Planning for Safety: How to Develop a Data-Driven Action Plan

NACTO Designing Cities Conference
Denver 2023

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Agenda

Introduction (10 minutes)
Albuquerque (10 minutes)
Detroit (10 minutes)
San Francisco (10 minutes)
Q&A (35 minutes)
Panelists

Valerie Hermanson (she/her/hers)
Public Works Strategic Program Manager
Department of Municipal Development
Albuquerque, NM

James Hannig, AICP (he/him/his)
Deputy Director, Complete Streets
Department of Public Works
Detroit, MI

Jennifer Wong (she/her/hers)
Quick Build Program Manager, Streets Division
San Francisco Municipal Transportation Agency
San Francisco, CA
Moderator

Lindsay Gips (she/her/hers)
Transportation & Mobility Intern
Department of Transportation and Infrastructure
City and County of Denver
Denver VZ Action Plans
What Does it Mean to be Data-Driven?
Why Use a Data-Driven Decision Making Approach?
Helps **define** our goals and make them **actionable**

What are we trying to solve?

What questions are we trying to answer?

What data do we collect and analyze that indicates this?
Removes **intuition** and **bias** from influencing our actions

Use intuition to generate hypotheses but use data to support or refute the ideas
Allows for **proactive** vs. reactive action

As we learn how to interpret data, we can take proactive measures to reach our goals.
Denver Left Turn Signal Warrant Policy

<table>
<thead>
<tr>
<th>Signalized Intersection Characteristics</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crash Rate Threshold</td>
<td>13-26 over 3 years</td>
<td>3 over 3 years</td>
</tr>
<tr>
<td>85\textsuperscript{th} Percentile Speed</td>
<td>45mph</td>
<td>40mph</td>
</tr>
<tr>
<td>Opposing Lane Threshold</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
Creates **consistency**

Consistency in approach across all groups and departments to ensure everyone is using the same language, metrics, and data.
Beware of analysis paralysis

Don’t let data overwhelm you!

“Of course we’ll make a decision ... once we have considered the 5243 factors.”

Source: cartoonresource / Adobe Stock
In Summary...

A data-driven action plan creates defined, actionable, and measurable goals through a consistent approach. It removes intuition and bias from our decisions and allows us to take proactive measures to achieve safety goals.
How?
NACTO Designing Cities Conference
Planning for Safety: How to Develop a Data-Driven Action Plan
May 17, 2023
About ABQ

- Population: 562,599
- 189 square miles
- 4,668 total surface lane miles
- 652 traffic signals
- 570 miles of on-street bike facilities and multi-use trails
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Photo: AMC
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Albuquerque metro ranked second most dangerous for pedestrians

New Mexico ranks #1 for pedestrian deaths

NM has highest pedestrian fatality rate in US
Vision Zero Action Plan

Overview

- 2019 Mayor Keller committed to working toward zero traffic deaths and serious injuries by 2040

- Completed Spring 2021. Department of Municipal Development (DMD) led Plan Creation with:
  - 13 City Departments
  - 5 local agencies
  - 14 community partners

- Identified High Fatal & Injury Network (HFIN) & Vulnerable Communities Index

- 6 Themes with 63 total actions
  - Engineering + Roadway Design
  - Safe Speeds
  - Policy, Regulation + Practice
  - Education + Encouragement
  - Walking + Rolling
  - Data + Transparency
High Fatal & Injury Network

Five core Vision Zero principles:
- Supporting mode shift
- Designing safe streets
- Slowing speeds
- Promoting safety culture
- Centering equity

Action items on safe design, safe speeds, and shift to active modes

Action Plan Summary

Includes

- High Fatal & Injury Network
- Five core Vision Zero principles:
  - Supporting mode shift
  - Designing safe streets
  - Slowing speeds
  - Promoting safety culture
  - Centering equity
- Action items on safe design, safe speeds, and shift to active modes

Missing

- Prioritization of action items and High Fatal and Injury Network (HFIN)
- Distinct themes / action items overlap
- Clear lead agencies/organizations responsible for implementing actions
- Focus on a targeted set of action items that will have the most impact at reducing/eliminating traffic fatalities and serious injuries
Year-in-Review/Prioritization Strategy

