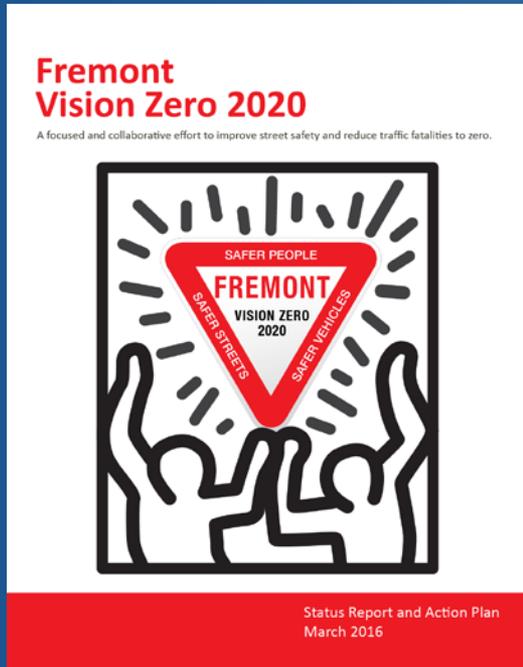


Fremont Vision Zero 2020

Evaluation of Vision Zero Program Implementation



2018 TRB Annual Meeting
January 11, 2018



“Vision Zero” Core Principles

- Traffic **deaths are preventable** and **unacceptable**
- **Safety** takes priority **over speed**; Speed is a fundamental predictor of crash survival
- System should **account for human error**; consequence of mistakes should not be severe injury or death
- Improving safety requires **collaboration and engagement** by all stakeholders (planning, engineering, enforcement, education, public health, vehicle manufacturers, policy makers, advocacy groups, and public)

About Fremont

230,000 Population; 4th Largest City in Bay Area



About Fremont

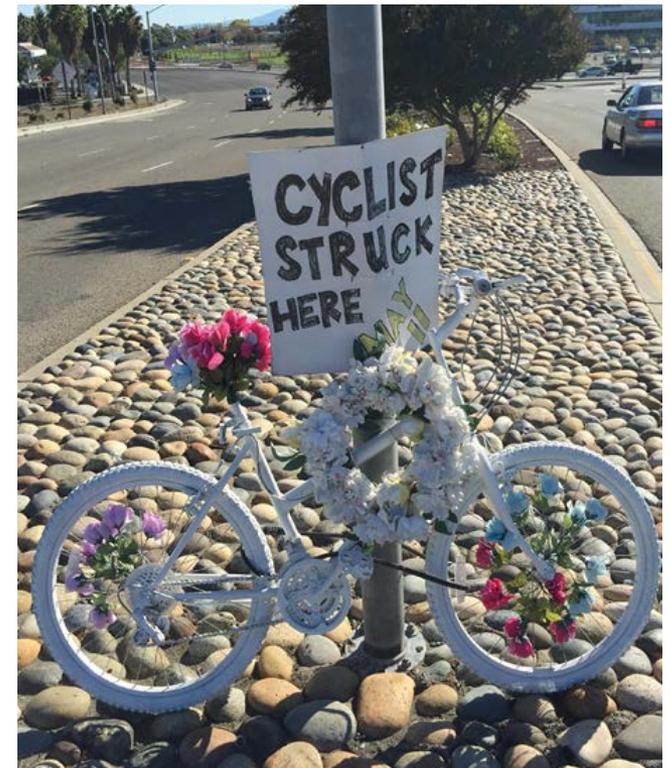
“#1 Happiest Place to Live in America” (2017 WalletHub Study)

- Family Friendly
- Ethnic Diversity
- Excellent Public Schools
- Parks and Open Space
- Low Crime Rate
- Regional Transit Access
- Silicon Valley Economy
- Unique History



Traffic Crashes in Fremont

Fatalities in 2014 and 2015 Were Up Significantly



Vision Zero in Fremont

Initiated by Fremont City Council in September 2015

■ Vision Zero Action Plan

(Adopted March 2016)

