FHWA Vision Zero Action Plans Development

Daly City Vision Zero Action Plan

May 21, 2020

Photo Credit: Daly City

Safe Roads for a Safer Future

Investment in roadway safety saves lives

U.S. Department of Transportation

Federal Highway Administration

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9. Performing Organization Name and Address **KLS Engineering, LLC (Prime)** **45155 Research Pl, Suite 200** **Ashburn, VA 20147** **Fehr and Peers DC** **1003 K St NW #209** **Washington, DC 20001** **Vision Zero Network** **1000 Broadway, Ste 480** **Oakland, CA, 94607**		10. Work Unit No. (TRAIS) **N/A** 11. Contract or Grant No. **DTFH61-16-D-00017**
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FHWA Project Manager: Chimai Ngo.

FHWA Technical Panel: Esther Strawder (Office of Safety, Headquarters), Ken Kochevar (FHWA California Division), Stephen Ratke (FHWA Texas Division) and Betsey Tramonte (FHWA Louisiana Division)

Daly City Staff: Public Works Department - Shirley Chan, Richard Chiu, Kevin Fehr, Aaron Tsang and Jimmy Fu; Police Department - Michael Haralambidis, Cameron Christensen, and Patrick Hensley; City Manager's Office - Stephen Stolte; and Planning - Michael Van Lonkhuysen.

16. Abstract

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. At the time of this report, more than 40 communities across the United States have committed to the Vision Zero strategy.

The FHWA is committed to eliminating traffic related fatalities, serious injuries, and crashes on the Nation's roadways. One of the FHWA's activities is to provide technical assistance to local communities to reach their zero deaths vision. This Vision Zero Action Plan is a product of FHWA's assistance to Daly City, California in the City's effort to reach the zero deaths goal. It is a part of a pilot implementation of a report entitled Transportation Safety Planning and the Zero Deaths Vision: A Guide for Metropolitan Planning Organizations and Local Communities.

This document, the Vision Zero Action Plan for Daly City, California, lays out a framework on how the City plans on achieving the vision zero goal.

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LETTER FROM THE CITY

Dear Fellow Daly City Citizens,

Together, we are taking the next leap towards eliminating serious injuries and fatalities on Daly City streets with the adoption of this Vision Zero Action Plan - our City's very first.

Vision Zero is an initiative adopted by forward-thinking communities across the United States and globally as a direct response to the traffic-related tragedies occuring on our public streets. Public infrastructure which was designed and built to prioritize the automobile over all other transportation modes no longer serves today's tansportation needs.

We believe the measureable actions set in this plan will make our public spaces and streets safer for all roadway users. This plan provides a path forward for the City, together with our public and private partners, to announce absolutely that Daly City streets are meant for ALL roadway users, for pedestrians and bicyclists, from our youngest to our oldest, and for everyone in our many diverse neighborhoods.

We are excited to lead this transition to create a more livable, vibrant, and resilient community for our current residents and for future generations.

Sincerely,

City Council of Daly City

Glenn R. Sylvester
Mayor

Juslyn C. Manalo
Vice Mayor

Raymond A. Buenaventura
Council Member

Pamela DiGiovanni
Council Member

Rod Daus-Magbual
Council Member

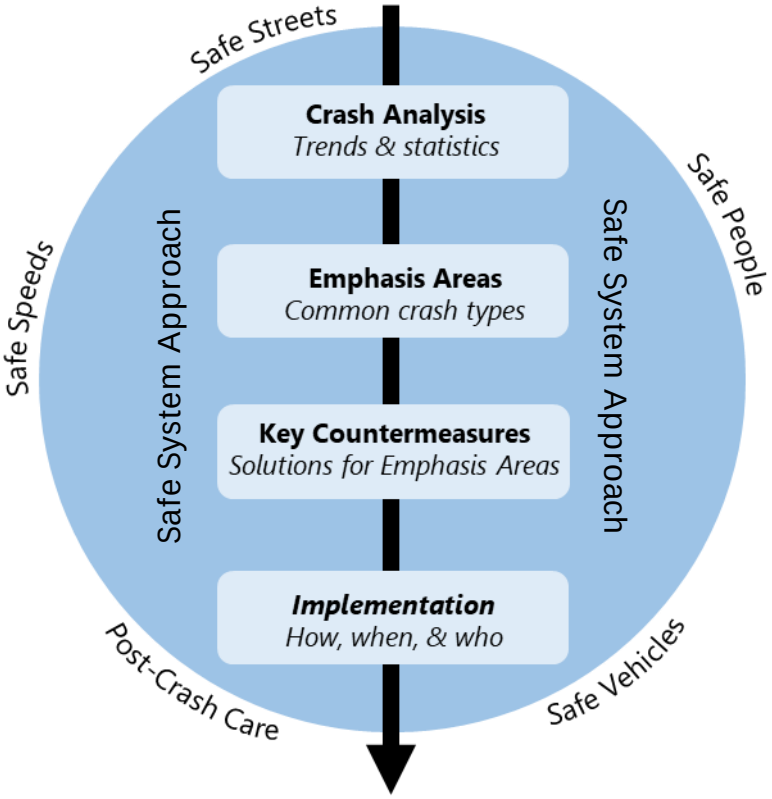
Executive Summary

Vision Zero sets an ambitious long-term goal to eliminate traffic fatalities and serious injuries. Vision Zero programs prioritize safety over other transportation goals, acknowledge that traffic fatalities and serious injuries are preventable, and incorporate a multidisciplinary Safe System approach.

Daly City Vision Zero

From 2013 through 2017, 2,788 traffic crashes occurred in Daly City, California, resulting in 11 fatalities and 73 serious injuries. On April 11, 2016, Daly City's City Council adopted Vision Zero to "achieve a singular goal of reducing death and serious injuries on our roads." Daly City has made progress toward this goal through recent transportation safety plans and projects.

Daly City is committed to **utilizing Vision Zero's collaborative and data-driven approach to eliminate fatalities and serious injuries by 2035** through safety-focused transportation projects and programs, partnerships with other governmental agencies, and public participation. The data-driven **crash analysis** revealed high-crash roadways and overarching crash trends, which supported the development of primary crash types, or **emphasis areas**. Engineering and programmatic strategies, called **key countermeasures**, were identified as solutions for addressing the emphasis areas. Complementing the list of key countermeasures, Daly City identified **implementation** steps built around the **Safe System approach**. While the countermeasures focus on the "what" for improving safety, the implementation steps identify the "how", "when", and "who".



Safe System Approach (Photo Credit: Fehr & Peers DC).

Safe System Approach

Daly City Vision Zero adopts the Safe System approach, which prioritizes human life and health as the first consideration in transportation system planning and decision-making. The Safe System approach recognizes human mistakes are inevitable, and the built environment should be designed to minimize the consequences from such mistakes. These principles move from a traditional approach to a Safe System for all through five main strategies:

Safe Streets: engineering countermeasures that improve roadway design and may include signage, road diets, and lane width adjustments.

Safe Speeds: roadway design improvements, lower speed limits, education and enforcement to reduce aggressive behaviors, and proven technology such as traffic surveillance cameras that encourage context-appropriate travel speeds.

Safe People: aimed at driver behaviors that cause crashes and focus on topics like seatbelt use, not driving while impaired, not driving while distracted, etc.

Safe Vehicles: advancement of vehicle technologies, such as automatic braking and backup cameras.

Post-Crash Care: emergency responders and trauma care, which can reduce the risk of death and serious injury after a crash occurs.

Data-Driven Process

Daly City's crashes, compiled from both State and local data, are analyzed to identify crash trends and high-risk locations. These results guide the Daly City Vision Zero Action Plan, providing the data to support key recommendations. The data-driven process applied in this project produced:

High-Injury Network: Daly City roads with a high concentration of killed or serious injury (KSI) crashes. The High Injury Network (HIN) spotlights streets with a high concentration of fatalities and serious injuries for pedestrians, bicyclists, and motorists. In Daly City, 64% of all crashes and 83% of crashes involving people killed or seriously injured occur along 17% of the City's roadway network.

Crash Trends: An evaluation of crashes in Daly City including crash severity by mode, location, time, victim demographics, and the types of crashes occurring. Over 50% of fatalities and serious injuries involved pedestrians and bicyclists, demonstrating a need to focus on those modes.

Emphasis Areas: Five emphasis areas with the most prevalent crash characteristics were identified, including crashes on arterials, pedestrian-involved crashes, nighttime crashes,

crashes from driving while impaired, and broadside crashes at intersections. Each emphasis area is paired with specific countermeasures to address the identified safety concern.

VISION ZERO IMPLEMENTATION

Daly City developed its Vision Zero Action Plan based on crash analysis and stakeholder feedback. It aims to take advantage of available funding to invest in high priority projects and policies with the most impact on safety. The implementation section is a road map for action and a tool for measuring progress towards the City's safety goal to address fatal and severe crashes and their consequences. Based on the Safe System approach, implementation is segmented into several sections: Vision Zero Program, Safe Streets, Safe Speeds, Safe People, and Safe Vehicles. Key actions in the implementation strategy include:

Strengthen Partnerships: work with agencies throughout Daly City, the Bay Area, and the national Vision Zero community to identify best practices and leverage resources.

Guidance for Bicycle and Pedestrian Improvements: create guidelines for the deployment of high-visibility bicycle markings and crosswalks, bulb-outs, street lighting, rectangular rapid flashing beacons (RRFBs), and travel lane width modifications.

Reduce Speeds through Operations and Design: prioritize new traffic signals and signal timing modifications along the High Injury Network and promote roadway designs that reduce vehicle speeds.

Focus Enforcement on High-Risk Behaviors and Locations: focus patrols and traffic citations on streets within the High Injury network and work with schools to allocate crossing guards where they are most needed.

The intersection of Mission Street, John Daly Boulevard, and Hillside Boulevard is the nexus of multiple streets on the High Injury Network (Photo Credit: Daly City).

List of Acronyms

CIP	Capital Improvement Program
CVI	Community Vulnerability Index
DUI	Driving Under the Influence [of Alcohol or Other Drugs]
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
HIN	High Injury Network
HSP	Highway Safety Plan
HSIP	Highway Safety Improvement Program
KSI	Killed or Seriously Injured
MTC	Metropolitan Transportation Commission
NHTSA	National Highway Traffic Safety Administration
PHB	Pedestrian Hybrid Beacon
RRFB	Rectangular Rapid Flashing Beacon
SHSP	Strategic Highway Safety Plan
SSAR	Systemic Safety Analysis Report
STEP	Saturated Traffic Enforcement Program
SWITRS	Statewide Integrated Traffic Records System

TABLE OF CONTENTS

The Vision Zero Action Plan was funded by the Federal Highway Administration Office of Safety as a pilot implementation of *Transportation Safety Planning and the Zero Deaths Vision: A Guide for Metropolitan Planning Organizations and Local Communities.*

INTRODUCTION

From 2013 through 2017, 2,788 traffic crashes occurred in Daly City, California, resulting in 11 fatalities and 73 serious injuries.[1] These fatal and non-fatal crashes brought trauma and financial burdens to the Daly City community. While most Daly City residents, employees, and visitors travel by car, pedestrians and bicyclists comprise half of the fatalities and serious injuries (KSI) in Daly City. Overall traffic crashes in Daly City declined by 20% from 2013 to 2017, but the number of fatal or serious injury crashes have been relatively constant.

On April 11, 2016, Daly City's City Council adopted Vision Zero to "achieve a singular goal of reducing death and serious injuries on our roads." Daly City has made progress towards this goal with the many transportation safety projects that have since been implemented or are in development. Daly City is also currently updating the City's bicycle and pedestrian master plan (Walk Bike Daly City), as well as developing a Systemic Safety Analysis Report (SSAR), both of which identify local safety challenges and provide strategies for reducing crashes for residents and visitors. However, more is needed to address safety across the City.

A streetscape improvement project on John Daly Boulevard, a major east-west arterial, was completed in 2018 and included bike lanes, wider sidewalks, pedestrian-scale lighting, and landscaping (Photo Credit: Daly City).

[1] Based on Daly City crash reports and reports included in the Statewide Integrated Traffic Records System (SWITRS). A serious injury is defined by broken bones and other visible injuries, unconsciousness, or severe burns.

About Vision Zero

Vision Zero sets an ambitious long-term goal to eliminate traffic fatalities and serious injuries among all road users. Vision Zero programs take a "safety first" approach, acknowledging that traffic fatalities and serious injuries are preventable and require a multidisciplinary approach. This represents a departure from conventional safety programs that requires a shared responsibility from all stakeholders to address complex traffic safety problems; and applies the Safe System approach that acknowledges humans' fallibility when designing transportation facilities.

Vision Zero was initiated in Sweden in 1997. It was not until 2014 that several cities in the United States adopted Vision Zero. In California, several medium and small cities have adopted Vision Zero including Fremont, Sunnyvale, and Santa Barbara. According to the Vision Zero Network – a nonprofit organization working to define and advance Vision Zero across the United States – as of early 2019, over 40 US cities have committed to implement Vision Zero. Daly City's Vision Zero Action Plan will be the first in San Mateo County.

Memorial for a pedestrian fatality on Mission Street (by Goethe Street) in 2017 (Photo Credit: Daly City).

Crashes, not *Accidents*

An important component of Vision Zero is changing current thinking about the preventability of severe and fatal crashes. Continued use of the word *accident* implies that motor vehicle crashes are outside of human influence or control. In reality, these events are predictable results of specific systems and policies such as roadway designs and posted speeds. The Federal Highway Administration (FHWA) supported the National Highway Traffic Safety Administration (NHTSA) in using the word *crash* in lieu of *accident*.

Daly City Vision Zero

Daly City is committed to **utilizing Vision Zero's collaborative and data-driven approach to eliminate fatalities and serious injuries by 2035** through safety-focused transportation projects and programs, partnerships with other governmental agencies, and public participation.

A Focus on Serious Injuries and Fatalities: Vision Zero aims to eliminate traffic fatalities and serious injuries. Daly City had 11 traffic fatalities and 73 serious injuries between 2013 and 2017. Traffic fatalities and serious injuries are analyzed together to reveal crash patterns or trends. Limiting the analysis to the most serious crashes helped to identify the conditions that lead to the most serious crashes. In turn, this plan identifies and prioritizes the most effective strategies for eliminating fatalities and serious injuries in Daly City.

