SFMTA | Municipal Transportation Agency

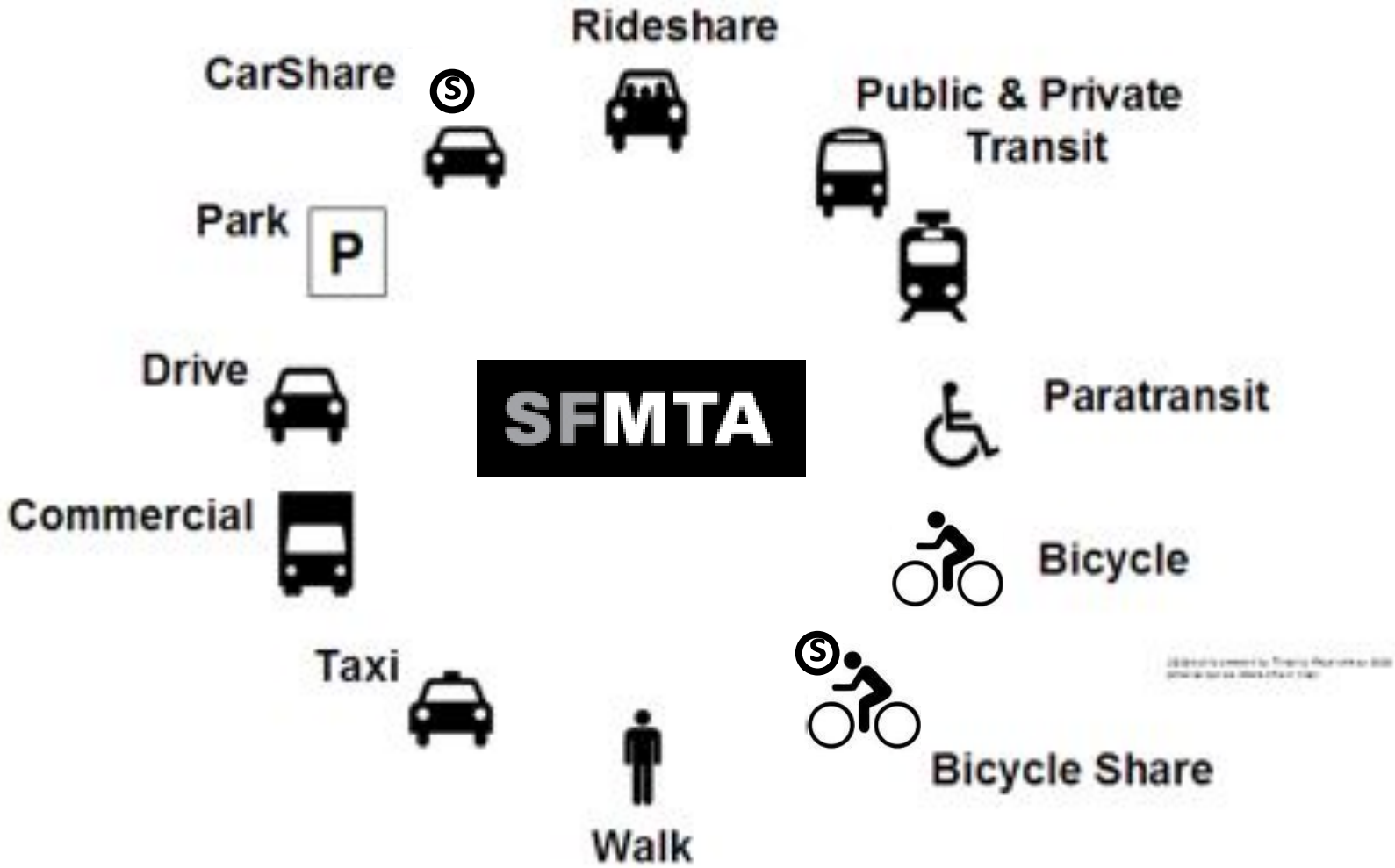


Pedestrian Safety
Supervisorial District 6

04 | 7 | 2011 | SAN FRANCISCO, CALIFORNIA

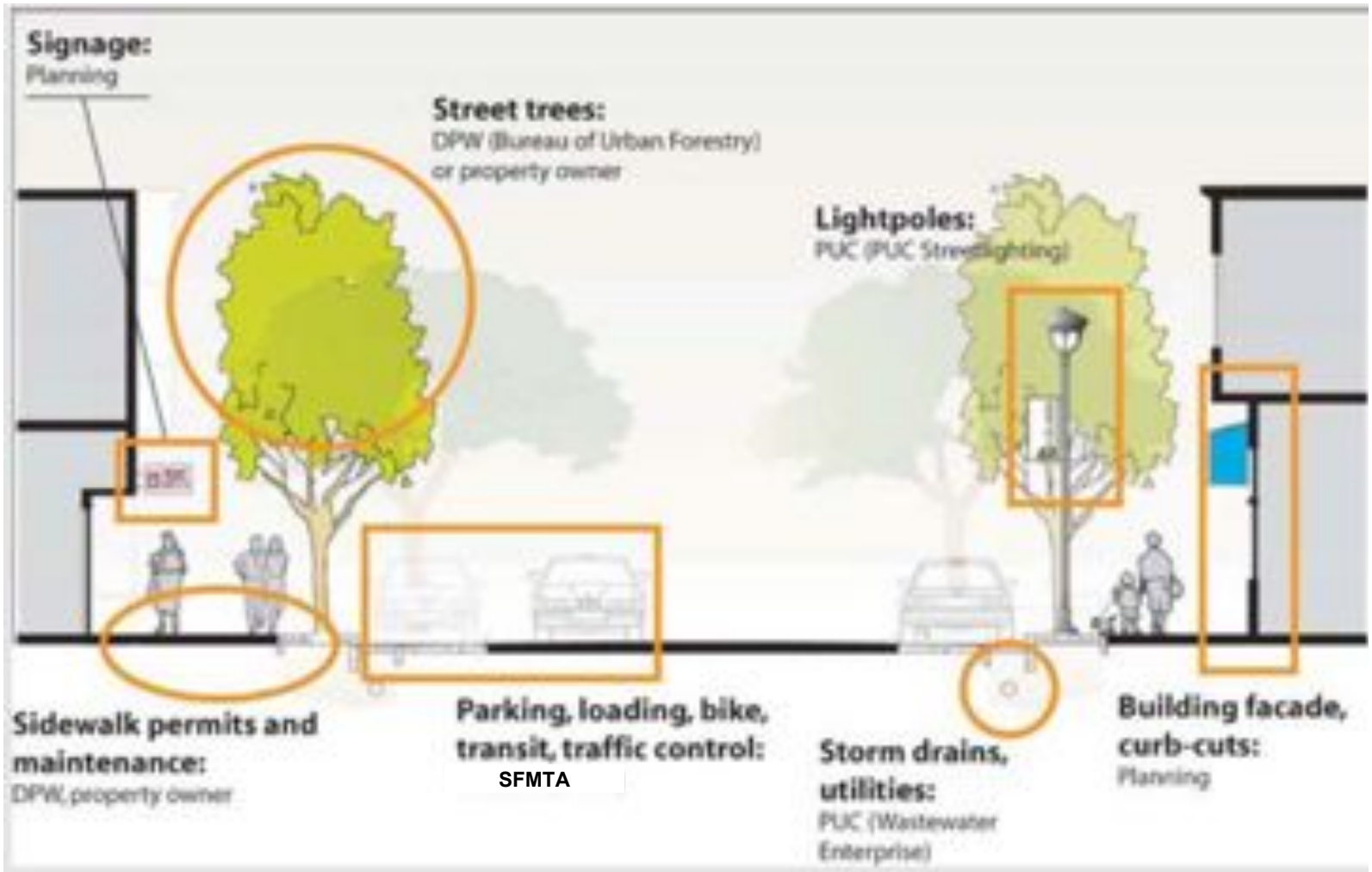
Agenda

- **The Public Realm and Pedestrian Safety**
- **Pedestrian Safety toolkit**
- **Pedestrian Safety and District 6:**
  - Pedestrian Safety Issues
  - Recently installed Pedestrian projects
  - Projects prioritized for 2011/2012
  - Opportunities for additional projects



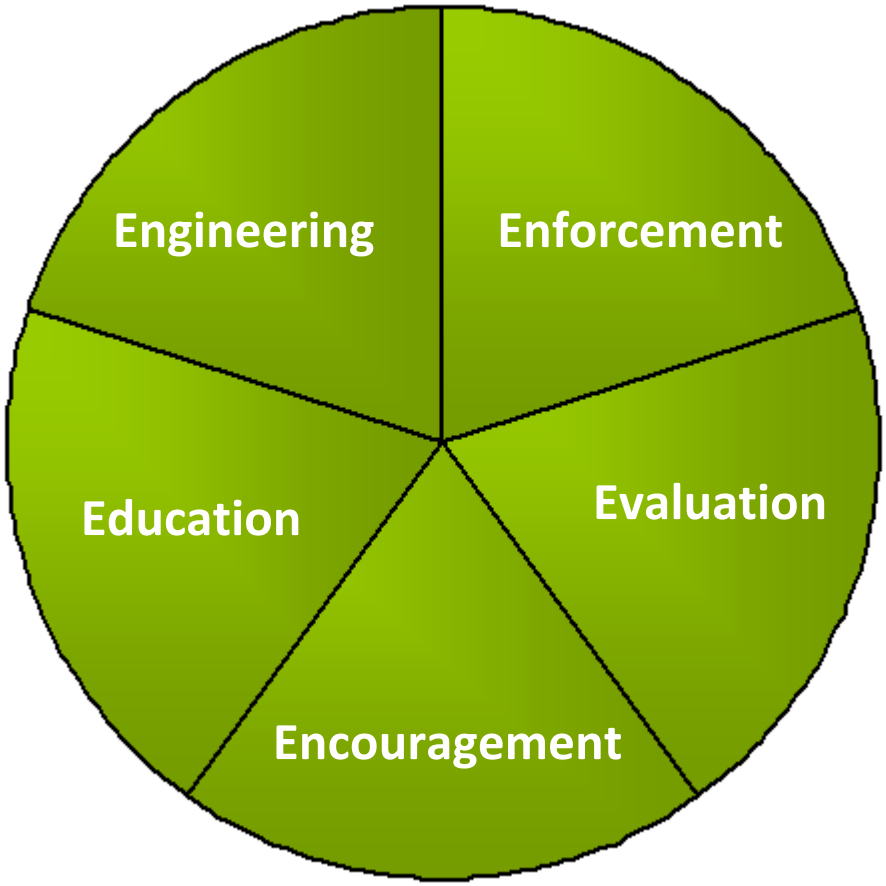
Walking is fundamental to our mobility vision