- Safer People — “Enforcement, Education”
- Safer Streets — “Engineering”
- Safer Vehicles

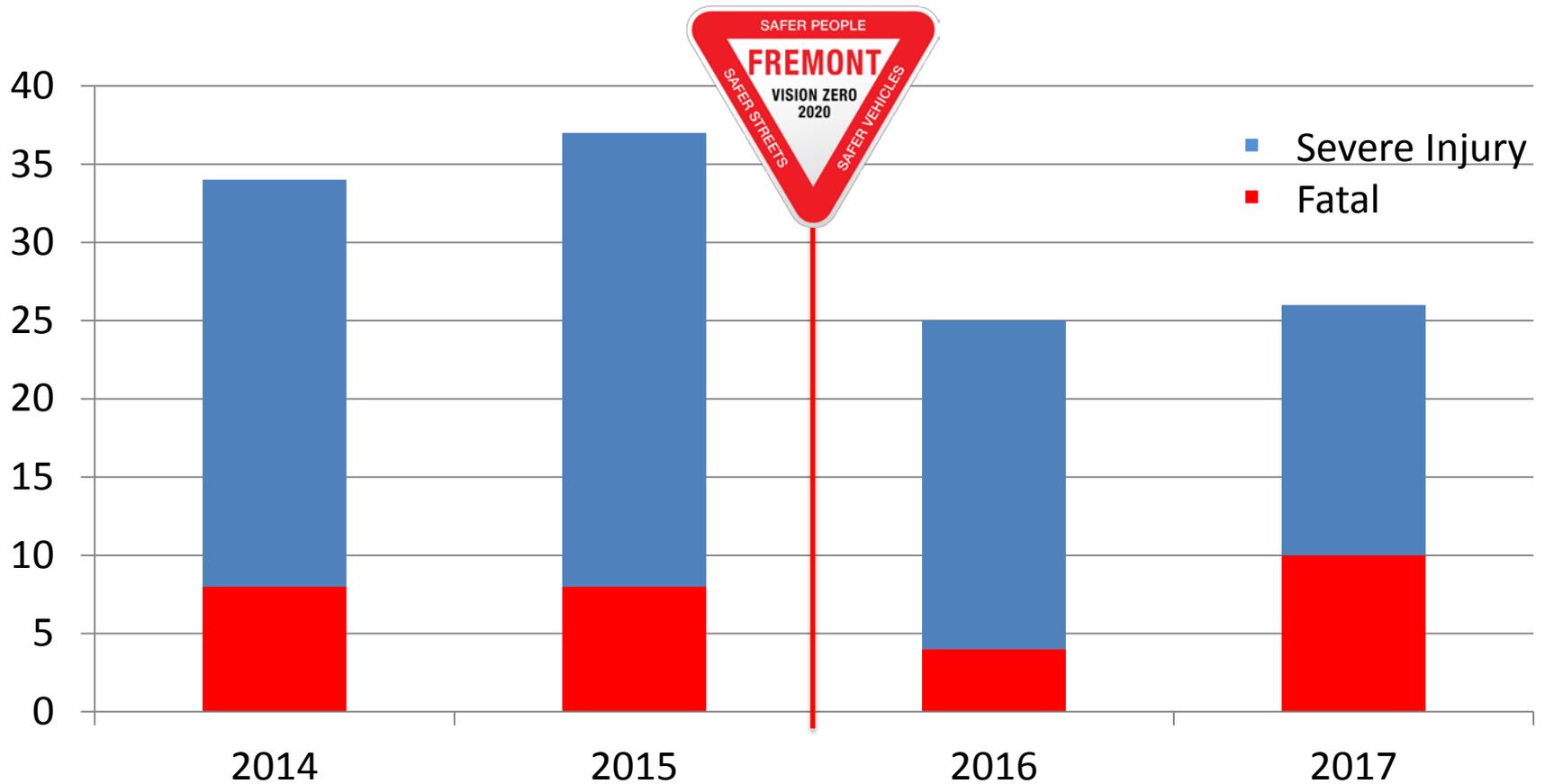
■ 7th U.S. City to Adopt Vision Zero Plan

