Recommendations to Improve Pedestrian & Bicycle Safety for the Westside Community in Santa Barbara

October 2018

California Walks
Stepping Up for Health, Equity, & Sustainability

Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

OTS
CALIFORNIA OFFICE OF TRAFFIC SAFETY

Acknowledgements

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We would like to thank the planning committee for inviting us into their community and for hosting the Community Pedestrian and Bicycle Safety Training in Westside community in Santa Barbara.

We thank the Calvary Baptist Church for providing the venue in support of this training.

Thank you to the American Automobile Association of Southern California (AAA) for sponsoring dinner and refreshments in support of this training. Thank you to AAA of Southern California for sponsoring child care. We thank Jesse Aguilar for providing the simultaneous English-to-Spanish interpretation at this training.

We would like to acknowledge the many community members, residents, and agencies present at the workshop and their dedication to pedestrian and bicycle safety. Their collective participation meaningfully informed and strengthened the workshop's outcomes.

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Recommendations to Improve Pedestrian & Bicycle Safety for Westside Community in Santa Barbara

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Introduction

At the invitation of the Coalition for Sustainable Transportation, California Walks (Cal Walks), the University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC), and the Planning Committee collaboratively planned and facilitated a Community Pedestrian and Bicycle Safety Training (CPBST) in the Westside community in Santa Barbara on September 13, 2018. The CPBST is a joint project of Cal Walks and SafeTREC that aims to leverage a community's existing strengths to develop a community-driven pedestrian and bicycle safety action plan and to identify pedestrian and bicycle safety priorities and actionable next steps in collaboration with community partners.

The Coalition for Sustainable Transportation (COAST) requested a workshop to 1) provide City of Santa Barbara staff, community organizations, and residents with a toolkit for promoting pedestrian and bicycle safety to inform future active transportation projects; 2) strengthen working relationships between various agencies and organizations and other stakeholders to ensure the best outcomes for the residents of the Westside community ; 3) provide safe active transportation connections to schools, jobs, shopping, and transit stops in the Westside; 4) encourage mode shifts towards active transportation modes; and 5) develop consensus regarding pedestrian and bicycle safety priority and actionable next steps; and 4) support the newly adopted Vision Zero implementation plan. which has identified San Andreas Street–the main thoroughfare in the Westside–as a high collision corridor.

Cal Walks and SafeTREC (Project Team) facilitated the workshop on September 13, 2018 from 5:30 p.m. to 8:30 p.m. at the Calvary Baptist Church. Dinner, childcare, and simultaneous English-to-Spanish interpretation were provided to maximize community participation. Twenty-seven (27) individuals attended the workshop, including residents, representatives from Mayor Murrillo's Office, Neighborhood Papers, Santa Barbara Metropolitan Transit District, Santa Barbara Police Department, Coalition for Sustainable Transportation, Cottage Hospital and, Safe Kids Santa Barbara.

The three (3) hour training consisted of: 1) three walkability assessments along three key routes; 2) an overview of multidisciplinary approaches to improve pedestrian and bicycle safety using the intersectional 6 E's framework including: Equity & Empowerment, Evaluation, Engineering, Education, Encouragement, and Enforcement and; 3) small group action-planning discussions to prioritize recommendations for the Westside community in Santa Barbara's active transportation efforts.

Background

Planning Process

The Westside community in Santa Barbara's CPBST planning process was initiated in May 2018. The planning process consisted of:

- **Community Plans and Policies Review:** Cal Walks conducted a review of current community planning documents to inform the training with local context and prepare to build off existing efforts. The following documents were reviewed prior to the site visit:
    - Santa Barbara County Association of Governments Regional Transportation Plan, 2017
    - Santa Barbara Bike Master Plan, 2016
    - Santa Barbara County Regional Bicycle and Pedestrian Plan, 2015
    - Santa Barbara General Plan Circulation Element, 2011
    - Santa Barbara County Americans with Disabilities Act Transition Plan, 2007
    - Santa Barbara Pedestrian Master Plan, 2006
- **Analysis and Mapping of Pedestrian and Bicycle Injury Data:** SafeTREC used the Statewide Integrated Traffic Records System (SWITRS) and the Transportation Injury Mapping System (tims.berkeley.edu) to analyze injury data in the Westside community, as well as Census data to create collision rates based on population. Patterns of injury collisions, victim characteristics, and demographics were analyzed and presented to inform the planning process for the CPBST.
- **Identification of Priority Discussion Topics for Training:** The Planning Committee identified the lower Westside community in Santa Barbara as the focus of the workshop due to the Committee's concerns for pedestrian and bicyclist safety, especially along San Andres Street, Mission Street, and Carrillo Street. The Planning Committee identified the following goals for the CPBST:

    - Gather qualitative data on the walking and biking experience in the Westside community, which is a primarily Latino community;
    - Assess the infrastructure along Westside's high pedestrian and bicyclist collision corridors: San Andres Street, Mission Street, and Carrillo Street;
    - Develop preliminary plans for Safe Routes to School for Santa Barbara City College and three schools in the Westside neighborhood, including Harding Elementary School and;
    - Build support for the newly adopted Santa Barbara Vision Zero policy.
- **Site Visit:** The Project Team facilitated an in-person site visit on July 12, 2018 with the Planning Committee to: 1) review existing pedestrian and bicycle collision data for the Westside community in Santa Barbara; 2) collect qualitative data based on in-person observations of existing conditions and travel behaviors and; 3) conduct preliminary walking assessments of the focal neighborhood. The Project Team used the site visit findings to develop the workshop presentation, including featuring local infrastructure examples and developing the walking and biking assessment route maps.

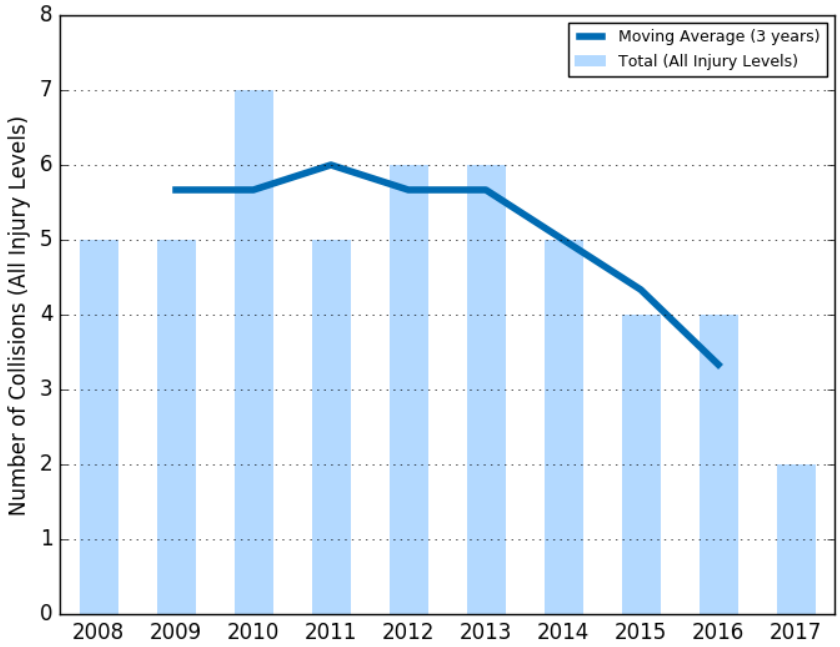
Existing Conditions

Pedestrian & Bicycle Collision History[1]

Between 2008-2017, there were 49 pedestrian collisions in the Westside, including six (6) severe injuries and ten (10) other visible injuries. These collisions were concentrated on San Andreas Street, Mission Street, and Micheltorena Street and occurred primarily during high-traffic times in the afternoon and evening between 3:00 p.m. and 8:59 p.m. The top two pedestrian collision factors for pedestrian collisions were driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk (62.5%) and pedestrian failure to yield right-of-way to vehicles when crossing outside of marked or unmarked crosswalk (31.2%)[2].

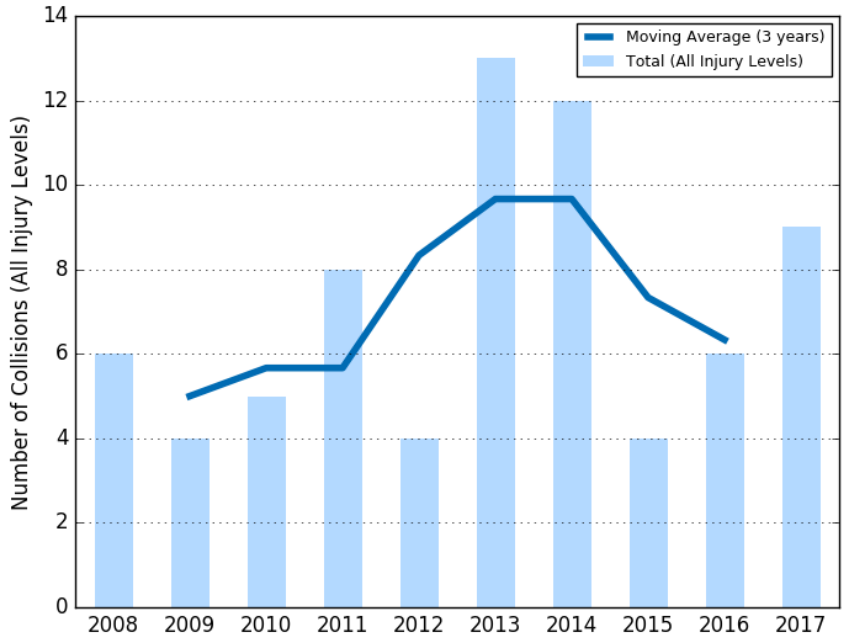
[1] 2016 SWITRS data are provisional as of November 2017.

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



Pedestrian Collision Trend
with 3-year moving average

Between 2008-2017, there were 71 bicycle collisions, including five (5) severe injuries and twenty-three (23) other visible injuries. These collisions were concentrated along San Andres Street, Mission Street, Micheltorena Street, Modoc Road, Carrillo Street, and San Pascual Street. The top four primary collision factors for collisions involving bicycles were driver or bicyclist failure to yield right-of-way when entering/crossing a highway (22.6%); driver or bicyclist failure to yield right-of-way when making a left turn or U-turn (16.1%); unsafe turning or moving right or left on a roadway/turning without signaling (12.9%); and failure to stop at a limit line or crosswalk at a red light/failure to yield right-of-way to pedestrians when turning on a red light (9.7%)[3].



Bicycle Collision Trend
with 3-year moving average

[3] According to California Vehicle Code 21200, bicycles are considered vehicles, therefore, bicyclists on public streets have the same rights and responsibilities as automobile drivers. This makes it difficult to discern whether a bicyclist or driver is at fault.

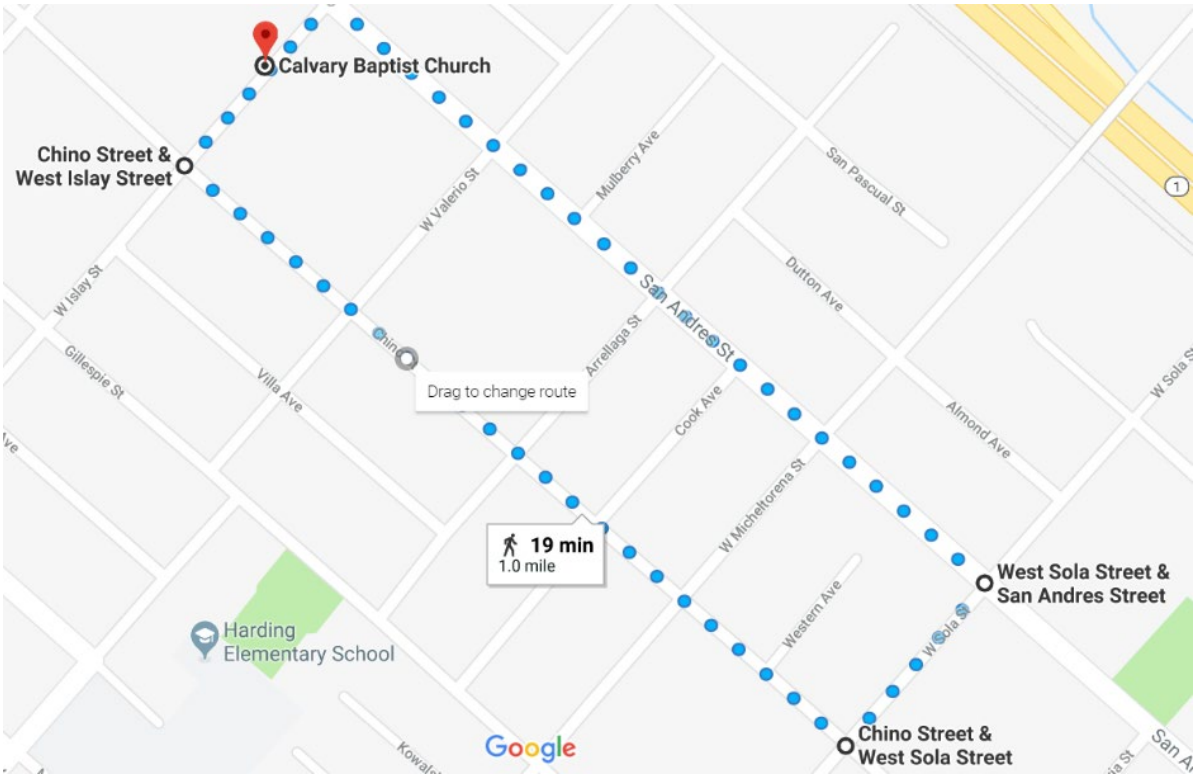
A full discussion of the pedestrian and bicyclist collision data prepared by UC Berkeley SafeTREC can be found in Appendix A and B.

Walkability & Bikeability Assessment Reflections

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; 4) consider how the walking and biking experience might feel different for other vulnerable users. Workshop participants conducted walking and biking assessments along three (3) key routes:

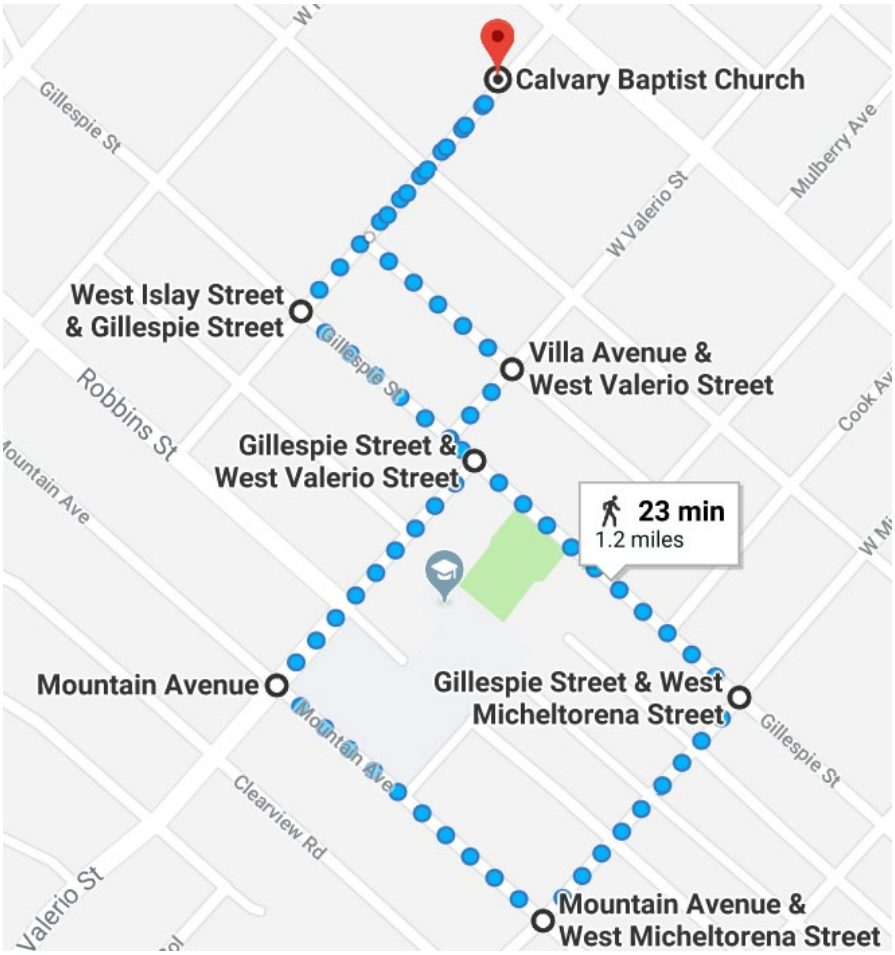
Route 1: Chino Street and San Andreas Street

The first assessment route focused on San Andres Street and Chino Street between West Islay Street and West Sola Street. San Andreas Street is a main thoroughfares used by drivers, bicyclists, and pedestrians to travel through the community, and the Planning Committee had noted that the street has numerous areas of conflicts with drivers for pedestrians and bicyclists. While Chino Street is primarily residential, San Andreas Street is one of the main commercial areas for the Westside. Starting the assessment at Calvary Baptist Church, participants walked east on West Islay Street, south on San Andreas Street, west on Sola Street, north on Chino Street, and east on West Islay Street to Calvary Baptist Church.



