



Watts Workshop Summary and Recommendations

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



August 2019

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



Watts, Los Angeles, California

Acknowledgments

We would like to thank the planning committee for inviting us into their community and hosting the Watts Community Pedestrian and Bicycle Safety Training at Florence Griffith Joyner Elementary School.

Planning Committee

Luis Calderon	Edwin Markham Middle School
Hannah Caruso	Partnership for Los Angeles Schools
Donna Cox	Florence Griffith Joyner Elementary School
Saul Garcia	Urban Peace Institute
Carmina Gomez	Los Angeles Walks
Maria Gurubel	Edwin Markham Middle School
Stephanie Hernandez	Partnership for Los Angeles Schools
Doris James	Edwin Markham Middle School
Dai Shalon Jordan	Florence Griffith Joyner Elementary School
Alex Kim	Edwin Markham Middle School
Maria de Jesus Lomeli	Edwin Markham Middle School
Julia Nuñez	Edwin Markham Middle School
Brenda Ponce	Florence Griffith Joyner Elementary School
Alicia Preciado	Florence Griffith Joyner Elementary School
Angelica Zagal	Florence Griffith Joyner Elementary School

Thank you to the Automobile Club of Southern California, Partnership for Los Angeles Schools (Partnership LA), and Los Angeles Walks for providing food and refreshments and childcare in support of this training. Additionally, a warm thank you to Valerie Hernandez of KTI Translations for providing simultaneous interpretation, and Partnership LA for sponsoring the interpretation. Finally, thank you to Florence Griffith Joyner Elementary School Principal Dai Shalon Jordan for hosting the training at the school's Personal Development Room.

This report was prepared by:

California Walks

Daniel Gonzalez

Wendy Ortiz

Caro Jauregui

<https://calwalks.org>

**UC Berkeley Safe Transportation Research
and Education Center (SafeTREC)**

Garrett Fortin

Katherine Chen

<https://safetrec.berkeley.edu>



Table of Contents

3	Acknowledgments
3	Planning Committee
5	Introduction
6	CPBST Planning Process
7	Pedestrian & Bicycle Collision History
7	Pedestrian Collisions
8	Bicycle Collisions
8	Equity Concerns
10	Walking and Biking Assessment
10	Routes
11	In-class Activity: Street Story
11	Reflections
11	Community Assets
12	Americans with Disabilities Act (ADA) Accessibility
12	Bike Lanes
13	Motorist Behaviors
13	Poor Road Conditions
14	Lack of marked, high-visibility crosswalks and crosswalk enhancements
14	Lack of signage/Quality of signage
15	Lighting
15	Sidewalk Obstructions
16	Trash/Debris
16	Recommendations to Improve Walking and Biking Safety
16	Community Recommendations
21	Cal Walks & SafeTREC Recommendations
23	Appendix A: Community Plans & Policies Review
24	Appendix B: Resources
25	Appendix C: Data Analysis



Workshop participants share results of Action Planning Activity.

Introduction

Partnership for Los Angeles Schools (Partnership LA), the 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) with the Florence Griffith Joyner Elementary School (Joyner Elementary School) and Edwin Markham Middle School (Markham Middle School) communities in Watts on April 29, 2019 from 9:30 a.m. to 1:00 p.m. at Joyner Elementary School.

The CPBST is a joint project of California Walks and SafeTREC that works with local residents and safety advocates to develop a community-driven action plan to improve walking and biking safety in their communities and strengthen collaboration with local officials and agency staff.

The Planning Committee identified a Safe Routes to School focus for Joyner Elementary School and Markham Middle School to:

1. Identify and develop pedestrian and bicycle safety priorities and next steps in collaboration with the Joyner Elementary and Markham Middle school communities;
2. Collaborate to make walking and biking safer in the community; and
3. Encourage more walking and biking in the community.

The training consisted of:

1. Walking and biking assessments along three 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;
3. A small group action-planning session to prioritize and plan for programs, policies, and infrastructure projects.

We would like to acknowledge the 44 participants who attended the workshop including Partnership for Los Angeles Schools, Los Angeles Walks, United Parents for Educational Justice (UPEJ), Joyner Elementary School Staff, Los Angeles County Metropolitan Transportation Authority (LA Metro), Urban Peace Institute, and South Bay Center for Counseling (SBCC). 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 Watts.

CPBST Planning Process



Step 1: Assemble a Planning Committee – February 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 – March 2019

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



Step 3: Conduct CPBST Site Visit – March 29, 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 – April 29, 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 & Bicycle Collision History

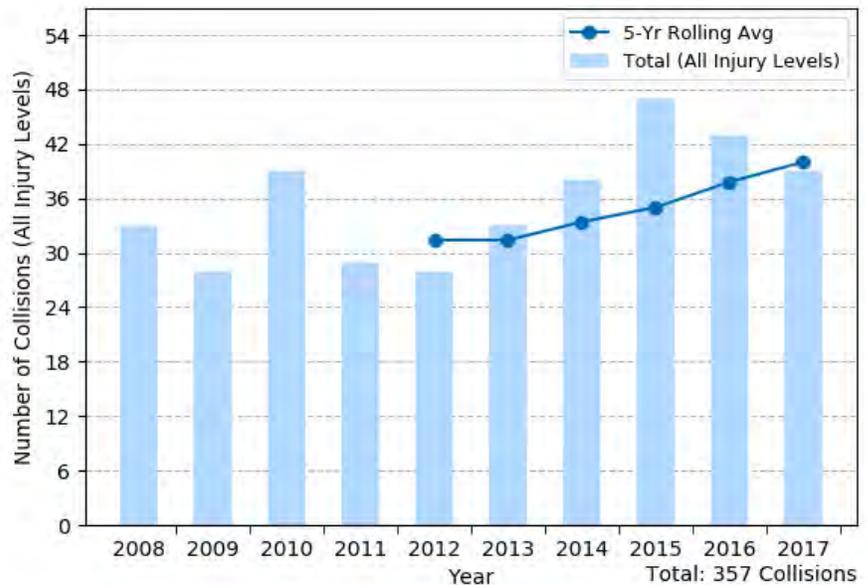
The following data is based on police-reported pedestrian and bicycle collisions resulting in injuries to pedestrians¹ and bicyclists within a one-mile radius of the intersection of 103rd Street and Wilmington Avenue in Watts. Data reported in this section are from the Statewide Integrated Traffic Records Systems (SWITRS) for the years 2008 to 2017. Collision data for 2016 and 2017 are provisional as of December, 2018. A full discussion of the pedestrian and bicycle collision data can be found in Appendix C.

Pedestrian Collisions

Over the 10 years from 2008 to 2017, pedestrian collisions have gradually increased. In the most recent five years of data available, 2013 to 2017, there were 200 pedestrian collisions, including six (6) fatalities and 27 severe injuries within one mile of the intersection of 103rd Street and Wilmington Avenue. Collisions in this time period were clustered along major streets or at intersections. The area with the greatest density of pedestrian collisions was Wilmington Avenue, south of 105th Street. There was also a dense cluster of collisions at the intersection of Wilmington Avenue and 107th Street.

Other collision clusters were on 103rd Street (especially clusters at major intersections), Century Boulevard, and 92nd Street. Central Avenue and Compton Avenue both had many collisions, again clustered at intersections. There were two (2) fatal collisions on Compton Avenue, one of which was part of a group of collisions near the railroad crossing at 110th/111th Streets. Collisions most often occurred on weekdays between 3 p.m. and 9 p.m., with the greatest number on Wednesdays. There was a pattern of commute-time collisions on weekday mornings as well. The top two primary collision factors identified by police in pedestrian collision reports were driver failure to yield to pedestrians in a crosswalk (31.5%) and pedestrian failure to yield to drivers when crossing outside of a crosswalk (24.0%).² Speeding is the third-highest violation, at 10.0%.

Turning to victims of these collisions, there were six (6) fatally-injured victims and 28 victims with suspected serious injuries, which together made up about 16% of all victims of pedestrian collisions. Almost half of these victims were between the ages of 5 and 24. Within this range, there was a very high number of victims among young children, with 20 victims ages 5 to 8. There were slightly more female than male collision victims.



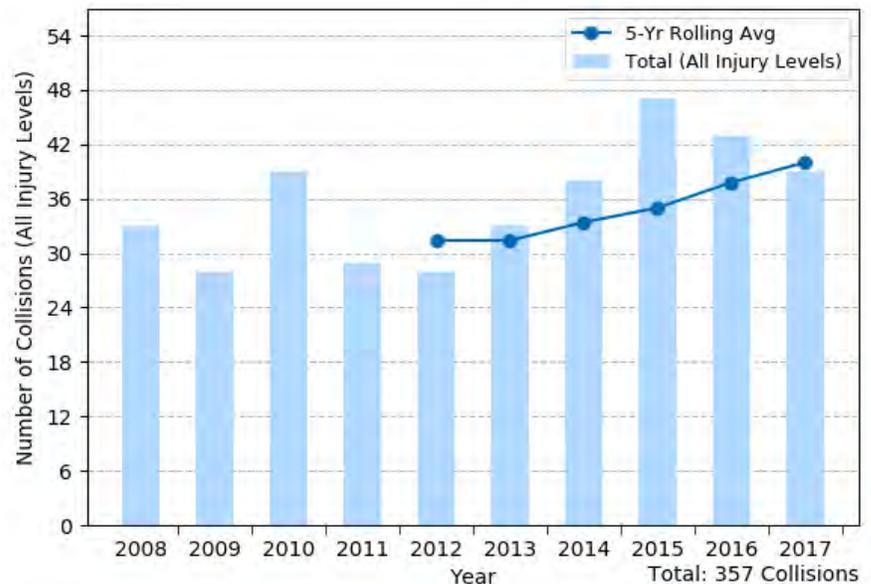
¹ A pedestrian is defined as any person who is afoot or using a non-motorized personal conveyance other than a bicycle. This includes skateboards, strollers, wheelchairs, and any electric assistive mobility device.

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

Bicycle Collisions

Over the 10-year period between 2008 and 2017, bicycle collisions appeared to be on a slight downward trend. In the most recent five years of data, 2013 and 2017, there were 104 bicyclist collisions, including three (3) fatalities and nine (9) severe injuries within one mile of the 103rd Street and Wilmington Avenue intersection. Collisions in this time period were concentrated mostly along corridors including Central Avenue, 92nd Street, 103rd Street, Wilmington Avenue, Grandee Avenue, and Graham Avenue. Central Avenue had a number of collisions, including one fatal and two severe, between 103rd and 108th Streets. Other significant corridors included:

1) 92nd Street, which had a cluster of severe injuries at the intersection with Elm Street/Wilmington Avenue, 2) 103rd Street, which had many relatively minor injuries, 3) Wilmington Avenue, which also had many relatively minor injuries, and 4) Grandee and Graham Avenues - along with the railroad between them - which had a train-related fatality on Century Boulevard and clusters of collisions at their intersections with 103rd and 92nd Streets. Bicycle collisions were spread throughout the week and occurred mainly between 9 a.m. and 9 p.m. The top violations identified by police in bicyclist collisions were failure to drive or ride on the right half of the roadway (25.0%) and failure to yield right-of-way when entering or crossing a street (17.3%). Please note that bicycles are considered vehicles, so it can be difficult to know whether some violations apply to a bicyclist or a motorist.



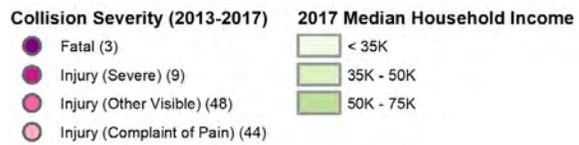
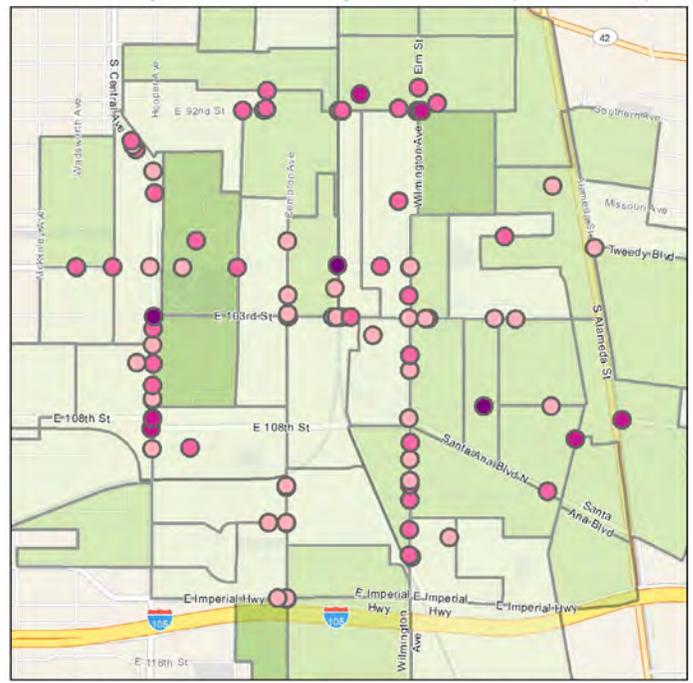
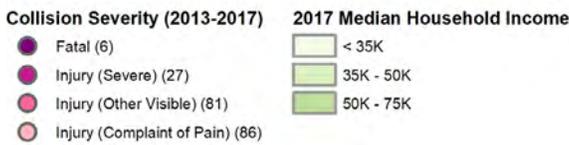
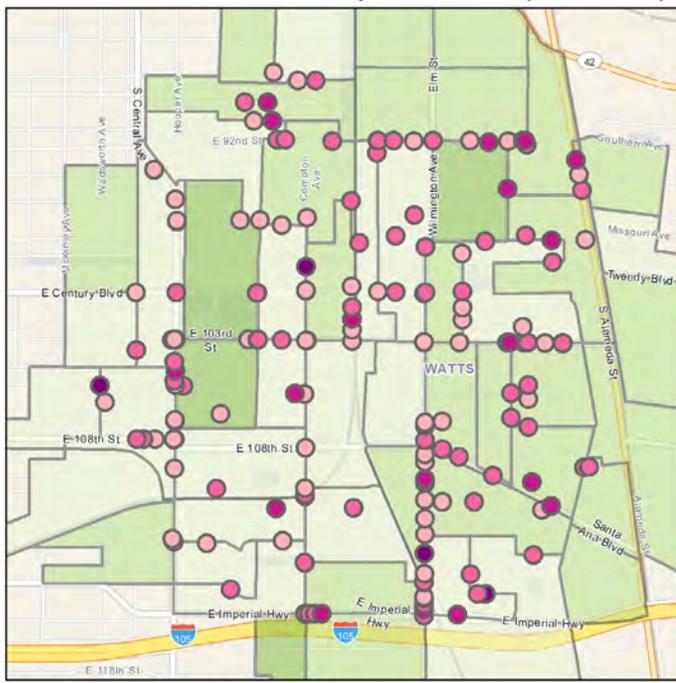
Turning to victims of these collisions, there were three (3) fatally-injured bicyclists and nine (9) bicyclists with suspected serious injuries, which together made up about 11.6% of all bicyclist victims in the data. The age range with the greatest number of victims was between the ages of 15 and 24, which included about one in four bicyclist victims. About three-quarters of all bicyclist victims were male.

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, our overall goal is to address inequities in vulnerable communities, which have disproportionately high levels of injuries. Improving safety requires tackling the complicated interplay between inequities, 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.³ The project team 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. The median household income for many of the neighborhoods within a one-mile radius of Joyner Elementary School is less than \$35,000. The analysis found on the next page shows that a disproportionately high number of collisions occurred in the lower income areas within a one-mile radius of Joyner Elementary.

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



Left: Pedestrian collision map with income. Right: Bicycle collision map with income. Data source: SWITRS 2013-2017; 2016 and 2017 data are provisional as of December 2018. ESRI, US Census Bureau, and American Community Survey.

The data seen above is also consistent with the Los Angeles Department of Transportation (LADOT) High Injury Network (HIN) Analysis, which reports that “nearly half of the streets on the High Injury Network” – streets where the majority of fatalities and severe injuries occur – are within neighborhoods largely comprised of people of color and low-income households.⁴ Specifically, in Watts, segments of East 103rd Street, Compton Avenue, Wilmington Avenue, Central Avenue, and Imperial Highway are all highlighted as streets with a high concentration of collisions that result in severe or fatal injuries to pedestrians and bicyclists. Despite the number of corridors identified as part of the High Injury Network, there has been only a single safety improvement installed in Watts under the Vision Zero Program.⁵

4 Map of High Injury Network. Los Angeles City Vision Zero. Available at <https://ladot.maps.arcgis.com/apps/MapJournal/index.html?appid=488062f00db44ef0a29bf481aa337cb3&webmap=6ad51e9cf42c4ef09817e4b3b4d2eeb0>. Accessed July 2019.

5 Vision Zero Safety Improvements. Los Angeles City Vision Zero. Available at <http://ladot.maps.arcgis.com/apps/View/index.html?appid=77df605a3eb142c7a0abc1c65bcf4861>. Accessed July 2019.

Walking and Biking Assessment

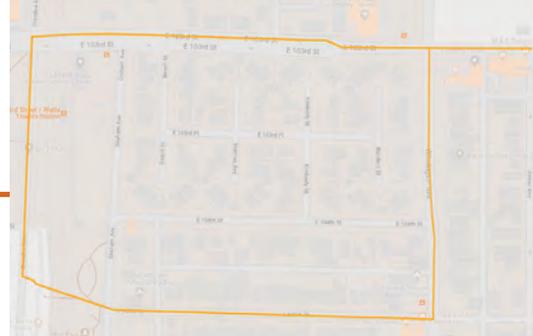
Routes

The Project Team led workshop participants on walking and biking assessments along three (3) key routes. Participants were asked to:

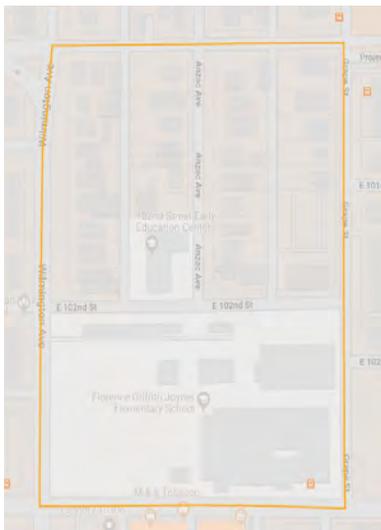
1. Observe infrastructure conditions and the behavior of all road users;
2. Assess the qualitative and emotional experience of walking and biking along the route and;
3. Identify positive community assets and strategies which can be built upon.

Route 1: Markham Middle School

The first route focused on streets frequented by students and parents who walk to or live around Markham Middle School and the Metro Blue Line.



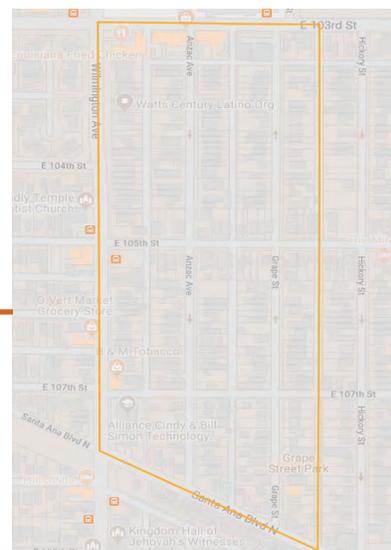
Route 2: Joyner Elementary School



The second route focused on streets frequented by students and parents who walk, bike, or skate to Joyner Elementary School and the local plaza the intersection of 103rd Street and Wilmington Avenue.