1. New York City (2014), 2. San Francisco, 3. Seattle,
4. San Jose, 5. Boston, 6. Washington DC, 7. Fremont



Fremont Major Traffic Crash Trends

Since start of Vision Zero program, major traffic crashes are down 27%



Fremont's Safety Success Recipe

- Rigorous Evaluation of Safety Data
- Align Transportation Engineering Investment Toward Safety
- Proactive Engagement by **Police Department**
- Integrate Traffic Safety Into Public Communication
- Encourage **Community** to Participate



Evaluation: Safety Priority Streets

10% of Streets Have 90% of Fatalities

2013 to 2015
Major Crash Locations
- Fatalities (Red)
- Severe Injury (Blue)



Major Crash Summary (2015)

- 37 major traffic crashes;
8 fatalities, 31 severe injuries
- 62% of fatalities involved persons walking or bicycling
- Ages of persons killed
19, 35, 46, 57, 57, 61, 69, 78
- All fatalities occurred on high speed streets (40 mph+)
- Major crashes occurred most frequently between 6 p.m. and 10 p.m.
- 5 major crashes involved DUI



Countdown Pedestrian Signals

- Increased from 50 locations to all 220 traffic signal locations Citywide



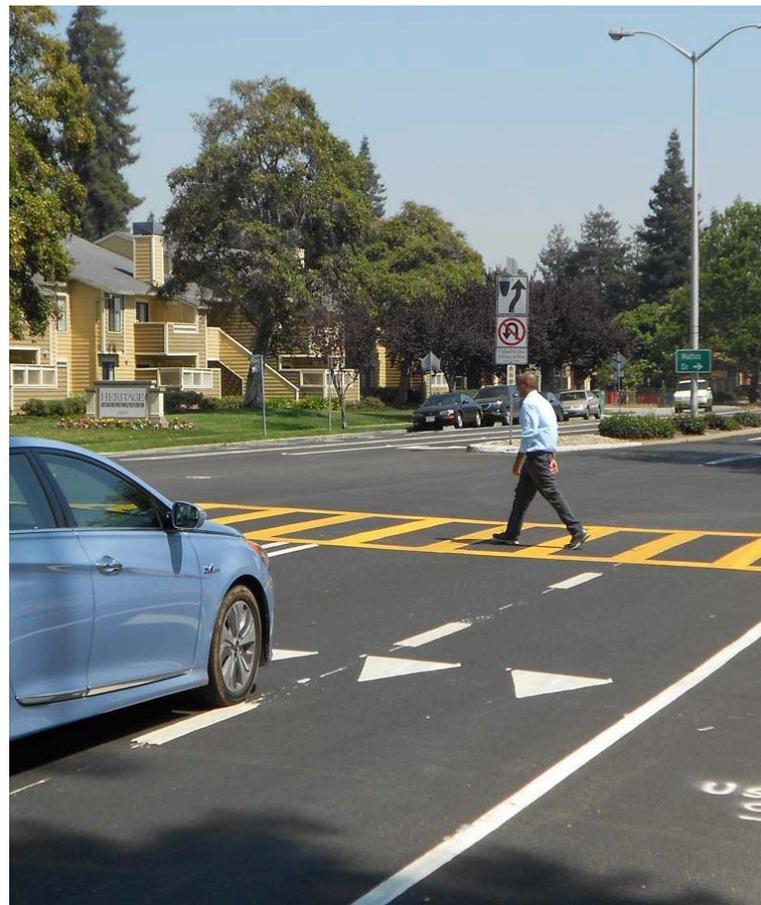
In 2015, two senior pedestrians were struck and killed in signalized crosswalks; possibly due to lack of awareness of available crossing time.