Pedestrian Realm & Pedestrian Safety



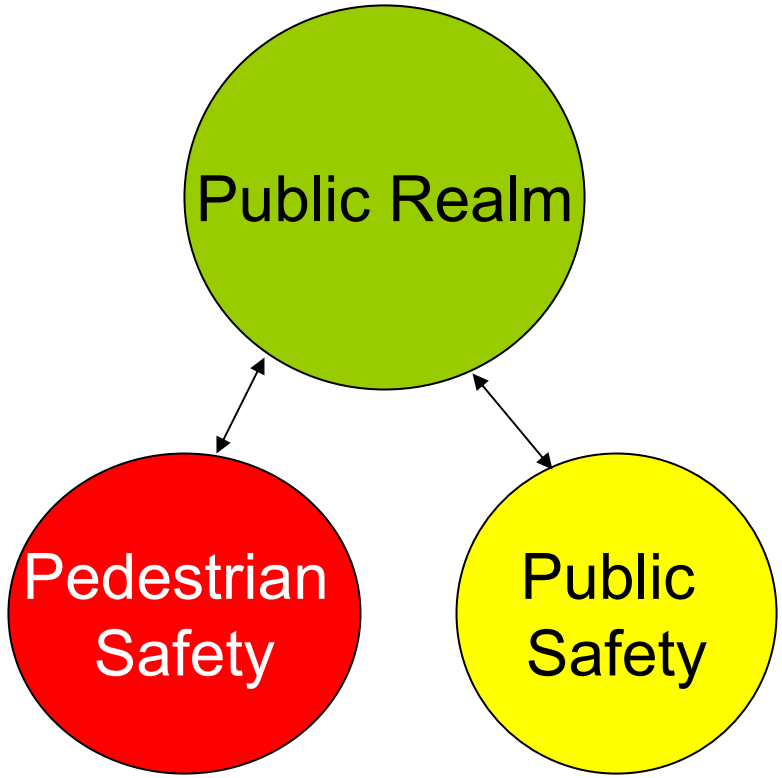
Source: Better Streets Plan

5 E's (Elements) of Good Street Design



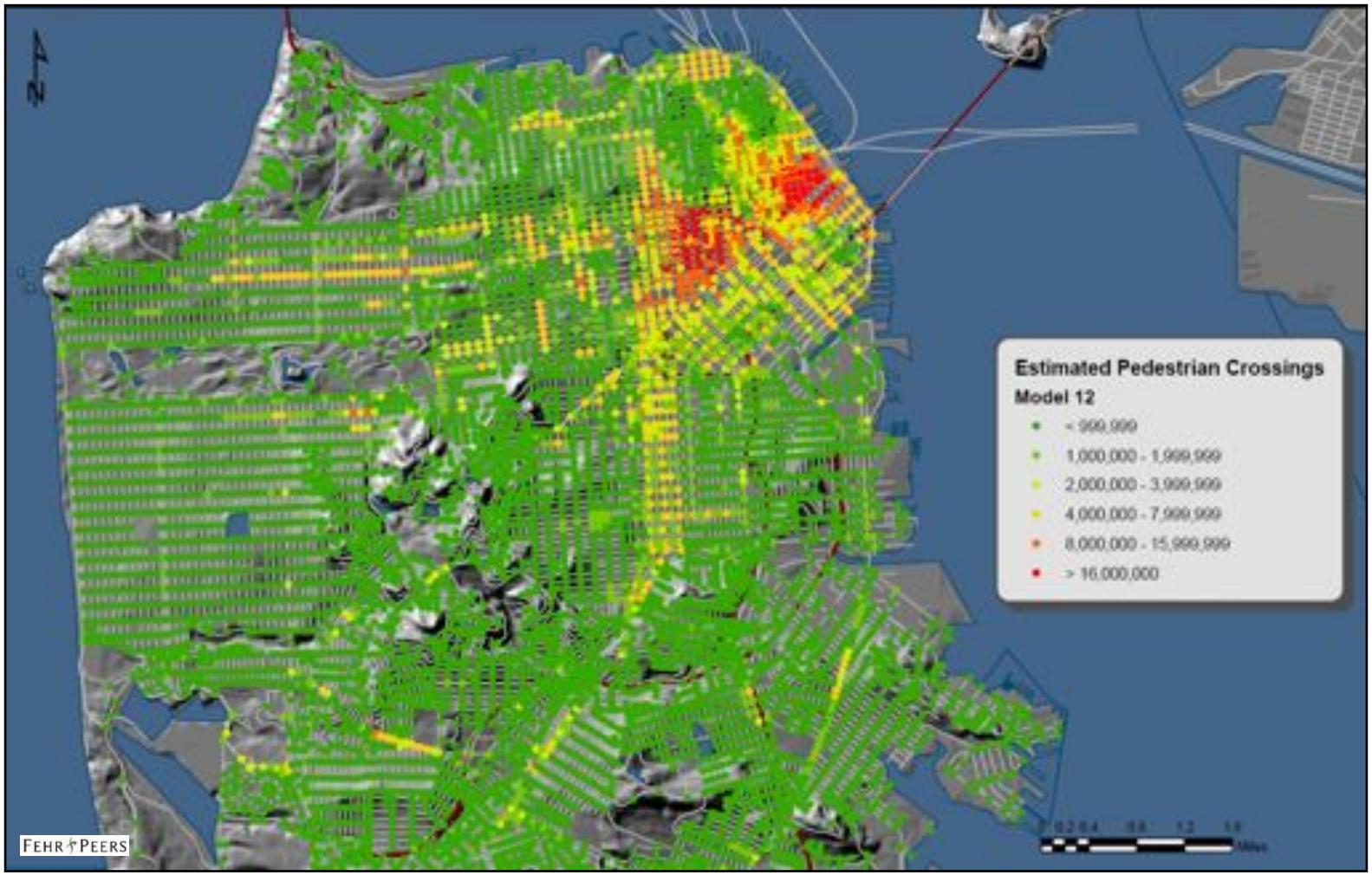
Good Design and Education lead to Safety outcomes

Quality of the Public Realm and Safety



Pedestrian Safety and Public Safety have different factors

Estimated Annual Pedestrian Crossings (in millions)



City of short trips-voted most walkable city







Red Zones
Continental Crosswalks
School Crosswalks
Audible Pedestrian Signals
Countdown Signals







- Advance limit lines with high visibility crosswalks
- Center Median improvements
- Sidewalk "bulb-outs"
- Improved Lighting