Route 3: Wilmington Avenue & Grape Street Park

The third route focused on streets frequented by students and parents who walk, bike, or roll to Joyner Elementary School, Markham Middle School, Grape Street Park, and local markets and shops in the community.



In-class Activity: Street Story

Workshop participants were given the option to share their transportation safety experiences walking and biking in Watts as part of an in-class activity. The Project Team guided nine participants through a series of paper surveys and facilitated discussions on the participants' experiences with collisions, near-misses, unsafe and safe areas to travel. Their stories are integrated into the walking and biking assessment reflections section of this report. Additionally all of the stories collected were inputted into the online Street Story platform after the workshop. To view data collected as part of Street Story in Watts, please visit: <https://streetstoryberkeley.edu/city/los%20angeles>.

Street Story is a community engagement tool that allows residents and community organizations to gather information that is important to transportation safety. Street Story is an online platform developed by UC Berkeley SafeTREC to collect stories about transportation collisions, near-misses, hazards and safe locations to travel. Street Story is also available in a paper version.

The platform and the information collected is free to use and publicly available. Street Story is available at: <https://streetstory.berkeley.edu>

Reflections

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

Community Assets

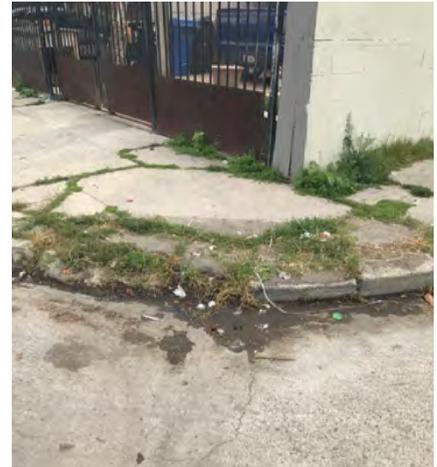
- During the in-class Street Story Activity, participants reported that they perceived the Watts Towers area and the Ted Watkins Memorial Park as relatively safe places to walk or bike, especially for kids.
- Murals on Wilmington Avenue from 103rd Street to 105th Street highlighted aspects of nature and are a local treasure. They also deter graffiti.
- Community members use the pedestrian bridge east of Markham Middle School for exercise.
- High-visibility pedestrian crosswalk at Wilmington Avenue and 105th Street made it easier for motorists to see pedestrians waiting to cross.
- Posted 15 miles per hour speed limit signage coupled with speed humps along Grape Street between 103rd Street and 105th Street helped slow traffic.
- Trees along Wilmington Avenue provided shade for pedestrians.



Left: Speed humps and low speed posted speed limit on northbound Grape Street. Right: High-visibility pedestrian crosswalk at the intersection of Wilmington Avenue and 105th Street.

Americans with Disabilities Act (ADA) Accessibility

- Two legs of the 102nd Street/Grape Street intersection do not have curb ramps to access the crosswalks. This makes it difficult for people using assisted mobility devices or strollers to navigate.
- Lack of curb ramps where sidewalks meet alleyways along Century Boulevard.
- Lack of curb ramps on all four legs of the intersection of Century Boulevard and Anzac Avenue.
- Lack of ADA-accessible curb ramps along Grape Street.



Left: Lack of ADA-accessibility between sidewalks and alleyways. Center: Lack of curb ramps at the intersection of Century Boulevard and Anzac Avenue. Right: Lack of curb ramps along Grape Street.

Bike Lanes

- Participants appreciated the standard painted bike lanes (Class II) along Wilmington Avenue and Century Boulevard but expressed concerns with the lack of connectivity to other bike facilities and abrupt endings. For example, bike lanes along Century Boulevard end between Wilmington Avenue and Grape Street, and bike lanes along Wilmington Avenue end at 105th Street.
- Motorist behaviors limited the sense of safety along the bike lanes as they are used at times by motorists as a passing lane to get ahead of traffic.



Standard painted bike lanes (Class II) along Century Boulevard.

Motorist Behaviors

- Motorists parked on the intersections of Grape Street/ 102nd Street and 102nd Street/Anzac Avenue despite these being no-parking zones with red curbs.
- Participants observed motorists speeding and failing to obey traffic signs and signals along Wilmington Avenue and Hickory Street, as well as along 103rd Street where it intersects with Grandee Avenue, Wilmington Avenue, Grape Street, and Hickory Street.
- Motorists encroached into the crosswalk at the intersections of Grandee Avenue/103rd Street and 103rd Street/ Wilmington Avenue.
- During the in-class Street Story Activity, participants reported five collisions that were near schools or in neighborhoods. In several cases, participants reported that factors relating to motorist behavior were the cause of these collisions. One fatal collision was reported near Ritter Elementary School and was believed to be due to the driver's unsafe speed and failure to yield. Two collisions, including one minor injury, occurred near Joyner Elementary School and the intersection of 103rd Street and Wilmington Avenue; a participant reported one collision as being caused by unsafe speeds. Another minor injury collision occurred at the intersection of 103rd Street/Juniper Street near Jordan High School; this collision happened at night and was caused by failure to yield and a lack of stop signs. Finally, a participant reported a pedestrian collision at the intersection of Santa Ana Boulevard/108th Street and Wilmington Avenue.
- During the in-class Street Story Activity, participants reported near-misses on Grape Street and 103rd Street, which they believed were caused by unsafe motorist speed and motorist failure to yield to pedestrians.
- Motorists used the bike lane heading north along Wilmington Avenue between 103rd Street and Century Boulevard as a street lane to get ahead of traffic.



Motorists parked at a red curb at the end of a crosswalk at the intersection of Grape Street and 102nd Street.

Poor Road Conditions

- Participants noted potholes and other debris on Wilmington Avenue near bike lanes making conditions for motorists and cyclists unpleasant and dangerous.

Lack of marked, high-visibility crosswalks and crosswalk enhancements

- Students used the unmarked crosswalk on 103rd Street, between Wilmington Avenue and Beach Street, due to its location directly in front of the Washington Court Apartments.
- Pedestrians waiting to cross at the high-visibility uncontrolled crosswalk on East 103rd Street, at Graham Avenue, often waited several minutes before motorists stopped and allowed them to cross.
- The 4-way stops at Century Boulevard and Wilmington Avenue lack high-visibility marked crosswalks, which participants noted exacerbates the existing visibility issue between motorists and pedestrians.
- The marked crosswalk at 105th Street and Graham Avenue leading to the pedestrian bridge towards Markham Middle School is faded.
- Santa Ana Boulevard, which participants indicated is used by students to get to both Joyner Elementary School and Markham Middle School, lacks a marked crosswalk at the corner of Grape Street.



*Left: Lack of high-visibility crosswalk markings at the intersection of Wilmington Avenue and Century Boulevard.
Right: High-visibility crosswalk at the intersection of 103rd Street and Graham Avenue.*

Lack of signage/Quality of signage

- There was a lack of school zone signage at the intersections of 103rd Street/Wilmington Avenue, 104th Street/Grandee Avenue, and 102nd/Wilmington.
- Some signage around the community has been vandalized.



Vandalized sign on Graham Avenue

Lighting

- Lack of pedestrian-scale lighting on Grape Street, Century Boulevard, 102nd Street, and Wilmington Avenue made it difficult to see at night. Community members shared that they choose to not walk at night without lighting.
- During the in-class Street Story Activity, participants reported three collisions, all pedestrian, on Imperial Highway. Two were on the same block, between Success Avenue and Compton Avenue on the 1500 block of Imperial Highway, and one was a little west of the area normally included in Watts, between Avalon Boulevard and Stanford Avenue on the 600 block of Imperial Highway. Of the 1500 block collisions, one occurred at night and the participant reported poor lighting and cracked or uneven roadway as causes. The 600 block collision also occurred at night and resulted in a minor injury; the participant reported poor lighting as one of the causes, alongside poor sidewalk conditions, poor signage, and obstacles in the road.

Sidewalk Obstructions

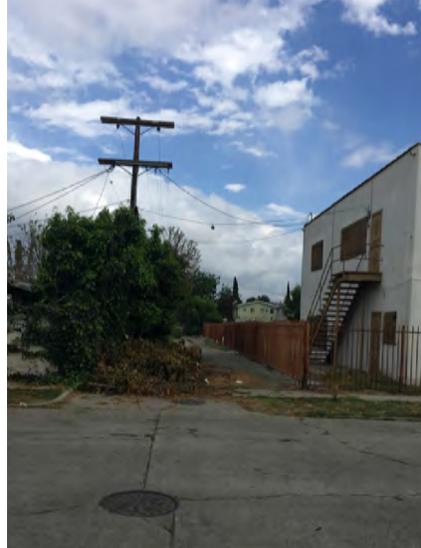
- Broken sidewalks along Wilmington Avenue, Grape Street, and Century Boulevard are challenging for residents to navigate, particularly those using strollers and mobility devices.
- Tree roots damaged and uplifted sidewalks on Grape Street between Santa Ana Boulevard to 103rd Street, creating tripping hazards for pedestrians.
- Overgrown bushes on Grape Street between Santa Ana Boulevard and 103rd Street blocked the sidewalks.
- Narrow neighborhood streets like 107th Street, between Wilmington Avenue and Grape Street lack sidewalks.
- Participants shared that homeowners often park their cars next to their fences without leaving adequate clearance for pedestrians to walk safely. Many community members resort to walking in the middle of the street.



Left: Pedestrian with stroller avoiding broken sidewalk on Grape Street. Right: Overgrown bushes obstructs sidewalk access along Grape Street.

Trash/Debris

- Bulky trash items obstructed the sidewalk along Wilmington Avenue, Grape Street, and Century Boulevard. Community members often walk in the street to avoid illegally dumped items.
- Participants shared that the alleyways between Century Boulevard and 102nd Street, leading to Joyner Elementary School, were often a site for illegally dumped items.



Left: Dumped furniture obstructs sidewalks along Wilmington Avenue. *Center:* Tree branches obstruct access to alleyway leading to Joyner Elementary School. *Right:* Bulky items and trash obstruct sidewalk along Wilmington Avenue.

Recommendations to Improve Walking and Biking Safety

Participants engaged in small-group action planning discussions to prioritize and outline preliminary plans for community programs and infrastructure projects aimed at reducing the number of injuries and fatalities, as well as increasing the number of people and the frequency of safe walking and biking in the Watts Joyner Elementary School and Markham Middle School school communities.

Community Recommendations

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

Education Project: Educational Safety Message Campaign

Project Description: Educate all road users about their rights and responsibilities while traveling on the roadway by developing an educational safety campaign.

Project Goals:

1. Increase pedestrian and bicyclist safety by educating all road users about their rights and responsibilities while traveling on the roadway;
2. Educate motorists on the importance of obeying the speed limit; and
3. Educate community at-large about Safe Routes to School concerns.

Action Steps	Timeline	Responsible Party	Resources Needed
<p>High-Visibility Signage for Educational Safety Messaging Campaign:</p> <ul style="list-style-type: none"> • Participants identified the need for and interest in an educational safety messaging campaign focused on key areas around Watts. • Participants were open to both developing their own materials or using materials that already exist, such as the “Go Human” Campaign materials offered by Southern California Association of Governments (SCAG). • Ideally, high-visibility signage would be posted by the beginning of the 2019-2020 school year. 	May - August 2019	<p>Parents, especially UPEJ parents</p> <p>Neighborhood Council Members</p>	<p>SafeTREC collision data</p> <p>Southern California Associations of Governments (SCAG) Go Human Campaign</p> <p>Local elected officials</p>

Encouragement Project: Resource Community Block Party

Project Description: Host a community block party for families to get together while providing educational materials and workshops on walking and biking safety.

Project Goals:

1. Promote safety education through the distribution of educational materials and activities;
2. Connect community members with local resources and to each other; and
3. Celebrate the resilience and unity of the Watts community.

Action Steps	Timeline	Responsible Party	Resources Needed
<p>Establish a Planning Team</p> <ul style="list-style-type: none"> ● Partnership LA and UPEJ parents to reach out to local community members, businesses, organizations, and city officials to partner in hosting community block party. ● Discuss and assign logistics of the Block Party among themselves 	August-September 2019	Workshop participants from Partnership LA and UPEJ.	Contact information for potential Planning Team Members
<p>Logistics</p> <ul style="list-style-type: none"> ● Decide on an ideal date, time, and location to host the block party to maximize turnout. ● Finalize the activities, materials needed and participants for the event. ● Seek donations ● Reach out to the City of Los Angeles Street Services Investigation & Enforcement Division to submit a street closure and special events application 	Fall/ Winter, 2019-2020 School Year	The Planning Team	Meeting space List of potential activities and participants Letter seeking donations Street closure permit application Coordinations of supplies, that include trash bags, gloves, tables, chairs, posters, maps, and signage
<p>Outreach</p> <ul style="list-style-type: none"> ● Develop flyers for distribution ● Assign Planning Team members to distribute flyer among community members, businesses, and organizations 	2019-2020 School Year	The Planning Team	Printer Paper Ink Thumb tacks

Enforcement Project: Crossing Guard Program

Project Description: Enact a crossing guard program at Joyner Elementary School.

Project Goals:

1. Understand opportunities for crossing guard programs and their criteria;
2. Mobilize the community to share their concerns, apply for crossing guards, and meet the program criteria; and
3. Implement crossing guard programs at Joyner Elementary School through stakeholder collaboration, with the goal to expand to other local elementary schools.

Action Steps	Timeline	Responsible Party	Resources Needed
<p>Petition for Crossing Guard Program:</p> <ul style="list-style-type: none"> • Parents from Partnership LA schools will write petition for program and collect signatures near the school • Present petition to school principal • Present petition to City Council, LAUSD including local representative, and LADOT 	Summer/ Fall 2019	Partnership LA Workshop Participants (Olga Gonzalez and Erica Torres) Local community of Watts elementary schools	Community volunteers School staff California School Crossing Guard Training Guidelines ¹
<p>Collect Data for Crossing Guard Program:</p> <ul style="list-style-type: none"> • Partnership LA school groups to reach out to relevant agencies to understand specific criteria needed to implement crossing guard program • Recruit and train volunteers • Collect traffic data to verify it meets criteria 	Summer/ Fall 2019	Workshop Participants Markham Middle School and Joyner Elementary School Community	Partnership LA Local agencies, including LAUSD and LADOT Community volunteers Crossing Guard Program Criteria (CA MUTCD Chapter 7) ²

¹ Safe Routes to School Technical Assistance Resource Center. "California School Crossing Guard Training Guidelines." May 2015. Available at: http://caatpresources.org/docs/crossingGuardTraining/California-School-Crossing-Guard-Training-Guidelines_4-29-2015_final.pdf.

² California State Transportation Agency. "California Manual on Uniform Traffic Control Devices." 2014 Edition, Revision 4. March, 2019. Available at: http://www.dot.ca.gov/trafficops/camutcd/docs/2014r4/CAMUTCD2014_rev4_hires.pdf.

Engineering Project: Temporary Curb Extensions

Project Description: Install low-cost temporary curb extensions at key intersections near Markham Middle School and Joyner Elementary School.

Project Goals

1. Collaborate with the City Council, Los Angeles Public Works Department, and the school community to install low-cost temporary curb extensions at community-identified locations;
2. Decrease motorist speeds when approaching intersection or mid-block crossing with curb extensions; and
3. Increase visibility between motorists, pedestrians, and bicyclists at marked or signalized intersections.

Action Steps	Timeline	Responsible Party	Resources Needed
<p>Identify potential curb extension locations with community input:</p> <ul style="list-style-type: none"> • Wilmington Avenue/ 104th Street • Wilmington Avenue/Century Boulevard • 102nd Street/Grape Street • Century Boulevard/Anzac Avenue 	Summer 2019	Workshop Participants Markham Middle School and Joyner Elementary School Community	Walking assessment of key intersections
<p>Gather information about feasibility and timeline of curb extension installations:</p> <ul style="list-style-type: none"> • Connect with the Public Works Department and Councilmember regarding the temporary curb extension installations • Connect with the Public Works Department to understand feasibility of temporary curb extension installations 	Fall 2019	Workshop Participants Markham Middle School and Joyner Elementary School Community	
<p>Work with the Public Works department to apply for funding for temporary curb extension installations:</p> <ul style="list-style-type: none"> • Work with the Public Works Department to identify funding sources such as Caltrans' Active Transportation Program to fund temporary curb extensions 	2020	Workshop Participants Markham Middle School and Joyner Elementary School Community City of Los Angeles Public Works Department	

Cal Walks & SafeTREC Recommendations

Install School Zone Signage and Infrastructure to Improve Safe Routes to School

- The Project Team recommends the City of Los Angeles Department of Public Works **install high-visibility crosswalks and school zone signage along Santa Ana Boulevard and around the schools**. The neighborhood around Joyner Elementary School did not have sufficient school zone signage nor high-visibility crosswalks. Santa Ana Boulevard, between Wilmington Avenue and Hickory Street, would benefit from high-visibility crosswalks in these neighborhood streets that feed into Joyner Elementary School, College Bridge Academy, and Alliance Cindy and Bill Simon Technology High School.
- The Project Team recommends the City of Los Angeles Department of Public Works **evaluate current speed limits around the schools**. The California Vehicle Code Section sets a 25 mile per hour speed limit near schools to promote student safety with the option to reduce speeds further to 15 miles per hour. However, community members witnessed speeding motorists along Wilmington Avenue and expressed concern with the posted 35 mile per hour speed limit sign only one block away from Alliance Cindy and Bill Simon High School.

Strengthen Watts Safe Haven and Safe Passage Program via Outreach

- The Project Team recommends the Watts Regional School Safety Collaborative and David Starr Jordan High School **expand the Watts Safe Haven and Safe Passage Program outreach to the Spanish-speaking community in the neighborhood**.⁶ Expanded non-English language outreach could help students and parents walk to school more safely. It could also help identify additional Safe Haven sites for LAUSD's pedestrian routes to school, including the already developed maps for Joyner Elementary School⁷ and Markham Middle School⁸.

Install Rectangular Rapid Flashing Beacon (RRFB)

- The Project Team recommends the City of Los Angeles Department of Transportation **install a RRFB at the marked crosswalk on East 103rd Street at Graham Avenue** to address motorist failure to yield to pedestrians at this uncontrolled marked crosswalk. The installation of a RRFB would signal to motorists with flashing lights that a pedestrian is waiting to cross.

Pedestrian Bridge Maintenance

- The Project Team recommends the City of Los Angeles Department of Public Works **schedule regular maintenance of the pedestrian bridge** to increase the community's perception of safety. Numerous workshop participants shared they felt uncomfortable walking across the pedestrian bridge because of the lack of lighting and low use. Minor maintenance and upgrades, including regular painting of the steps and floors, would likely create a more comfortable environment for the community to use the bridge for its intended purpose.

⁶ Watts Regional School Safety Collaborative. *Vision Plan for a Safe and Healthy Watts*. Prepared by Advancement Project. March 2015: <http://publichealth.lacounty.gov/place/docs/Advancement%20Project%20Watts%20Vision%20Plan%20FINAL%20March%202015.pdf>. The following businesses and schools operate as a Safe Haven in the community: Harris Grocery Market, David Starr Jordan High School, M & T Donuts, Randy's Market, Shields for Families at the Jordan Downs Community Center, Watts Coffee House, Watts Century Latino Organization, and Weigand Elementary School.

