

Local Roadway Safety Plan

Stakeholder Outreach #2

August 28th, 2023



Agenda

- What is Local Roadway Safety Plan (LRSP)?
- LRSP Process
- Community Engagement and Comments
- Collision Analysis and Findings
- Emphasis Areas
- High Injury Intersections & Corridors
- Countermeasure Toolbox
- Safety Projects
- Open Discussion
- Questions



Stakeholder Outreach #2

Santa Clara County:

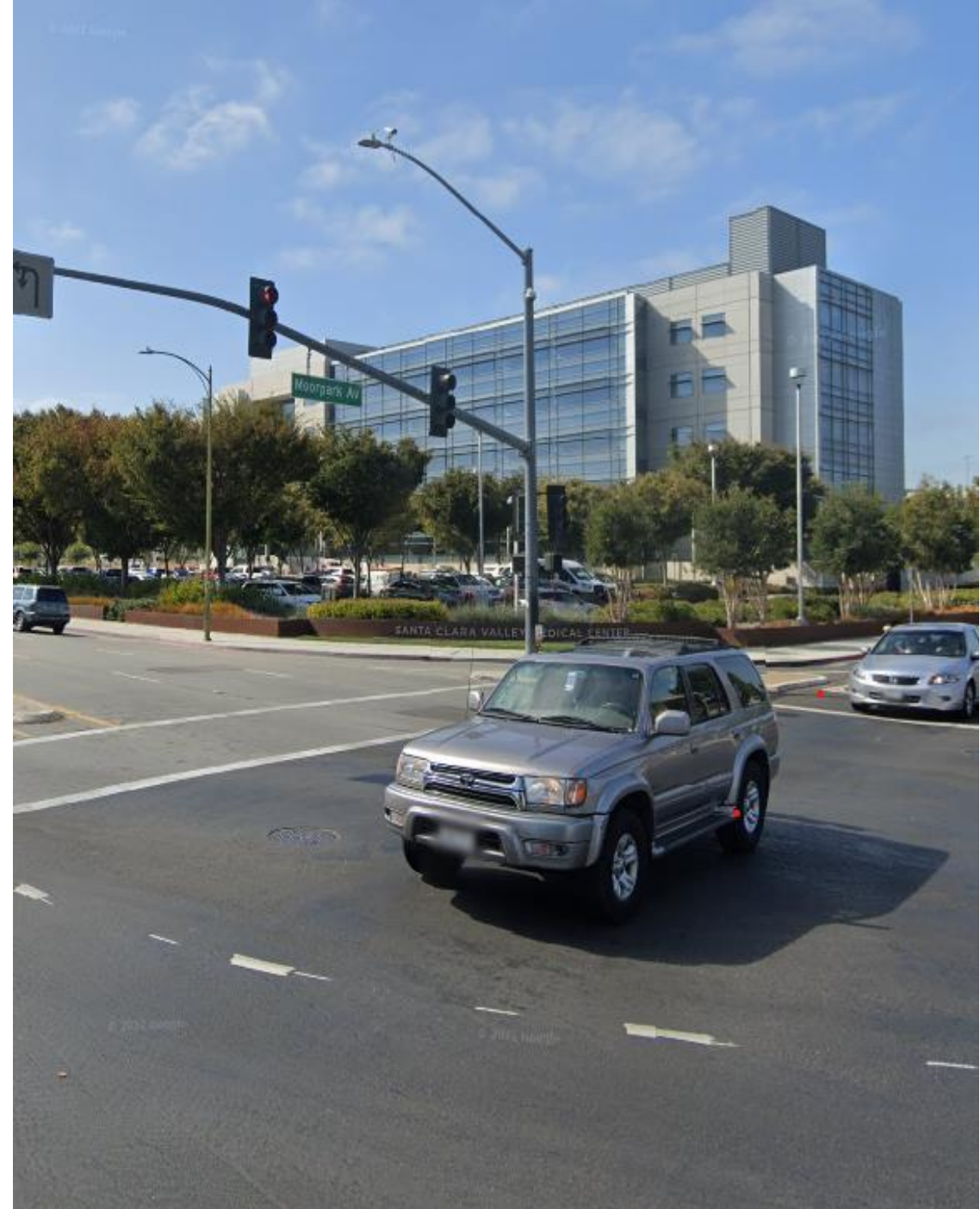
- Clarence Salim, Senior Civil Engineer
- Thein Pham, Senior Civil Engineer
- Peter Perez-Hernandez, Assistant Civil Engineer
- Ronald Short, Junior Civil Engineer

TJKM Transportation Consultants:

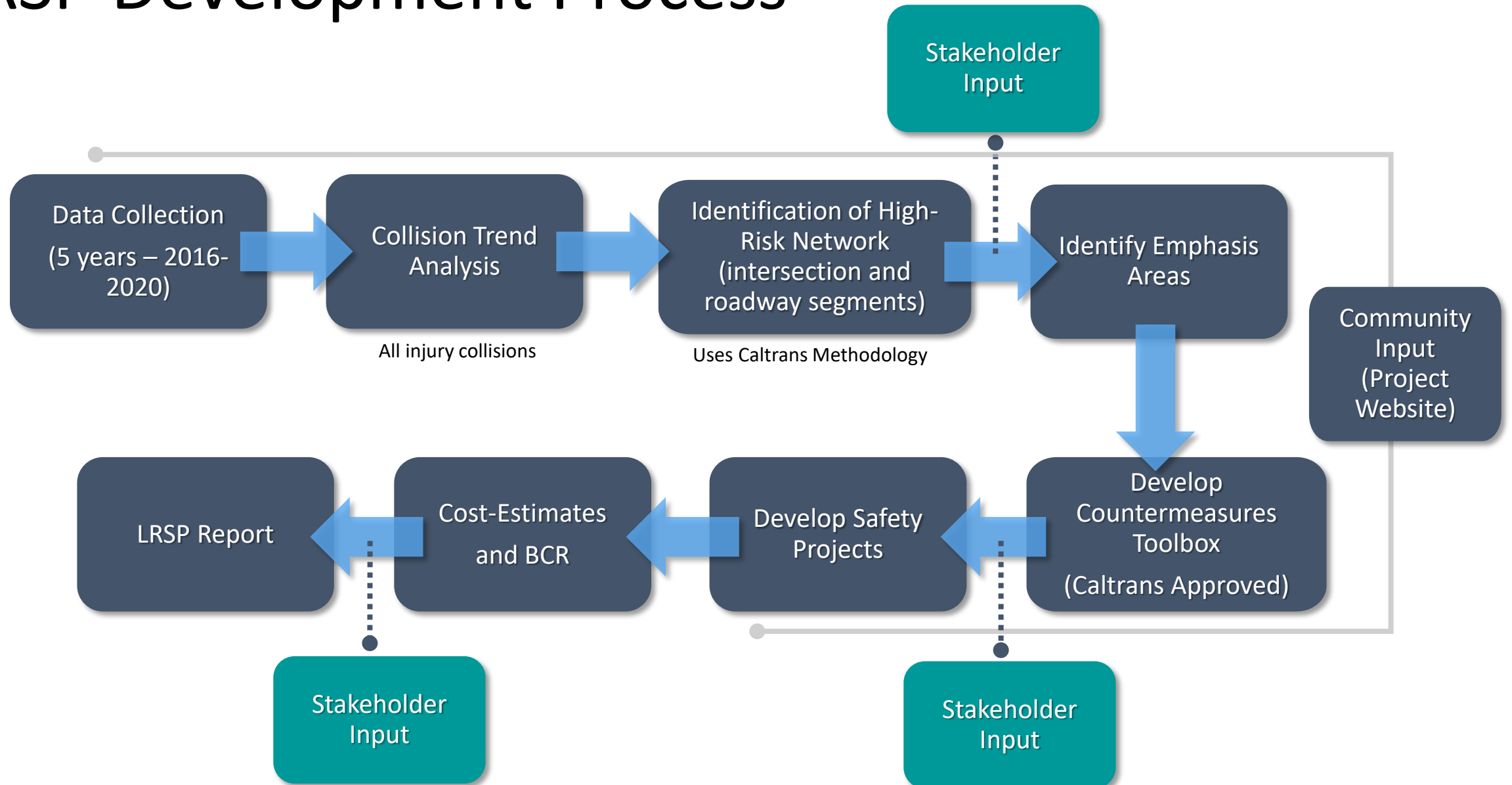
- Ruta Jariwala, Principal Engineer
- Himangi Mutha, Transportation Planner

What is a Local Road Safety Plan (LRSP)?

- **Overarching Goals:**
 - To reduce fatalities and severe injuries on county roadways and intersections attributed to traffic collisions
 - To identify, analyze and prioritize roadway and intersection safety improvements on county roads
 - A required document to be eligible for the Highway Safety Improvement Program (HSIP) grant funding & One Bay Area Grant (OBAG)
- **Considers Engineering and Non-engineering Strategies**
 - **5 E's of Traffic Safety:** Education, Enforcement, Engineering, Equity and Emergency Medical Services (EMS)



LRSP Development Process



Benefits of a LRSP

- Data driven approach to identify, analyze, and prioritize roadway safety improvements
- Considers stakeholder and community feedback to identify additional traffic safety related concerns
- Holistic approach: incorporates more than just engineering solution
- Allows the County to implement a systemic approach to address collisions
- Tailored to the County's and Community specific traffic safety needs – based on the data
- Implementation: County is eligible to apply for grants (HSIP, OBAG and SS4A)



Community Engagement

[Project Overview](#) [Report Concern](#) [Collision History](#) [Project Updates](#) [Provide Feedback](#) [Subscribe & Contact](#)

 **COUNTY OF SANTA CLARA**
LOCAL ROAD SAFETY PLAN

Project Overview

The County of Santa Clara is developing a comprehensive Local Road Safety Plan (LRSP). An LRSP provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads. This plan will enable the County to enhance traffic safety for all modes of transportation and for all ages and abilities.

The goal is to develop a successful LRSP by analyzing historic collision databases and creating a decision-making process that relies on public outreach and a partnership with stakeholders using the four "E's" of traffic safety: Engineering, Enforcement, Education, and Emergency Medical Services.

Scroll down to view the [Project Area](#).

Project Updates

04/10/2023: View the [Collision Analysis Report](#) here. This report is based on collision database from the year 2016-2020.

04/05/2023: View the [Stakeholder Meeting#1 Presentation](#) here. County of Santa Clara and the consultant (TJKM) hosted their first stakeholder meeting for this project on April 5th, 2023.

12/01/2023: View the [Collision History](#) section for collisions of all severity that occurred in the County from 2016 to 2020. We are constantly updating the interactive map as the project moves forward.

02/01/2023: Downloadable materials, plans, and reports will be uploaded here when they are available.