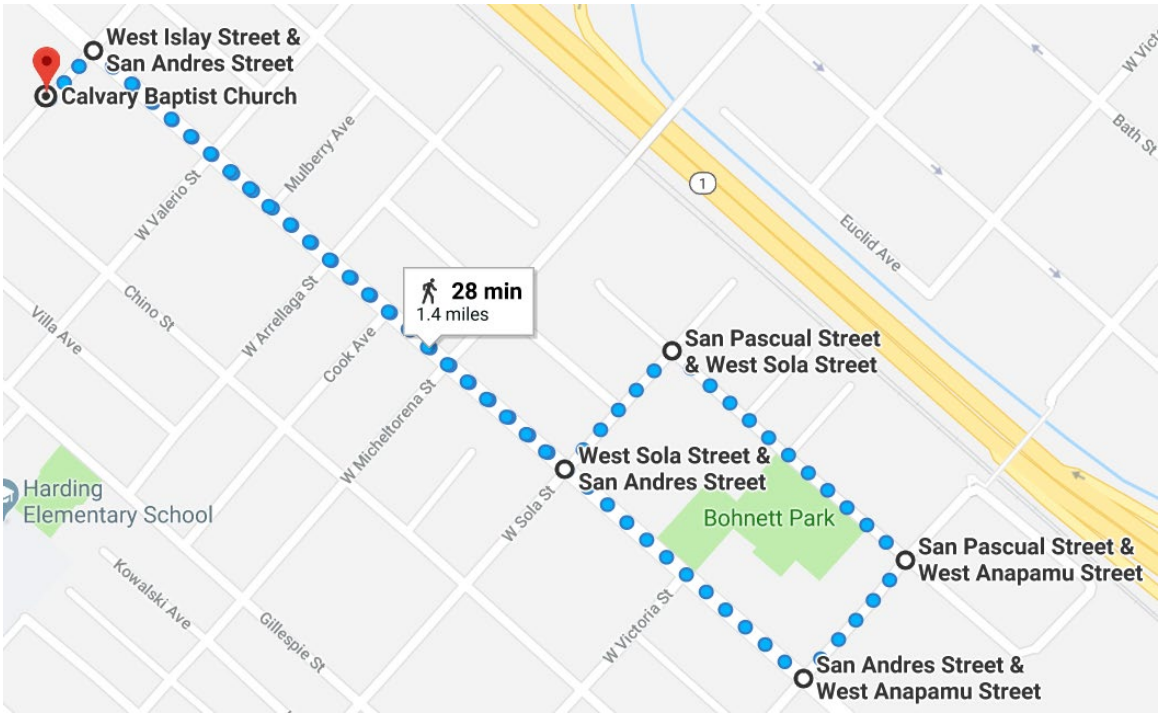
Route 2: Harding Elementary

The second assessment route focused on Gillespie Street and the Harding Elementary School neighborhood. The Planning Committee selected this route to assess how students and parents used the streets to get to and from school and how the community used the streets to access nearby destinations, including Harding Elementary School, and the commercial corridor along San Andreas Street. Starting at Calvary Baptist Church, participants walked west along West Islay Street, south along Gillespie Street, west along Micheltorena Street, north along Mountain Avenue, east along Valerio Street, north on Villa Avenue, and east on West Islay Street.



Route 3: Bohnett Park

The third assessment route focused on the streets surrounding Bohnett Park, the largest and most used park in the Westside community. Starting the walk assessment at Calvary Baptist Church, participants walked northeast on West Islay Street, southeast on San Andres Street, northeast on West Sola Street, southeast on San Pascual Street, through Bohnett Park, northwest on San Andres Street, and southwest on West Islay Street back to Calvary Baptist Church. Workshop participants were unable to observe West Anapamu Street as originally planned because it was blocked off due to construction.



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

Poor Roadway Maintenance: During the site visit and workshop, participants pointed out cracked asphalt and concrete lanes, potholes, and gravelly roads, especially along the curbs and gutters where bicyclists ride. Participants shared that that that many gutter grates are sunken and cracked, which causes transit buses to dip and hit the pavement along San Andreas Street exacerbating the poorly maintained roadway conditions. Participants also noted the severely faded condition of roadway markings, including lane markings, stop bars, bicycle lanes, and crosswalks.

Cracked and gravelly roads in the community cause safety challenges for all road users.

Sidewalk Gaps and Inconsistent Sidewalk Conditions: Sidewalk conditions vary throughout the Westsde community. Participants pointed out upheaved sidewalks– some of over 5 inches in height– cracked sidewalks, sidewalks of various materials– including concrete, brick, and pavers–and sidewalks littered with vegetative and household debris. Sidewalk widths vary along residential streets and larger thoroughfares; in some instances, the sidewalks were too narrow, which made it difficult for two adults to comfortably walk side-by-side.

Missing, narrow, upheaved, and cracked sidewalks in the Westside.

Challenging Crossings without Enhancements: Participants were concerned with the lack of marked crosswalks, high-visibility crosswalks, and 4-way stop intersections along San Andres Street. Participants were particularly concerned with the San Andres Street/Arrellaga Street intersection where many students cross at the unmarked crosswalk that leads directly to Harding Elementary School. Participants appreciated the high-visibility crosswalks at Sola Street/San Andres Street where many residents access a laundromat, and Valerio Street/San Andres Street where a liquor store is located at the corner. However, they expressed frustration with there being only one high-visibility crosswalk at each intersection, with the remaining three legs of each intersection lacking any crosswalk markings. Workshop participants shared that residents tend to cross San Andres Street at the Sola Street/San Andres Street and Valerio Street/San Andres Street intersections wherever it is most convenient, meaning many pedestrians choose to cross at the unmarked crosswalks rather than the marked crosswalk.

Accessibility Challenges: Participants expressed concern over the numerous accessibility challenges residents with disabilities face when walking or rolling in the community, including missing, narrow and obstructed sidewalks, and curb ramp in the community. During the walking and biking assessments, participants pointed out a wide variety of curb cuts that are not compliant with current ADA standards, while many intersections lacked curb ramps altogether. Participants also noted the steep slopes of sidewalks create challenging conditions for people in wheelchairs or using other mobility assistance devices. Additionally, sidewalk materials, conditions, and width make it difficult for those using assisted mobility devices to travel in the community. On Route 2, a resident using an assisted mobility device shared that he often avoids certain streets and travels along roundabout routes with curb ramps to reach his destination so that he is stay on sidewalks and avoid traveling in the street. In several locations along the assessment route, he had to use a residential driveway to go into the street since the sidewalk ended with no curb ramp or overgrown vegetation made it difficult to navigate the sidewalk.

Missing and inconcsistent ADA ramps create access and safety challenges for those using assisted mobility devices.

Unimproved Transit Stops: Participants shared that many bus transit stops in the community are uncovered, exposed to the elements, and are missing lighting for nighttime use. On Route 2, participants observed that transit stops are difficult to access for those using assisted mobility devices and parents with strollers because small landscape buffers separate the transit stops from the sidewalks.

Many transit stops in the community lack lighting and shelters, exposing passengers to the elements. Sidewalk buffers also create access challenges for those using assisted mobility devices or parents with strollers.

Lack of Bike Facilities and Unsafe Bicyclist Behaviors: Participants shared that there are many community members who regularly travel on bicycles to reach their destinations and that they would like to see more bicycle facilities, including bike lanes and signage, installed in the community. During the site visit and assessments, participants pointed out the bicyclists often ride on the sidewalks, where available, to avoid riding adjacent to fast moving vehicle traffic along narrow two-lane roads. The inconsistent sidewalks means that they are often forced to enter the street midblock, in areas where motorists or pedestrians are not expecting them. Participants suspected the unsafe behaviors were largely due to a lack of cultural and linguistic bicycle education in the community.

High Vehicle Speeds: Participants shared that drivers often travel at speeds well above the posted speed limits even along narrow residential and connector streets. Many of the streets in the Westside are narrow two-lane roads with parking on either side. Participants shared that community members have grown accustomed to the narrow streets and continue to travel at high rates of speed despite close proximity to the parked cars.

Overgrown Vegetation and Empty Vegetation Buffers: Participants pointed out various species of overgrown vegetation in the community. Along Route 2, participants experienced multiple extremely uplifted sidewalks due to buckling and overgrown tree roots. Along many sidewalks, low-hanging tree

branches and overgrown shrubs block visibility and access for pedestrians. Many of the sidewalks in the community are buffered by a vegetated strips filled with trees, shrubs, and flowers of various kinds, including ornamental plants and cacti with large spikes, which could be harmful to pedestrians and bicyclists using the sidewalk.

Most sidewalks in the community have landscape buffers, many are empty or overgrown.

Key Opportunities to Improve Walking and Biking Safety

Following the walking and biking assessment, the Project Team facilitated small-group action planning discussions where participants prioritized and preliminarily planned infrastructure projects and community programs aimed at reducing the number of injuries and fatalities, as well as increasing the number of people and the frequency of walking and biking in the Westside community in Santa Barbara.

Through a voting process during the training, participants chose to focus on and preliminarily plan for Crosswalk Enhancements, Additional Bike Lanes, and a Walking and Biking Educational Campaign. Participants self-selected which project they wanted to collaborate on with their fellow participants to develop a plan and discussed:

- The problem the infrastructure project/community program is intended to solve;
- The people, organizations, and agencies that should be involved to implement the infrastructure project/community program;

- Resources needed to implement the infrastructure project/community program; and
- Short-term and long-term action steps to implement the infrastructure project/community program.

Community Recommendations

Infrastructure Projects

- **Crosswalk Enhancements:** Participants were interested in implementing crosswalk enhancements at various intersections in the Westside community, with a priority of uncontrolled intersections with direct access to community services and destinations and for intersections that lacked crosswalk markings on all four legs. Participants specifically identified the following improvements to pursue:
    - Installing Rectangular Rapid Flashing Beacons (RRFB) at the Arrellaga Street/San Andres intersection and at the high-visibility crosswalk on San Andres Street directly in front of Bohnett Park.
    - Installing high-visibility crosswalk markings at the Sola Street/San Andres Street and Valerio Street/San Andres Street intersections.
    - Installing stop bars before the crosswalk at all existing marked crosswalks to minimize motorists from stopping in the crosswalk.
    - Coupling crosswalk enhancements with pedestrian-scale lighting at all marked and unmarked crosswalks.

  This group also explored the idea of integrating creative art into crosswalks that reflect the Westside community and discussed planning a temporary pedestrian scramble demonstration at the State Street/Carrillo Street and Cliff Drive/Meigs Road intersections to build community support for a permanent scramble crossing. Finally, participants plan to advocate for the aforementioned improvements in the Westside community to the City to be funded with Measure C– the recently enacted one-cent local sales tax for transportation projects. In the immediate future, participants committed to conducting pedestrian counts at intersections where they felt needed the most crosswalk enhancements in order to collect data to support their requests for improvements to the City.

- **Additional Bike Lanes:** Participants were interested in the installation of additional bike lanes in the community and felt that the current number of bike lanes are inadequate. Participants shared that existing bike lanes in the Westside are discontinuous, and not available on many roads bicyclists currently use, resulting in sidewalk riding and conflicts with pedestrians. Participants identified the City, community members, and local bicycle advocates as key partners in this effort, and in the short-term, this group planned to complete a community-wide biking assessment to identify existing bike lanes, key bicycle network gap connections, and conflict zones that would benefit from fluorescent green conflict zone markings. The biking assessment findings would be used to supplement the findings of the Santa Barbara Bicycle Master Plan and help to focus efforts and funding to close bicycle network gaps prioritized by the community.

Community Programs, Policies, and Campaigns

- **Walking and Biking Educational Campaign:** Participants were interested in developing a safe walking and biking educational campaign for the Westside community. The group's main goal is to raise awareness around the most vulnerable road users and to develop drivers' empathy for other road users in the community. Participants prioritized the following education topics: 1) driver speeding; 2) distracted driving; 3) distracted walking, biking, and skating; and 4) helmet use. They felt strongly that educational campaigns should be developed with the community and involve individuals who travel primarily by driving, walking, biking, and skating to help inform the educational tips and campaign format that would be directed at each road user.

  Participants identified the City, Police Department, Westside schools, and community groups as partners in the development and implementation of the education campaign with the following short-term action steps: 1) develop targeted safety slogans; 2) develop campaign designs; 3) apply for grant funding; and 4) partner with agencies, businesses, and community groups to post and disseminate campaign materials.

  This group identified the City Channel, TV Santa Barbara, and film students from Santa Barbara City College as potential partners to help develop and share the campaign. By Spring 2019, the group planned to have the designs and outreach plan finalized and to begin sharing these designs with the community for feedback. Participants hoped to extend the campaign across Santa Barbara and continually update it to ensure it is relevant and accessible to the target audiences.

Cal Walks/SafeTREC Recommendations

California Walks and SafeTREC also submit the following recommendations for consideration by the Planning Committee and workshop participants:

- **Connect with the Citizens' Oversight Committee for Measure C:** Measure C recently completed its first year of enactment in Santa Barbara and the Citizens' Oversight Committee wrote the Measure C Annual Accountability Report to inform residents of the status of current and future infrastructure projects. The Project Team **recommends the workshop participants connect with the Santa Barbara Department of Public Works and the Citizens' Oversight Committee to learn about how community residents can get involved** in the development and prioritization of Measure C projects. Due to the high concern over the lack of infrastructure investment in the Westside community, workshop participants could become involved and advocate for an equitable distribution of tax dollars towards Santa Barbara neighborhoods that need infrastructure improvements the most.

- **Continue Creation of Neighborhood-Specific Transportation Plans to Prioritize and Strategize Needed Investments:** The Project Team recommends the City of Santa Barbara and the Westside community create a neighborhood-specific transportation plan that would encompass robust community engagement to help the City of Santa Barbara gather information on the transportation needs and improvements requested by residents. According to the City's website, Neighborhood Traffic Management Plans have been completed for have been completed for the Oak Park, St. Francis, and East Side neighborhoods in support of the Draft Neighborhood Traffic Management Program which was adopted by the Santa

Barbara City Council on November 9, 2001. At 42 square miles and a population of approximately 92,000 people, Santa Barbara neighborhoods are economically and geographically diverse and consequently, have unique needs. Creating neighborhood-specific transportation plans in coordination with the community can help guide future investments and support grants and proposals for funding from state and local agencies. Transportation plans should include assessments and recommendations for sidewalk, lighting, and ADA improvements, which are a top concern for many workshop attendees. One current funding opportunity for the creation of these neighborhood transportation plans is the Caltrans Sustainable Transportation Planning Grant Program that is currently accepting applications through November 30, 2018. For more information on the grant program, please visit http://www.dot.ca.gov/hq/tpp/grants.html

Appendix A

Pedestrian and Bicycle Collision Data Analysis

Workshop Handout

2013-2017 WESTSIDE SANTA BARBARA DATA ANALYSES

Community Pedestrian and Bicycle Safety Training Workshop
September 13, 2018

The goal of the Community Pedestrian and Bicycle Safety Training (CPBST) is to make communities safer and more pleasant for walking and bicycling. This workshop will train local residents and safety advocates in pedestrian and bicycle safety as well as create opportunities for collaboration with local officials and agency staff.

This fact sheet highlights 2013-2017 pedestrian and bicycle collision data available to help your community better prioritize recommendations that emerge from this workshop.

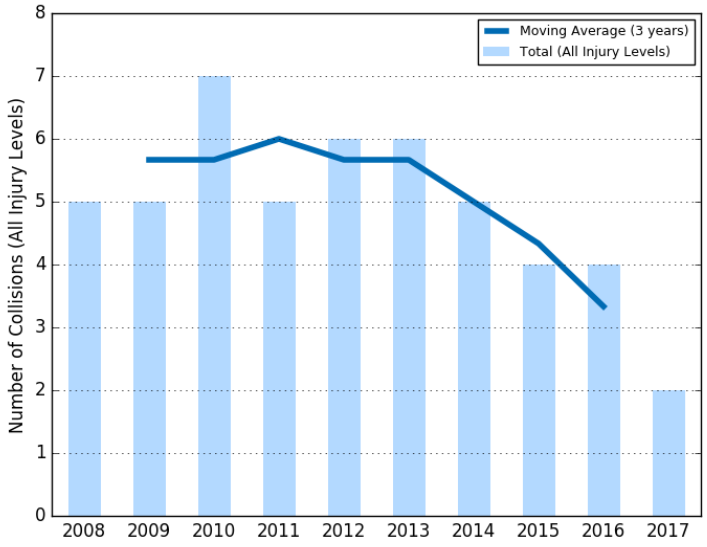
PEDESTRIANS

50 people were killed or injured in **49** pedestrian collisions in the last 10 years (2008-2017).

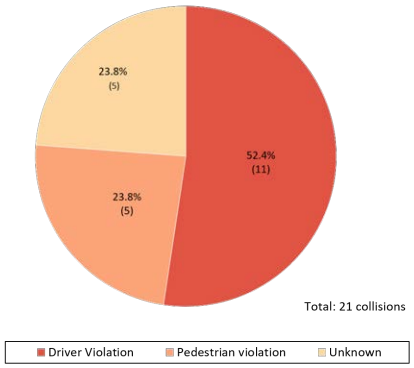
The **three-year moving average** line shows a **downward** trend in pedestrian collisions.*

There were **4** pedestrian collisions in 2016, but an average of **3.3** pedestrian collisions per year for the 3-year rolling average between 2015 and 2017.

