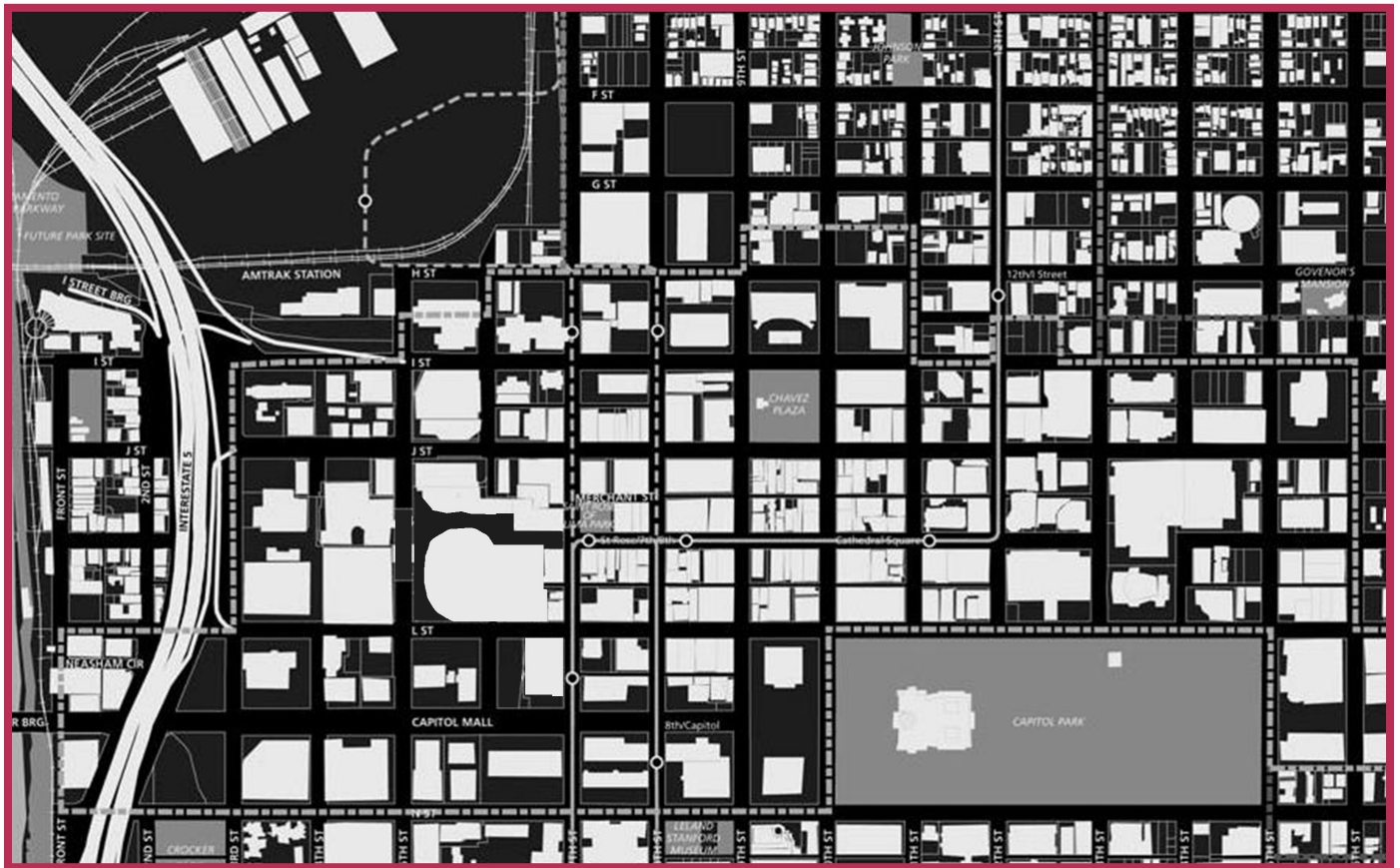


Chapter 3: Public Realm Guidelines



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A. Introduction

From an urban design perspective, the fabric of the Central Core is composed of two distinct, yet highly inter-related components: the “public” realm and the “private” realm. The “public realm” consists primarily of the publicly-owned street rights-of-way and other publicly accessible open spaces such as parks, squares, plazas, courtyards, and alleys. The “private realm,” which is addressed in Chapter 4, is the area occupied by buildings and associated improvements and is generally more limited in its accessibility to the public. Together, the public and private realms create a three-dimensional space defined by street wall heights within streets and plazas, and provide a sense of scale and place that is defined and strengthened by each realm.

Although it occupies the smaller proportion of the Central Core (35-40%), the public realm plays a critical role in the district’s function, serving several interrelated and overlapping roles, including the following elements:

Circulation and Access. The public rights-of-way provide for circulation within and through the Central Core, and access to individual buildings and sites. The public realm accommodates numerous travel modes not just automobiles, but also delivery trucks, buses, trains, street cars, bicycles, and pedestrians.

Development Framework. Using the fabric analogy, the public realm is the fabric that gives structure to the Central Core and provides the framework that contains and organizes individual developments into a cohesive whole. It also serves as the entry to the private realm, a sort of public “forecourt” to individual buildings and developments.

Public Open Space. Within the densely developed Central Core, the public realm plays an important role as public open space allowing for light, air, and landscaping and a respite from the enclosure of buildings. The public parks, plazas and streetscapes also serve as the “living room” for community life the places where the public can meet, interact, and linger.

Visual Character. While buildings are important visual elements, the design of the public realm is critical in establishing the Central Core’s visual context and overall character. The physical design and character of the public

realm contributes a great deal to its perceived unity, its quality, and its identity as a unique place.

In order to accommodate such diverse and sometimes competing functions, the public realm is generally understood to be made up of two distinct zones, each related to its primary function: the “Travelway” zone, whose primary function is to accommodate vehicular circulation, and the “Pedestrian” zone, whose primary function is to accommodate pedestrian circulation.

The Travelway zone generally includes the area of the public right-of-way within the curb-to-curb cross-section of the street that is occupied by travel lanes, bike lanes, parking lanes, and any medians, traffic circles, etc. that occur between the curbs (see diagram). The Pedestrian zone generally includes the outer portions of the right-of-way that flank the street, including sidewalks and any adjoining plazas and parks while the character and function of these two zones are inextricably connected, the guidelines in this chapter have been organized by zone to facilitate their use.

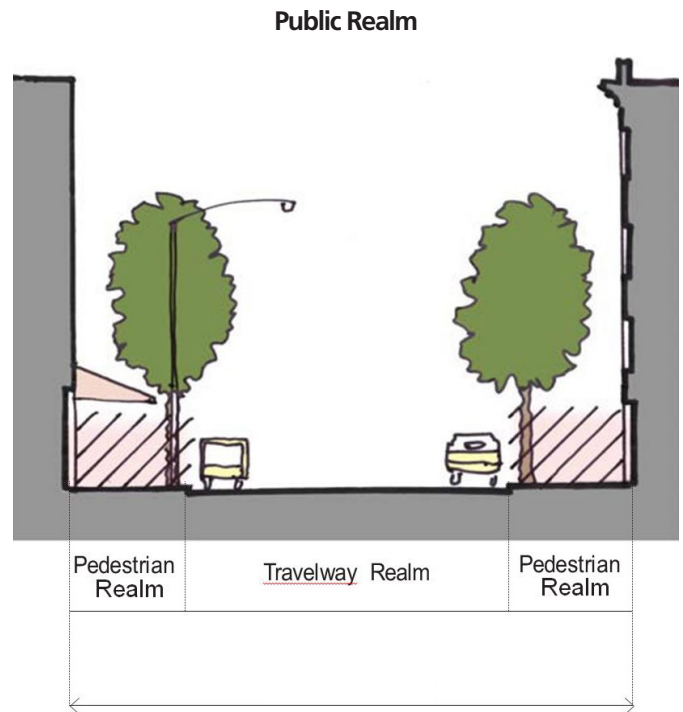


Figure 3-1. The Public Realm has two components: the Pedestrian Realm and the Travelway Realm.

B. Travelway Realm

The Travelway Realm guidelines in this document are quite focused in scope. They focus primarily on how to better and more safely integrate motor vehicles, public transit (light-rail, streetcar and buses) bicycles and pedestrians in the Central Core. The intent is not to provide a revised vehicular circulation plan for the Central Core or to address the integration of multiple travel modes within the vehicular travelway, but to provide guidelines for the design of City streets that will accommodate effective circulation of automobiles and bicycles while also promoting a more walkable downtown that is safe, convenient, and comfortable for pedestrians.

As a result, the guidelines tend to focus on how to structure aspects of the travelway to promote a better pedestrian environment, with the emphasis being on those changes that will enhance the pedestrian's sense of well-being. This includes reducing the speed of moving vehicles, creating buffers between pedestrians and moving vehicles, and clearly delineating zones that vehicles share with people.

The guidelines are intended to reduce the conflict between people, bicycles, public transit, and automobiles, while also acknowledging the functional requirements of public streets to provide access to and between destinations within the Central Core. Consistent with GRID 3.0, the guidelines recommend some restructuring of the travel way to calm traffic, accommodate the Downtown Streetcar, and to balance the area of public right-of-way committed solely to motor vehicles.

A premise underlying the guidelines is the City's commitment to making decisions and taking actions that will contribute to making Sacramento the most livable city in America. One key element in that quest will be creating a more pedestrian, bicycle and transit-oriented Central City and ensuring that this objective is reflected in the public right-of-way assigned to each of these travel modes. The following guidelines explore a number of options for restructuring the street cross-section including reducing lane widths, reducing travel lanes, widening sidewalks, adding designated streetcar lanes and stations, and necking down intersections.

Travelway Realm

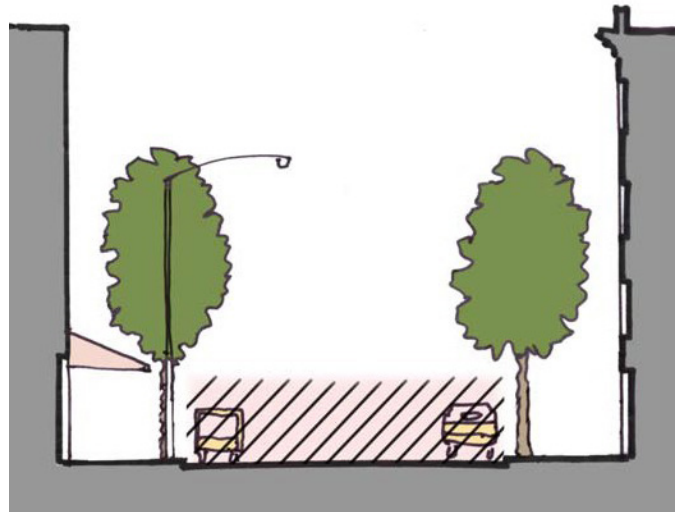


Figure 3-2. The Travelway Realm occupies the curb-to-curb street cross section within the public right-of-way.



Figure 3-3. The travelway generally occupies 60 to 65% of the public right-of-way.

B. Travelway Realm

B.1. Street Categories

.....
PRINCIPLE: The design of the public street rights-of-way shall balance vehicular circulation with all the modes of transportation to create a safe, comfortable, attractive and robust pedestrian and bicycle environment.
.....

Rationale:

The Central City street system is characterized by a grid of 80-foot wide street rights-of-way set on 400 x 420 foot centers. The function of the street system however, is clearly more varied than the design of the streets. Some streets, such as I and J, 9th and 10th, and 15th and 16th streets function as major through vehicular travel corridors that provide primary access to and from the downtown. Others serve primarily as local streets that provide access to residential neighborhoods and shopping districts and carry much lower volumes of traffic.

Sacramento's city-wide street grid can be repetitive, whereas other cities enjoy more variety. Potential opportunities include: calming vehicular traffic, enhancing transit service, accommodating bicycle movement, managing on-street parking, improving the pedestrian zone, accommodating utility infrastructure, enhancing the urban forest, accommodating storm-water management features, and differentiating neighborhoods.

This section provides a number of possible scenarios for altering the design of street cross sections within the existing right-of-way to achieve one or more of the City's multiple objectives for the downtown. The intent is not to comprehensively reconfigure the streets of the Central City, but to provide a menu of design options that will introduce variety to the downtown. Over time, they can be implemented incrementally as conditions warrant and circumstances permit, or provide the formal basis for more comprehensive street improvement programs in the future, including the relationship of street trees in urban streets.



Figure 3-4. Street design needs to effectively integrate light rail with vehicular traffic.



Figure 3-5. A number of one-way corridor streets serve as key arterials through the downtown.

B. Travelway Realm

B.1. Street Categories (continued)

Corridor Streets

Corridor Streets serve as the major circulation routes connecting to freeways and state highways. They allow efficient circulation in and out of the Central Business District. Corridor streets often function as one way pairs, or couplets, with three lanes of vehicular traffic and on-street parking on both sides. Examples of Corridor Street couplets in downtown Sacramento include I and J Street, P and Q Streets, 15th and 16th Streets, and 12th Street. L and N were once a couplet but N Street has been converted to 2-way traffic east of 16th Street.