Provide Feedback

Let us know if you have any comments or suggestions about the project by filling the feedback form below. Please report concerns regarding traffic and safety on county maintained roads only.

Name

[Santa Clara County's Local Roadway Safety Plan](#)

Community Engagement



[Santa Clara County's Local Roadway Safety Plan](#)

Report Your Area of Concern

Your input is essential for the success of the County's Local Road Safety Plan. Click the button below to provide us with your concerns regarding traffic and safety.

Sample comments -

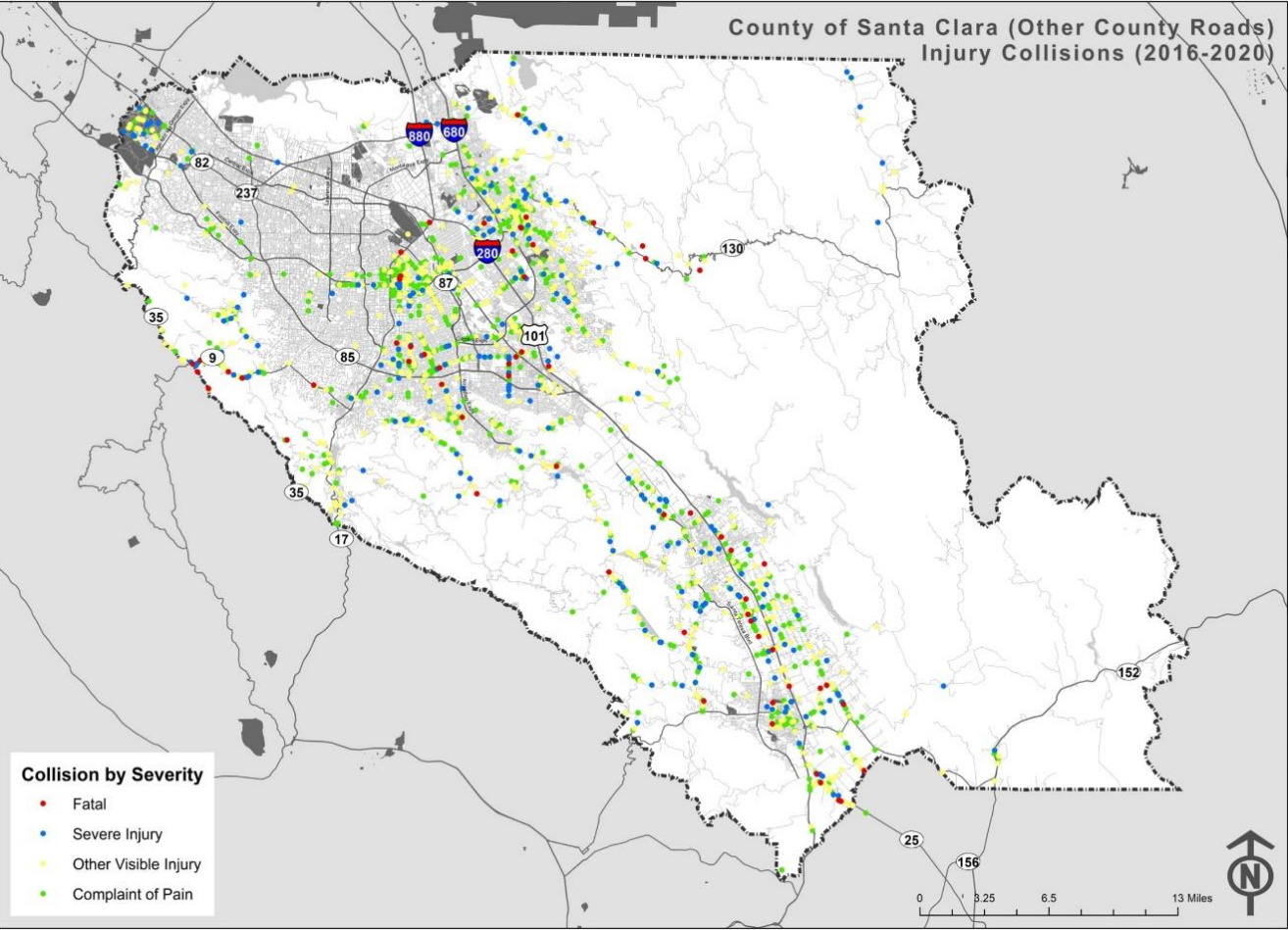
- This roadway segment is unsafe for walking and biking.
- Cars don't stop at this stop-controlled intersection.
- Speeding on this roadway segment.

Report your concern

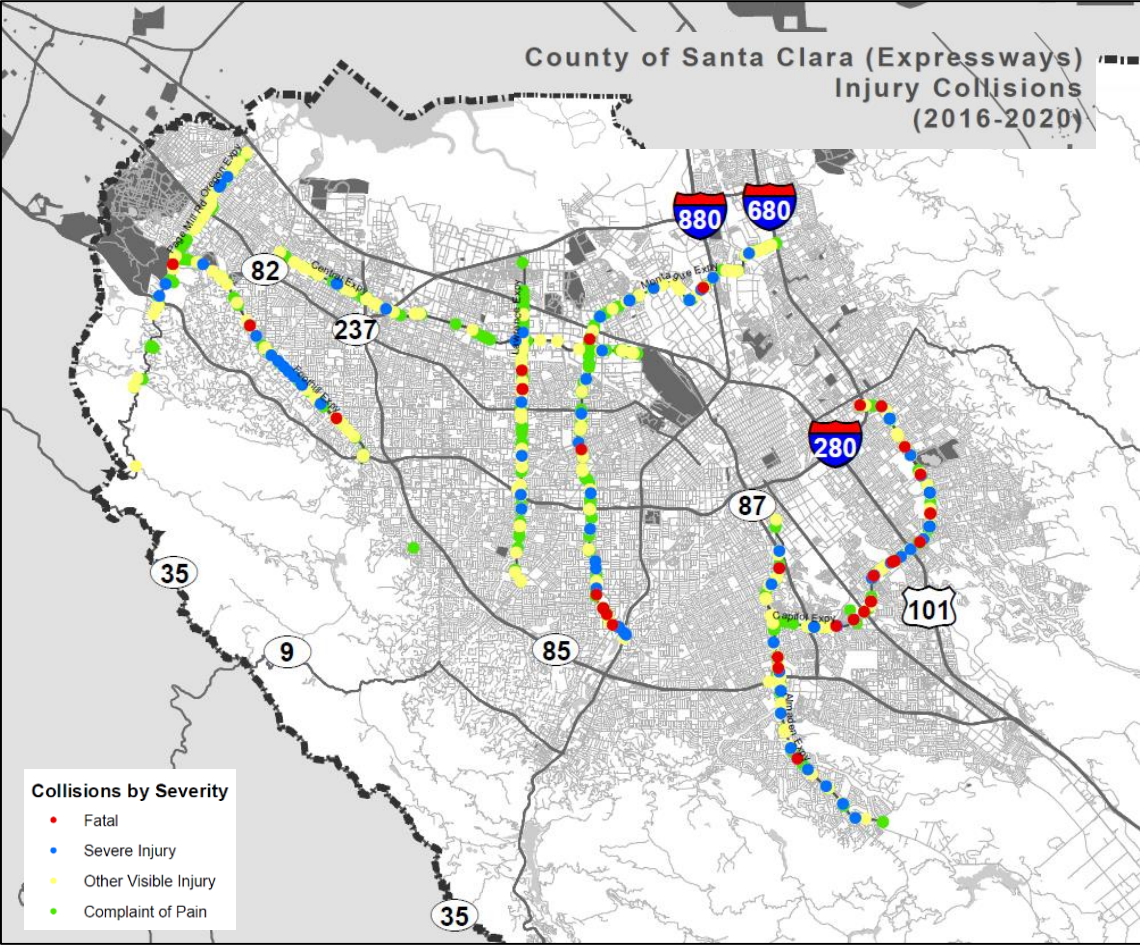


[CLICK
HERE!](#)

