Vision Zero: Moving from Vision to Action
An estimated 40,000 deaths and rising

Motor Vehicle Fatalities


50,000
45,000
40,000
35,000
30,000

14% Increase

"OUR COMPLACENCY IS KILLING US."

Debbie Hersman
President and CEO
National Safety Council

#FatalFacts

VISION x NETWORK
Vision Zero Cities

A Vision Zero City meets the following minimum standards:

- Sets clear goal of eliminating traffic fatalities and severe injuries
- Mayor has publicly, officially committed to Vision Zero
- Vision Zero plan or strategy is in place, or Mayor has committed to doing so in clear time frame
- Key city departments (including Police, Transportation and Public Health) are engaged.
Acknowledges that traffic losses are *preventable*

Takes *systems approach* to prevention

Is data-driven

Not all E’s are created equal

Leadership = essential!
CRASH ACCIDENT
Acknowledges that traffic losses are *preventable*

Takes *systems approach* to prevention

Is data-driven

Not all E’s are created equal

Leadership = essential!
The Spectrum of Prevention

- Influencing Policy & Legislation
- Changing Organizational Practices
- Fostering Coalitions & Networks
- Educating Providers
- Promoting Community Education
- Strengthening Individual Knowledge & Skills
Vision Zero Ethical Platform

**System Designers**
Responsible for safety level in entire system

If road users fail to comply
System designers take new steps to

**Road Users**
Responsible for following rules
Acknowledges that traffic losses are *preventable*.

Takes *systems approach* to prevention.

Is *data-driven*.

Not all E’s are created equal.

Leadership = essential!
Data: Death and serious injury concentrated on small % streets
Vision Zero Denver

50% of Denver’s traffic fatalities occur on just 5% of our streets.

Arterial roadways are disproportionately dangerous for all modes in Denver:

- 6x more pedestrians died on arterials than other roads
- 7x more bicyclists died on arterials than other roads
- 4x more drivers died on arterials than other roads

Vision 4x4 Network
Data: Not all Communities’ Safety is Treated Equitably

**People Killed While Walking by Income**

- **Low-Income**: 2x as likely
- **High-Income**:

Governing, August 2014
© 2015 Safe Routes to School National Partnership

**People Killed While Walking**

- **African American**: 2x as likely
- **Latino**: 2x as likely
- **White**: 2x as likely

Governing, August 2014
© 2015 Safe Routes to School National Partnership

**Communities with Sidewalks**

- **High income**: 90%
- **Low income**: 49%

Bridging the Gap, Income Disparities in Street Features that Encourage Walking, 2012
© 2015 Safe Routes to School National Partnership

VISION 4 KNETWORK
Safe Systems,
not traffic stops
Acknowledges that traffic losses are *preventable*

Takes *systems approach* to prevention

Is data-driven

Not all E’s are created equal

Leadership = essential!
SAFE TRAVEL FOR ALL

SAFE STREETS
SAFE SPEEDS
SAFE VEHICLES
SAFE PEOPLE

VISION 4 KONETWORK
Focus on Roadway Redesign & Managing Speed
Hit by a vehicle traveling at 20 MPH
9 out of 10 pedestrians survive.

Hit by a vehicle traveling at 30 MPH
5 out of 10 pedestrians survive.

Hit by a vehicle traveling at 40 MPH
only 1 out of 10 pedestrians survives.
Vision Zero Success = Managing Speed for Safety

SAFE STREET DESIGN
SAFE SPEED LIMITS
AUTOMATED SPEED ENFORCEMENT
SPEED CAMERA PROGRAMS

SPEED LIMIT 3 ON LOCAL ROADS

COULD HAVE PREVENTED >22,000 DEATHS OR INJURIES NATIONWIDE IN 2015

SOURCE: INSURANCE INSTITUTE FOR HIGHWAY SAFETY, IIHS.ORG
Portland, OR
Fremont, CA
Acknowledges that traffic losses are *preventable*

Takes *systems approach* to prevention

Is data-driven

Not all E’s are created equal

**Leadership = essential!**
9 Components of a Strong Vision Zero Commitment

Based on the experiences of early-adopter cities in the United States, these nine components have proven to be an effective high-level framework for communities considering a Vision Zero commitment. While these are not the only factors to consider, they are critical aspects to ensure a strong and lasting commitment to Vision Zero.