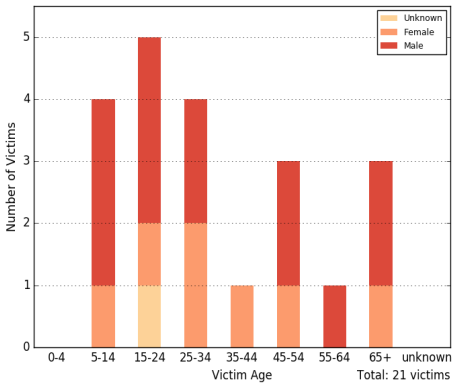
*This line is useful for tracking change over time, especially when the number of collisions changes a lot between years. Data points are at the midpoint of the three years of data specified.



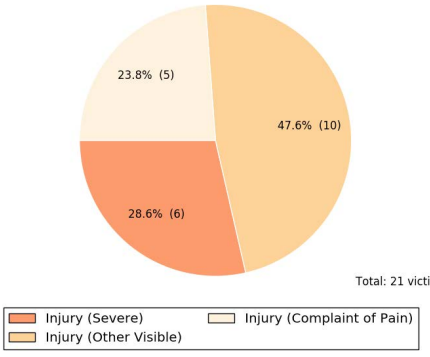
52.4% driver violations
VS.
23.8% pedestrian violations



*Unclear violations were committed either by the driver, pedestrian or bicyclist.



61.9% of victims were male
33.3% of victims were under age 20



28.6%
of victims (or 6 people) were SEVERELY INJURED

Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2016 and 2017 are provisional at this time.
Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

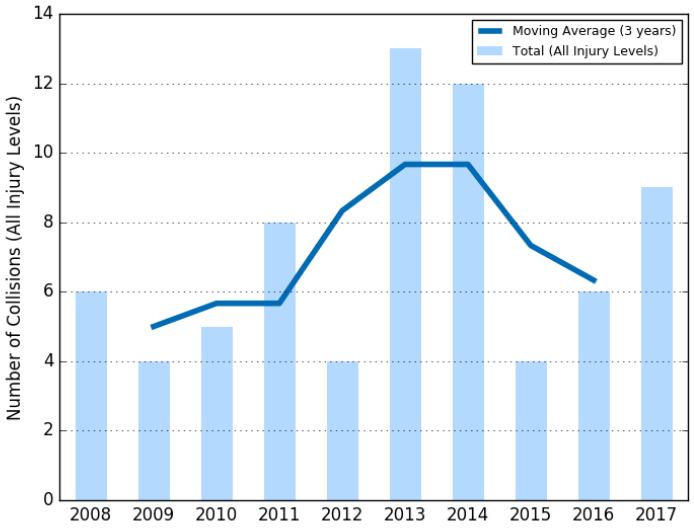
BICYCLES

72 people were killed or injured in **71** bicycle collisions in the last 10 years (2008-2017).

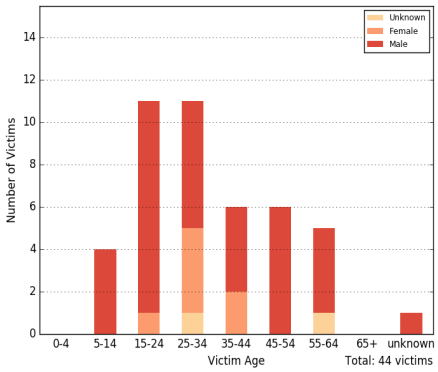
The **three-year moving average** line shows a **downward** trend in bicycle collisions.*

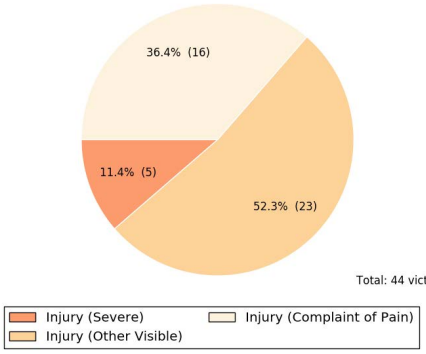
There were **6** bicycle collisions in 2016, but an average of **6.3** bicycle collisions per year for the 3-year rolling average between 2015 and 2017.

* This line is useful for tracking change over time, especially when the number of collisions changes a lot between years. Data points are at the midpoint of the three years of data specified.



Bicycles **must follow all the same rules of the road as vehicles.** As a result, we can**not** break down violations by driver vs. bicyclist.





79.5% of victims were male

34.1% of victims were 24 and under

11.4%
of victims (or 5 people)
SEVERELY INJURED

SUMMARY

71.6 pedestrian fatalities & injuries per 100,000 population over the last five years, which is **1.98x times more than** Santa Barbara County and **1.99x times more than** California

110.5 bicyclist fatalities & injuries per 100,000 population over the last five years, which is **1.97x times more than** Santa Barbara County and **3.3x times more than** California

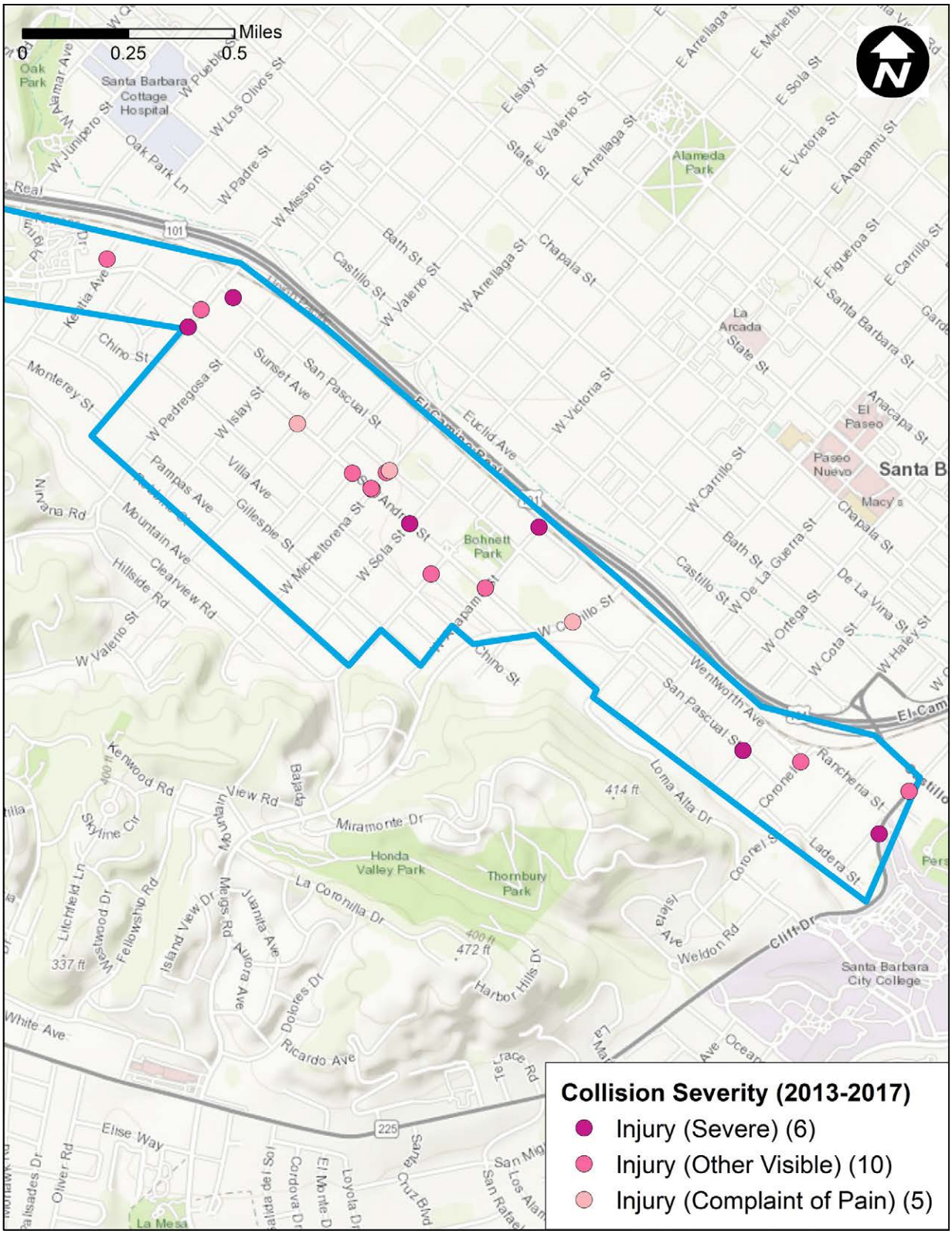
	Yearly Population Rate of Fatalities & Injuries per 100,000 Population Calculated Over a 5-year Period*	
	Pedestrian	Bicyclist
Santa Barbara	71.6	110.5
Santa Barbara County	36.1	56.1
California	35.9	33.3

Source: U.S. Census Bureau, Population Division (intercensal population data for 2016).

* The rate per population is calculated by adding the number of fatalities and injuries from 2012 to 2016 divided by five times the population in 2016.

Pedestrian Collisions 2013-2017

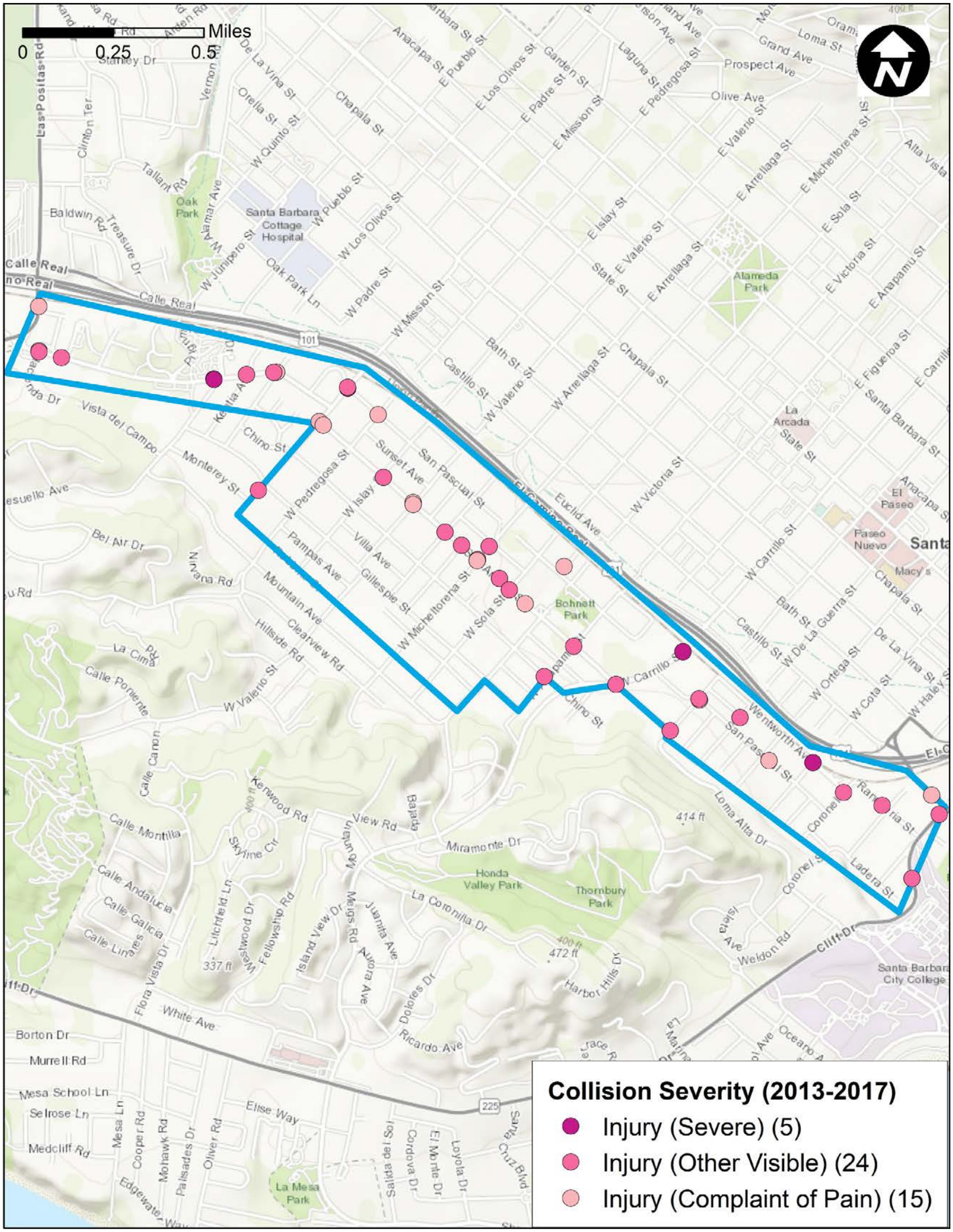
21 collisions mapped in the Westside neighborhood of Santa Barbara, CA.



Data Source: California Statewide Initegrated Traffic Records System (SWITRS). Collision data for 2016 and 2017 are provisional as of November 2017.

Bicyclist collision locations, 2013-2017.

44 collisions mapped in the Westside neighborhood of Santa Barbara, CA.



Data Source: California Statewide Inetegrated Traffic Records System (SWITRS). Collision data for 2016 and 2017 are provisional as of November 2017.

Appendix B

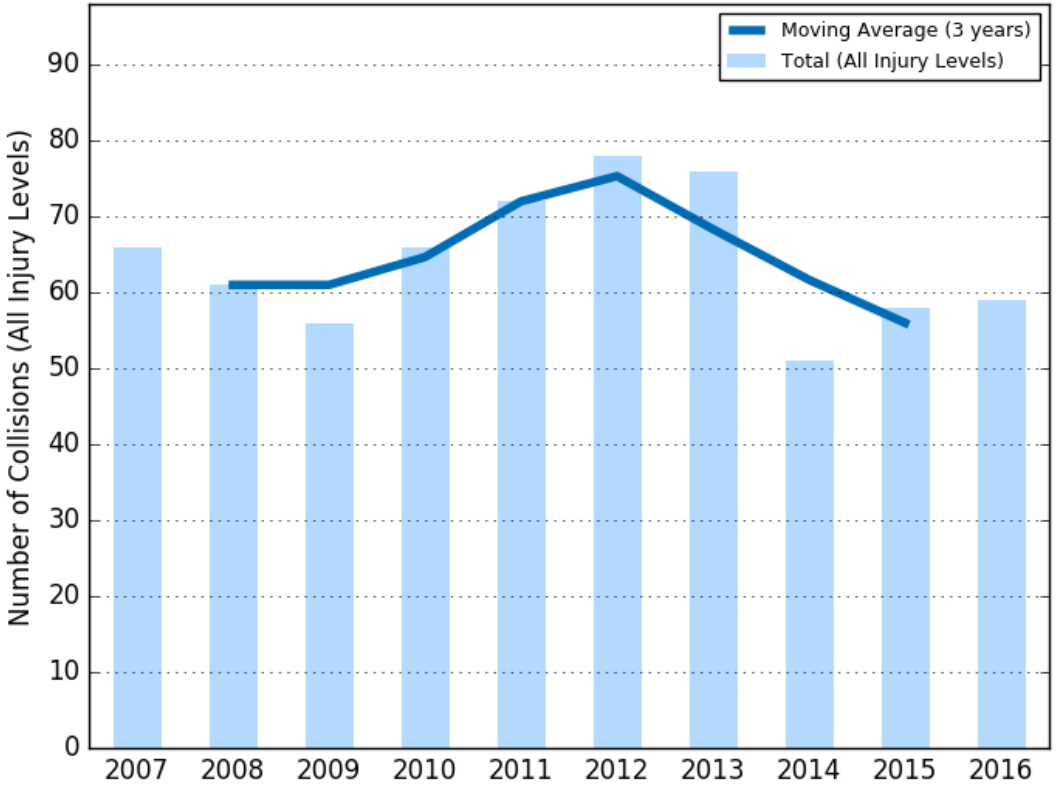
Pedestrian and Bicycle Collision Data Analysis
Site Visit Presentation