⁷ City of Los Angeles Department of Transportation. *Pedestrian Routes for Florence Griffith Joyner Elementary School*. September 2016. <https://achieve.lausd.net/site/handlers/filedownload.ashx?moduleinstanceid=26242&dataid=29393&FileName=GriffithJoynerES.pdf>

⁸ City of Los Angeles Department of Transportation. *Pedestrian Routes for Markham Middle School*. September 2016. <https://achieve.lausd.net/site/handlers/filedownload.ashx?moduleinstanceid=26240&dataid=29102&FileName=MarkhamMS.pdf>

The following recommendations are related to Environmental Design, which promotes pedestrian and bicycle safety through improved environments.

Green Alleys

- The Project Team recommends that workshop participants collaborate with the City of Los Angeles Department of Public Works and the Trust for Public Land to **explore the opportunity to fund and develop the alley between 97th Street, 102nd Street, Grape Street, and Anzac Avenue into a green alley**. Green alleys are repurposed to be open, safe, and green community spaces. Numerous workshop participants identified this alley as one that community members avoid due to uneven, cracked, and missing pavement conditions; dumped furniture; and lack of lighting. Transforming this alleyway into a green alley would create a safe space with a direct walking and bicycling route to Joyner Elementary School.

Trash Abatement

- The Project Team recommends that workshop participants collaborate with the City of Los Angeles Office of Community Beautification, the City of Los Angeles Department of Sanitation, Joyner Elementary School, and Markham Middle School to **educate community members through pamphlets about the procedure to have furniture, appliances and bulky items removed** by the City of Los Angeles Department of Sanitation. Workshop participants observed sidewalks blocked by bulky, abandoned furniture and appliances throughout the neighborhood, which impedes safe travel on and access to sidewalks. Educating residents on how to have these items removed is imperative to reducing the amount of bulky item waste on local streets and improving ADA accessibility. The Project Team also recommends the Planning Committee, and workshop participants conduct biweekly or monthly community clean-ups around their neighborhood.

Improve and Activate Grape Street Pocket Park

- The Project Team recommends the City of Los Angeles Department of Recreation and Parks, with input from Watts community members, **improve Grape Street Pocket Park**. This local asset is a small, gated but unlocked park in a lot surrounded by neighborhood homes on Grape Street. During the walking assessment, almost all participants shared they were unaware of this park's existence. Having more amenities at the park can help attract more residents to visit and use the park, which can create "safety in numbers" and help alleviate personal safety concerns for people walking and biking in the neighborhood.

Appendix A: Community Plans & Policies Review

The following reports were reviewed:

- [Los Angeles Vision Zero-Safety Improvements Map](#)
- [Los Angeles Long Range Transportation Plan 2009](#)
- [LADOT Great Streets for Los Angeles](#)
- [The City of Los Angeles High Injury Network](#)
- [Metro Safe Routes to School](#)
- [LAUSD Safe Routes to School Pedestrian Routes](#)
- [Markham Middle School Pedestrian Route Map](#)
- [Vision Plan for a Safe and Healthy Watts, 2015](#)
- [Watts Jordan Downs Village Awarded \\$35 Mil from California Strategic Growth Council, 2018](#)

Appendix B: Resources

List/Links of Resources

Bicycle Facility Improvements

- [NACTO Urban Bikeway Design Guide](#)

Conducting Bicycle and Pedestrian Counts

- [Conducting Bicycle and Pedestrian Counts A Manual for Jurisdictions in Los Angeles County and Beyond](#)
- [Bike Count Data Clearing House](#)

City Plants Program

- [Street Trees Program](#)

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

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

Appendix C: Data Analysis

Pedestrian and Bicycle Collision Data Analysis

- Watts CPBST Workshop Data Factsheet
- Watts CPBST Site Visit Data Presentation
- Watts CPBST Site Visit Data Follow-Up

Watts Pedestrian & Bicycle Data Analyses

Community Pedestrian and Bicycle Safety Training Workshop (CPBST)

April 29, 2019

In California, more than one in four people who die 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 is based on Watts as defined by the members of the workshop’s planning committee.

PEDESTRIANS

How are pedestrian collisions changing over time?
 What could have caused an increase or decrease in collisions?



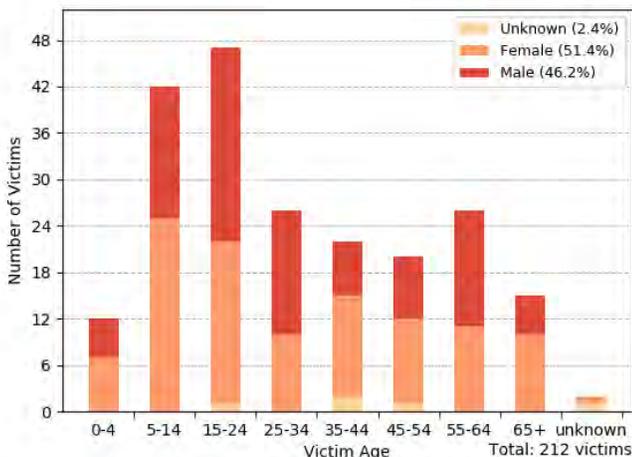
377 people were injured in **357** pedestrian collisions in the last 10 years (2008-2017).

The number of pedestrian collisions appear to be **increasing**, 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.

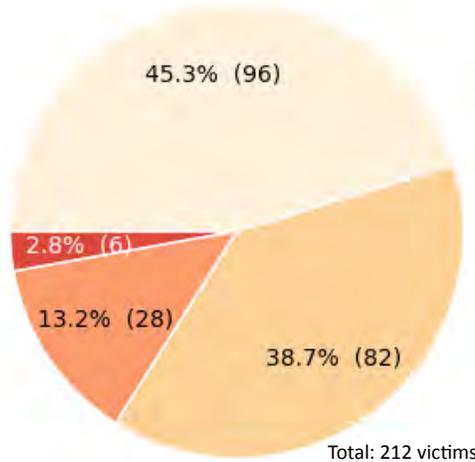
The following are based on pedestrian collision data for the years 2013-2017:

Who were the victims in these collisions?



37.7% of victims were 18 or younger
46.2% of victims were male
12.7% of victims were 60 or older

How serious were victims’ injuries?

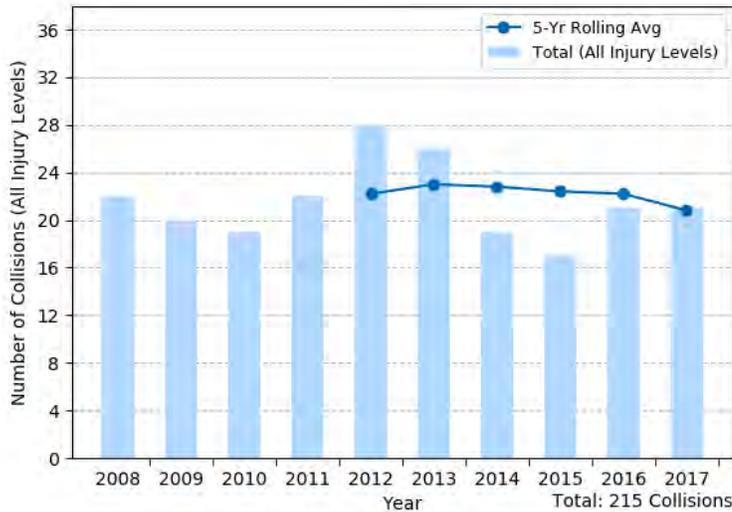


16% fatalities or suspected serious injuries

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.

BICYCLISTS

How are bicycle collisions changing over time?
 What could have caused an increase or decrease in collisions?



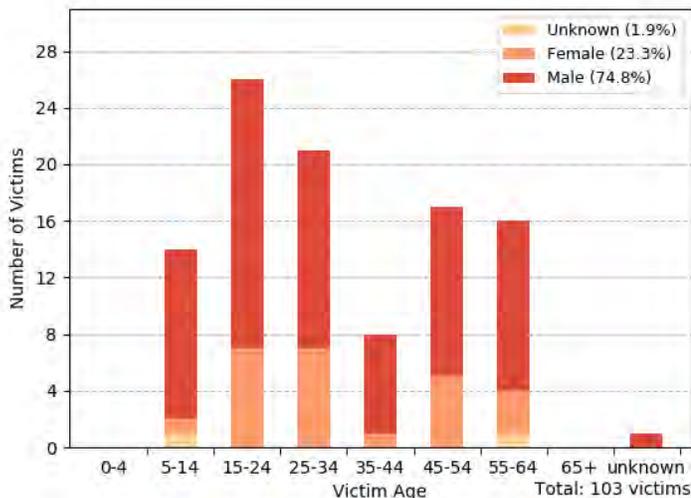
212 people were injured in **215** bicycle collisions in the last 10 years (2008-2017).

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:

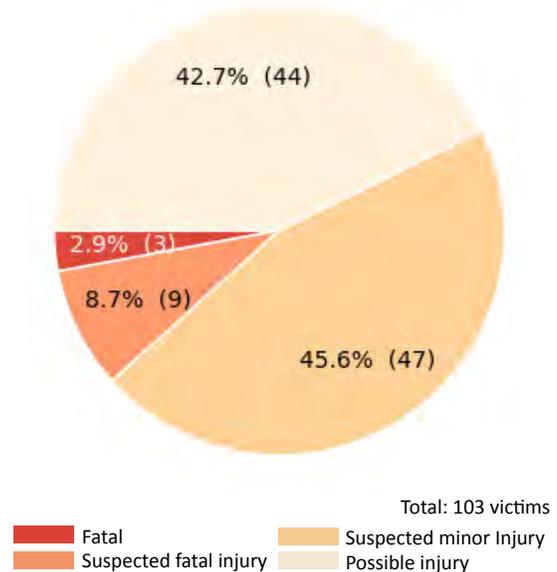
Who were the victims in these collisions?



38.8% of victims were 24 or younger

74.8% of victims were male

How severe were the victims' injuries?

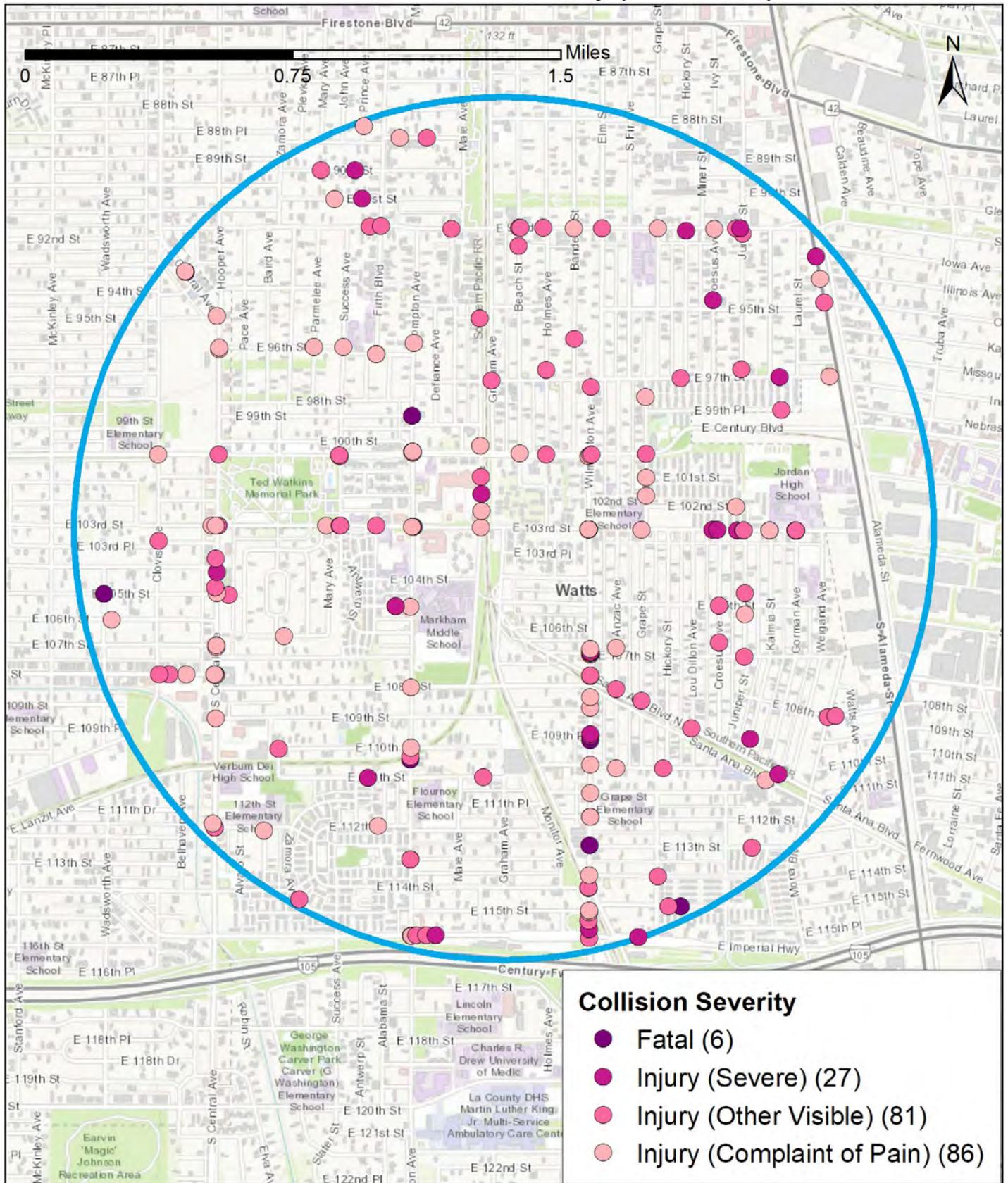


11.6% fatalities or suspected serious injuries

- While these numbers do not tell the whole story, do they resonate with 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?

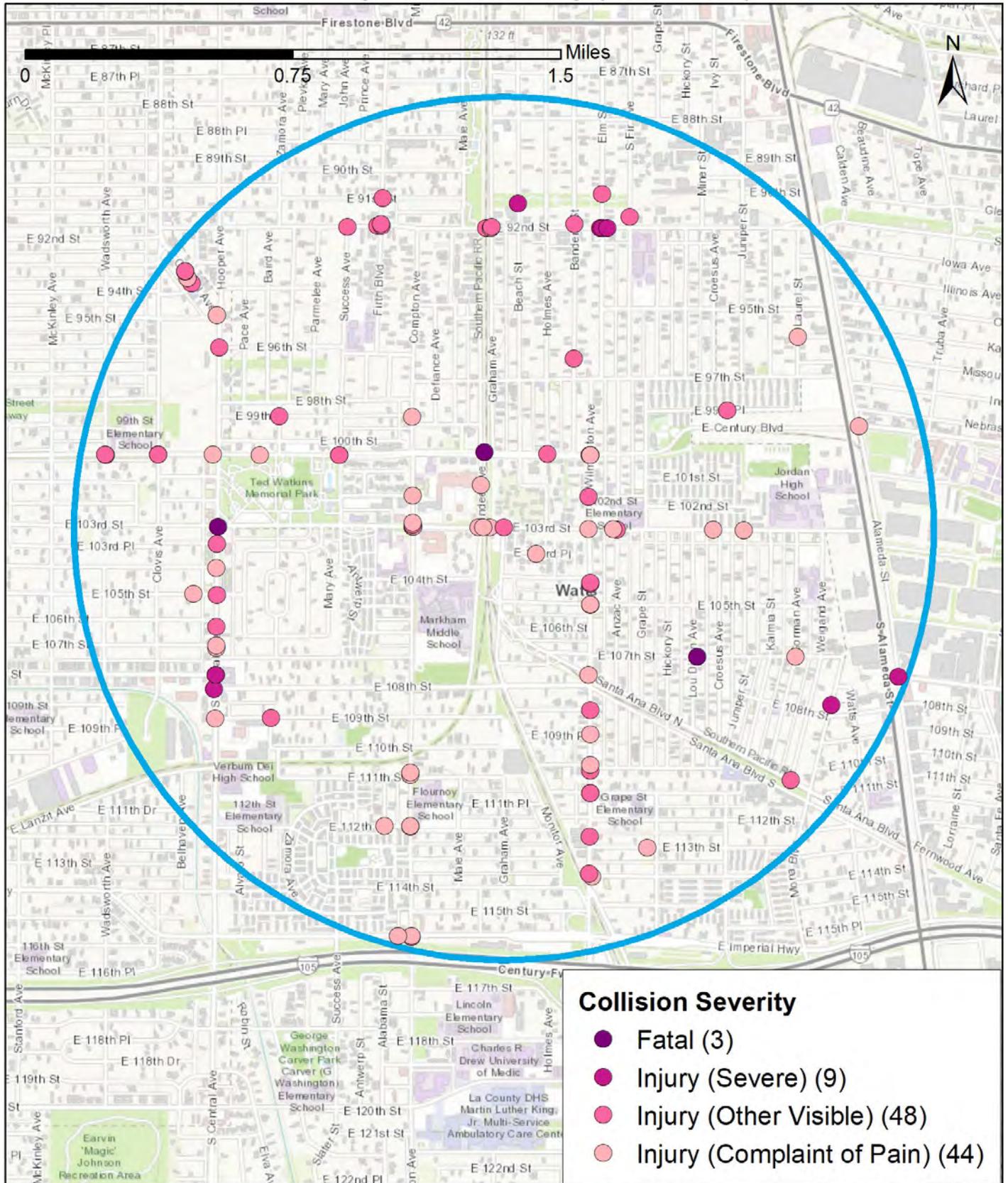
To learn more about collision data in your community, visit the free tools available through the Transportation Injury Mapping System (tims.berkeley.edu). For additional assistance, please email us at safetrec@berkeley.edu.