Transit Streets

Transit Streets are designed to improve the speed and efficiency of transit routes in dedicated or shared lanes. They accommodate either fixed route dedicated transit service or bus transit service in downtown Sacramento. Examples of Transit Streets in downtown Sacramento include K Street, 7th Street, 8th Street, and 12th Street.

With or without dedicated right-of-way, transit should travel no faster than the posted speed limit. For buses, far side transit stops that are located immediately after passing through an intersection are generally preferred. Far side stops result in fewer conflicts for buses with turning vehicles and pedestrians and avoid visual obstruction of traffic signals and signs by buses waiting at stops. However, for streetcars, near side transit stops are generally preferred in order to be at the front of the queue after boarding.

Traffic turning movements across rail tracks from adjacent travel lanes should be prohibited where possible. At locations where such turns across the track must be allowed, special traffic signal phasing, including any appropriate special signals and signing, pavement marking, vertical delineation, and roadway geometry are often necessary to separate conflicting movements. In some cases, transit may require special traffic signals, signal heads, and/or preemption phases to control transit movements. The transit signal heads may need to be physically separated from traffic signal heads for vehicles and designed to display distinct indications that do not resemble traffic signals to prevent driver confusion. Transit-only lanes may be included on transit streets. Transit-only lanes are most efficient on corridors with frequent

service of 70 or more vehicles per hour or where vehicle delays cause significant delays to transit. Peak-only transit lanes should be considered on streets with high transit vehicle frequency and predictable transit delay due to peak motor vehicle traffic. Separated facilities for incompatible modes of travel are preferred. Where possible, left-running streetcar tracks and platforms are strongly preferred for bicyclist safety. Bike facilities crossing a street-surface rail track should occur at a minimum 60 degree angle, however 90 degrees is preferred.

Retail Streets (Downtown and Neighborhood)

Retail Streets support neighborhood retail by providing low speed access to commercial and mixed-use buildings. A good retail street is pedestrian and bicycle-friendly, with wide sidewalks, pedestrian amenities such as seating, on-street parking, bicycle parking, and a limited number of travel lanes with slow but consistent travel speed. A narrow street width creates spatial enclosure, and sidewalk bulb-outs allow short pedestrian crossing distances and higher visibility to oncoming traffic. Planting wells are preferred over planting strips in order to maximize the useful space for pedestrian traffic along the sidewalk. Several retail streets traverse downtown Sacramento but most could benefit from additional enhancements. Great examples include portions of J Street, K Street, L Street, Capitol, R Street, 15th Street, 16th Street, 19th Street, 20th Street, and 21st Street despite the fact that several of these streets also function as Corridor Street.

B. Travelway Realm

B.1. Street Categories (continued)

Residential Neighborhood Streets

Residential Streets serve two major purposes in Sacramento's downtown neighborhoods. As arterials, residential streets balance transportation choices with land access, without sacrificing auto mobility. As collectors and local streets, residential streets are designed to emphasize walking, bicycling and land access over auto mobility. In both cases, residential streets tend to be more pedestrian oriented than corridor streets, giving a higher priority to landscaped areas, shade trees, sidewalks, on-street parking and bicycle routes versus dedicated lanes. Residential streets in the downtown generally contain two to three travel lanes in one direction. Some of these streets are planned to be converted from one-way to two-way to slow traffic and provide greater redundancy on the grid.

Bicycle Streets

Bicycle streets (streets with Class II or Class IV on-street bicycle facilities) emphasize bicycle mobility by providing dedicated bicycle lanes. These striped, protected and separated bicycle lanes form the primary bicycle circulation system, connecting to other bicycle facilities (i.e., Class I Bike Trails and Class III Bike Routes) to provide comprehensive and integrated bicycle access throughout the Central City and beyond.

Alleys

Alleys provide access to properties that is separate from the primary street system. They are not intended to accommodate through-traffic. Sacramento's alleys are valuable assets that supplement the pedestrian network in the existing vehicular realm and increase vehicular accessibility. Alleys provide access to interior parking and to the service areas of individual parcels in high density mixed-use and commercial districts, and can serve as narrow, pedestrian-scaled streets for secondary residential units.

One of the more significant recommendations of GRID 3.0 is involves the activation of some of the Central City's 38 miles of alleys, which currently fulfill a utilitarian role. These alleys serve as a home to overhead and underground utilities, trash collection containers and services, and provide access to garages and loading docks. By accommodating the service aspects of urban life, alleys help to maintain a

more aesthetically pleasing street front and experience for pedestrians and bicyclists. In addition to aesthetic benefits, alleys also assist with reducing the number of curb cuts along roadways, which enhances safety for bicyclists and pedestrians.

However, as available space in the Central City declines, efficient use of what is left becomes more important. To that end, alleys are receiving increasing attention as the Grid continues to grow. Due in part to this phenomenon, developers on the Grid have started building homes and storefronts that are accessed via alleys. This trend has started a conversation in Sacramento about how to "activate" alleys, and make them a more desirable place to travel or spend time. The importance of alleys is in the public consciousness and the enhancement of pedestrian alleys should continue as second residential units and alley adjacent commercial continues to develop in downtown. A major step in this direction included improvement of Liestal Alley and the official naming of the alleys for better emergency response as well as convenience.

B. Travelway Realm

B.1.1. One-way Corridor Street Category

PRINCIPLE: Limit the use of one-way corridor streets to corridors where they are necessary to accommodate high traffic volumes, and introduce side-walk extensions (i.e., bulb-outs) at street intersections to calm traffic, reduce pedestrian crossing distances, and increase visibility.

Historically, the Central City has included numerous one-way corridor streets. Typically these streets include three lanes of traffic, on-street parking on both sides of the street, and bicyclists often share travel lanes with automobile traffic. Some of these streets are aligned with freeway on and off ramps, such as I and J Streets and P and Q Streets. Designed to efficiently carry heavy peak hour traffic, these streets tend to be less pedestrian or bicycle friendly due to the speed and volume of traffic and street widths. While a heavy volume of commuters will continue to require access to downtown over time, these streets can be made more hospitable to pedestrians and bicyclists with improvements such as sidewalk bulb-outs at the intersections.

These one-way corridor streets are appropriate where they are critical to accommodate heavy peak hour traffic. Otherwise, it is recommended that other street designs be used that calm traffic and are more suited for bicycles and pedestrians. Many one-way corridor streets have been reconfigured over the years by introducing two-way traffic or converting a travel lane to a bicycle lane. This practice should continue.

The vehicular zone is generally flanked with street trees on both sides and generous sidewalk areas. In the Central Core, the relatively narrow sidewalks and buildings built up to the property line limit opportunities to grow street trees with large wide canopies. However, large canopy trees are used wherever adequate space exists for them.

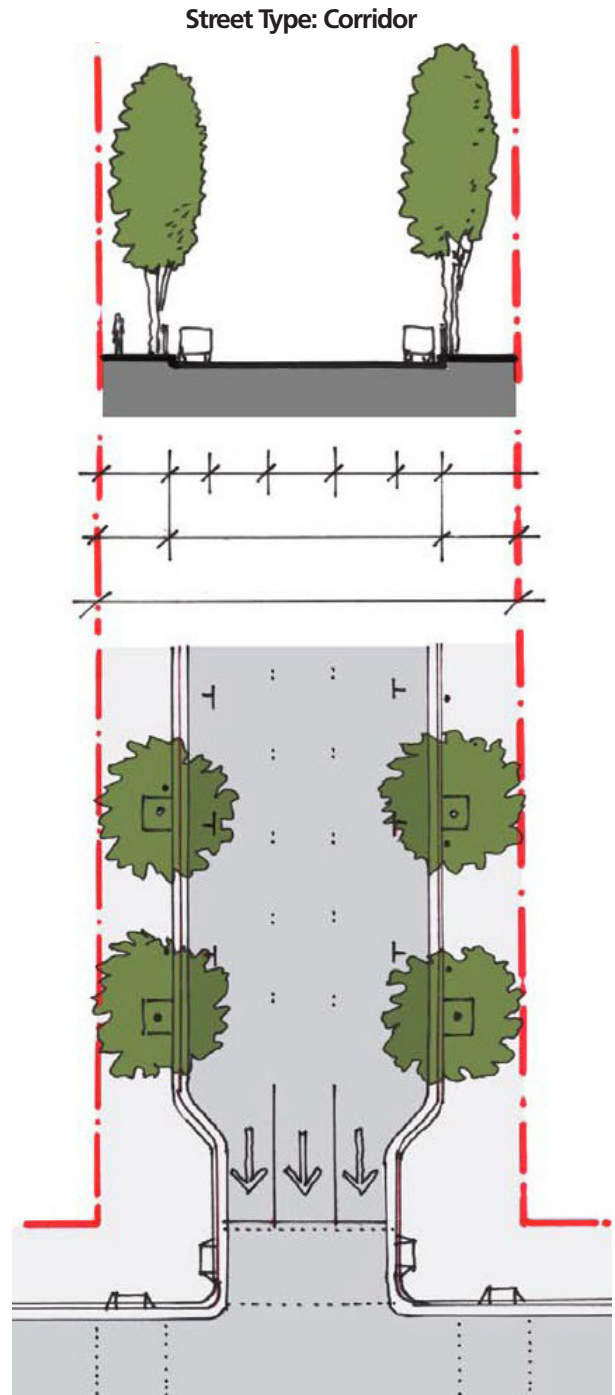


Figure 3-6.

B. Travelway Realm

B.1.2. Corridor Street with Widened Sidewalk

.....
PRINCIPLE: Widened sidewalks should be planned for selected Central City locations to accommodate increasingly active pedestrian street life.
.....

Wide sidewalks provide more space for passing pedestrians, and for uses such as sidewalk cafes that contribute to an active and engaging street life. The increased sidewalk width could also be used to provide additional public amenities. 9th Street opposite Cesar Chavez Park is an example of where the sidewalk has been widened by eliminating the parking lane. The existing street trees are in their current location so as not to interfere with underground utilities and services.



Figure 3-7. 9th Street between I & J Streets.

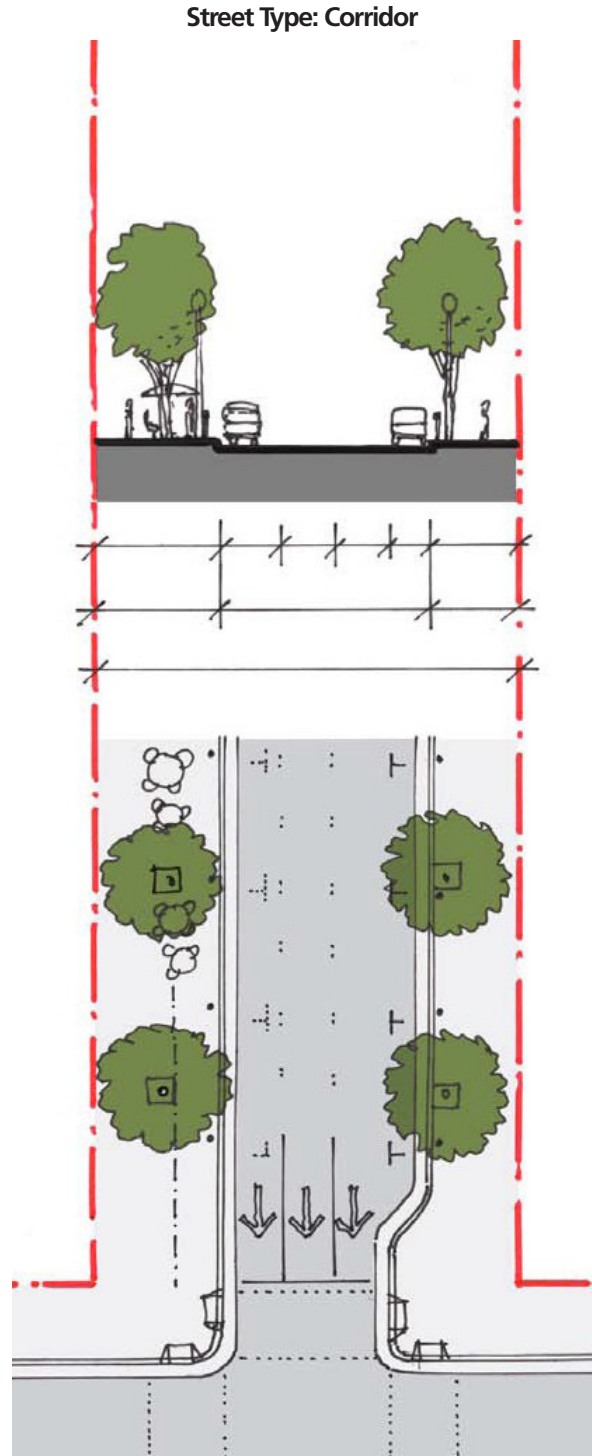


Figure 3-8.

B. Travelway Realm

B.1.3. Two-way ‘Green’ Residential Street

.....
PRINCIPLE: Manage stormwater run-off using “green streets” that incorporate rain water retention gardens or bio-swales.
.....

