

Improving safety and walking conditions in San Francisco

Prioritizing Walking Improvements

Pedestrian Safety Task Force | June 14, 2011



San Francisco Department of Public Health SAN FRANCISCO PLANNING DEPARTMENT



SFMTA Municipal Transportation Agency

SALIFORNIA OFFICE

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Project Purpose

The project's goal is to improve walking conditions in San Francisco, and encourage walking as a way of getting around the city.

The WalkFirst project will **identify** where people walk, and **prioritize** how to make safety improvements to best serve pedestrians. This is important in order to best make use of limited funding.





Project Deliverables

 Map of key walking streets in San Francisco

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- Method for prioritizing the most important safety improvements
- Preliminary list of pedestrian safety upgrades
- Draft policies to guide City decisions about pedestrian safety and walking conditions
- Examples of street designs to improve the walking environment

Overlap with the Pedestrian Safety Executive Directive

 Goal of the Executive Directive (ED) is to reduce pedestrian injuries, with a special focus on severe and fatal injuries

 WalkFirst will inform the following ED workplan deliverables to be completed by December 2011:

- Engineering Committee Workplan C Develop a strategic plan framework for effective planning and prioritization of capital improvements to advance safety
 - WalkFirst to inform as well as other existing prioritized ped safety improvements (e.g., APS and curb ramps)
- Engineering Committee Workplan D Develop a corridor/neighborhood safety engineering program. At least five corridors will be identified through the WalkFirst project and the associated improvements for each corridor will be consistent with the Better Streets Plan
- Enforcement Committee Workplan A A targeted enforcement program in five corridors with known high concentrations of serious and fatal injuries
 - Data Committee and WalkFirst to inform selection of 5 corridors

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Prioritizing Locations for Walking Improvements



Prioritizing locations for walking improvements

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Category	Pedestrian Activity	Pedestrian Safety	Street and Sidewalk Characteristics	Project Readiness
Goal	Identify places	Identify most important locations for safety	Identify street and sidewalk infrastructure/	Identify opportunities to fund and construct pedestrian
Product	Map of key walking streets in SF	Map of identified areas of improvement for pedestrian safety	Preliminary project	Preliminary project list

Prioritizing locations for walking improvements

Ped Safety: # of collisions and collision rate/crossing

Ped Activity: Key walking streets and areas		<i>High:</i> ranks in top 1/3 of ped safety needs	<i>Medium:</i> ranks in next 1/3	<i>Low:</i> ranks in last 1/3
	<i>High:</i> identified as key walking street or area (primary)	HIGHEST	High	Medium
	<i>Medium:</i> identified as key walking street or area (secondary)	High	Medium	Low
	<i>Low:</i> not identified	High	Low	Low

Prioritizing locations for walking improvements

- Once priority locations have been identified, we will also consider the following factors to determine appropriate types of improvements:
 - Street type and function
 - Street and sidewalk characteristics
 - Project readiness
 - Equity



Street type and function

- Street type per Better Streets Plan (land use and transportation characteristics)
- Role in transportation network (e.g. transit route, bike route, etc.)

Current Street and Sidewalk Characteristics

• 6 categories:

- Traffic control devices
- Street designs and streetscape
- Walking space and buffers
- Traffic characteristics
- Traffic calming features
- Accessibility



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Project Readiness

- How efficiently and quickly can improvements be made?
- Factors:
 - Potential for coordination with other construction project(s)
 - Part of a community-vetted plan (area plan, capital plan, etc.)
 - Funding status
 - Costs
 - Capital
 - Life cycle, including maintenance



Equity and Public Participation

- How fair and reflective are the public and policymaker preferences for improvements?
- Factors:
 - Geographic distribution
 - Addresses special needs of vulnerable users (i.e., seniors, people with disabilities, youth)
 - Public input

Preliminary Capital Improvements List

- For high priority locations:
 - Pedestrian activity and safety factors
 - Street physical characteristics
 - Recommended physical improvements
- To be refined in later phases (if funded) by:
 - Filling in data gaps
 - Community and policy maker involvement
 - Greater coordination with other projects
 - Expanding list

Improvement Types to Include for WalkFirst Recommendations: Preliminary List

- Curb and Bus Bulb-outs
- Continental Crosswalks*
- Flashing Beacons
- Sidewalk Widening
- Pedestrian-Friendly Signal Changes
 - Scramble Signal Phasing
 - Protected Left Turns
- Pedestrian Refuge Islands
- Pedestrian-Scale and Roadway Safety Lighting
- * Being considered as routine crosswalk marking, but conversion and new locations could still be prioritized

Additional Improvement Types to Include for WalkFirst Recommendations: Preliminary List

- Street Trees (block level only)
- Pedestrian Countdown Signals
- Opening Closed Crosswalks
- Speed Control Measures, such as:
 - Radar speed display signs
 - Roadway narrowing
 - Rumble strips

Already Prioritized by Other Processes

- Curb Ramps
- Neighborhood Traffic Calming Measures
- Accessible (Audible) Pedestrian Signals