Watts Pedestrian Collision Map (2013 - 2017)



Data Source: Statewide Integrated Traffic Record System (SWITRS) 2013-2017; 2016 and 2017 data are provisional as of Dec. 2018 Date: 3/13/2019

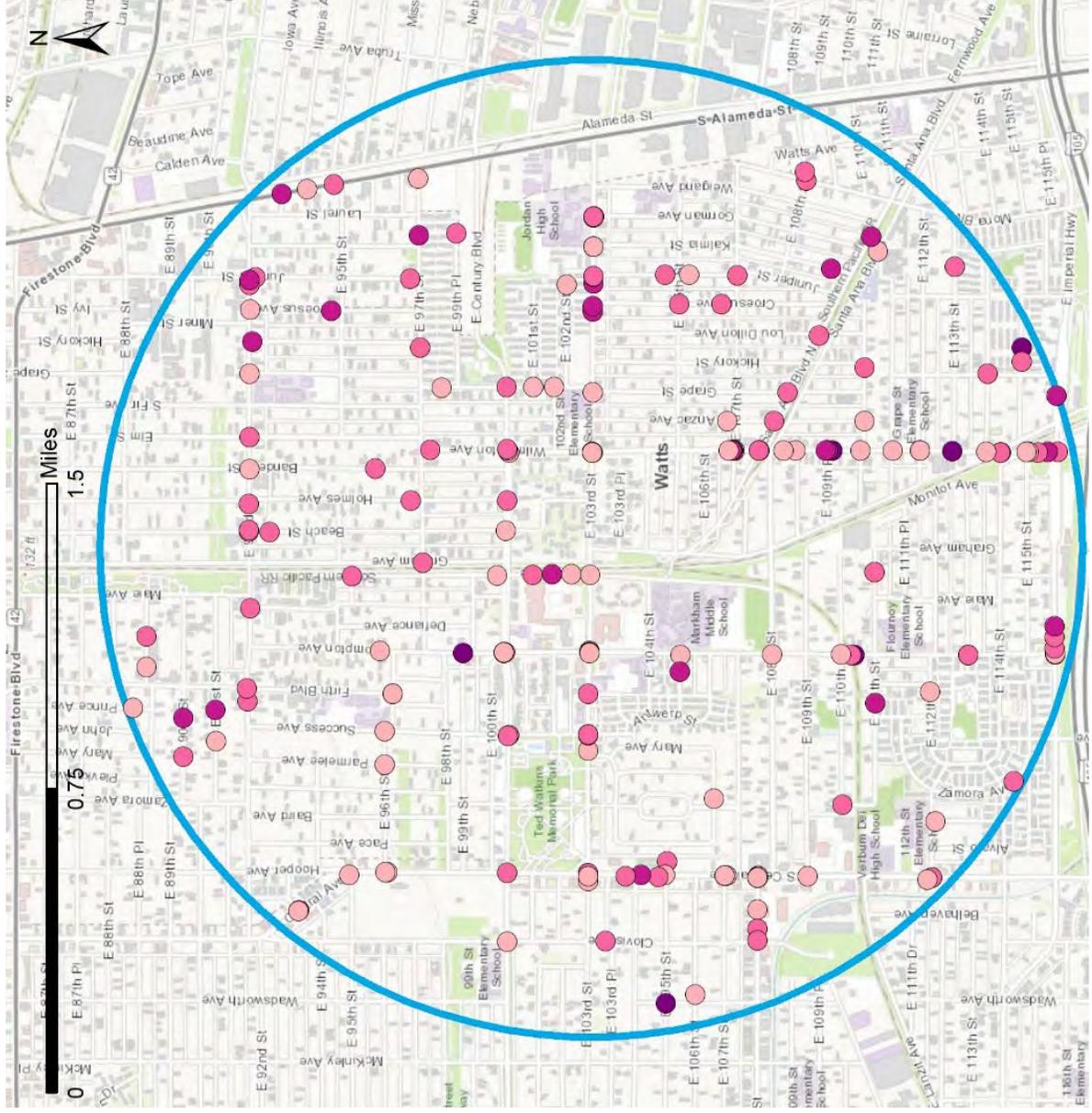
Watts Bicycle Collision Map (2013 - 2017)



Data Source: Statewide Integrated Traffic Record System (SWITRS) 2013-2017; 2016 and 2017 data are provisional as of Dec. 2018 Date: 3/13/2019

Pedestrian Injury Collisions (2013-2017)

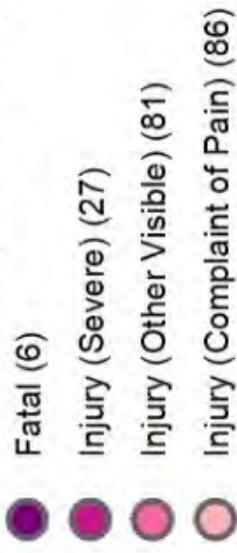
- Collision Severity**
- Fatal (6)
 - Injury (Severe) (27)
 - Injury (Other Visible) (81)
 - Injury (Complaint of Pain) (86)



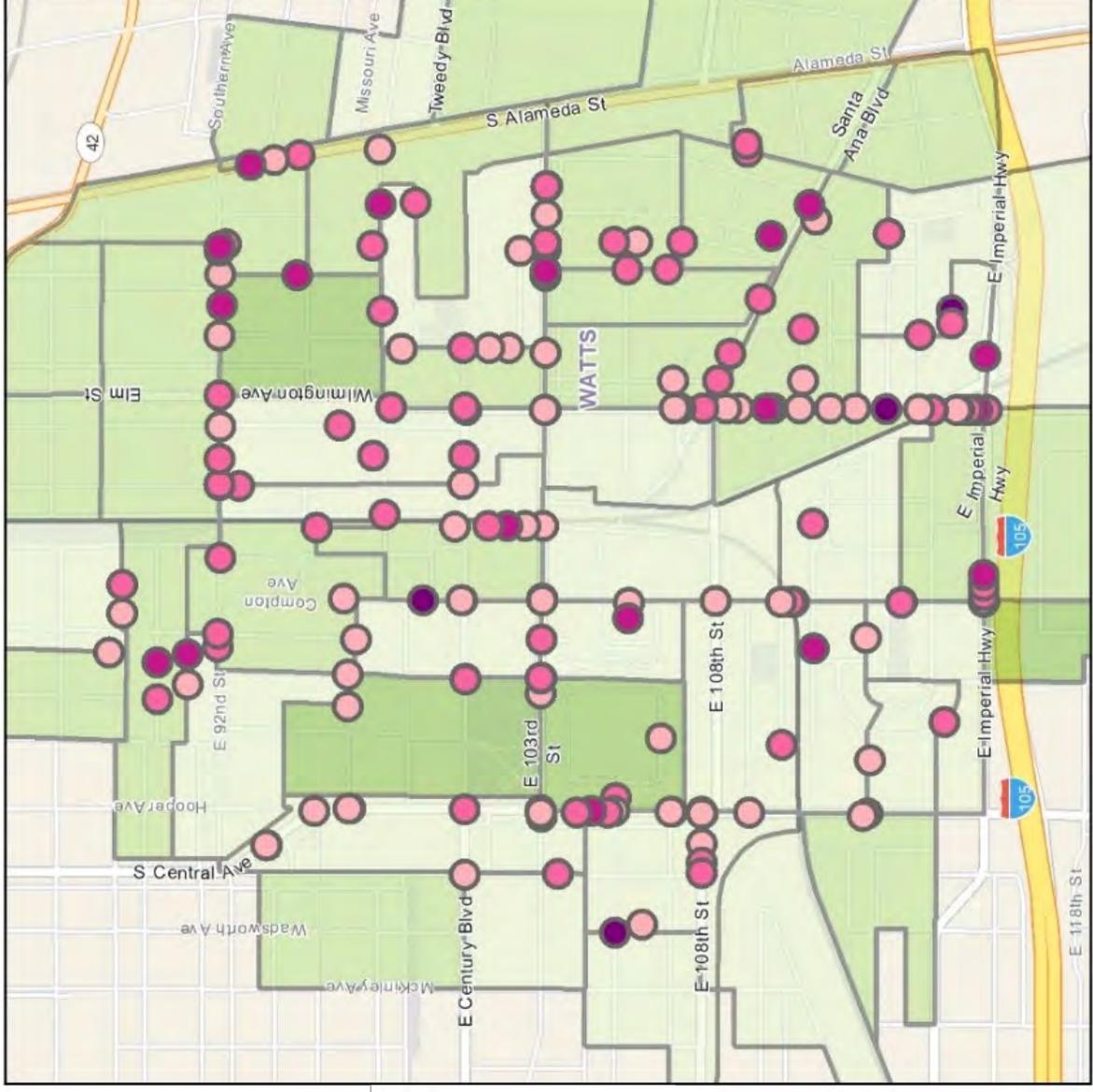
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian Injury Collisions (2013-2017)

Collision Severity (2013-2017)



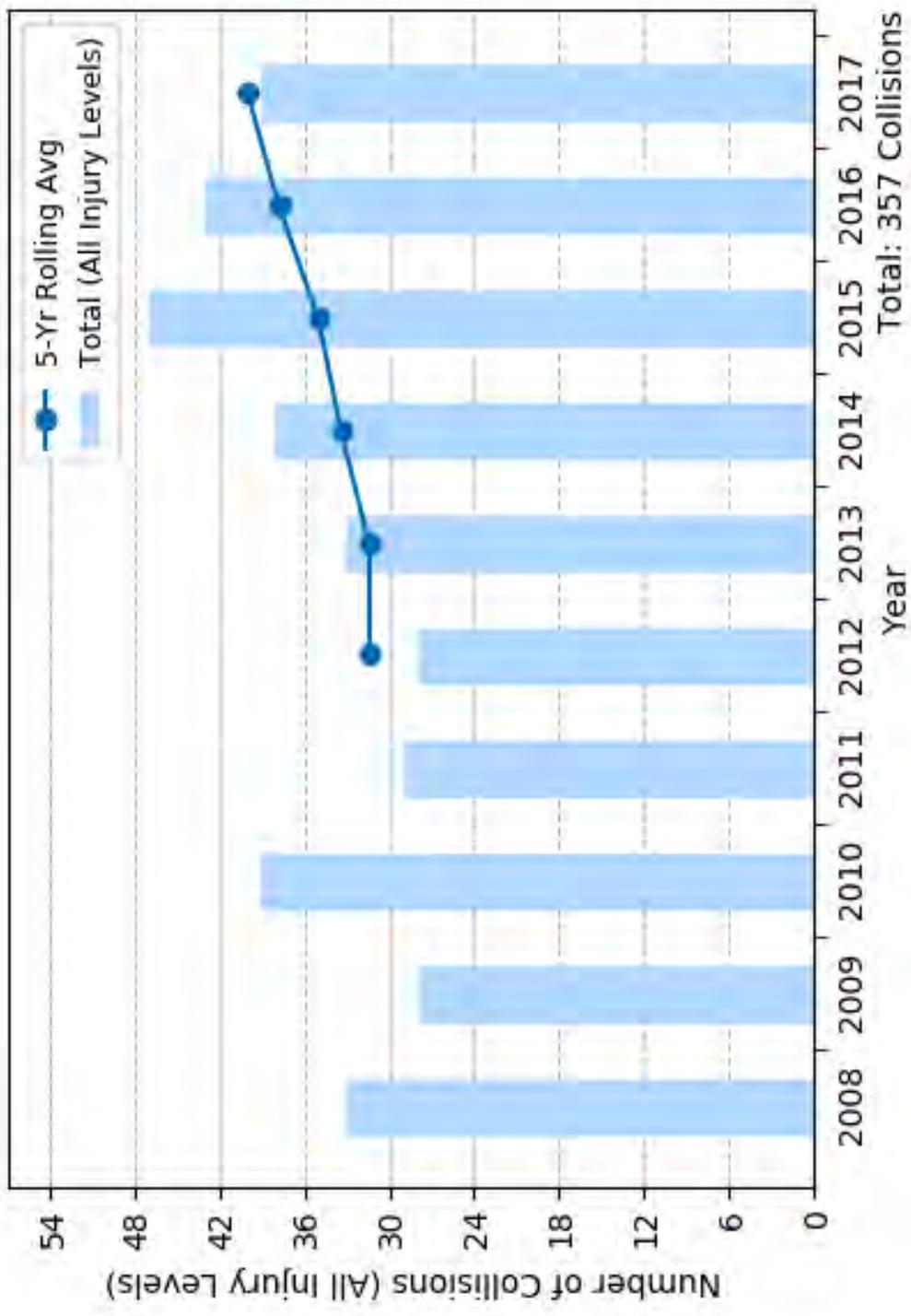
2017 Median Household Income



Data Source:

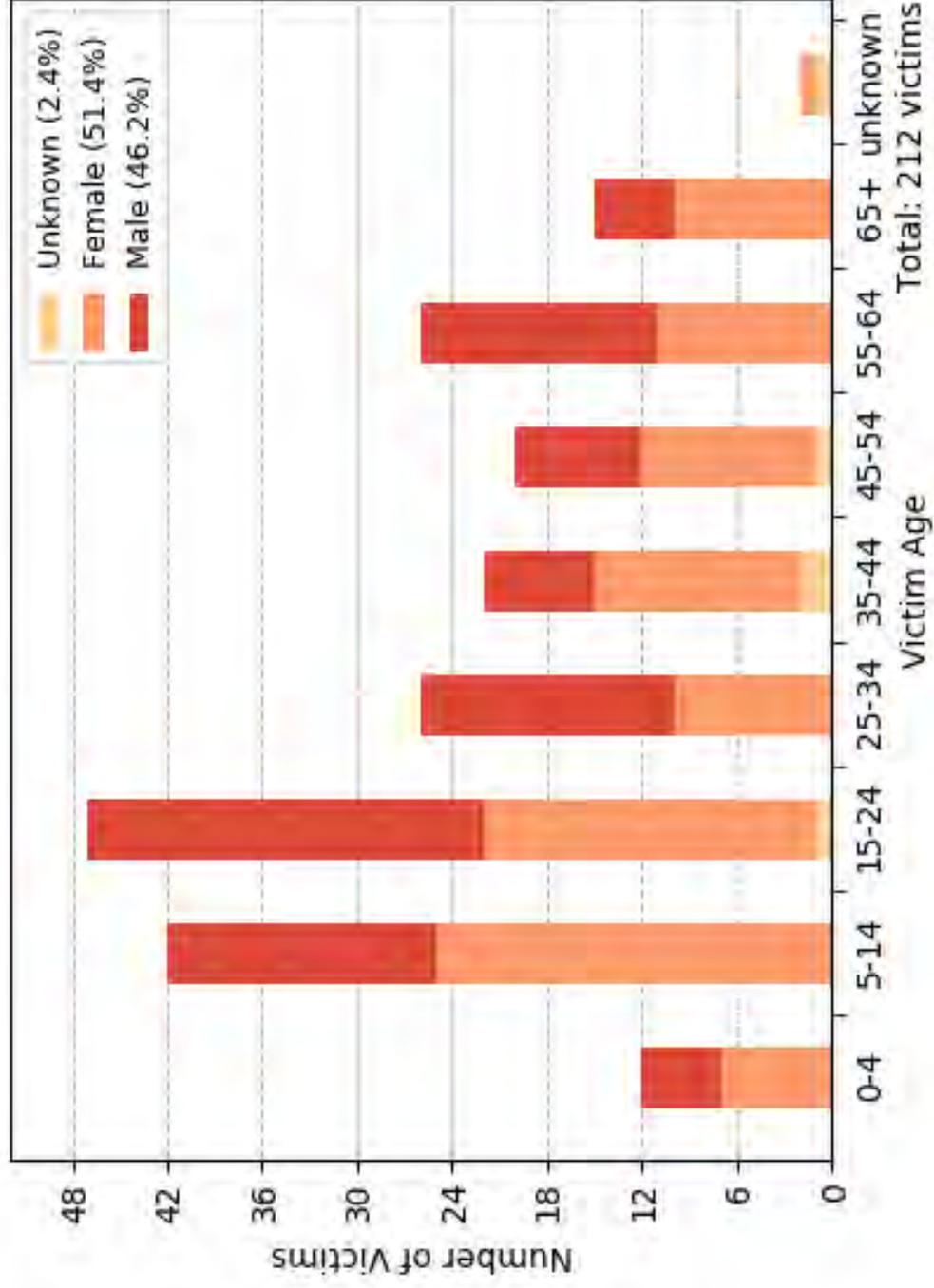
1. Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.
2. ESRI Business Analyst 2017.

Pedestrian Injury Collision Trend with 5-year rolling average



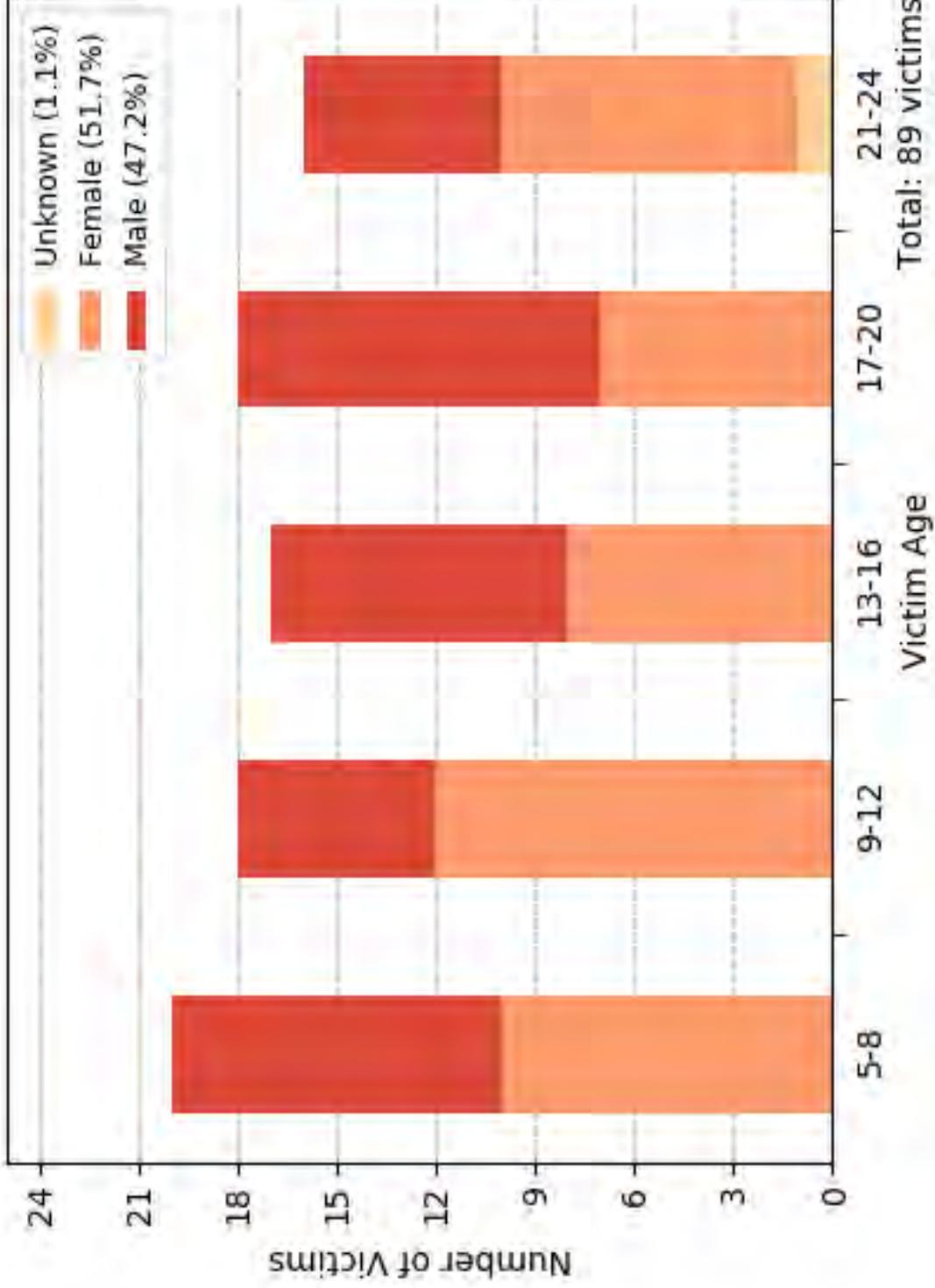
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2008-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian Victim Injury (2013-2017) by age and gender



