better streets
SAN FRANCISCO

CHAPTER 2.0

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CONTEXT

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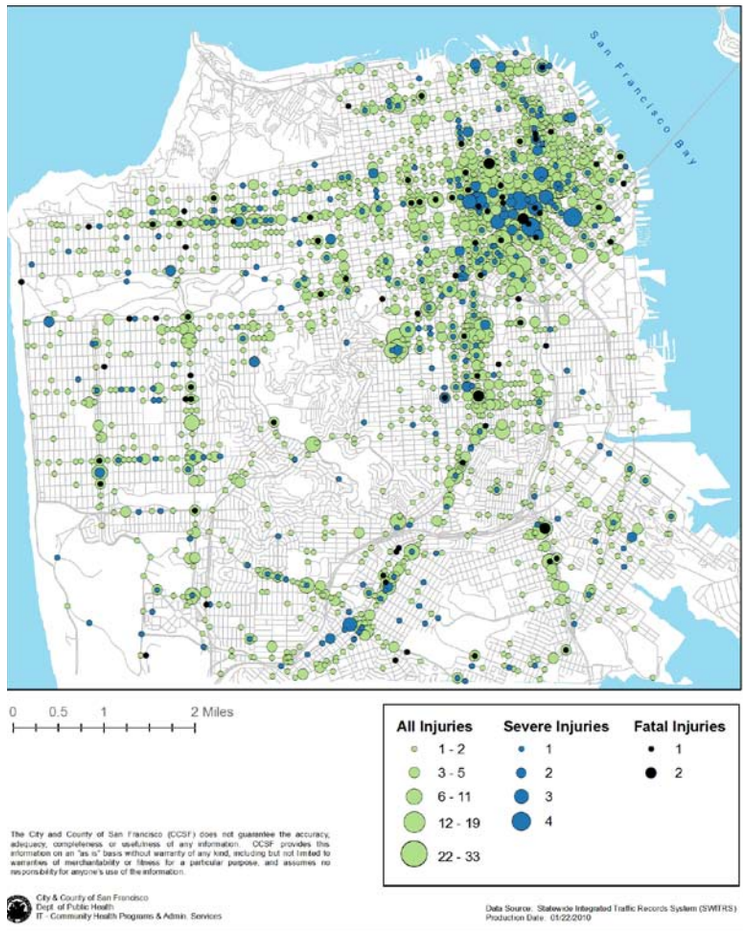
San Francisco is a walker's city – a dense mix of uses, short blocks, and small streets combine to make a convenient and desireable walking environment. However, existing conditions could still be improved to promote a safer and more comfortable pedestrian realm.

FIGURE 2.1

PEDESTRIAN INJURIES CITYWIDE 2004-2008

Source: Statewide Integrated Traffic Records System (SWITRS)