- Raised Crosswalks

Pedestrian Safety Engineering Toolkit







22% Reduction of Collisions after installation*

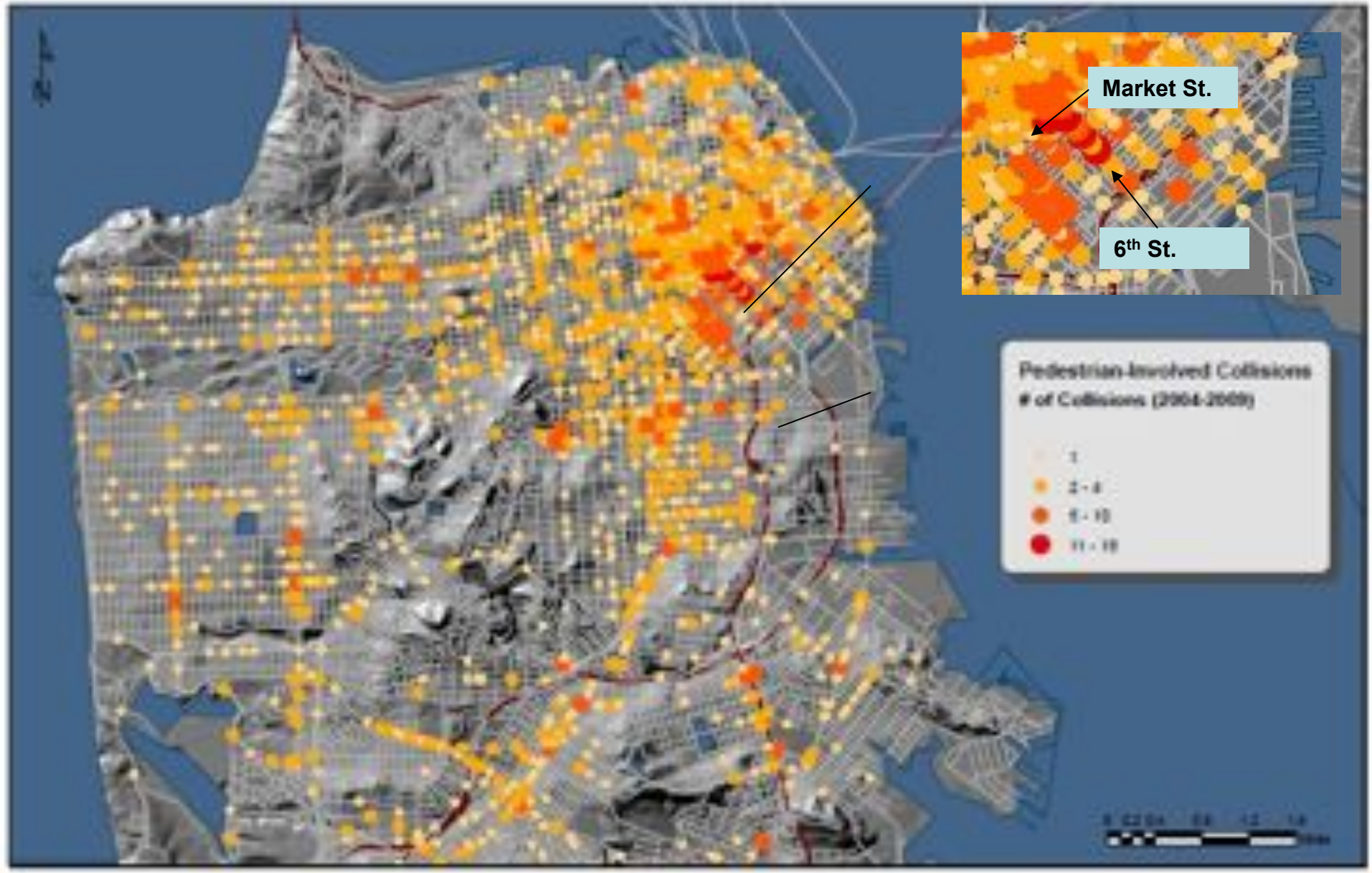
*SafeTREC, 2003

Pedestrian Countdown Signals

Approximate Costs and Timelines

Tool	Approximate Cost*	Environmental Analysis	Implementation Timeline*
Signalized Intersection	$350,000	Potential	30-36 months
Bulbouts	$250,000	Potential	18-24 months
Road Diet (striping/ signage, lane removal)	$100,000 per mile	Yes	18-36 months
Complete Street	$1 million per block	Yes	36-48 months
Pavement to Parks	$250,000	Potential	6-12 months
Street Circulation Pilots	$250,000	Yes	6-12 months
Signage, Striping	$10,000	Potential	2-3 months