Core Principles

The following Safe System principles guide the actions of the Daly City Vision Zero Action Plan:

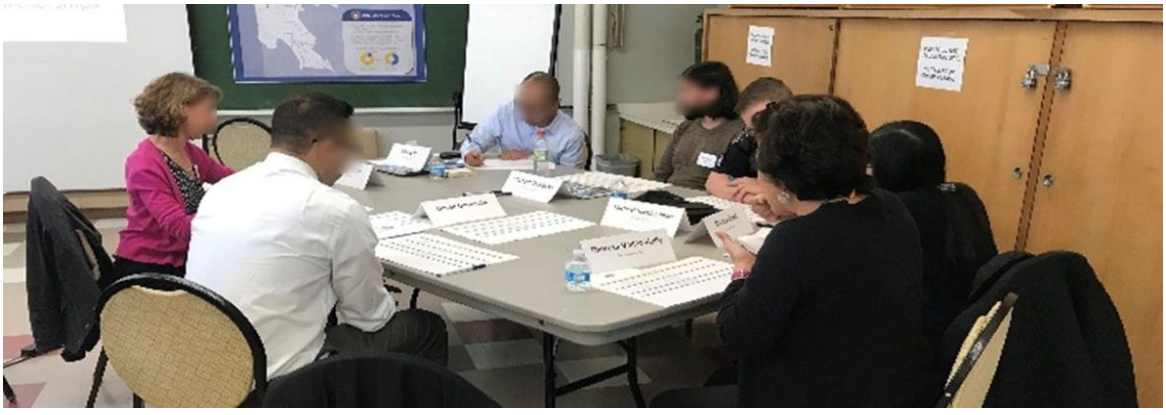
1. Traffic deaths are preventable and unacceptable.
2. Human life takes priority over speed and other objectives of the road system. The street system should be safe for all users, for all modes of transportation, in all communities, and for people of all ages and abilities.
3. Human error is inevitable; the transportation system should be designed to be forgiving of these inevitable errors, so the consequence is not serious injury or death. Advancements in vehicle design and technology are a necessary component toward avoiding the safety impacts of human errors and poor behaviors.
4. People are inherently vulnerable, and speed is a predictor of crash severity and survival. The transportation system should be designed for speeds that protect human life.
5. Safe human behaviors, education, and enforcement are important complements to the commitment to roadway design focused on safety.
6. Policies at all levels of government need to align with making safety the highest priority for roadways.

Changes on the Horizon: The future is uncertain. Transportation Network Companies like Uber and Lyft have already dramatically shifted transportation patterns, and experts are forecasting autonomous vehicles will be even more disruptive. Daly City is also growing, and its urban form is shifting as higher density developments are planned and built. These changes, along with climate change, changes in demographics and lifestyle, and other technological and economic trends will have yet unknown impacts on travel behavior and transportation safety. In this Action Plan, Daly City has identified proactive steps to address safety, but also acknowledges that some trends are outside of the City's control and efforts will be needed to continuously recalibrate our strategies to remain effective as the future unfolds.

Safe System Approach

Daly City Vision Zero adopts the Safe System approach, which prioritizes human life and health as the first consideration in transportation system planning and decision-making. The Safe System approach recognizes human mistakes are inevitable, and the built environment should be designed to minimize the consequences from such mistakes. This is a system based on the shared responsibility of experts who design, build, and operate the roadways, as well as road users. These principles move from a traditional approach to a Safe System for all through five main strategies.

- **Safe Streets:** Roads are platforms where crashes occur. Improving infrastructure is a long-term investment to reduce crashes and outcomes such as injuries and fatalities. Safe roads strategies are engineering countermeasures that improve roadway design and may include signage, road diets, and lane width adjustments.
- **Safe Speeds:** The severity of a crash is tied to the speed of the vehicles involved. As a result, strategies that reduce speeds can result in fewer crashes and less severe crashes. Safe speed strategies include roadway design improvement, lower speed limits, education and enforcement to reduce aggressive behaviors, and proven technology that in general encourage road users to practice safe behavior.
- **Safe People:** Safe people focuses on human behavior. Safe people strategies develop a culture of safety through education and enforcement. Strategies are aimed at driver behaviors that cause crashes and focus on topics like seatbelt use, not driving while impaired, not driving while distracted, etc.
- **Safe Vehicles:** Advancement of vehicle technology can improve the safety for all road users, as agencies and residents replace older vehicles with new, safer vehicles that employ new technologies, such as automatic braking and backup cameras.
- **Post-Crash Care:** Post-crash care addresses the response in the minutes following a severe crash. Post-crash strategies involve emergency responders and trauma care, which can reduce the risk of death and serious injury after a crash occurs.



Vision Zero stakeholder workshop at Doelger Senior Center (Photo Credit: Daly City).

Ongoing Safety Projects

Daly City is improving multimodal safety. Current Daly City Public Work projects in design or construction are listed below:

Central Corridor Bicycle and Pedestrian Improvement project includes bike lanes, bicycle routes, upgraded pedestrian facilities along Junipero Serra Boulevard from John Daly Boulevard to the southern City limit near D Street and along Westmoor Avenue through Guadalupe Canyon Parkway to the eastern City limit. The project will also close a sidewalk gap, installing approximately 1,050 linear feet of new sidewalk within the Caltrans right-of-way along Mission Street and El Camino Real.

Mission Street Streetscape project widens and landscapes existing medians along Mission Street between Crocker Avenue and Templeton Avenue as well as installation of pedestrian bulb-outs, upgraded striping, and signage improvements.

Westlake Elementary School Safe Routes to School/Green Infrastructure project consists of stormwater bulb-outs at two corners at the intersection of Westlawn Avenue and Fieldcrest Drive near the Westlake Elementary School.

Enhanced Bicycle and Pedestrian Visibility project installs bike lanes and bike routes throughout the City to substantially complete the bicycle network proposed in the Bicycle and Pedestrian Master Plan (adopted 2013). In addition, rectangular rapid flashing beacons (RRFBs) have been installed at three uncontrolled intersections.

Hickey Boulevard/Campus Drive Crosswalk Improvements project includes a new pedestrian crossing with pedestrian countdown signals and ADA curb ramps across Campus Drive at Hickey Boulevard.

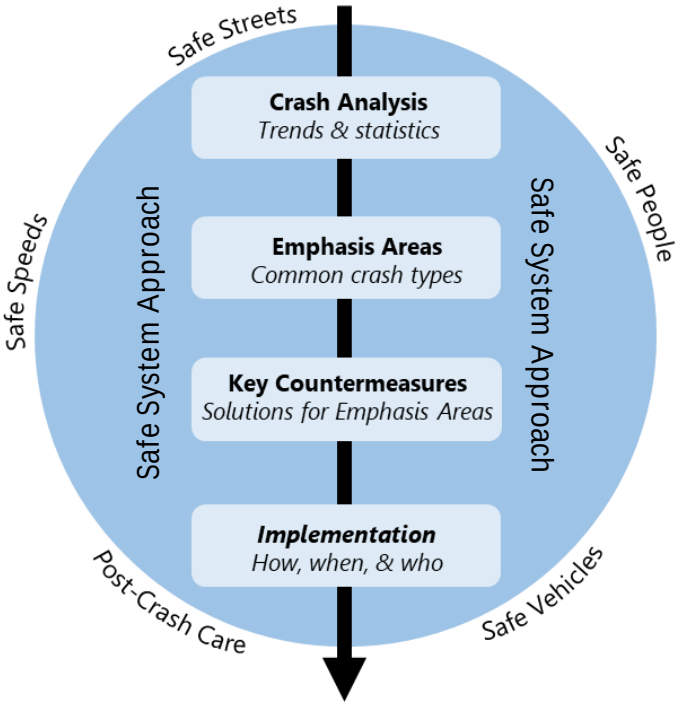
New pedestrian crossing with continental striping, ADA ramps, and pedestrian countdown signal at Hickey Boulevard and Campus Drive (Photo Credit: Daly City).

These projects are funded through a variety of federal, state, regional, county, and local funds.

Vision Zero Plan Development

With funding support and in partnership with the FHWA, the Daly City Vision Zero project kicked off with a meeting in December 2018. Led by Daly City Public Works, the meeting engaged a mix of local, county, regional, state and federal stakeholders. Participants shared their goals for the plan, as well as current efforts across departments and at all levels of government to address traffic safety. Daly City Departments including Planning, Police, Public Works, City Managers' Office were joined by outside stakeholders including San Mateo County, Caltrans, FHWA, and the Silicon Valley Bicycle Coalition in committing to advancing safety in Daly City.

This plan builds on previous work in the region. To understand existing safety practices, a literature review was conducted for safety plans and policies impacting Daly City, San Mateo County, the Bay Area, and the State of California. Data-driven crash analysis revealed high-crash roadways and overarching crash trends, which supported the development of primary crash types, or emphasis areas. Engineering and programmatic strategies, called key countermeasures, were identified as solutions for addressing the emphasis areas. Complementing the list of key countermeasures, Daly City identified implementation steps built around the Safe System approach. While the countermeasures focus on the "what" for improving safety, the implementation steps identify the "how", "when", and "who".



Safe System Approach (Photo Credit: Fehr & Peers DC).

The Daly City Vision Zero stakeholder workshop held in May 2019 engaged a range of local and regional stakeholders including City of Daly City staff, Daly City City Council, Daly City Bicycle and Pedestrian Advisory Committee, San Mateo County, Metropolitan Transportation Commission, Caltrans, Jefferson Elementary School District, Silicon Valley Bicycle Coalition, the Vision Zero Network, City and County of San Francisco, and FHWA Office of Safety staff based in Sacramento, CA, and Washington, DC. Daly City shared crash analysis findings, and County, regional, and State stakeholders shared existing resources that could be used to advance safety in Daly City.

Small group discussions generated feedback and highlighted new ideas for how Daly City can reduce crashes. This feedback helped shape the countermeasures and implementation steps summarized in this plan.

Plans, Policies, and Other Documents

Daly City Vision Zero builds on the City's commitment towards safety through a range of local and regional transportation plans and guidelines. These local, countywide, regional, statewide, and federal resources are summarized in this section.

Local Documents and Policies

In addition to developing this Vision Zero Action Plan, Daly City is addressing local transportation safety through a variety of local plans and programs:

- **Daly City Complete Streets Policy (2012)** includes complete streets policies and principles, recommending safe accommodation for all modes.
- **Daly City 2030 General Plan (2013)** includes policies to improve transportation safety and accessibility.
- **Daly City Bicycle and Pedestrian Master Plan (2013)** identifies specific safety enhancements to the City's existing bikeway and pedestrian facilities.
- **Daly City Pedestrian Safety Assessment (2013)** outlines pedestrian safety enforcement efforts, Safe Routes to School, and traffic calming strategies.
- **Comprehensive Biennial Operating and Capital Budget for FY 2019 and 2020 (2018)** prioritizes safe sidewalks and responding to citizen requests for safety and mobility enhancements.
- **Systemic Safety Analysis Report (SSAR; ongoing)** identifies safety improvements throughout Daly City for locations with both high numbers of crashes and systemic safety challenges.
- **Walk/Bike Daly City (WBDC; ongoing)** summarizes conditions for bicycling and walking and highlights infrastructure improvements to improve access and safety for these modes.

Complementing Previous Work: Daly City Vision Zero complements the analysis completed as part of the Systemic Safety Analysis Report (SSAR). The SSAR analysis developed recommendations based on trends associated with all traffic crashes, while the Vision Zero analysis and safety strategies focus specifically on people killed or seriously injured in Daly City. With these different focuses, the results for some key variables differ. For example, rear-end crashes are the second most prevalent crash type in the SSAR, comprising 24% of crashes between 2013 and 2017, but they make up just 7% of fatalities and serious injuries during the same time period. While rear-end crashes are common in Daly City, they rarely lead to serious injuries or fatalities. Both safety planning efforts are important, crashes that do not lead to serious injuries or fatalities can still result in physical and financial costs to those involved as well as disruptions to traffic flow.

Countywide Documents and Policies

Both the San Mateo Countywide Transportation Plan and Bicycle and Pedestrian Master Plan include safety goals, policies, and performance measures to reduce fatal and serious injury crashes:

- **San Mateo County Comprehensive Bicycle and Pedestrian Plan (2011**) includes three main policies: 1) safety funding, 2) education and enforcement strategies, and 3) education addressing safety as well as travelers' rights and responsibilities.
- **San Mateo Countywide Transportation Plan 2040 (2017)** outlines existing conditions, potential funding sources, policy measures and countermeasures, planned and current projects within the County.

Regional Documents and Policies

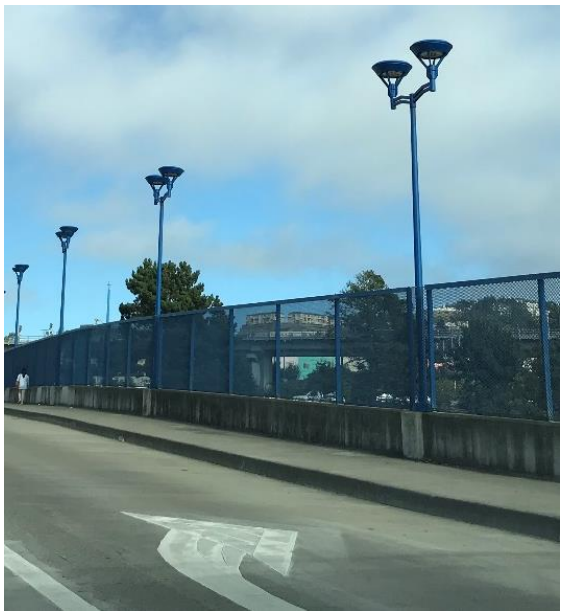
The Metropolitan Transportation Commission (MTC) recently updated both long-term and short-term transportation plans that address safety:

- **Plan Bay Area 2040 (2017)** identifies transportation and land use strategies for the next 20 years to enable a more sustainable, equitable, and economically vibrant future.
- **MTC Transportation Improvement (2018)** summarizes funding for projects across the region, including safety projects in Daly City, such as near-term funded transportation projects like Daly City's Central Corridor Bicycle and Pedestrian Improvements project.

State Documents and Policies

The State of California has adopted a "toward zero deaths" goal. Several safety goals and manuals summarize how local jurisdictions, as well as the State, can address safety.

- **California Highway Safety Plan (HSP) (2018)** highlights existing safety challenges in California and offers strategies to change behavior to move toward zero deaths.
- **California Strategic Highway Safety Plan (SHSP) (2015-2019)** provides a framework for reducing fatalities and serious injuries on roads by addressing 15 challenge areas such as pedestrians and driver behavior. The forthcoming 2020-2024 California SHSP began its development in 2018 with a review of collision data trends and the successes of the current SHSP.
- **Local Road Safety Manual (2018)** includes systemic and hotspot safety analysis approaches for local jurisdictions, such as safety countermeasures and cost-benefit analysis.