POLITICAL COMMITMENT
The highest-ranking local officials (Mayor, City Council, City Manager) make an official and public commitment to a Vision Zero goal to achieve zero traffic fatalities and severe injuries among all road users (including people walking, biking, using transit, and driving) within a set timeframe. This should include passage of a local policy laying out goals, timeline, stakeholders, and a commitment to community engagement, transparency, & equitable outcomes.

MULTI-DISCIPLINARY LEADERSHIP
An official city Vision Zero Taskforce (or Leadership Committee) is created and charged with leading the planning effort for Vision Zero. The Taskforce should include, at a minimum, high-ranking representatives from the Office of the Mayor, Police, Transportation (or equivalent), and Public Health. Other departments to involve include Planning, Fire, Emergency Services, Public Works, District Attorney, Office of Senior Services, Disability, and the School District.

ACTION PLAN
Vision Zero Action Plan (or Strategy) is created within 1 year of initial commitment and is implemented with clear strategies, owners of each strategy, interim targets, timelines, & performance measures.

EQUITY
City stakeholders commit to both an equitable approach to Vision Zero by establishing inclusive and representative processes, as well as equitable outcomes by ensuring measurable benchmarks to provide safe transportation options for all road users in all parts of the city.

COOPERATION & COLLABORATION
A commitment is made to encourage meaningful cooperation and collaboration among relevant governmental agencies & community stakeholders to establish a framework for multiple stakeholders to set shared goals and focus on coordination and accountability.

SYSTEMS-BASED APPROACH
City leaders commit to and prioritize a systems-based approach to Vision Zero — focusing on the built environment, systems, and policies that influence behavior — as well as adopting messaging that emphasizes that these traffic losses are preventable.

DATA-DRIVEN
City stakeholders commit to gather, analyze, utilize, and share reliable data to understand traffic safety issues and prioritize resources based on evidence of the greatest needs and impact.

COMMUNITY ENGAGEMENT
Opportunities are created to invite meaningful community engagement, such as select community representation on the Taskforce, broader community input through public meetings or workshops, online surveys, and other feedback opportunities.

TRANSPARENCY
The city’s process is transparent to city stakeholders and the community, including regular updates on the progress on the Action Plan and performance measures, and a yearly report (at minimum) to the local governing board (e.g., City Council).

For more visit the Vision Zero Network at visionzeronetwork.org.
Questions or ideas? Contact leah@visionzeronetwork.org.
Contact
Leah Shahum
leah@visionzeronetwork.org

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@visionzeronet
Sunnyvale Vision Zero

Ralph Garcia, P.E., Senior Transportation Engineer
Silicon Valley Bike Summit, August 22, 2018
Project Progress

• Bicycle and Pedestrian Advisory Commission 2016 Study Issue

• City Council Approved Funding for Vision Zero Plan in 2017

• Project Commenced in Summer 2017
  ◦ Audit of Existing Transportation Facilities
  ◦ Community Engagement
  ◦ 5-Year Collision Analysis (2012-2016)

• 85% Project Completion to Date
### Online Survey

**What is your primary mode of transportation for travel in Sunnyvale?**

<table>
<thead>
<tr>
<th>Mode of Transportation</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Vehicle</td>
<td>81.7%</td>
<td>318</td>
</tr>
<tr>
<td>Carpool</td>
<td>0.5%</td>
<td>2</td>
</tr>
<tr>
<td>Bicycle</td>
<td>11.3%</td>
<td>44</td>
</tr>
<tr>
<td>Walking</td>
<td>2.6%</td>
<td>10</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>0.5%</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>3.3%</td>
<td>13</td>
</tr>
</tbody>
</table>