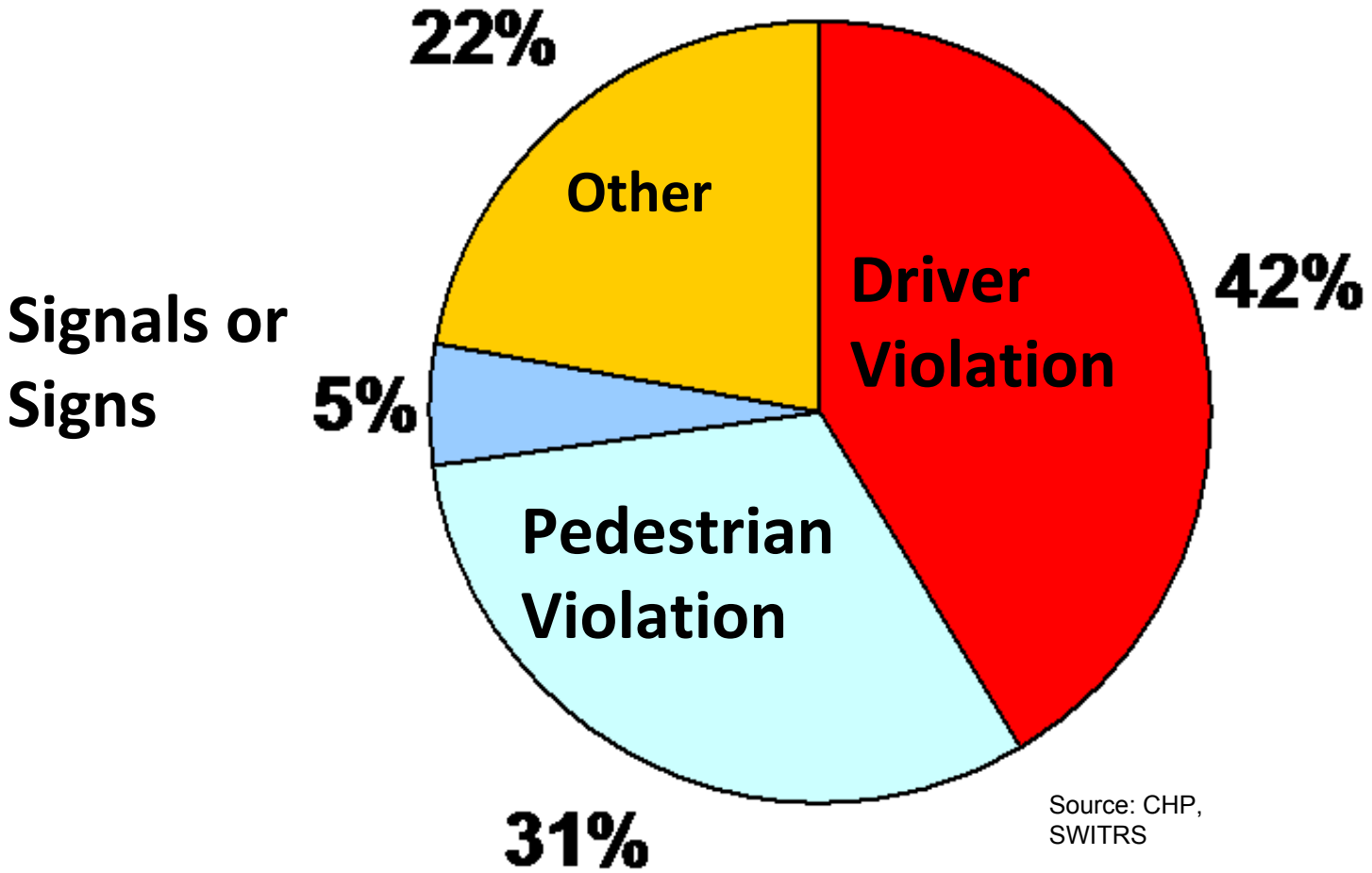
*General estimates based on recent work includes planning, community outreach, funding applications, engineering, installation labor and permitting



Source: Fehr & Peers, SWITRS.