The central core area of Sacramento has a combined sewer system that is subject to capacity problems during winter storms. Large overflow reservoirs, such as one in the Docks Area next to Pioneer Bridge, are necessary to hold overflow water from the sewers after winter storms and on rare occasion untreated sewage has to be dumped into the Sacramento River. In order to improve water quality and reduce the amount of storm-water run-off carried in sewers, it is desirable to slow the peak flow of rain water run-off from the streets and filter pollutants through the use of bio-swales and permeable paving. These are suitable in residential neighborhoods.

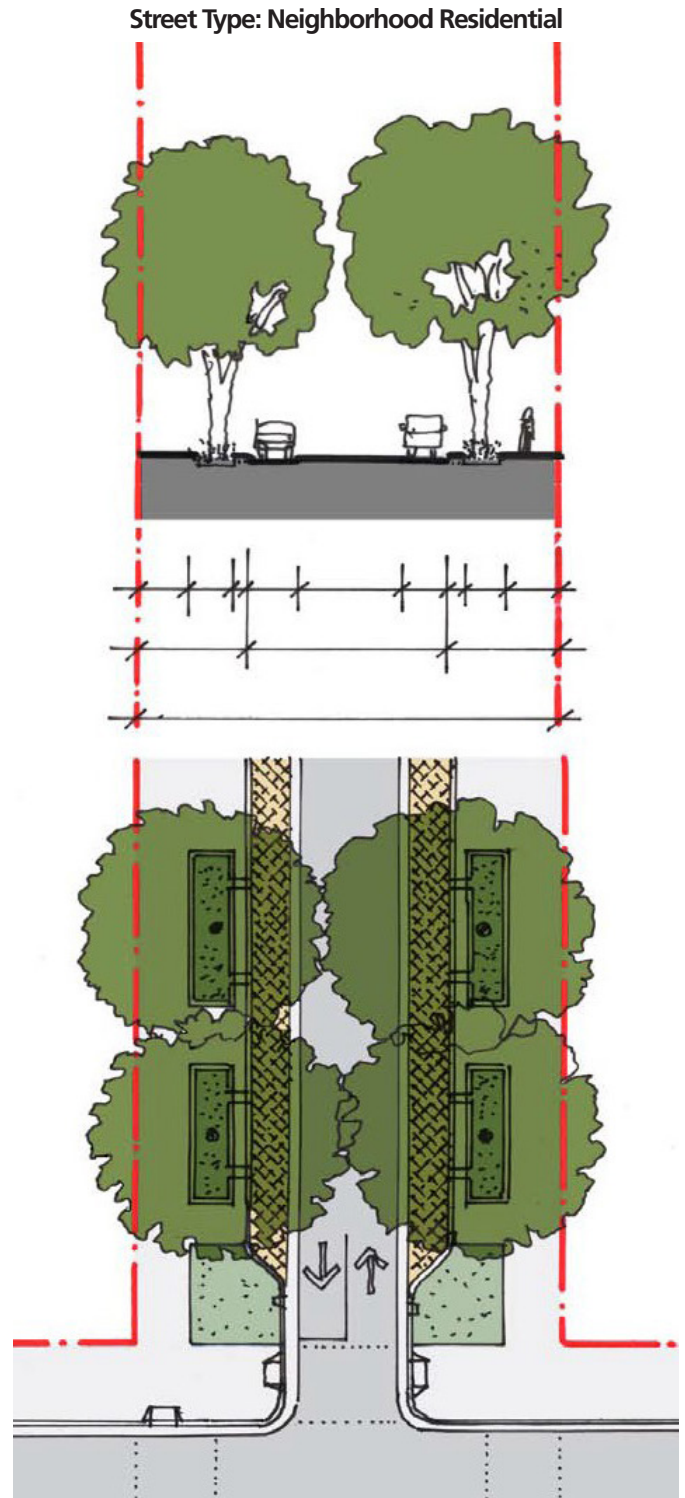


Figure 3-9.

B. Travelway Realm

B.1.4. Bicycle Street (one -way)

.....
PRINCIPLE: Introduce dedicated bicycle lanes on one-way streets consistent with Grid 3.0.
.....

The diagram shows a typical one-way neighborhood street with two travel lanes, a buffered bicycle lane and parallel on-street parking on both sides. The photo below shows a similar treatment for a two-way street.

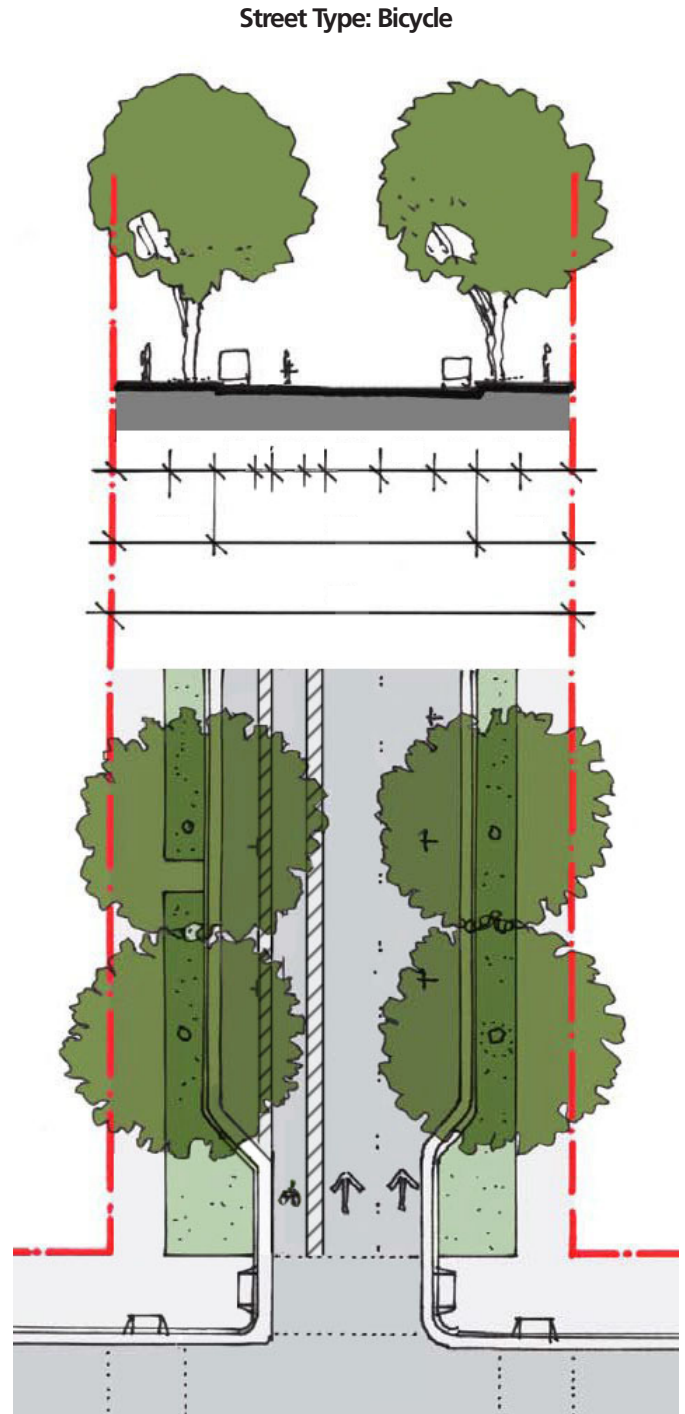


Figure 3-10.

B. Travelway Realm

B.1.5. Alleys: Commercial District Service Alleys

PRINCIPLE: In commercial districts, alleys should provide access to parking and service areas for commercial buildings to reduce street traffic and pedestrian/vehicle conflicts along the sidewalks

Alleys in commercial districts should be used to provide access to parking and service areas for commercial buildings, reducing the need for garage entrances and curb cuts along the street frontages.

The accompanying drawing shows two potential conditions for a commercial district alley. On the left is an example of a loading dock and on the right a structured parking garage.

Recommendations

1. Trash bins and skips may not intrude into the alley right-of-way (R.O.W.).
2. Where feasible, angled loading docks are recommended because the 20' width of existing alley rights-of-way is too narrow for large vehicle turning.
3. Adequate throat depth should be provided to prevent cars in the process of parking from blocking alley. Where possible, alleys should have paving strategies designed to attenuate stormwater flows, e.g. with the use of porous paving materials and retention systems.



Figure 3-11. Service alley in the Central Core

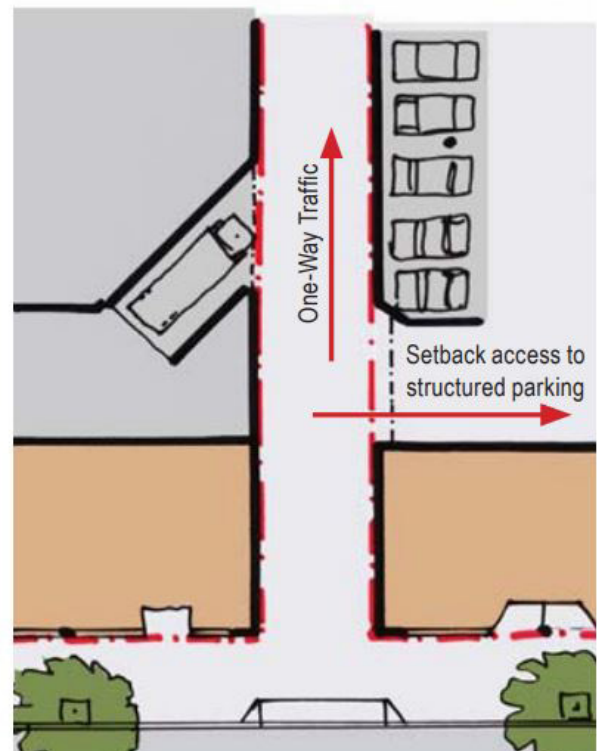
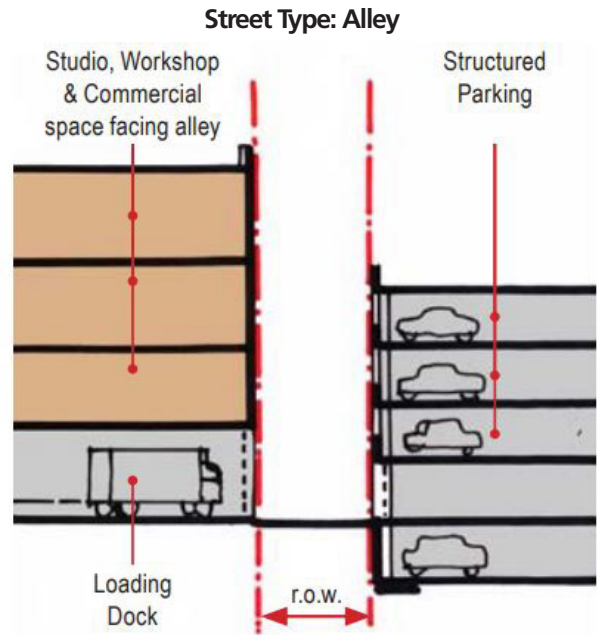


Figure 3-12.

B. Travelway Realm

B.1.6. Alleys: Shared-Use Alleys

PRINCIPLE: In certain locations, alleys can function as shared-use environments that are primarily pedestrian in character, but where cars are tolerated.

At locations in the city where urban life and intensity are high, alleys can function as shared-use environments that are more pedestrian than vehicular in character. Similar to Dutch “woonerfs,” these alleys are designed as shared environments primarily for pedestrian activity and children’s play areas, but also accommodating limited car use and access. The detailing and materials used in the alley right-of-way should clearly signify the space as more “paseo” than “street.” These shared-use alleys can accommodate outdoor cafés and vendors, possibly for limited hours of the day or evening.

The accompanying drawing shows a mid-block alley with cafes and studio spaces on either side. Removable bollards are shown to define the end of the vehicle access zone. Garage access would need to be from the rear of any buildings facing the alley, with access provided from the alley near the street.

Recommendations

1. Trash bins and skips may not intrude into the alley right of way
2. Adequate throat depth should be provided to prevent cars in the process of parking from blocking alley. Alleys should have paving materials that are conducive for both vehicular and pedestrian activity. Where possible, the paving should be designed to attenuate storm-water flows, e.g. with the use of porous paving material and retention systems.