Daly City coordinated with Caltrans to replace the street lights on John Daly Boulevard over I-280, improving safety and visibility for pedestrians (Photo Credit: Daly City).

Federal Documents and Policies

Safety is the top priority of the U.S. Department of Transportation. For FHWA, this means a roadway system that is designed to protect its users, through implementing life-saving programs and infrastructure safety solutions. FHWA's goal is to reduce transportation related fatalities and serious injuries across the transportation system, and for this reason it fully supports the vision of zero deaths and serious injuries.

- **FHWA Transportation Safety Planning and the Zero Deaths Vision: A Guide for Metropolitan Planning Organizations and Local Communities (2018)** explains the safety planning process and includes guidance for metropolitan planning organizations and local communities to develop their own regional or local safety plan.
- **FHWA Proven Safety Countermeasures (2008, updated 2017)** includes 20 treatments and strategies that practitioners can implement to successfully address roadway departure, intersection, and pedestrian and bicycle crashes.

- **National Highway Traffic Safety Administration (NHTSA) Countermeasures that Work (2017)** assists practitioners in selecting effective, evidence-based non-engineering countermeasures for traffic safety problem areas.

Data-Driven Process

Daly City's crashes, compiled from both State and local data, are analyzed to identify crash trends and high-risk locations along the network. The results inform the Daly City Vision Zero Action Plan by providing the underlying data to support key recommendations. Crash trends show when, where, and how collisions occurred and who were involved. The data-driven process applied in this project produced:

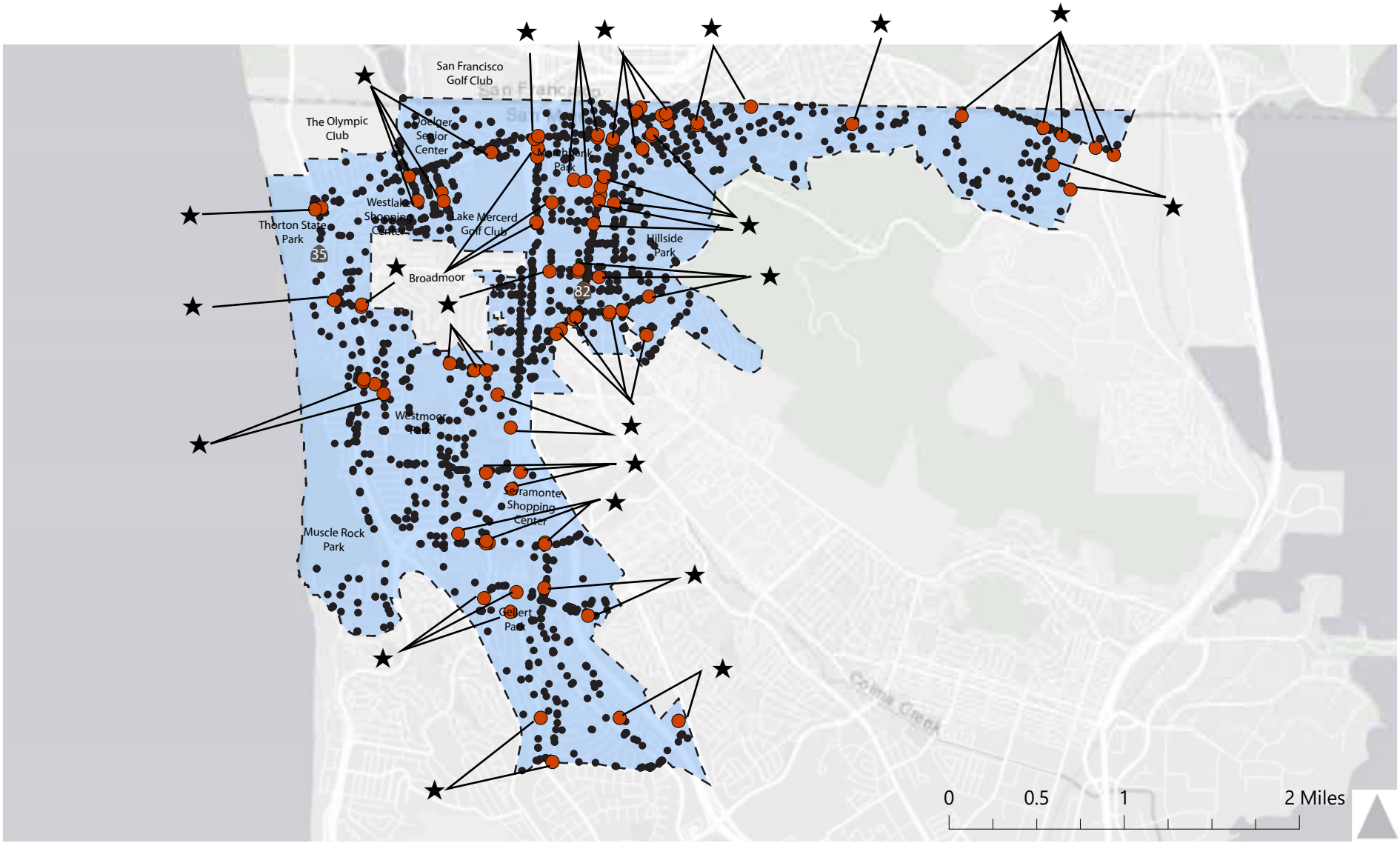
High-Injury Network: Roads with a high concentration of fatalities or serious injuries

Crash Trends: An evaluation of crashes in Daly City, including crash severity by mode, location, and time, demographics of crash victims, and the types of crashes occurring

Emphasis Areas: Five emphasis areas with the most prevalent crash characteristics

Data Compilation: This crash analysis assesses the most recent five years of complete crash data available (2013-2017) from the California Statewide Integrated Traffic Records System (SWITRS) database. The analysis includes all crashes within the City of Daly City, with the exception of crashes reported to occur on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) or on interchange ramps within City limits. In addition, the City provided supplementary crash data from the Daly City Police Department's collision records for the same five-year period. All non-duplicative crashes with a reported severity level were added to the crash database. The SWITRS dataset includes crash variables not captured in the City's supplemental crash data. As a result, some variables are analyzed only based on the SWITRS data.

Pedestrians crossing Junipero Serra Boulevard at John Daly Boulevard adjacent to the Daly City BART station. Both streets are on the City's High Injury Network (Photo Credit: Daly City).



Legend

- ★ ● KSI Crash (79 total; 84 fatalities or serious injuries)
- • Non-KSI Crash
- City of Daly City

Note: Some KSI crashes resulted in more than one fatality or serious injury. Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

Figure 1

Daly City KSI Crashes, 2013-2017

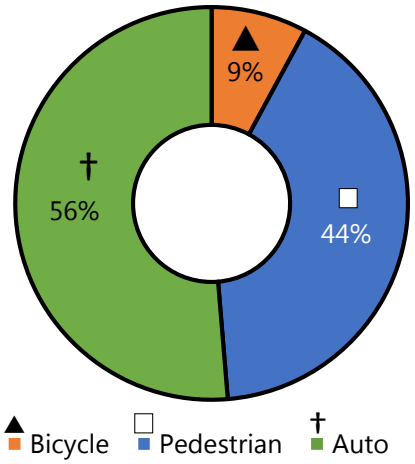
High Injury Network

The High Injury Network (HIN) spotlights streets with a high concentration of fatalities or serious injuries for pedestrians, bicyclists, and motorists. **In Daly City, 64% of all crashes and 83% of crashes involving people killed or seriously injured occur along 17% of the City's roadway network.**

High Injury Network Approach: The Daly City HIN was created using the roadway network, crash data, and geographic information system (GIS) software. The collision data were joined spatially to the roadway network, allowing for crash analysis at the roadway segment level. Next, crash densities were developed for each roadway segment, weighting fatal and serious injury crashes as 20 times that of other crashes. Each roadway segment was then ranked based on its weighted crash density (measured as crashes per mile). Roadway segments with the highest weights were incrementally totaled to identify the roadway segments that contribute to the largest number of crashes.

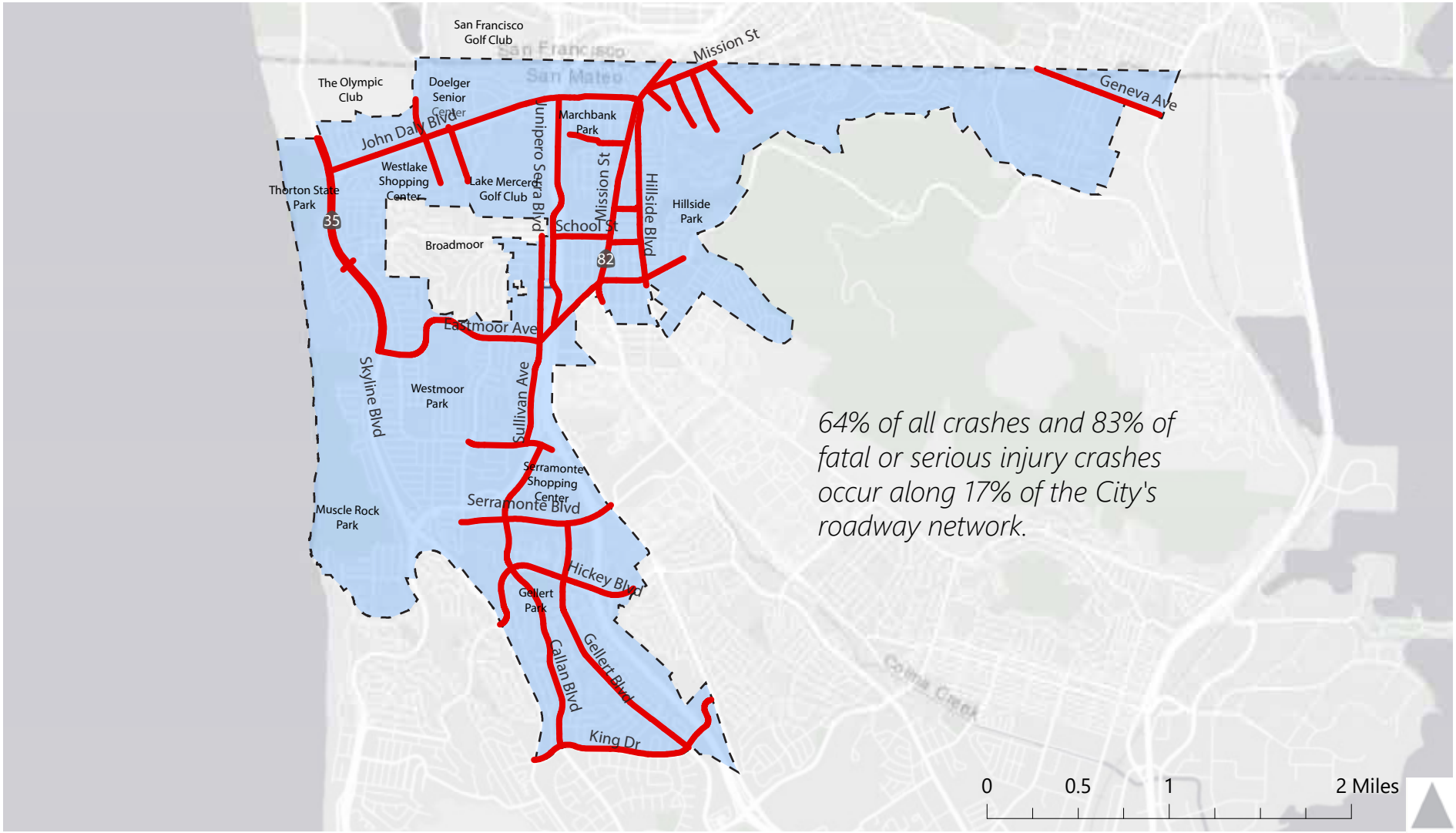
Of the fatal and serious injuries along the High Injury Network, 56% involve only people in vehicles, 9% involve bicyclists, and 44% involve pedestrians.

HIN Fatalities and Serious Injuries by Mode



Most of the schools and parks in Daly City fall within a quarter mile of the High Injury Network. Of the 50 schools in Daly City, 45 are within a quarter mile of the HIN, which presents challenges for kids to walk safely to school. Daly City is working with the San Mateo County Safe Routes to School Program to implement infrastructure and programmatic approaches to improving safety for local students.

Children crossing Bellevue Avenue in front of Panorama Elementary School (Photo Credit: Daly City).



Legend

- High Injury Network
- Daly City Border

Note:
Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

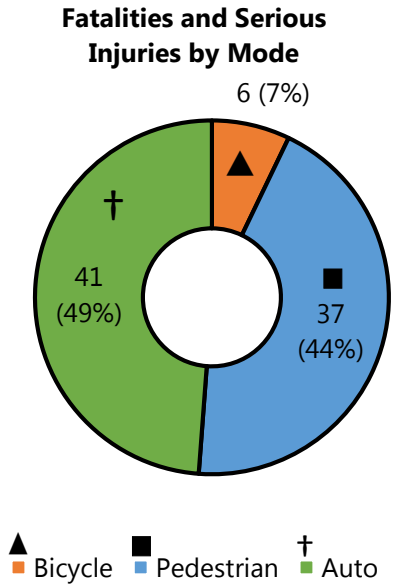
Figure 2

Daly City High Injury Network

Crash Analysis

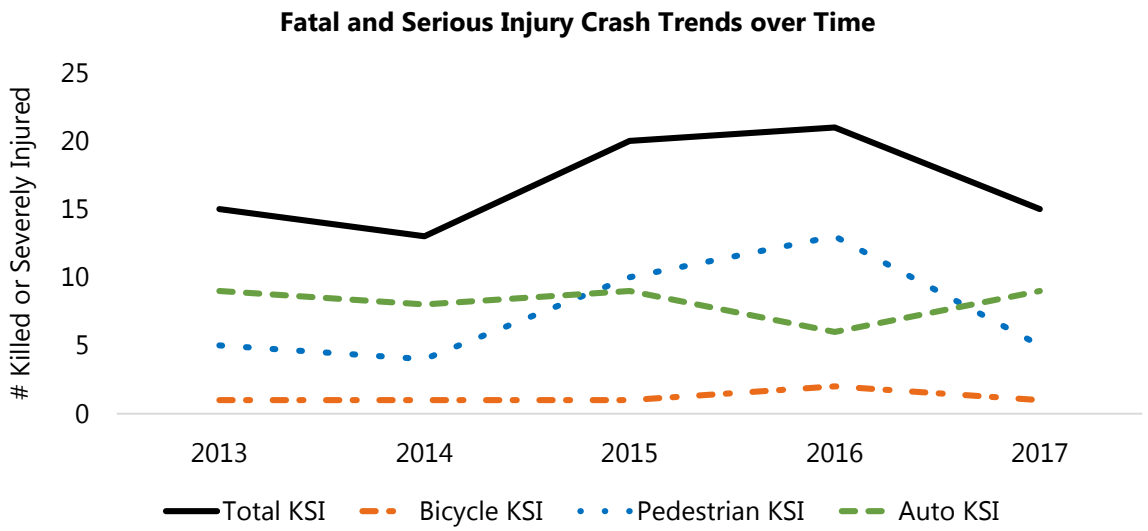
This section provides a detailed summary of crash trends in Daly City between 2013 and 2017, showing crash severity by mode and trends over time, as well as descriptive statistics related to the crash victims, the time and location of crashes, and the types of crashes occurring. Analysis of key crash trends informed the determination of the Vision Zero emphasis areas, discussed in the next section

Trends by Mode: Based on the 2012 California Household Travel Survey, 15% of all trips in San Mateo County are made by bicycling or walking, yet over 50% of fatalities and serious injuries involve victims traveling by bicycle or on foot. While bicyclists and pedestrians represent a small share of travelers in Daly City, they are overrepresented in fatal and severe crashes.