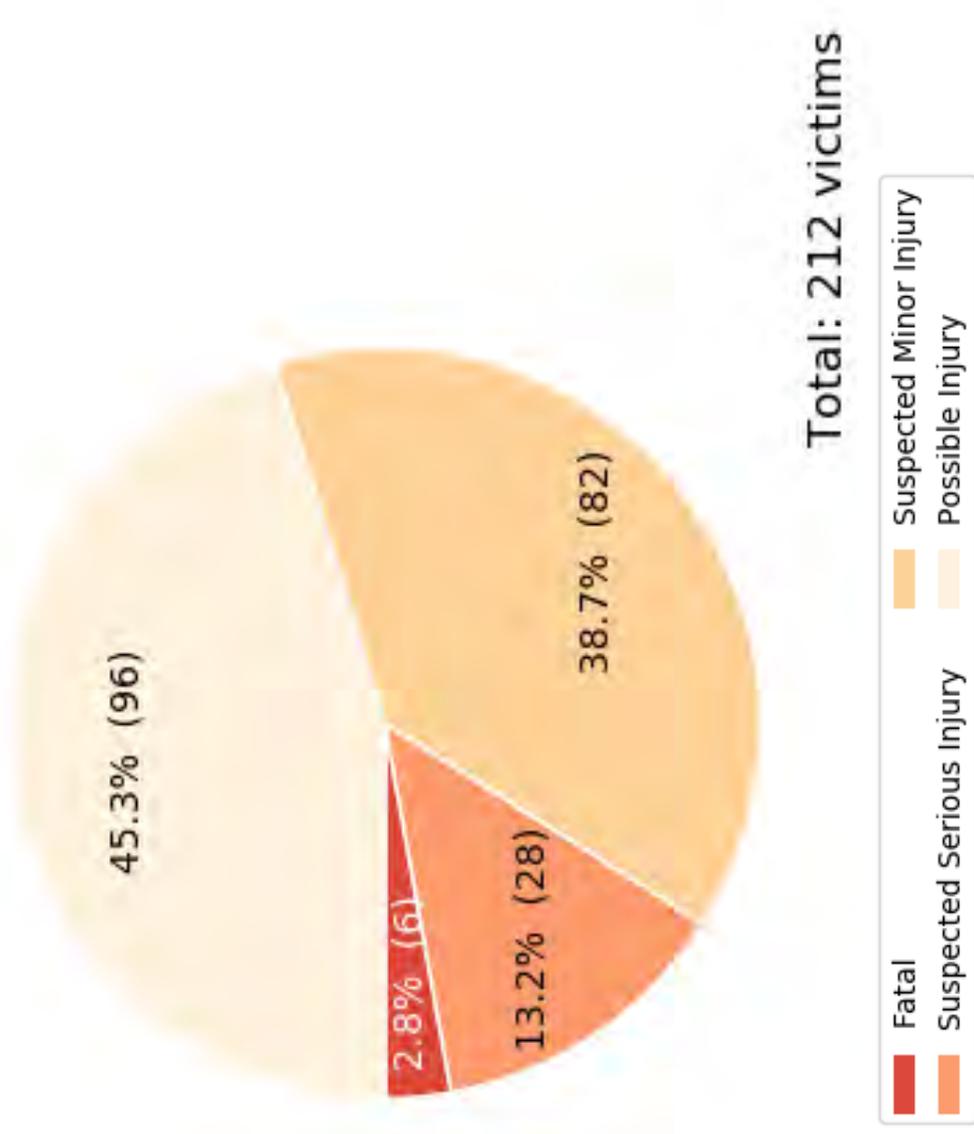
Data Source: Statewide Integrated Traffic Records System (SWITRS), 2008-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian Victim Injury (2013-2017) by age and gender for children & youth



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian Victim Injury (2013-2017) by injury severity



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian Collisions (2013-2017) by time of day and day of week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM -	3	7	2	4	6	4	1	27
06:00PM-08:59PM -	5	4	15	6	6	5	8	49
03:00PM-05:59PM -	10	4	9	3	7	6	2	41
Noon-02:59PM -	4	2	7	3	3	6	7	32
09:00AM-11:59AM -	3	2	2	2	3	3	0	15
06:00AM-08:59AM -	4	4	3	8	7	1	0	27
03:00AM-05:59AM -	0	0	3	1	0	2	0	6
Midnight-02:59AM -	0	0	0	2	0	0	1	3
Total	29	23	41	29	32	27	19	200

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian Collisions (2013-2017) by type of violation

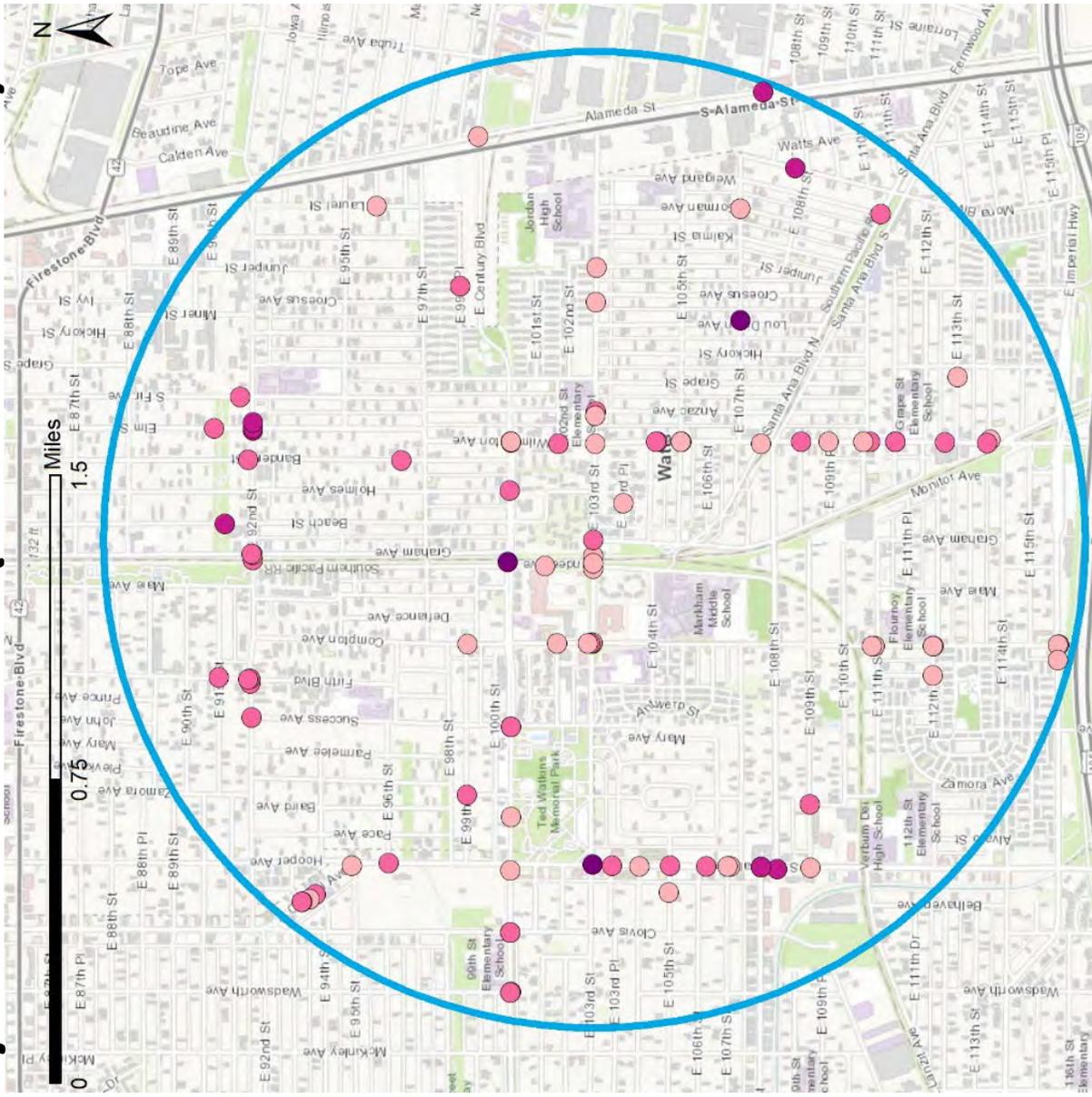
Total: 200 Collisions

CVC No.	Description	Number of Collisions
21950	Driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk	63 (31.5%)
21954	Pedestrian failure to yield right-of-way to vehicles when crossing outside of a marked or unmarked crosswalk	48 (24.0%)
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	20 (10.0%)
21956	Pedestrian failure to walk close to the edge of the roadway when there is no sidewalk present / Pedestrian failure to walk on the left-hand edge of the roadway when outside of a business or resident district, unless crossing is not possible	15 (7.5%)
22106	Unsafe starting or backing of a vehicle on a highway	7 (3.5%)
21955	Pedestrian failure to cross at crosswalks between adjacent traffic signal controlled intersections	7 (3.5%)
22450	Driver failure to stop at a limit line or crosswalk at a stop sign / (ND): Driver failure to stop for a stop sign before a limit line; otherwise, a crosswalk or intersection entrance Driver failure to stop at limit line before railroad; or, before entering	4 (2.0%)
22107	Unsafe turning or moving right or left on a roadway Turning without signaling	4 (2.0%)
21952	Driver failure to yield right-of-way to pedestrians on sidewalks	3 (1.5%)
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	2 (1.0%)
22451	Failure to stop at least 15 feet before a railroad track and wait to proceed safely if a train is approaching or a gate or signal prohibits entry	2 (1.0%)
21953	Pedestrian failure to yield to vehicles when crossing a roadway without using a pedestrian tunnel or overhead pedestrian crossing when one exists	2 (1.0%)

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Bicycle Injury Collisions (2013-2017)

- Collision Severity**
- Fatal (3)
 - Injury (Severe) (9)
 - Injury (Other Visible) (48)
 - Injury (Complaint of Pain) (44)



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

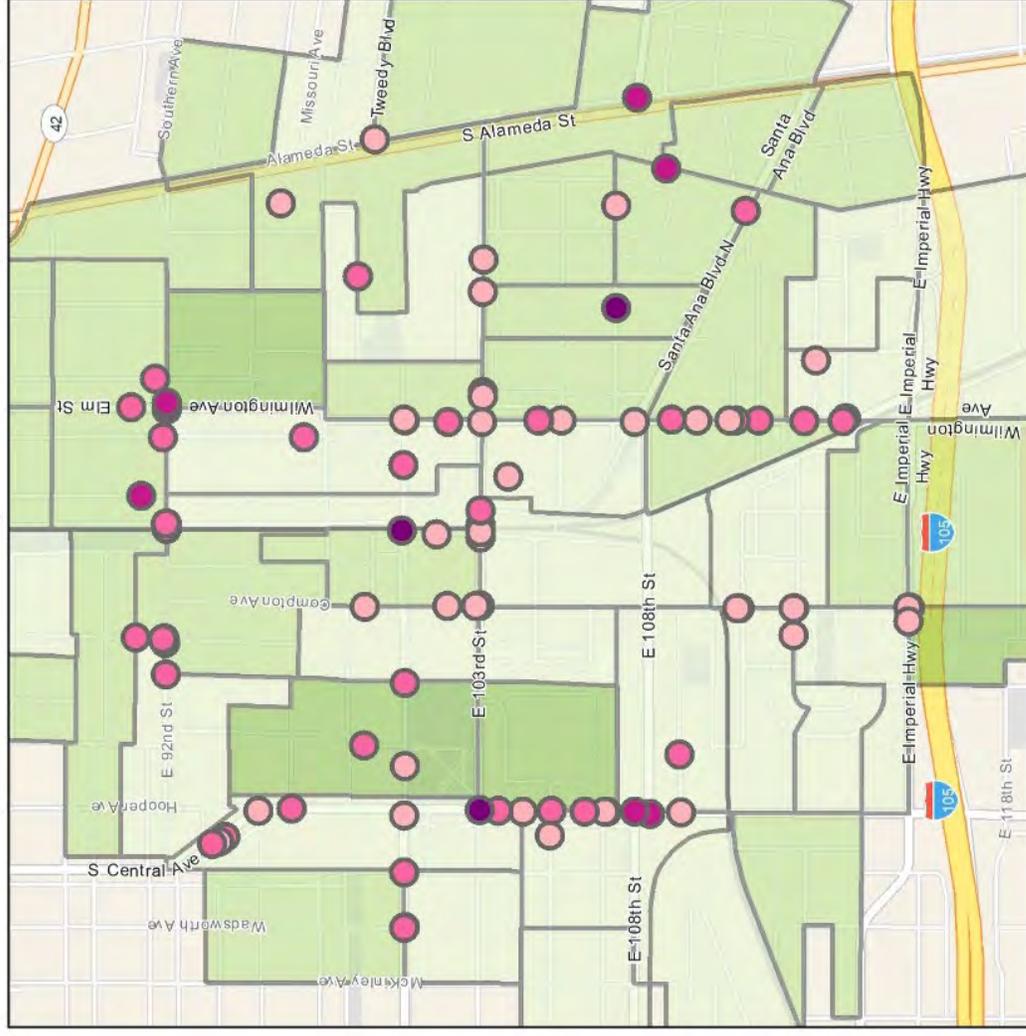
Bicycle Injury Collisions (2013-2017)

Collision Severity (2013-2017)

- Fatal (3)
- Injury (Severe) (9)
- Injury (Other Visible) (48)
- Injury (Complaint of Pain) (44)

2017 Median Household Income

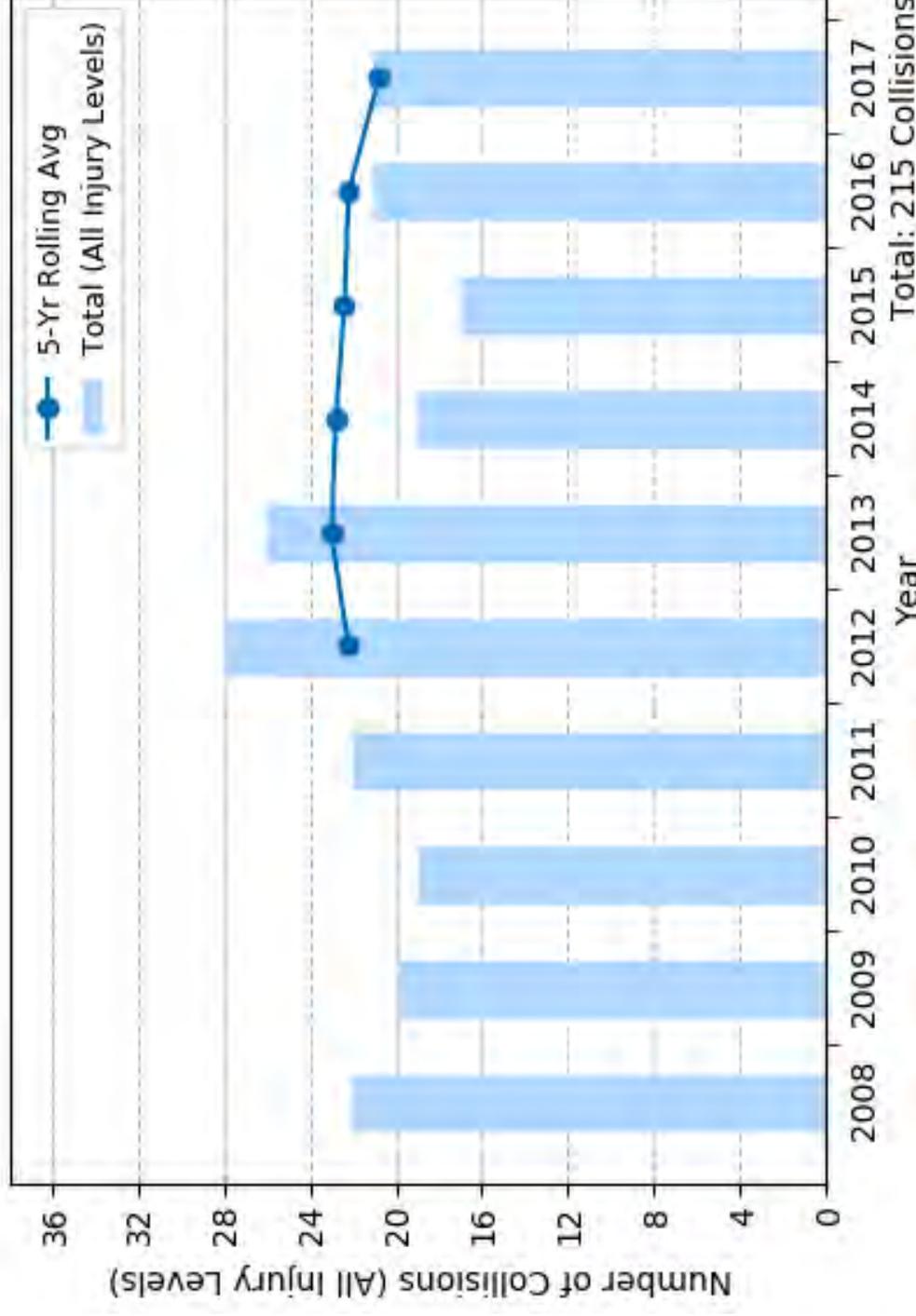
- < 35K
- 35K - 50K
- 50K - 75K



Data Source:

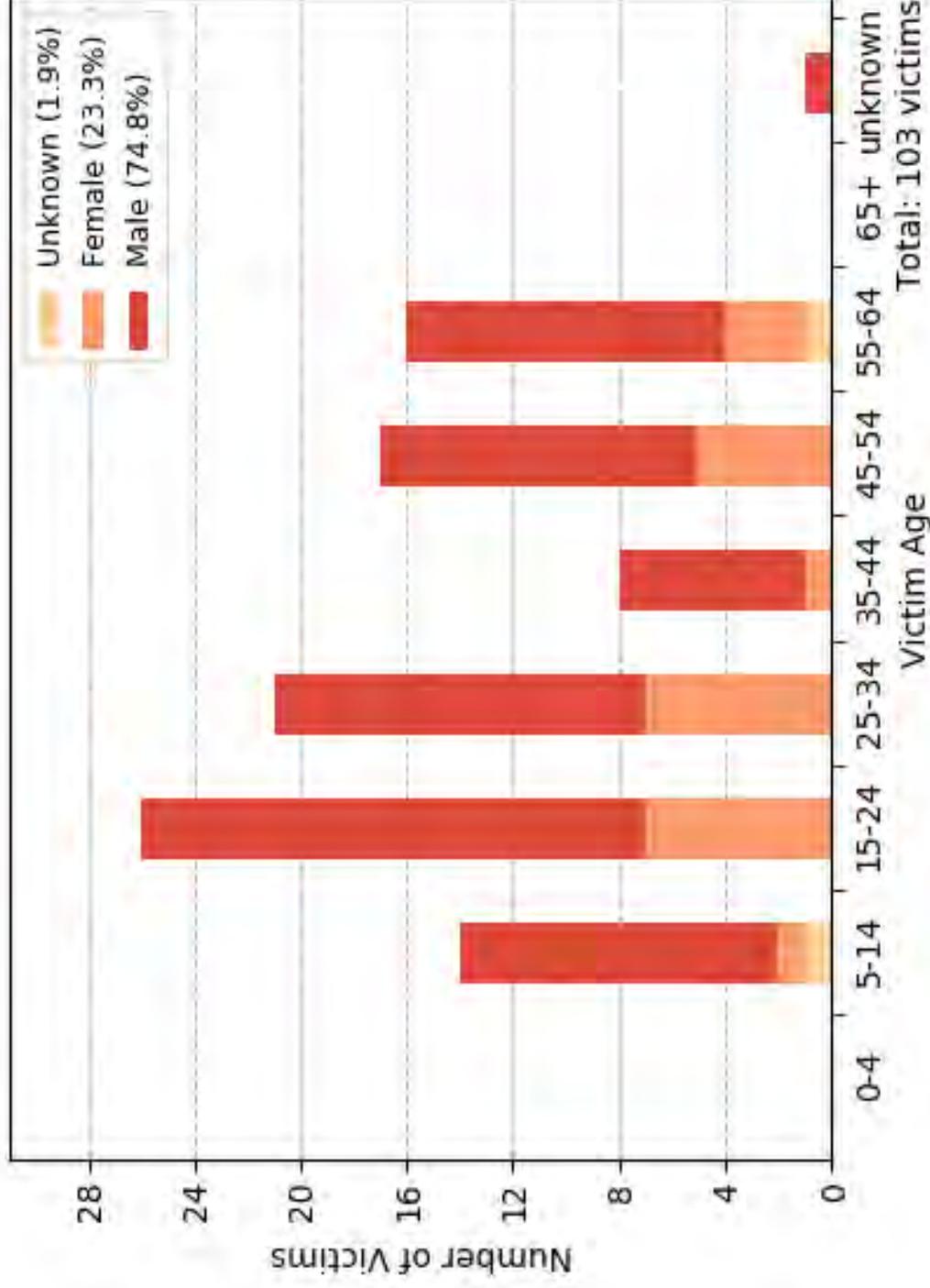
1. Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Bicycle Injury Collision 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 December 2018.