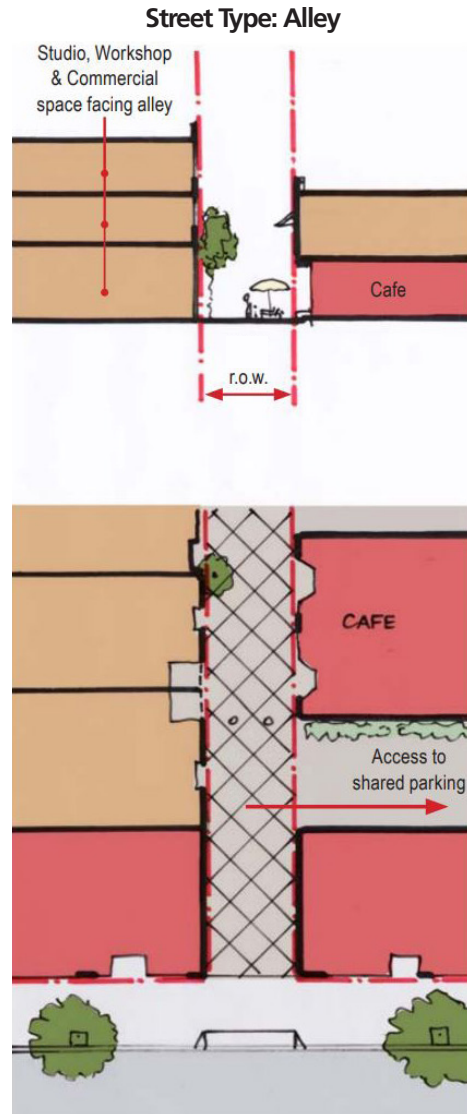


Figure 3-13.



Figure 3-14.



Figure 3-15.

Figure 3-14 and 3-15. British “home zone” shared street concept Belden Place, San Francisco



Figure 316. Dutch “woonerf”

B. Travelway Realm

B.1.7. Alleys: Commercial District Pedestrian Alleys

PRINCIPLE: Some alleys in the commercial district shall be redesigned as retail-lined passages - areas of intense pedestrian use and activity with only limited service and emergency vehicle use

In the Central Core, there is an opportunity for some alleys in the commercial district to be redeveloped as passages, suitable for pedestrian and retail activity. They should support mid-block pedestrian paths and the potential for small scale retail activity such as cafes, bars and coffee shops with outdoor seating. Limited vehicle and service activities would be allowed during off-peak hours. These alleys must provide access for emergency vehicles and not exceed ADA cross slope maximums.

The accompanying drawings at right shows two potential conditions for a commercial district pedestrian alley:

The alley is shown at a lower elevation than the adjoining street level, recognizing the historic condition found between L and I Streets due to the raising the street levels in the late 19th century.

On the left is a commercial building, with ground floor retail at the corner and a service/loading area facing the adjoining numbered-street.

On the right are commercial buildings with upper level and basement parking and the potential of a ground level retail/ bar or café space facing the alley. Garage access would need to be from the numbered streets only in order to avoid conflict with pedestrian activities on the alley. In some instances where strong North/South vehicular movement occurs, garage access from the lettered streets may be allowed.



Figure 3-17.



Figure 3-18. Existing Central Core Alley (between 10th, 11th, L & K Streets)



Figure 3-19. Hardware Lane, Melbourne. Retail uses front onto this narrow pedestrian lane, a model for redevelopment of Sacramento's alleys.

B. Travelway Realm

B.1.7. Alleys: Commercial District Pedestrian Alleys (continued)

In both cases, in order to minimize the impact of loading and service areas and garage entrances facing the street, the maximum width of opening would be limited to 24'. Three curb cuts would be the maximum allowed for the block.

The alley should be paved as a pedestrian space with unit pavers from building face to building face without curbs. Area drains should be located in the center of the alley.

Recommendations

1. All loading and service should be on-parcel, keeping the right-of-way (R.O.W.) clear
2. Sidewalks and curbs are not recommended, unless verified per current regulations.
3. Alleys should have paving materials that are conducive to both pedestrian and vehicular activity, e.g. unit pavers, from building face to building face. Where possible, the paving should be designed to attenuate storm-water flows, e.g. with the use of porous paving material and retention systems.
4. Area drains should be located in the center of the alley.
5. The alley should have retractable bollards engaged and disengaged by the City to prevent vehicular access during hours of retail/restaurant use.
6. Garbage locations and collection should be coordinated to eliminate nuisances of smell and unsightliness.



Figure 3-21. Alley in the Railyards District outside of the Central Core.



Figure 3-20.



Figure 3-22. Retail shops and cafes front onto these narrow lanes, restricted to pedestrian activity during peak / business hours.

B. Travelway Realm

B.1.8. Alleys: Residential District Alleys

PRINCIPLE: Alleys in residential districts should perform as minor streets, providing a traffic-calmed, pedestrian scaled environment providing frontage access to residential units and vehicle access to garages and service areas.

In residential districts alleys can perform the functions of a minor street, providing a pedestrian scaled environment for both secondary residential units and mid-block facing units. In addition, alleys can provide a traffic-calmed environment for vehicle access to garages and service areas.

The accompanying drawing shows two potential conditions for a residential alley:

On the left of the alley is an example of front-loaded townhouses with their garages facing the alley.

On the right of the alley is an example of rear-loaded townhouses with their garages accessed from a shared garage at the rear. The townhouses face the alley with their open space on the second level above the podium level.

Recommendations

1. Alleys should have paving materials that are conducive for both vehicular and pedestrian activity. Rougher paving texture should be used to slow vehicle speeds.
2. Trash bins must may not intrude into the alley right of way.
3. Flush pavement without sidewalks should be the standard detail.

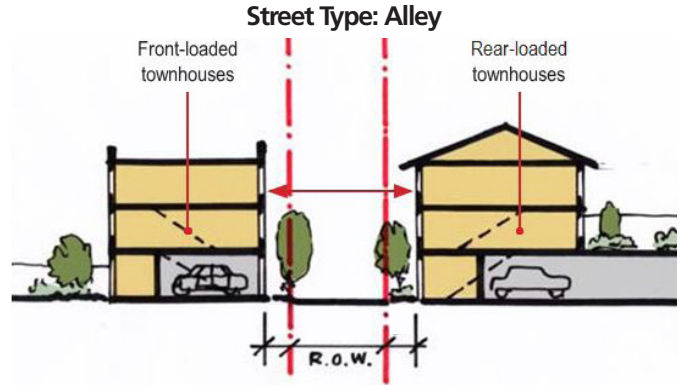


Figure 3-23.



Figure 3-24. Townhouses front alley near 10th and T Streets



Figure 3-25. Japanese "shared Street"

B. Travelway Realm

B.2. On-Street Parking

.....
PRINCIPLE: Provide on-street parking as a means of enhancing access to adjacent uses, buffering pedestrians from moving traffic, and increasing activity on the street.

Rationale:

On-street parking is an important component of a successful Central Core that offers benefits to visitors, merchants, and residents, including:

- A. Supports local economic activity of merchants by providing convenient customer access to storefronts;
- B. Supports residential neighborhoods by providing convenient guest parking;
- C. Accommodates on-street loading and unloading of delivery trucks to local commercial retail uses and residential uses;
- D. Reduces development costs for small businesses by decreasing demand for on-site parking;
- E. Enhances pedestrian comfort by providing a physical buffer between public sidewalks and moving vehicular traffic;
- F. Calms (i.e., slows) traffic by alerting motorists that driving speeds should be reduced, in response to increased street-side activity related to on-street parking (e.g., vehicle turning movements, opening car doors, etc.);
- G. Enhances pedestrian activity on the street by creating foot traffic between parked cars and commercial destinations.
- H. Accommodates electric vehicles.

On-street parking can be developed in different configurations, including parallel parking, and angled parking can assume several configurations including “head in” and “back in” type spaces. Both parallel and angled parking are good solutions in the right context. Generally, parallel parking is better for higher volume streets with faster moving traffic and limited right-of-way width. Angled parking works better on slower, lower volume streets that have ample right-of-way.

Generally, the advantage of angled parking is that it can provide more on-street parking than parallel parking can within the same length of curb. This is particularly desirable in retail areas that have “main street” type storefronts and want to generate as much street-side activity as possible. The disadvantages of angled parking are that it requires more

street width to accommodate the angled spaces (i.e., either narrower vehicular travelway or narrower pedestrian zone), it can create sight distance problems associated with cars backing out of parking spaces, creates potential conflicts with cyclists, and can slow traffic flow.

The use of back-in (reverse) angled parking can overcome the sight distance concerns, and because of this is considered a superior solution for streets with bicyclists traveling adjacent to angled parking. However, it is not a configuration that many drivers are familiar with so it requires some education and time for people to understand how it works.

Guidelines

1. **On-street Parking.** To the extent feasible, on-street parking should be provided to support adjacent uses and enhance pedestrian safety and activity.
2. **Curb Cuts.** Curb cuts should be avoided to the extent possible, and the use of alleys to access on-site parking promoted in order to maximize the curb side available for on-street parking,
3. **Transit bulb outs.** Curb extension transit stops may require the removal of some on-street parking. The location of stops and length of platforms should minimize reduction of on-street parking where possible.
4. **Intermittent Parking Zones.** Where traffic capacity needs to be balanced with on-street parking, the Public Works Director may consider using the curb lane for parking during off-peak periods and for traffic during peak periods. This strategy may allow for the narrowing of some arterial and collector street cross-sections (i.e., lane removal) where it is desirable to provide wider pedestrian zones and off-peak traffic volumes do not require three travel lanes.
5. **Parking Orientation.** On-street parking should be primarily parallel parking on high-volume arterial and collector streets.

B. Travelway Realm

B.2. On-Street Parking (continued)

6. **Bicycle Corrals.** In areas with high demand for bicycle parking, conversion of an on-street parking space to a bicycle corral should be considered by the Public Works Director. Bicycle corrals are on-street bicycle parking facilities that can accommodate more bicycles than a typical sidewalk rack, and typically take up a single vehicle parking space.
7. **Spacing.** At least 20 to 50 feet from mid-block crosswalks and at least 20 feet from the curb return of intersections (30 feet from an approach to a signalized intersection) or as required to maintain a proper sight distance triangle depending on speed and roadway geometrics.
8. **Motorcycle and Scooter Parking.** Convenient on-street motorcycle parking should be provided to encourage motorcycle and scooter use. Ample on-street motorcycle and scooter parking should be provided within the Central Core in prominent, well-lit locations as close as possible to main entrances of buildings, Motorcycle parking bays should be striped perpendicular to the sidewalk in the on-street vehicular parking zone.



Figure 3-26. Parallel parking works better on narrower streets.

B. Travelway Realm

B.3. Intersections

.....
PRINCIPLE: Design streets to accommodate safe and convenient pedestrian crossings.

Rationale

Street intersections are the places in the Central Core where the Traveled way and Pedestrian Realms overlap. As these areas are shared by pedestrian, vehicular and in many areas, bicycle traffic, intersections have the potential for conflict. In order to reduce potential conflict and ensure pedestrian safety, it is important that pedestrian crossings be designed as an integral and critical component of the street system that accommodates vehicular, bicycle and pedestrian circulation.

The design of pedestrian crossings should announce to motorists the potential presence of pedestrians in the travelway, and acknowledge their right to be there. Free movement of pedestrians from block to block is an essential element of all successful downtown areas and should be supported by the design of safe and attractive pedestrian crossings. Pedestrian crossings are sectors of the public right-of-way that are intended to be shared by vehicles and pedestrians, and need to be designed as such, not treated as unwelcome impediments to the free flow of vehicular traffic.

Numerous strategies can be employed to achieve these objectives some addressing the physical design of the street and crossing, others addressing traffic control. The appropriate mix of strategies in designing pedestrian crossings will be determined by factors such as the size of the street, the volume of traffic, and the level of pedestrian activity, with crossings of higher volume commercial streets typically requiring more design intervention than lower volume residential streets.

Strategies for creating safe, well-marked pedestrian crossings may include, but are not limited to, features such as sidewalk extensions (or “bulb-outs”) to reduce crossing distances, alternative paving materials at crosswalks, enhanced lighting, pedestrian controlled signals, advanced pavement markings, and re-timing of signals to increase crossing times. The Sacramento Pedestrian Master Plan (2006) and its appendices should be referenced for further guidance. Any crosswalk should comply with the City’s Pedestrian Safety Guidelines, Pedestrian Crossing Guidelines, and the MUTCD.

Guidelines**1. Crossing Distance**

- 1.1. Curb-to-curb Distance. Where feasible, the curb-to-curb distance that pedestrians need to cross a street should be minimized. Minimizing pedestrian exposure to traffic improves pedestrian safety and comfort while also minimizing the time traffic flow must stop to accommodate crossing pedestrians. Design strategies to reduce crossing distances include reducing the number and/or width of approach lanes to an intersection, and reducing the radius of the intersection curb returns.
- 1.2. Turn Lanes. Unless absolutely necessary to accommodate the safe flow of vehicular traffic, turn lanes are generally discouraged because they increase the width of the pedestrian crossing and increase the potential for pedestrian/vehicle conflict.



Figure 3-27. Traffic calming measures, such as crosswalk refuges, make streets more pedestrian friendly.

B. Travelway Realm

B.3. Intersections (continued)

1.3. **Curb Extensions.** Curb extensions—often called “bulb-outs” or “neckdowns”—are recommended where feasible in order to reduce the crossing distance for pedestrians, eliminate the need for transit vehicles to pull out of the travel lane, and to slow traffic speeds. Curb extensions also provide space for amenities such as covered transit stops, landscaping, lighting, water features, and street furniture while maintaining a clear travelway for pedestrians. Boarding height of transit vehicles must be considered when designing curb extensions (e.g., modern streetcars are generally low-floor vehicles, while current light rail vehicles that operate within the City are not).