Community Pedestrian and Bicycle Safety Workshop Site Visit

Santa Barbara, CA

Pedestrian Injury Collision Trend (2007-2016)

with 3-year moving average

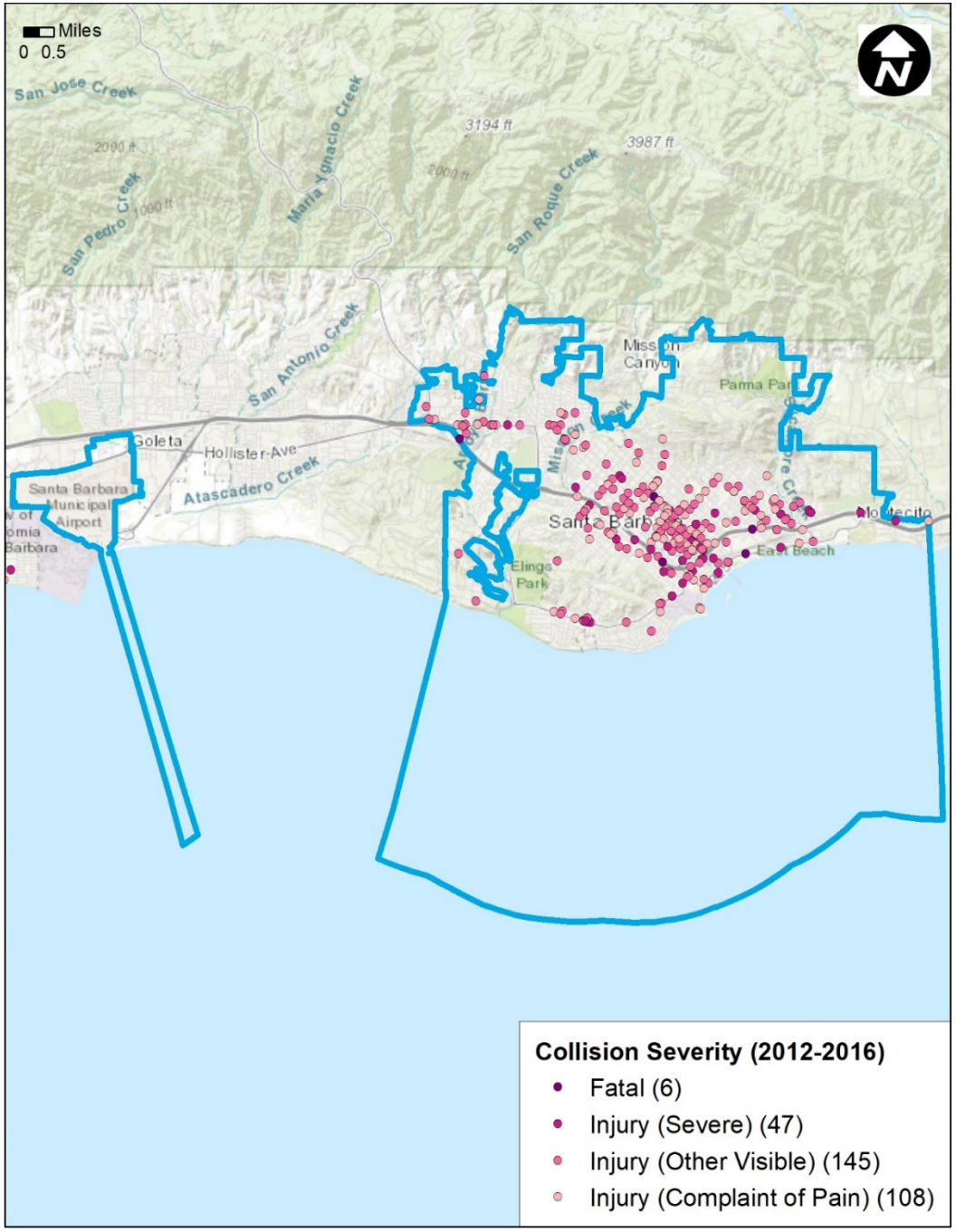


Note: 2016 Statewide Integrated Traffic Records System (SWITRS) data are provisional as of March 2018.

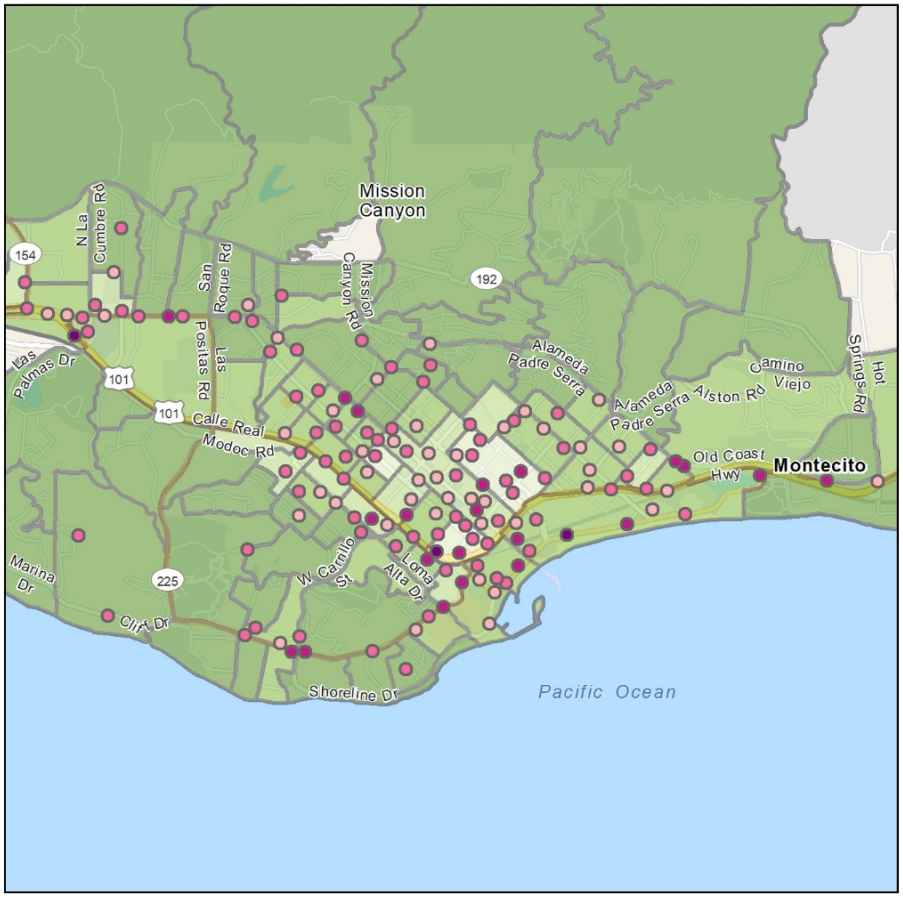
Pedestrian Injury Collisions 2012-2016

Only 306 of 322 collisions are mapped.

Note: 2016 SWITRS data are provisional as of March 2018.



Santa Barbara Pedestrian Collision Map (2012 - 2016)



Collision Severity (2012-2016)

- Fatal (6)
- Injury (Severe) (46)
- Injury (Other Visible) (145)
- Injury (Complaint of Pain) (107)

2017 Median Household Income

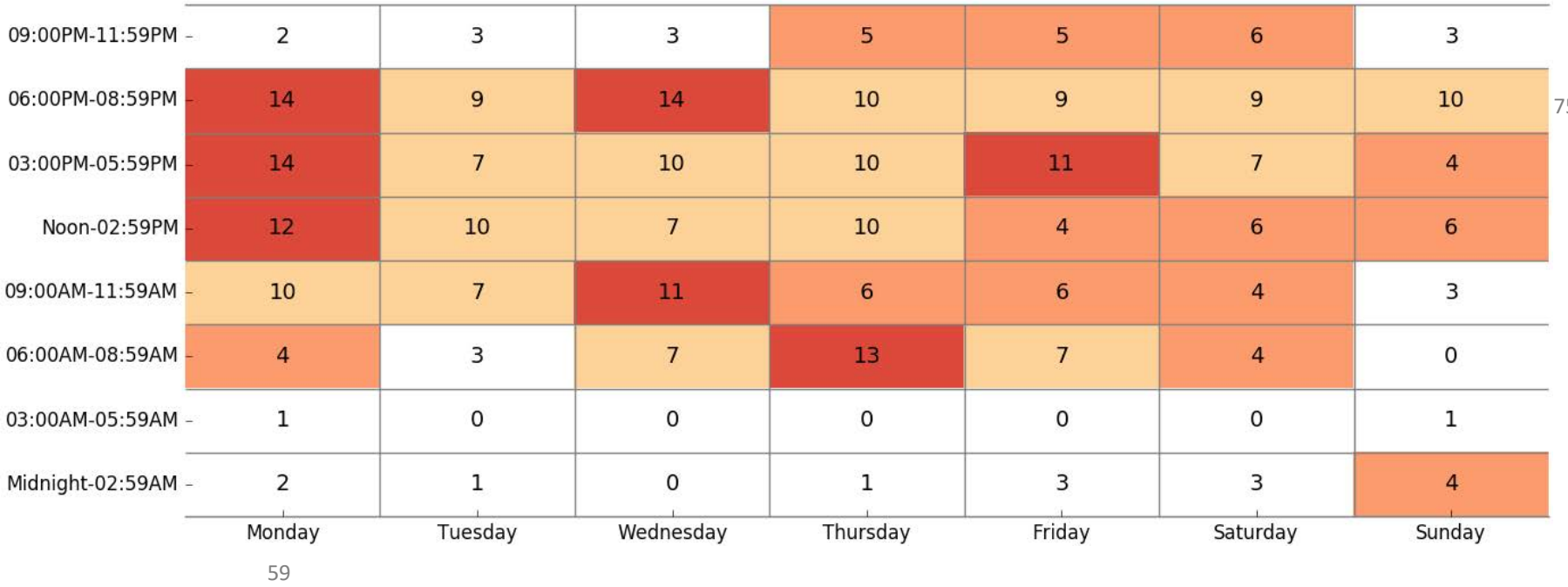
- < 35K
- 35K - 50K
- 50K - 75K
- > 75K

Berkeley SafeTREC

Data Source: Collision - SWITRS 2012 - 2016
Demographics - Esri, US Census Bureau, and ACS
Date: 6/12/2018

This map shows where all the pedestrian/bicycle injury collisions occurred and may not extend to the city's boundaries.

Pedestrian Collisions by Time of Day and Day of Week (2007-2016)



*The colors in this graph refer to how frequently a collision occurs at that time and day.

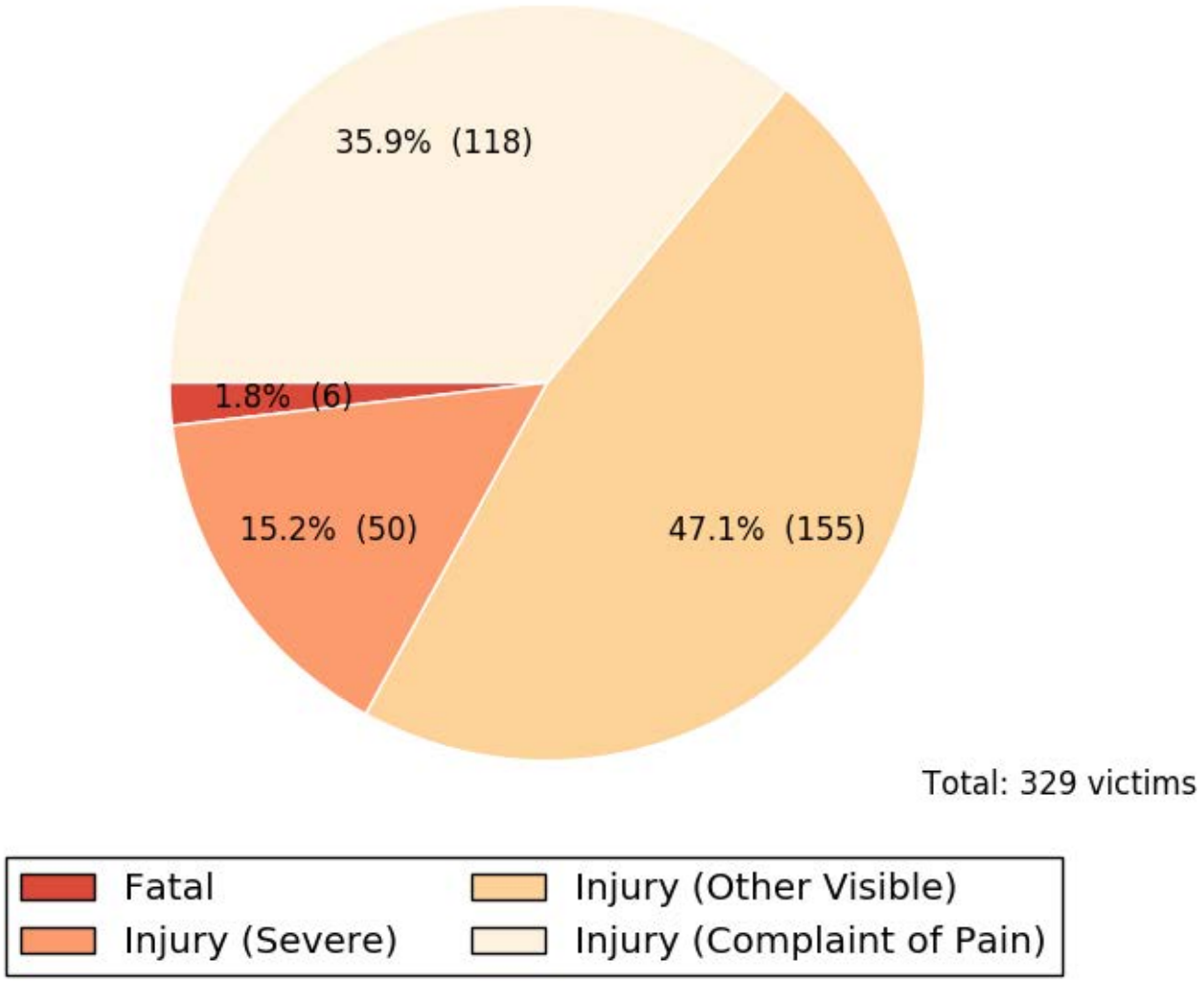
Total: 322 collisions

Top 10 Violations in Pedestrian Collisions (with # and %)

CVC No.	Description	Freq.	Percent
21950	Driver failure to yield right-of-way to pedestrians at a crosswalk	134	41.6%
0	Unknown	72	22.4%
21954	Pedestrian failure to yield right-of-way to vehicles	37	11.5%
21955	At intersections, pedestrians can't cross anywhere except at a crosswalk	10	3.1%
21456	"Walk" pedestrian failure to yield right-of-way to vehicles already in crosswalk	9	2.8%
22350	Speeding on the highway	8	2.5%
21956	Pedestrian failure to walk close to the edge of the roadway when there is no sidewalk present	8	2.5%
21952	Motor vehicle drivers must yield to pedestrians	8	2.5%
22106	Unsafe starting or backing of vehicle	6	1.9%
22107	Unsafe turning with or without signaling	5	1.6%
Total		297	92.2%