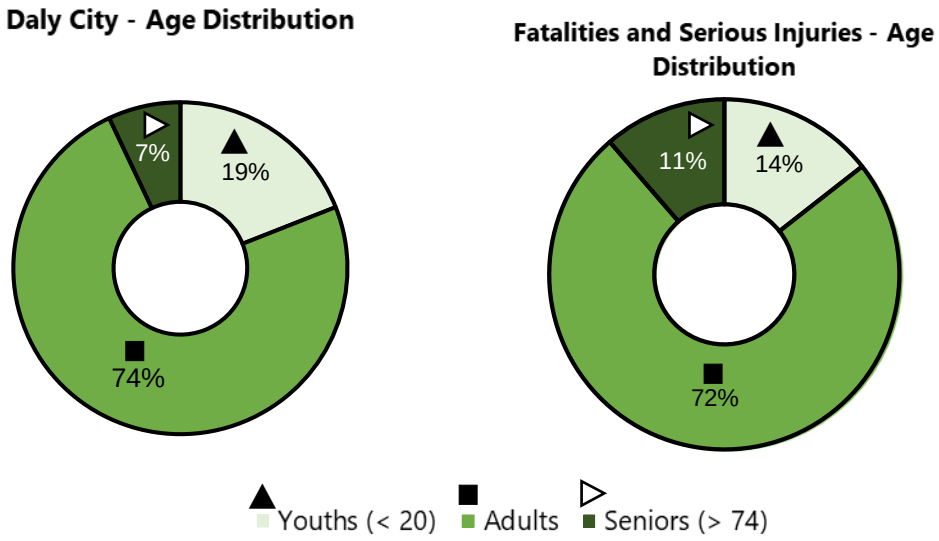


Trends over Time: The number of people killed or seriously injured in Daly City has remained relatively constant since 2013, while total traffic crashes in Daly City (not shown below) declined by 20% over the same time period.

St. Francis Boulevard looking north, with Highway 1 in the foreground. Class II bike lanes were added as part of the Enhanced Bicycle and Pedestrian Visibility project in 2019 (Photo Credit: Daly City).



Trends by Age: Based on the American Community Survey, part of the US Census, 19% of Daly City's population is under 20 years old, 74% are between 20 and 74 years old, and 7% are 75 years old or older. This population age distribution aligns with the age distribution of people killed or seriously injured; however, children are slightly underrepresented (19% of population and 14% of fatalities and serious injuries) and seniors slightly overrepresented (7% of population and 11% of fatalities and serious injuries). This relationship may speak to the fragility of the user group as well as the likelihood of being involved in a crash.



Considering Equity: Equity is a priority for Daly City. To better understand crash patterns throughout Daly City, trends were analyzed through an equity lens. The region and the State have equity metrics to define locations with a high concentration of underserved households.

Communities of Concern, identified by MTC, are locations with a high concentration of low-income and racial minority households and locations with a high concentration of four or more of the following characteristics: limited English proficiency residents, zero vehicle households, seniors, persons with disabilities, single parent families, and severely rent-burdened households.[2] Residents in Communities of Concern make up 26% of Daly City's population, but 36% of fatalities and serious injuries occur in Communities of Concern, suggesting that disadvantaged populations may be more likely to be involved in severe traffic crashes.

Community Vulnerability Index (CVI) scores each of the 156 Census tracts in San Mateo County based on seven indicators: health insurance coverage, education, supplemental security income, gross rent as a percentage of income, poverty, unemployment, and disability status.[3] Four of the top 10 Census tracts for the countywide Community Vulnerability Index fall within Daly City. These four most vulnerable tracts comprise 9% of the land area in Daly City and include 29% of Daly City residents. Severe crashes are overrepresented within vulnerable communities, with 40% of fatalities and serious injuries in Daly City occurring in these four Census tracts.

"We take pride in our cultural diversity and work hard to promote community interaction." – Daly City 2030 General Plan

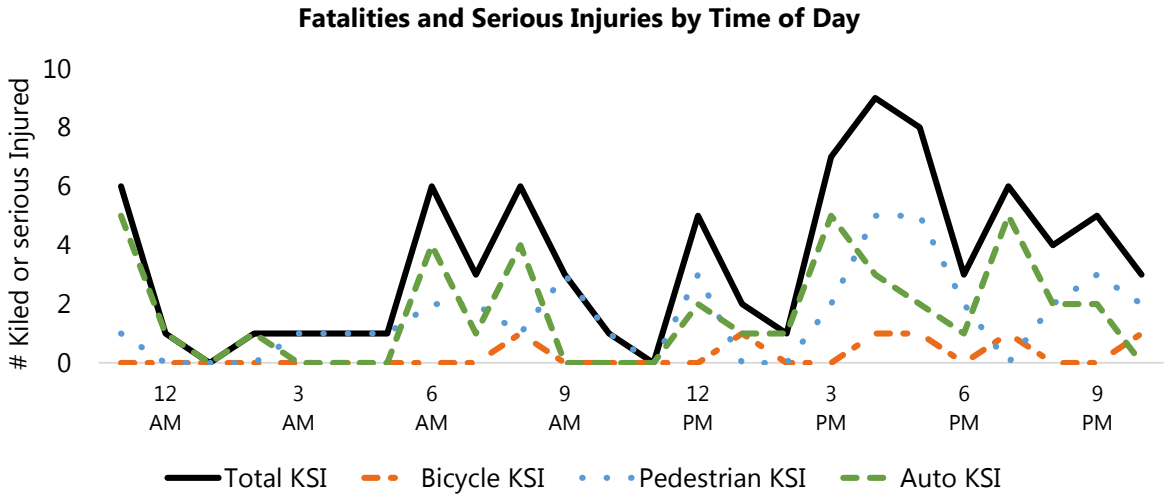
Geneva Avenue at Rio Verde is within a Communities of Concern as identified by MTC (Photo Credit: Daly City).

Trends by Season, Day, and Time: Owing to Daly City's year-round temperate climate, the strong seasonal patterns that can be found in other cities are less apparent in Daly City; fatalities and serious injuries occur at a relatively constant rate year-round. There are no large differences

[2] MTC Plan Bay Area 2050 Equity Analysis
[3] San Mateo County Community Vulnerability Index

between days of the week, except for Saturdays with the highest number of people killed or seriously injured (21%) and the highest number of fatalities and serious injuries involving only vehicles (35%).

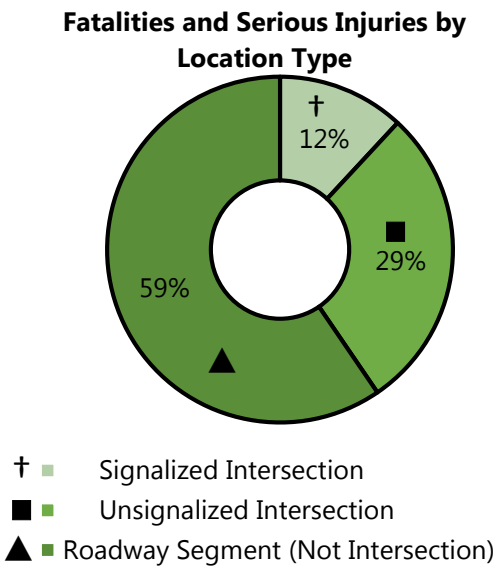
Across the day, there are spikes in fatalities and serious injuries during the morning commute, lunchtime, afternoon commute, and evening. The highest period of fatalities and serious injuries occurs for all modes in the afternoon, between 3 PM and 6 PM. The chart below shows total fatalities and serious injuries over the course of the day, as well as for each mode.

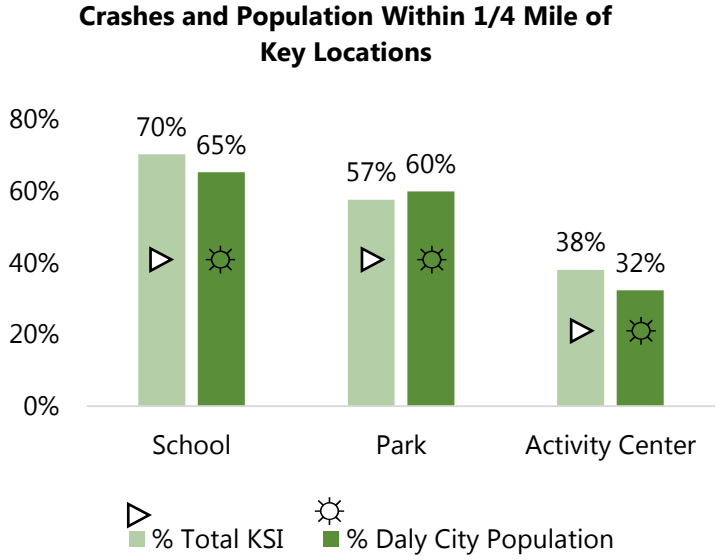


A new rectangular rapid flashing beacon (RRFB) was installed on Southgate Avenue at Crestwood Drive as part of the Enhanced Bicycle and Pedestrian Visibility project in 2019 (Photo Credit: Daly City).

Trends by Location: Based on the location where a crash occurs, different strategies may be appropriate to improve safety. In Daly City, 59% of fatalities and serious injuries occur along roadway segments, while 41% occur at intersections. At intersections, these severe crashes are more common at unsignalized intersections (29%) than signalized intersections (12%).

It is important to identify locations where severe crashes occurred, whether along roadway segments or at signalized or unsignalized intersections, as well as the land use context of those locations. This analysis reviewed three key destination types in Daly City: schools, parks, and activity centers[4]. The number of people killed or seriously injured and the Daly City population within a ¼ mile buffer of key destinations were compared with the number of people killed or seriously injured and population citywide. Where the percentage of fatal or serious injury crashes exceed the percentage of population, crashes are overrepresented. Fatal and serious injury crashes are overrepresented in areas near schools, with 70% occurring within a ¼ mile of a school, while the population of Daly City within a ¼ mile of a school is 65%. Similarly, fatal and serious injury crashes are slightly underrepresented (less common) near parks and slightly overrepresented (more common) near activity centers.





[4] Activity Centers include Westlake Shopping Center, Skyline Plaza, Serramonte Shopping Center, King Plaza, Mission Plaza, Cow Palace, and Pacific Plaza.

Emphasis Areas

FHWA recommends that Vision Zero Action Plans, similar to State Highway Safety Plans, include emphasis areas, which help direct safety efforts and make the Action Plans more strategic and effective. Emphasis areas capture the prevalent fatal and severe crash patterns across Daly City, and they provide City staff with key priorities for focusing engineering and non-engineering countermeasures. The emphasis areas cover crash characteristics, such as driving while impaired, as well as contextual factors, such as crashes occurring on an arterial street or in the evening. Individual crashes may fall under multiple emphasis areas. For example, a crash may be a nighttime crash and involve a driver under the influence of drugs or alcohol.

Based on the crash trends, five emphasis areas were identified for Daly City. These emphasis areas are summarized in the table below and on the pages that follow.

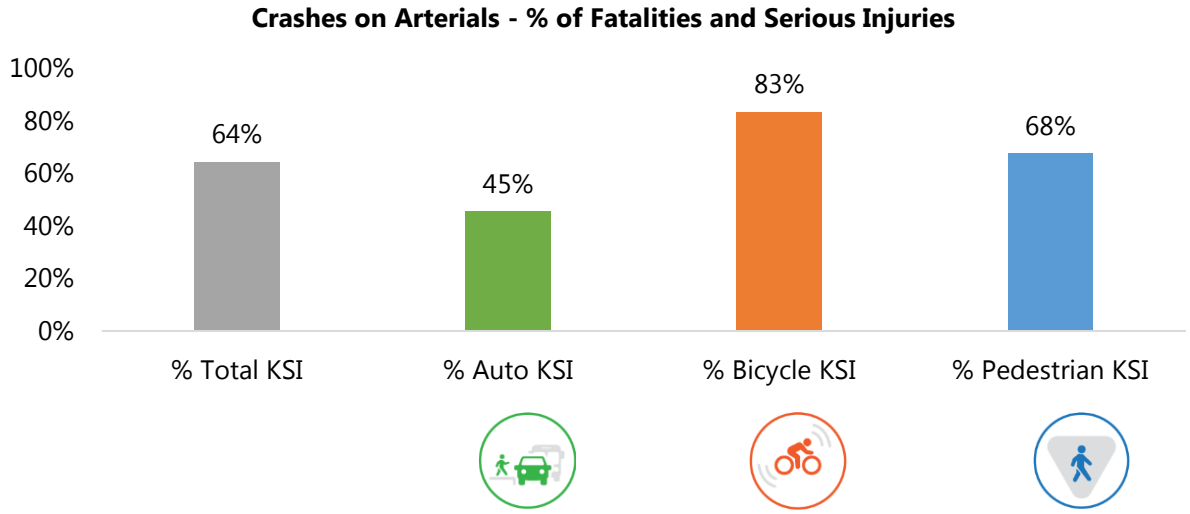
	Emphasis Area	% All Fatalities & Serious Injuries
1	Crashes on Arterials	64%
2	Pedestrian Involved	44%
3	Nighttime Crashes	43%
4	Driving while Impaired	17%
5	Broadside Crashes at Intersections	15%

The following pages include a description of each of the five emphasis areas with appropriate key countermeasures. Each emphasis area is paired with safety countermeasures shown to be effective at addressing the emphasis area and crash type. The countermeasures represent "what" the City can implement to increase safety, while the following implementation section discusses how these improvements will be rolled out. Additional countermeasures that also may be effective at reducing crashes associated with a given emphasis area are included in **Appendix A**.