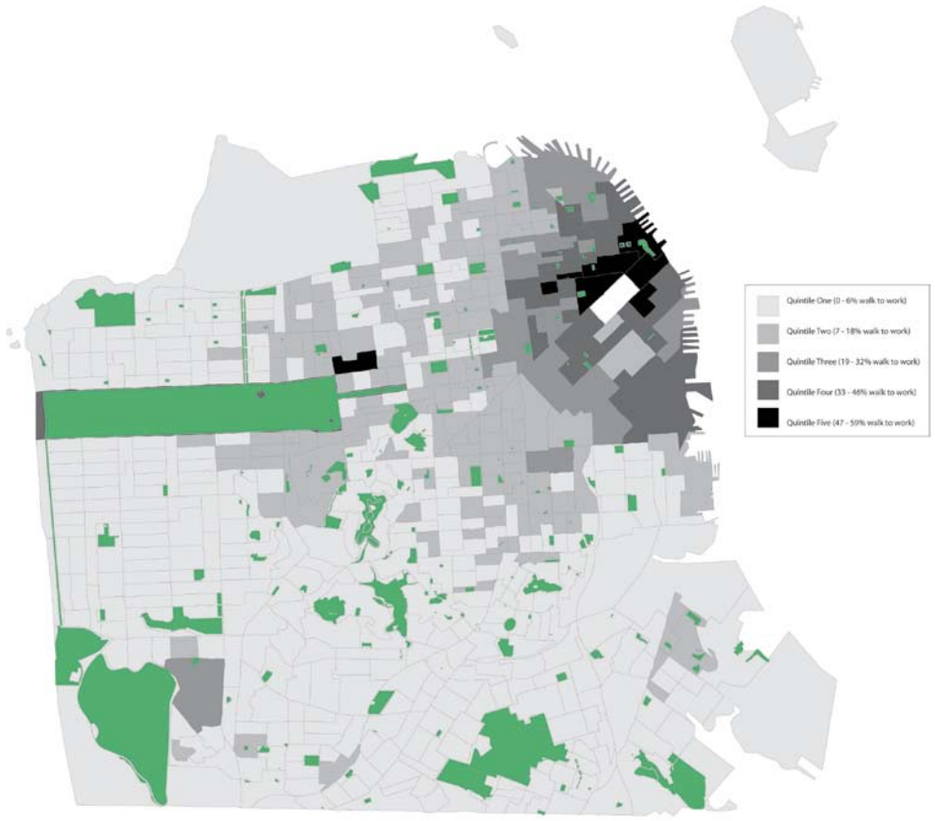


FIGURE 2.2

PERCENTAGE (BY QUINTILE) OF POPULATION THAT WALKS TO WORK

Source: US Census, 2000

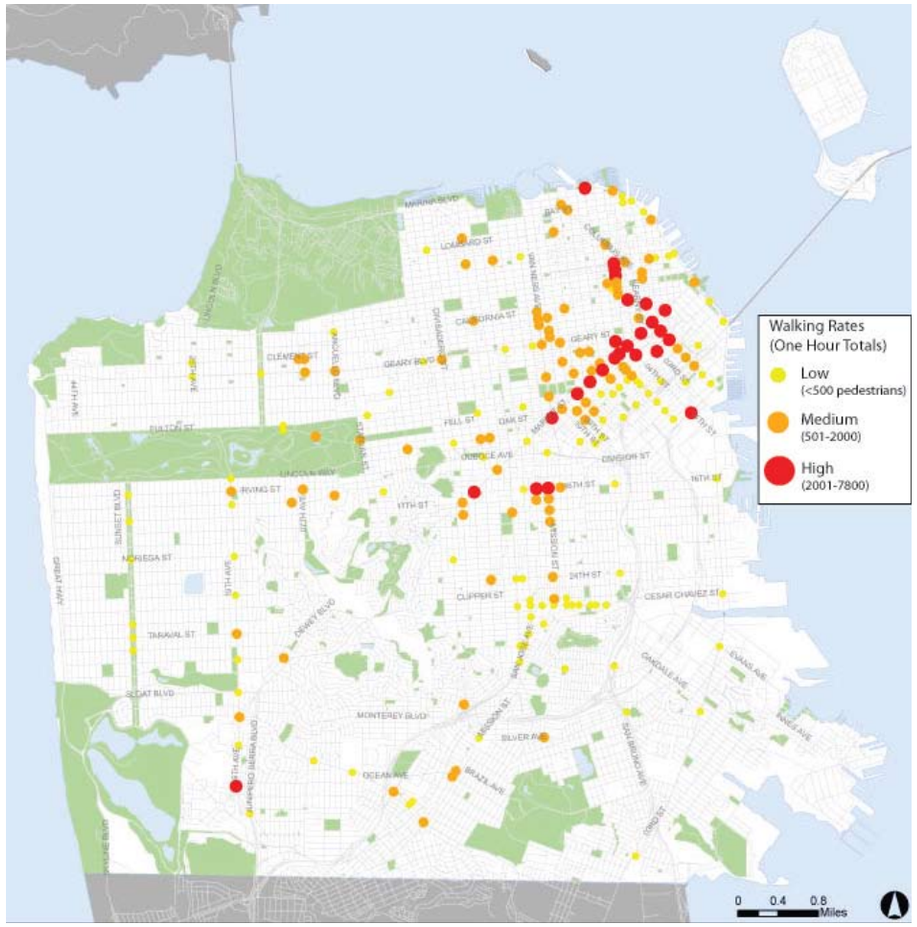


FIGURE 2.3

VOLUME OF PEDESTRIANS PER HOUR AT SELECTED INTERSECTIONS

Source: SFMTA Traffic Counts

Existing Conditions

2.1

PEDESTRIAN CONDITIONS

Walking plays a major role in San Francisco's transportation system. Each day, 4.5 million transportation trips are made in San Francisco; of these approximately 890,000 (20%) are walking trips. An additional 780,000 trips (17%) are made on transit, most of which include walking at the beginning and end of each trip. (See Table 2.1)

Most streets in San Francisco include basic pedestrian infrastructure such as sidewalks and marked crosswalks. As some formerly industrial areas transition to commercial and housing uses, gaps in the basic pedestrian network are being filled in.

Block size and intersection density (the number of intersections per area) greatly affect the ease and convenience of walking in San Francisco. Shorter blocks in areas such as Downtown and Chinatown provide more choices and direct routes for pedestrians. In other neighborhoods, such as the Mission District or Hayes Valley, a network of alleys helps break up larger blocks to provide pedestrian connections. In yet other areas, such as SoMa, blocks are approximately four times longer than typical downtown blocks, creating less frequent or direct pedestrian connections.

Embarcadero Plaza crosswalk

Major pedestrian activity generators

Pedestrian activity in San Francisco is clustered in locations where activity generators such as commercial corridors, transit facilities, and major institutions are concentrated.

Observed walking rates are collected by SFMTA at selected intersections. Data for citywide walking rates comes from the US Census journey to work survey, which asks respondents to name the mode of transportation they most often use to get to work. This data does not provide the full spectrum of transportation trips and only includes the mode most often used to get to work, so it does not provide a comprehensive picture of transportation choice across the City. However, the journey to work data does show the areas of San Francisco, most notably Downtown, where walking rates to work are most concentrated.

SAN FRANCISCO MODE SPLIT FOR ALL TRIPS, 2000

Source: San Francisco County Transportation Authority

Auto	2,809,000	62%
Transit	777,000	17%
Walk	892,000	20%
Bike	40,000	1%
TOTAL	4,518,000	100%

Collision Patterns

Data on pedestrian collisions in San Francisco comes from two sources: the Statewide Integrated Traffic Records System (SWITRS) and the PedSafe study, conducted by UC Berkeley researchers and the SFMTA. The SWITRS data, compiled by the California Highway Patrol, is based on San Francisco Police Department traffic collision reports, while the PedSafe study analyzed hospital discharge records in addition to police reports to include pedestrian injuries for collisions that were not reported to the police.

In recent years, reported pedestrian injury collisions have decreased from approximately 900 to 1000 per year in the 1990's to 700 to 800 from 2006 to 2008. Additional improvements are necessary, but the overall decline in pedestrian collision totals over the past 15 years is encouraging. The number of pedestrian fatal collisions decreased to 12 in 2008, which was the lowest number in the past decade, following a spike in 2007 to 21 pedestrian fatalities. In general, injury collisions are a more reliable indicator of collision trends over time because fatal collisions, being rarer events, are more subject to random fluctuations.

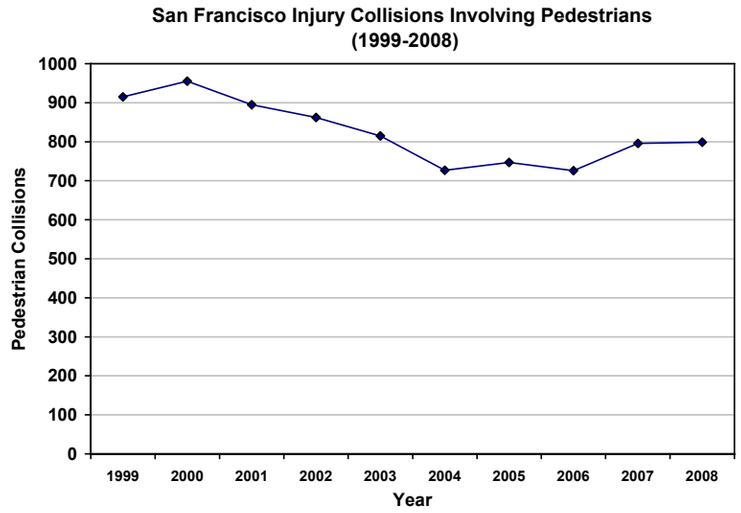
According to the PedSafe study, both fatal and non-fatal injuries often occur at intersections with a traffic signal. According to 2001-2005 data from the 89 intersections with the most pedestrian collisions in San Francisco, all 17 fatal collisions occurred at signalized intersections. The majority of pedestrian injury collisions also occurred at intersections with a traffic signal, as shown in Figure 2.10.

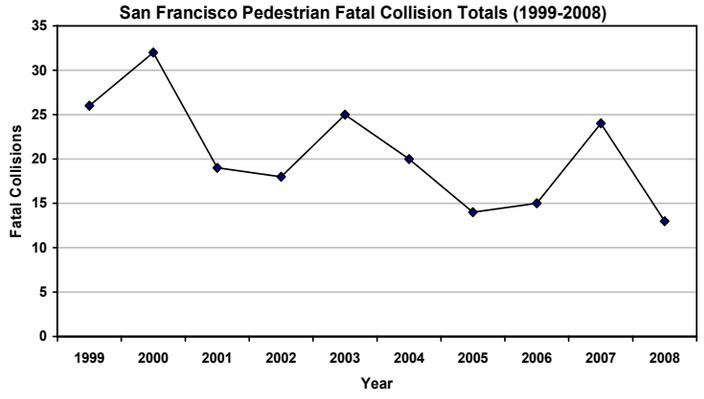
Pedestrian-injury collisions in San Francisco are highly concentrated in clusters. The PedSafe Phase I Report identified seven higher-risk zones based on injury density and severity and the potential to benefit from modest pedestrian injury countermeasures in the absence of other major interventions for pedestrian safety. The seven zones are: SoMa West; North Mission; Chinatown/North Beach; Outer Mission Street; Geary Blvd./Cathedral Hill/ Japantown; Geary Blvd./Richmond; and Upper Market Street. Based on the San Francisco 2008 Collision Report, the four locations with the most pedestrian collisions between 2006 and 2008 were: 6th and Market Streets; 6th and Howard Streets; Golden Gate and Jones Streets; and 6th and Mission Streets.