**Who do you feel is most responsible for keeping roadways safe?**

<table>
<thead>
<tr>
<th>Responsible Party</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Public Works</td>
<td>15.5%</td>
<td>60</td>
</tr>
<tr>
<td>Department of Public Safety</td>
<td>14.1%</td>
<td>52</td>
</tr>
<tr>
<td>All road users</td>
<td>50.0%</td>
<td>231</td>
</tr>
<tr>
<td>Other</td>
<td>6.5%</td>
<td>33</td>
</tr>
</tbody>
</table>

**Does safety affect the mode of transportation you choose for travel in Sunnyvale?**

<table>
<thead>
<tr>
<th>Safety Impact</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>66.0%</td>
<td>256</td>
</tr>
<tr>
<td>No</td>
<td>34.0%</td>
<td>132</td>
</tr>
</tbody>
</table>

**What is your top traffic safety concern in the City?**

<table>
<thead>
<tr>
<th>Traffic Safety Concern</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speeding</td>
<td>24.2%</td>
<td>94</td>
</tr>
<tr>
<td>Red light runners</td>
<td>17.2%</td>
<td>67</td>
</tr>
<tr>
<td>Illegal turning</td>
<td>5.4%</td>
<td>21</td>
</tr>
<tr>
<td>Traffic congestion</td>
<td>20.1%</td>
<td>78</td>
</tr>
<tr>
<td>Pedestrians illegally crossing streets</td>
<td>0.8%</td>
<td>3</td>
</tr>
<tr>
<td>Bicyclists riding in an unsafe manner or violating traffic laws</td>
<td>0.0%</td>
<td>14</td>
</tr>
<tr>
<td>Other</td>
<td>28.8%</td>
<td>112</td>
</tr>
</tbody>
</table>

**What would be your primary mode of transportation for travel in Sunnyvale if safety were not a consideration?**

<table>
<thead>
<tr>
<th>Mode of Transportation</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Vehicle</td>
<td>46.6%</td>
<td>177</td>
</tr>
<tr>
<td>Bicycle</td>
<td>41.8%</td>
<td>158</td>
</tr>
<tr>
<td>Waiting</td>
<td>7.7%</td>
<td>29</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>1.3%</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>2.4%</td>
<td>9</td>
</tr>
</tbody>
</table>
Online Map – Community Input on Traffic Safety Issues
Fatal or Severe Injury (KSI) Collisions

91 collisions with a fatality (21) or severe injury (70) between 2012 and 2016, out of 6,875 total collisions.
Mode Split of KSI Collisions

*Source: California Household Travel Survey, 2012
Collision Analysis by Age

TOTAL POPULATION*
- 18 & under: 24%
- 19-60: 61%
- 60+: 15%

KSI COLLISIONS
- 18 & under: 5%
- 19-60: 75%
- 60+: 20%

PED KSI COLLISIONS
- 18 & under: 6%
- 19-60: 61%
- 60+: 33%

*Source: American Community Survey 5-Year Average, 2011-2015
Collision Profiles

- walking or bicycling on expressway, arterial, or collector (43 KSI, 47%)
- unmarked pedestrian crossing (15 KSI, 17%)
- speed-related conflict (14 KSI, 15%)
- left turn at signalized intersection (11 KSI, 12%)
- 60+ year old pedestrian at intersection (11 KSI, 12%)
- influence of drugs or alcohol (10 KSI, 11%)
- midblock bicycle conflict (9 KSI, 10%)
- conflicting through movement at intersection (7 KSI, 8%)
- child walking or biking near school (7 KSI, 8%)
- red light violation at signalized intersection (5 KSI, 6%)
Priority Project Locations

1) El Camino Real between Mary and Mathilda
2) El Camino Real between Taaffe and Fair Oaks
3) El Camino Real/Fremont/Wolfe
4) Remington/Fair Oaks between Iris and Manet
5) El Camino Real between Henderson and Helen
6) Mathilda and Maude
7) Fair Oaks between Balsam and Taylor
8) Fremont between Sunnyvale Saratoga and Floyd
9) Homestead between Heron and Wolfe
10) Mary between Remington and Fremont
Priority Project Location 2 – El Camino Real between Taaffe and Fair Oaks