- Working group (City, local agencies, community partners)
- 20 Staff interviews (DMD, Planning, Parks, Transit, Mayor’s Office, Council, Police, NMDOT, MRMPO, Public Schools)
- What’s working well?
- What’s not working well?
- What are national best practices?
- How should we prioritize the plan?
Priority Focus Areas

Actions: What to focus on?
- Low cost
- High impact

Spatial: Where to focus?
- High Fatal & Injury Network (HFIN)
- Vulnerable Communities

Thematic Goals
- Prioritize
- Reframe
Goals/Actions Prioritization
Reclassification Thematic Goals

<table>
<thead>
<tr>
<th>Original Categories</th>
<th>New Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering + Design</td>
<td>Safe Multimodal Street Design</td>
</tr>
<tr>
<td>Safe Speeds</td>
<td>Shift to Active Modes</td>
</tr>
<tr>
<td>Walking + Rolling</td>
<td>Culture of Safety</td>
</tr>
<tr>
<td>Policy, Regulation + Practice</td>
<td>Data and Transparency</td>
</tr>
<tr>
<td>Education + Encouragement</td>
<td>32 actions</td>
</tr>
</tbody>
</table>

63 actions

higher priority

lower priority
Sample Prioritization

**Example Actions**

- **Retrofit HFIN principal arterials using low-cost/high-impact safety measures**
  - Feasibility of Implementation: High
  - Required Resources: Medium
  - Level of Benefit: High

- **Incorporate Vision Zero principles and traffic safety best practices into the Comp Plan Update**
  - Feasibility of Implementation: High
  - Required Resources: Low
  - Level of Benefit: Medium
Spatial Prioritization
Vulnerable Communities Index

- Developed by the Centers for Disease Control and Prevention (CDC) (2018)

Vulnerability Indicators
- Per capita income
- Population 65+
- Population 17 and under
- People with a disability
- Non-white population
- Limited English proficiency
- Multi-family (10+ units)
- Households with no vehicle
41% of fatalities occurred on these 24 corridors (2015–2019)

16% of road miles in Albuquerque

90% are Principal Arterials
## HFIN Prioritization Criteria

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Summary</th>
<th>Scoring Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>As all corridors are already on the HFIN, corridors are further prioritized based on vulnerable road user fatalities</td>
<td>• Presence of bicycle/pedestrian fatalities</td>
</tr>
<tr>
<td>Transportation Equity</td>
<td>Corridors located near or within communities more vulnerable to traffic violence</td>
<td>• Vulnerable Communities Index scores</td>
</tr>
<tr>
<td>Access to Destinations</td>
<td>Corridors that provide access to important destinations</td>
<td>• Proximity to major or minor destinations</td>
</tr>
<tr>
<td>Facility Needs</td>
<td>Prioritizes corridors that do not have adequate facilities for multiple modes of transportation</td>
<td>• Presence or absence of appropriate bike facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Presence or absence of sidewalks, sidewalk gaps, and landscape buffers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Spacing of pedestrian crossings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Posted speed and presence/absence of medians</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Density of streetlights</td>
</tr>
<tr>
<td>Current Level of Use</td>
<td>Prioritizes corridors that see the most auto, transit, and pedestrian use</td>
<td>• Average daily traffic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transit boardings</td>
</tr>
<tr>
<td>Land Use / Employment</td>
<td>Prioritizes corridors that provide access to employment opportunities and Comprehensive Plan Centers</td>
<td>• Proximity to Comprehensive Plan Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employment density within 0.5 mi of corridor</td>
</tr>
</tbody>
</table>
HFIN Priority Tiers

Priority Tiers
- 1st: Score >25
- 2nd: Score 23-25
- 3rd: Score 20-23
- 4th: Score 16-20
- 5th: Score <17
- State Road

Vulnerable Communities Index
- 0.0 - 0.2 (Low Vulnerability)
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0 (High Vulnerability)
- City Boundary
HFIN Workshops/Tool Kit

- Review conditions along 10 HFIN segments
- Differentiate between low-cost high-impact strategies and major road improvements
- Compile tool kit of strategies
Example: Central Ave:
Eubank Blvd to Tramway Blvd
Example: Central Ave: Eubank Blvd to Tramway Blvd

Extend road diet through restriping to Eubank Blvd. Apply business access transit (BAT) lanes for outside travel lanes.