Collision Analysis and Findings

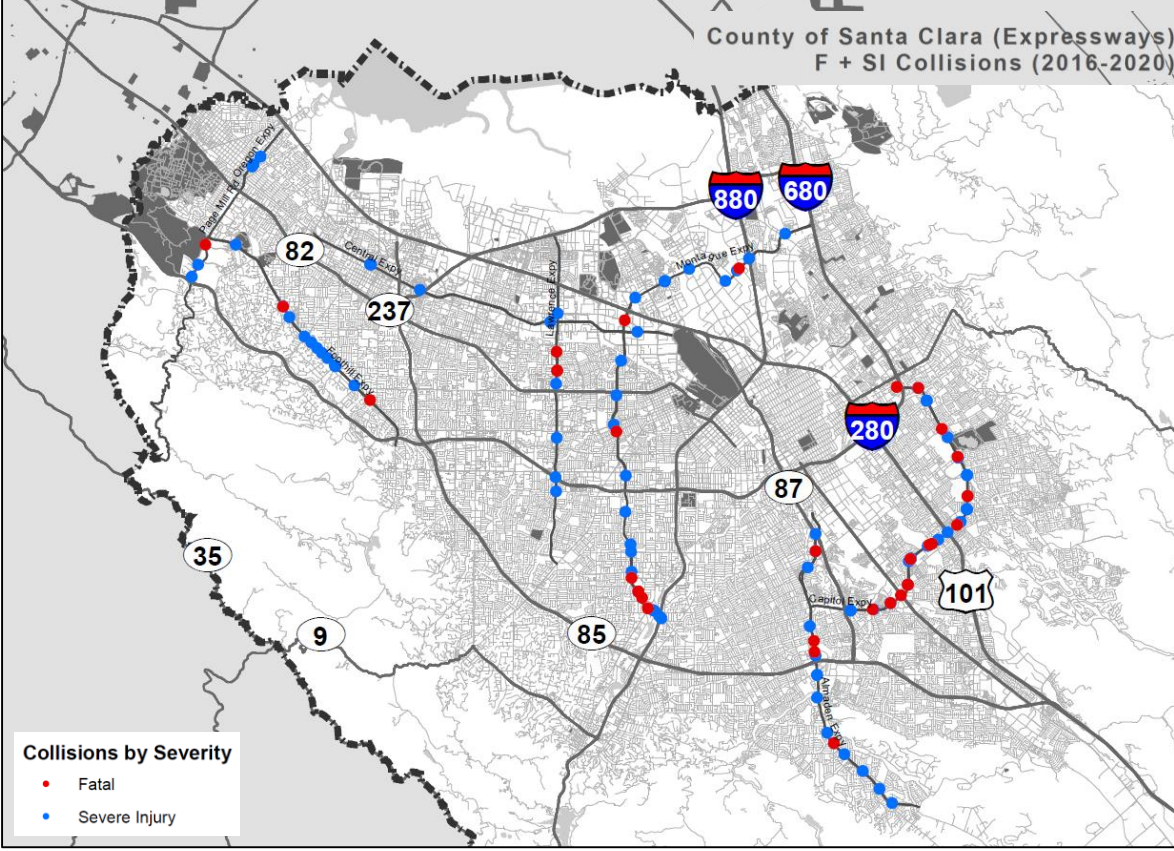
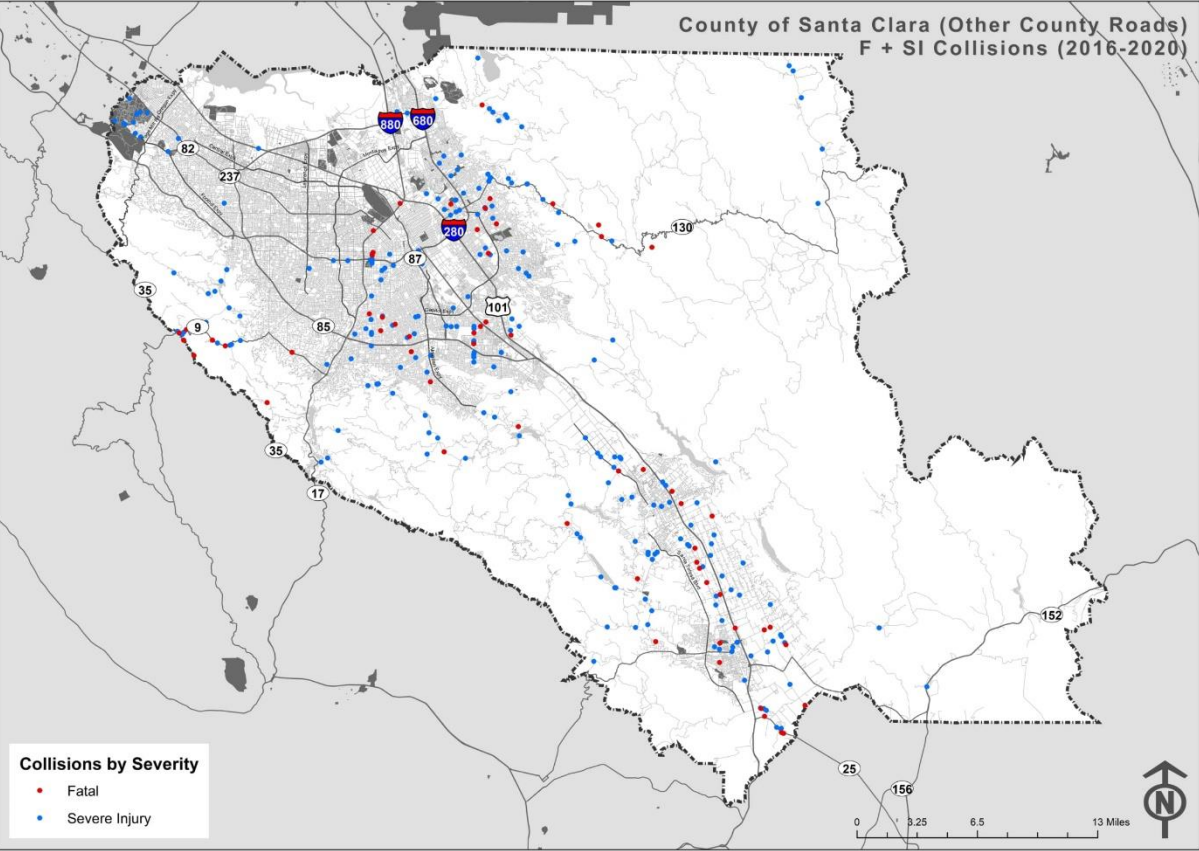


All Injury Collisions (2016-2020)
Other County Roads (excluding expressways)



All Injury Collisions (2016-2020)
Expressways

Collision Analysis and Findings

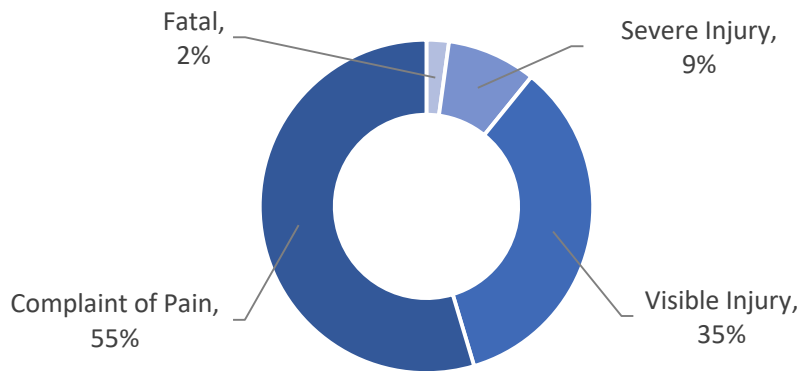
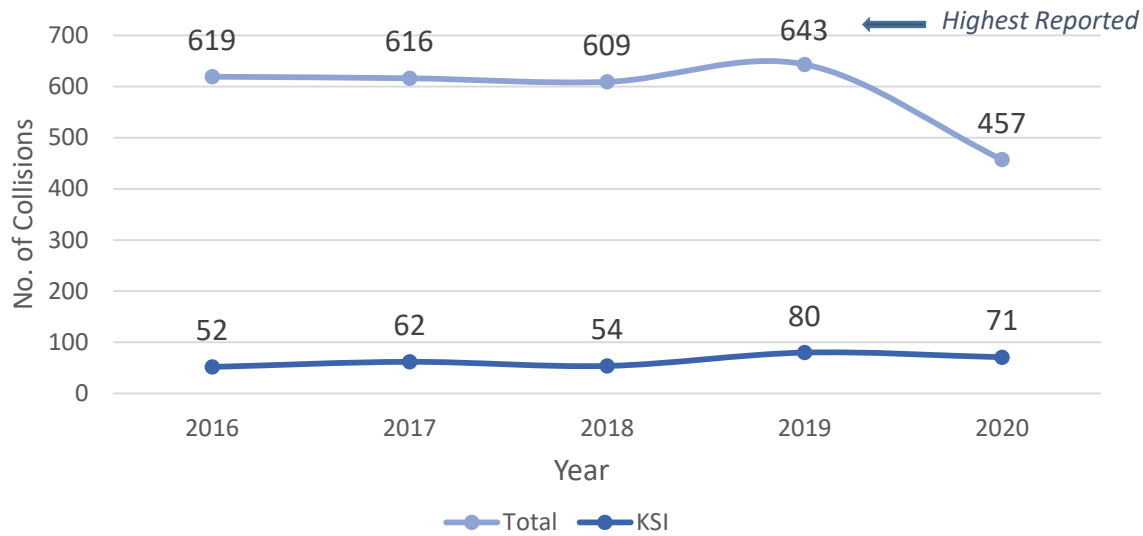


KSI (Killed & Severe Injury) Collisions (2016-2020)
Other County Roads (excluding expressways)

KSI (Killed & Severe Injury) Collisions (2016-2020)
Expressways

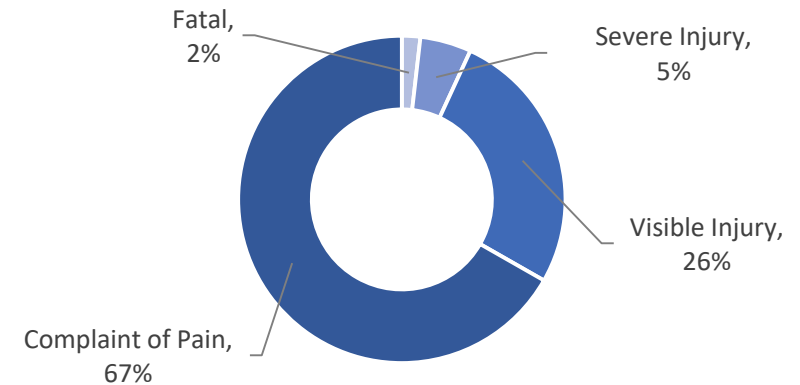
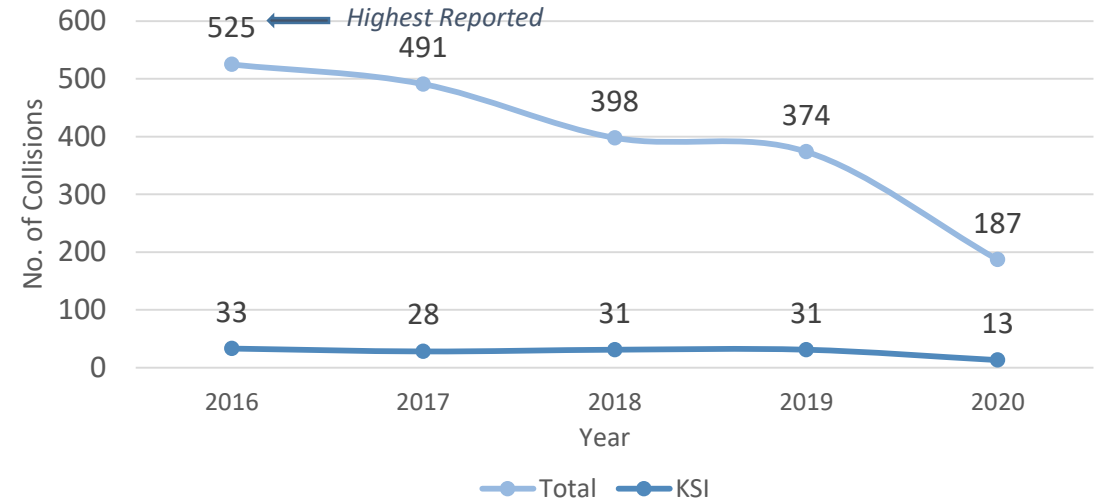
Collision Analysis and Findings

Other County Roads (2016-2020)



319 Killed & Severe Injury (KSI) collisions

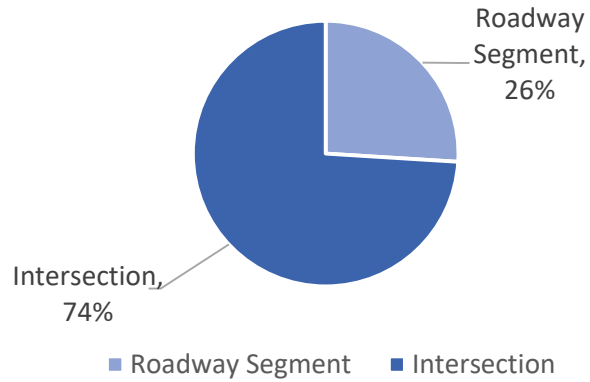
Expressways (2016-2020)