- Curb extensions can also be installed at intersections as well as at mid-block crosswalks
- Curb extensions should be designed to accommodate on-street bicycle facilities
- Curb extensions may not be appropriate at intersections where there are: no on-street parking lanes, exclusive right-turn lanes adjacent to the curb, or high volumes of right-turning trucks or buses turning into narrow cross streets.

1.4. **Reduced Corner Radii.** Reducing corner radii at intersections provides the dual benefit of reducing the crossing distance for pedestrians and slowing traffic. Reducing corner radii is a particularly important strategy at intersections that do not have curb extensions, since smaller curb radii slow traffic.

- In urban areas where pedestrian activity is intensive, curb return radii should be as small as possible—typically less than 25 feet, with a 10- to 15-foot minimum radius. Refer to Pedestrian Master Plan and Appendices for further guidance.
- Smaller corner radii are appropriate where the volume of large turning vehicles (buses, trucks, etc.) is low, where the occasional turn made by large vehicles can be accommodated with slower speeds, where on-street parking and bicycle lanes provide a greater effective turning radius, and where some encroachment into the opposing traffic lanes is deemed acceptable.

2. Crossing Time

- 2.1. **Walking Speed.** Set pedestrian crossing times for walking speeds appropriate for the type of pedestrian using the intersection. Accepted timings for children and the elderly are 3.5 feet per second, which is being considered for the standard at the national level in the MUTCD (Manual on Uniform Traffic Control Devices).
- 2.2. **Pedestrian Countdown Signals.** Consider installing “countdown” pedestrian signals to all signalized intersections to improve pedestrian comfort, especially at wide intersections and those with high pedestrian volumes. Countdown pedestrian signals, indicating how many seconds remain to cross the street, are particularly valuable to the young and the elderly.
- 2.3. **Leading Pedestrian Interval.** Consider re-timing lights to dedicate a few seconds at the beginning of a green phase to pedestrians only. This gives pedestrians a head start into the intersection and makes it less likely that they will be hit by vehicles turning into the crosswalk.
- 2.4. **Short Signal Cycles and Pedestrian Recall.** Favor short traffic signal cycles that reduce pedestrian delay and allow for transit vehicles to get back to the signal progression quickly. Program traffic signals to feature pedestrian recall (automatic walk phases) on all cycles to minimize delay to pedestrians.



Figure 3-28. Curb extensions expand the pedestrian realm, slow traffic and reduce pedestrian crossing distance

B. Travelway Realm

B.3. Intersections (continued)**3. Cross Walks****3.1. Crosswalk Markings**

- High visibility markings should be used to delineate pedestrian crosswalks, both to alert drivers of the potential presence of pedestrians and to guide pedestrians to use only designated crossing points.
- Marked crosswalks should be provided for all legs of signalized intersections, and across 'STOP' sign controlled intersections where there is significant pedestrian activity.
- At unsignalized or uncontrolled crossings, high visibility materials should be used to increase visibility of pedestrian crossings. High contrast markings also are recommended to aid people with vision impairments.

3.2. Crosswalk Materials. Special paving treatments, such as brick pavers, colored stamped asphalt concrete, and thermoplastic, in conjunction with crosswalk markings, may enhance the visibility of crosswalks, improve aesthetics, and serve as a visual and tactile cue to drivers that there is pedestrian activity. Due to high maintenance costs, special paving treatments are allowed only under specific circumstances or a specific locations, and are subject to review by the Street Maintenance Division. All crosswalk materials should be durable, safe for pedestrian use, and stable enough to accommodate vehicle traffic without shifting or settling.

3.3. Crosswalk Lighting. Pedestrian-scaled lighting should be used in conjunction with traffic safety lighting at crosswalks to better illuminate pedestrians to drivers. Special lighting, such as flashing pavement markings, can be used to further enhance pedestrian visibility during evening hours.

3.4. Mid-block Crosswalks.

- Mid-block pedestrian crossings generally are not recommended, particularly in the historic core areas where intersections are relatively closely spaced. Because mid-block crossings are not generally expected by motorists, they should be used only where truly needed, there is appropriate sight distance, and crossings are appropriately signed, marked and illuminated.

- Mid-block crossings may be considered when there is significant pedestrian demand to cross a street between intersections, such as to connect two major mid-block destinations.

3.5. Accessibility. Curb ramps shall be provided at all intersections to ensure accessibility.

4. Visibility

4.1. Pedestrian-scaled lighting should be used in conjunction with traffic safety lighting at crosswalks to better illuminate pedestrians to drivers.



Figure 3-29. Provide curb ramps at all intersections.



Figure 3-30. Special paving treatments and pedestrian-activated crossing lights alert drivers to the presence of pedestrians.

B. Travelway Realm

B.4. Protected View Corridors

.....
PRINCIPLE: View corridors and spatial continuity of streets should be protected by avoiding obstructions over the public rights-of-way.
.....

Rationale

Sacramento, with its beautiful landscaping and landmark buildings, offers a variety of views and vistas. Protecting views of landmarks and the spatial continuity of streets is essential. Second level walkways, construction over streets, and lowering of roadways damage streets in a variety of ways. Besides disturbing retail continuity by not supporting street-level activities, they block views that make Sacramento unique among California cities.

Guidelines

1. Second level pedestrian bridges across public streets should not be allowed unless for very special circumstances.
2. Construction or intrusion of private or public development over public streets and rights-of-way should not be permitted.



Figure 3-31.



Figure 3-32. The pedestrian bridge at 10th and L St. blocks views and detracts from ground-floor pedestrian activity.

C. Pedestrian Realm

The Pedestrian Realm guidelines are intended to promote a more walkable downtown by improving pedestrian safety, convenience, and comfort. The guidelines build upon recent city efforts, including the City's Pedestrian-Friendly Street Design Standards (2004) and Pedestrian Master Plan (2006), that strive to make Sacramento a model pedestrian-friendly city--in short, the "Walking Capital." These guidelines enhance the recommendations of these two pedestrian documents.

The guidelines focus on improving the attractiveness and effectiveness of the pedestrian network in order to encourage walking as a realistic mode of transportation. As such, they recommend design strategies for enhancing the physical safety, comfort, and convenience of the pedestrian environment as well as the aesthetic character and quality of the pedestrian experience.

The guidelines are intended to reclaim City streets for pedestrians, creating true multi-modal transportation routes that safely and effectively balance the circulation needs of vehicular and pedestrian traffic, while also acknowledging the public streetscape's role as the "stage" or "living room" on which the life of the community plays out.

The Pedestrian Realm's principle location is the sidewalk, where it serves several functions: circulation facility, social space, and amenity zone and must accommodate numerous features and facilities to support these functions. For purposes of these guidelines, the sidewalk has been subdivided into three zones: the Pedestrian Zone, the Amenity Zone, and the Frontage Zone (see diagram). Each zone plays a slightly different role in the pedestrian realm and has different design requirements. The following discussion further describes each zone and the guidelines have been organized by zone to clarify the differences.

The three zones generally occur on both sides of the street. The Pedestrian Zone is the middle zone and primarily accommodates pedestrian circulation. The Amenity Zone generally is adjacent to the street and accommodates public facilities and street furnishings. The Frontage Zone is adjacent to building frontages and serves as a transition area between inside and outside. These zones are conceptual, and while they may be clearly represented and delineated on some streets, on other streets they may be missing or weakly defined.

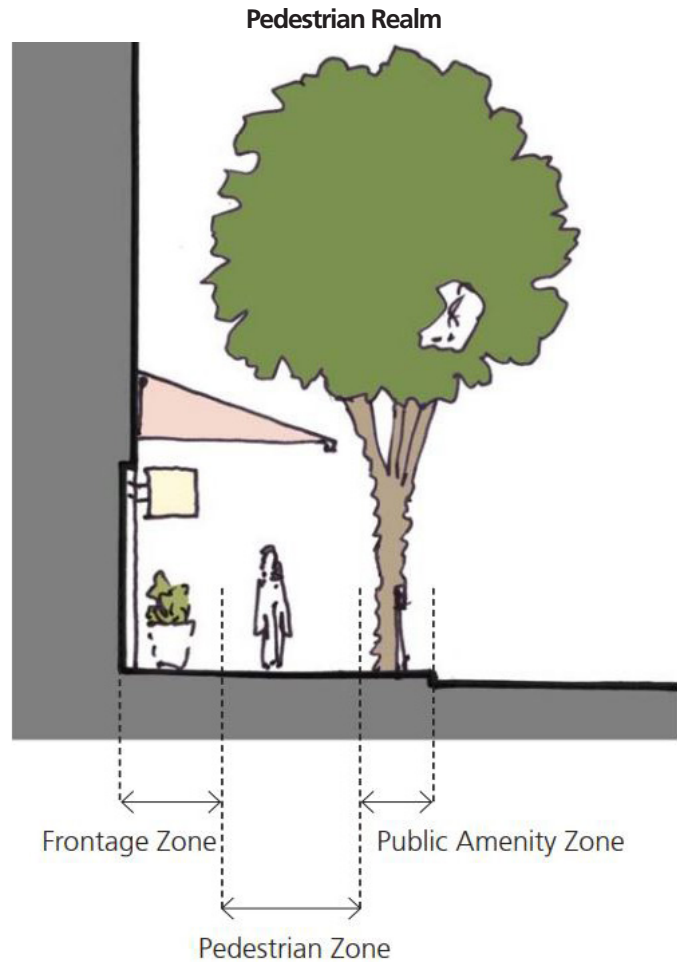


Figure 3-33.



Figure 3-34. The pedestrian realm serves several functions: circulation, social space, and public amenities.

C. Pedestrian Realm

C.1. Sidewalks

PRINCIPLE: Dedicate adequate space within the public street right-of-way to support a safe, comfortable, attractive, and robust pedestrian environment sufficient in width for the desired level of pedestrian activity.

Rationale

Sidewalks are the primary areas within the public street right-of-way that are reserved specifically for pedestrian use. They also serve as the interface between buildings and uses of the private realm and the vehicular travelway, providing both connections and buffers. As such, the design of the sidewalk and the elements within it are critical to the creation of an active, pedestrian friendly environment, which in turn is essential to establishing and maintaining the Central Core as a successful commercial and cultural center and vibrant residential neighborhood.

As part of the “public” right-of-way, sidewalk widths can be read as a statement about the relative status given to pedestrians versus automobiles in the Central Core. When the majority of the street right-of-way is given over to the automobile, and pedestrians are relegated to narrow sidewalks on either side of the travelway the implicit message, whether intentional or not, is that the pedestrian is not as important as the automobile

Generally, the space allocated to the pedestrian and the automobile needs to be balanced to reflect the City’s commitment to establishing a walkable Central Core. Safe, comfortable pedestrian environments will only occur where the design of the public realm balances the concerns for automobile efficiency with those for a high quality pedestrian environment.

Historically, the regularity of the Central City’s street grid has resulted in substantial uniformity in the design of the standard street cross-section. The typical 80-foot wide public street right-of-way in the Central Core can accommodate much more variety in design, including variation in the relative emphasis (i.e., space) given to pedestrians versus automobiles.

While not always feasible, it is desirable that sidewalk widths should be 14 feet or greater throughout the Central Core in order to provide space for pedestrian amenities, for local business activity to spill out onto the sidewalk, and for a leisurely walking pace without vehicle traffic dominating the

pedestrian realm. However, in many areas in a vibrant urban center, sidewalks may be wider to accommodate increased types and amounts of activity. This expanded dimension may be achieved with front setbacks paved with materials matching the adjacent sidewalk, creating a visually seamless space from curb to building face.



Figure 3-35. Ample sidewalk widths accommodate a diversity of uses.