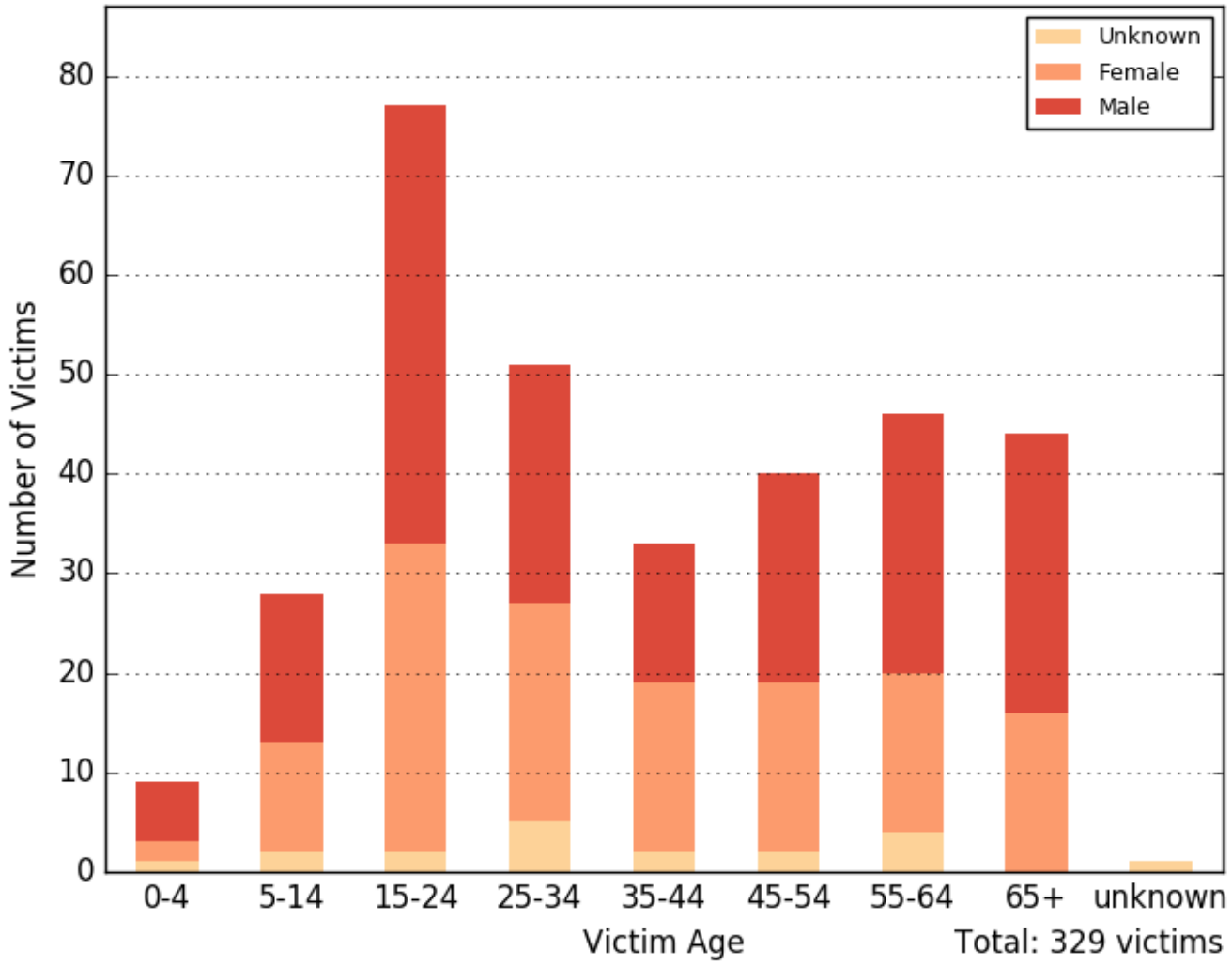
Total: 322 collisions

Pedestrian Victim Injury Severity



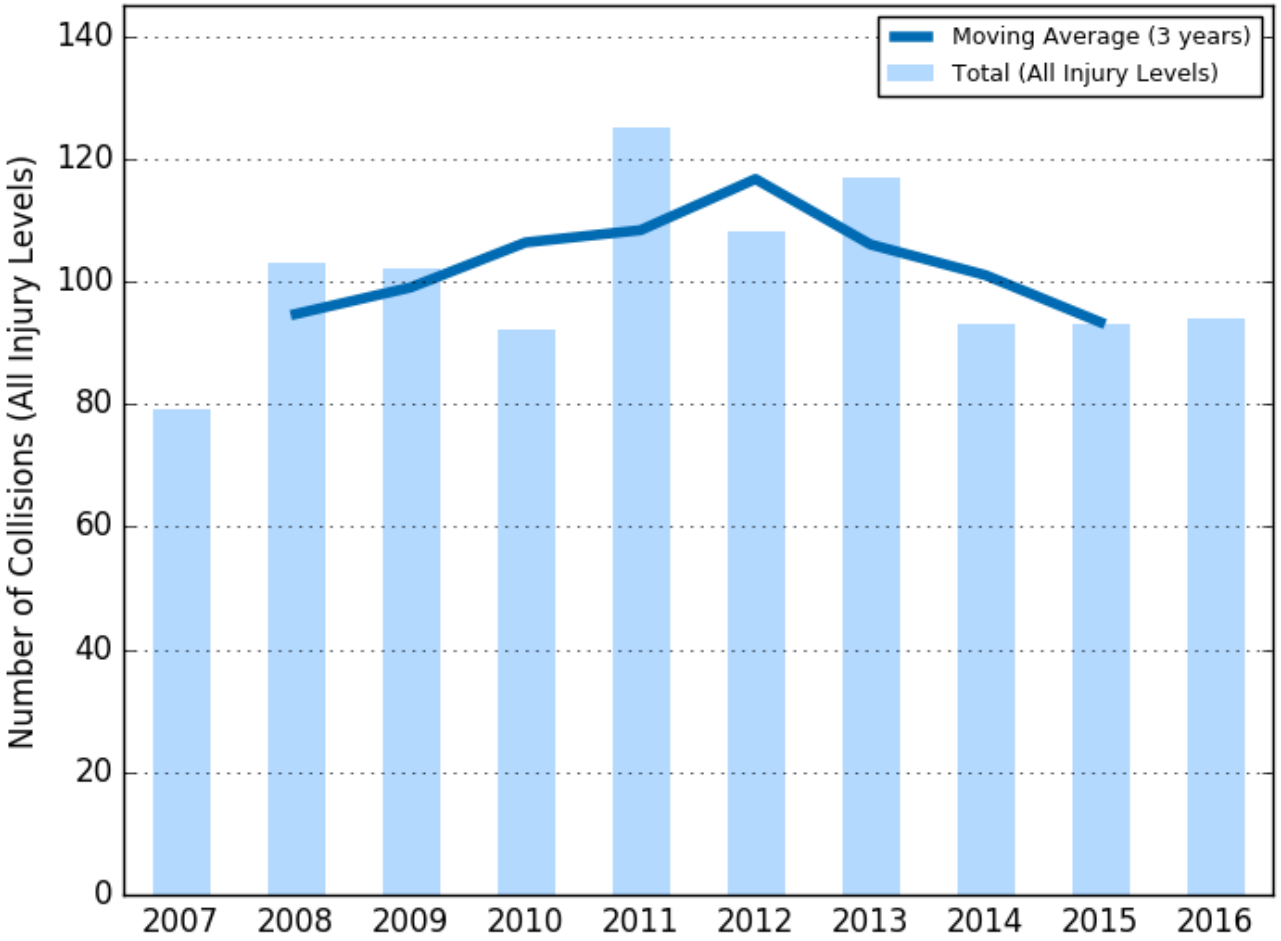
Note: 2015 and 2016 SWITRS data are provisional as of November 2017.

Pedestrian Victims by Age and Gender



Note: 2016 SWITRS data are provisional as of March 2018.

Bicycle Injury Collision Trend
with 3-year moving average

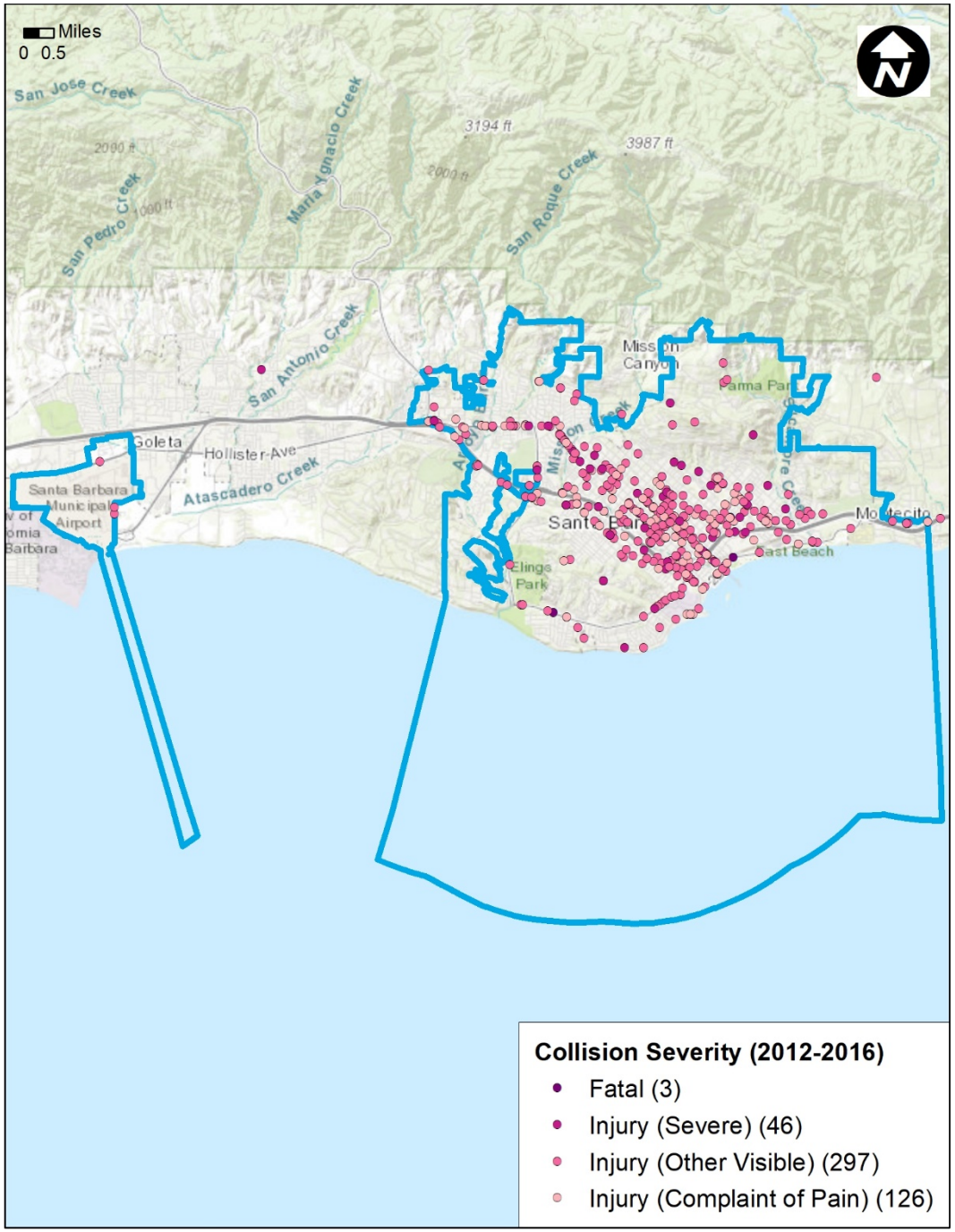


Note: 2016 SWITRS data are provisional as of March 2018.

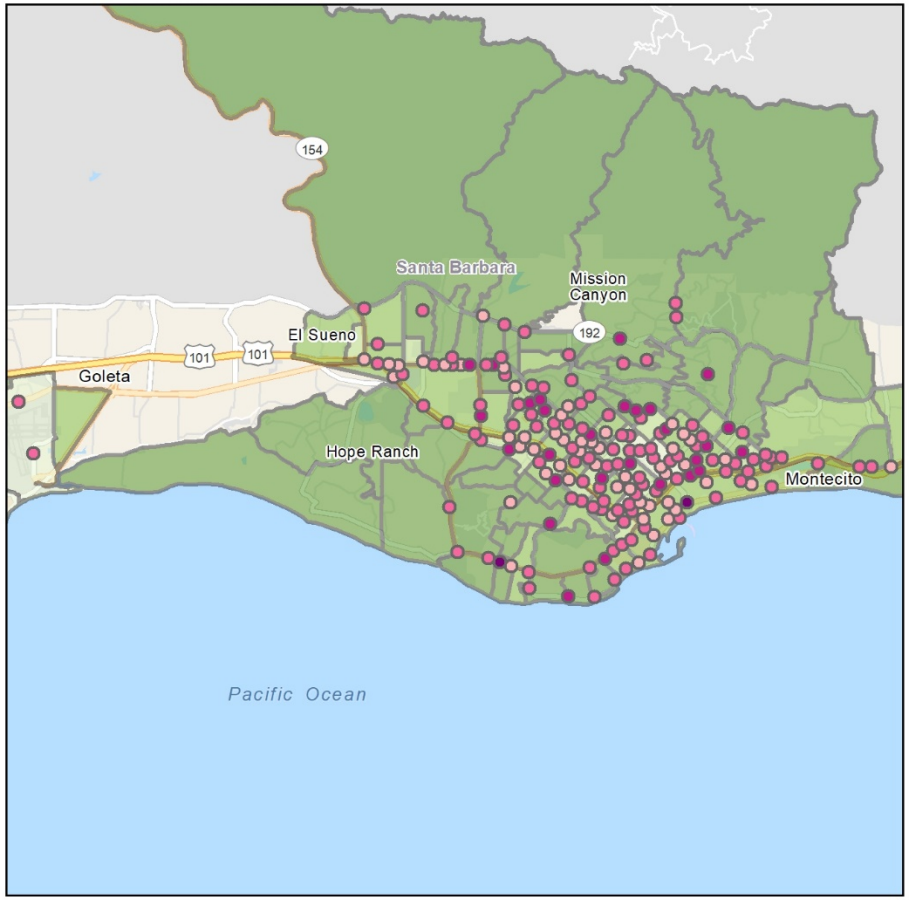
Bicycle Injury Collisions 2012-2016

472 of 505 collisions are mapped.

Note: 2016 SWITRS data are provisional as of March 2018.



Santa Barbara Bicycle Collision Map (2012 - 2016)



Collision Severity (2012-2016)

- Fatal (3)
- Injury (Severe) (45)
- Injury (Other Visible) (295)
- Injury (Complaint of Pain) (126)

2017 Median Household Income

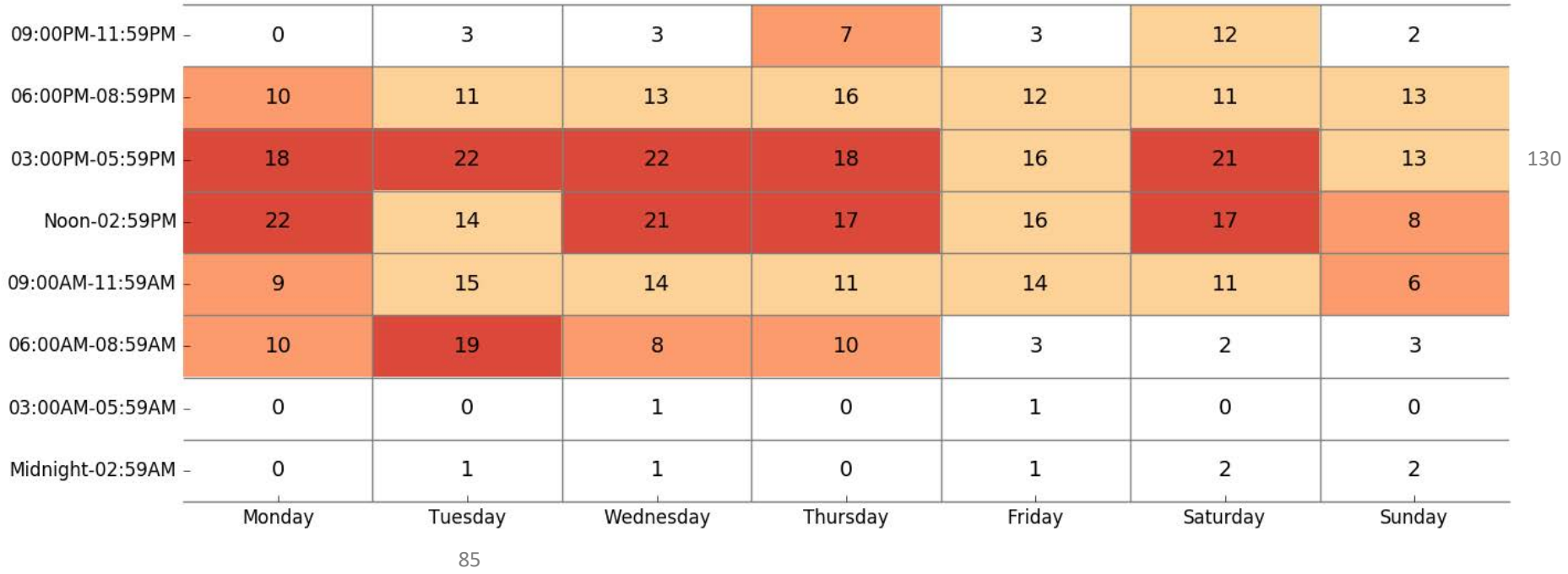
- < 35K
- 35K - 50K
- 50K - 75K
- > 75K

Berkeley SafeTREC

Data Source: Collision - SWITRS 2012 - 2016
Demographics - Esri, US Census Bureau, and ACS
Date: 6/12/2018

This map shows where all the pedestrian/bicycle injury collisions occurred and may not extend to the city's boundaries.