Brighter Street Lighting



Fully converted all Fremont streetlights to brighter LED lights (16,000 lights)

Enhanced Street Crossings



Updated Pedestrian Master Plan identified 40 locations for street crossings improvements

Safer Street Design

10-Foot Vehicle Travel Lanes, Buffered Bike Lanes, Road Diets



Fremont now has 26 miles of streets with buffered bike lanes; Posted speed limits were lowered on 11 street segments

Neighborhood Traffic Calming



Increased speed lump locations from approximately 200 to 250

Enforcement

Increased Traffic Safety Discussion from Quarterly to Weekly



Enforcement

- Focused on High Risk Locations/Behaviors
 - Safety Priority Streets
 - Speeding and DUI
- Expanded Resources by Crossing-Training
 - 11 traffic officers; 93 patrol officers
 - Purchased more speed detection equipment
- Tripled Number of Speeding Citations
 - From 1,231 (2015) to 4,258 (2016)
- Saturation Patrols for DUI
 - 2 officers dedicated to DUI patrol 20 days a year



Education and Engagement

Stickers, Newsletters, Events, Social Media



Three, Two, One ... Fremont is Set to Launch 'Vision Zero'

A Plan to Improve Traffic Safety and Reduce Traffic Fatalities to Zero

In September 2015, the City Council approved "Vision Zero" as the City's traffic safety policy with the bold direction to eliminate traffic fatalities, reduce injury crashes, and improve safety for all modes of travel. The Vision Zero concept, started by Sweden in 1997, was subsequently adopted by many European countries and is credited with reducing traffic fatalities by over 50 percent in the past decade. The core principle of Vision Zero is making traffic safety the highest priority for the design and operations of the transportation

[Continued on Page 3](#)



Upcoming Traffic Safety Campaigns

- April:** National Distracted Driving Month
- May:** National Bicycle Safety Month
- May:** Click It or Ticket Mobilization Period