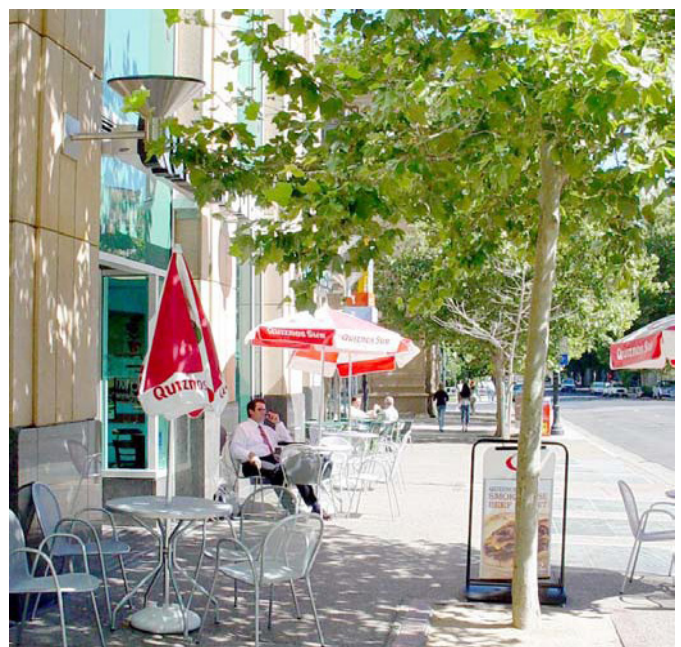


Figure 3-36. The sidewalk opposite Chavez Plaza was widened specifically to encourage pedestrian activity

C. Pedestrian Realm

C.1.1. Sidewalks - Widths

Guidelines

1. **Sidewalk Widths.** Sidewalk widths shall be commensurate with the level of pedestrian activity desired for the specific street frontage. Whereas sixteen(16) feet is the typical sidewalk width in the CBD, it is desirable for high activity areas to have sidewalk widths of 20 feet or more, which is generally achieved by with the addition of a building setback. Where a sidewalk would be less than 14' if an adjacent building were to be constructed at the property line, than a setback should be considered to achieve a minimum of 14' Curb Extensions. Curb extensions at "necked-down" intersections are encouraged as a means of expanding the pedestrian zone where pedestrians are likely to congregate while waiting for transit or to cross the street.
2. **Functional Zone Priorities.** The widths of the sidewalk functional zones should vary in response to context, but sidewalk width should be distributed amongst the 3 zones according to the following priorities: pedestrian (highest), amenity (middle), frontage (lowest). See guidelines for each zone for minimum allowable widths.



Figure 3-37.



Figure 3-38. Retail streets should maintain sufficient clearance for comfortable walking.

C. Pedestrian Realm

C.1.2. Sidewalks - Paving

.....
PRINCIPLE: The pedestrian environment and the quality of the pedestrian experience shall be further enhanced, defined and made legible through the use of coordinated, attractive, and high-quality paving surfaces.

Rationale

The character and consistency of the paving of public sidewalks contributes greatly to streetscape identity and the quality of the pedestrian realm. Inconsistent use of paving materials and patterns becomes a source of visual clutter and reveals a lack of pride and clarity about the role of the public realm, and a lack of commitment to a quality pedestrian environment. A coordinated, high quality paving scheme can introduce pedestrian friendly qualities such as human scale, connectivity, and coherence to the public realm. A consistent use of paving material, color, pattern and finish, provides visual cues that help define the public realm and contribute to ease of pedestrian access and safety.

While paving can be a highly distinctive design element, the first priority should be on establishing a consistent design vocabulary that visually unifies Central City streets and establishes a pleasing and interconnected pedestrian realm. Only secondarily should paving be used to distinguish individual uses and sites, or establish a specific theme.



Figure 3-39. Sidewalk paving should be divided into a grid that fits the typical 16 foot wide sidewalk.

Guidelines

1. **Materials.** Sidewalks generally should be paved with grey Portland concrete with a broom, or light sand-blasted, finish.
2. **Dimensions.** Sacramento's Central Core has long used a 2-foot paving grid. Sidewalk paving should be divided into a grid of 2-foot squares that fits within the typical 16-foot wide sidewalk. The 2-foot dimension is nominal and can be adjusted in equal measurements either up or down.
3. **Decorative Paving -- Restrictions.** In order to maintain a consistent character to the streetscape, decorative paving for building entrances, plazas, etc., generally should be restricted to the private realm, and not extend across the public sidewalk. The pedestrian K Street is an exception.
4. **Decorative Paving -- Allowances.** Limited decorative paving or elements will be allowed within the frontage and walkway zones as long as such improvements:
 - Are less than 16 square feet in area (i.e., less than one 4' x 4' pavement module);
 - Are unique elements that contribute to the character and identity of the streetscape (e.g., private identity logos/emblems, historical plaques/ markers, public art, etc.); and
 - Have design review approval.
5. **Alternative Paving Materials.** Alternative paving materials (e.g., unit pavers, porous pavement, etc. may be allowed in the amenity zone, particularly if they reduce storm-water runoff and enhance street tree health and viability. Such materials will still be required to conform to the paving pattern established by the 2-foot grid.
6. **Special Districts.** In instances where there is a desire to establish a distinct identity for a street or district, other higher quality paving materials, such as stone pavers, may be used for the public sidewalk as long as there is consistent application for no less than the perimeter of a half block (i.e., the paving treatment should wrap around the block from alley to alley).

C. Pedestrian Realm

C.1.2. Sidewalks - Paving (continued)

7. **Accessibility and Safety.** The design and composition of sidewalk paving must maintain smooth and level surfaces that meet universal accessibility requirements, and have a non-slippery surface when wet.
8. **Sustainable Materials.** Using quality materials and installation to ensure long use and avoid frequent replacement is the most sustainable practice. Recycled and/or locally-sourced paving materials should be specified whenever feasible in order to minimize resource depletion and energy to transport. For example, using fly ash - a material that is pre-consumer recycled content as a substitute for portland cement in concrete.
9. **Storm-water Management.** The use of permeable or porous pavement in the amenity zone is encouraged whenever feasible as a means of reducing storm-water runoff rates and volumes and increasing water volume to the root zone of street trees.
10. **Granite Curbs.** Existing granite curbing shall be retained and replaced when disturbed by construction or repair work. On blocks where sections of granite curbing are missing, new granite curbs should be re-introduced in conjunction with new development or sidewalk repair to create a consistent, high-quality street edge.
11. **Coordination with Public Facility Placement.** The siting and design of public facilities such as street lights, tree wells, utility vaults, etc. should be coordinated with and responsive to the standard paving module, and not simply ignore the established ground plane pattern.
12. **Historic Sidewalks.** Historic sidewalks should be maintained (for historic and sustainability reasons). Adjacent sidewalk should match pattern and color.
13. **Hollow sidewalks.** The City is currently undertaking a historic resources survey of the downtown hollow sidewalks/raised streets area. The survey results may be used to establish protocols and guidelines for their rehabilitation, reconstruction or adaptive reuse, since they involve public right-of-way.



Figure 3-40. Decorative paving or elements are allowed within the public amenity zone, but limited within the frontage and pedestrian zones.



Figure 3-41. Hollow sidewalk features should be celebrated

C. Pedestrian Realm

C.2. Functional Zones

PRINCIPLE: The elements that occupy the public sidewalk shall be organized into three distinct zones that: facilitate safe, comfortable pedestrian movement (Pedestrian Zone); support the vitality & function of adjoining uses (Frontage Zone); and provide the amenities & facilities that promote social interaction (Public Amenity Zone).

Rationale

As the transitional zone between the vehicular travelway and developed parcels, the public sidewalk serves several functions. It provides for pedestrian circulation both parallel and perpendicular to building facades, accommodating movement from one end of the block to the other, as well as from on-street parking to storefronts. Sidewalks also serve as an important social space for the community, where people meet, stroll together, window shop, sit and chat, dine in open air cafes, and people watch. They also accommodate important public facilities such as transit stops, bicycle parking, directional signs, and street lights that support transit and bicycling as well as walking.

As a circulation facility, the public sidewalk needs to provide for ease of access and free flow of pedestrian traffic. As a public space, the sidewalk needs to also provide a comfortable and attractive setting. To effectively accommodate active pedestrian use, the design of public sidewalk areas generally should be organized into three zones relating to their primary function: the frontage zone, the pedestrian zone, and the public amenities zone.



Figure 3-42. Three functional zones of public sidewalks: Public Amenity Zone, Pedestrian Zone, and Frontage Zone.

Pedestrian Zone

The pedestrian zone is the middle section of the sidewalk, and is flanked by the frontage zone and the public amenity zone. Its primary function is to accommodate the efficient movement of pedestrians. As such, it needs to provide an unobstructed, linear sidewalk space that is free of street furniture, street trees, planters, and other vertical elements such as light poles, fire hydrants and transit facilities, and be wide enough to accommodate projected volumes of pedestrian traffic.

Public Amenity Zone

The public amenity zone is the section of sidewalk that adjoins the street and buffers pedestrians from the adjacent roadway. This zone is the appropriate location for the majority of the public facilities and streetscape amenities that enhance and serve the pedestrian zone, including features such as street trees, landscaping, street lights, transit stops and shelters, parking meters, fire hydrants, benches, news racks, and other street furniture and amenities.

Frontage Zone

The frontage zone forms the outer edge of the public right-of-way and typically is defined by a building façade, landscaping, fence, wall, plaza, or park (or, in less desirable, interim conditions, a surface parking lot). It functions as the interface between the public right-of-way and adjoining uses. As such, the design of this zone should be responsive to and support the adjoining use, which, depending on context, may mean providing a clear zone for store entrances, a “slow” zone for retail displays and window shopping, or a furnished zone for outdoor dining.

C.2. Functional Zones (continued)

Guidelines

1. **Accessibility.** Public sidewalks should provide a direct and continuous pedestrian network that connects blocks and buildings to each other, and provide access links to transit facilities with a clear, unobstructed pedestrian travelway that is designed to accommodate the needs of a broad range of users, including the elderly, those with disabilities, and young children.
2. **Amenities.** Sidewalks should be richly appointed with improvements and facilities, primarily within the amenity and frontage zones, that enhance the pedestrian experience, but should avoid clutter, obstruction, and congestion.
3. **Seating.** In addition to accommodating pedestrian circulation, public sidewalks should provide spaces for more passive or sedentary activities, where people can linger to observe or participate in public outdoor activities. Seating can be either formal (e.g., chairs and benches, such as that found at a café or a transit stop) or informal (e.g., low walls, steps, fountain edges).
4. **Landscape.** Landscaping of the public sidewalk through street trees and other vegetation is encouraged as a means of adding color and visual interest, softening the urban edges, providing shade, and assisting with air quality and stormwater management. Landscaping generally, should be located in the amenity and frontage zones and should not obstruct through pedestrian traffic or access to the street.



Figure 3-43. Sometimes the sidewalk zones are clearly and formally defined



Figure 3-44. Other times the sidewalk zones assume a more informal character.

C. Pedestrian Realm

C.2.1. Functional Zones - Pedestrian Zone

.....
PRINCIPLE: Public sidewalks shall provide adequate horizontal and vertical clearance to accommodate convenient and comfortable pedestrian circulation, with sidewalk designs proportional to pedestrian traffic levels.
.....

Rationale

Sidewalks function as critical transportation routes within the Central Core and are the one section of the public street right-of-way that is reserved for exclusively for pedestrian circulation. In addition to providing physical access to land uses and transit facilities along a corridor, the sidewalk also serves as an important social space, where people interact, stroll together, wait for transit, window shop, share a meal, grab a cup of coffee, and access adjoining uses.

As a rule, sidewalk widths should be proportional to the level of activity and pedestrian use along a street. Similarly, the width of the pedestrian zone should be proportional to the amount of pedestrian traffic it needs to accommodate. Sidewalks that maintain minimum sidewalk widths often become crowded with public utilities, transit facilities, street furnishings, and landscaping that can constrict pedestrian movement. High pedestrian activity locations such as the Central City should have wider sidewalks to ensure adequate walkway clearance and access and to allow for additional activities which support the intensity of land use.

Pedestrian Zone

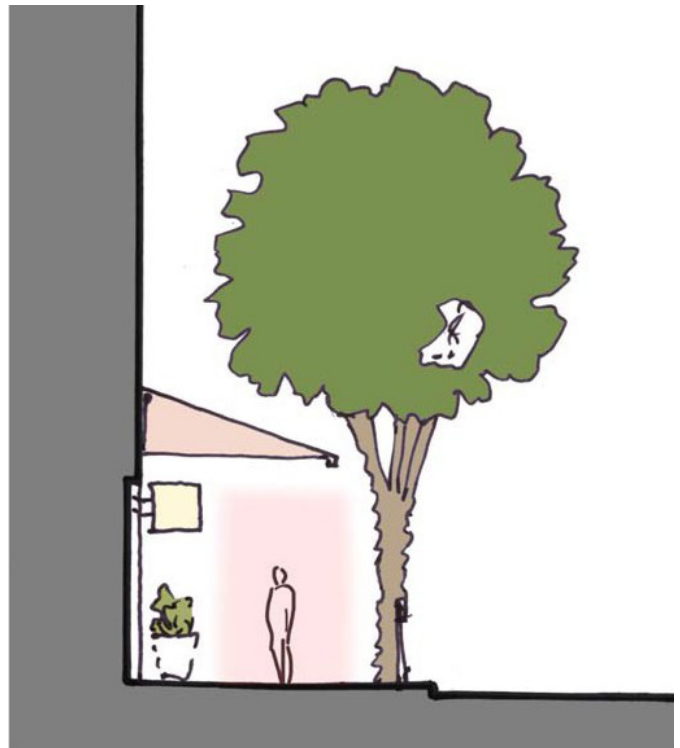


Figure 3-45.



Figure 3-46. The pedestrian zone needs to be large enough to accommodate pedestrian circulation.