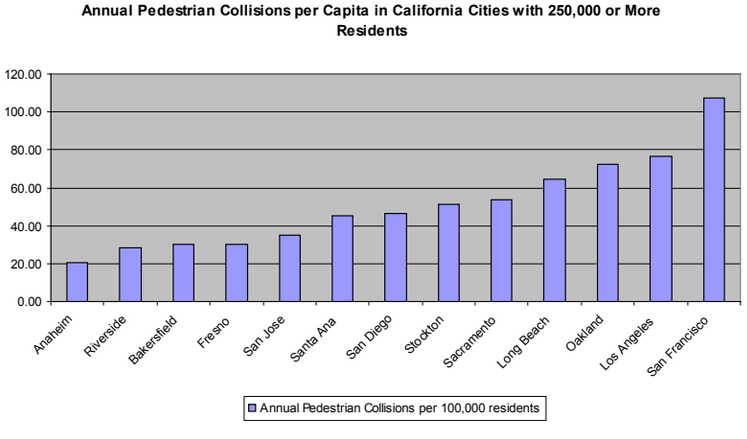
In San Francisco, senior pedestrians are at a higher risk of dying in collisions than any other age group. Seniors are most often hit by vehicles at signalized intersections and often involve drivers making a left turn. Unlike national and statewide trends, children are not overrepresented in pedestrian collisions in San Francisco.

In per capita terms, San Francisco has a high number of pedestrian injuries and collisions. However, this is largely a function of the fact that lots of people walk in San Francisco, and does not mean that San Francisco is a particularly dangerous place to walk; in fact, the opposite is

FIGURES 2.3 - 2.5

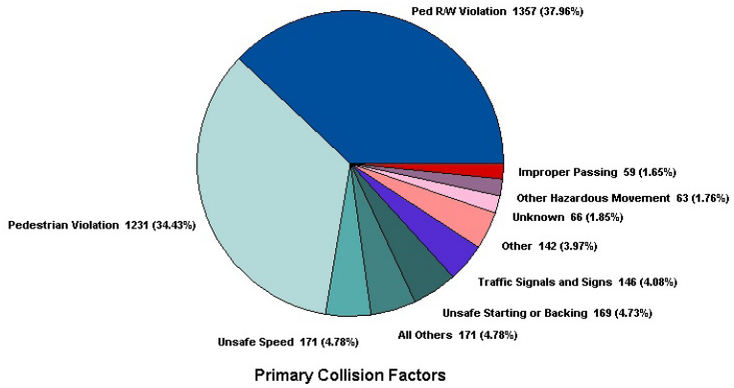




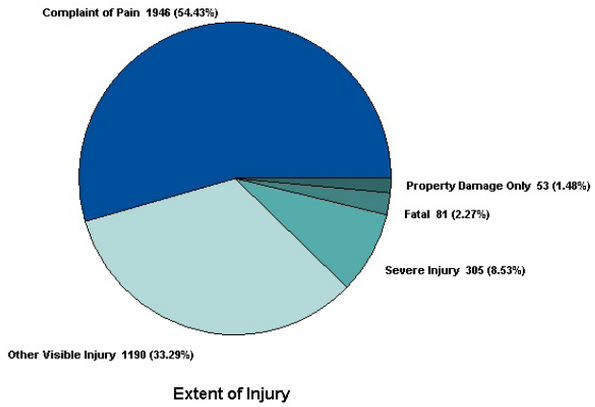


Source: San Francisco 2008 Collisions Report, SFMTA

FIGURES 2.7 - 2.9

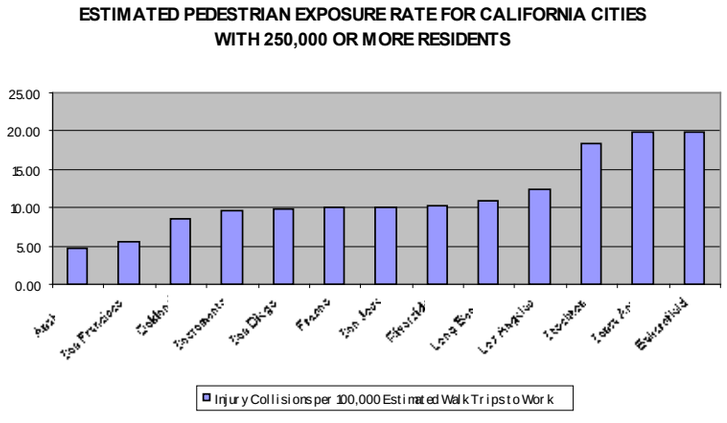


PRIMARY COLLISION FACTORS 2002-2006



EXTENT OF PEDESTRIAN INJURY 2002-2006

Source: SFMTA



true. (Per capita collisions tell very little about a City's relative safety for walking. Very few pedestrians are injured on freeways, but this does not make them safe places to walk.)

Among the 13 cities in California with a population over 250,000, San Francisco had the most pedestrian injuries and collisions per capita in 2007, with 822. However, if the number of people who walked to work in these cities in 2007 is used instead of population to create a collision rate per pedestrian, San Francisco ranks 12th out of 13, indicating that San Francisco's collision rate per pedestrian is very low relative to other major cities in California.

Pedestrian collisions are caused by a number of factors. However, most injury collisions are attributable to either motorists who violate pedestrian right-of-way (pedestrian right-of-way violations) or pedestrians who violate the vehicle code (pedestrian violations).

In addition to human costs, pedestrian collisions are a major expense to the city. A recent study by the UCSF San Francisco Injury Center found that the total cost of pedestrian injury at San Francisco General Hospital averaged about $15 million/year between 2004 and 2009.[1] This does not even include health care costs related to chronic diseases caused by lack of physical activity.

Pedestrian Surveys

San Francisco has historically not done comprehensive studies of how pedestrians perceive the quality of the pedestrian environment. The majority of data in San Francisco focuses on either pedestrian safety statistics, or physical conditions of existing infrastructure. However, the City is beginning to incorporate surveys of pedestrian perception into its data collection, which will give a more complete picture of pedestrian conditions.

CONDITION OF EXISTING INFRASTRUCTURE

Pedestrian Signals

The SFMTA is working to install pedestrian countdown signals at all traffic signals in the City. As of this draft approximately 740 of 1155 signalized intersections (65%) in San Francisco have pedestrian countdown signals for all crosswalks. Another 50 intersections are programmed to receive countdown signals over the next few years. Of the remaining 365 intersections, 183 have countdown signals for some of the crosswalks and 182 have no countdown signals at all.