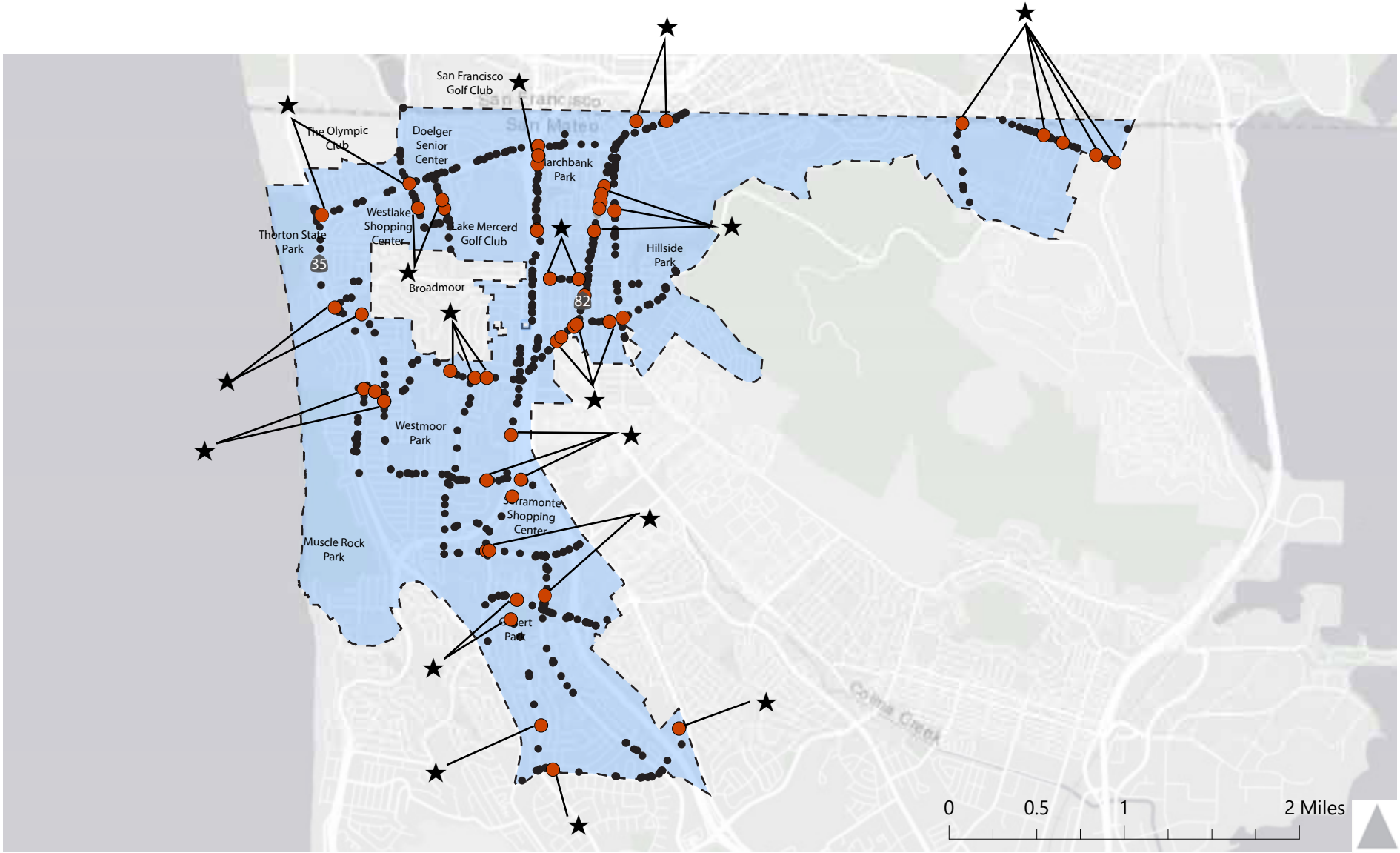
Stormwater bulb-outs installed at the intersection of Westlawn Avenue and Fieldcrest Drive as part of the Westlake Elementary School SRTS/GI project (Photo Credit: Daly City).

Emphasis Area 1 - Crashes on Arterials

Crashes occurring on arterials and collectors. This emphasis area represents fatalities and serious injuries occurring on Daly City's high-volume roadways: arterials in Daly City generally have a roadway capacity of 22,500 daily vehicles, while collectors can accommodate 11,000 vehicles daily. In Daly City, crashes on arterials account for 64% of total fatalities and serious injuries, as well as a significant proportion by mode: 45% percent of auto, 83% of bicycle, and 68% of pedestrian.



Key Countermeasures



Legend

- ★ ● KSI Crash (50 total; 54 fatalities or serious injuries)
- • Non-KSI Crash
- City of Daly City

Note: Some KSI crashes resulted in more than one fatality or serious injury. Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

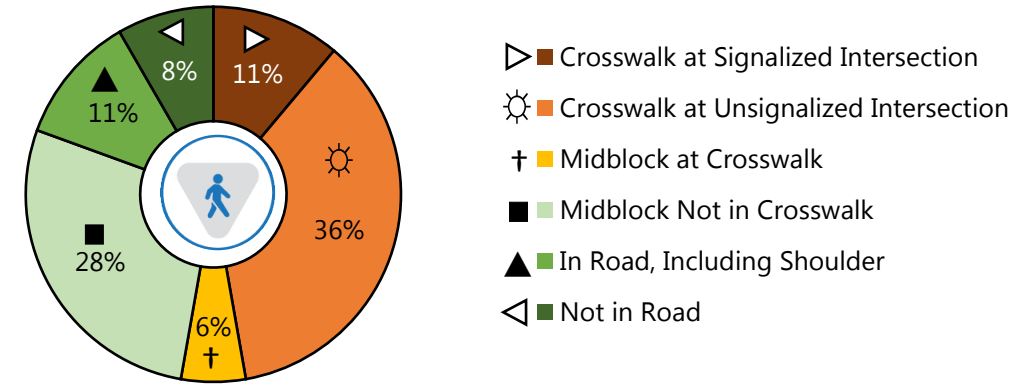
Figure 3

Emphasis Area 1: Daly City Crashes on Arterials

Emphasis Area 2 - Pedestrian Involved

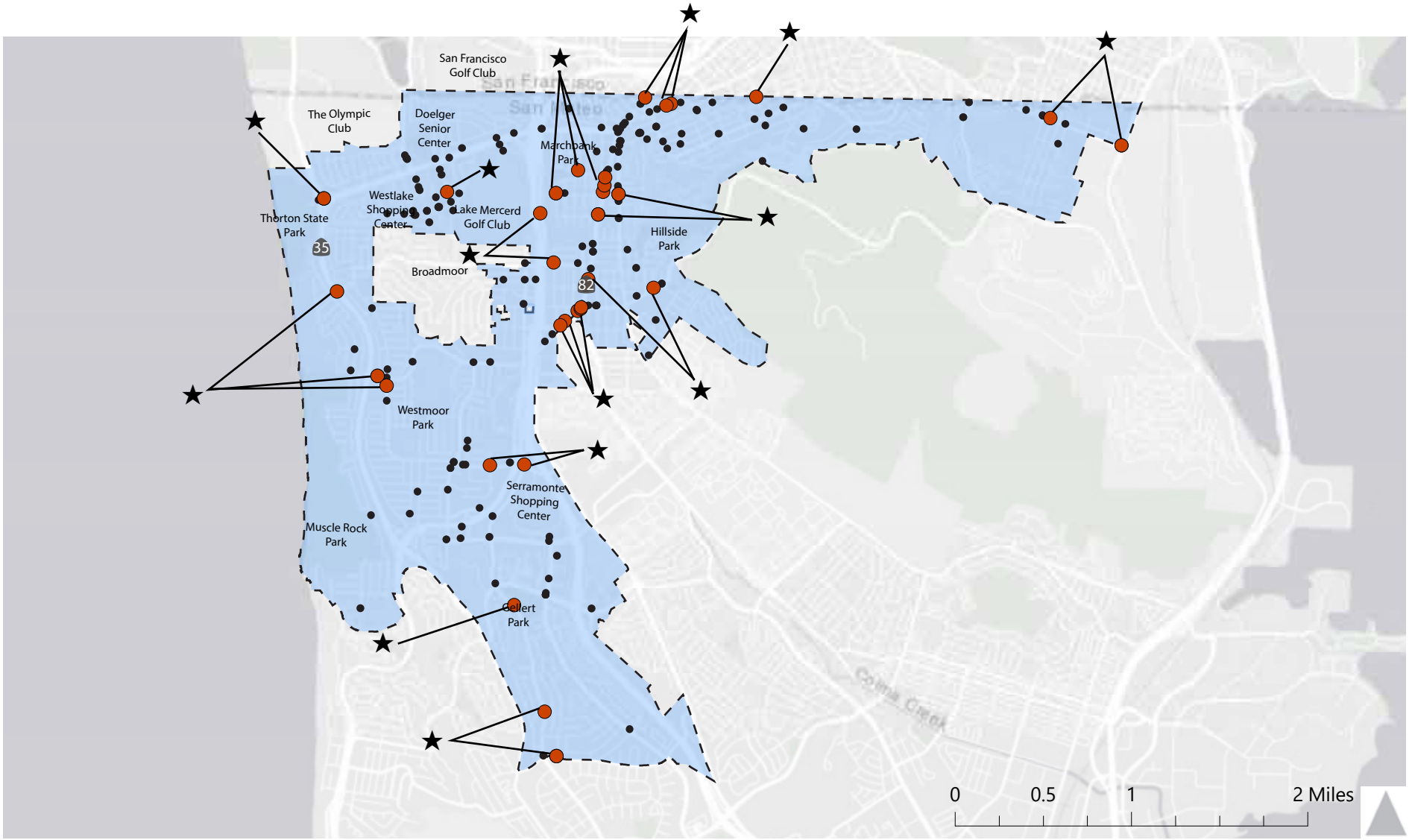
Crashes including one or more pedestrians. Forty-four percent of fatalities and serious injuries in Daly City involve a pedestrian. Of these, 53% occurred while pedestrians were crossing a roadway in a crosswalk: 11% at signalized intersections, 36% at unsignalized intersections, and 6% at midblock crosswalks. The remaining 47% of pedestrian fatalities and serious injuries occurred: midblock where no crosswalk was present (28%), while pedestrians walked along a roadway (11%), and outside of the roadway (such as in a parking lot; 8%).

Pedestrian Fatalities and Serious Injuries - Pedestrian Actions



Key Countermeasures

- Pedestrian Countdown Signal Head
- New Traffic Signals
- Leading Pedestrian Interval
- Pedestrian Hybrid Beacon
- Rectangular Rapid Flash Beacon (RRFB)
- Bulb-outs and Curb Extensions
- Sidewalk and Pathway to Close Gap
- High Visibility Crosswalks-Advance Stop or Yield Lines
- Marked Crossings at Controlled Locations



Legend

★ ● KSI Crash (37 total; 37 fatalities or serious injuries)

• Non-KSI Crash

City of Daly City

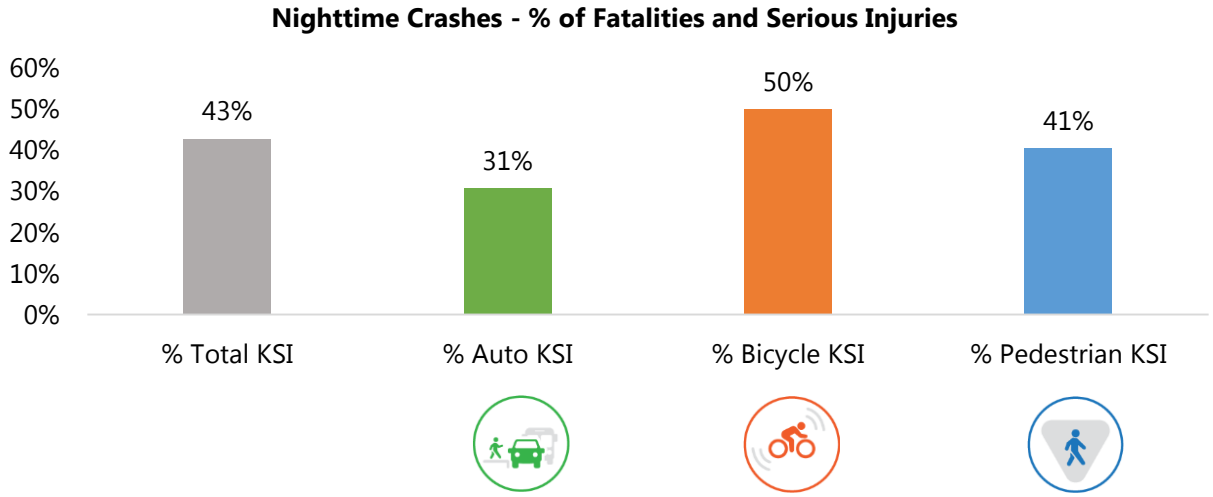
Note: Some KSI crashes resulted in more than one fatality or serious injury. Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