Pedestrian Activity: Where Walking is Important

Pedestrian Activity: Key Walking Streets and Areas

- Access/need to walk
 - Transit mode share, walking mode share
- Transit ridership
 - Daily transit boardings
- Density of people
 - Residential density, job density
- Pedestrian generators
 - Colleges, public & private schools, hospitals and clinics, shopping districts, parks, tourist destinations, senior centers, service providers to persons with disabilities
- Vulnerable populations
 - Seniors, youth, persons with disabilities
- Income

Street slope



Pedestrian Activity: 7 Category Maps with Street Segment Score 1-10





Composite Map





Composite Map 1: Raw Score, Equal Weights

Category 1: Access / Need to Walk Category 2: Transit Ridership Category 3: Density of People Category 4: Pedestrian Generators Category 5: Vulnerable Populations Category 6: Income Category 7: Street Slope

Street Segment Score Low: 7 - 29 Medium: 30 - 43 High: 44 - 68

SAN FRANCISCO Composite Map, Natural Breaks 3 Classes April 27, 2011

Preliminary Map of Key Walking Streets and Areas

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key walking street recreation street key areas



SAN FRANCISCO WalkFirst: Key Walking Streets Source: San Francisco Planning Department, June 8 2011

Composite Map Preliminary Map of Key Walking Streets & Areas



Treasure Island

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Composite Map 1: Raw Score, Equal Weights

Category 1: Access / Need to Walk Category 2: Transit Ridership Category 3: Density of People Category 4: Pedestrian Generators Category 5: Vulnerable Populations Category 6: Income Category 7: Street Slope

Street Segment Score

Low: 7 - 29 Medium: 30 - 43 High: 44 - 68

Key Walking Streets



SAN FRANCISCO Composite Map, Natural Breaks 3 Classes May 17, 2011

Public & Private Schools Preliminary Map of Key Walking Streets and Areas

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Senior Centers Preliminary Map of Key Walking Streets and Areas



SAN FRANCISCO Senior Centers - Buffers Source: San Francisco Department of Public Health, 2008



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Pedestrian Safety: The Conditions Pedestrians Face

Pedestrian Safety Score

- Will Include:
 - Using SWITRS data 2005-2009
 - Pedestrian injuries and fatalities at intersections and corridors
 - Severity weighted
 - Fatal and severe injuries weighted 3X
 - Exclude pedestrian collisions with no injuries
 - Primarily based on absolute # of injuries
 - Rate (per walk trip) only used to help order intersections within broader priority groups
- To Be Overlaid on Key Pedestrian Streets to Select Priority Locations
- Can Be Refined and Expanded in Later Phases

Pedestrian Injuries at Intersections: Statistical Distribution



Severity Score Distribution

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Pedestrian Safety: High-Risk Corridors and Area Methods

1) Map pedestrian injury counts (SWITRS Data, 2005-2009) to street segments.

- Aggregate injury counts to adjoining street segments (based on primary and secondary street of injury occurrence)
- Weight severe and fatal injuries (multiply counts times 3)
- Note injuries are being "double counted" on the streets with which they intersect.

Methodology developed by SFDPH as a part of the Citywide Pedestrian Safety Task Force Data Subcommittee Deliverables.



Pedestrian Safety: High-Risk Corridors and Area Methods

2) Identify candidate high-risk street corridors

- With contiguous/closely spaced-high risk street segments (weighted injury count <u>></u>9)
- Based on distribution, inclusion of segments with 3+ severe/fatal injuries
- Cross reference with SFMTA-defined high ranking intersections and segments to ensure included in corridor selection

Methodology identifies ("blue" corridors):

- 6.7% of city street length in miles
- 55% of severe and fatal pedestrian injuries
- 51% of total pedestrian injuries
- Next Steps: Ranking corridors based on injury count /mile (total and severe/fatal)

Methodology developed by SFDPH as a part of the Citywide Pedestrian Safety Task Force Data Subcommittee Deliverables.

High Risk Injury Corridors and Areas

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- 55% of severe and fatal pedestrian injuries
- 51% of total pedestrian injuries

Methodology developed by SFDPH as a part of the Citywide Pedestrian Safety Task Force Data Subcommittee Deliverables.





High Priority Streets



High Priority Streets

 Overlay Key Walking Streets & Areas and High Risk Injury Corridors

- Will only consider capital projects where there is overlap between two
- Streets under development should refer to development plan (e.g., Treasure Island, Hope SF)



SAN FRANCISCO WalkFirst: Key Walking Streets Source: San Francisco Planning Department, June 8 2011



Prioritizing locations for walking improvements

- In priority locations, we will also consider the following factors to determine appropriate types of improvements:
 - Street type and function
 - Street and sidewalk characteristics
 - Project readiness
 - Equity

Preliminary Capital Improvements List

- Preliminary Capital Improvements List locations will be based primarily on the high-priority corridors
 - Supplemented by high priority intersections not included in the identified corridors
- Later phases (if funded) to refine the approach and expand the locations covered by recommendations



Stay involved!

- Monthly presentations at PSAC
- Join the mailing list for updates: send an email to walkfirst@sfgov.org



6 For more information visit: http://walkfirst.sfplanning.org



Thank you!



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