Youth Engagement

Safety Education Projects with Fremont Youth Service Corps and Girl Scouts



School Safety Plans

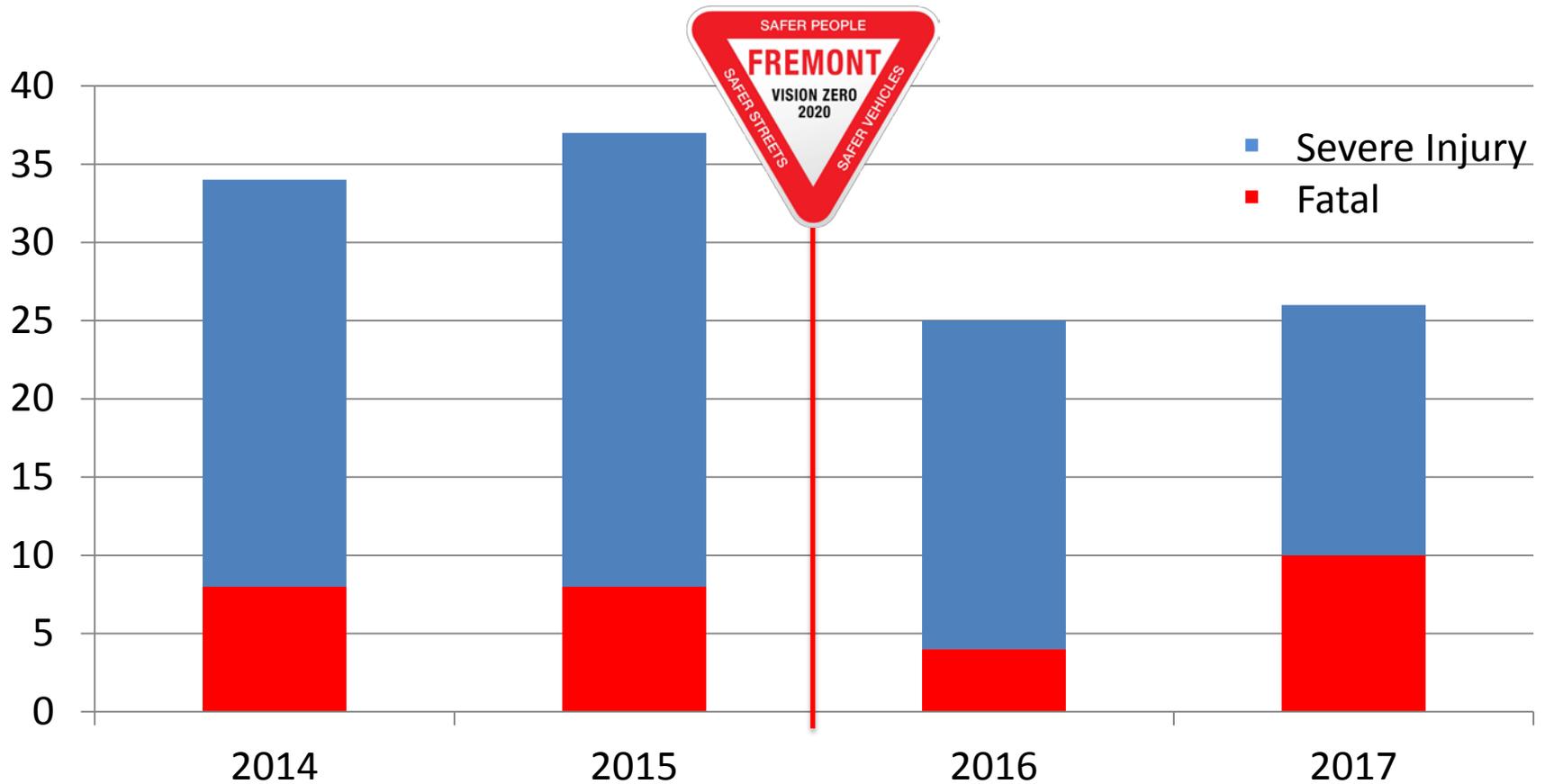
Partnership with Fremont Unified School District



School safety site assessment plans are being prepared for all 40 public schools

Fremont Major Traffic Crash Trends

Since start of Vision Zero program, major traffic crashes are down 27%



Fremont Vision Zero Results

Comparing Factors in Major Crashes Before and After Vision Zero

	Before VZ (2014, 2015)	After VZ (2016, 2017)	Change
Major Crashes	70	51	Down 27%
- Fatal	16	14	Down 13%
- Severe Injury	54	37	Down 31%
Travel Mode			
- Walking	25	14	Down 44%
- Bicycling	7	5	Down 29%
- Motorcycle	7	10	Up 43%
- Driving	31	22	Down 29%

Fremont Vision Zero Results

Comparing Factors in Major Crashes Before and After Vision Zero

	Before VZ (2014, 2015)	After VZ (2016, 2017)	Change
Dark	33	26	Down 21%
DUI	10	9	Down 10%
Speed Limit			
- 35 mph or less (89% of streets)	28	32	Up 14%
- 40 mph or more (11% of streets)	42	19	Down 55%
Fremont Boulevard			
- Major Crashes	16	11	Down 31%
- Fatal Crashes	7	4	Down 43%

Fremont Vision Zero Results

Comparing Factors in Major Crashes Before and After Vision Zero

	Before VZ (2014, 2015)	After VZ (2016, 2017)	Change
Age Groups			
- Under 16	6	1	Down 83%
- 16 to 29	18	20	Up 11%
- 30 to 49	22	16	Down 27%
- 40 to 64	16	11	Down 31%
- 65 and over	14	7	Down 50%