Figure 4

Emphasis Area 2: Pedestrian Involved

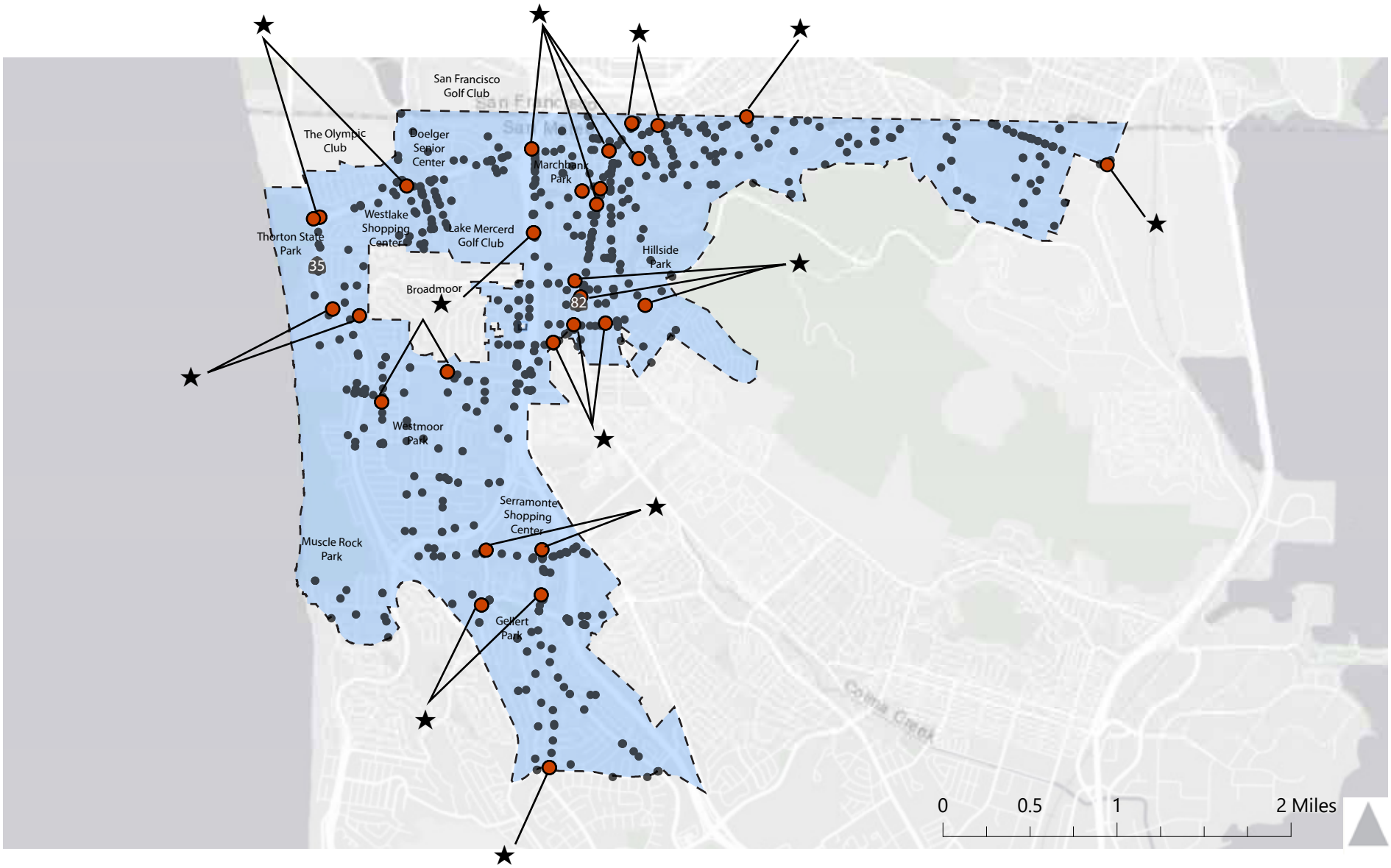
Emphasis Area 3 - Nighttime Crashes

Crashes occurring between 6 PM and 1 AM. Nighttime crashes resulted in 43% of total fatalities and serious injuries. Pedestrians were most impacted by nighttime crashes, with nearly 50% of pedestrian fatalities and serious injuries occuring between 6 PM and 1 AM. Most nighttime fatalities and serious injuries occurred between Thursday and Sunday, with a peak on Saturday evening (between 6 PM and 1 AM).



Key Countermeasures

- High Visibility Crosswalks with Advance Stop or Yield Lines
- Bulb-outs and Curb Extensions
- Pedestrian-Scale Lighting
- Parking Restrictions near Intersections
- Rectangular Rapid Flashing Beacon (RRFB)
- Backplates with Retroreflective Borders



Legend

★ ● KSI Crash (32 total; 36 fatalities or serious injuries)

• Non-KSI Crash

City of Daly City

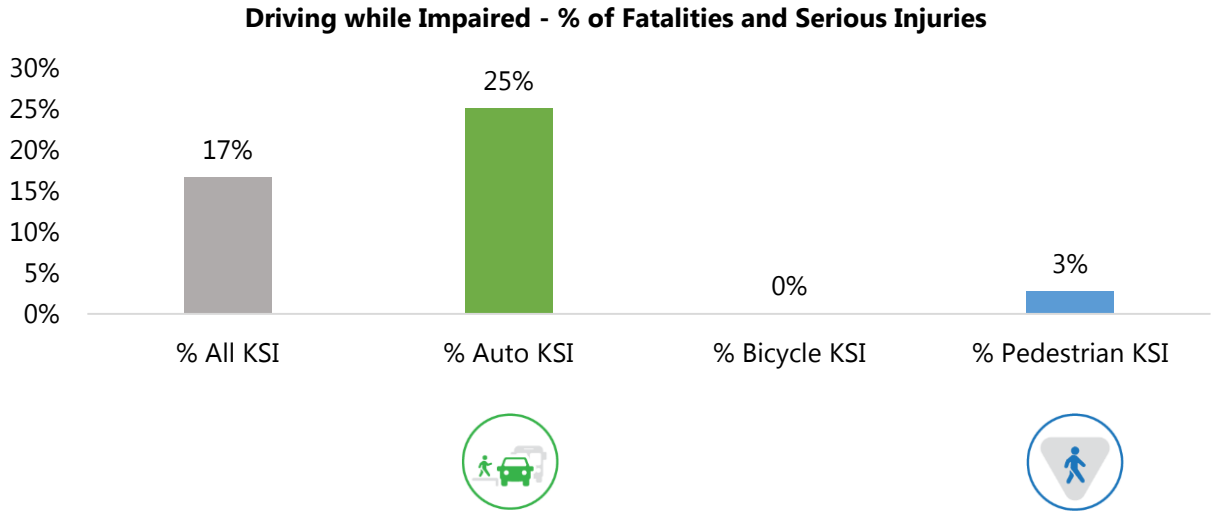
Note: Some KSI crashes resulted in more than one fatality or serious injury. Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

Figure 5

Emphasis Area 3: Nighttime Crashes

Emphasis Area 4 - Influence of Drugs or Alcohol

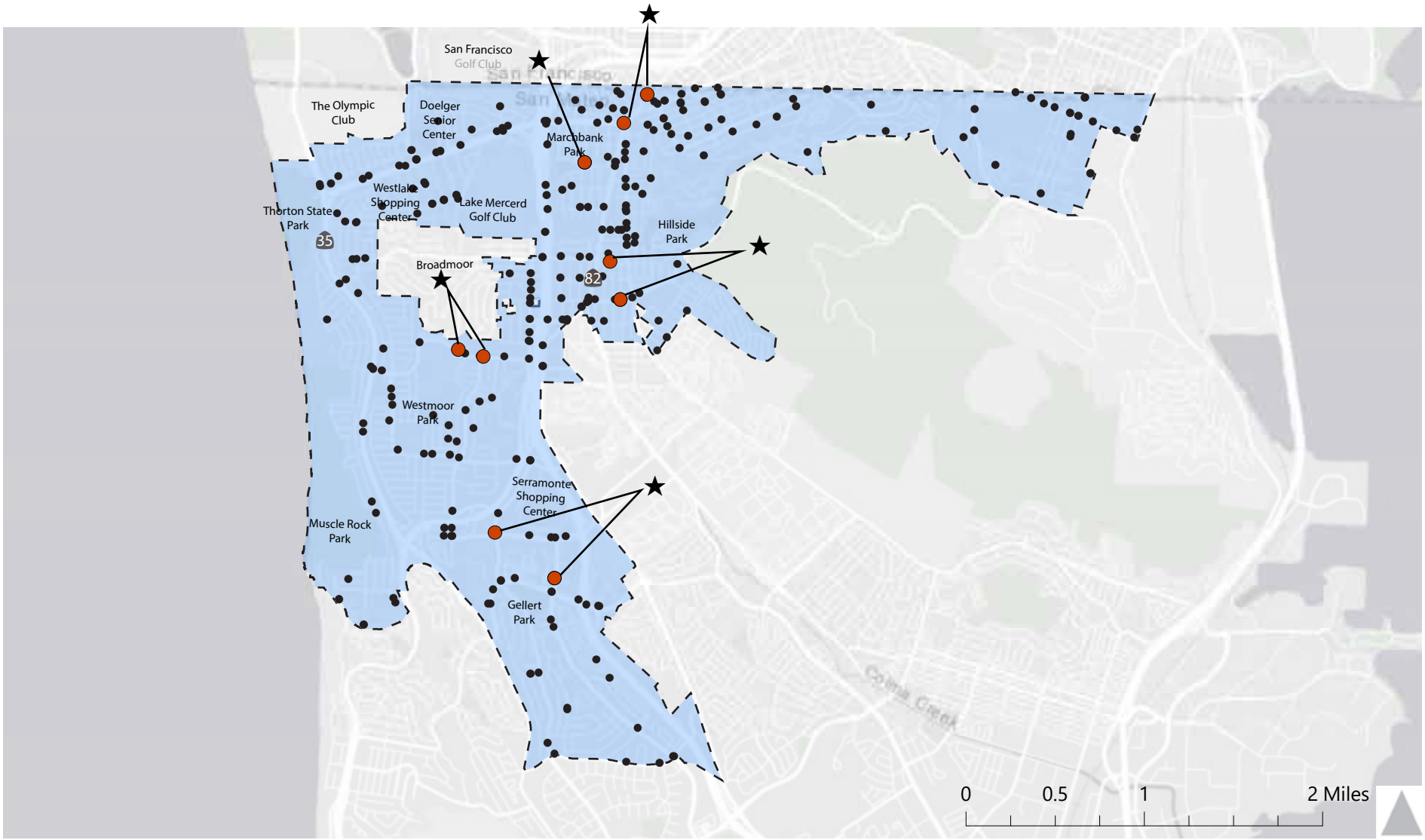
Crashes occurring while a driver is under the influence of drugs or alcohol. Fatalities and serious injuries involving the influence of drug and alcohol comprise 17% of total fatalities and serious injuries in Daly City. These crashes primarily impact drivers: 25% of auto fatalities and serious injuries are the result of impaired driving. No bicyclists were impacted by impaired driving, but one fatality or serious injury (3%) involved a pedestrian.



Key Countermeasures

Education, Public Service Announcements

Focused Enforcement



Legend

★ ● KSI Crash (10 total; 14 fatalities or serious injuries)

• Non-KSI Crash

City of Daly City

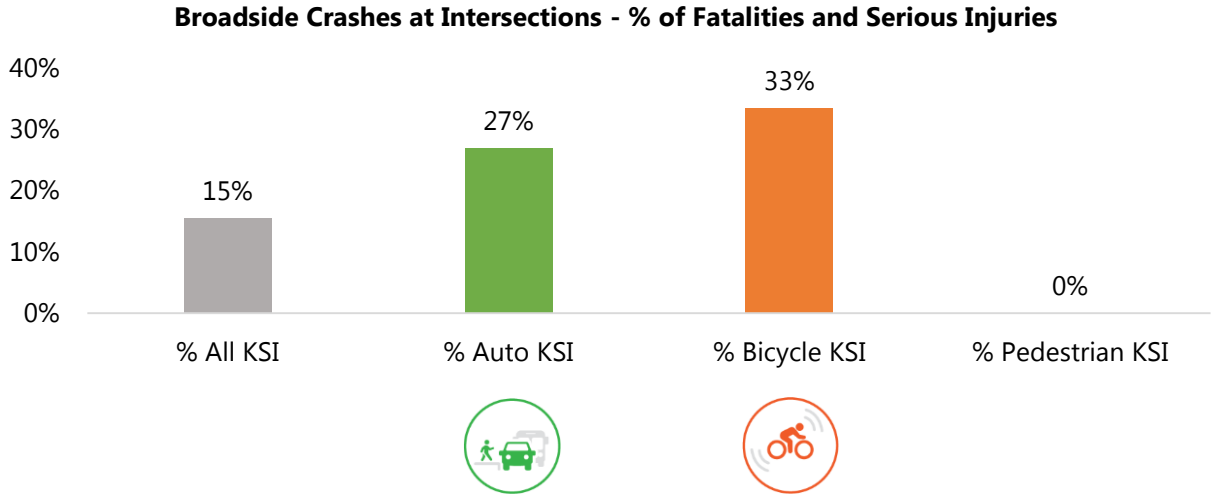
Note: Some KSI crashes resulted in more than one fatality or serious injury. Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

Figure 6

Emphasis Area 4: Driving While Impaired

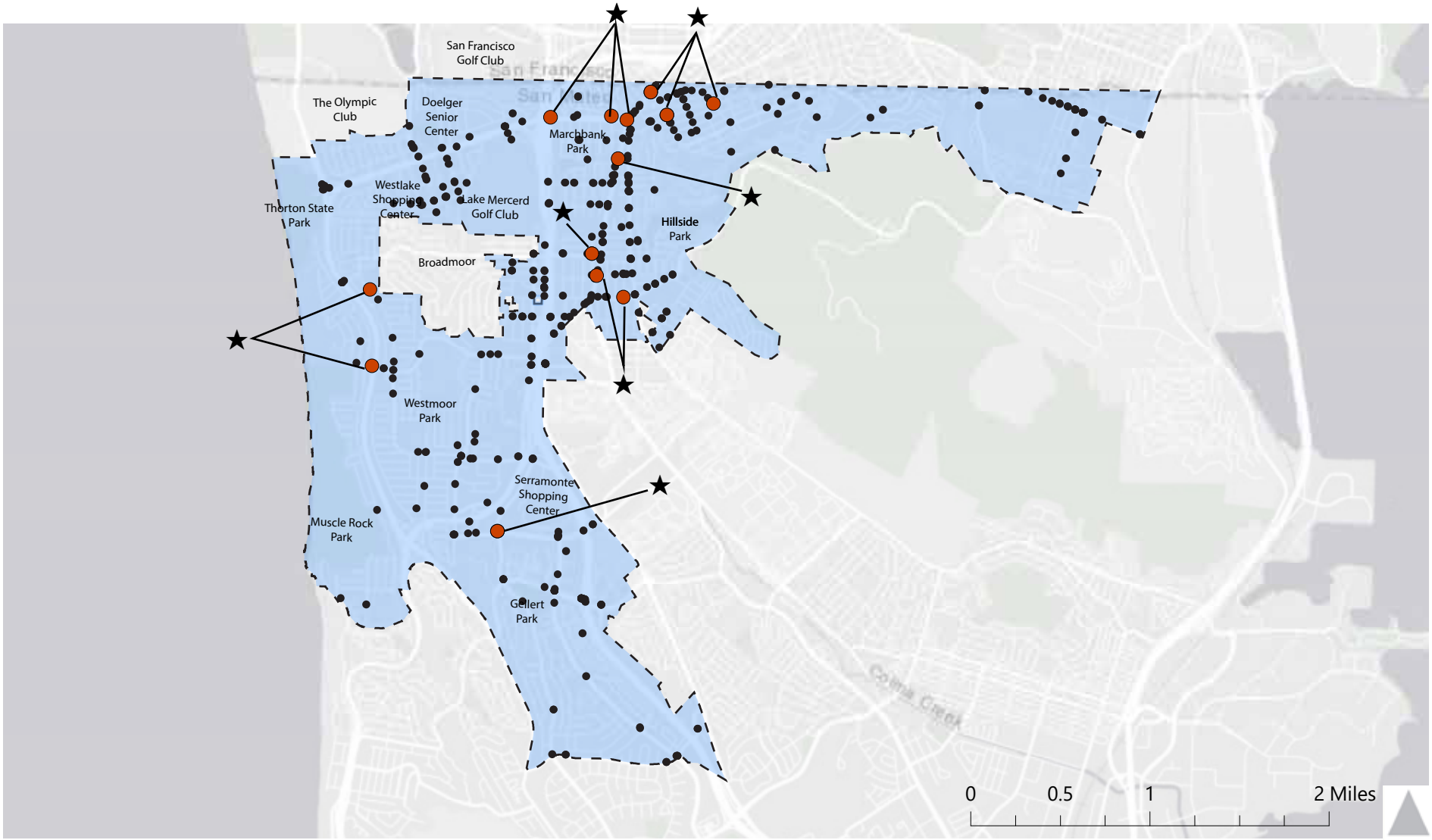
Emphasis Area 5 - Broadside Crashes At Intersections

Crashes occurring as a result of one vehicle colliding with the side of another vehicle or bicycle (also known as a t-bone crash). Broadside crashes at intersections between two vehicles comprise 27% of auto fatalities or serious injuries, and broadside crashes at intersections between a vehicle and a bicycle make up to 33% of bicycle fatalities or serious injuries. Broadside crashes occurred at unsignalized intersections (62%) more frequently than at signalized intersections (38%).