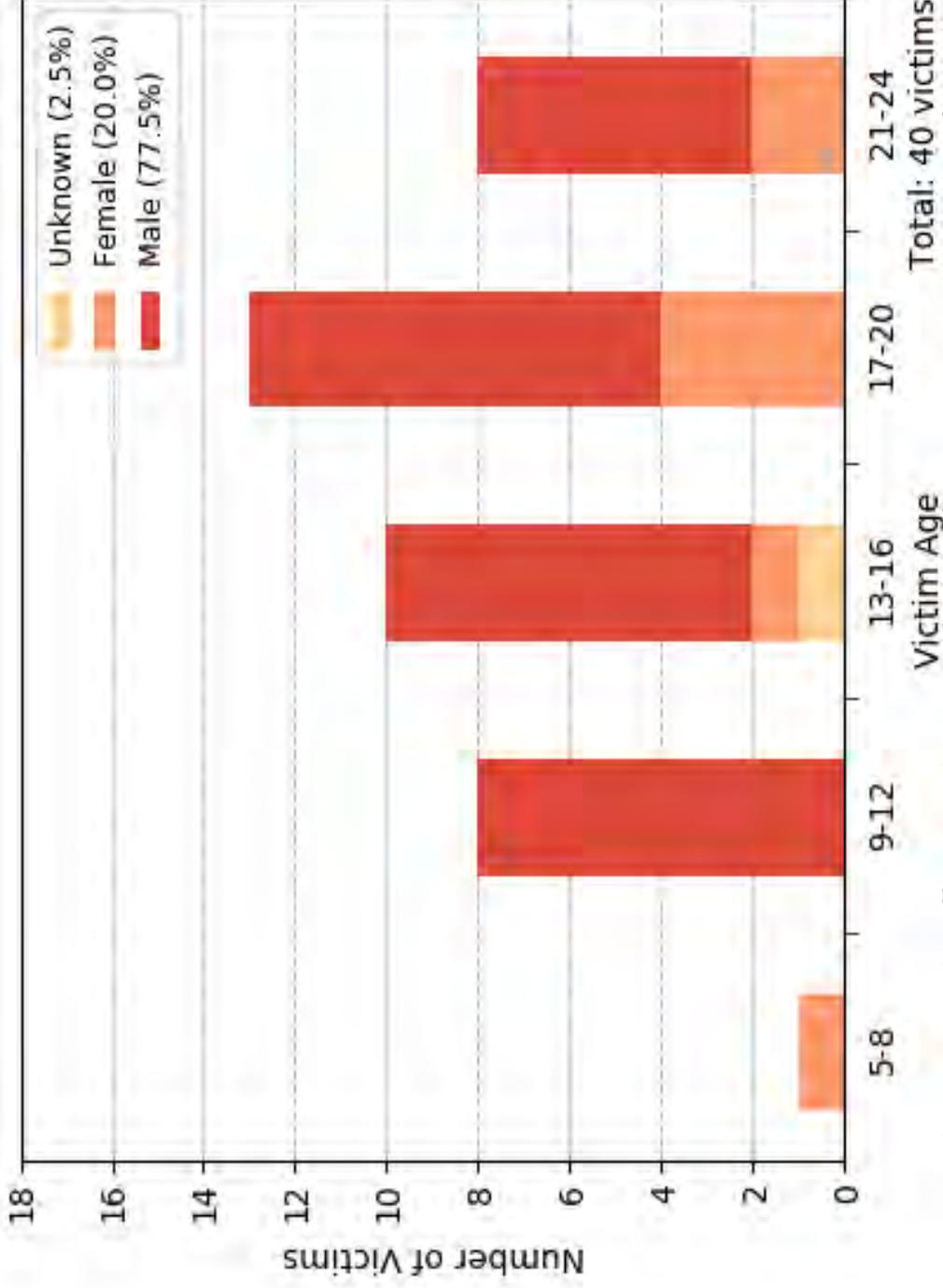
Bicycle Victim Injury (2013-2017) by age and gender



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

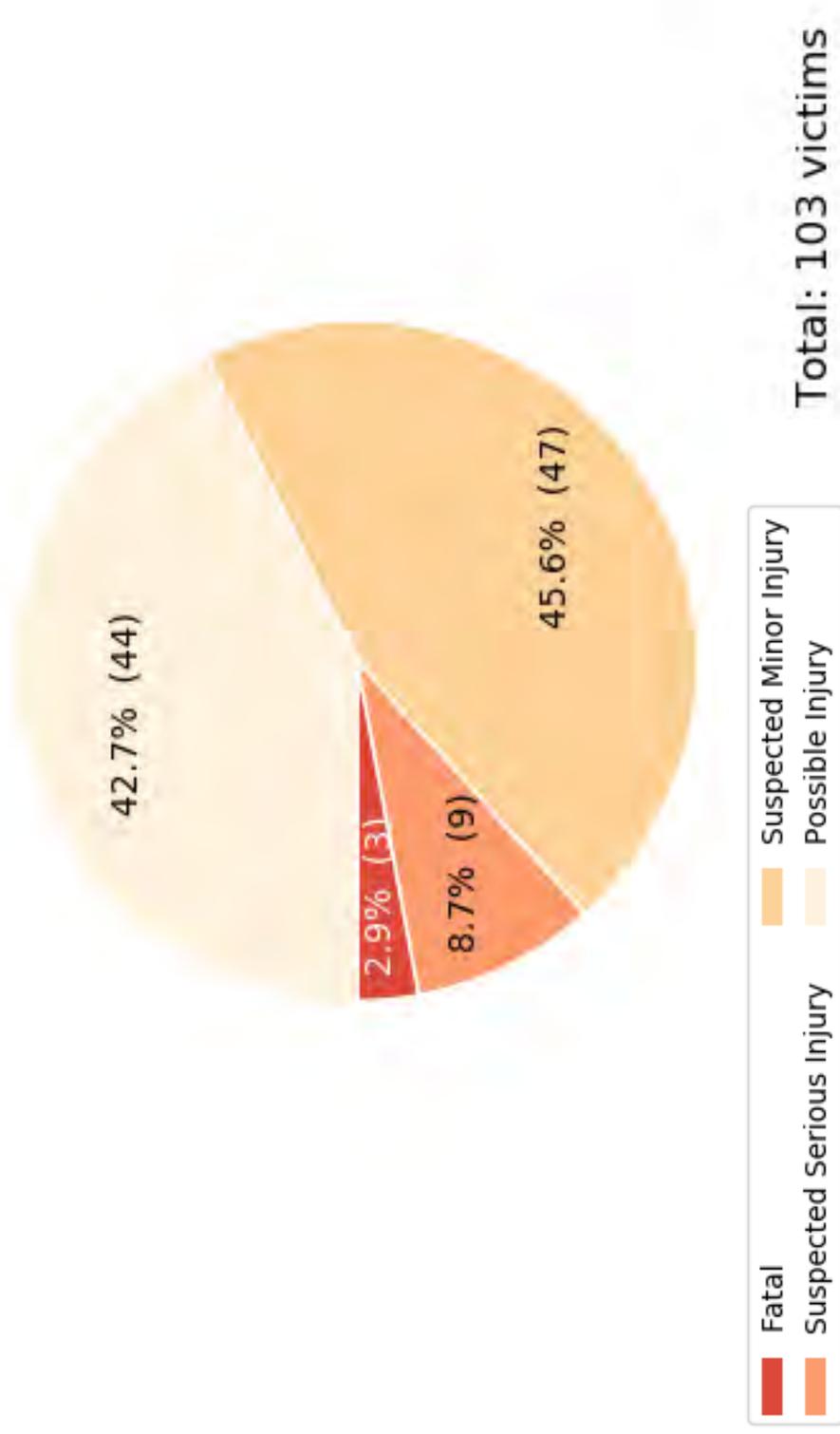
Bicycle Victim Injury (2013-2017)

by age and gender for children & youth



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Bicycle Victim Injury (2013-2017) by injury severity



Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Bicycle Collisions (2013-2017) by time of day and day of week

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
09:00PM-11:59PM -	1	3	1	2	0	2	1	10
06:00PM-08:59PM -	3	2	5	1	1	6	3	21
03:00PM-05:59PM -	3	3	5	3	3	4	4	25
Noon-02:59PM -	1	4	1	3	2	3	2	16
09:00AM-11:59AM -	2	2	2	2	4	3	5	20
06:00AM-08:59AM -	1	1	4	0	0	1	1	8
03:00AM-05:59AM -	1	1	0	0	1	0	0	3
Midnight-02:59AM -	0	0	0	0	0	0	1	1
Total	12	16	18	11	11	19	17	104

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Bicycle Collisions (2013-2017)

by type of violation

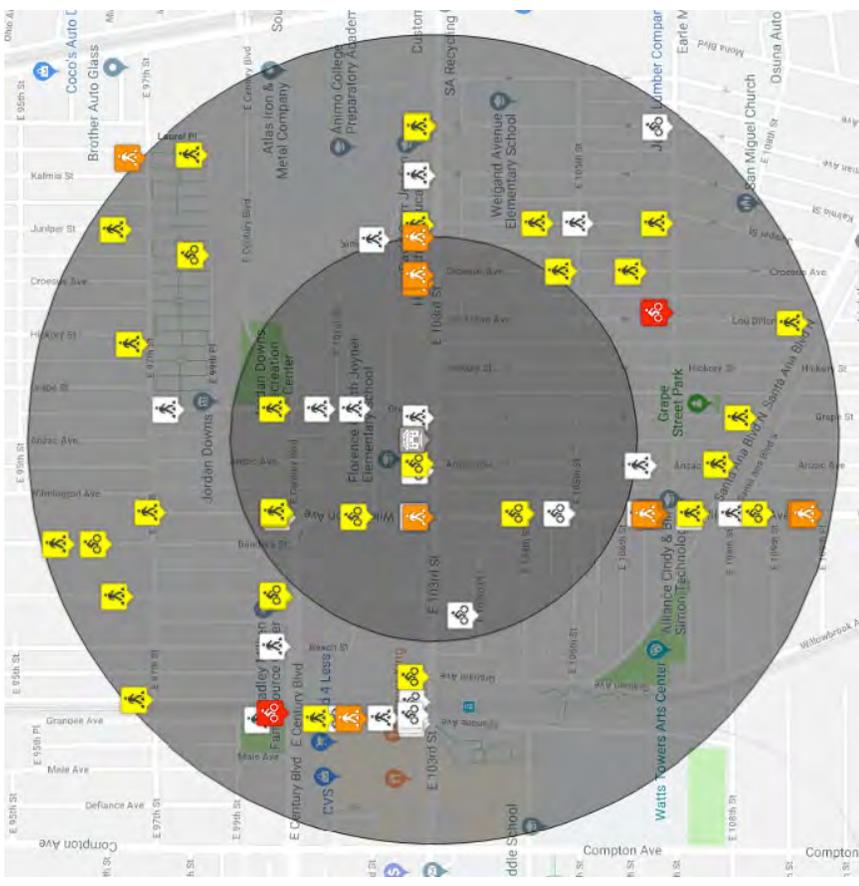
Total: 104 Collisions

CVC No.	Description	Number of Collisions
21650	Failure to drive/ride on right half of the roadway (with some exceptions)	26 (25.0%)
21804	Driver failure to yield right-of-way when entering/crossing a highway	18 (17.3%)
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	9 (8.7%)
22450	Driver failure to stop at a limit line or crosswalk at a stop sign / (ND.): Driver failure to stop for a stop sign before a limit line; otherwise, a crosswalk or intersection entrance Driver failure to stop at limit line before railroad; or, before entering	8 (7.7%)
21801	Driver failure to yield right-of-way when making a left turn or U-turn	7 (6.7%)
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	6 (5.8%)
22107	Unsafe turning or moving right or left on a roadway Turning without signaling	6 (5.8%)
21802	Failure to stop or yield right-of-way at a stop sign	5 (4.8%)
21202	Bicyclist failure to ride on right edge of roadway if riding below the normal speed of traffic	3 (2.9%)
22517	Opening the door of a vehicle on the side of moving traffic unsafely as to interfere with traffic or leaving the door open for a longer period of time than is necessary	2 (1.9%)
21658	Failure to drive vehicle in single lane	2 (1.9%)
21950	Driver failure to yield right-of-way to pedestrians at a marked or unmarked crosswalk	2 (1.9%)

Data Source: Statewide Integrated Traffic Records System (SWITRS), 2013-2017. Collision data for 2016 and 2017 are provisional as of December 2018.

Pedestrian and Bicycle Collisions (2013-2017)

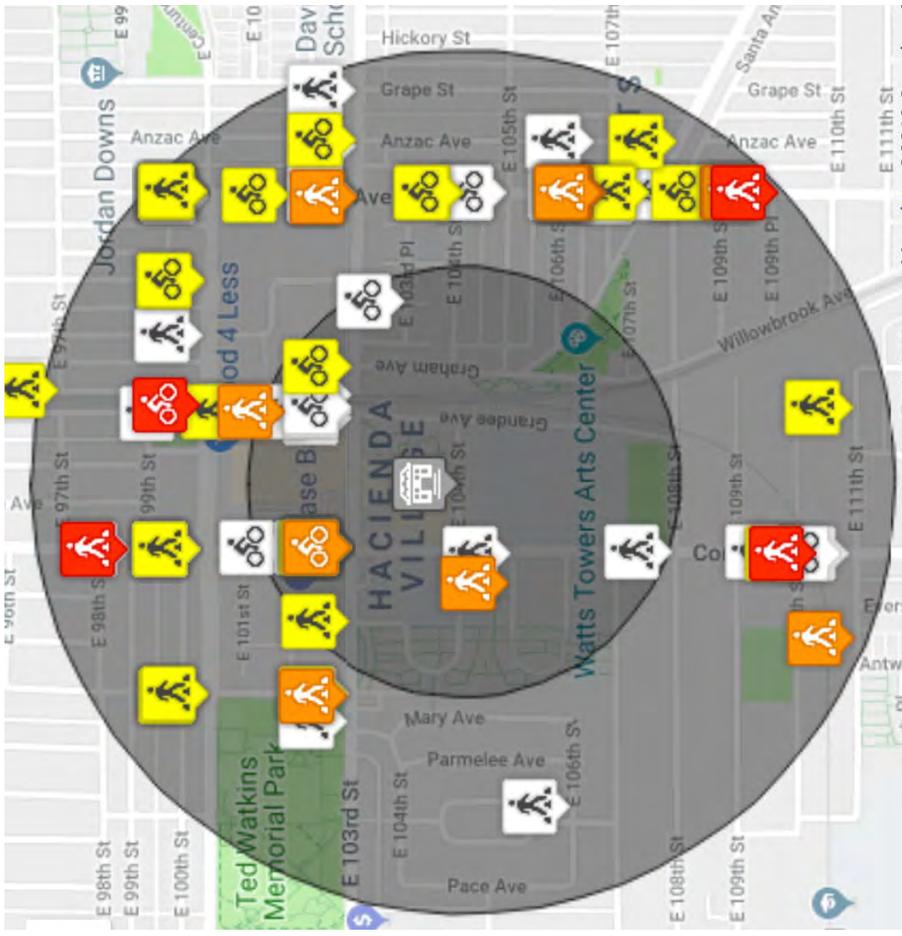
Florence Griffith Joyner Elementary
 163 East 103rd Street, Los Angeles, CA
 Los Angeles County
 CDS: 19647336018527



Radius	Fatal	Severe Injury	Visible Injury	Complaint of Pain	Pedestrian	Bicycle	Total
<¼ mi.	0	4	8	17	15	14	29
¼ - ½ mi.	2	7	29	25	48	15	63
Total	2	11	37	42	63	29	92

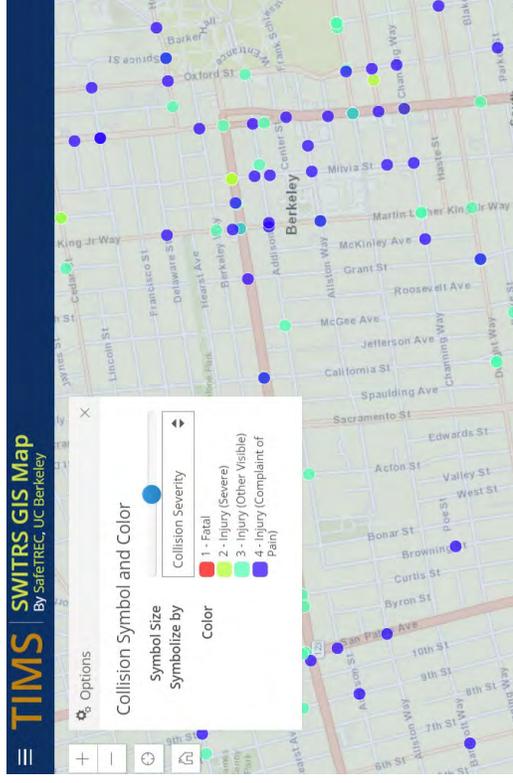
Pedestrian and Bicycle Collisions (2013-2017)

Edwin Markham Middle School
 1650 East 104th Street, Los Angeles, CA
 Los Angeles County
 CDS: 19647336061527



Radius	Fatal	Severe Injury	Visible Injury	Complaint of Pain	Pedestrian	Bicycle	Total
<¼ mi.	0	3	7	17	13	14	27
¼ - ½ mi.	4	8	24	35	49	22	71
Total	4	11	31	52	62	36	98

Additional Resources



Transportation Injury Mapping System (TIMS)

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

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

<https://tims.berkeley.edu>



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.

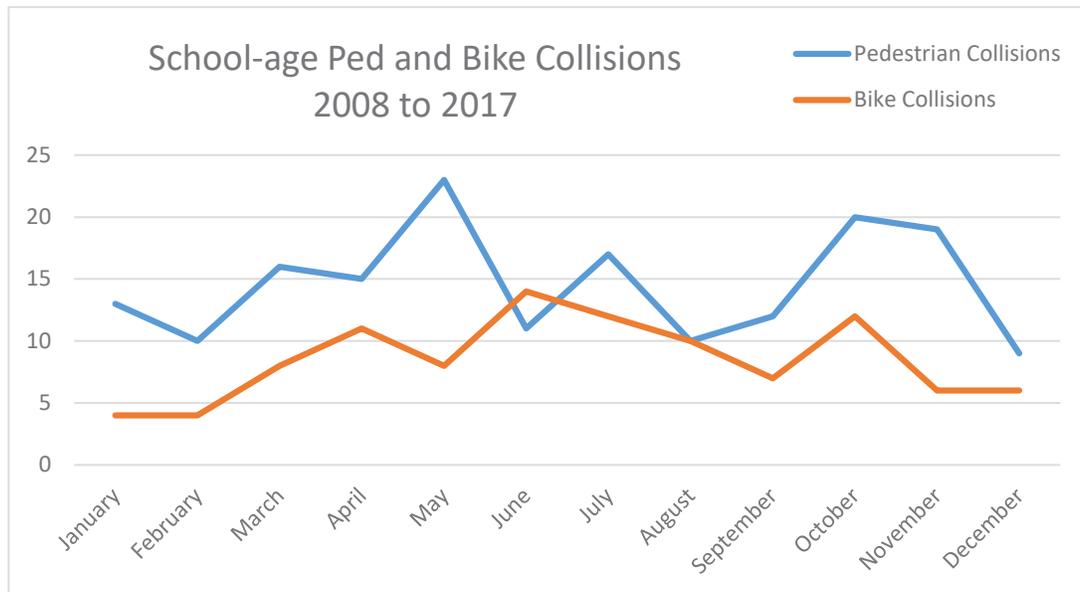
<https://streetstory.berkeley.edu>



Summary Page

This summary looks at collisions involving pedestrians and bicyclists with victims from ages 5 to 24, within a 1 mile radius of the intersection of 103rd and Graham (next to the Metro station) from 2008 to 2017.