Focus on Fatalities



2017 fatality involving a 96-year old driver in a 28-year old vehicle

Focus on Fatalities

Comparing Factors in Fatal Crashes Before and After Vision Zero

	Before VZ (2014, 2015)	After VZ (2016, 2017)	Change
Fatal Crashes	16	14	Down 12%
- <i>“Loss of Innocent Life”</i>	5	5	
Reckless Driving	5	6	
- <i>DUI/Speeding</i>	3/2	2/4	
Inattentive Driving	4	3	
Unsafe Walking/Biking	4	2	
Medical/Sleepy	2	1	
Unknown	1	2	

2017 Fatality Narratives

Human Error

1. 96-year old **motorist** (in old vehicle w/ no air bags) makes **unsafe turn** and is hit broadside at 35 mph
2. 74-year old **motorist** (in old vehicle w/ no air bags) **runs off road** and hits tree (may have fallen asleep)
3. 77-year old **pedestrian** in crosswalk is **hit by motorist with limited visibility** (foggy windows) at 25 mph
4. 65-year old **pedestrian crossing** major street **midblock** in dark is hit at 35 mph
5. 47-year old **pedestrian** crossing commercial driveway from right is **hit and run over** by motorist looking left

2017 Fatality Narratives

Reckless Driving

1. 58-year old riding **motorcycle** on rear wheel and **speeding** hits another vehicle
2. 50-year old riding **motorcycle** and **speeding** (74 mph in 35 mph zone) hits traffic signal pole
3. 24-year old **motorist speeding** to pass a vehicle crashed into another vehicle head-on
4. 44-year old **pedestrian** (walking away from parked delivery truck) **hit by drunk driver** (57-year old)
5. 18-year old **vehicle passenger hit** broadside by **drunk driver** (22-year old), running red light, and speeding (107 mph in 35 mph zone)

Safer Vehicles



Technology Saves Lives

94%

PERCENTAGE OF FATAL CRASHES INVOLVING HUMAN CHOICE OR ERROR

EXPLAINING CRASH AVOIDANCE TECHNOLOGY

Pedestrian Automatic Emergency Braking

Watch how a new safety technology keeps Tested.com's Adam Savage from hitting a strangely familiar pedestrian.

[WATCH THE VIDEO](#)

SAFETY SPOTLIGHT

Rearview Video Systems

[WATCH THE VIDEO](#)

Safer Vehicles

Partnering with Auto Dealers to Promote Crash Avoidance Technology

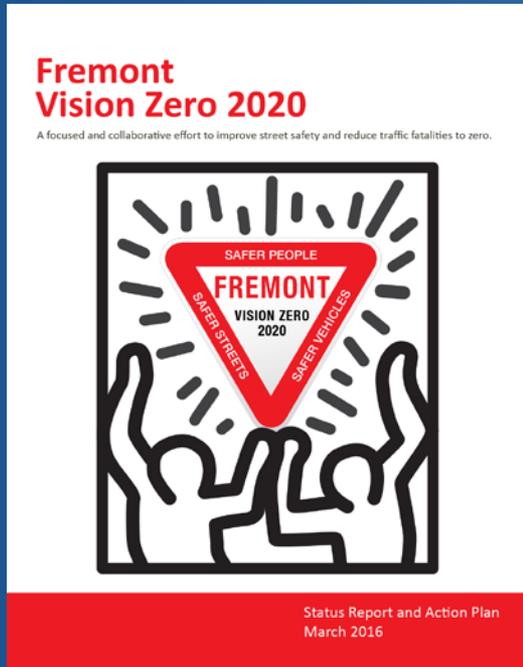


Concluding Thoughts

- National Traffic Fatality Levels are Unacceptable
- The Vision Zero Approach is Making a Positive Difference
 - Evaluation, Engineering, Enforcement, Education, and Engagement
- Need to Accelerate Deployment of Safer Vehicles

Fremont Vision Zero 2020

Evaluation of Vision Zero Program Implementation



2018 TRB Annual Meeting
January 11, 2018