FIGURE 2.10

TRAFFIC CONTROL FOR PEDESTRIAN INJURY COLLISIONS

Top 89 Intersections in San Francisco, 2001-2005

YEAR / CONTROL	SIGNAL	STOP	OTHER	GRAND TOTAL
2001	89	1	5	95
2002	109		3	112
2003	93		8	101
2004	105		1	106
2005	102		5	107
Grand Total	498	1	22	521

Source: San Francisco PedSafe Study

Sidewalks, Stairs and Paths

Prior to 2007, the City of San Francisco relied primarily on public complaints to identify needed sidewalk repairs. In 2007, the Department of Public Works (DPW) instituted the Sidewalk Inspection and Repair Program (SIRP) to proactively identify and make needed sidewalk repairs. The SIRP inspects all sidewalks on a 25-year cycle, prioritized by pedestrian usage. The SIRP informs all responsible parties (both public and private property owners) of sidewalk damage, and DPW then coordinates repairs to make repairs in a timely and efficient manner.

Curb Ramps

Curb ramps were first installed in San Francisco in the early 1970's. Since that time, DPW and other public and private entities have installed numerous curb ramps across the city. In addition to funding dedicated specifically to curb ramp construction, street changes such as curb changes, re-paving, or new construction typically trigger a requirement to construct curb ramps.

1 *Cost of Auto Versus Pedestrian Injuries, San Francisco, 2004-2008*; R. Dicker, M.D. et. al., San Francisco Injury Center, March 2010

The City has approximately 7,200 intersections. DPW policy is to build one curb ramp at each end of each crosswalk. However, due to traffic considerations and to topographical or other physical and legal constraints, two curb ramps are not always feasible at each street corner. The main barrier to installing two ramps per corner is the cost to construct new catch basins and utility relocation. As a result, the citywide average is 1.82 potential curb ramp locations per corner.

To assess the location and condition of the City's existing curb ramps and determine locations where new curb ramps should be installed, DPW created a detailed curb ramp database based on surveys of more than 29,000 intersections. This database identified 21,300 street corners with curbs in need of reconstruction or improvement, and 1,000 street corners where no ramp is feasible. An additional 17,000 intersections have not yet been surveyed.

Street Trees

There are an estimated 106,000 street trees on public rights-of-way in San Francisco. Of these, approximately 26,000 are maintained by DPW Bureau of Urban Forestry. The remaining trees are maintained by private property owners in accordance with the Public Works Code. The City's recent "Clean and Green Initiative" seeks to plant an additional 5,000 trees every year for the next five years, including trees both on private land and in the public right-of-way.

DPW tracks the maintenance or mortality of individual DPW-maintained street trees, but not privately-maintained street trees (trees on streets that are not DPW-maintained streets). DPW has a goal of pruning street trees every three years; however, due to funding limitations trees are typically pruned every seven years.

According to the 2005 City Survey, performed by the Controller's Office, 59% of residents reported that there are "not enough" trees citywide while 52% said the number of trees in their neighborhood was "about right."

Street Lighting

There are approximately 43,000 street lights in San Francisco. Of these, approximately 24,000 are managed and maintained by the SFPUC, while approximately 19,000 are maintained by PG&E. The SFPUC pays PG&E to maintain its street lights. Other departments and agencies including MUNI, DPW, Recreation and Park, the Port of San Francisco and CalTrans also maintain a small number of street and pedestrian lights.

The SFPUC estimates that a more comprehensive and effective maintenance program would require on the order of $4 to 5 million per year over the next 5 years; however, its FY09/10 funding for street light maintenance was only $2.4 million. In FY09/10, the SFPUC had a capital improvement budget of $3.6 million for street lights.

In 2007, the Streetlight Management Program Study recommended that the "City should develop a Street Lighting Policy that will support the City's goals for livable neighborhoods and urban development, ensure appropriate lighting levels for safety and comfort on public streets and sidewalks, and help create a system that is cost efficient, easy to operate and maintain."

Site Furnishings

The City of San Francisco does not currently keep records on the maintenance conditions of street furnishings such as benches. The City does not currently have a palette of accepted street furnishings; DPW is currently working on developing such a palette.

Stormwater Infrastructure

The majority of San Francisco (90%) is served by a combined sewer system, which carries both sanitary effluent and stormwater in the same set of pipes. The combined effluent is conveyed to sewage treatment facilities where it is treated to secondary standards, then discharged to the Bay and Ocean. Under most circumstances, the combined system allows for higher levels of stormwater treatment than is provided by conventional separate systems.

However, when the capacity of the system is overwhelmed by large storm events, localized flooding and combined sewer overflows (CSOs) can occur. In the event of a CSO, the system discharges a mixture of partially treated sanitary and stormwater effluent to receiving water bodies. While these discharges are highly diluted (typically consisting of roughly 6% sewage and 94% stormwater), they can cause public health hazards and lead to beach closures. The SFPUC's National Pollutant Discharge Elimination System (NPDES) permit, required under the Clean Water Act, sets design goals for the allowable number of CSOs per year, on average, based on location.

Approximately 10% of the City is served by separate storm sewer systems or is lacking stormwater infrastructure; in most of these areas stormwater flows directly to receiving waters without treatment.

San Francisco's first 250 miles of sewers were built in the late 1800s; by 1935 almost two thirds of today's system had been installed. Sewers typically last from 50 to 100 years, so large portions of the City's pipes have exceeded their expected lifespan.

▼ Market Street

Regulatory Context

2.2

Federal, state and local policies guide the design and implementation of pedestrian and streetscape elements. The federal Americans with Disabilities Act (ADA) provides guidelines for accessibility of elements such as sidewalks and curb ramps. Traffic control devices and geometrical design follow the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD) and the American Association of State Highway and Transportation Officials (AASHTO) Green Book. Stormwater regulations are set primarily by the federal Clean Water Act. All projects that propose physical changes must receive clearance under the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA) if the project involves federal funds or jurisdiction. Additionally, a number of existing local regulations provide guidance on the prioritization and design of pedestrian facilities in San Francisco.

FEDERAL AND STATE POLICIES

Accessibility

All new construction, additions, and alteration to public rights-of-way must be accessible and usable by individuals with disabilities per federal, state and local regulations. Current regulations focus primarily on lots and buildings, and have significant gaps in scope and technical requirements for design and construction of accessible elements within the public right-of-way.

The prevailing accessibility standard, the ADA Accessibility Guidelines (ADAAG), currently scopes accessibility requirements within sites and not in the public right-of-way. ADA Title II, which is applicable to state and local governments, contains requirements for curb ramps, but lacks clarity on specific accessibility guidelines for other right-of-way elements.

The US Access Board, the Federal agency responsible for developing accessibility guidelines, is in the process of redesigning ADAAG. When completed, the new guidelines propose to include Public Rights-of-Way Accessibility Guidelines (PROWAG). As of this draft, the PROWAG has not been completed, and will require several years of further development and approval.

PROWAG is oriented to new construction. It does not provide a clear set of guidance for conditions where "…other existing physical or site constraints prohibit modification or addition of elements, spaces, or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility". PROWAG should be considered a "best practice" and not a strict, formal requirement.