Add LPIs to existing signalized crossings

Existing signalized crossings

Proposed midblock crossing with pedestrian hybrid beacons (PHBs)

Existing road diet through restriping that reduced general-purpose travel lanes from six to four and installed buffers and right turn lanes in outside travel lanes.

Approx. 1.97 miles
Lessons Learned

• Using data to prioritize and focus on strategies that will have the greatest impact in eliminating traffic deaths and serious injuries.

• Create clear actions, identify who is responsible, and performance metrics to track progress

• Identify short to mid-term strategies and longer-term strategies

• Prioritization creates transparency and it’s easier to communicate with the public and local elected officials.

• HFIN Workshops: Opportunity to influence existing/planned projects
Detroit has one of the highest traffic fatality rates in the country. Among large cities, we rank second in overall fatality rate and third in pedestrian fatality rate, when adjusted for population.

Detroit’s per capita traffic death rate grew 88% between 2017 and 2020 while the median increase among major cities was 19%.

Source: MCTF
Between 2017 and 2021, 539 people were killed in traffic crashes in Detroit. Another 2,473 were seriously injured.

Fixed Object, Angle, and crashes involving Vulnerable Users (people walking and biking) make up 61% of severe crashes 2017-21.

The HIN accounts for 3% of surface streets, but 34% of severe crashes.
## Equity Analysis

### Disparities in Traffic Crashes, 2017-2021

<table>
<thead>
<tr>
<th></th>
<th>Detroit</th>
<th>SEMCOG Region</th>
<th>State of Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Deaths per 10,000 Residents (2019 estimates)</td>
<td>1.61</td>
<td>0.66</td>
<td>0.88</td>
</tr>
<tr>
<td>KA Crashes per 10,000 Residents (2019 estimates)</td>
<td>8.99</td>
<td>4.39</td>
<td>5.78</td>
</tr>
<tr>
<td>Share Population Non-White, 2020</td>
<td>89%</td>
<td>36%</td>
<td>27%</td>
</tr>
<tr>
<td>Median Household Income (in 2020 dollars), 2016-2020</td>
<td>$32,498</td>
<td>$64,068</td>
<td>$59,234</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>% of Detroit by Population (2019)</th>
<th>% of Detroit Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not an HDC</td>
<td>43%</td>
<td>44%</td>
</tr>
<tr>
<td>HDC</td>
<td>57%</td>
<td>56%</td>
</tr>
</tbody>
</table>

Source: MTCF; US DOT
Detroit's Traffic Safety Strategy

- Builds upon existing traffic safety programs
- Incorporates the Safe System Approach
- Endorses regional Vision Zero target to eliminate fatal and serious injury crashes by 2050
- Incorporates Comprehensive Safety Action Plan (CSAP) into overall transportation master plan, Streets for People (SFP)
- Leverages federal grant funding, especially Safe Streets and Roads for All (SS4A)

SFP and CSAP are based on the Safe System approach to traffic safety
Timeline

Fall 2019
• Began SFP

2020
• Community Engagement
• Existing conditions
• COVID-19

2021
• Planning continues (slowly)