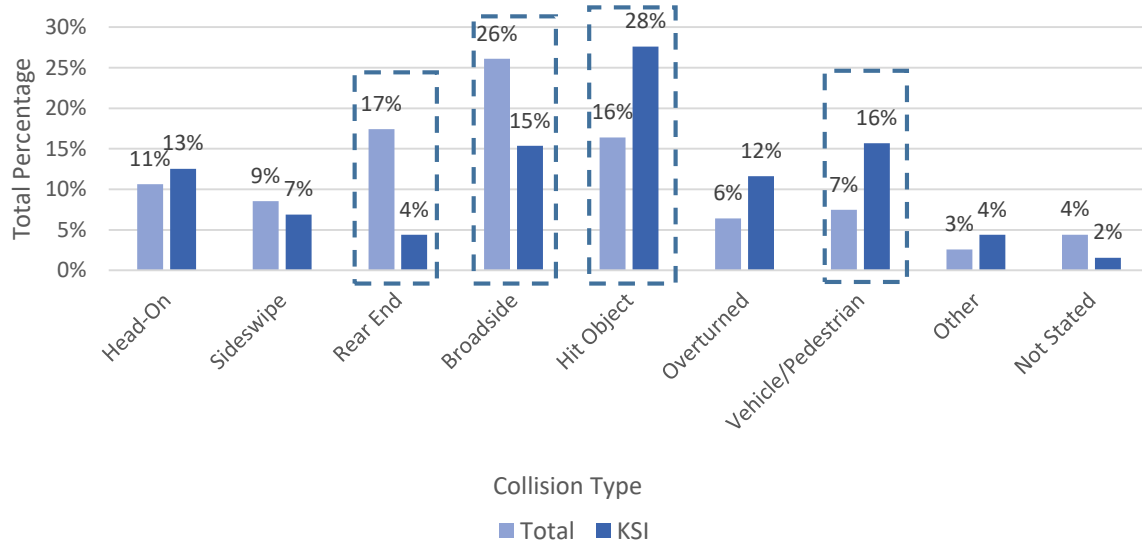
136 Killed & Severe Injury (KSI) collisions

Collision Analysis and Findings

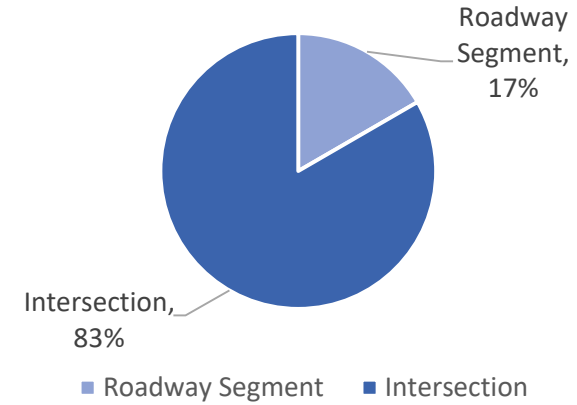
Other County Roads (2016-2020)
Intersections vs. Roadway Segments



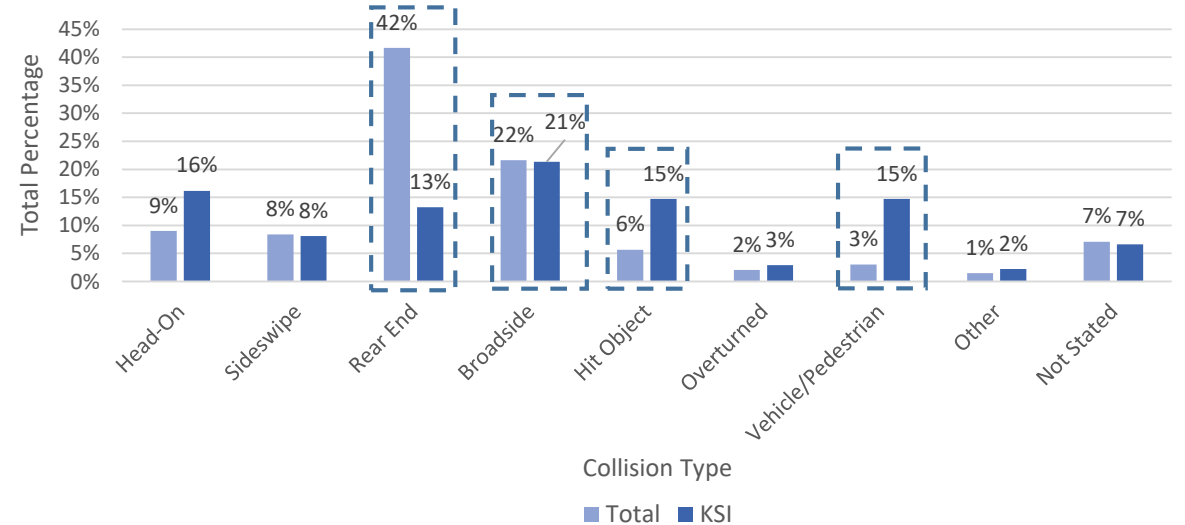
Collision Type



Expressways (2016-2020)
Intersections vs. Roadway Segments



Collision Type



Emphasis Areas

Focused Emphasis Areas: Other County Roads and Expressways:

- Address Broadside Collisions & Automobile Right of Way Violations
- Improve Rear End Collisions & Unsafe Speed Violations
- Reduce Nighttime Collisions:
 - a. Collisions occurring in low or no natural lighting conditions
 - b. Reduce Driving Under Influence collisions
- Address Improper Turning Collisions
- Address Pedestrian and Bicycle collisions:
 - a. Vehicle-Pedestrian collisions
 - b. Pedestrian and Bicycle collisions
 - c. Pedestrian violations
- Improve Intersection Safety (Signalized & Non- Signalized)
 - a. Collisions within 250 feet of intersections

Equivalent Property Damage Only (EPDO) Score

Collision Severity	EPDO Score
Fatal and Severe Injury Combined	165
Visible Injury	11
Complaint of Pain	6
Property Damage Only (PDO)	1