In San Francisco, Department of Public Works (DPW) standard plans set forth local requirements that incorporate accessibility guidelines for commonly implemented infrastructure improvements, such as curb ramps.

Appendix D (Summary of Accessibility Guidelines) contains requirements and best practices for design of accessible components in the public right-of-way.

Transportation

MUTCD The MUTCD provides uniform standards, guidance, and specifications for the placement, construction, and maintenance of all traffic control devices including traffic signals (Part 7), traffic signs (Part 2), and street markings (Part 3).

AASHTO Green Book AASHTO has developed "A Policy on Geometric Design of Highways and Streets," known as the "AASHTO Green Book." The guidance supplied in the policy is based on established practices and supplemented by recent research. The intent of the policy is to provide guidance to the designer by referencing a recommended range of values for critical street dimensions. The guidelines are intended to provide safety, comfort, convenience, and operational efficiency.

California Vehicle Code The California Vehicle Code (CVC) describes the responsibilities of pedestrians when crossing the street, or walking along a street on a sidewalk. The CVC also addresses the roles and responsibilities of motorists in relationship to pedestrians. California, like most other states, requires both pedestrians and drivers to exercise due care.

The CVC states that drivers must yield the right-of-way to a pedestrian crossing the roadway in a marked or unmarked crosswalk. It does not prohibit pedestrians from crossing roadways at places other than crosswalks, except between adjacent intersections controlled by traffic signals or police officers. Local authorities may adopt ordinances prohibiting pedestrians from crossing streets outside crosswalks. For signalized intersections, the CVC states that the pedestrian may cross with a green light at any marked or unmarked crosswalk unless expressly prohibited. The pedestrian shall yield the right-of-way to vehicles lawfully within the intersection at the time the signal changed.

According to the CVC, "it is the policy of the State of California that safe and convenient pedestrian travel and access, whether by foot, wheelchair, walker, or stroller, be provided to the residents of the state." The code also states that it is the intent of the Legislature that all government levels to work to provide safe, convenient passage for pedestrians on or across all streets and highways, increase levels of walking, and reduce pedestrian fatalities and injuries.

Stormwater

In 1972, the US Congress passed the Clean Water Act to regulate the discharge of pollutants to receiving waters such as oceans, bays, rivers, and lakes. The California State Water Resources Control Board (SWRCB) serves as the implementing agency for these regulations in California.

Most stormwater in San Francisco is collected in a combined stormwater and sanitary sewer system and treated prior to discharge to San Francisco Bay or the Pacific Ocean. The remainder is collected in a separate stormwater sewer system. Ownership of the separate system is divided between two City agencies: the Port of San Francisco for areas along the City waterfront, and the SFPUC for all other areas within the City's jurisdiction.

Since 2004, the discharge of stormwater from the separate stormwater sewer system has been covered by a statewide general permit for small municipal separate storm sewer systems (MS4), issued by the San Francisco Bay Regional Water Quality Control Board. As a requirement of the permit, the Port and SFPUC are required to develop detailed stormwater management plans (SWMPs) outlining implementation of various control measures required under the statewide general permit. The SWMPs set guidelines for incorporating design features into new development and redevelopment projects to permanently control stormwater runoff in compliance with the Clean Water Act. To help new development develop SWMPs, the Port and SFPUC have developed the San Francisco Stormwater Design Guidelines, discussed in this section and in Section 6.2.

Environment

In 1970, the California legislature passed the California Environmental Quality Act (CEQA). CEQA is intended to ensure that projects or policies that may result in changes to the physical environment fully analyze any potential impacts to the physical environment, including impacts on visual quality, transportation, biological resources, historical resources, and other categories. Plans or projects that may result in physical changes must receive CEQA clearance in order to proceed with implementation. Projects with Federal funding or jurisdiction must additionally undergo analysis under the National Environmental Protection Act (NEPA), the Federal equivalent of CEQA.

In San Francisco, most CEQA review is carried out by the Planning Department.

CITY OF SAN FRANCISCO POLICIES

Local street design regulations are found in a number of existing City documents. Together, these documents require that streets be designed for all types of transportation, particularly walking, bicycling, and transit, and set forth design policies and guidelines to implement that goal.

Many of these plans and codes will be updated as part of the adoption this plan.

The San Francisco General Plan

The San Francisco General Plan provides policies to guide future City growth; all other City regulations must be consistent with General Plan policies. Two chapters of the General Plan are particularly germane to design of streets – the Urban Design Element and the Transportation Element. The Open Space and Recreation Element also contains policies to encourage the use of streets to provide public space.

The Better Streets Policy

San Francisco Administrative Code Section 98.1, known as the 'Better Streets Policy,' states that streets are for all types of transportation, particularly walking and transit, and requires City agencies to coordinate the planning, design and use of public rights-of-way to carry out the vision for streets contained in the policy. The Better Streets Policy was adopted in 2006. See Appendix A for full text.

Transit-First Policy

The Board of Supervisors initially adopted the 'Transit-First Policy' in 1973 in response to the growing challenge of automobile traffic congestion. In 1999, San Francisco voters approved Proposition E, which moved the Transit-First Policy to the City Charter to strengthen the policy and make it the City's primary transportation policy. The Transit-First Policy states that the City should prioritize street improvements that enhance travel by public transit, by bicycle and on foot as an attractive alternative to travel by private automobile. See Appendix B for full text.

"Complete Streets" Policy

The "Complete Streets" Policy (Section 2.4.13 of the Public Works Code) directs the City to include pedestrian, bicycle, and streetscape improvements as part of any planning or construction in the public right-of-way. See Appendix C for full text.

Area Plans

Area Plans, Master Plans, Redevelopment Plans, and Specific Plans include regulations for a specific geographic area of the City. Typically, area plans contain policies and guidelines relating to the design of streets in these particular areas, and may even recommend a specific palette of streetscape materials and plantings. Two area plans with citywide significance are the Downtown Streetscape Plan, adopted in 1995, which guides development of the downtown pedestrian network and the Waterfront Design and Access Element, adopted in 1997 as part of the Port's Waterfront Land Use Plan, which guides the physical aspects of waterfront revitalization.

Streetscape Maintenance: Rights and Responsibilities

Maintenance of public streets and sidewalks in San Francisco is split among various public agencies, utilities, and property owners.

ROADWAYS

The roadway is generally maintained by DPW, including travel lanes and parking lanes. Catch basins are managed by the SFPUC, but maintained by DPW. Utility providers often excavate in the roadway to maintain or repair utility lines – utility providers are required to replace paving in-kind per the Public Works Code (Article 2.4) and DPW Director's Order #176,707 (Section 12.4.B).

SIDEWALKS

On most streets in San Francisco, sidewalk maintenance and repair is the responsibility of the fronting property owner. Resources are available through DPW's Sidewalk Inspection and Repair Program (SIRP) (*http://www.sfgov.org/site/sfdpw_page.asp?id=89724*), which enables property owners to use DPW contractors to repair sidewalks. The Sidewalk Landscape Permit is also available through DPW, which enables property owners to replace portions of the sidewalk in front of their property with landscaping, which may preclude the need to repair portions of broken sidewalk (*http://www.sfgov.org/site/sfdpw_index.asp?id=42766*).