Spring 2022
• SFP substantially complete
• SS4A NOFO

Summer 2022
• Developed CSAP
• Prepared SS4A grant application

September 2022
• Adopted SFP & CSAP
• Submitted SS4A grant

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### Community Priorities

#### "What concerns, if any, do you have moving about Detroit safely?"

<table>
<thead>
<tr>
<th>Concern</th>
<th>Total Responses</th>
<th>Percent of Total</th>
<th>Self ID as Black</th>
<th>Percent as Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speeding or Other Forms of Dangerous Driving</td>
<td>1,005</td>
<td>84%</td>
<td>554</td>
<td>86%</td>
</tr>
<tr>
<td>Damaged or Missing Sidewalks</td>
<td>560</td>
<td>47%</td>
<td>242</td>
<td>37%</td>
</tr>
<tr>
<td>People Walking in the Street</td>
<td>365</td>
<td>31%</td>
<td>194</td>
<td>30%</td>
</tr>
<tr>
<td>Inability to See Bicyclists</td>
<td>209</td>
<td>18%</td>
<td>86</td>
<td>13%</td>
</tr>
<tr>
<td>Vehicles Parked or Driving in Bike Lanes</td>
<td>365</td>
<td>31%</td>
<td>132</td>
<td>20%</td>
</tr>
<tr>
<td>Poor Road Quality</td>
<td>715</td>
<td>60%</td>
<td>366</td>
<td>57%</td>
</tr>
<tr>
<td>Wide Roads</td>
<td>161</td>
<td>13%</td>
<td>41</td>
<td>6%</td>
</tr>
<tr>
<td>Poor Lighting</td>
<td>607</td>
<td>51%</td>
<td>350</td>
<td>54%</td>
</tr>
<tr>
<td>Crime</td>
<td>642</td>
<td>54%</td>
<td>412</td>
<td>64%</td>
</tr>
<tr>
<td>Encounters with Police</td>
<td>200</td>
<td>17%</td>
<td>112</td>
<td>17%</td>
</tr>
<tr>
<td>None</td>
<td>9</td>
<td>1%</td>
<td>6</td>
<td>1%</td>
</tr>
</tbody>
</table>

#### "What improvements would you like to see?"

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Total Responses</th>
<th>Percent of Total</th>
<th>Self ID as Black</th>
<th>Percent as Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street improvements that balance the needs of all users</td>
<td>735</td>
<td>62%</td>
<td>362</td>
<td>56%</td>
</tr>
<tr>
<td>Reduced speeding and increased safety</td>
<td>939</td>
<td>79%</td>
<td>515</td>
<td>80%</td>
</tr>
<tr>
<td>Safer Connections to Schools</td>
<td>519</td>
<td>43%</td>
<td>241</td>
<td>37%</td>
</tr>
<tr>
<td>Safer Bike Routes</td>
<td>419</td>
<td>35%</td>
<td>153</td>
<td>24%</td>
</tr>
<tr>
<td>Better and More Convenient Public Transit</td>
<td>515</td>
<td>43%</td>
<td>224</td>
<td>35%</td>
</tr>
<tr>
<td>Increased Vibrancy</td>
<td>658</td>
<td>55%</td>
<td>314</td>
<td>49%</td>
</tr>
<tr>
<td>Improved Connections to Retail</td>
<td>516</td>
<td>43%</td>
<td>236</td>
<td>36%</td>
</tr>
</tbody>
</table>

*Source: Streets for People*
## Detroit CSAP Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Safe Users</th>
<th>Safe Vehicles</th>
<th>Safe Speeds</th>
<th>Safe Streets</th>
<th>Post-Crash Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch a citywide traffic safety campaign</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce speeding throughout Detroit</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Build a culture of shared responsibility within City government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Improve the High Injury Network</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Establish the Slow Streets Network</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Create commercial streetscapes that promote safe speeds and safe crossings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Proactively target the streets and places where severe crashes may occur</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Create safe, complete networks for people walking and using assistive devices</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote safe fleets through City procurement and other mechanisms</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure that nobody is left behind in a safe vehicles future.</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respond to fatal crashes with all due urgency</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate progress toward safety goals</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
### Project Prioritization Criteria

- For prioritizing all projects, specific emphasis on safety projects
- Aligns with Streets for People Values
  - Safety First
  - Economic Opportunity
  - Equity, Dignity, Transparency
  - Access for All
  - Public Health and Environment