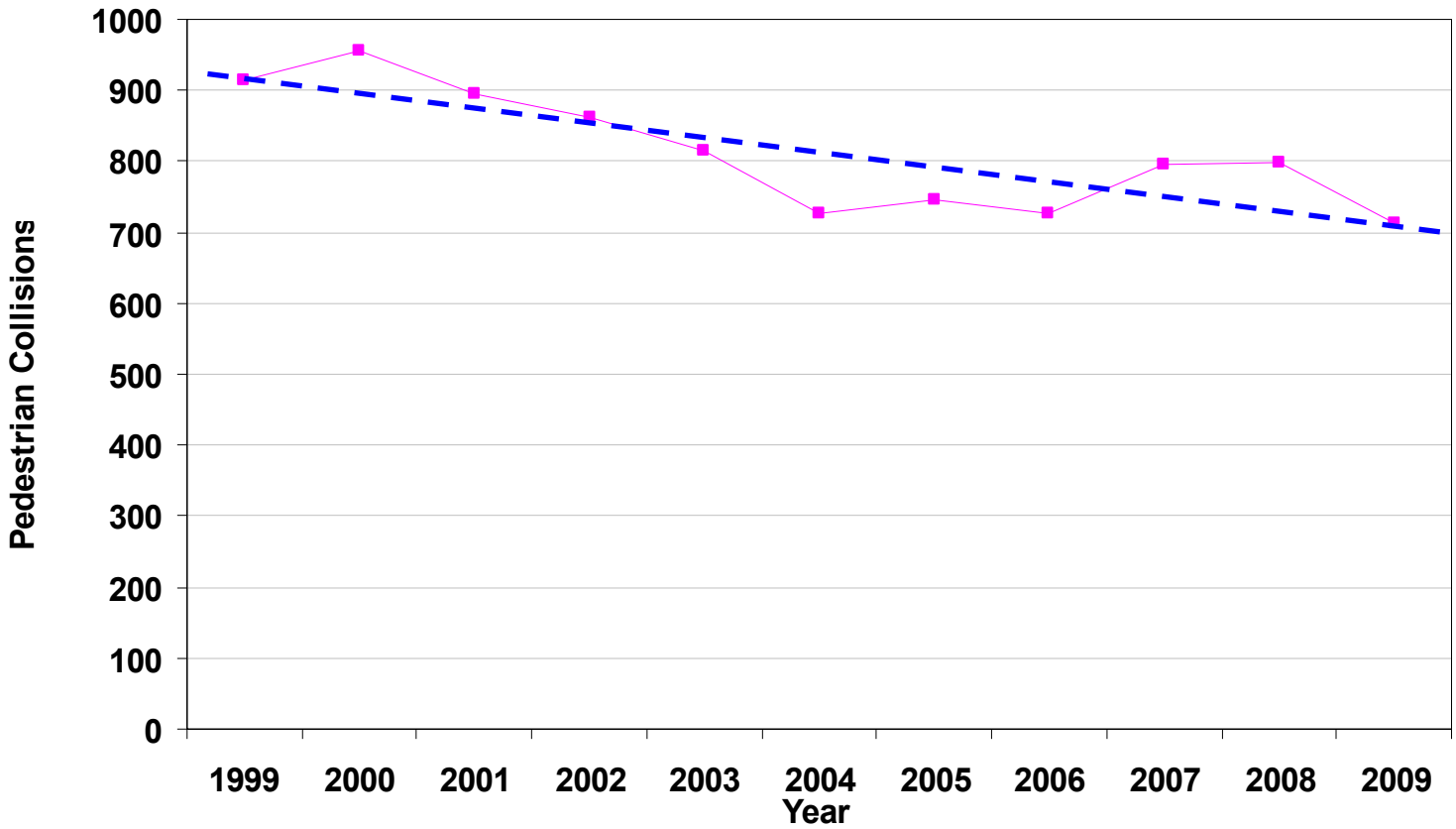
Pedestrian Incident Locations 2004-2009

Pedestrian Non-fatal Injuries: Primary Collision Factors



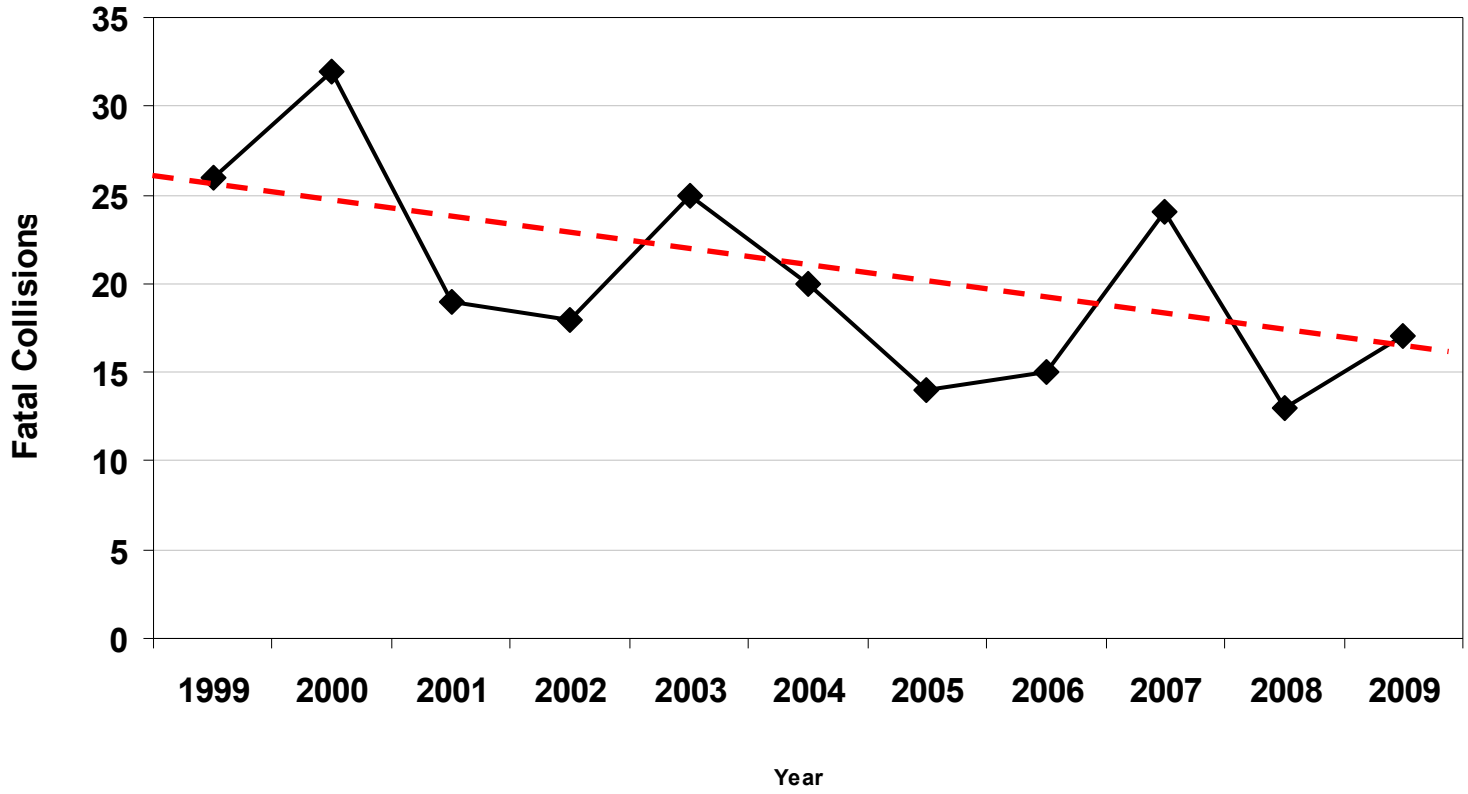
Source: CHP, SWITRS

Injury Collisions Involving Pedestrians 1999-2009



Source: CHP, Statewide Traffic Records System (SWITRS)