Bicycle Collisions by Time of Day and Day of Week



*The colors in this graph refer to how frequently a collision occurs at that time and day

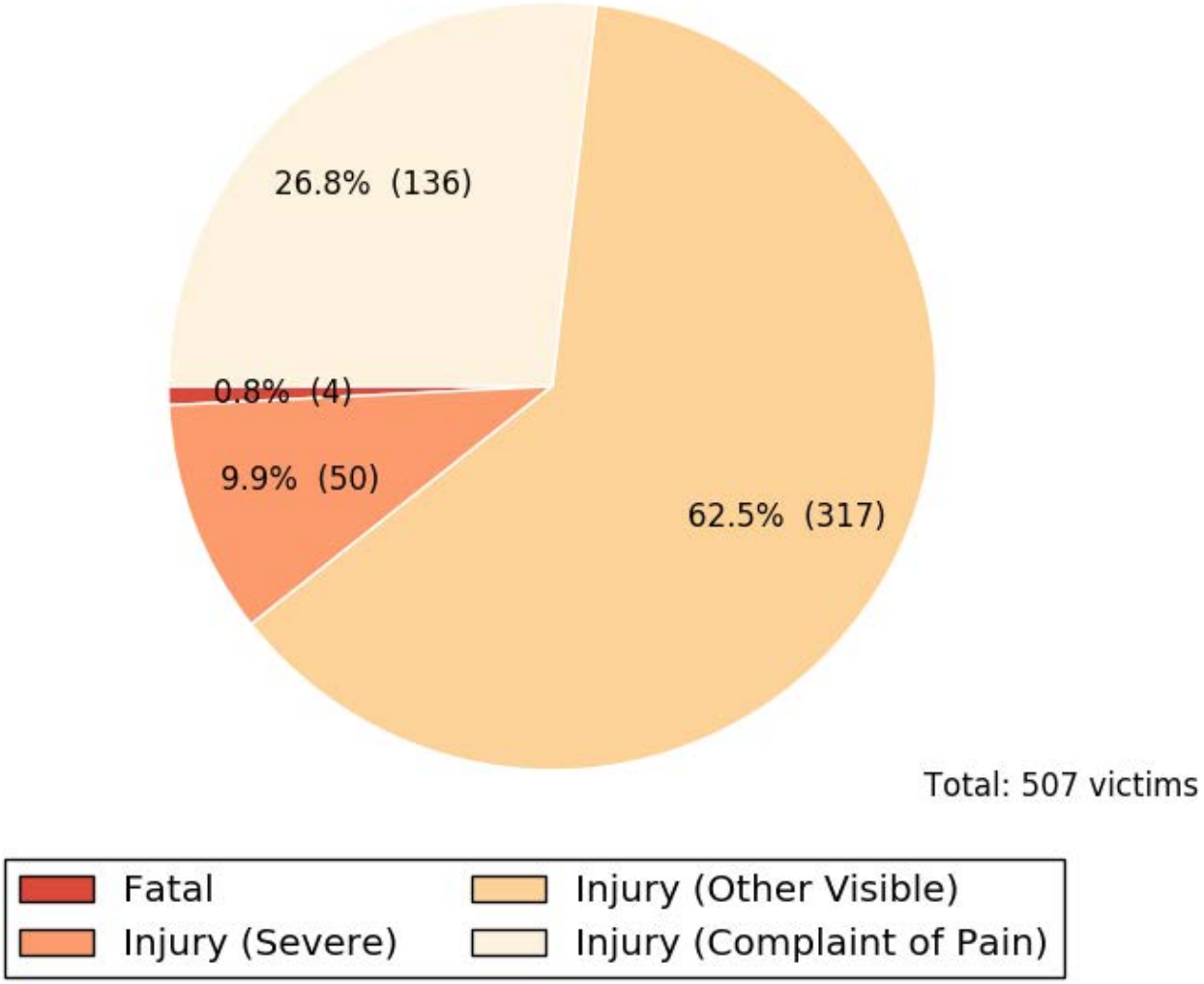
Total: 505 collisions

Top 10 Violations in Bicycle Collisions (with # and %)

CVC No.	Description	Freq.	Percent
0	Unknown	141	27.9%
22107	Unsafe turning with or without signaling	72	14.3%
22350	Speeding on the highway	47	9.3%
21801	Failure to yield right-of-way to incoming cars while turning left or making U-turn	38	7.5%
22517	Person shouldn't open a vehicle door on the side of moving cars	32	6.3%
21804	Driver failure to yield right-of-way when entering/crossing a highway	21	4.2%
21453	Red or Stop, vehicles stop at limit line or X-walk. When making right turn at a red light/stop sign driver required to yield to any vehicle approaching so closely as to constitute an immediate hazard	21	4.2%
21200	Bicyclists on the highway share the same rights and are subject to the same laws as vehicles	19	3.8%
21802	Failure to stop or yield right-of-way at a stop sign.	19	3.8%
21650	Failure to drive on right half of the roadway (with some exceptions)	18	3.6%
Total		428	84.8%

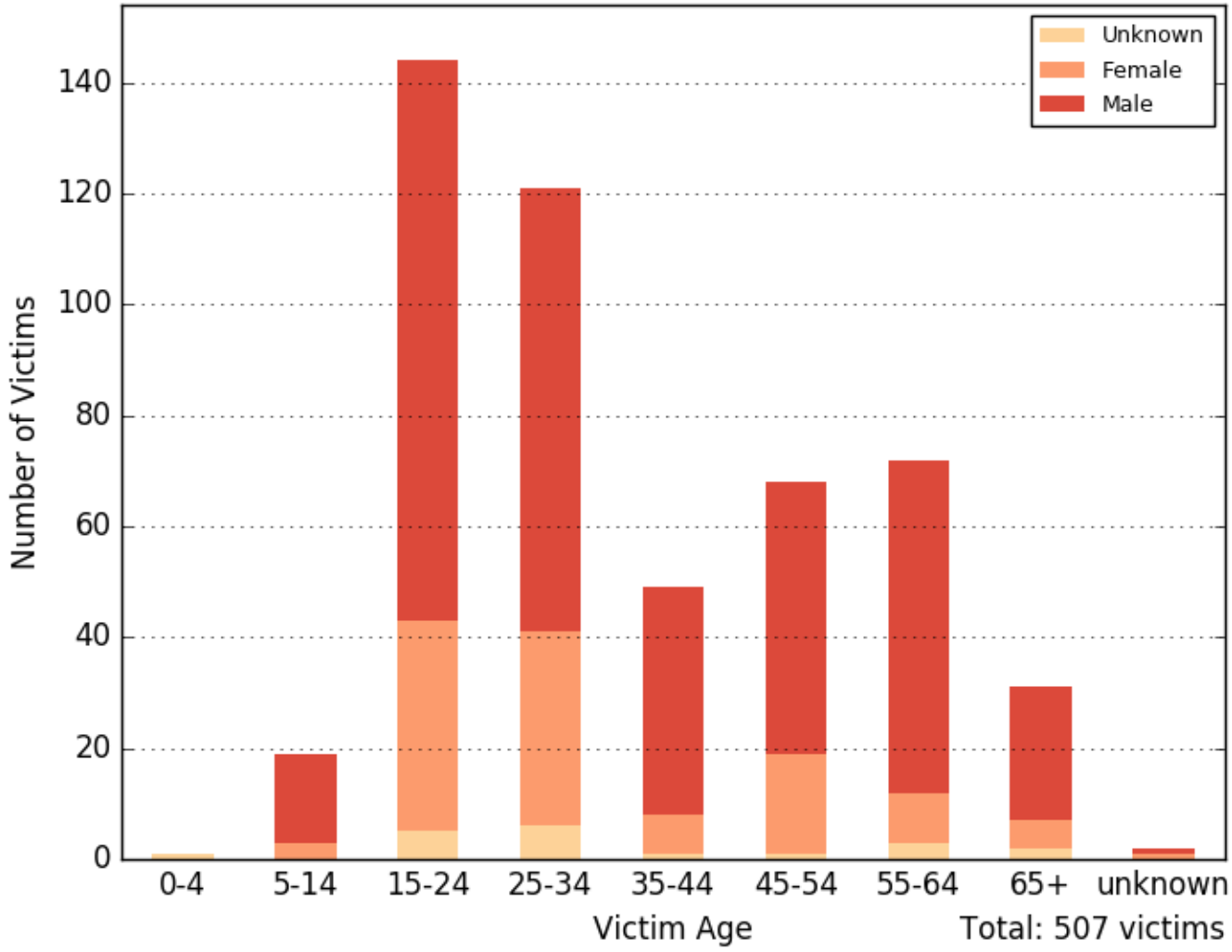
Total: 505 collisions

Bicycle Victim Injury Severity



Note: 2016 SWITRS data are provisional as of March 2018.

Bicycle Victims by Age and Gender



Note: 2016 SWITRS data are provisional as of March 2018.

Data for Westside Santa Barbara, CA

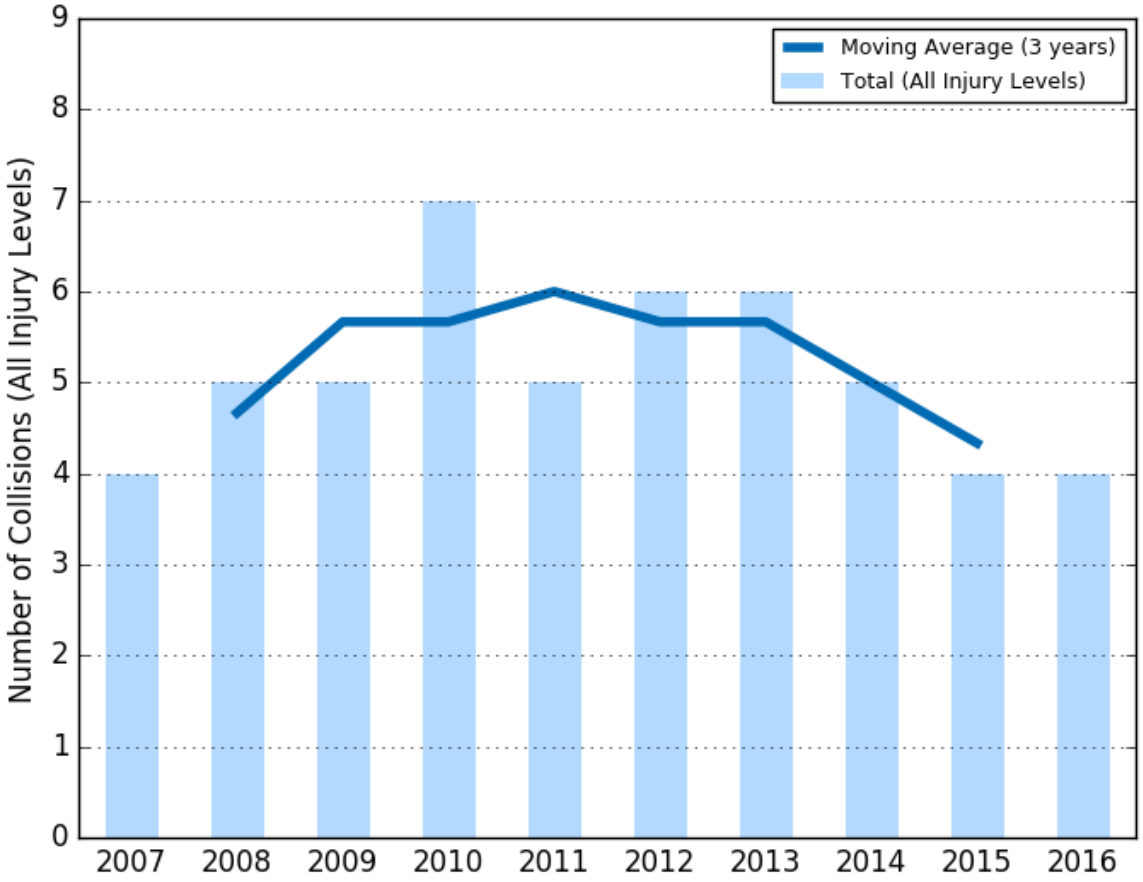
SWITRS Data

Community Pedestrian and Bicycle Safety Workshop Site Visit

Westside Santa Barbara, CA

Pedestrian Injury Collision Trend (2007-2016)

with 3-year moving average

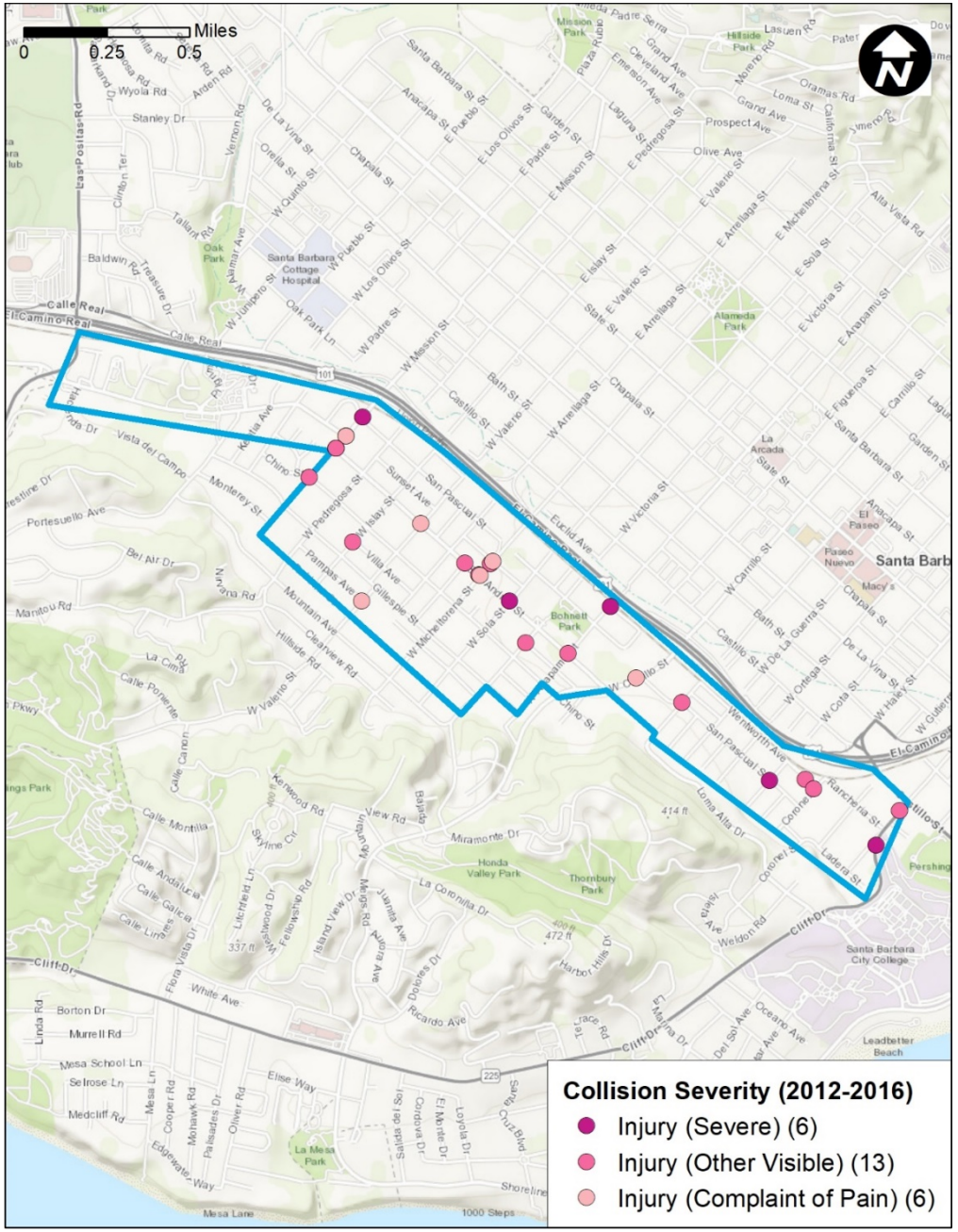


Note: 2016 SWITRS data are provisional as of March 2018.

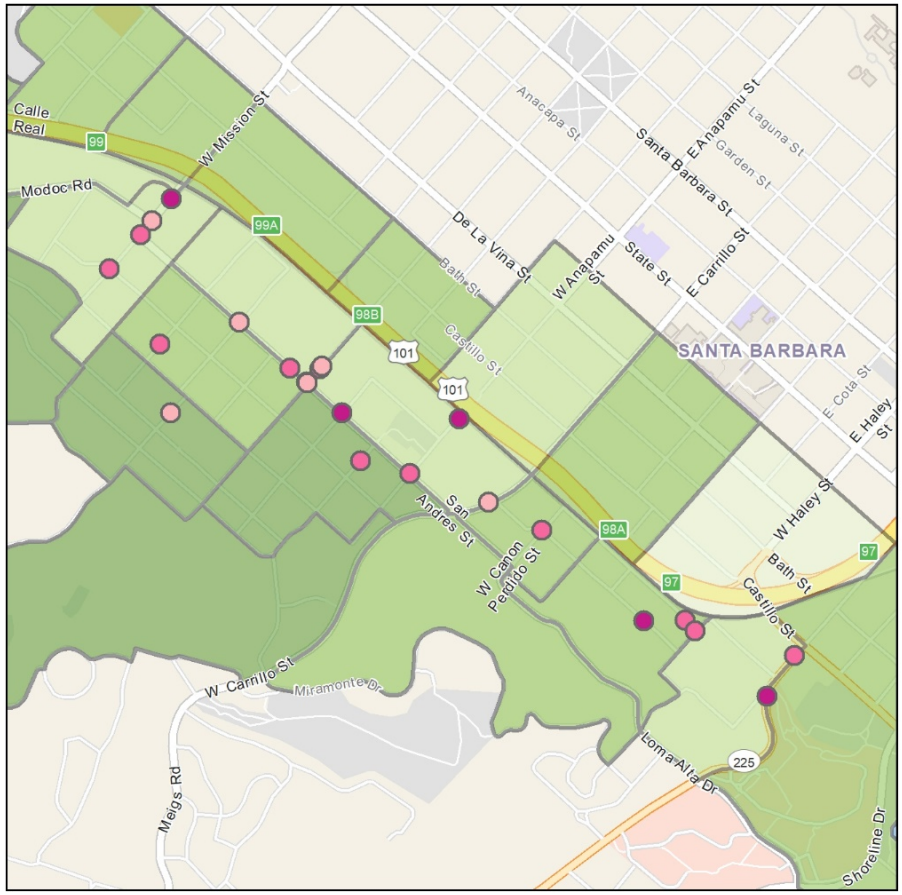
Pedestrian Injury Collisions 2012-2016

25 pedestrian collisions mapped

Note: 2016 SWITRS data are provisional as of March 2018.