C. Pedestrian Realm

C.2.1. Functional Zones - Pedestrian Zone (continued)

Guidelines

1. **Clearance.** Ensure that a minimum sidewalk width for pedestrian through traffic is not obstructed with street furniture, utility poles, traffic signs, trees, etc streetscape amenities generally should be located in the Public Amenity Zone to maintain a clear walking zone.
2. **Width Proportions.** The Pedestrian Zone shall comprise at least 50% of the sidewalk width (i.e., 8 feet for the standard 16-foot sidewalk, where feasible), but never be less than 6 feet, whichever is greater.
3. **Minimum Vertical Clearance.** The Pedestrian Zone should maintain a minimum vertical height clearance of 96" (i.e., 8'0"), clear of overhanging tree limbs, protruding fixtures such as awnings, signs, or other horizontal obstruction.
4. **Transitions.** Although dimensions of the three sidewalk zones may vary according to the Street Type and the character of the neighborhood, the dimensions of each Sidewalk Width Zone shall be designed to maximize consistency along the entire length of a block. To ensure pedestrian safety and smooth flow of traffic, transitions in the width of the Pedestrian Zone should not be abrupt and should be signaled by some sort of transitional element.

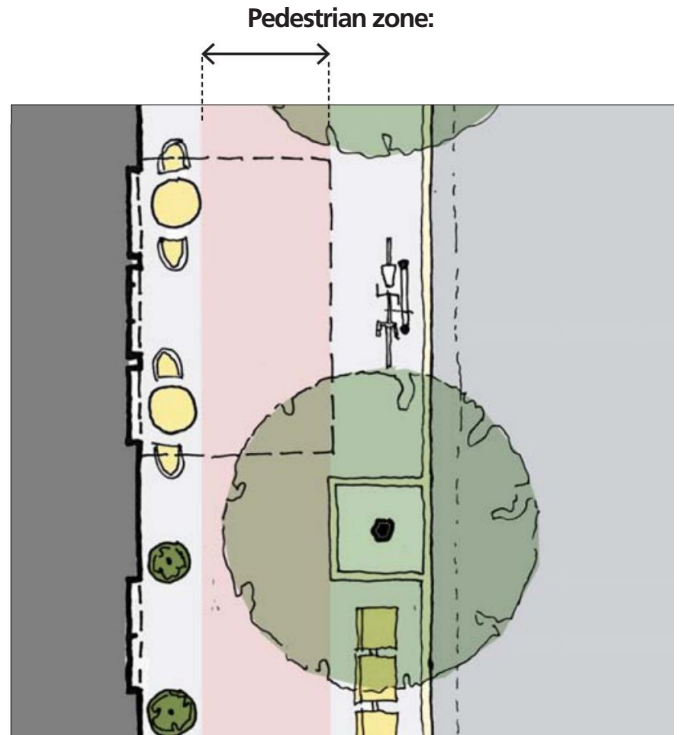


Figure 3-47. 50% of overall sidewalk width, or 6', whichever is greater



Figure 3-48. The pedestrian zone shall comprise at least 50% of the sidewalk width.



Figure 3-49. Umbrellas, awnings and trees should maintain vertical clearance above the pedestrian zone.

C. Pedestrian Realm

C.2.2. Functional Zones - Public Amenity Zone

PRINCIPLE: A public amenity zone shall be provided, where sidewalk widths allow, within the pedestrian realm that provides space and amenities within the public sidewalk that contribute to pedestrian comfort, convenience, safety and interest, and support positive social interaction.

Rationale

The Public Amenity Zone serves several important functions. As the section of the pedestrian realm that adjoins the street, it serves as both a transition area and buffer between pedestrian circulation and vehicular circulation. It provides both a physical and psychological buffer that contributes to pedestrian comfort and well-being, and allows those who have parked on-street to conveniently access adjoining businesses.

In addition to buffering pedestrians from vehicular traffic, amenities located in this zone provide comfort and interest for pedestrians, improve the visual appearance of the street, and add to its utility as a functional space. Streetscape amenities that enhance and serve the pedestrian zone include features such as street trees, landscaping, seating, news racks, public art, and public restrooms. Café seating may also be acceptable in the Amenity Zone, pending approval by Public Works and Planning. Additional features such as streetlights with banners, informational signage, planters, etc. add color and festivity to the street and further enhance the pedestrian experience. The Public Amenity Zone is also the appropriate location for most utilities and service facilities, such as street lights, parking meters, fire hydrants, and transit facilities.

Maintaining consistent standards for the design and placement of public amenities helps to define the identity of the Central City and enhance its function. Design and placement of public amenities such as street furniture along a corridor should be well coordinated to ensure that all improvements contribute to a coherent design treatment for a given thoroughfare and avoid conflict with other streetscape elements.

If not appropriately sited, street furniture can clutter the sidewalk, interfering with travel, and stifling, rather than supporting, active street life. Keeping street furniture, such as newspaper stands, orderly and compact helps to increase the amount of space for pedestrian movement, especially on narrower sidewalks

Pedestrian Amenity Zone:

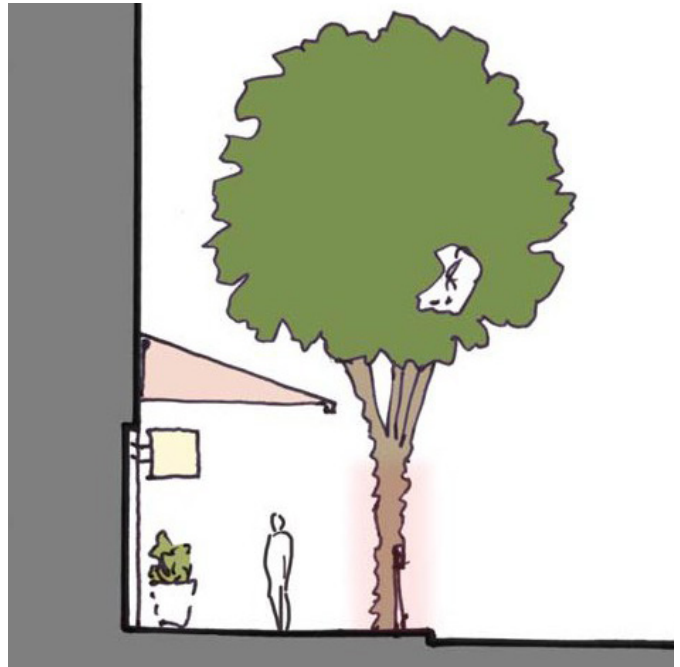


Figure 3-50.



Figure 3-51. The Amenity Zone accommodates a variety of functional and aesthetic amenities.

C. Pedestrian Realm

C.2.2. Functional Zones - Public Amenity Zone (continued)

Guidelines

1. **Location.** Public utilities and street furniture generally should be consolidated in the Public Amenities Zone to keep them from becoming obstacles in the Pedestrian Zone. This includes, but is not limited to street trees, planting strips, street furniture, bicycle parking, utility poles, signal poles, signal and electrical cabinets, signs, transit shelters, fire hydrants, etc.
 2. **Width Proportions.** The Public Amenity Zone should comprise at least 35% of the sidewalk width (i.e., 6.5 feet for the standard 16-foot sidewalk), but never be less than 30%, or 4 feet, whichever is greater.
 3. **Distribution and Concentration.** Whereas, the function of features such as light standards, street trees, and parking meters requires an even distribution along the length of a street, street furniture should generally be located in high activity areas where people can be expected to congregate, such as transit stops, major building entrances, plazas, and retail and entertainment zones.
 4. **Opportunities at Intersections.** The Public Amenity Zones at intersections, particularly where they have been expanded by necked down intersections, are ideal locations for streetscape elements that serve high levels of pedestrian traffic, such as transit shelters, informational kiosks, and news racks. Benches and seating areas should typically be located in mid-block locations where there is less potential conflict with pedestrian traffic flow.
 5. **Consolidate Parking Meters and News Racks.** In order to reduce clutter within the amenity zone, facilitate on-street parking, and increase parking revenues the City continue to install multi-space and pay-and- display parking meters that require one meter for every 3 to 4 parking spaces. Currently, such a system is used in Old Sacramento and near Cesar Chavez Park. The consolidation of newspaper racks is discussed under Street Furnishing guidance.
 6. **Setback from Curb.** To the degree feasible, elements within the Public Amenity Zone generally should be setback at least 3 feet from the face of the street curb to avoid conflict with on-street parking (e.g. car doors, passenger loading, etc.), but no less than 1.5 feet.
- 
7. **Location of Utilities.** Where practical, hand-holes, vaults, and other utility access points should be located out of the sidewalk area, and in the private parcel area. Above ground utility boxes, control panels, etc. should be discouraged or located outside of the pedestrian realm of the sidewalk zone, and should have a standardized color where possible.
 8. **Under-grounding of Utilities.** In order to reduce conflict with pedestrian movement and improve the aesthetic character of the public realm, utilities should be underground whenever feasible, particularly on major and commercial streets. Under-grounding projects should maximize space available for street tree planting.
 9. **Unified Design Identity.** Provide a continuity of streetscape features along the length of a street. At a district scale, coordinated design, type, color and material of street furniture and utility boxes contribute to a sense of community identity, and reflect and strengthen the local character.
 10. **Amenity Zone.** Where café seating is provided in the Amenity Zone, it should be directly fronting the restaurant or café of which it is a part, and be clearly delineated, with removable stanchions, fencing or similar barriers to separate it from the Pedestrian Zone. Since use of this space is discretionary, a proposal to utilize the amenity space must be approved by the Planning Director, who may revoke this permission, if the use of the space is disrupting the use of the sidewalk by pedestrians. If alcoholic beverages are to be served, appropriate demarcation of the area and approval from Alcohol Beverage Control Board is required.

Figure 3-52. Clearly defined Public Amenity Zone

C. Pedestrian Realm

C.2.2 Functional Zones - Public Amenity Zone (continued)

11. **Permeability.** New café seating shall not create new impermeable surfaces in tree planters.
12. **Storm-water Management.** The use of permeable or porous pavement and landscape designed to treat and attenuate storm-water flow in the amenity zone is encouraged whenever feasible as a means of reducing storm-water runoff rates and volumes.
13. **Clearance.** ADA Clearance at Bus and Streetcar Stops Maintain 5 ft. x 8 ft. clear areas at bus and Streetcar stops for boarding of wheelchair users.
14. **Tree Planting.** See City tree planting guidelines for additional information and guidance on street tree planting.
15. See Street Furnishings and Amenities section for additional information and guidance.



Figure 3-53. Urban storm-water management strategies such as these planters and permeable pavement attenuate and treat storm-water flow.

C. Pedestrian Realm

C.2.3. Functional Zones - Frontage Zone

.....
PRINCIPLE: A frontage zone shall be provided, where sidewalk widths allow, within the pedestrian realm that supports adjoining commercial uses by accommodating private elements, features, and activities within the public right-of-way.

Rationale

The frontage zone represents the outer edge of the public right-of-way and is typically defined by a building façade, and less frequently by landscaping, a fence, wall, a plaza or surface parking. This zone provides the interface between the circulation on the public sidewalk and the interior of adjoining buildings. As such, businesses are allowed to extend uses, displays, street furniture, and other elements into the frontage zone as a means of engaging passersby and activating the public streetscape.

In addition, pedestrians generally are less comfortable moving at a full pace directly along a building façade or wall, so the frontage zone provides some setback that allows for people to move out of the flow of traffic, to window shop, and to enter and exit buildings easily. Typically, the width of the frontage zone will vary with the nature of adjoining uses, with retail and entertainment districts having larger frontage zones than districts that have predominantly office and residential uses at the street level.

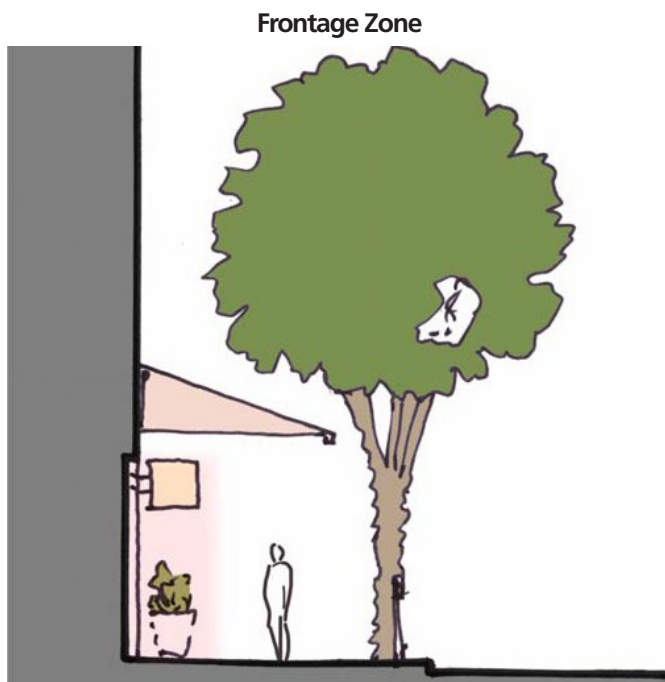


Figure 3-54.