UTILITIES

Utility main lines are the maintenance responsibility of the utility provider. Utility laterals (which connect individual lots to the main line) are typically the responsibility of the property owner to maintain or repair.

STREET TREES AND LANDSCAPING

On most streets in San Francisco, maintenance of trees and landscaping on the sidewalk is the responsibility of the fronting property owner. Property owners and the City often partner with the non-profit organization Friends of the Urban Forest to plant and maintain trees. DPW is generally responsible for trees and landscaping in medians. On some streets, DPW is responsible for maintenance of street trees on the sidewalk. See *http://www.sfgov.org/site/sfdpw_index.asp?id=33189*

STREETLIGHTS

Streetlights are managed and maintained by a variety of agencies, chiefly the SFPUC and PG+E. Pedestrian lights are typically not managed by the utility providers, and, where provided, are typically maintained by DPW.

SITE FURNISHINGS

Many streetscape elements, such as the pedestal newsracks, kiosks, sidewalk restrooms, and Muni bus shelters, are provided and maintained by private companies as part of advertising contracts with the city. Other site furnishings are maintained by DPW (such as trash receptacles), or SFMTA (such as bike racks or bollards); yet others are maintained by fronting property owners.

City Codes

The City's various codes include specific regulations to implement the policies in the General Plan, Area Plans, and other policy documents.

Administrative Code

As previously mentioned, Chapter 98 of the San Francisco Administrative Code includes the Better Streets Policy. In addition, Chapter 25 of the code contains several sections related to streetlights.

Building Code

San Francisco has five regulatory codes that are sometimes collectively referred to as the "building code:" the Building Code proper and the Electrical, Housing, Mechanical, and Plumbing codes. Together, these codes include a small number of policies related to how buildings interface with the public right-of-way.

City Charter

The City Charter of the City and County of San Francisco, which serves as the fundamental law of the City and County, includes the Transit-First Policy, described above.

Fire Code

The City's Fire Code has one section that is highly relevant to streetscape design. Section 7.01 (found under part IX, "Appendices") establishes requirements for street sizes to facilitate emergency equipment access.

Planning Code

The San Francisco Planning Code includes detailed regulations to implement the policies of the General Plan. It contains a number of regulations related to street design, including policies to control how private development impacts public streets and use of public streets, and requirements for provision of street trees and other sidewalk and pedestrian improvements.

Public Works Code

The San Francisco Public Works Code contains most of the local rules and regulations that are of relevance to streetscape design and maintenance.

Transportation Code

The City's Transportation Code is a compilation of local rules and regulations governing vehicle traffic.

Departmental Standards and Guidelines

DPW Director's Orders

In addition to adopted plans and policies, the Department of Public Works issues Director's Orders, which set specific technical guidance for features such as curb ramps, streetlights, and sidewalks.

DPW Standard Specifications and Plans

DPW has developed standard specifications and plans for design and construction within San Francisco, including streetscape and pedestrian features such as curb ramps and traffic circles.

SFMTA Traffic Calming Guidelines, Crosswalk Guidelines, and Pedestrian Signal Guidelines

The SFMTA has developed guidelines to direct implementation of traffic calming measures in San Francisco. The guidelines are largely procedural, and also include a table describing which traffic calming measures are appropriate on particular street types. In addition, the SFMTA has developed guidelines to direct the placement and design of crosswalk markings and pedestrian signals. These guidelines are consistent with this plan, but provide greater technical detail.

Existing City Efforts

2.3

EXISTING CITY STREET DESIGN PROCESS

Design, construction and management of the pedestrian realm in San Francisco today is scattered across several different departments, agencies, private entities, and organizations. Though there are many good projects, results are inconsistent depending on the project sponsor, and the process can be expensive, time-consuming, and confusing.

As part of the Better Streets Plan effort, the City has commissioned the Controller's Office to review the City's existing street design process and make recommendations for its improvement (the "Better Streets Institutional Analysis"). This report was developed independently of this planand was released in January 2010. The report is available at *www.sfbetterstreets.org*.

This section gives a brief overview of processes and responsibilities regarding street design in the City as it exists today.

Capital Planning

Street improvement projects are identified through the capital planning efforts of a variety of agencies, including SFMTA, DPW, SFPUC, SFCTA, the Planning Department, the Port, and the Redevelopment Agency. Each department or agency develops their own capital plan based on their long term planning programs, community generated request, and opportunities to coordinate with other agencies' projects. Department capital plans are informed by the Congestion Management Program (CMP) which is developed and administered by the SFCTA.

Agencies and departments submit their budgets to the City's Capital Planning Program, housed in the City Administrator's office. This program reviews and analyzes infrastructure needs and facility conditions, evaluates capital project requests, and establishes financing strategies to meet the City's long- and short-term capital needs. Capital components of department budgets are incorporated into the City's ten-year Capital Plan upon the approval of the Capital Planning Committee. The Board of Supervisors adopts the Capital Plan annually.

Opportunities to more closely coordinate long-term capital planning efforts between agencies could result in cost savings and leveraging opportunities by identifying related projects early on in the planning stage.

Funding

Funding for street improvements is available from Federal, State, Regional, County and City sources. This section describes the major available existing sources of funding for street improvements.

Since 1991, the US Federal Highway bill, financed through gas tax revenues, has included programs for pedestrian safety and infrastructure. The current version of this act (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users – SAFETEA-LU), provides funding for street improvement programs such as Safe Routes to Schools. These funds are administered through State and Regional bodies. Congress is currently considering reauthorization for SAFETEA-LU.

The Bay Area region has created additional programs to fund transportation-related improvements. The regional planning organization for the nine-county Bay Area, the Metropolitan Transportation Commission (MTC), provides transportation funds through several programs, including Transportation for Livable Communities, the Lifeline Transportation Program, Safe Routes to Transit and Safe Routes to School. The Bay Area Air Quality Management District administers a program funded by a gas tax surcharge called the Transportation Fund for Clean Air.

In 2003, San Francisco voters approved Proposition K, which authorized the City to collect a one-half cent sales tax to fund a new 30-year Transportation Expenditure Plan. Proposition K funds are administered through the SFCTA, as are state Transportation Enhancement funds.

In 2006, California voters approved Propositions 1B and 1C, which authorized the issuance of general obligation bonds for transportation infrastructure and housing infrastructure, respectively. The SFMTA and DPW receive formula funds from the transportation infrastructure bond. Additional grants are available to fund infrastructure related to infill and transit-oriented housing development allocated through the housing infrastructure bond. The federal American Recovery and Reinvestment Act has also provided funding for street improvement projects.

The City and County of San Francisco also has a number of tools available to fund street improvement projects. Currently, a small amount of the City's General Fund supports street improvement projects. Developer fees, assessment districts (such as Mello-Roos Community Facilities Districts), and tax-increment financing in redevelopment areas are all tools available to the City for future sources of street improvement revenue. Developer- and community-led projects also constitute a significant resource for street improvements with untapped potential.