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Detail</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety Impact [25 total]</strong></td>
<td>Project Located on the HIN</td>
<td>Intersection project on HIN or corridor project on HIN</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td><strong>Uses Detroit CSAP severe crash reduction countermeasures, including at least 1 speed reduction countermeasure</strong></td>
<td>3 or more countermeasures 2 or more countermeasures 1 or more countermeasures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project improves safety around a school or a park</td>
<td>Within 1/8 mile (660')</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>Increases safety and comfort for people walking, using assistive devices, or biking</strong></td>
<td>Scope includes safer crossings, Slow Streets, bicycle facilities, and/or filling gaps in the sidewalk network</td>
<td>3</td>
</tr>
<tr>
<td><strong>Equity [15 total]</strong></td>
<td><strong>Project is located in an Equity Area</strong></td>
<td>SFP Tier 1 and HDC</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>SFP Tier 2 and HDC</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>SFP Tier 1 only</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>SFP Tier 2 only</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Project has prior community support</td>
<td>Documented through a neighborhood plan or community-identified high-risk location</td>
<td>5</td>
</tr>
<tr>
<td><strong>Sustainability, Climate Change, &amp; Economic Competitiveness [10 total]</strong></td>
<td>Improvements support transit or transit access through safer crossings, enhanced transit amenities, or enhanced transit operations</td>
<td>Project located on a ConnectTen route, at a transfer intersection, or documented in a DDOT, SMART, or RTA plan</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Improvements increase tree canopy and/or decrease impermeable surfaces</td>
<td>Scope includes new trees or tree replacements, rain gardens, permeable pavements, or infiltration</td>
<td>4</td>
</tr>
</tbody>
</table>
### Project Prioritization Criteria

- Identified potential scope of safety countermeasures for range of project types
- Currently developing guidance for designers to use in various project development phases

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Potential Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced Protection Projects</td>
<td>Streetscape, curb extensions, separated bike lanes, one-two way conversion, lighting</td>
</tr>
<tr>
<td>Rapid Intervention Projects</td>
<td>Striping, crosswalk markings, paint and post treatments, signal retiming</td>
</tr>
<tr>
<td>Traffic Signals</td>
<td>Modernization, APS, updates, retiming, interconnects</td>
</tr>
<tr>
<td>School and Park Safety Upgrades</td>
<td>Crosswalk markings, raised crosswalks, curb extensions</td>
</tr>
<tr>
<td>Enhanced Pedestrian Crossings</td>
<td>RRFBs, PHBs, refuge islands, crosswalk markings</td>
</tr>
<tr>
<td>Complex Intersections</td>
<td>Geometric changes, signal upgrades</td>
</tr>
<tr>
<td>High Speed Streets</td>
<td>Road diet, speed limit reduction, speed feedback signs</td>
</tr>
<tr>
<td>Slow Streets Network</td>
<td>Bicycle boulevards, raised crosswalks, traffic calming</td>
</tr>
<tr>
<td>Separated Bikeways</td>
<td>At-grade or sidewalk level, protected intersections</td>
</tr>
<tr>
<td>Safety Treatment Maintenance</td>
<td>Markings, signage, replacement costs</td>
</tr>
<tr>
<td>Fatality Spot Improvements</td>
<td>As determined by investigation team</td>
</tr>
</tbody>
</table>
**Safe Streets for All (SS4A) Grant | Safe Streets for Detroit (SS4D)**

**Goal:** Reduce fatal & serious injury crashes on High Injury Network (HIN) corridors under City’s jurisdiction

**$31M Project Budget**
- **$24.8M Grant Award**
- **Enhanced Protection Projects**
  - $19.3M or $1.4M/mile
- **Rapid Implementation Projects**
  - $5.3M or $300K/mile
- **Vulnerable User Safety Improvements**
  - $1.9M
- **Technology Improvements & Data Collection**
  - $2.9M
- **Evaluation & Maintenance**
  - $2M

**Costs and Metrics:**
- Estimated cost of $300,000 per mile
- 10.6 miles of proposed safety projects
- Approximately $5.3 million of improvements

**Typical project characteristics:**
- Reallocation of street space ("Paint & Posts")
- Quick build, quick impact
- To be completed within approximately 1 year of grant award

**Enhanced Protection**
- Full scope redesigns ("Concrete & Curbs")
- More substantial design & traffic interventions
- Long-term safety investments

**Rapid Implementation**
- Estimated cost of $1,400,000 per mile
- 13.7 miles of proposed safety projects
- Approximately $19.3 million of improvements
SS4D Sample Proven Safety Countermeasures by Sub-Project