Key Countermeasures

- Signal Timing Improvements
- Protected Turns
- Roundabouts
- Bike Intersection Markings
- Parking Restrictions near Intersections



Legend

★ ● KSI Crash (11 total; 13 fatalities or serious injuries)

• Non-KSI Crash

City of Daly City

Note: Some KSI crashes resulted in more than one fatality or serious injury. Analysis excludes crashes on major controlled access Caltrans roadways (i.e., Interstate 280 and Route 1) and crashes on interchange ramps.

Figure 7

Emphasis Area 5: Broadside Crashes at Intersections

VISION ZERO IMPLEMENTATION

Daly City developed its Vision Zero Action Plan based on the crash analysis and stakeholder feedback. The Action Plan aims to take advantage of available funding to invest in high priority projects and policies with the most impact on safety.

Daly City's goal is to eliminate fatalities and serious injuries by 2035 through safety-focused transportation projects and programs.

This implementation section is a road map for action and a tool for measuring progress towards the City's safety goal to address fatal and severe crashes and their consequences. Based on the Safe System approach, implementation is segmented into several sections: Vision Zero Program, Safe Streets, Safe Speeds, Safe People, and Safe Vehicles. While the Safe System approach doesn't explicitly call out how Vision Zero is institutionalized within a jurisdiction, leadership and partnerships are key to achieving Daly City's safety goals.

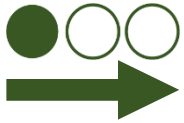
Each action on the following pages addresses the five emphasis areas and other safety challenges. The actions each include an approximate timeline, key partners, and level of City resources required. Short-term actions generally can be implemented within 3 years; medium-term actions generally can be implemented within 10 years; and long-term actions generally can be implemented within 15 years. Some actions are considered ongoing. They will start during the short-, medium-, or long-term period.

To support implementation, **Appendix B** outlines potential funding opportunities for Daly City, including opportunities at the county, regional, state, and federal levels. City staff will lead the pursuit of funding, which will be used to support the implementation of the actions shown here, each under the direction of a City Department with collaboration across key partners.

Tying it All Together: The crash analysis identified five emphasis areas and countermeasures to address them. These countermeasures are examples of **what** Daly City can do to address safety challenges. The implementation actions outlined next focus on the **when, where, how,** and **who** for addressing safety challenges. Some implementation actions explicitly refer to one or more emphasis areas, while others are broader, with benefits across all five identified emphasis areas.

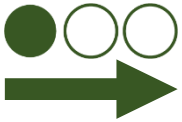
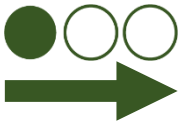
Vision Zero Program

The Daly City Vision Zero Program establishes a framework for the City's approach to achieve its Vision Zero goal. Program strategies are set to institutionalize Vision Zero in Daly City, strengthen partnerships, and regularly monitor and evaluate the outcome.

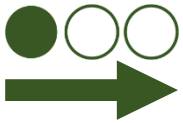
Institutionalize Vision Zero in Daly City					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
VZ1	City Council Pledge	City Council will sign a pledge as a forward to the Vision Zero Action Plan. City Council will adopt the Vision Zero Action Plan by resolution.		City Council	
VZ2	Vision Zero Coordinator(s)	Vision Zero Coordinator(s) will be responsible for monitoring Vision Zero progress measures, attend Traffic Safety Committee meetings, identify HIN safety improvements, and submit Vision Zero grant funding applications.		City Manager/ Public Works/ Police	
VZ3	Succession Planning	Public Works Director will include a discussion of Daly City's Vision Zero program as a part of his/her orientation for newly elected City officials.		Public Works	
VZ4	Future Plans and Policies	Future planning, design and policy documents will review and, where relevant, reference and continue to build on the Vision Zero action plan.		All	

Timeline Short-term Medium-term Long-term Ongoing 

City Resources Low Medium High 

Strengthen Partnerships					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
VZ5	Vision Zero Cities	Vision Zero Coordinator(s) will engage and collaborate with other Vision Zero Cities to share successes and lessons learned.		All	
VZ6	Stakeholder Engagement	City Staff will continue to engage appropriate stakeholders to achieve stated Vision Zero goals.		All	
VZ7	Caltrans Collaboration	City Staff to improve collaboration with Caltrans and other stakeholders to improve safety on State ROW, including along Mission St/El Camino Real, Freeway On-ramp/Off-ramps, and Skyline Boulevard.		Public Works/Caltrans	
VZ8	Safe Routes to Schools	City Staff to engage regularly with schools and the school districts to improve two-way communications.		Public Works / Police/Schools	
VZ9	Traffic Safety Committee/ Vision Zero Task Force	City Staff to share and discuss findings from Police Department's traffic investigation team for KSI crashes during Traffic Safety Committee meetings.		Police/ Public Works/Fire Department	

	Short-term	Medium-term	Long-term	Ongoing		Low	Medium	High
imeline					**City Resources**			

Regularly Monitor and Evaluate					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
VZ10	Living Document	Vision Zero Coordinator(s) to monitor Vision Zero Action Plan and update document periodically and whenever necessary.		Public Works	
VZ11	Data Collection	City Staff to collect data before and after the implementation of safety projects.		Public Works	
VZ12	Field Personnel	City field personnel, including police officers and public works maintenance staff to provide feedback and suggestions to improve safety on City streets.		All	
VZ13	New Technologies and Legislation	Vision Zero Coordinator(s) to stay informed on new emerging technologies and legislative developments that help to further Vision Zero goals.		All	
VZ14	Equity	City Staff to work with San Mateo County Health to better understand inequities in the City to deliver Vision Zero safety improvement projects and programs equitably.		Public Works/ San Mateo County	
VZ15	Hospital Data	City Staff to work with San Mateo County Health to improve the completeness of existing crash data by working to obtain injury data from local hospitals.		San Mateo County/Local Hospitals	

Timeline Short-term Medium-term Long-term Ongoing

City Resources Low Medium High

SAFE STREETS

The second strategy is Safe Streets aiming to identify resources for capital improvements, prioritize quick and/or low-cost improvements, and focus on bicycle and pedestrian improvements.

Identify Resources for Capital Improvements					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
1	HIN-Focused CIP Projects	City Staff will add a new logo identifier in the Capital Improvement Program (CIP) book for all projects with safety improvements on the HIN.	●○○	Public Works	●○○
2	HIN Funding	City Staff will pursue funding for capital projects with safety improvements on the HIN (e.g. grant, Highway Safety Improvement Program)	●○○→	Public Works	●●●
3	Private Development and the HIN	City will develop policies requiring private developments along HIN to identify and install safety improvements, as appropriate.	●●○	Public Works/ Planning	●●○
4	Private Development - Bike/Ped Impacts	City will develop policies requiring private developments in the City to assess project's impact to existing pedestrian and bicycle facilities.	●●○	Public Works/ Planning	●●○

Timeline: Short-term ●○○ Medium-term ●●○ Long-term ●●● Ongoing →

City Resources: Low ●○○ Medium ●●○ High ●●●

Prioritize Quick and/or Low-Cost Improvements					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
5	Annual Low-Cost HIN Project	City Staff will create a list of low-cost HIN safety improvement projects recommended from the SSAR and WBDC plans and develop a new annual low-cost HIN safety improvement program. Projects should have construction estimates of less than $100,000.		Public Works/ Finance	
6	Annual Street Resurfacing and Slurry projects to Include Low-Cost HIN Improvements	City Staff to review annual street resurfacing and slurry projects along the HIN, review list of low-cost safety improvement projects, and where feasible, include low-cost elements as part of the project scope of work.		Public Works	
7	CIP Projects to Include Low-Cost HIN improvements	City Staff to review CIP projects with improvements along the HIN, review list of low-cost safety improvement projects, and where feasible, include low-cost elements as part of the project scope of work.		Public Works	

Timeline Short-term Medium-term Long-term Ongoing 

City Resources Low Medium High 

Develop Guidance for Bicycle and Pedestrian Improvements					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
8	High-Visibility Bicycle Markings	City Staff to create guidelines for the deployment of high visibility bicycle markings for use on City streets to increase awareness of bicyclists.	●●○	Public Works	●○○
9	High-Visibility Crosswalks and Bulb-Outs	City Staff to create guidelines for the deployment of high visibility crosswalk markings and bulb-outs for use on City streets to increase pedestrian safety.	●●○	Public Works	●○○
10	Travel Lane Width	City Staff to create guidelines for minimum travel lane widths on City streets to encourage safer vehicle speeds.	●●○	Public Works	●○○
11	Street Lighting	City Staff to develop lighting design guidance along HIN to improve pedestrian visibility at crossings.	●●○	Public Works/ City Manager/ Planning	●●○
12	Pedestrian Crossing Warning Devices	City Staff to develop guidelines for the deployment of MUTCD-compliant pedestrian-actuated flashing beacon system to enhance awareness of pedestrian crossings	●●○	Public Works	●●○
Improve Safe Access to Transit					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
13	Transit Stops	City Staff to work with the San Mateo County Transit District, the San Francisco Municipal Transportation Agency and other shuttle/bus operators to review transit stop locations for safety and access.	●●○→	Public Works/SamTrans/SFMTA	●●○

Timeline: Short-term ●○○ Medium-term ●●○ Long-term ●●● Ongoing →

City Resources: Low ●○○ Medium ●●○ High ●●●

In 2018, a traffic signal was installed at Serramonte Boulevard and Callan Boulevard, replacing stop signs on all four approaches on the intersection (Photo Credit: Daly City).

Safe Speeds

Daly City Vision Zero encourages traveling at safe speeds by implementing actions to adjust intersection controls to address speeding through enforcement.

Reduce Speeds through Operations and Design					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
S1	Traffic Signal Improvements	City Staff to review 10-year CIP and prioritize new traffic signal installations along HIN.	●●○	Public Works	●○○
S2	Traffic Signal Timing	City Staff to review traffic signal timing along HIN and consider safety improvements.	●●○	Public Works	●●○
S3	Reduce Vehicle Speeds	City Staff to encourage the design of roadways to support reductions in speeds along the HIN.	●●○	Public Works	●●○
Address Speeding through Enforcement					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
S4	Deploy Saturated Traffic Enforcement Program (STEP) along HIN.	Police to deploy STEP operations within Daly City along HIN.	●●○→	Police	●●○
S5	Prioritize Speeding Citations	Police to prioritize speeding violation related citations.	●○○→	Police	●●○
S6	Discourage Speeding	Police to discourage speeding along the HIN with traditional radar speed control trailers and other innovative methods.	●○○	Police	●●○

Timeline Short-term ●○○ Medium-term ●●○ Long-term ●●● Ongoing →

City Resources Low ●○○ Medium ●●○ High ●●●

SAFE PEOPLE

Daly City Vision Zero encourages safe travel behaviors by defining actions to develop and implement Vision Zero public information campaign and to focus enforcement on high-risk behaviors and locations.

Develop and Implement Vision Zero Public Information Campaign					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
P1	Vision Zero Logo	City Staff to develop Daly City Vision Zero project logo for use in advertising campaigns.	●○○	Public Works/ City Manager	●●○
P2	Construction Signage	City Staff to develop standard detail for construction signage to be used at Vision Zero project construction sites.	●○○	Public Works	●●○
P3	Public Outreach	City Staff to develop advertising campaign material to be distributed with targeted social media, and other public outreach avenues.	●●○	Public Works/ City Manager	●●○

Timeline: Short-term ●○○ | Medium-term ●●○ | Long-term ●●● | Ongoing →

City Resources: Low ●○○ | Medium ●●○ | High ●●●

Focus Enforcement on High-Risk Behaviors and Locations					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
P4	Prioritize HIN Citations	Police to prioritize patrols and traffic citations on streets within the HIN by adjusting existing patrol routes to place a higher emphasis on HIN.	●○○	Police	●●○
P5	Crossing Guards	Police to work with schools to better allocate crossing guards where they are most needed. Provide training for school staff to augment crossing guard duties.	●●○	Police/Schools	●●○
Improve City Staff Driving Behavior					
#	**Action Name**	**Action Description**	**Timeline**	**Key Partners**	**City Resources**
P6	Safe Vehicle Training	City Staff to provide training on the safe operation of City vehicles to City employees.	●●○→	Public Works/ Human Resources	●●○
P7	First Responder Training	City Staff to provide training to first responders for safe driving behavior when traveling to and from emergency sites.	●●○→	Police	●●○

Timeline Short-term ●○○ Medium-term ●●○ Long-term ●●● Ongoing →

City Resources Low ●○○ Medium ●●○ High ●●●

SAFE VEHICLES

Daly City Vision Zero promotes advancement of vehicle technology to improve the safety for all road users.