Although there are a number of potential funding sources for streetscape and pedestrian improvements, the total is fairly insignificant compared to the level of need in the City today, and the City can only finance and build a handful of significant street improvement projects each year. Additional revenue sources must be sought to fully build the vision of the Better Streets Plan.

Planning and Design

Street design may be done by any number of departments. DPW, SFMTA, the Planning Department, the San Francisco Redevelopment Agency, the SFPUC, and the Port of San Francisco all propose and design street improvements as part of on-going programs. Each of these agencies has a unique mission, and thus project proposals may differ greatly from one project to the next. In addition, private development sponsors often design streets (reviewed and approved by City agencies) as part of their development proposals. Community members and organizations may also plan for and design street improvements.

Typically, agencies coordinate with one another on street improvement projects, through technical advisory committees, on-going formal meeting bodies, or informal coordination. There are currently few formal structures for comprehensive interagency coordination of street improvements, particularly at the early planning stages.

Regulation and Permitting

As with planning and design, many agencies are responsible for permitting of public realm improvements. Generally speaking, DPW's Bureau of Street Use and Mapping is responsible for regulating and permitting street and sidewalk use, SFMTA is responsible for traffic and parking changes, and the SFPUC regulates stormwater run-off and is responsible for street light design and specifications.

Street improvement projects typically require approvals or recommendations at least from DPW, SFMTA, Planning, the Arts Commission, and TASC (an interdepartmental body) before going to the Board of Supervisors and/or the SFMTA Board for approval.

In many cases, acquiring simple permits may be a burdensome and expensive endeavor, discouraging community members from making streetscape improvements and delaying or adding expense to development projects.

Maintenance and Repair

Street maintenance responsibility is shared between City agencies and property owners. On most streets, property owners are responsible for sidewalk, driveway, street tree, and landscape maintenance (DPW has responsibility on the remainder of streets). Most street repair and maintenance from the City side is carried out by DPW. This includes day to day maintenance such as street sweeping, less frequent maintenance such as catch basin cleaning, and repairs such as re-paving. One notable exception is street lighting: the SFPUC owns most street light poles and is responsible for maintaining them.

The Controller's Office will be making recommendations on how to improve the City's streetscape maintenance as part of the Better Streets Institutional Analysis, described above.

Typical streetscape design process

The typical steps for streetscape improvement projects from project identification to completion are shown in Figure 2.11. Many of these steps vary from project to project, depending on funding source, physical conditions, and agencies that need to be involved. In addition, though the process appears linear, there is often considerable iteration, meaning there is considerable back and forth between steps to deal with issues that have been brought up at a particular step. This often results in time delays and costly design revisions. There is a need for greater coordination and review at early stages of the street design process to minimize the need to make significant revisions later on in the process.

FIGURE 2.11

EXISTING CITY STREET DESIGN PROCESS

ORGANIZATION CHART

APPROVING BODIES

Arts Commission (AC)

Board of Supervisors (BOS)

Department of Public Works (DPW)
- *Bureau of Street Use and Mapping (BSM)*
- *Americans with Disabilities Act (ADA) Coordinator*

Human Rights Commission (HRC)

Planning Department (PLN)
- *Historic Preservation Committee*
- *Citywide Division*
- *Major Environmental Analysis (MEA) Division*

San Francisco Public Utilities Commission (SFPUC)
- *Street lighting*

AC | BOS | DPW | HRC | PLN | SFPUC

PROJECT MANAGER

- The project manager (City Department or private sector) is responsible for seeking the necessary approvals. This happens individually.
- Depending on the type of feedback received by one body, the designs may need to be revised and recirculated.

1 PHASE I: Project Development

PROJECT INITIATION

Projects are initiated by City departments for many reasons. They may be a response to

- necessary emergency repairs
- long-term capital, department, or community planning processes
- funding opportunities (grants or other sources)

PROJECT PLANNING

Project planning typically includes:

- Identification of funding
- Inter-agency coordination
- Stakeholder involvement
- Identification of consultant resources

2 PHASE II: Engineering Plan Development

DESIGN PHASE

Design phase typically includes:

- Preparation of design submittals
- Additional requests for funding
- Additional stakeholder involvement
- Additional Inter-agency coordination including:
  - Technical Advisory Committees
  - Transportation Advisory Staff Committee
  - Informal one-on-one meetings

These activities and the direction provided by approving bodies refine the final design.

This is an iterative process.

DESIGN PHASE

3 PHASE III: Approval of Plans & Specifications

APPROVAL OF PLANS & SPECIFICATION

AC
Public Art

BOS
Sidewalk changes

DPW
ADA Review and Approval
BSM Permits

PLN
General Plan Referral
Historic Properties Review
CEQA / NEPA

SFPUC
Streetlighting

Once approvals are received, project can move to construction

4 PHASE IV: Project Construction

ADVERTISE AND AWARD

REQUEST CONSTRUCTION FUNDING

CONSTRUCTION

CLOSEOUT

OTHER PLANNING EFFORTS

Stormwater Design Guidelines

The San Francisco Stormwater Design Guidelines (SDG), developed by the Port of San Francisco and the SFPUC, will improve San Francisco's environment by reducing pollution in stormwater runoff in areas of new development and redevelopment. The SDG will be applied in areas of San Francisco served by separate storm sewers that discharge directly to local lakes or San Francisco Bay. The Draft SDG was released in February 2009.

Transit Effectiveness Project

The Transit Effectiveness Project (TEP) is a project to review, evaluate, and make recommendations on the existing Muni transit system, with the goals of making service more attractive to the public and stabilizing operating costs. Draft TEP recommendations were endorsed by the SFMTA Board in October 2008.

San Francisco Bicycle Plan

The San Francisco Bicycle Plan plans for the improvement of bicycle facilities in order to increase bicycling for transportation and recreation throughout San Francisco. The Bicycle Plan was adopted by the SFMTA Board in June 2009.

EDUCATION

The San Francisco Department of Public Health (DPH) Community Health Promotion and Prevention (CHPP) Branch coordinates with other City agencies to promote pedestrian safety and comfort through community awareness, advocacy, and education. The awareness and advocacy program focuses on building local community-based organizations' capacity building through its mini-grant program. The education program tries to change social norms through media campaigns which highlight pedestrian safety, traffic enforcement, and traffic engineering.

Since 2001, DPH has awarded mini-grants to community-based organizations (CBOs) to work on pedestrian traffic and safety in their respective communities. DPH helps each CBO collect data and provide ongoing education, training, and technical assistance to CBO awardees. DPH then helps CBOs identify engineering, enforcement, encouragement and education solutions to enhance pedestrian safety.

DPH and SFMTA have conducted an annual media outreach campaign since 2002. Themes of DPH's media campaign include preventing aggressive driving, drinking and driving, red-light running, increasing courtesy between drivers and pedestrians, and reducing speeding.