<table>
<thead>
<tr>
<th>PROGRAM CATEGORY</th>
<th>SUB-PROJECT</th>
<th>TYPICAL COUNTERMEASURES</th>
<th>CRASH REDUCTION FACTOR (CRASH TYPE)</th>
<th>SAFE USERS</th>
<th>SAFE SPEEDS</th>
<th>SAFE STREETS</th>
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</thead>
<tbody>
<tr>
<td>High Injury Network Interventions</td>
<td>Rapid Implementation Projects</td>
<td>Road Diet</td>
<td>39% (all)</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td></td>
<td>High visibility crosswalks</td>
<td>40% (pedestrians)</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leading Pedestrian Intervals (LPI)</td>
<td>19% (pedestrians)</td>
<td>X</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Add pedestrian crossing time</td>
<td>50% (pedestrians)</td>
<td>X</td>
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<td>X</td>
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<tr>
<td></td>
<td>Enhanced Protection Projects</td>
<td>Curb Extensions/Bus Bulbs</td>
<td>32% (all)</td>
<td>X</td>
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<tr>
<td></td>
<td></td>
<td>Bike Lanes</td>
<td>35% (all)</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>Pedestrian Refuge Islands</td>
<td>31% (pedestrians)</td>
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<td>X</td>
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<tr>
<td></td>
<td></td>
<td>Road Diet</td>
<td>39% (all)</td>
<td>X</td>
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<tr>
<td>Neighborhood Corridor Improvements</td>
<td>Curb Extensions/Bus Bulbs</td>
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<tr>
<td></td>
<td>Pedestrian Refuge Islands</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>High visibility crosswalks</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>RRFBs</td>
<td>47% (pedestrians)</td>
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<tr>
<td>Systemic Safety Interventions</td>
<td>Safety Improvements for Vulnerable Users</td>
<td>Raised Crosswalks</td>
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<td>Intersection lighting</td>
<td>44% (pedestrians)</td>
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<td></td>
<td></td>
<td>High visibility crosswalks</td>
<td>40% (pedestrians)</td>
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<td></td>
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<tr>
<td></td>
<td>Signal Equipment Upgrades</td>
<td>Pedestrian Countdown Timers</td>
<td>9% (all), 70% (pedestrians)</td>
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<tr>
<td></td>
<td></td>
<td>LED signal heads</td>
<td>28% (all)</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>Protected Left Turn Phases</td>
<td>55% (all)</td>
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<td></td>
<td>X</td>
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</tbody>
</table>

Source: CMF Clearinghouse
Let’s connect!

James Hannig, AICP
DPW Deputy Director, Complete Streets
james.hannig@detroitmi.gov
313.542.2158
Fatal Collisions in SF

<table>
<thead>
<tr>
<th>Year</th>
<th>People Killed While Walking</th>
<th>People Killed While Biking</th>
<th>People Killed in Vehicles</th>
<th>Overall AVG</th>
<th>VZ AVG</th>
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<tbody>
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<td>1</td>
<td>11</td>
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<td>2006</td>
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<td>2007</td>
<td>16</td>
<td>2</td>
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<td>14</td>
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<td>12</td>
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<tr>
<td>2018</td>
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<td>17</td>
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<tr>
<td>2019</td>
<td>15</td>
<td>3</td>
<td>1</td>
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<td>2020</td>
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<td>2021</td>
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<td>2022</td>
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</tr>
</tbody>
</table>

N= 27, 32, 41, 27, 30, 24, 28, 29, 34, 31, 31, 32, 20, 23, 29, 30, 27, 39
San Francisco’s Transit First Policy

- Voter approved in 1973
- Decisions regarding the use of limited public street and sidewalk space shall encourage the use of public rights of way by pedestrians, bicyclists, and public transit, and shall strive to reduce traffic and improve public health and safety.
Vision Zero Action Strategy

2015
What is Vision Zero?

2017
Defining a
Safe System Approach

2019
Advancing
Transformative
Policies

2021
Vision Zero Action
Strategy Update
2019 Vision Zero Action Strategy

Increase the total miles of high-impact sustainable travel lanes - transit-only lanes, protected bicycle facilities, and wider sidewalks…

Reduce delivery timelines through quick-build projects - work done entirely by city crews- …

visionzerosf.org/about/action-strategy/
Mayoral Direction & Support

“the SFMTA will develop a policy that requires SFMTA staff to move forward with quick, near-term safety enhancements on high injury corridors, including paint, safety posts, and temporary sidewalk extensions”

March 6, 2019

“We need to make bicycling a safer, more viable choice for our residents, and this starts with expanding our network of protected bike lanes and keeping our current bike lanes clear. That’s why I am directing the SFMTA to double our production of protected bike lanes over the next two years and increase enforcement of violations related to blocking bike lanes.”