EPDO Score =

(165 x # of Fatal Collisions) +

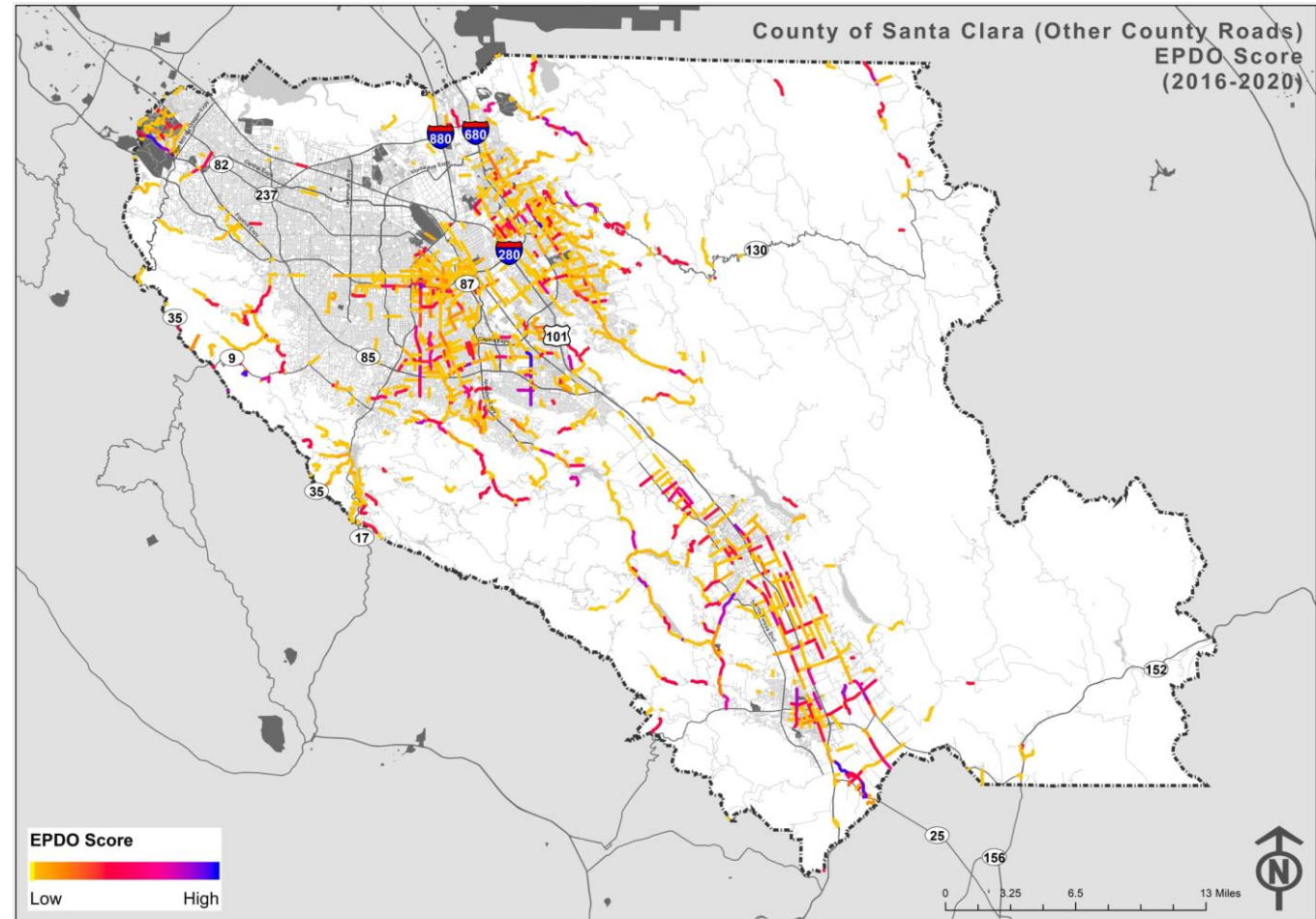
(165 x # of Severe Injury Collisions) +

(11 x # of Other Visible Injury Collisions) +

(6 x # of Complaint of Pain Collisions) +

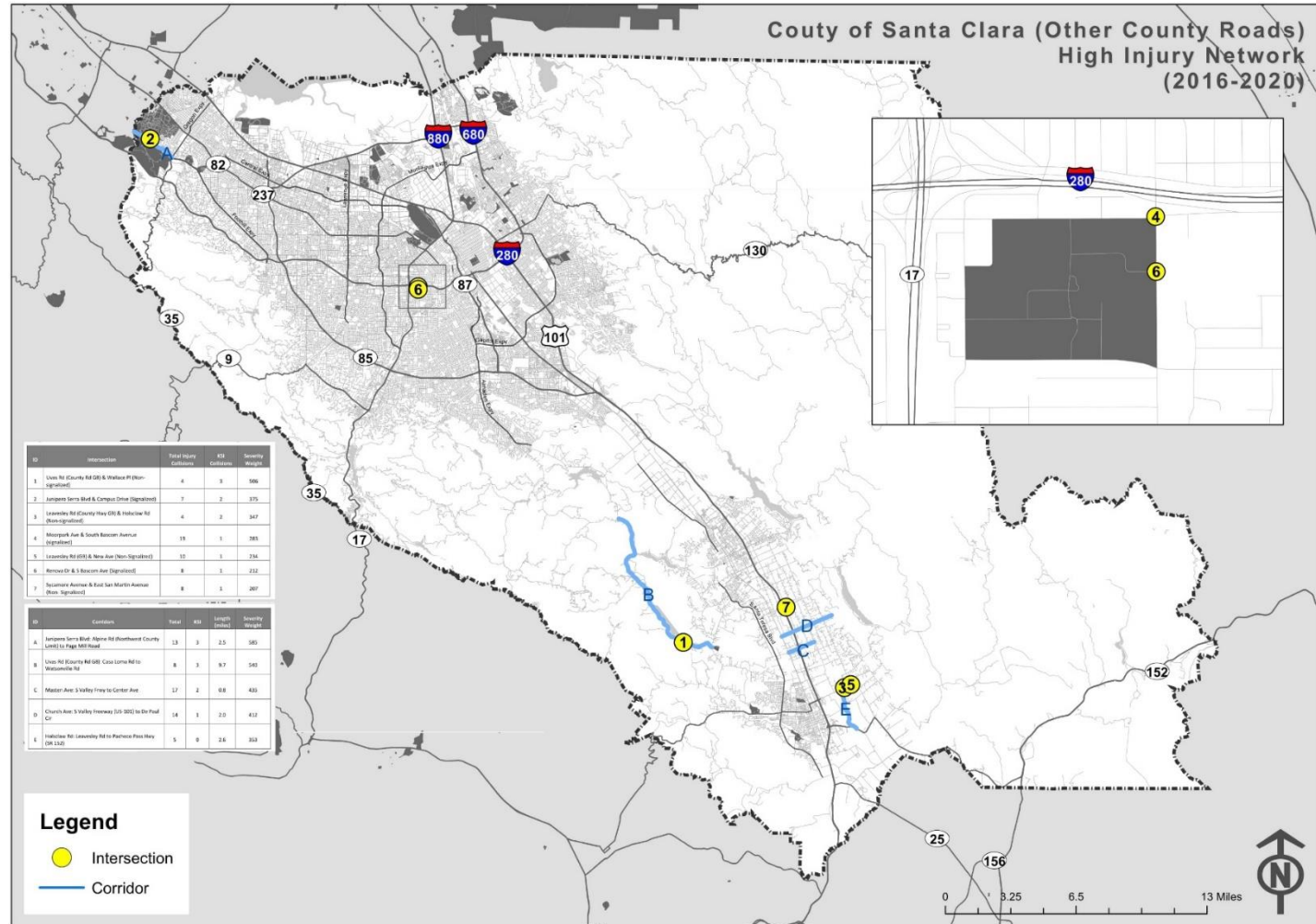
(1 x # of PDO Collisions)

(Source: Local Roadway Safety Manual 2020, Caltrans)



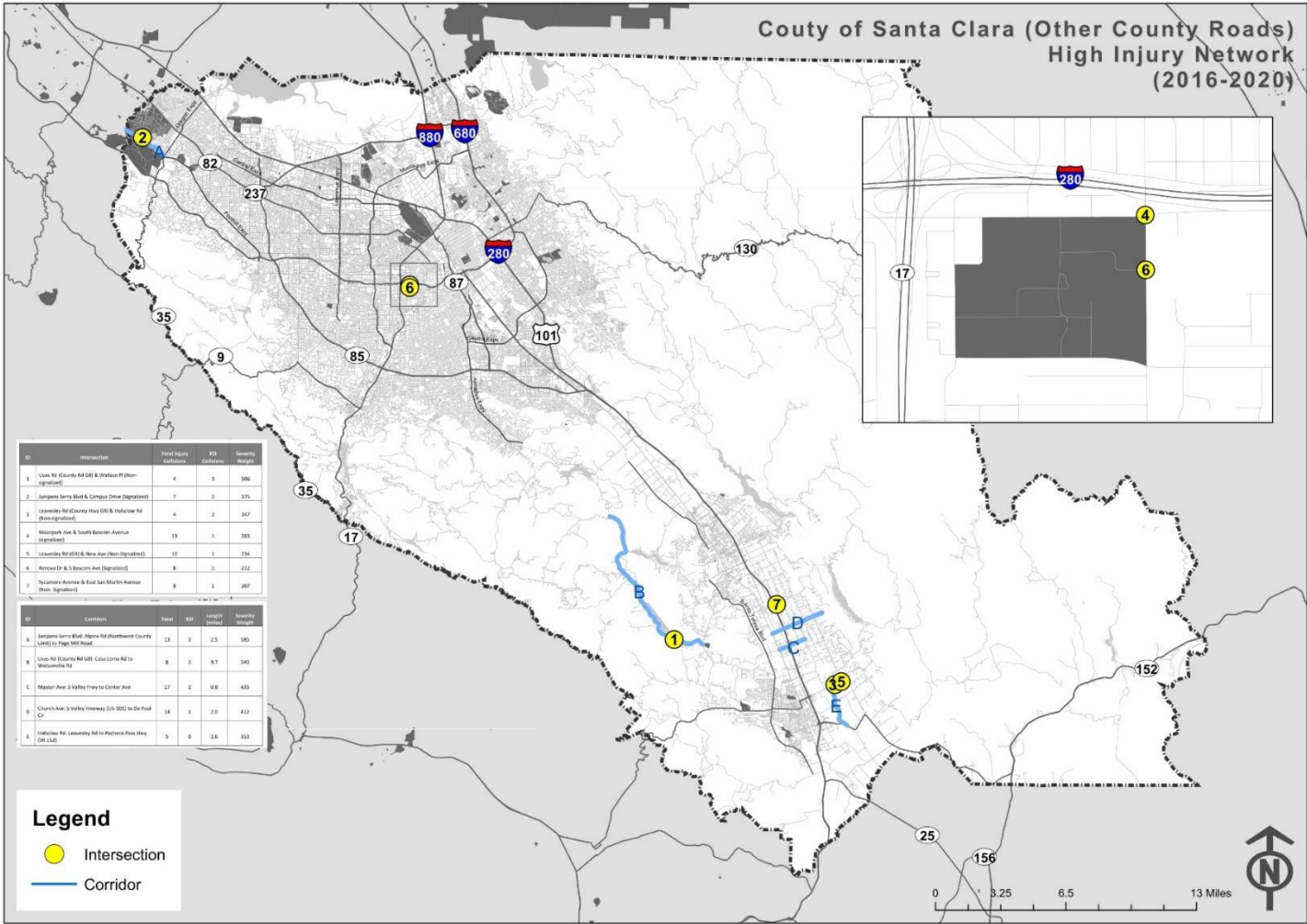
High-Injury Intersections- Other County Roads (2016-2020)

ID	Intersection	Total Injury Collisions	KSI Collisions	Severity Weight
1	Uvas Rd (County Rd G8) & Wallace Pl (Non-signalized)	4	3	506
2	Junipero Serra Blvd & Campus Drive (Signalized)	7	2	375
3	Leavesley Rd (County Hwy G9) & Holsclaw Rd (Non-signalized)	4	2	347
4	Moorpark Ave & South Bascom Avenue (signalized)	19	1	283
5	Leavesley Rd (G9) & New Ave (Non-Signalized)	10	1	234
6	Renova Dr & S Bascom Ave (Signalized)	8	1	212
7	Sycamore Avenue & East San Martin Avenue (Non-Signalized)	8	1	207



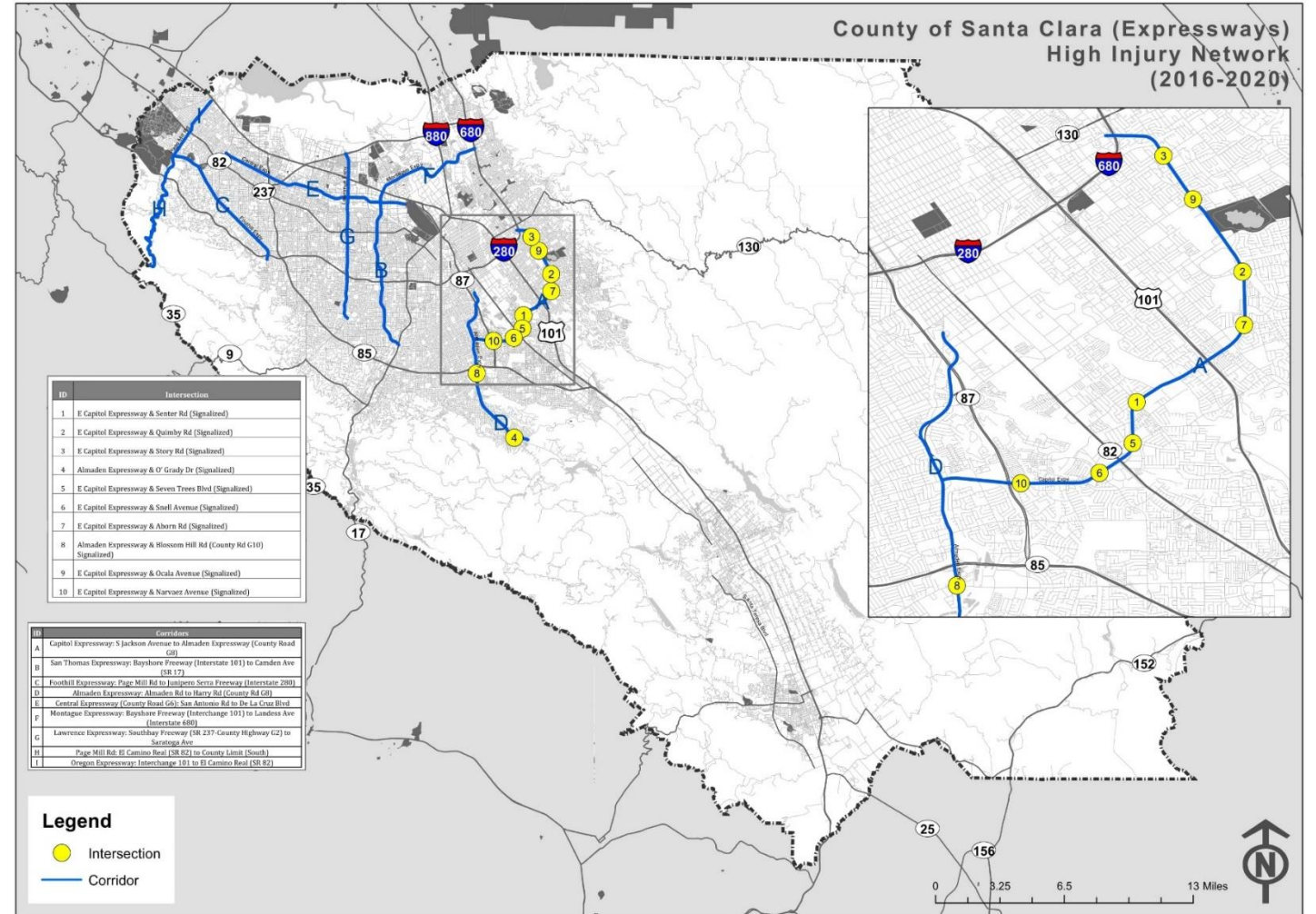
High-Injury Corridors -Other County Roads (2016-2020)