The study area extends 0.7 miles along El Camino Real between S. Taaffe Street and S. Fair Oaks Avenue. The project area is served by VTA Bus Routes 22 and Rapid 522, and major destinations in the vicinity of the corridor include Allaria Shopping Center, Hillary School, Sprouts Farmers Market, Safeway, CVS Pediatrics Sunnyvale Center, and food services. El Camino Real in this section is generally 6 lanes with a speed limit of 40 miles per hour. There were 173 collisions on the project corridor between 2012 and 2016, including six severe/fatal collisions. Collisions on the corridor often involved speed. Other notable collision patterns were people walking or bicycling on the arterials. Left turns at signalized intersections and red light violations at signalized intersections.

Potential Improvements

- Lane width reduction to 11’ where feasible
- Buffered bike lane where feasible
- Green pavement marking in conflict zones
- Speed feedback sign and traffic enforcement
- Improve street lighting
- Directional curbs near to assist pedestrians with visual impairment where feasible
- Faded sign replacement / excessive sign removal
- Planting strips to separate sidewalk from roadway
- Bicyclist conflicts be reduced where possible
- Tactile surface improvements
- High-visibility crosswalks
- Curb extensions to reduce curb radii

Signalized Intersection Improvements

A majority of collisions for all nodes in this segment occurred at or near the existing signalized intersections. Providing the following features may help to improve safety at these locations:

- Signalized crosswalks
- Accessible pedestrian signals (APS) with countdown timers
- Passive in-crosswalk pedestrian detection
- Bicycle detection
- Leading Pedestrian Intervals (LPI)
- Median pedestrian refuge island
- Multi-vehicle signal heads to improve visibility
- Possible elimination of right-turn pinch point at the intersection of El Camino Real and S. Fair Oaks Avenue
- Protected left turns and turn lanes on Orange Drive
- Bike lane on southbound Orange Drive

Signalized midblock crossing on El Camino Real

Data indicate pedestrian-involved (PI) collisions occurred on this segment of El Camino Real. Midblock crossings along with enhanced crossing treatments, if warranted, should be considered to improve crossing safety for pedestrians at these locations. Treatments may include:

- Midblock high-visibility crosswalks with traffic signal
- Median pedestrian refuge island
- Advance left lane

City of Sunnyvale – Vision Zero – August 2018
Collision Countermeasures

- Pedestrian countdown signal
- Leading pedestrian interval
- Buffered bike lane
- Pedestrian refuge island
- Rectangular rapid flashing beacon
- Protected left turn
- Curb extension
- Shared-use/bicycle path
El Camino Real – Draft Conceptual Improvements

- High visibility crosswalks
- Sharrows at intersections
- Median pedestrian refuge island on El Camino Real
- Curb extension on northeast corner to reduce curb radius
- Leading pedestrian interval (LPI)
- Passive ped and bicycle detection
- Green marking in conflict zones and through intersection
- Protected left turn and turn lanes on Cozymere Drive
- Bike box on southbound Cozymere Drive
- Buffered bike lane
- Signalized mid-block crossing
- High visibility crosswalks
- Advance limit line
- Median pedestrian refuge island
- Minimizing bus-bike conflict through bus boarding island at bus stops where feasible
- Bus bulb-out
- Buffered bike lane
- Grading improvements at curb cut
Sunnyvale Vision Zero Plan – Next Steps

• Finalize Conceptual Improvement Plans
• Develop Final Vision Zero Plan and Report
• Sunnyvale City Council Adopt Final Vision Zero Plan
• Vision Zero Plan to Provide Guidance on Future Projects
   Systemic Safety Analysis Report Program
   Master Bike Plan Update / Safe Routes to School Plan / Ped and Bike Safety Plan
   Private Development Projects
• Provide Framework for Community Involvement
• Sunnyvale Vision Zero Webpage: sunnyvale.ca.gov/news/topics/visionzero