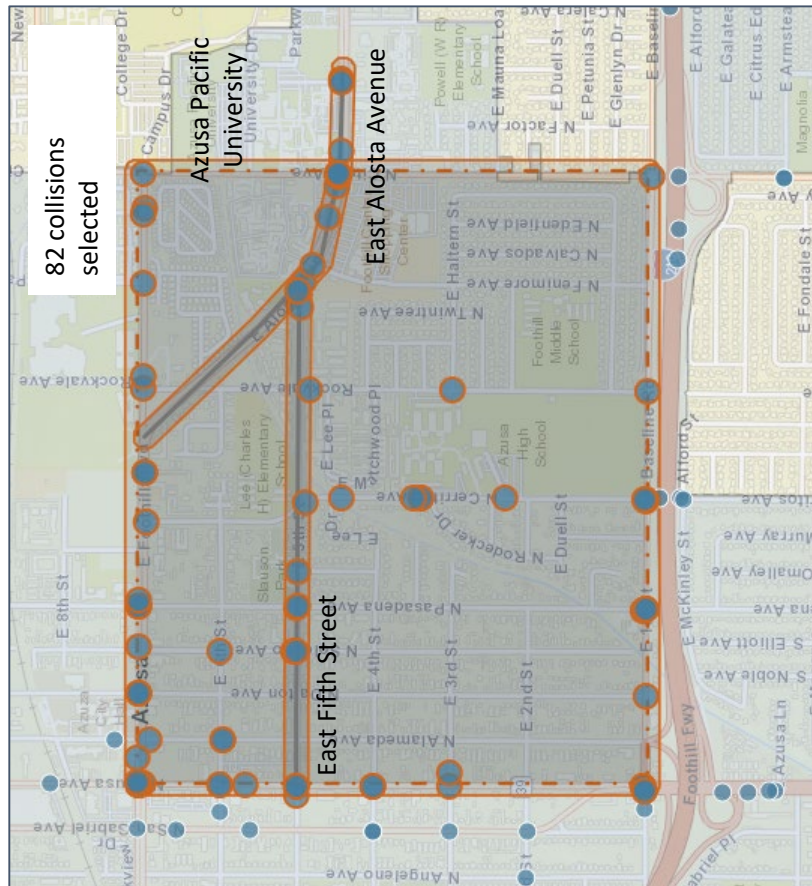


Pedestrian + Bicycle Injury Collisions (2013-2017)

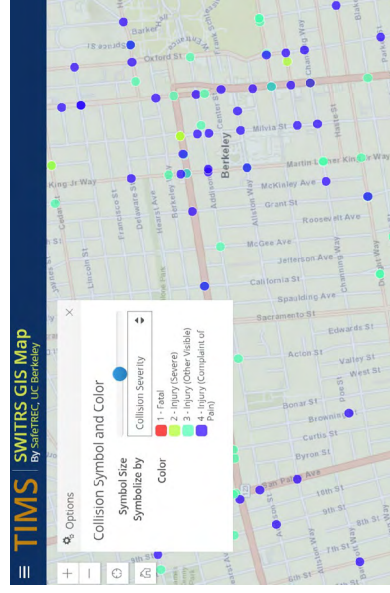
40.8% of collisions were concentrated in northeast Azusa, near Azusa Pacific University

15 collisions occurred on East Alosta Avenue

14 collisions occurred on East 5th Street



Additional Resources



Transportation Injury Mapping System (TIMS)