Santa Barbara Westside Pedestrian Collision Map (2012 - 2016)



Collision Severity (2012-2016)

- Injury (Severe) (6)
- Injury (Other Visible) (13)
- Injury (Complaint of Pain) (6)

2017 Median Household Income

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

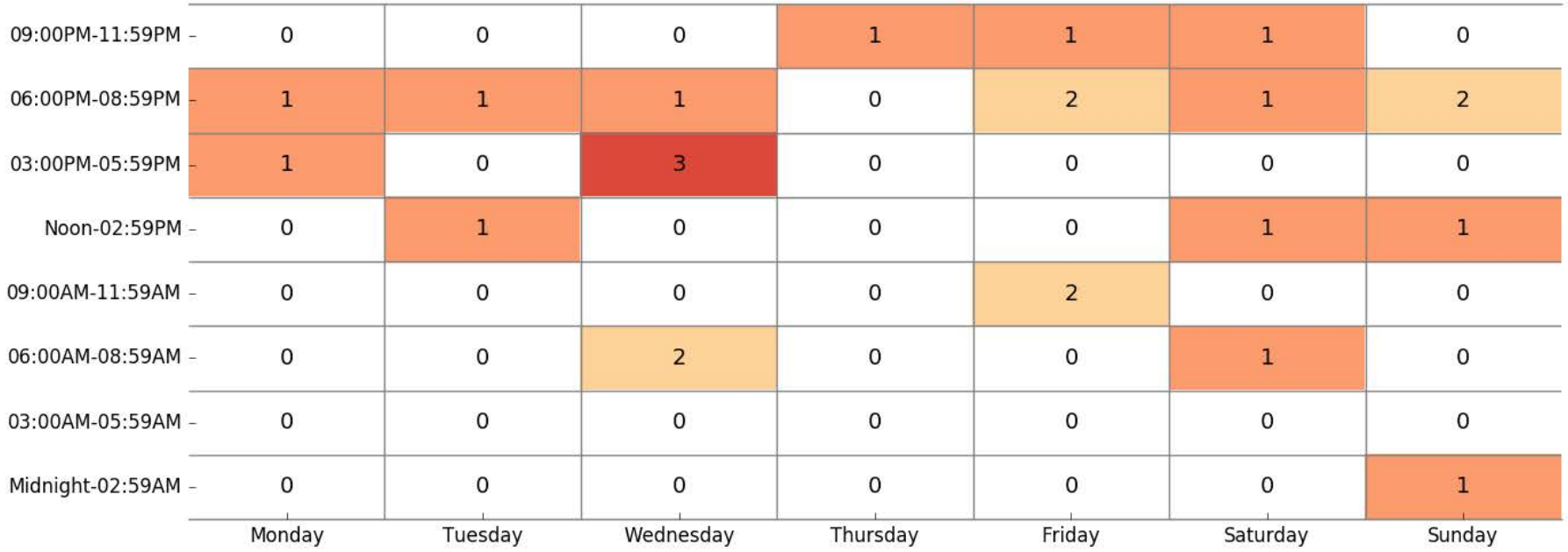
Berkeley SafeTREC

Data Source: Collision - SWITRS 2012 - 2016
Demographics - Esri, US Census Bureau, and ACS
Date: 6/12/2018

This map shows where all the pedestrian/bicycle injury collisions occurred and may not extend to the city's boundaries.

Pedestrian Collisions by Time of Day and Day of Week

Westside Santa Barbara, CA



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

*The colors in this graph refer to how frequently a collision occurs at that time and day

Total: 25 collisions

Top 10 Violations in Pedestrian Collisions (with # and %)

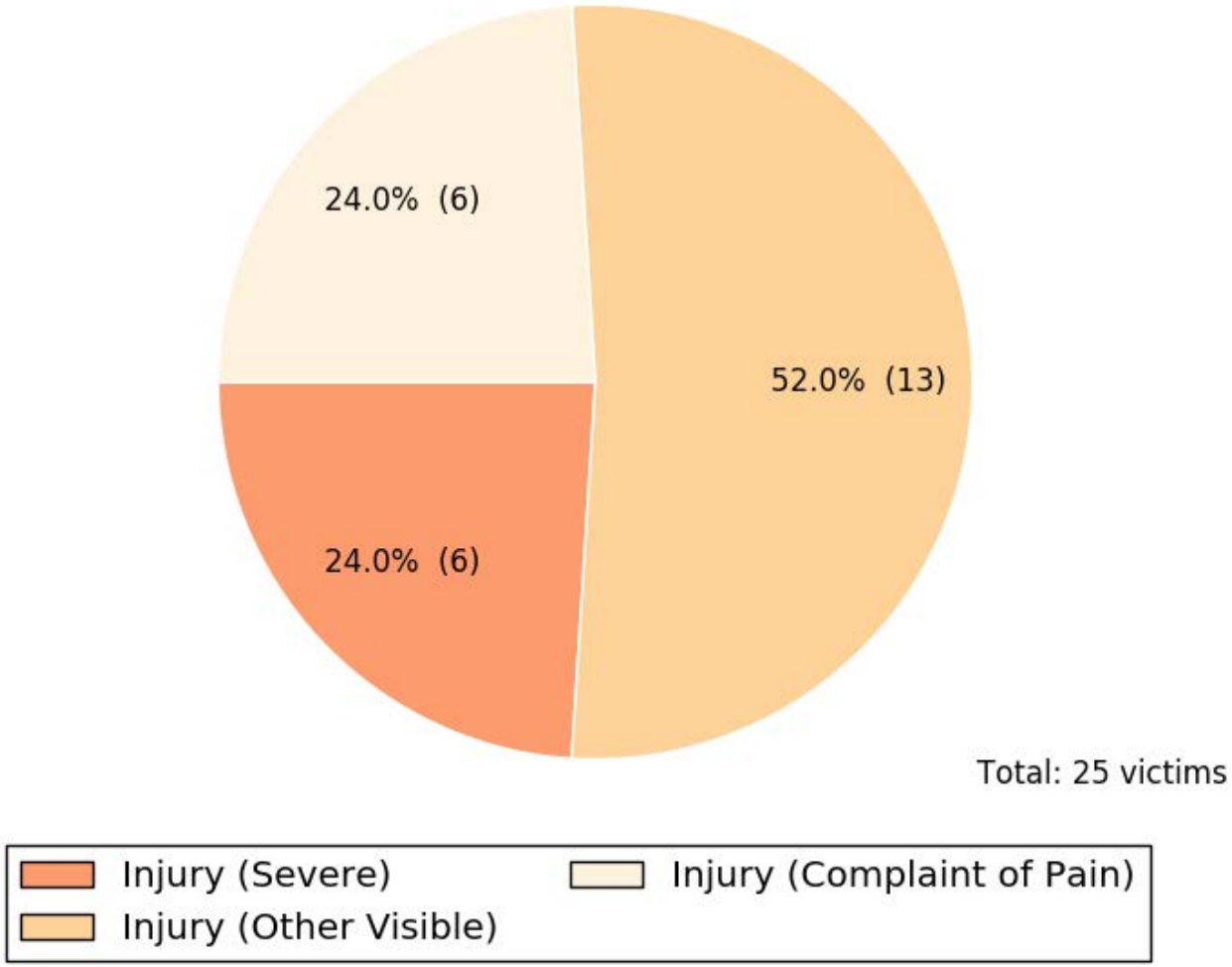
Westside Santa Barbara, CA

CVC No.	Description	Freq.	Percent
21950	Driver failure to yield right-of-way to pedestrians at a crosswalk	11	44.0%
0	Unknown	7	28.0%
21954	Pedestrian failure to yield right-of-way to vehicles	5	20.0%
21956	Pedestrian failure to walk close to the edge of the roadway when there is no sidewalk present	1	4.0%
22350	Speeding on the highway	1	4.0%
Total		25	100.0%

Total: 25 collisions

Pedestrian Victim Injury Severity

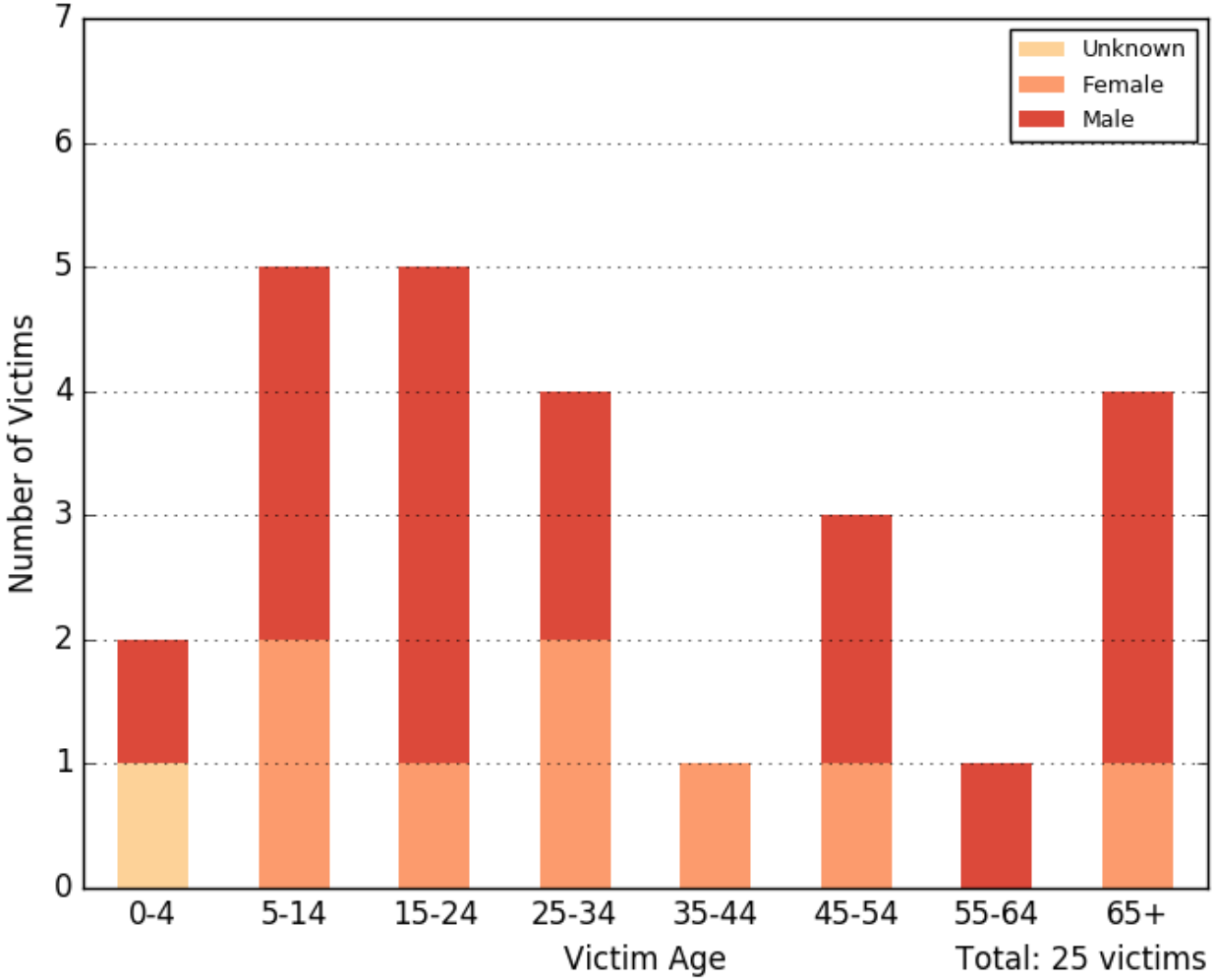
Westside Santa Barbara, CA



Note: 2016 SWITRS data are provisional as of March 2018.

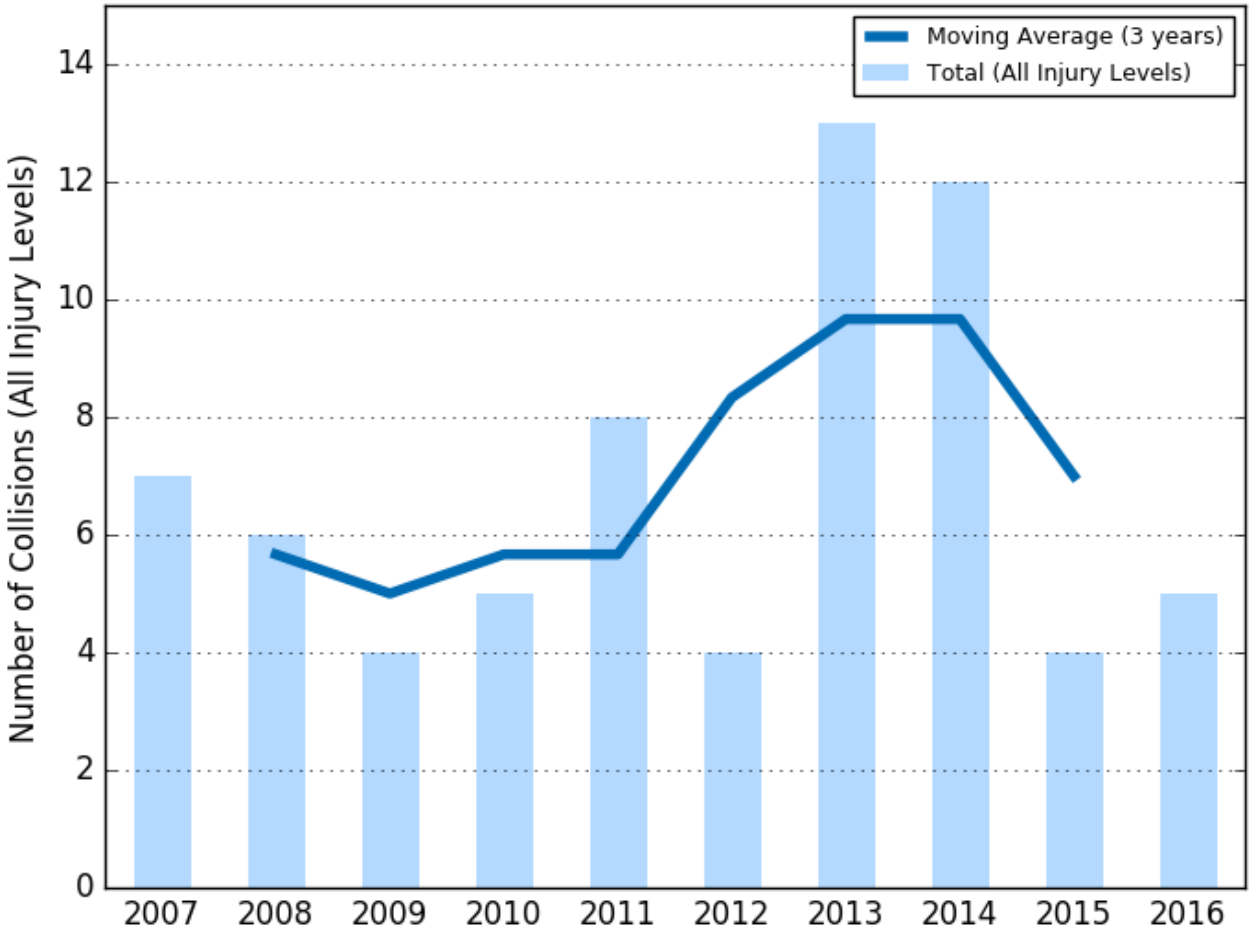
Pedestrian Victims by Age and Gender

Westside Santa Barbara, CA



Note: 2016 SWITRS data are provisional as of March 2018.