Fatal Pedestrian Collisions 1999-2009



Source: CHP, Statewide Traffic Records System

Pedestrian Safety in District 6



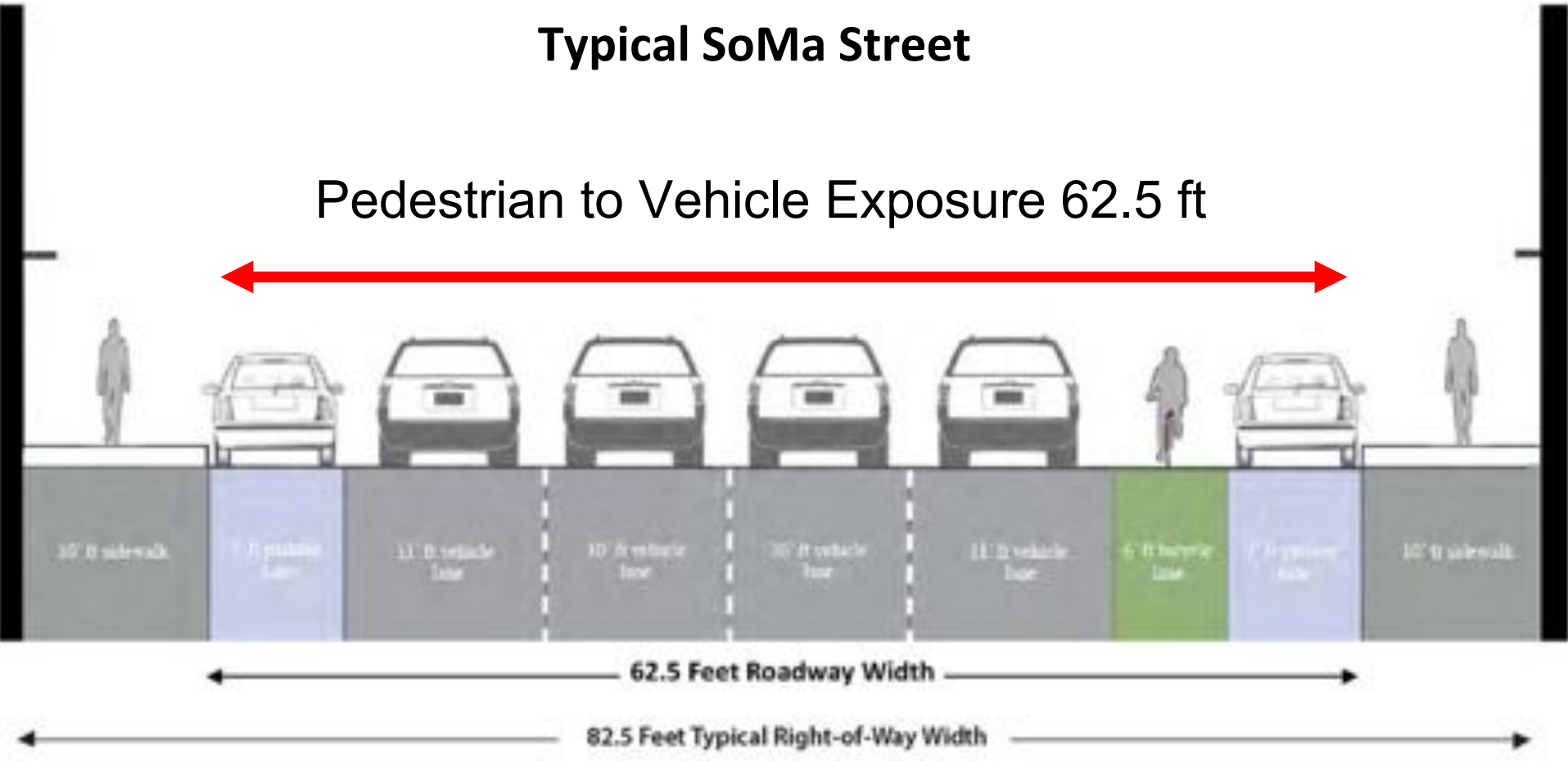
DRAFT Pedestrian Crossing Risk Map from Pedestrian Volume Modeling Project

This map shows the relative risk of crossing the street based on pedestrian volumes and collision history