ID	Corridors	Total	KSI	Length (miles)	Severity Weight
A	Junipero Serra Blvd: Alpine Rd (Northwest County Limit) to Page Mill Road	13	3	2.5	585
B	Uvas Rd (County Rd G8): Casa Loma Rd to Watsonville Rd	8	3	9.7	540
C	Masten Ave: S Valley Frwy to Center Ave	17	2	0.8	435
D	Church Ave: S Valley Freeway (US-101) to De Paul Cir	14	1	2.0	412
E	Holsclaw Rd: Leavesley Rd to Pacheco Pass Hwy (SR 152)	5	0	2.6	353



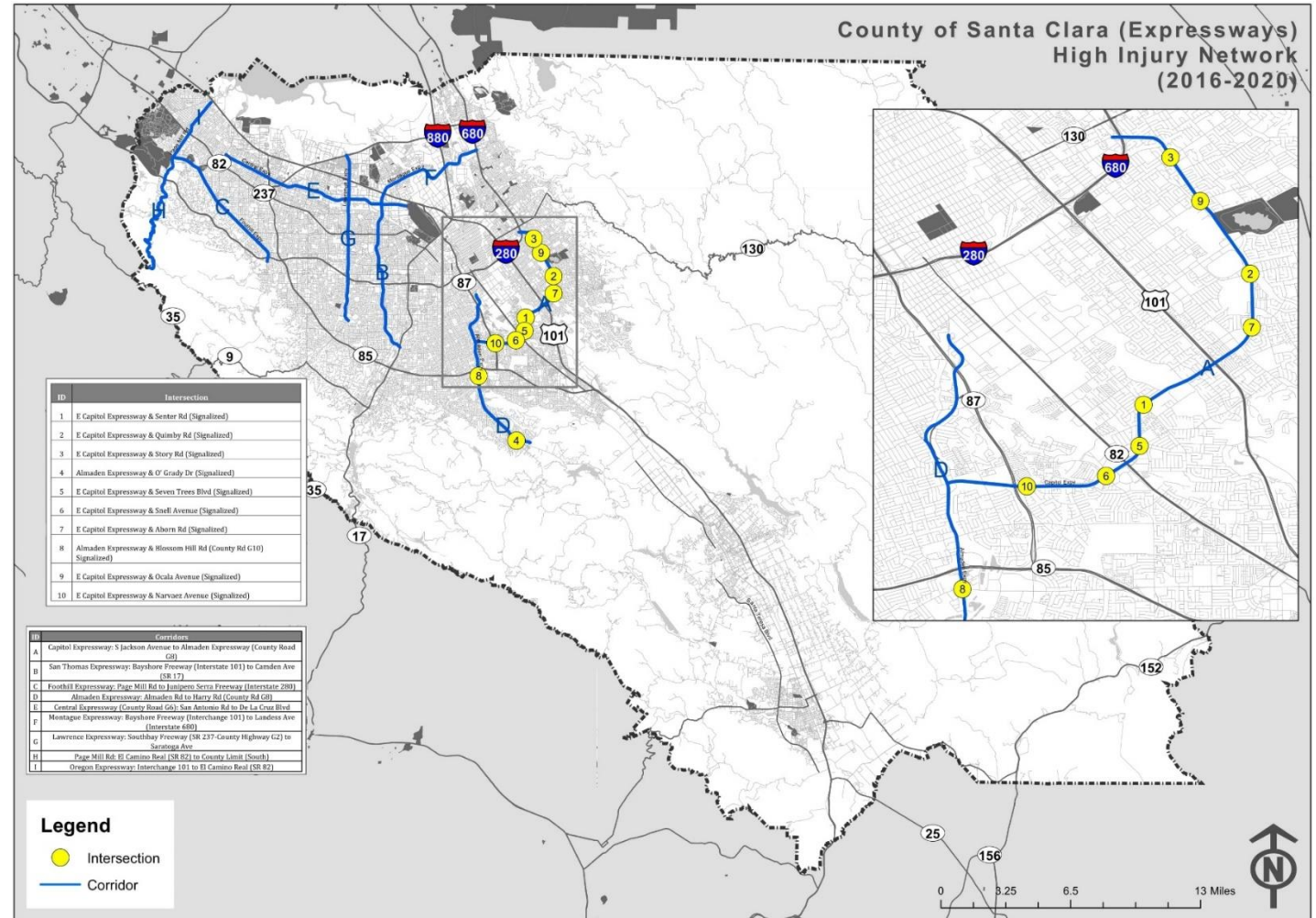
High-Injury Intersections- Expressways (2016-2020)

ID	Intersection	Total Injury Collisions	KSI Collisions	Severity Weight
1	E Capitol Expressway & Senter Rd (Signalized)	34	4	900
2	E Capitol Expressway & Quimby Rd (Signalized)	39	3	786
3	E Capitol Expressway & Story Rd (Signalized)	45	3	772
4	Almaden Expressway & O' Grady Dr (Signalized)	29	3	701
5	E Capitol Expressway & Seven Trees Blvd (Signalized)	28	3	700
6	E Capitol Expressway & Snell Avenue (Signalized)	27	3	684
7	E Capitol Expressway & Aborn Rd (Signalized)	23	3	645
8	Almaden Expressway & Blossom Hill Rd (County Rd G10) (Signalized)	33	2	546
9	E Capitol Expressway & Ocala Avenue (Signalized)	38	1	442
10	E Capitol Expressway & Narvaez Avenue (Signalized)	15	2	438



High-Injury Corridors- Expressways (2016-2020)

ID	Corridors	Total	KSI	Length (miles)	Severity Weight
A	Capitol Expressway: S Jackson Avenue to Almaden Expressway (County Road G8)	136	12	10.0	2884
B	San Tomas Expressway: Bayshore Freeway (Interstate 101) to Camden Ave (SR 17)	120	12	9.1	2723
C	Foothill Expressway: Page Mill Rd to Junipero Serra Freeway (Interstate 280)	84	10	8.0	2209
D	Almaden Expressway: Almaden Rd to Harry Rd (County Rd G8)	75	5	9.0	1390
E	Central Expressway (County Road G6): San Antonio Rd to De La Cruz Blvd	76	4	11.0	1232
F	Montague Expressway: Bayshore Freeway (Interchange 101) to Landess Ave (Interstate 680)	88	3	6.0	1105
G	Lawrence Expressway: Southbay Freeway (SR 237-County Highway G2) to Saratoga Ave	112	1	8.4	941
H	Page Mill Rd: El Camino Real (SR 82) to County Limit (South)	61	3	11.8	933
I	Oregon Expressway: Interchange 101 to El Camino Real (SR 82)	65	1	2.0	619



High-Injury Intersections – Pedestrian & Bicycle

Pedestrian/Bicycle HIN Intersections (Other County Roads)

ID	Intersection	Total Injury Collisions	KSI Collisions	Severity Weight
1	Elliott St and Vaughn Ave (Stop Control)	6	5	215

Pedestrian/Bicycle HIN Intersections (Expressways)

ID	Intersection	Total Injury Collisions	KSI Collisions	Severity Weight
1	Capitol Expressway & Story Rd (Signalized)	7	2	370
2	Capitol Expressway & Aborn Rd (No Control)	3	2	341
3	Almaden Expressway & Cherry Ave (Signalized)	11	1	260
4	Almaden Expressway & Blossom Hill Rd (Co Hwy G8) (Signalized)	6	1	210
5	Capitol Expressway & Senter Rd (Signalized)	5	1	199

High-Injury Corridors – Pedestrian & Bicycle

Pedestrian/Bicycle HIN Corridors (Other County Roads)

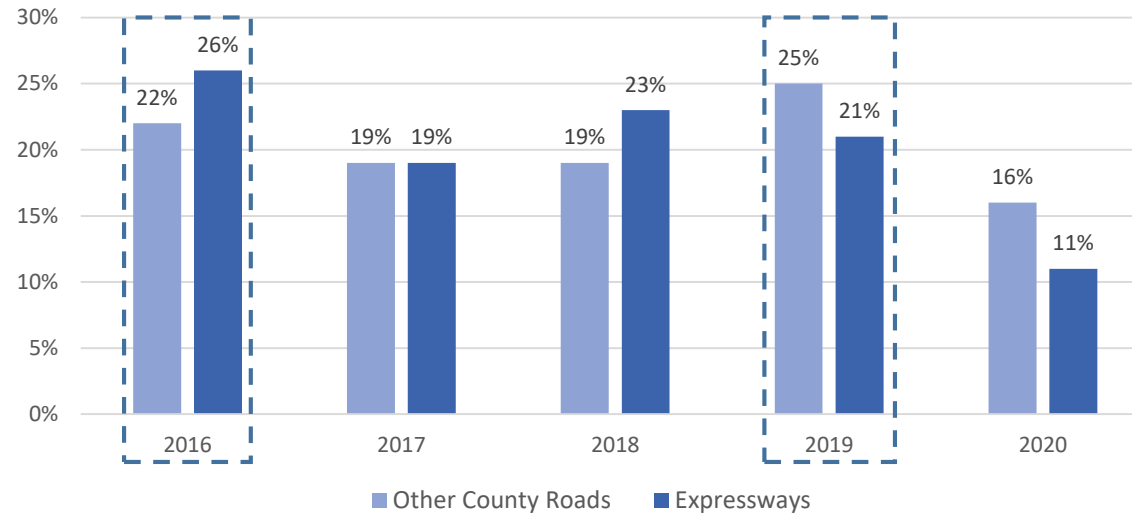
ID	Corridors	Total	KSI	Length (miles)	Severity Weight
A	S Bascom Ave: Moorpark Ave to Hamilton Ave S. Bascom Complete Street Project (35% project design review in progress)	13	2	2.0	416
B	Junipero Serra Blvd: Alpine Rd (Northwest County Limit) to Page Mill Road	6	2	2.5	369

Pedestrian/Bicycle HIN Corridors (Expressways)