May 9, 2019 (Bike to Work Day)
Quick-Build Program

- Traffic safety improvements that are
  - Easy to implement
  - Lower cost
  - Adjustable/reversible
- Design, construct, and evaluate more nimbly and iteratively
Quick-Build Projects
Project Results

20% improvement of bus on-time performance along 7th and 8th Streets

Bicycle use increased by 29% along Golden Gate

Volume of vehicles traveling on Jones and Hyde decreased by 24%

SFMTA.com/SafeStreetsEvaluation
Project Results

INVENTORY
- 7TH STREET
- 8TH STREET
- FOLSOM STREETSCAPE
- GOLDEN GATE AVENUE
- LEAVENWORTH STREET
- TURK STREET
- CENTRAL EMBARCADERO
- VALENCIA STREET
- 6TH STREET
- SAFER TAYLOR STREET
- INDIANA STREET
- CALIFORNIA STREET
- PAGE STREET
- FELL STREET
- POLK STREET
- SECOND STREET
- MASONIC AVENUE
- LEFT-TURN SAFETY

TOOLBOX
- ROAD LANE REDUCTIONS
- SEPARATED BIKEWAYS
- BICYCLE SIGNALS
- PEDESTRIAN UPGRADES
- LEFT TURN TRAFFIC SAFETY

RESULTS
- Collisions decreased by 18%
- 85th percentile speeds decreased by 3%
- Bicycle volumes increased up to 75%
- Vehicle-bike interactions at bike signals decreased by 93%
- Vehicles blocking the bike lane decreased by 90%
- Pedestrian-vehicle close calls decreased by 38%
- Vehicle travel time increased an average of 50 seconds for 7.3 miles of road lane reductions
- Left turn vehicle speeds decreased by 17%
QUICK-BUILDS VS STREETSCAPE PROJECTS

5th Street Before

~ $1.6M Quick-Build

5th Street After

2nd Street Before

~ $20M Streetscape

2nd Street After
Program Successes

- Iterative design process using streamlined delivery and thorough evaluation
- Flexibly respond to community-identified traffic safety needs and construction coordination opportunities
- Maximize use of local funding for traffic safety improvements
2021 Vision Zero Action Strategy

More than 80 miles of safety improvements have already been completed or are in planning or construction on the High Injury Network. This Action Strategy commits the City to applying the Quick-Build toolkit on the remaining 80 miles of the High Injury Network.

visionzerosf.org/about/action-strategy/
What’s Next

Applying the Quick-Build Toolkit to the High Injury Network

Since 2014, approximately 80 miles of corridor-level improvements have been completed or are in planning or construction. The City has approximately 80 miles remaining on the High Injury Network that need to be updated with safety improvements. This strategy commits the City to making these core safety improvements using the Quick-Build toolkit—which can include tools such as continental crosswalks, painted safety zones, daylighting, traffic signal retiming, and protected bike lanes.

**SF is committed to applying the Quick-Build toolkit to the High Injury Network**

- **80 MILES OF CORRIDOR LEVEL IMPROVEMENTS COMPLETED OR ARE IN PLANNING OR CONSTRUCTION**
- **80 MILES OF HIGH INJURY NETWORK REMAINING TO BE UPDATED WITH SAFETY IMPROVEMENTS**
- **COMMUNITIES OF CONCERN**

VISION ZERO SF ACTION STRATEGY 2021-2024
What’s Next

Major Street Redesign: Car free zones, Quick-Build projects, Protected bike lane network, and transit only lanes

Speed Safety Cameras: Using speed cameras to enforce speed limits

Mode Shift and Pricing Tools: Moving to active transportation modes by using tools like pricing

Advanced Vehicle Technologies: Advance driver-assisted systems and smaller vehicles

Increased Housing Density: Housing near jobs/services, especially affordable housing and services for unhoused populations
Contact Information

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Email: QuickBuild@SFMTA.com