Bicycle Injury Collision Trend (Westside Santa Barbara, CA)
with 3-year moving average

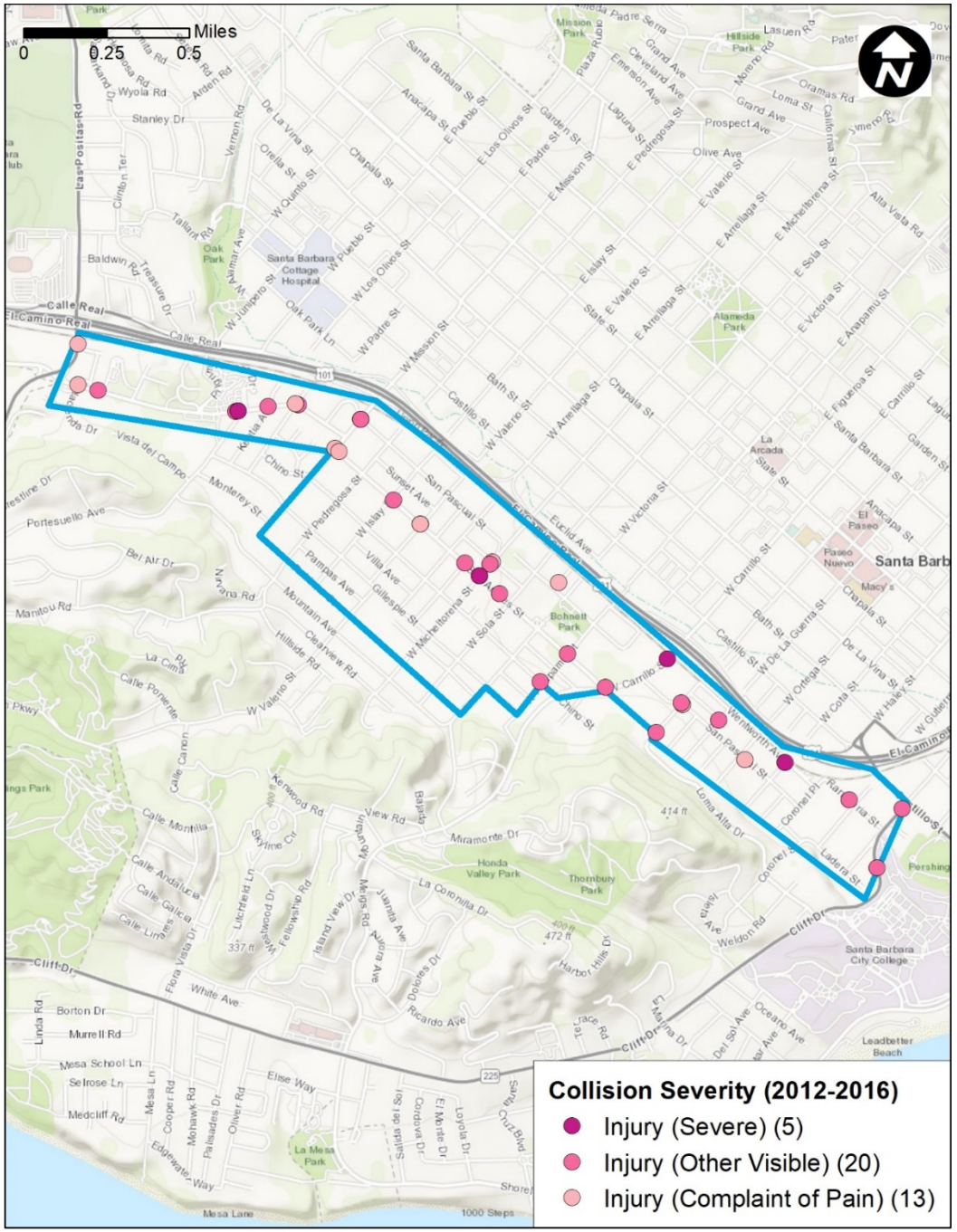


Note: 2016 SWITRS data are provisional as of March 2018.

Bicycle Injury Collisions 2012-2016

38 collisions mapped

Note: 2016 SWITRS data are provisional as of March 2018.



Santa Barbara Westside Bicycle Collision Map (2012 - 2016)

Collision Severity (2012-2016)

- Injury (Severe) (5)
- Injury (Other Visible) (20)
- Injury (Complaint of Pain) (13)

2017 Median Household Income

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

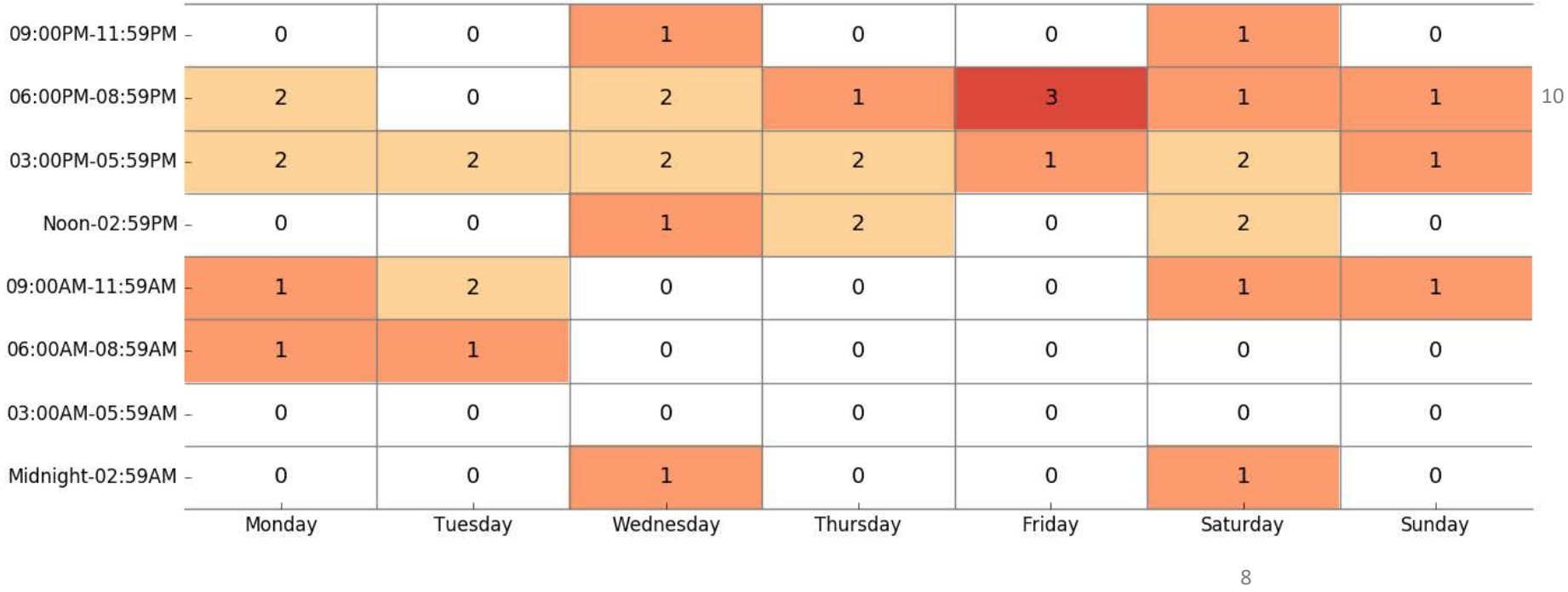
Berkeley SafeTREC

Data Source: Collision - SWITRS 2012 - 2016
Demographics - Esri, US Census Bureau, and ACS
Date: 6/12/2018

This map shows where all the pedestrian/bicycle injury collisions occurred and may not extend to the city's boundaries.

Bicycle Collisions by Time of Day and Day of Week

Westside Santa Barbara, CA



*The colors in this graph refer to how frequently a collision occurs at that time and day

Total: 38 collisions

Top 10 Violations in Bicycle Collisions (with # and %)

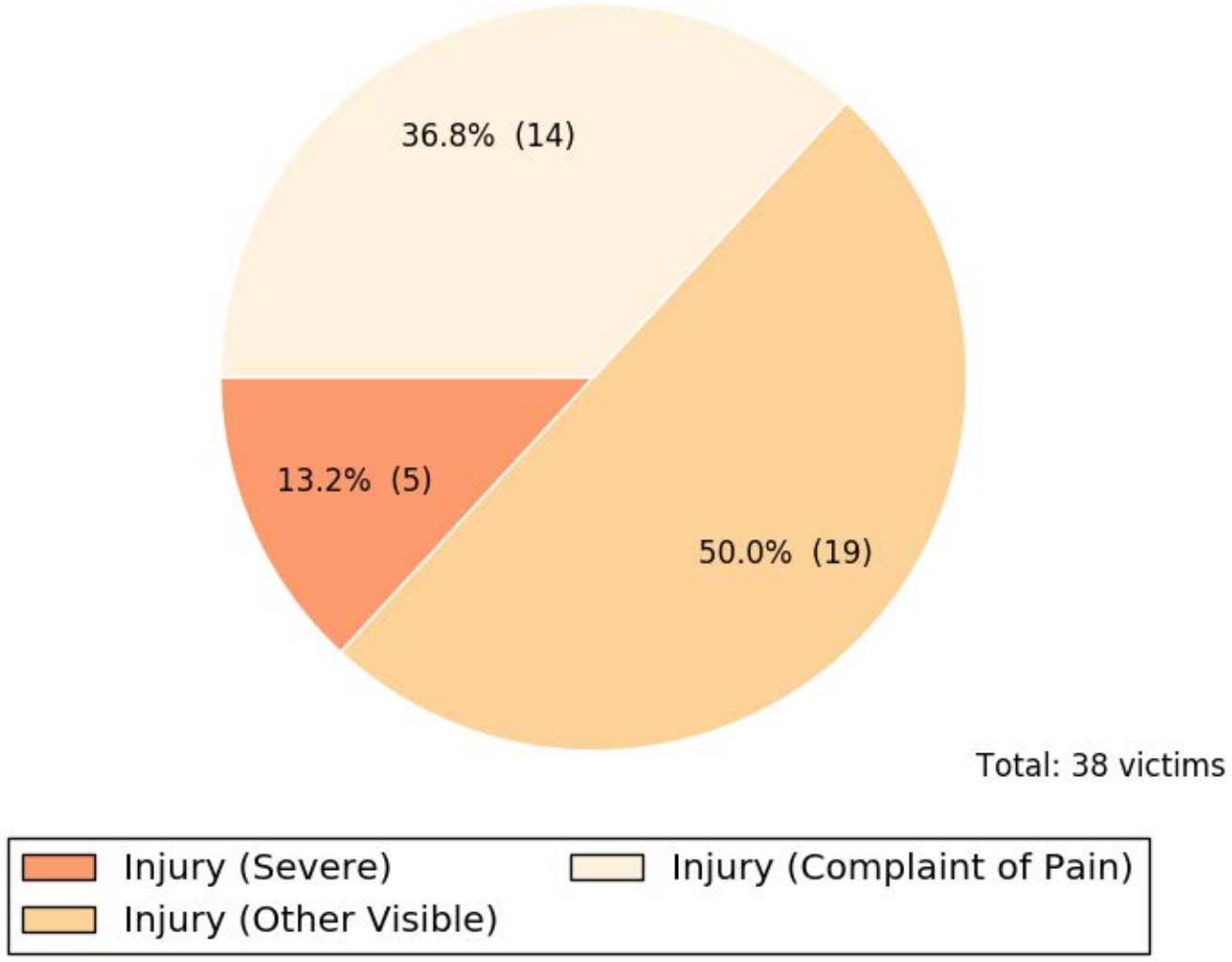
Westside Santa Barbara, CA

CVC No.	Description	Freq.	Percent
0	Unknown	12	31.6%
21801	Failure to yield right-of-way to incoming cars while turning left or making U-turn	7	18.4%
21804	Driver failure to yield right-of-way when entering/crossing a highway	6	15.8%
22107	Unsafe turning with or without signaling	4	10.5%
21453	Red or Stop, vehicles stop at limit line or X-walk. When making right turn at a red light/stop sign driver required to yield to any vehicle approaching so closely as to constitute an immediate hazard	2	5.3%
21460	Driver shall not cross double parallel solid yellow lines	1	2.6%
21658	Failure to drive vehicle in single lane	1	2.6%
21750	Driver that is passing another driver shall do so in a safe manner	1	2.6%
21802	Failure to stop or yield right-of-way at a stop sign.	1	2.6%
21954	Pedestrian failure to yield right-of-way to vehicles	1	2.6%
Total		36	94.7%

Total: 38 collisions

Bicycle Victim Injury Severity

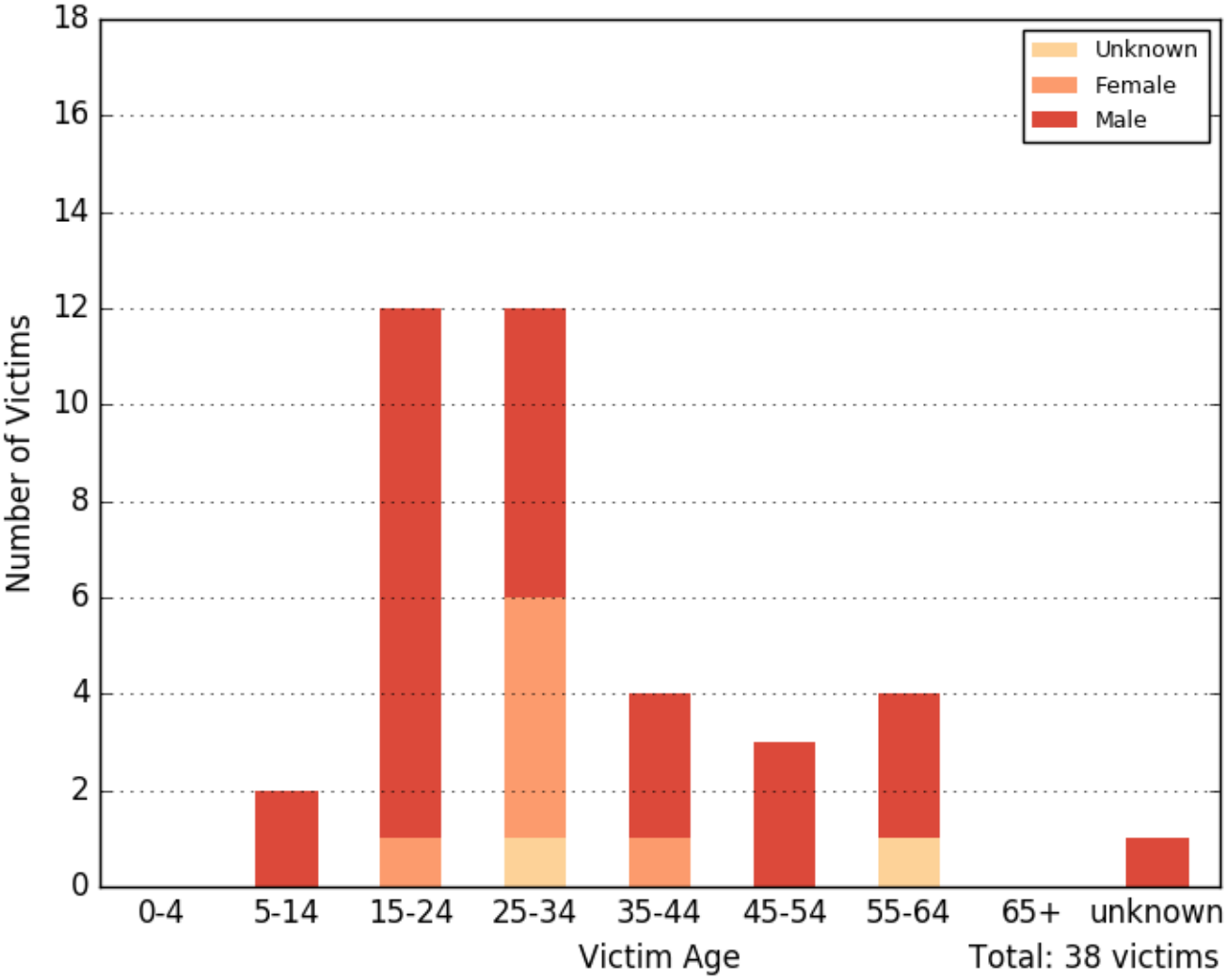
Westside Santa Barbara, CA



Note: 2016 SWITRS data are provisional as of March 2018.

Bicycle Victims by Age and Gender

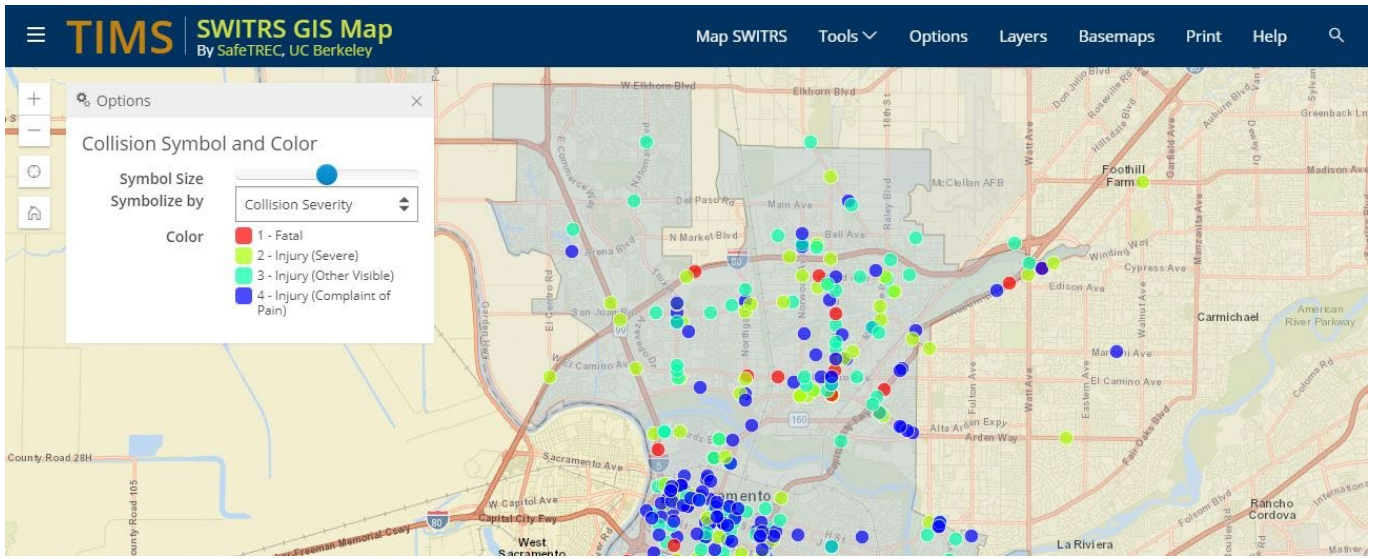
Westside Santa Barbara, CA



Note: 2016 SWITRS data are provisional as of March 2018.

The Transportation Injury Mapping System (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/



Berkeley SafeTREC