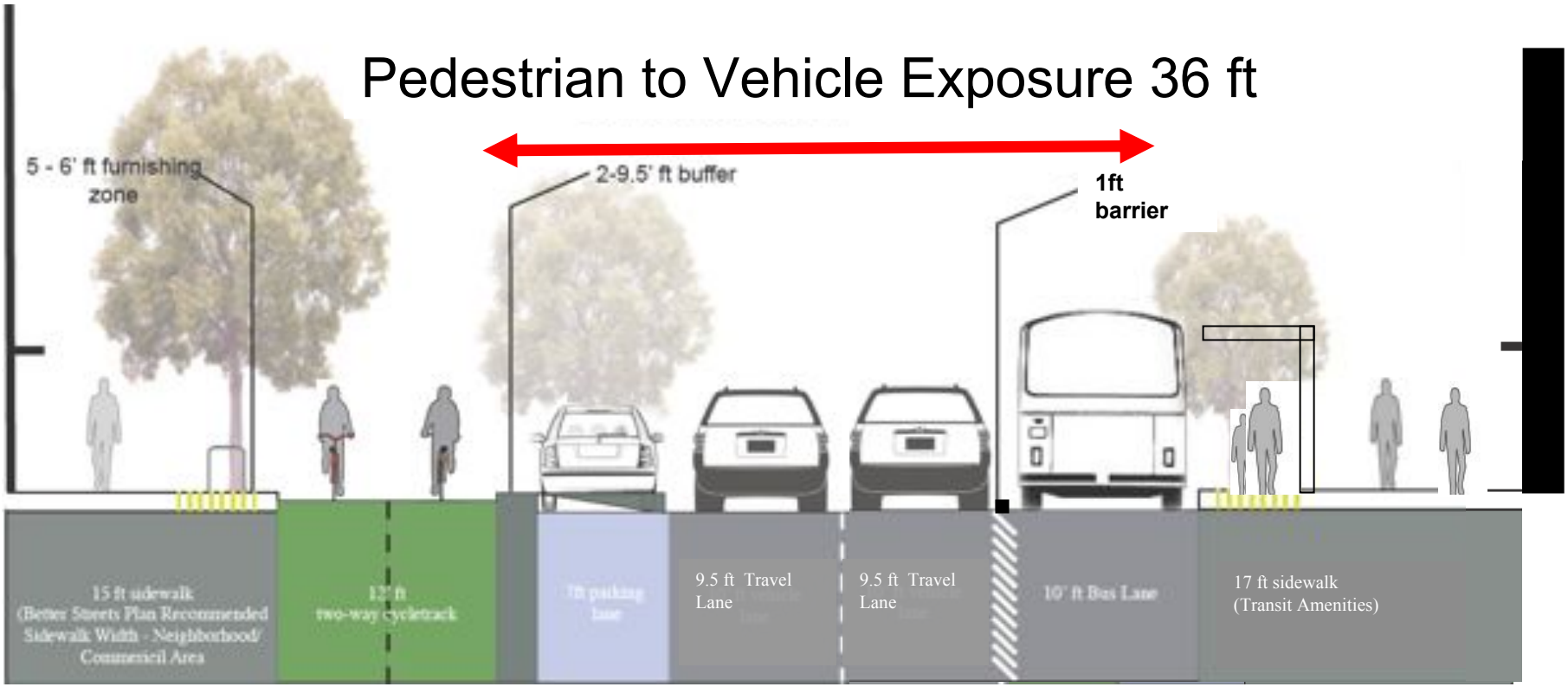
Value
High
Low
N
NOT TO SCALE

New pedestrian risk assessment tool

Typical SoMa Street



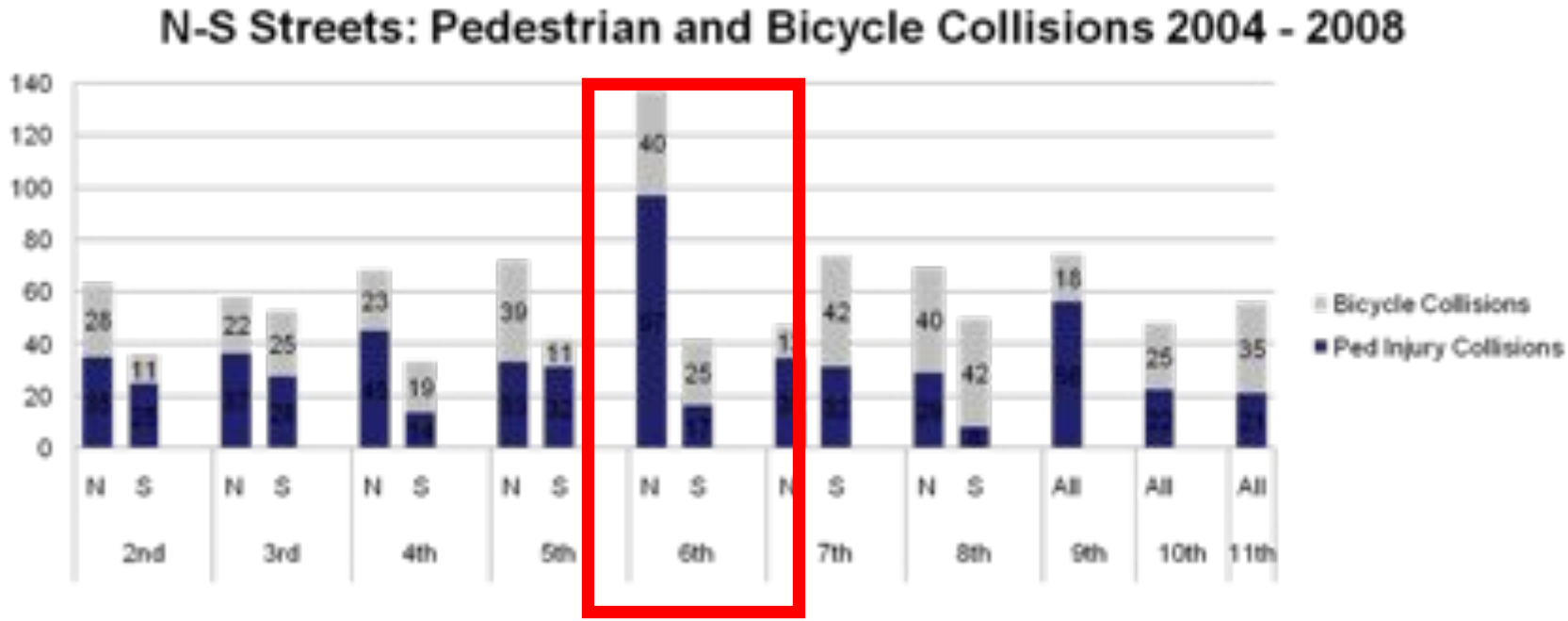
Street Design is critical to safe walking conditions



Trade offs: travel lane and/or parking lane removal

Complete Streets-promotes safety through design

Corridor Analysis Example:
SoMa Vehicle Collisions



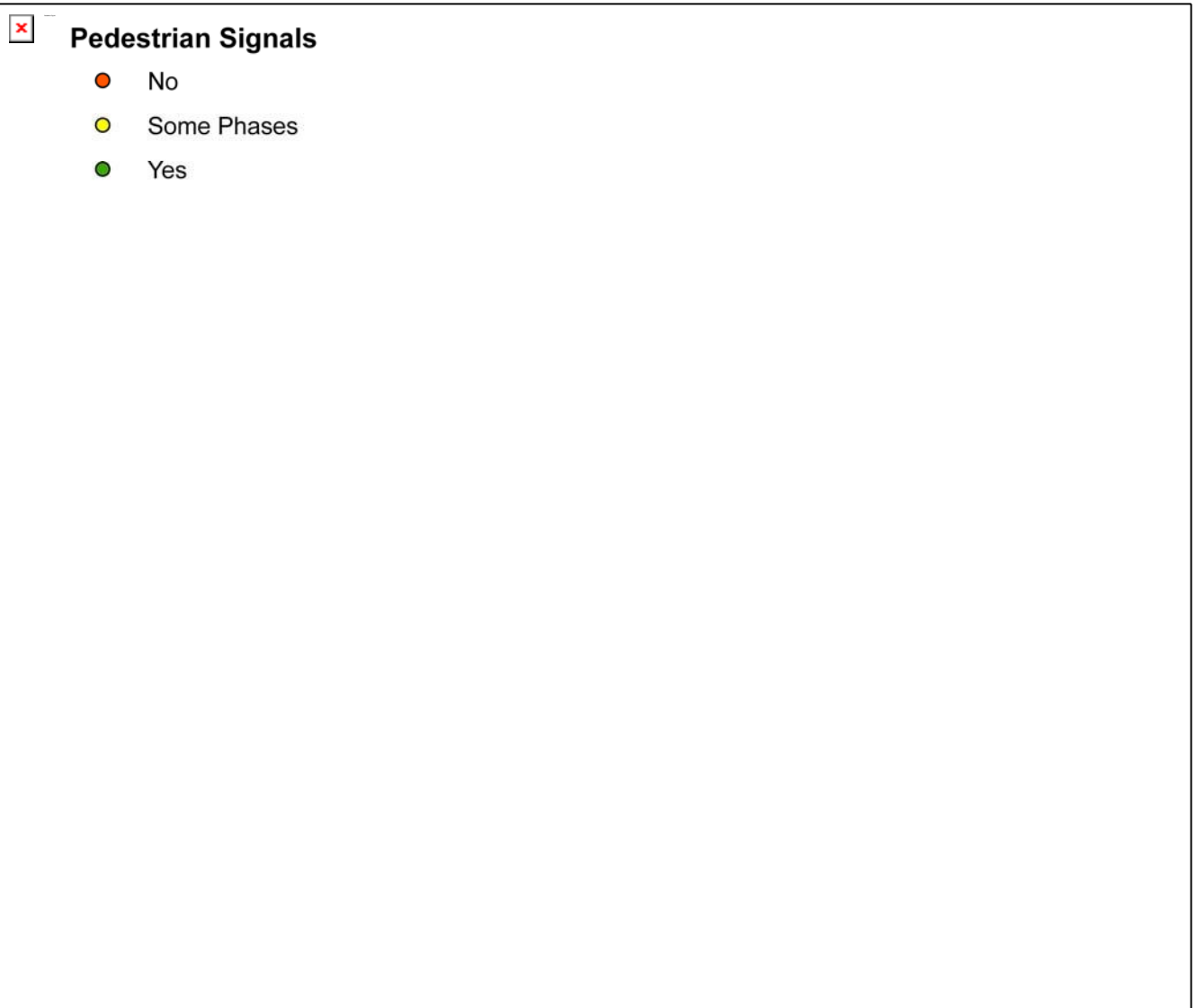
- Northern segments of north-south SoMa arterials stand out for collisions, particularly 6th Street.