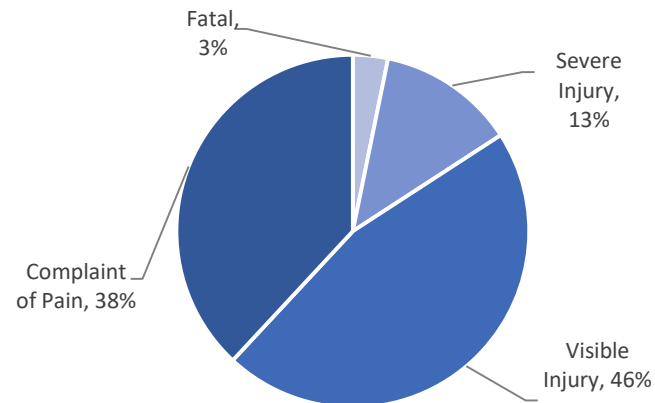
ID	Corridors	Total	KSI	Length (miles)	Severity Weight
A	Capitol Expressway: Quimby Rd to Snell Ave	18	6	4.6	1092
B	San Tomas Expressway: Bayshore Freeway (Interstate 101) to Camden Ave (SR 17)	5	3	6.2	507
C	Almaden Expressway: Almaden Rd to Harry Rd (County Rd G8)	14	2	8.0	437
D	Foothill Expressway: Page Mill Rd to Junipero Serra Freeway (Interstate 280)	9	2	9.9	392
E	Montague Expressway: Bayshore Freeway (Interchange 101) to Landess Ave (Interstate 680)	5	2	4.0	353
F	Page Mill Rd: El Camino Real (SR 82) to County Limit (South)	8	1	11.0	227
G	Lawrence Expressway: Buckley St to Stevens Creek Blvd	5	1	2.6	199
H	Central Expressway (County Road G6): San Antonio Rd to Ferguson Drive	7	0	3.1	67
I	Oregon Expressway: Interchange 101 to El Camino Real (SR 82)	4	0	2.0	39

Collision Analysis Findings-Pedestrian/Bicycle

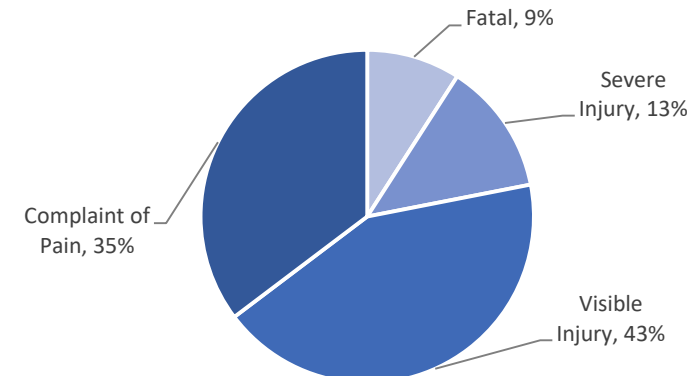
All Injury Collisions (Pedestrian/Bicycle Collisions)



Pedestrian Collisions (Injury Collisions)



Bicycle Collisions (Injury Collisions)



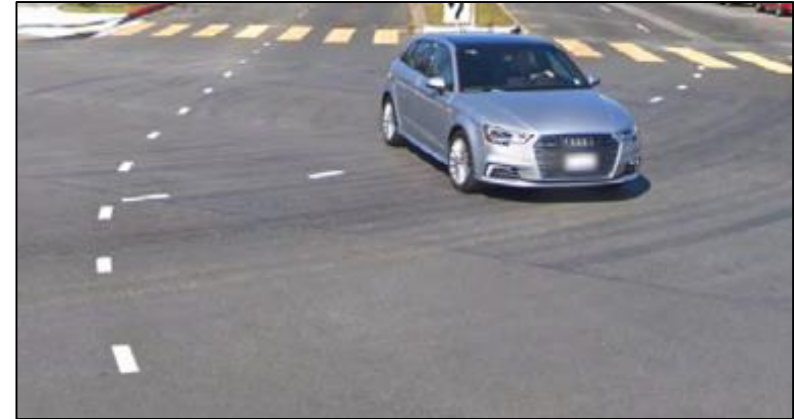
Countermeasures at Signalized Intersections



S02- Improve Signal Hardware (lenses, back-plates with retroreflective borders, mounting, size, and number)



S03- Improve Signal Timings (coordination, phases, red, yellow, or operation)



S09- Install raised pavement markings and striping (Through Intersection)



S20PB- Advance Stop Bar (Bicycle Box)

Countermeasures at Non-Signalized Intersections



NS03- Install signals



NS06- Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs



NS07- Upgrade Intersection pavement marking (NS.I)



NS09- Install Flashing Beacons as advance warning (N.S.I)

Countermeasures at Corridor Improvements



R11- Install acceleration/
deceleration lanes



R21- Improve pavement
friction (High Friction
Surface Treatment)



R22- Install/Upgrade signs with new
fluorescent sheeting (*regulatory or
warning*)



R24- Install curve advance
warning signs



R26- Install dynamic/variable
speed warning signs



R30- Install centerline rumble strips/strips

Safety Projects

Safety Projects (Other County Roads)

- Project 1:** Improve safety at Signalized Intersection
- Project 2:** Improve safety at Non-Signalized Intersection
- Project 3:** Improve safety at Roadway Segments
- Project 4:** Install signal at Non-Signalized intersections
- Project 5:** County wide Sign Inventory
- Project 6:** Countywide Centerline rumble striping

Safety Projects (Expressways)

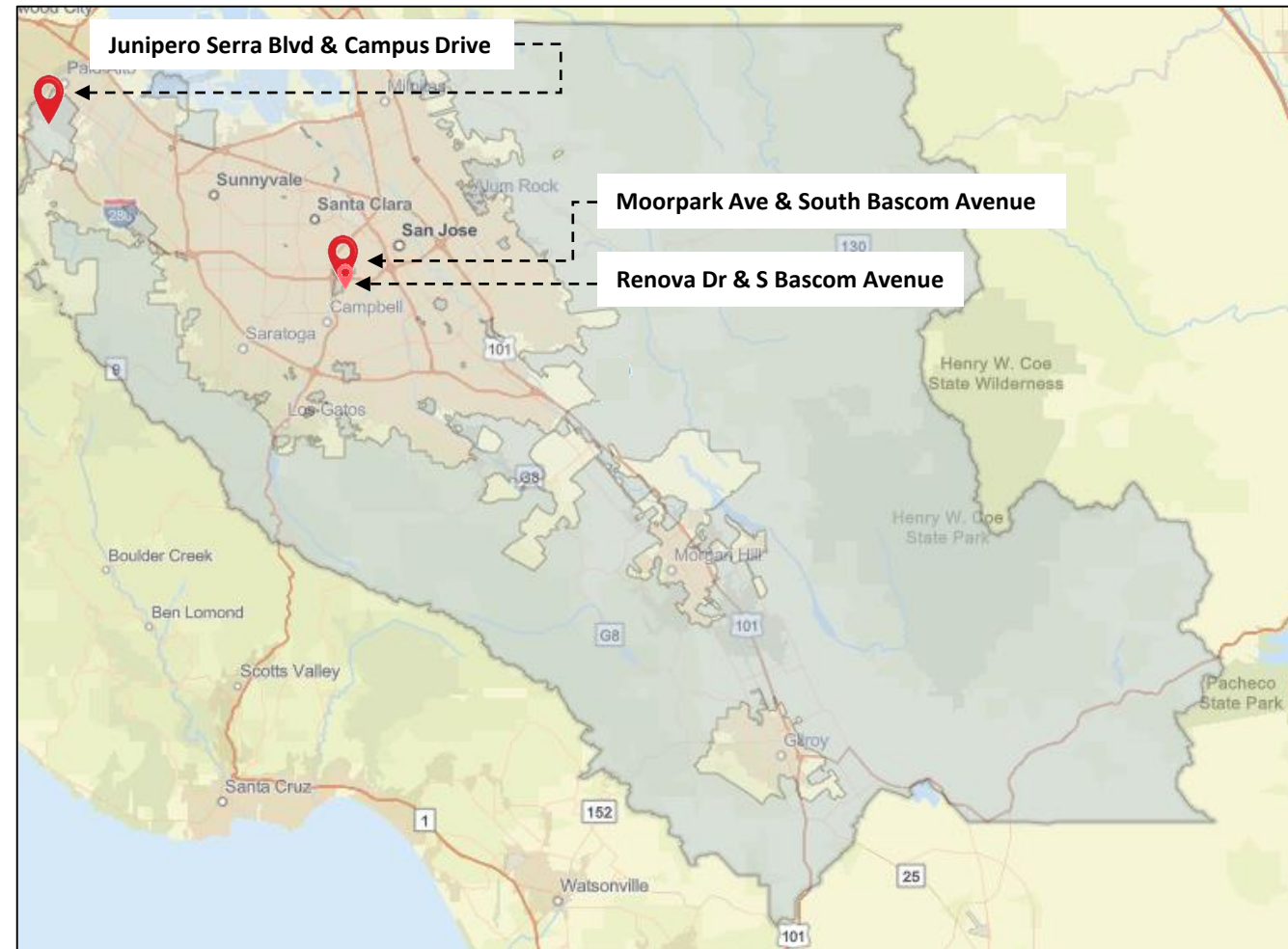
- Project 1:** Squaring Loops/ Squaring corners
- Project 2:** Countywide Signal Hardware Improvements
- Project 3:** Countywide Install raised pavement markers and striping (Through Intersection), Install acceleration /deceleration lanes and Improve pavement friction (High Friction Surface Treatments)
- Project 4:** Countywide Sign Inventory/Signage's/Warning Signs
- Project 5:** Countywide Advisory Speed/ Ball Bank Study

Safety Projects (Other County Roads)

Location	CM1	CM2
Project 1: Improve safety at Signalized Intersection		
Junipero Serra Blvd & Campus Drive	S02	S03
Moorpark Ave & South Bascom Avenue	S02	S03
Renova Dr & S Bascom Avenue		S03

S02 – Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number

S03 – Improve Signal Timings (coordination, phases, red, yellow, or operation)



Safety Projects (Other County Roads)

Location	CM1	CM2	CM3
Project 2: Improve safety at Non-Signalized Intersection			
Uvas Rd (County Rd G8) & Wallace Pl	NS06	NS07	
Leavesley Rd (County Hwy G9) & Holschalw Rd	NS06	NS07	NS09
Sycamore Ave & East San Martin Avenue	NS06	NS07	

NS06 – Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs

NS07 – Upgrade intersection pavement marking (NS.I)

NS09 – Install flashing beacons as advance warning (NS.I)



Safety Projects (Other County Roads)