#	Action Name	Action Description	Timeline	Key Partners	City Resources
V1	Non-Auto Transportation	City Staff to maintain and increase alternative transportation options in the City, especially in underserved communities.	●●○→	Public Works	●●○
V2	Fleet Modernization	City Staff, as a part of the City's regular vehicle replacement program, will evaluate reasonable and proven safety upgrades for new vehicle purchases and retrofit existing vehicles with safety features when practical.	●●○→	Public Works	●●○

Timeline Short-term ●○○ Medium-term ●●○ Long-term ●●● Ongoing →

City Resources Low ●○○ Medium ●●○ High ●●●

Daly City DUI command center, police vehicle and motorcycle. (Photo Credit: Daly City)

The identified actions address each of the five emphasis areas. The following table summarizes how the emphasis areas intersect with the Safe System pillars.

Safe System Pillars	Action Categories	1. Crashes on Arterials	2. Pedestrian Involved	3. Nighttime Crashes	4. Driving while Impaired	5. Broadside at Intersections
Vision Zero Program*	Institutionalize Vision Zero in Daly City	x	x	x	x	x
	Strengthen Partnerships	x	x	x	x	x
	Regularly Monitor and Evaluate	x	x	x	x	x
Safe Streets	Identify Resources for Capital Improvements	x	x			x
	Prioritize Quick and/or Low-Cost Improvements	x	x			x
	Develop Guidance for Bicycle and Pedestrian Improvements	x	x	x		x
	Improve Safe Access to Transit	x	x			
Safe Speeds	Reduce Speeds through Operations and Design	x	x			x
	Address Speeding through Enforcement	x	x			x
Safe People	Develop and Implement Vision Zero Public Information Campaign	x	x	x	x	x
	Focus Enforcement on High-Risk Behaviors and Locations	x	x	x	x	x
	Improve City Staff Driving Behavior	x	x	x		x
Safe Vehicles	Non-Auto Transportation	x	x			x
	Fleet Modernization	x	x	x		x

* While the Safe System approach doesn't explicitly call out how Vision Zero is institutionalized within a jurisdiction, leadership and partnerships are key to achieving Daly City's safety goals.

How to Get Involved

Daly City officials and staff need the help of the community to carry out the actions presented in this plan and to eliminate traffic fatalities and serious injuries in Daly City by 2035. Everyone has a personal responsibility to make the safe transportation choices and to spread the word about why traffic safety matters, making the City's efforts even more effective.

When **driving**, be aware of surroundings, obey the rules of the road, observe speed limits, and yield to pedestrians and bicyclists when turning at intersections.

When **bicycling**, obey the rules of the road and use lights and reflectors at night.

As a **pedestrian**, stay alert, stay visible to the extent possible, and do not assume that drivers see you or will yield when turning.

Bike lanes on John Daly Boulevard (Photo Credit: Daly City).

APPENDIX A. COUNTERMEASURE TOOLBOX

These countermeasures are tools that can be applied towards various implementation approaches across the Safe System pillars. The resources included in the table are summarized below:

- **Systemic Safety Analysis Report (SSAR) Countermeasure List:** Daly City is current developing an SSAR to address safety challenges throughout the jurisdiction. As part of the project, the Daly City developed an Engineering and Non-Engineering Countermeasures Memo (February 2019) including a list of capital and programmatic measures that could be used to improve safety.
- **HSIP Cycle 9/LRSM:** Developed by the Caltrans Division of Local Assistance, this resource aims to maximize the safety benefits for local roadways by encouraging all local agencies to proactively identify and analyze their safety issues and to position themselves to compete effectively in Caltrans' statewide, data-driven call-for-projects.
- **FHWA Crash Modification Factor (CMF) Clearinghouse:** A CMF is used to compute the expected number of crashes after implementing a countermeasure on a road or intersection. The Crash Modification Factors Clearinghouse provides a searchable online database of CMFs along with guidance and resources on using CMFs in road safety practice. It also provides guidance to researchers on best practices for developing high quality CMFs.
- **FHWA PEDBIKESAFE:** The Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE) and Bicycle Safety guide and Countermeasure Selection System (BIKESAFE) are intended to provide practitioners with the latest information available for improvement the safety and mobility of those who walk and bike.

Countermeasure Categories	Countermeasures	Efficacy	Cost	Complexity	Location Type	Included in SSAR Countermeasure List	Included in HSIP Cycle 8 / LRSM	Included in FHWA CMF Clearinghouse	Included in FHWA PEDBIKESAFE	Countermeasure Notes
Signalization	Pedestrian Countdown Signal Head				Signalized Intersections	Yes	Yes		Yes	
	Increase Pedestrian Crossing Time, Pedestrian Detection	Med	Low	Low	Signalized Intersections				Yes	
	Leading Pedestrian Interval	Med	Low	Low	Signalized Intersections	Yes		Yes	Yes	
	New Traffic Signals	High	High	Med	Unsignalized Intersections				Yes	If signal is warranted
	Pedestrian Hybrid Beacon	High	High	Med	Mid-Block Locations; Unsignalized Intersections	Yes			Yes	Requires marked crosswalk
	Pedestrian-Activated Crosswalk Sign		Med	Low	Mid-Block Locations; Unsignalized Intersections	Yes				
	Pedestrian-Activated Crosswalk Beacon		Med	Low	Mid-Block Locations; Unsignalized Intersections	Yes	Yes			
	Signal Timing Improvements (including extend all-red time)	High	Low	Low	Signalized Intersections				Yes	
Geometric	Bulb-outs/ Curb Extensions	Med	Low	Low	All Intersections	Yes			Yes	
	Sidewalk/Pathway to Close Gap	Unknown	Med	Med	All Streets		Yes		Yes	
	Narrow Lanes	Med	Med	Low	All Streets			Yes	Yes	

Countermeasure Categories	Countermeasures	Efficacy	Cost	Complexity	Location Type	Included in SSAR Countermeasure List	Included in HSIP Cycle 8 / LRSM	Included in FHWA CMF Clearinghouse	Included in FHWA PEDBIKESAFE	Countermeasure Notes
	Pedestrian Refuge Islands/ Medians	High	Med	Low	All Intersections and Mid-Block Crossing Locations	Yes			Yes	
	Separated Bikeways (Cycle tracks)	Med	High	High	Typically Arterials			Yes	Yes	
	Road Diets	High	Med	High	Multi-Lane Arterials	Yes			Yes	
	Roundabouts	High	High	High	Controlled Intersections		Yes	Yes	Yes	
	Shared-Use/ Bicycle Path	High	High	High	Corridors with Adjacent Excess Right-of-Way		Yes		Yes	
Signs, Markings, Operational	Bike Box	Low	Low	Low	Signalized Intersections		Yes			MUTCD interim approval
	Bike Intersection Markings	Med	Low	Low	All Intersections			Yes	Yes	
	Bike Lane				Typically Collectors	Yes	Yes	Yes	Yes	
	Buffered Bike Lanes	Low	Med	Med	Typically Arterials		Yes			
	Green Paint/ Conflict Zones	Low	Med	Low	All Streets		Yes	Yes		MUTCD interim approval
	High Visibility Crosswalks with Advance Stop or Yield Lines	High	Low	Low	All Crossing Locations	Yes			Yes	
	Intersection, Street-Scale Lighting (Unsignalized Intersections)	High	Med	Low	Unsignalized Intersections	Yes			Yes	
	Intersection, Street-Scale Lighting (Signalized Intersections)	Low	Low	Low	Signalized Intersections	Yes	Yes		Yes	
	Marked Crossings (unsignalized intersections)	Low	Low	Low	Unsignalized Intersections; Mid-Block Locations		Yes		Yes	
	Parking restrictions near intersections (nearside locations)	High	Low	Low	All Intersections		Yes		Yes	
	Protected Turns (turn pockets and protected or split signal phasing)	High	Med	Med	Signalized Intersections					
	Restrict or Prohibit Turns (including Right Turn on Red Restriction)	Med	Low	Low	All Intersections (Signalized Intersections for RTOR)				Yes	
Speed Control Measures, Miscellaneous	Dynamic/Variable Speed Warning Signs	Med	Med	Low	Citywide	Yes	Yes			
	Reduced Speed School Zone	High	Low	Low	Within 500 Feet of Schools				Yes	15 or 20 mph, per AB 321
Education	Education, PSAs	Med	Unknown	Unknown	Citywide				Yes	
Enforcement	Video enforcement for red light running or speeding	High	Unknown	High	Citywide	Yes		Yes	Yes	Requires legislative changes

APPENDIX B. FUNDING OPPORTUNITIES

The following table summarizes several competitive grant funding programs available to local agencies for safety-related plans, infrastructure, or education/encouragement programs. Grant sources and requirements change often. Readers are advised to contact the agencies in charge of administering each grant to confirm information presented in this appendix.

Name	Administering Agency	Local Match	Eligible Projects	Notes & Requirements
Measure A Pedestrian and Bicycle Program	San Mateo County Transportation Authority (SMCTA)	Minimum of 10%	▪ New capital infrastructure, including project planning	▪ Evaluation criteria include project readiness and need, effectiveness, policy consistency, sustainability, and funding leverage
Measure W Bicycle and Pedestrian Program	SMCTA	New program, match is TBD	▪ New program, to be defined pending completion of SMCTA Strategic Plan (end of 2019)	▪ Solicitation could occur in conjunction with Measure A Bicycle and Pedestrian Program
Community Implementation Funding	San Mateo County Health	Not required	▪ Community education ▪ City planning processes ▪ Action-focused research ▪ Promotion of systems change ▪ Technical assistance	▪ Address health equity, focusing on low-income, communities of color, or older adults
Safe Routes to School	San Mateo Office of Education	Not required	▪ May address the five "E's": education, encouragement, enforcement, engineering, and evaluation ▪ Project coordination	▪ Applicant must be a nonprofit organization; Daly City could work with local organizations to apply

Name	Administering Agency	Local Match	Eligible Projects	Notes & Requirements
One Bay Area Grant Program (OBAG)	MTC	11.47% of total project cost in local funds	▪ Bicycle and pedestrian infrastructure that reduce vehicle trips ▪ Safe Routes to School planning, infrastructure, and education/ encouragement	▪ Projects must be in or near Priority Development Areas (PDAs) identified in Plan Bay Area ▪ Funded by Surface Transportation Block Grant Program (STBGP) and Congestion Mitigation and Air Quality (CMAQ) funds
Transportation Development Act Article 3 (TDA3) Local Transportation Fund	MTC	None for capital projects, 50% for planning and education projects	▪ Bicycle and pedestrian design and construction ▪ Bicycle and pedestrian education programs (up to 5% of each jurisdiction's allocation) ▪ Comprehensive bicycle and pedestrian plans	▪ Bikeway projects must meet Caltrans minimum safety design criteria per the California Highway Design Manual ▪ All projects must be reviewed by a Bicycle Pedestrian Advisory Committee ▪ Projects require CEQA clearance prior to TDA funded elements
Transportation Fund for Clean Air (TFCA) grant program	Bay Area Air Quality Management District (BAAQMD)	None	▪ Bicycle and pedestrian infrastructure ▪ Expansions of the Bay Area Bike Share system	▪ Projects must reduce motor vehicle emissions and be consistent (where applicable) with California Highway Design Manual ▪ Bike share expansions must demonstrate viability

Name	Administering Agency	Local Match	Eligible Projects	Notes & Requirements
Active Transportation Program (ATP)	Caltrans and MTC	Not always required, but committing local funds improves score	▪ Bicycle and pedestrian infrastructure ▪ Bicycle and pedestrian education/ encouragement programs ▪ Bicycle and pedestrian plans	▪ Requirements change with each funding cycle ▪ In past rounds, projects had to show potential for increased walking and bicycling and potential for reduced collisions/ improved safety
Highway Safety Improvement Program (HSIP)	Caltrans	0 -10% match depending on engineering countermeasure	▪ Local roadway infrastructure projects with demonstrated crash reduction potential	▪ Projects located in areas with high crash rates or high risk for crashes ▪ Non-safety elements cannot exceed 10% of construction costs ▪ Focused on low-cost safety countermeasures that are implemented incrementally ▪ Determined by benefit-to-cost ratio ▪ High Risk Rural Roads (HR3) as a special rule under HSIP program
Office of Traffic Safety Grants	California Office of Traffic Safety	Not required	▪ Must relate to a Program Priority Area: alcohol-impaired driving, drug-impaired driving, occupant protection, police traffic services, motorcycle safety, distracted driving, emergency medical services, pedestrian and bicycle safety, roadway safety and traffic records, or public relations and marketing	▪ Application must be supported by local crash data

Name	Administering Agency	Local Match	Eligible Projects	Notes & Requirements
Systemic Safety Analysis Report Program	Caltrans	Not required	▪ Jurisdiction-wide plan to identify safety challenges	▪ Daly City is currently developing a Caltrans-funded Systemic Safety Analysis Report
Sustainable Transportation Planning Grant Program	Caltrans	11.47% of total project cost in local funds	▪ Multimodal transportation planning studies ▪ Project identification and prioritization ▪ Conceptual design	▪ Next call for projects is Fall 2019
State Highway Operation and Protection Program (SHOPP)	Caltrans	None required	▪ Repair and preservation on State highways, with four key assets including pavement, bridges, culverts, and Transportation Management Systems (TMS) ▪ Incorporate complete streets elements, such as bicycle and pedestrian facilities as identified through local planning efforts	▪ A repaving project on El Camino recently entered the Project Initiation Document (PID) phase, meaning it has been programmed. The tentative schedule for the project lists construction starting in FY 2026/2027
Accelerating Safety Activities Program (ASAP)	FHWA	20% required for all proposals	▪ Demonstration projects ▪ Training, workshops	▪ Must be an FHWA Safety Focus state: CA is a bicycle and pedestrian focus state ▪ Only proposals of $20,000 or less accepted ▪ Every Day Counts and/or data-driven safety analysis receives additional consideration

Name	Administering Agency	Local Match	Eligible Projects	Notes & Requirements
Section 405 National Priority Safety Programs	NHTSA	20% required	▪ Categories included occupant protection, information systems improvements, impaired driving, distracted driving, graduated licensing, non-motorized safety	▪ In 2019, California awarded grants in five categories (occupant protection, information systems, impaired driving, motorcyclist safety, and non-motorized safety).
Local Technical Assistance Program	Sacramento State University	None required	▪ Technical assistance and training ▪ Equipment loans	▪ Contact Tracy Coan, LTAP Coordinator at 916-278-4524 or tracy.coan@csus.edu