In addition to preventing pedestrian injuries, DPH-CHPP actively works to promote physical activity in San Francisco, working closely with the Shape Up SF Coalition - a public/private partnership whose mission is to increase the awareness of and opportunities for increased physical activity and improved nutrition where people live, play, work and learn.

DPH has launched the Safe Routes to Schools program. The main goals of Safe Routes to School are to:

- increase bicycle, pedestrian, and traffic safety around schools;
- decrease traffic congestion around schools;
- reduce childhood obesity by increasing number of children walking and biking to school; and
- improve air quality, community safety and security, and community involvement around school.

SFMTA's School Area Safety Program also promotes pedestrian safety education and awareness. The program's achievements include:

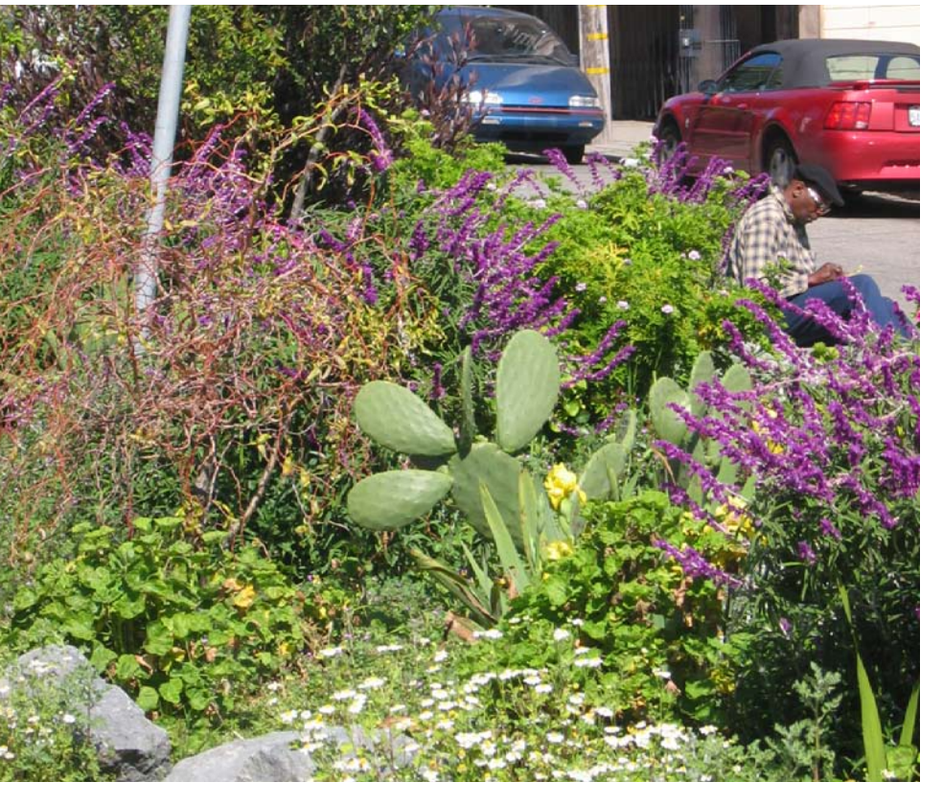
- supporting and promoting Walk to School Day;
- developing and providing schools with educational materials about walking and biking safely;
- attending school events and fairs to promote safe walking and biking and to educate children about traffic safety;
- meeting with schools to discuss traffic safety and developing strategies to tame school-area traffic; and
- providing flyers and warning tickets about unsafe driving behavior in school zones.

ENFORCEMENT

Traffic and parking enforcement is carried out by the San Francisco Police Department (SFPD) and the SFMTA. SFMTA Traffic Company and the SFPD enforce traffic violations such as speeding, violation of pedestrian right-of-way, and the like.

SFMTA, in collaboration with the SFPD, enforces parking violations. Roughly 2,000,000 parking citations were issued in FY06/07. Of these, about 78,000 or 4.25% related to parking in a pedestrian area, including 36,000 or 2% for vehicles illegally parked on the sidewalk, 32,000 or 1.75% for illegal parking in a driveway, and 10,000 or .5% for illegal parking in a crosswalk.

DPW approves permits for sidewalk uses and cites sidewalk obstructions to ensure proper sidewalk safety, accessibility, and maintenance. DPW inspects sidewalk condition (by district), street improvements, utility excavations, and tables and chairs and merchandise display permits in commercial districts in response to permits and to neighborhood complaints.



Making Community Streetscape Improvements

Community-led improvements represent a significant positive contribution to the City's streetscape environment. Individuals or community groups may be involved in the design, construction, or maintenance of improvements to the public right-of-way (with appropriate permits) such as adding sidewalk plantings, reclaiming street areas for community space, or placing café seating or merchandise displays on public sidewalks.

The Better Streets Plan is intended to facilitate the ability of community members to make improvements on their own streets. For the first time in the city, the Better Streets Plan provides a comprehensive guide to applicable guidelines for design of streetscape and pedestrian facilities. Where applicable, the Plan references necessary permits and other relevant guidelines and standards for making streetscape improvements. Simultaneously, the City is studying how to streamline its street design and permitting process, making it simpler and more straightforward for community members and others to navigate.

Depending on the scope of the work, a community-led project may require one of a number of permit types from DPW or other agencies: tables and chairs permit, sidewalk landscape permit, minor encroachment permit, major encroachment permit, or others. The project must meet all applicable guidelines for these permits, and will include agreements for maintenance and liability. Standards and guidelines to ensure proper safety, accessibility, and design must be met.

The Better Streets Plan is intended as a guide: it is not a hard and fast template that must be replicated exactly throughout the city: differences in neighborhood preference, topography, existing infrastructure, and transportation characteristics make this impossible and undesirable. Rather, the Better Streets Plan uses a kit-of-parts approach, describing appropriate standard elements by street type, and potential case-by-case additions. For each particular element in the plan, there are many guidelines. Though circumstances may differ from case to case, the overall design of street improvements should meet with the intent of the plan's goals and policies for the variety of uses for the street.

Permits for Private Use of the Public Right-of-Way

Most street improvement permits are available from DPW and can be found at *http://www.sfgov.org/site/sfdpw_index.asp?id=32969*

Common permits include:

SIDEWALK LANDSCAPE PERMIT:
Required for a property owner to replace paved sidewalk with landscaping in front of their property

TREE PLANTING PERMIT:
Required for a property owner to plant a street tree in front of their property

MINOR ENCROACHMENT PERMIT:
Required for encroachments, either surface or sub-surface, by private properties into the sidewalk area less than 10% of the area, or 25% of the frontage, in front of the adjacent property. Typical encroachments include retaining walls, steps, ADA level landings, and driveway slopes.

MAJOR ENCROACHMENT PERMIT:
Required for encroachments by private property owners into the right-of-way, either surface or sub-surface, of a more substantial nature. Examples include private utility lines or special paving and grading of the entire right-of-way.

TABLES AND CHAIRS/DISPLAY MERCHANDISE PERMITS:
Required for placing outdoor seating or merchandise in the public right-of-way.