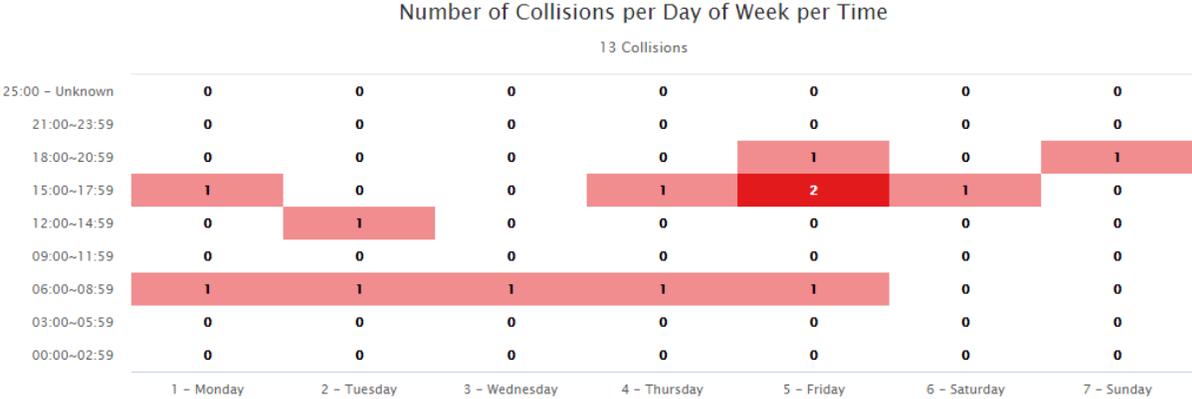
There were 175 collisions involving pedestrians and 102 collisions involving bicyclists in which at least one victim was age 5 to 24. These collisions are not evenly spread throughout the year. Pedestrian collisions are higher in the spring and fall, while bicycle collisions are higher in the summer.



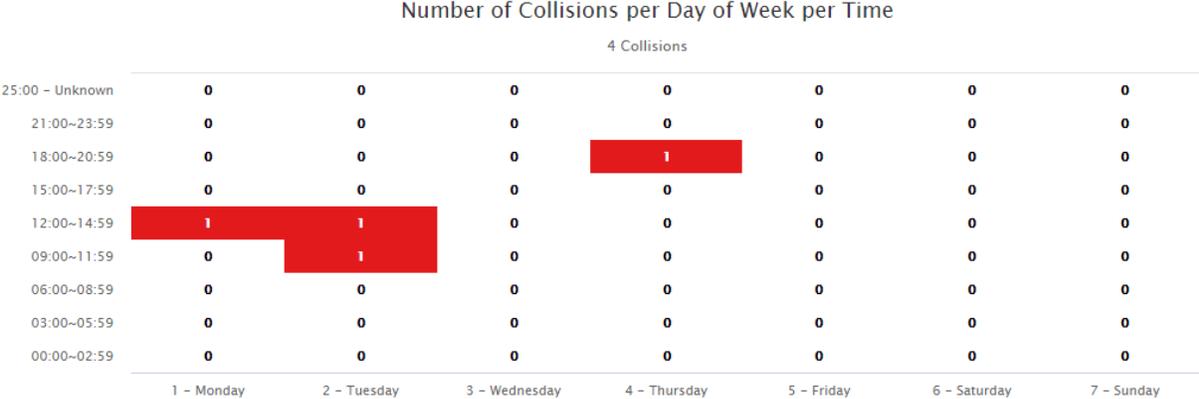
Turning to day-of-the-week patterns, about 80% of pedestrian collisions and about 70% of bike collisions occurred on weekdays. Pedestrian collisions were more concentrated on the weekdays in winter months and less concentrated during the summer and fall. Bike collisions generally followed the same pattern but with more variability due to the smaller numbers. Interestingly, August was an exception for both bikes and pedestrians; in that month, collisions were much more concentrated on weekdays than in either summer or fall.

It is difficult to draw strong conclusions about time-of-day collision patterns because the data is thinly spread across the year. There are perhaps fewer collisions in morning commute hours during the summer break (only one before noon on a weekday in June and four in July). Many collisions occur in the afternoon commute (6pm to 9pm) throughout the year, for pedestrians and cyclists.