6th Street Pedestrian Safety projects

Intersection	Countdown Ped Signals	All Reds	Ped Head Start	Reduce Travel lanes	Red light Camera	Ped Bulbs
Market	X	X	X			
Mission	X	X	X			
Howard	X	X	X	X		
Folsom	X	X	X			X
Harrison	X	X	X			
Bryant	X	X	X		X	
Brannan	X	X	X			

Current toolkit applications on 6th Street

District 6 Pedestrian Signals



- 273 signalized intersections in District 6
- 217 intersections (79%) have Pedestrian Signals for all crosswalks
- 24 intersections (9%) have Pedestrian Signals for some crosswalks

District 6 Accessible Pedestrian Signals (APS)



- 273 Signalized intersections in District 6
- 42 (15%) of these signalized intersections have APS (42)
- 2 installed in 2010/early 2011:
  - 4th/Gene Friend Way (Campus Way),
  - Fremont/Howard

Recent D6 Pedestrian Safety Projects

- **SoMa Alleyways project:**
  - Improved Russ St and various other alleys
- **Ellis and Eddy Streets:**
  - Bulb outs and lane removal
- **Howard St:**
  - Lane redesign, bulb outs & opened closed pedestrian crossing
- **Townsend St:**
  - “Road diet” to provide space for bicycle lanes
- **Folsom St:**
  - Narrowed travel lanes









SoMa Alleyways and lane improvements





Townsend Street before-after

School-Related Projects in District 6

- **In 2010, SFMTA restriped faded school crosswalks at 4 intersections**
  - 1. Polk/Elm
  - 2. Van Ness/Golden Gate
  - 3. Van Ness/Turk
  - 4. Ellis/Laguna
- **In 2011, SFMTA will restripe faded school crosswalks at 2 intersections**
  - 1. Polk/Frank Norris
  - 2. Van Ness/Elm
- **Safe Routes to Schools has funded the installation of bulbouts at Marshall Elementary**



Other Pedestrian Safety Projects in District 6

- **Continental crosswalks, yield lines and signs, and red zones in advance of the crosswalks at:**
  1. 6th/Minna
  2. 16th/Capp
  3. 16th/Shotwell
  4. Division/9th

(Note: some of these locations already have 1 or more of these treatments)







Market St Pilots improvements for all users



Parklets widen sidewalks and walking amenities



Powell Street Promenade link Hallidie Plaza to Union Square



On Street Bicycle Corral Parking increases pedestrian space



Complete Pedestrian Engineering toolkit



Valencia Street –Complete Street Segment









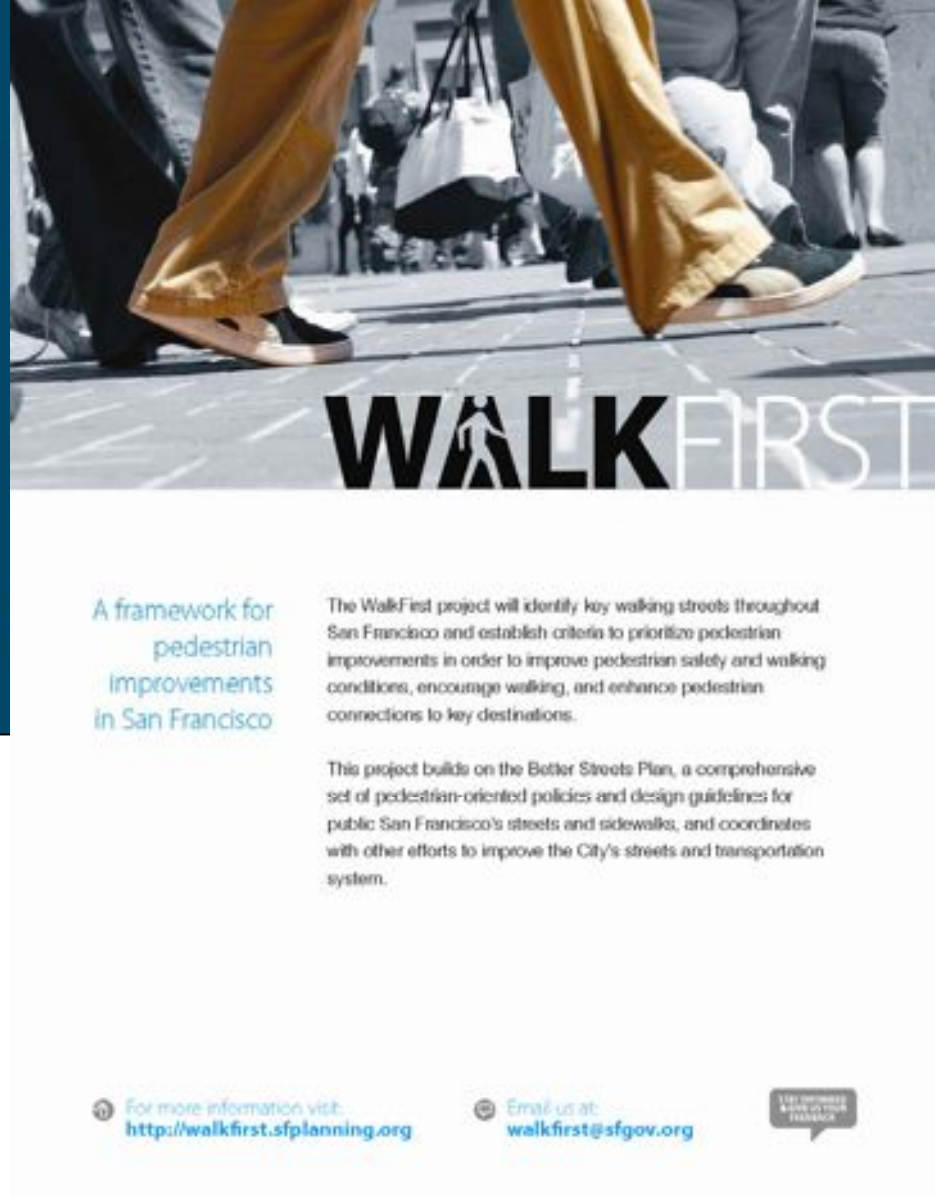






Home Zones Pilot: Marshall School Traffic Calming





- **Better Streets Plan**
- **WalkFirst Study**
- **Pedestrian Action Plan**
- **Risk Reduction Plan**
- **Walkable Neighborhoods**

Pedestrian Planning Activities



Market
Van Ness
Geary
4th Street Central Subway
EN-TRIPS Corridors

Future redesign efforts focus on walkability

D6 Pedestrian Safety Projects in 2011

- **Prioritized Pedestrian Signals at:**
  - 8th/Bryant (Fwy)
  - 10th/Bryant (Fwy)
  - Harrison/Spear
  - Fremont/Harrison
  - Polk/O'Farrell
  - Ellis/Gough
  - Folsom/Russ

2011/2012 Projects and Opportunities

- **Prioritized projects for 2011:**
  - Powell Street Promenade (Parklet)
  - 15MPH & Home Zone at Marshall Elementary
  - 15MPH signage at Bessie Carmichael School
  - Accessible Pedestrian Signals for 3rd & King
  - Ellis and Eddy pedestrian safety treatments
  - Increase visibility at corners in SoMa Grid
  - Review speed limits on Howard and Folsom
  - McAllister two-way near Market

2011/2012 Potential Opportunities

- **Businesses can apply for:**
  - Parklets, On street Bicycle Corrals
- **New Funding needed to begin:**
  - New Pavement to Parks
  - Additional Signalized Intersections
  - Potential Arterial Traffic Calming Pilots:
    - 6th St from Market to Howard road diet
    - Westbound Market Street restrictions
    - Two-way segments in SoMa Grid
  - Additional Pedestrian Safety projects