Location	CM1	CM2	CM3
Project 3: Improve safety at Roadway Segments			
Junipero Serra Blvd: Alpine Rd (Northwest County Limit) to Page Mill Road	R24	R26	
Uvas Rd (County Rd G8): Casa Loma Rd to Watsonville Rd	R24		R30
Masten Ave: S Valley Frwy to Center Ave		R26	R30
Church Ave: S Valley Freeway (US-101) to De Paul Cir		R26	R30
Holsclaw Rd: Leavesley Rd to Pacheco Pass Hwy (SR 152)	R24	R26	R30

R24- Install curve advance warning signs

R26- Install dynamic/variable speed warning signs

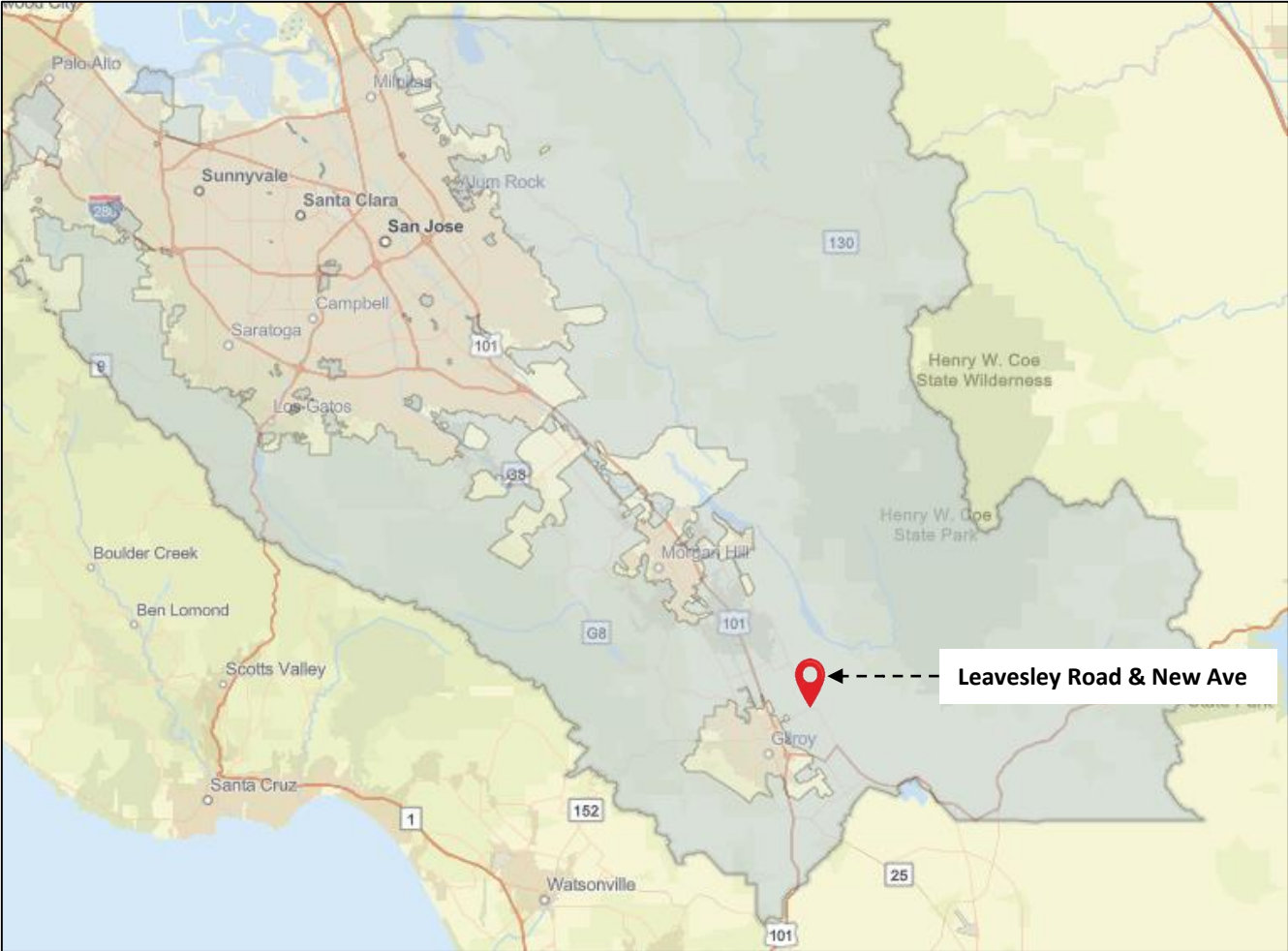
R30- Install centerline rumble strips/stripes



Safety Projects (Other County Roads)

Location	CM1	CM2
Project 4: Improve safety at Non-Signalized Intersections		
Leavesley Rd (G9) & New Ave	NS03	
Project 5: Countywide Sign Inventory		
Countywide Sign Inventory	R22	R26
Project 6: Countywide Centerline Rumble striping		
Countywide centerline rumble striping	R30	

NS03- Install signals
R22 – Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)
R26- Install dynamic/variable speed warning signs
R30- Install centerline rumble strips/stripes



Safety Projects (Expressways)

Location	CM1
Project 1: Squaring Loops/Squaring corners	
E Capitol Expy & Senter St	County's Review
E Capitol Expy & Quimby Rd	
E Capitol Expy & Story Rd	
E Capitol Expy & Seven Trees Blvd	
E Capitol Expy & Snell Blvd	
E Capitol Expy & Aborn Rd	
E Capitol Expy & Ocala Avenue	
E Capitol Expy & Narvaez	
S Capitol Expy & Excalibur Dr	

Location	CM1	CM2	CM3
Project 2: Countywide Signal Hardware Improvements			
Countywide Sign Upgrade	S02	S03	S20PB

S02 – Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number

S03 – Improve signal timing (coordination, phases, red, yellow, or operation)

S20PB - Install advance stop bar before crosswalk (Bicycle Box)

Safety Projects (Expressways)

Location	CM1	CM2	CM3
Project 3: Countywide Install raised pavement markers and striping (Through Intersection), Install acceleration/deceleration lanes and Improve pavement friction (High Friction Surface Treatments)			
Countywide Pavement markers and pavement friction	S09	R11	R21
Project 4: Countywide Sign Inventory/ Signage's/Warning Signs			
Countywide Sign Inventory	R22		
Project 5: Countywide Advisory Speed/Ball Bank Study			
Countywide Speed Study			

S09 – Install raised pavement markers and striping (Through Intersection)
R11- Install acceleration/ deceleration lanes
R21- Improve pavement friction (High Friction Surface Treatment)
R22- Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)

Additional Identified Location

No	HSIP Funded Locations	Improvements
1	Lawrence Expressway: N Poinciana Dr & Cabrillo Ave	Intersection Improvements (Length 12ft. North bound)
2	Lawrence Expressway: North of Stevens Creek Blvd (South of Lawrence and Harvard Ave)	Roadway segment improvements (Length 548ft.)
3	Foothill Expressway: North of Edith Rd	Several roadway segment improvements (Length 2,772 ft.)
4	Foothill Expressway: Joseph Ave & Grant	Intersection Improvements (Length 154 ft.)
5	San Tomas Expressway: North of Moorpark Ave/ San Tomas Expressway & Moorpark Ave	Intersection/Roadway Improvements (Length 445)

Non Engineering Strategies

Education

- Conduct public information and education campaign for intersection safety laws, unsafe speeds, distracted driving, improper turning and driving under the influence.
- Conduct bicycle and pedestrian safety campaigns and outreach to raise their awareness of bicycle and pedestrian safety needs through media outlets and social platforms
- Implement tactical urbanism/public art projects

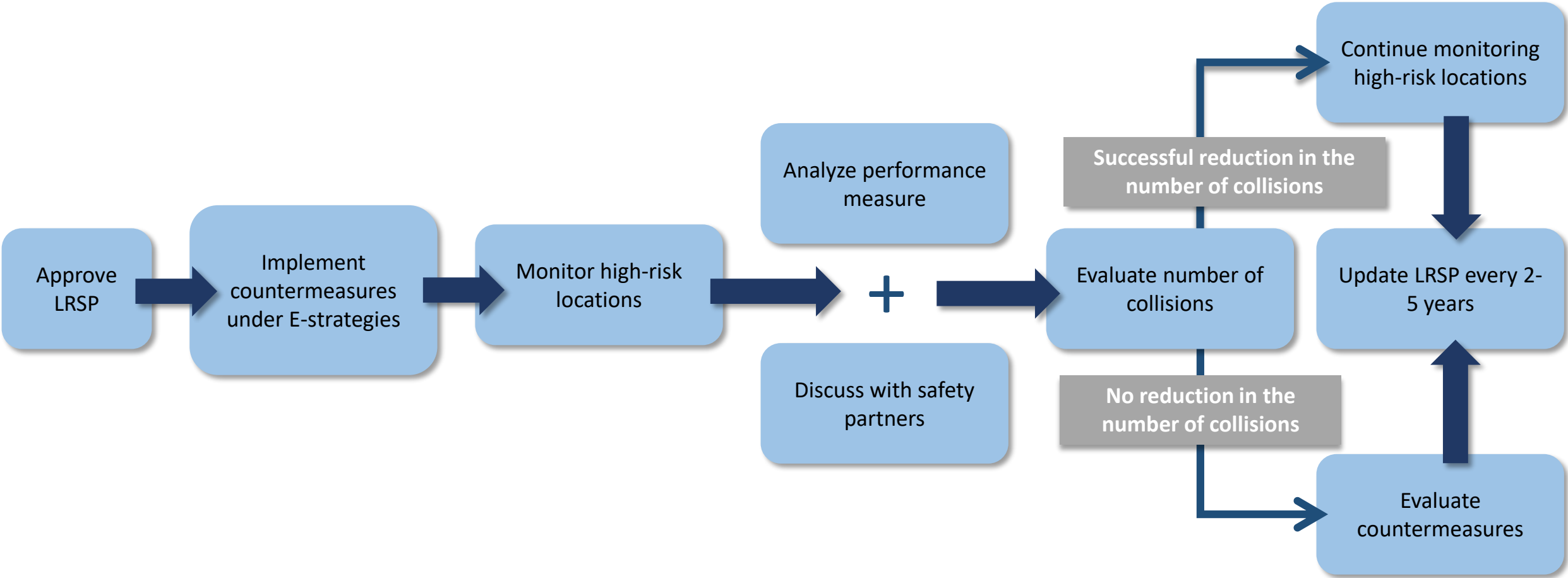
Enforcement

- Targeted enforcement at high-injury locations.
- Increase the number of personnel who have completed Advanced Roadside impaired Driving Enforcement (ARIDE) training

EMS (Emergency Medical Services)

- Install emergency vehicle pre-emption systems
- Increase the number of EMS/fire control personnel taking Traffic Incident Management Training

Implementation of the Plan





Thank you!

[Santa Clara County's Local Roadway Safety Plan](#)

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