TIMS is a web-based 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>



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>

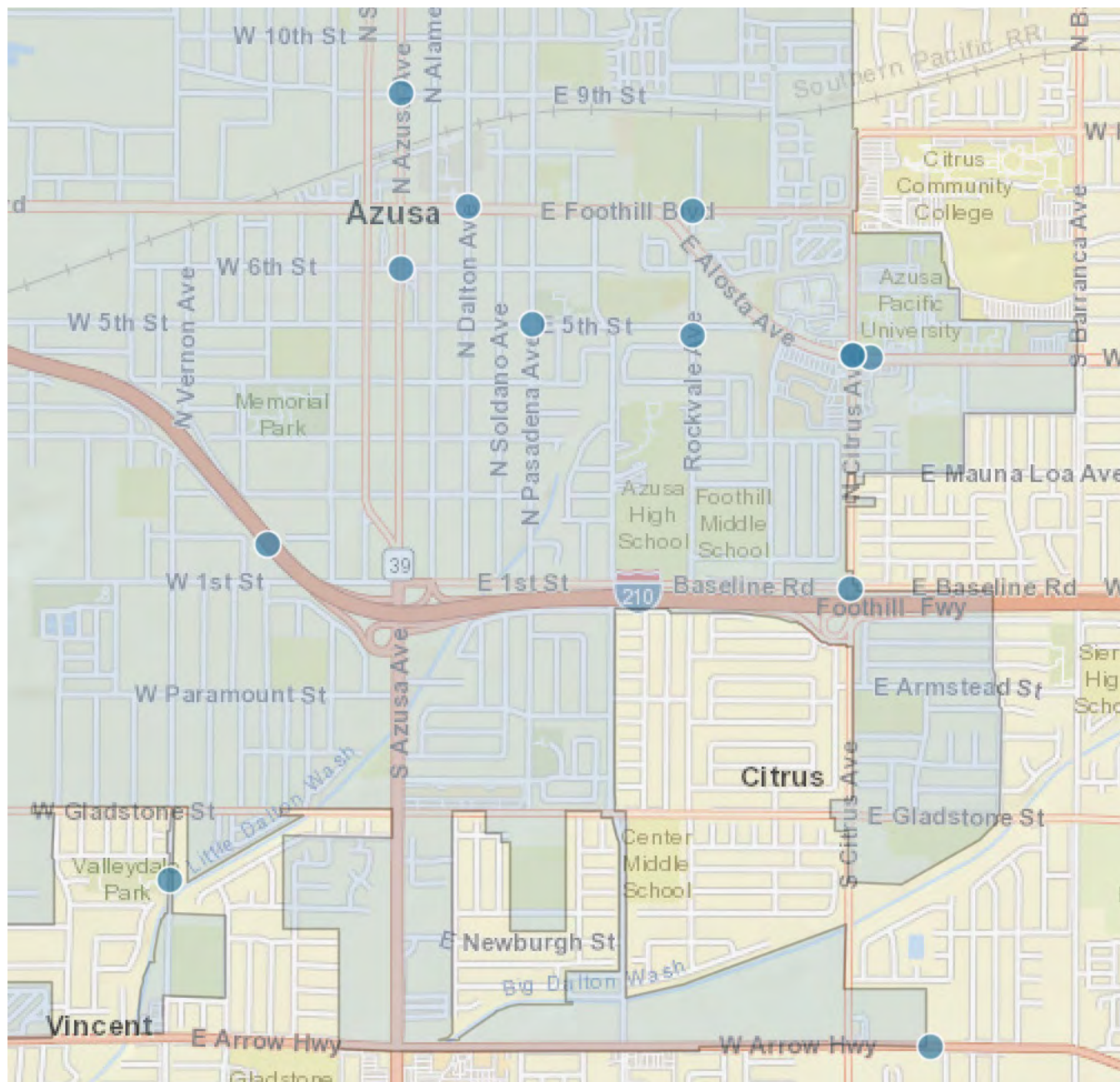


AZUSA CPBST

Supplemental Data -- August 2019

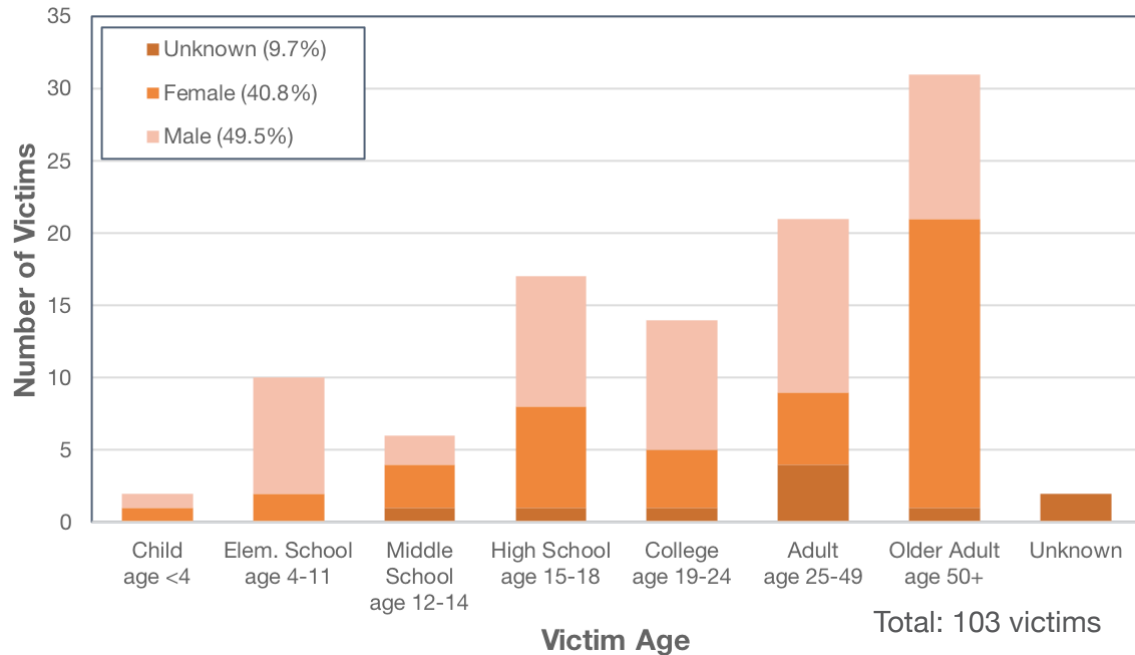
COLLISIONS INVOLVING PEDESTRIAN VICTIMS AGE 17-20

Between 2013 and 2017, there were 14 collisions involving 16 pedestrians age 17-20. As anticipated, the collisions were concentrated in the northeast quadrant near Azusa Pacific University.



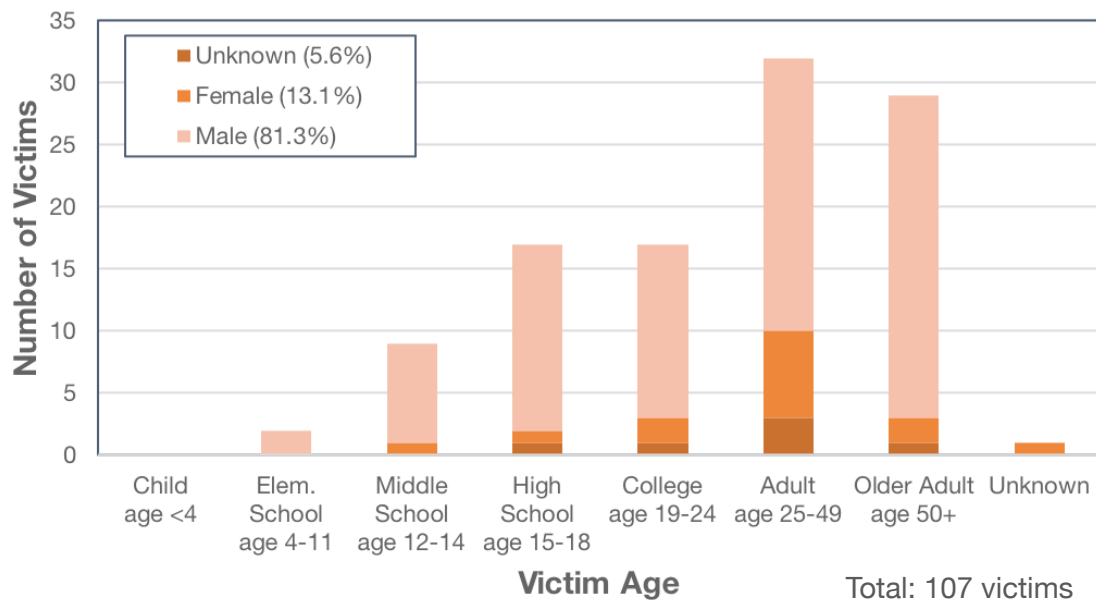
PEDESTRIAN VICTIMS BY AGE AND GENDER

The Planning Committee requested custom age breakdown. Per this analysis, older adults make up the largest proportion of pedestrian injuries at 30.1% followed by adults at 20.4%. However, these age ranges do not comprise of the same number of years per group.



BICYCLE VICTIMS BY AGE AND GENDER

The Planning Committee requested custom age breakdown. Per this analysis, adults make up the largest proportion of bicyclist injuries at 29.9% followed by older adults at 27.1%. However, these age ranges do not comprise of the same number of years per group.



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2008-2017. Collision data for 2016 and 2017 are provisional as of March 2018.