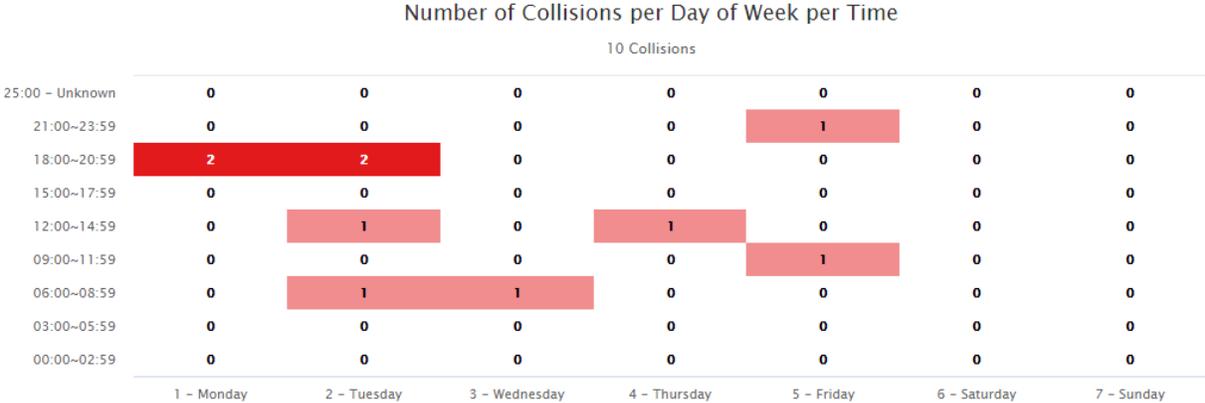
January Ped



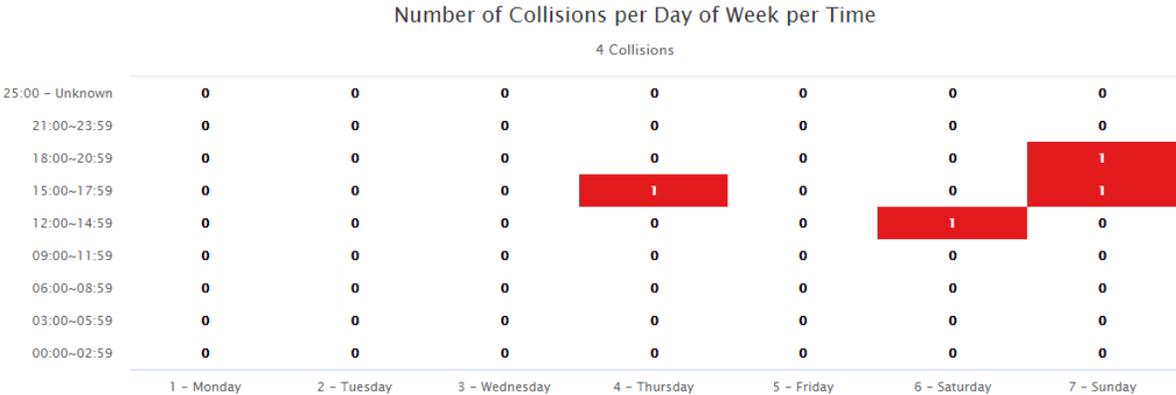
January Bike



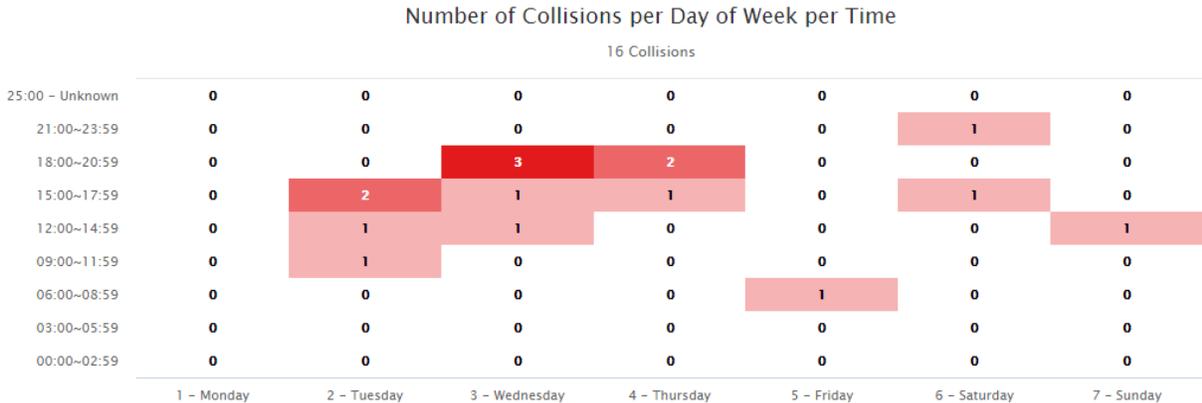
February Ped



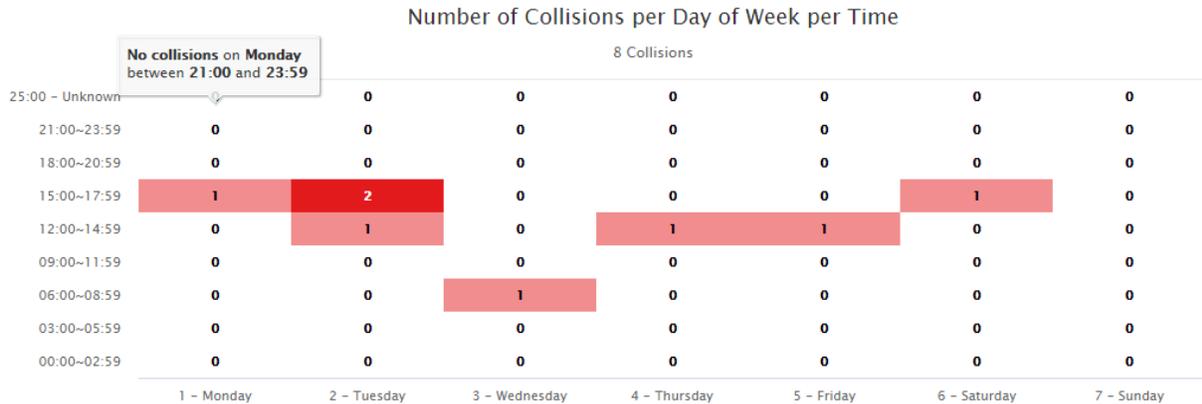
February Bike



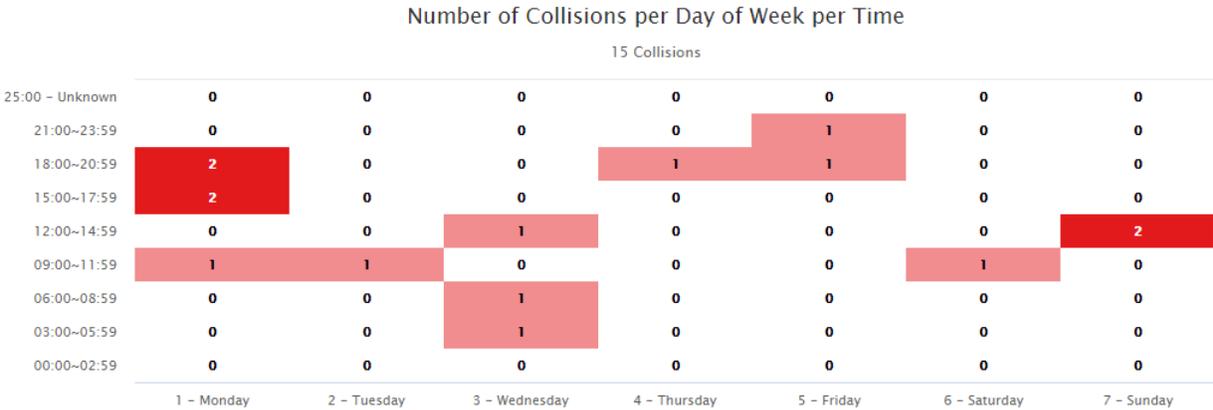
March Ped



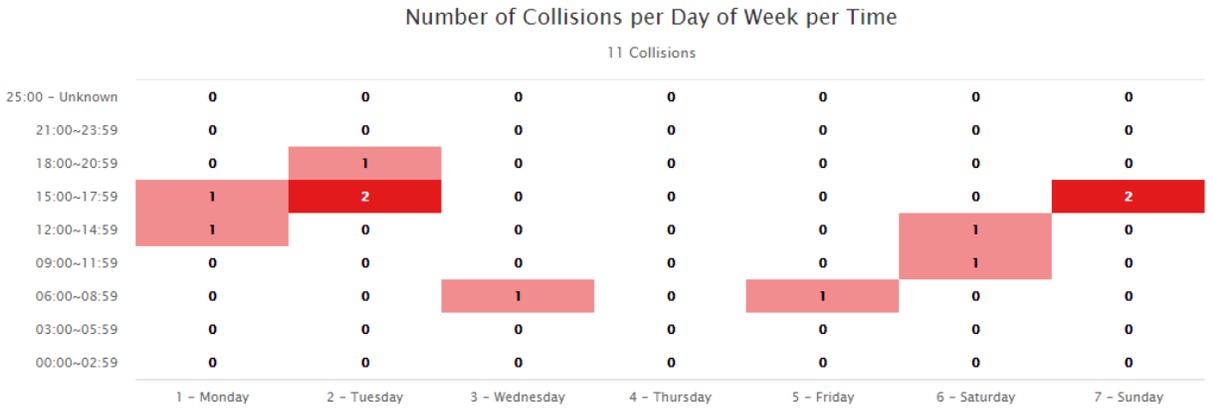
March Bike



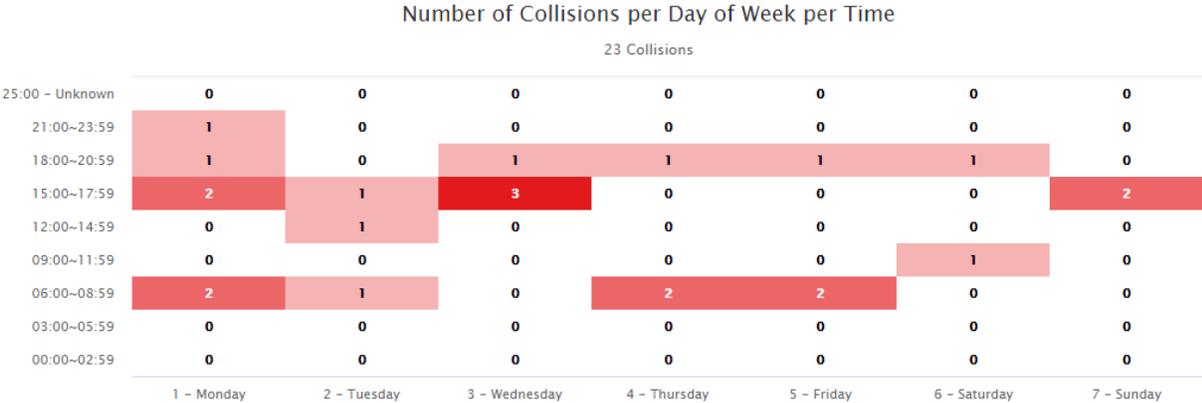
April Ped



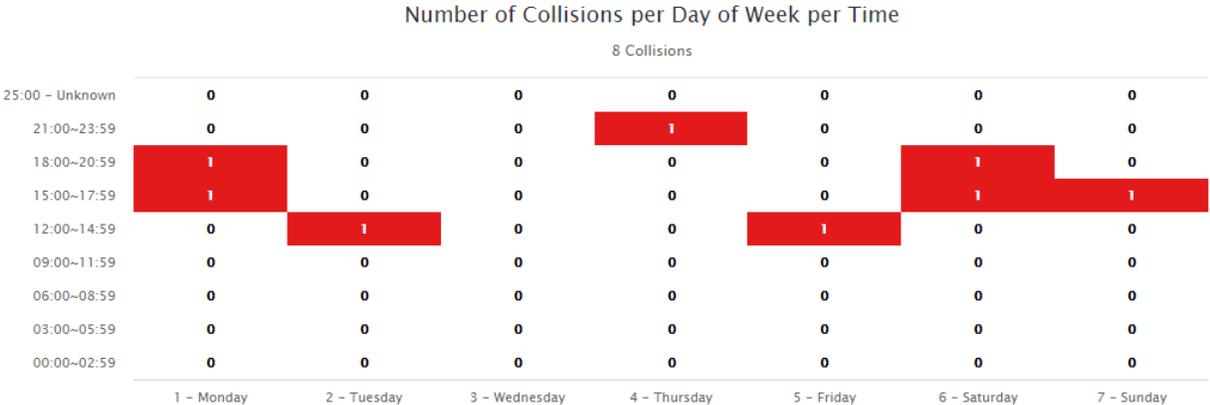
April Bike



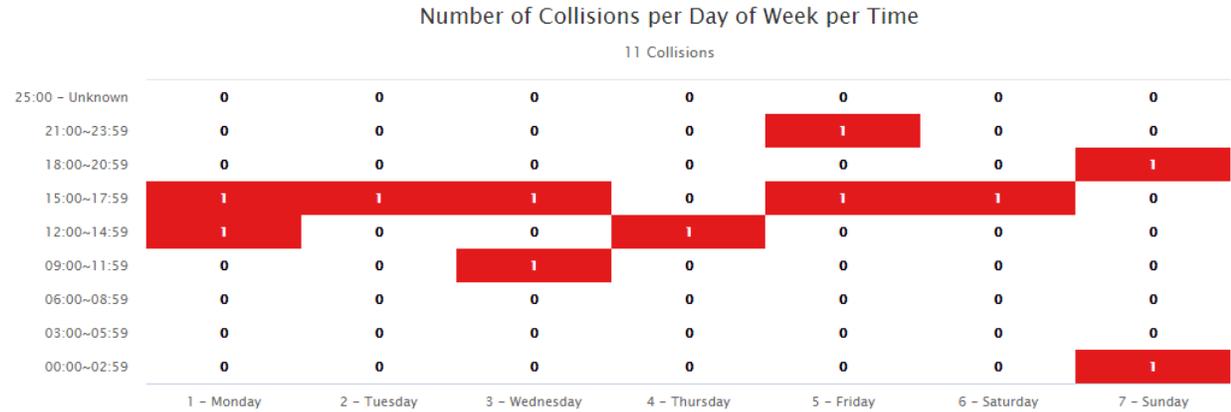
May Ped



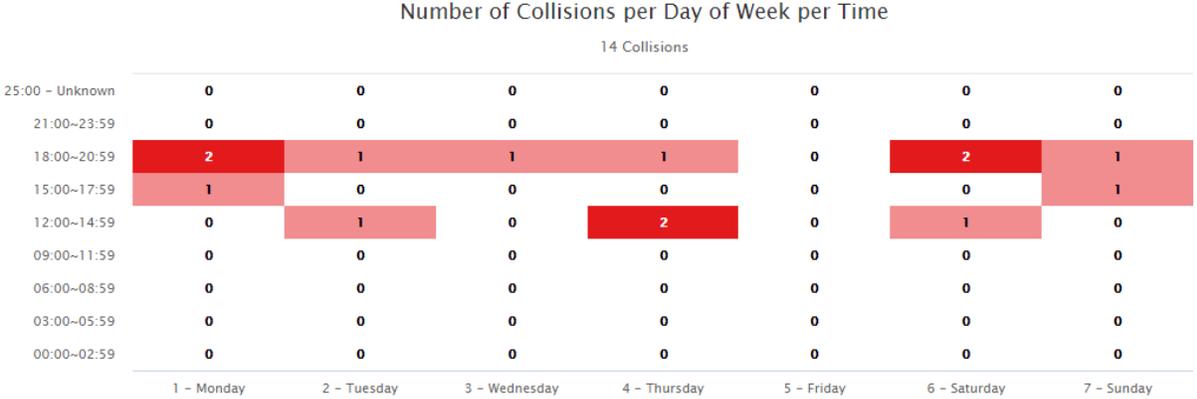
May Bike



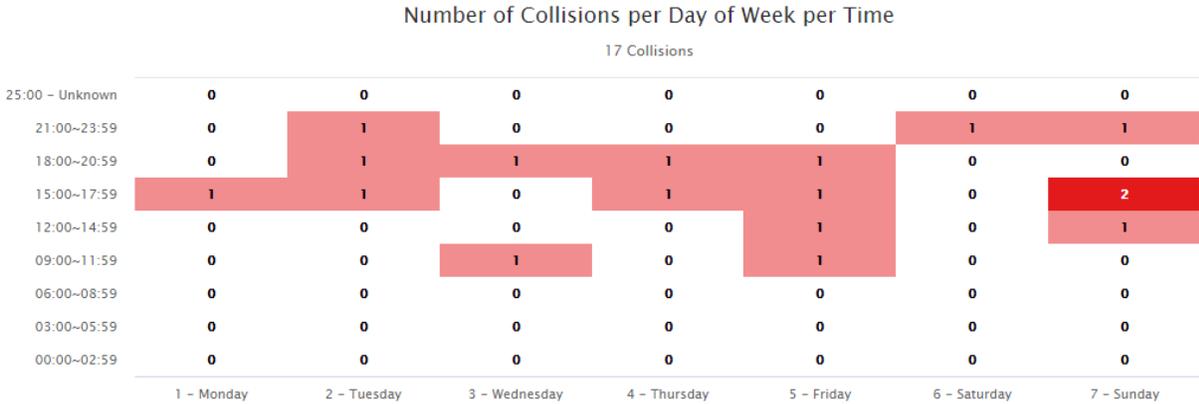
June Ped



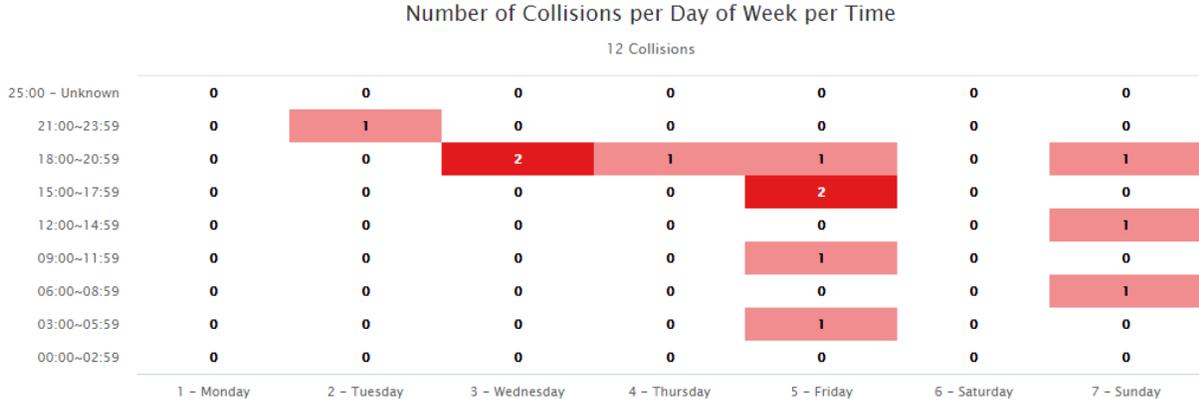
June Bike



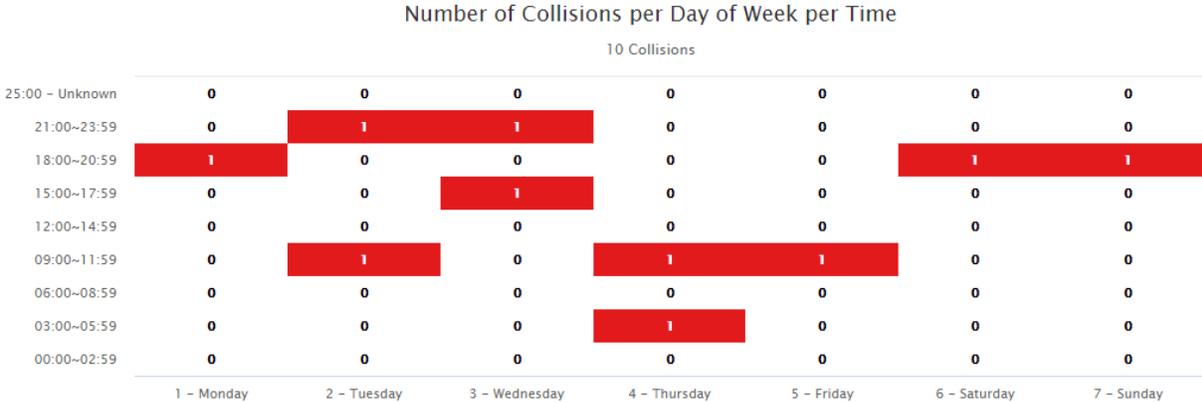
July Ped



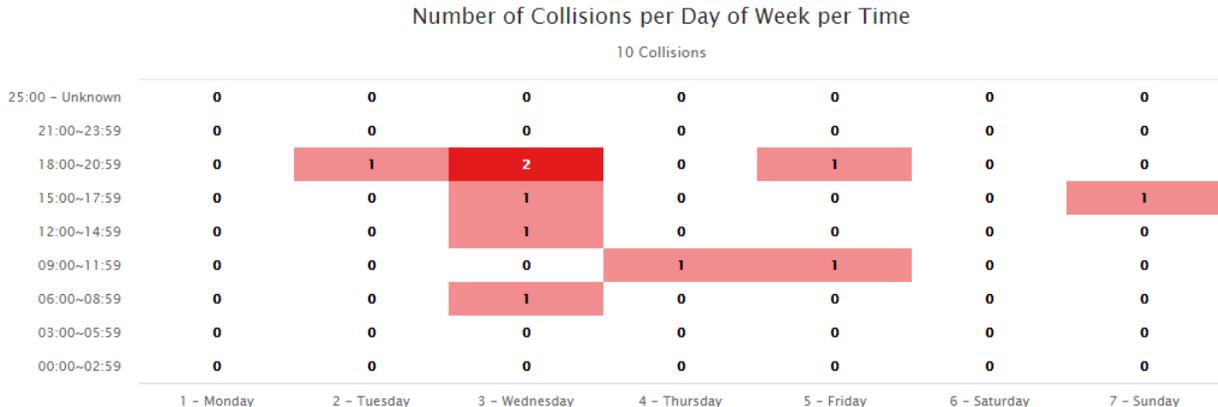
July Bike



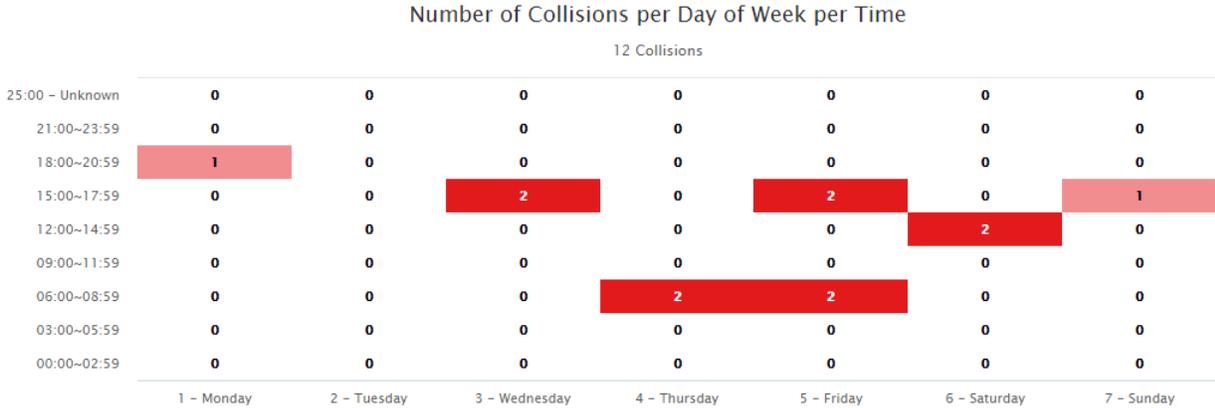
August Ped



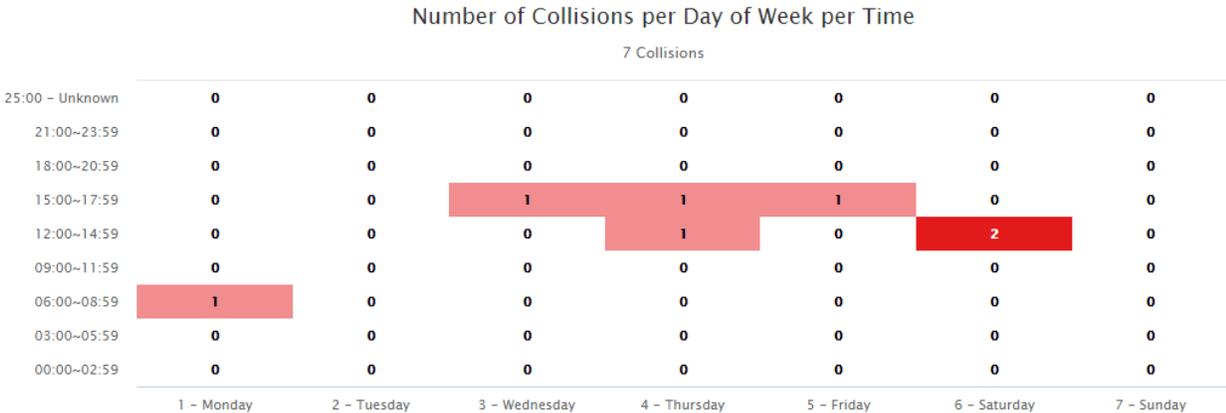
August Bike



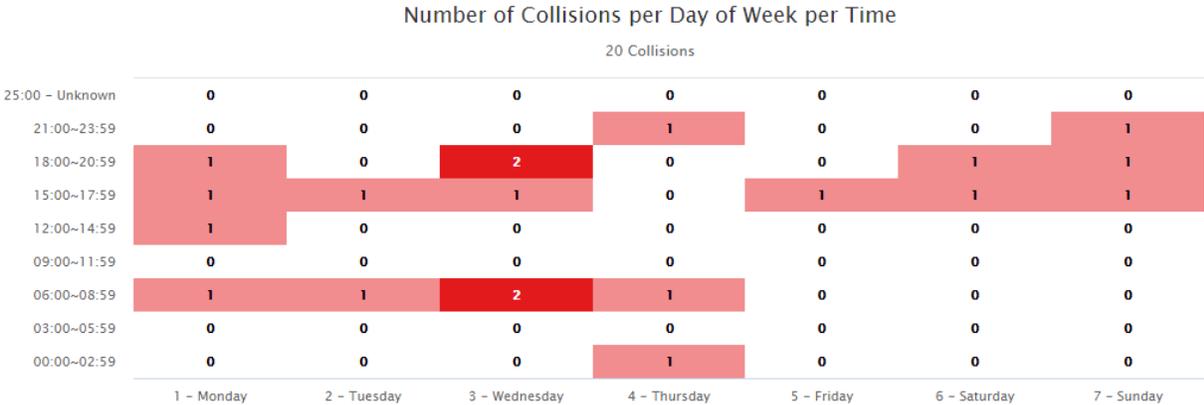
September Ped



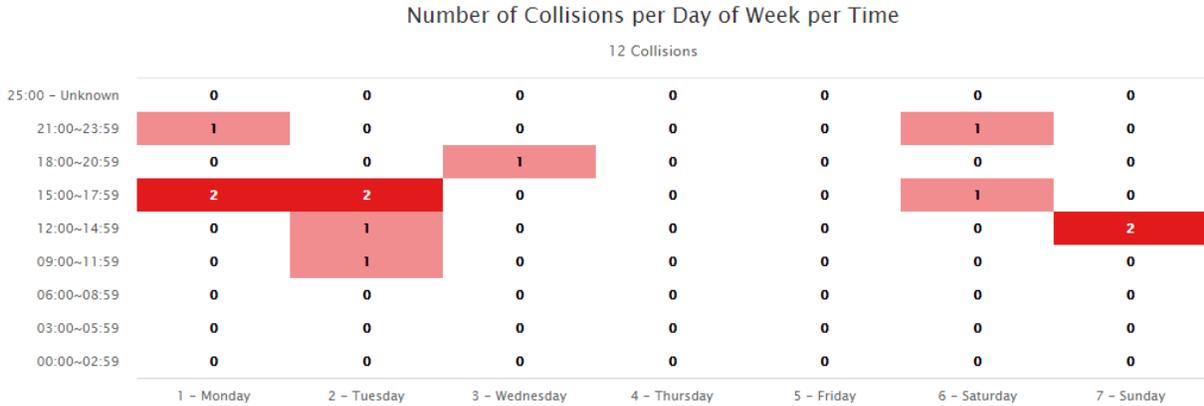
September Bike



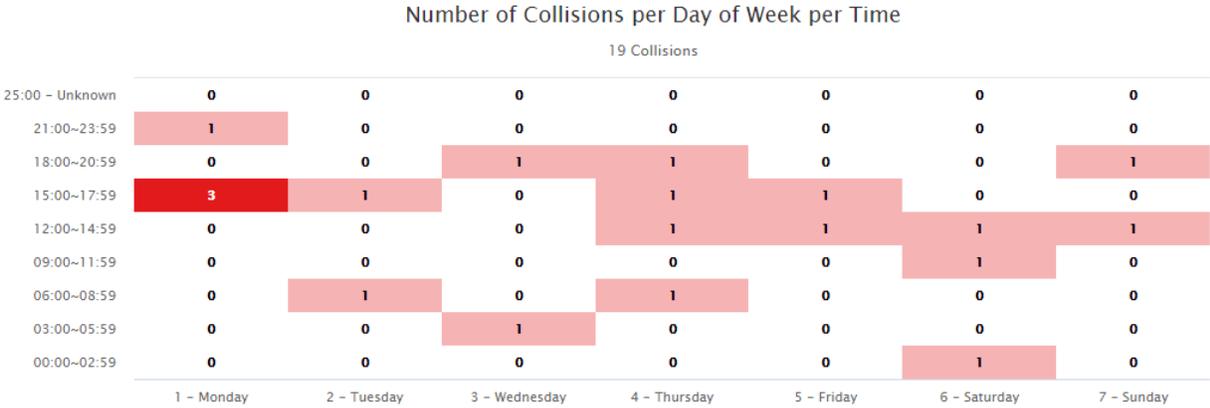
October Ped



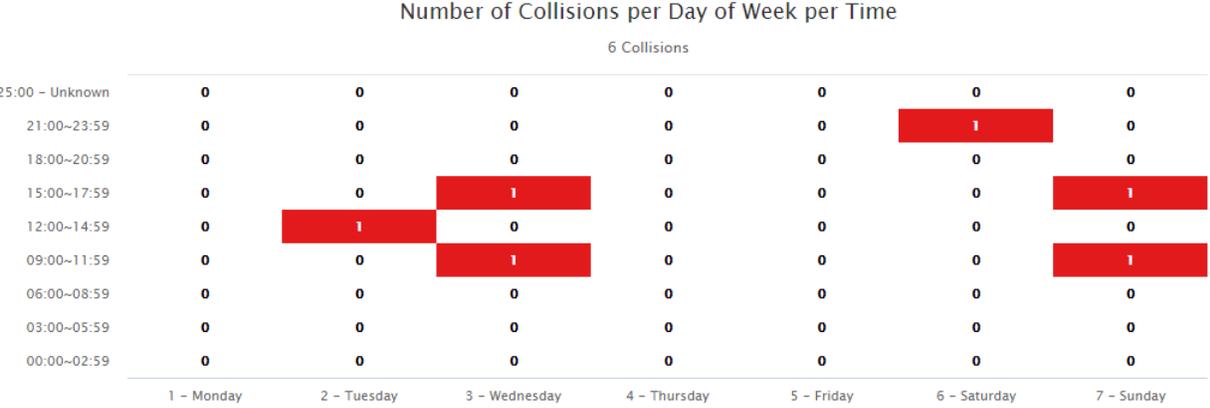
October Bike



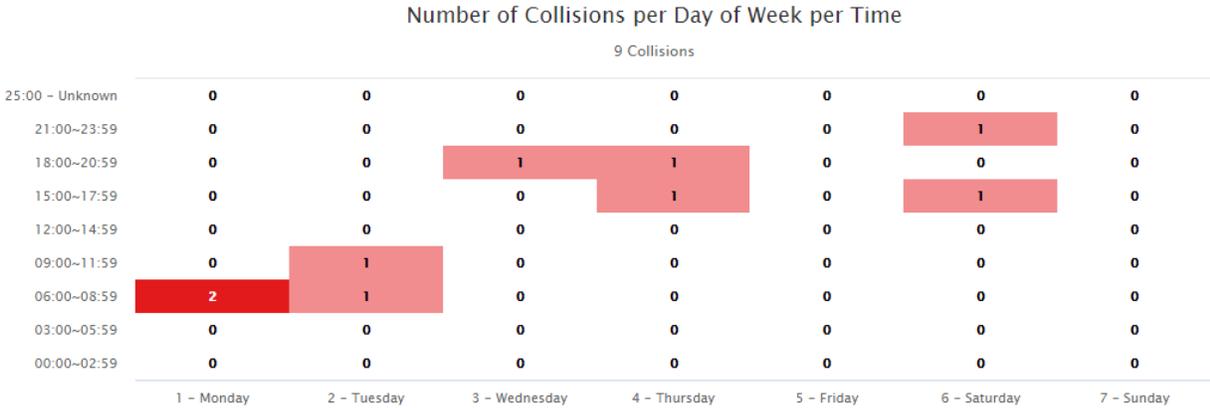
November Ped



November Bike



December Ped



December Bike