Guidelines

1. **Private Furnishings.** Private furnishings permitted in the frontage zone may include seating and tables, merchandise displays, planters, art, and portable signage (e.g., menu stand).
2. **Decorative Elements.** On streets with commercial frontages, businesses are encouraged to provide decorative elements (e.g., landscaping, potted plants, etc) that activate the public streetscape, visually enhance the building frontage, identify building entrances, and generally engage the public realm, without constricting the flow of pedestrian traffic.
3. **Sidewalk Cafes.** Sidewalk cafes are encouraged within the frontage zone as a use that activates and energizes the public realm.
4. **Extension into Amenity Zone.** In certain situations, sidewalk cafés and other commercial activities may be allowed to extend into the amenity zone rather than the frontage zone, or where extra wide sidewalks occur in both the frontage and amenity zones. Such use will require special findings to ensure such use and facilities enhance the overall quality of the public realm and do not impede pedestrian traffic or conflict with access to on-street parking.
5. **Vertical Clearance.** Awnings, canopies, and umbrellas used within the frontage zone should provide adequate vertical clearance so they do not infringe upon the pedestrian travel zone.
6. **Delineating Sidewalk Cafes.** Sidewalk cafes that have more formal dining facilities (i.e., offer waiter service to their tables) or more than a single row of tables should provide a decorative element, such as a railing, rope divider, etc., that delineates the café from pedestrian travel zone. (This is a State requirement for serving alcohol.) Such delineation is not required for less formal eateries such as cafes, coffee shops, and sandwich shops that have a single row of chairs and tables.

C. Pedestrian Realm

C.2.3 Functional Zones - Frontage Zone (continued)

7. **Permitting.** All private use of the frontage zone should be required to obtain an encroachment permit and be maintained to established standards
8. **Width.** The minimum frontage zone width is 1.5 feet. A frontage zone is not needed if the sidewalk corridor is adjacent to a landscaped space
9. **Constrained Frontage Zones.** In the event there is insufficient right-of-way width, the frontage zone can be reduced to augment widths of the walkway and amenity zones. If there is insufficient frontage zone space to accommodate private uses such as cafes and sidewalk displays, additional area should be taken from the private realm rather than constrain the function or character of the walkway and amenity zones. In all cases, a direct path should be provided for pedestrians and the disabled.
10. **Plumbing and Mechanical Utilities of Buildings.** Buildings should be designed to minimize the occurrence and mitigate the visual impact of plumbing and mechanical utilities within the Public Realm.

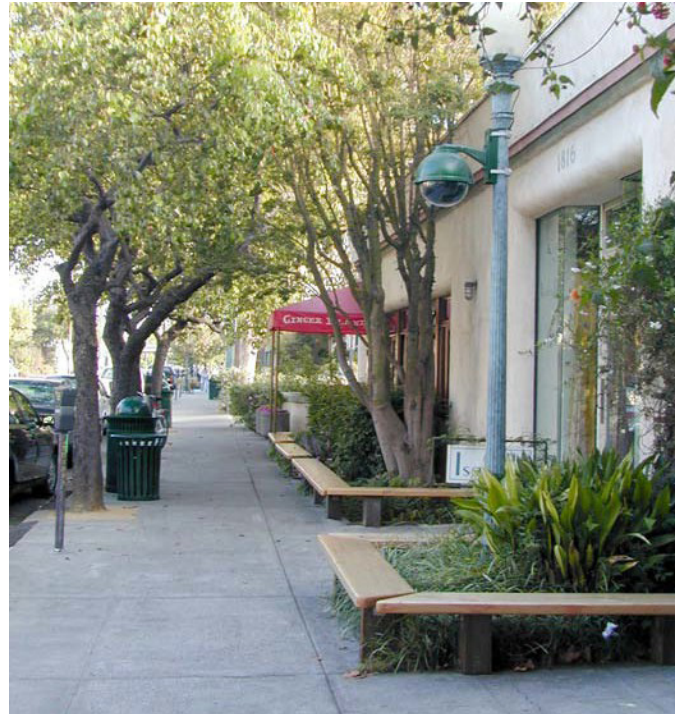


Figure 3-55. Deeper frontage zones can accommodate landscaping and seating.



Figure 3-56. In cases where tree plantings are infeasible within the public amenity zone, planters within the frontage zone can provide a landscape element to the streetscape.

C. Pedestrian Realm

C.3. Street Furnishings and Amenities

.....
PRINCIPLE: Public street life shall be supported by providing quality facilities and amenities in the public streetscape that are an attractive and comfortable environment for people to congregate.
.....

Rationale

As the “living room” for community life in the Central Core, it is important that the pedestrian realm be appropriately furnished. In order to transform the public streetscape from mere transportation facility to vibrant public open space it is important to add facilities and amenities that: allow people to stop and linger, provide services and information, and engage and delight the senses.

Streetscape amenities, such as, benches and seating areas, kiosks, news stands, news racks, drinking fountains, water features, bike racks, transit facilities, rest rooms, trash receptacles, and public art all help to animate the pedestrian realm, support public use, and contribute to the social and economic vitality of the Central Core

Streetscape furnishings also have much to do with establishing the character and identity of an area. Their quality, durability, and location all influence the perception and use of an area. Streetscape furniture also includes both public and private furnishings. The public furnishings are the elements that provide continuity and predictability from block to block, while private furnishings generally contribute variety to the streetscape with their focus being on enriching and enlivening a particular building or use.

C. Pedestrian Realm

C.3.1. Street Furnishings and Amenities - General Guidelines

.....
PRINCIPLE: The design of the public street rights-of-way shall balance vehicular circulation with all the modes of transportation to create a safe, comfortable, attractive and robust pedestrian and bicycle environment.
.....

Guidelines

1. **Variety.** Public streetscape furnishings should include a variety of amenities and selection of materials that add to the excitement and vitality of Central Core.
2. **Unified Design Identity.** Street furnishings should provide a continuity of streetscape features along the length of a street. At a district scale, coordinated design, type, color and material of street furniture contributes to a sense of community identity, and reflects and strengthens the local character of the Central Core.
3. **Context.** Street furniture should strengthen sense of place by utilizing design, materials, and colors that best complement the context of existing buildings and landscape.
4. **Accessibility.** Street furniture needs to be designed for universal access and to facilitate use by those of all ages and abilities.
5. **Seating.** As much formal and informal seating as possible should be provided to increase the number of opportunities for people to socialize and spend leisure time outdoors along public streets.
6. **Pedestrian Activity Areas.** Street furniture and other amenities such as trash receptacles, kiosks, public telephones, newsstands, should be located in conjunction with active pedestrian areas such as intersections, key building entries, public parks and plazas, bus and streetcar stops, important intersections and pedestrian streets.
7. **Public Amenity Zone.** Street furniture and other amenities will be located predominantly in the public amenity zone to unambiguously indicate public use and maintain a clear zone for walking. If public amenities are located in the frontage zone adjacent to private property, they should be designed in such a way that they do not preclude public use
8. See Public Amenity Zone section for additional information.

Location

- A. **Pedestrian Activity Areas.** Street furniture and other amenities such as trash receptacles, kiosks, public telephones, newsstands, should be located in conjunction with active pedestrian areas such as intersections, key building entries, public parks and plazas, bus and streetcar stops, important intersections and pedestrian streets.
- B. **Public Amenity Zone.** Street furniture and other amenities will be located predominantly in the public amenity zone to unambiguously indicate public use and maintain a clear zone for walking. If public amenities are located in the frontage zone adjacent to private property, they should be designed in such a way that they do not preclude public use. Street furniture should strengthen sense of place by utilizing design, materials, and colors that best complement the context of existing buildings and landscape.

C. Pedestrian Realm

C.3.2. Street Furnishings and Amenities - Bicycle Racks

Refer to the City of Sacramento Bike Rack Design and Placement Design Standards.



Figure 3-57. Expanded sidewalk with bicycle parking.



Figure 3-58. Prominently located bicycle racks on sidewalk bulb-out.



Figure 3-59. Bicycle racks can serve as an attractive design feature.



Figure 3-60. Bicycle racks as sculptural element.

C. Pedestrian Realm

C.3.3. Street Furnishings and Amenities - Transit Stops

.....
PRINCIPLE: The use of transit shall be supported by providing attractive, comfortable, and highly functional transit stops.
.....

Rationale

In order to encourage and support community use of transit, it is imperative that transit service and facilities reflect a care and quality that conveys its importance to implementing the vision for the Central City and the City's Smart Growth and Sustainability goals. People will only leave their cars for transit if the experience is a pleasant and rewarding one.

To date, RT facilities, including transit furniture such as shelters, trash receptacles, maps and schedules, etc. do not always convey the desired character or quality envisioned. As major elements of the public streetscape there is the opportunity for transit stops to become more than just utilitarian infrastructure. Instead, they can become symbols and attractive physical manifestations of Sacramento's commitment to a more sustainable, transit-friendly future.

Guidelines:

1. **Schedule Information.** All transit stops should be prominently signed and all pertinent route and schedule information, including major connecting services, should be posted.
2. **Shelters and Seating.** Transit shelters should be provided at heavily used transit stops; all stops should provide seating and shade.
3. **Shade.** Adequate shade must be provided to protect transit user from the sun. This can be achieved with either trees or a shelter, or at heavily used stops, both.
4. **Architectural Design.** Transit shelters should be designed to provide protection from sun, wind, and rain. Transit shelters and other amenities should be distinctive through strong architectural design that reflects the character of the district.
5. **Amenities.** Amenities such as Global Positioning System (GPS)-based real-time arrival information, ticket machines, nighttime lighting, and trash receptacles should be provided.
6. **Sustainability.** Transit shelters should be designed to promote transit and carbon reduction by incorporating features such as renewable and energy efficient technologies.

7. **At-Grade Access.** Ultimately the City and RT should transition to low boarding trains and replace all of the existing ramps and raised platforms with at-grade stops. The Streetcar will contain at-grade transit stops.



Figure 3-61



Figure 3-62. Attractive transit facilities, such as comfortable shelters with posted route information, encourage transit use.

C. Pedestrian Realm

C.3.4. Street Furnishings and Amenities - Street Lighting

PRINCIPLE: Lighting shall be provided that creates a safe and attractive setting for the community's nighttime use of the public realm.

Rationale

Frequently, street lighting is designed to prevent certain adverse situations (e.g., crime, accidents, etc.) from occurring, rather than to create an attractive and inviting public environment. The tendency is for lighting design of the public realm to be influenced more by fiscal expediency and vehicular circulation issues than by a clear vision for a high quality pedestrian environment. As a result, street lighting too often consists of tall, widely spaced light standards that are out of scale with the pedestrian environment, and produce a uniform, overly bright illumination that drains the public realm of visual interest and drama. Typical of this type of lighting is the ubiquitous "cobra head" style light standard. At 28 feet 6 inches in height, these light standards indiscriminately illuminate the public realm, typically with more emphasis on lighting the street than the sidewalk.

Ideally, street lighting needs to meet multiple objectives. In addition to ensuring that public safety and security criteria are met, street lighting should be designed to create a comfortable and attractive pedestrian environment. To this end, street lighting should be scaled to the pedestrian, with light fixtures that are more closely spaced and mounted closer to the sidewalk. Such lighting contributes to a human-scaled spatial definition of the streetscape, separating pedestrians from street traffic and providing for increased security and visibility. Pedestrian-scaled lighting can act both as a functional deterrent to unwanted activity and also as a stimulus to extend the active hours of street use. The design of light fixtures and the quality of the illumination add visual interest to the streetscape and contribute to the overall character of the street.

Guidelines

1. **Unified Design Identity.** A single consistent style and size of pole and fixture should be used within a given district or street to create a unifying scheme of illumination that is appropriate to the scale of the street and the level and character of nighttime activity. Pole and fixture design should be coordinated with other street furniture and amenities to establish an attractive and unified design character.
2. **Armature for Banners and Other Features.** Light poles should include armature that allows for the hanging of banners or other amenities (e.g., hanging flower baskets, artwork, etc.) If the pole is SMUD owned then coordination of these items would be required. These fixtures are currently not allowed on SMUD owned wood poles as they pose a climbing hazard to field employees.
3. **Height of Light Fixtures.** The height of light fixtures generally should be kept low to promote a pedestrian scale to the public realm and to minimize light spill to adjoining properties. In active and more intimately scaled pedestrian zones pole-mounted fixtures should not exceed twelve (12) to fifteen (15) feet in height from grade to light source. On larger streets, at major intersections, a mounting height of up to eighteen (18) feet may be acceptable.
4. **Spacing.** Generally, shorter light standards should be more closely spaced to provide appropriate levels of illumination. Although in lower activity areas where lower lighting levels are acceptable, closer spacing may not be necessary.



Figure 3-63. Pedestrian-scaled lighting on retail streets enhances and encourages night-time street life.

C. Pedestrian Realm

C.3.4 Street Furnishing and Amenities - Street Lighting (continued)

- 5. **Location in the Amenity Zone.** Light standards should be located in the amenity zone of the sidewalk (i.e., area closest to curb) and should not interfere with pedestrian circulation.
- 6. **Energy Efficiency.** In order to conserve energy and reduce long-term costs, energy-efficient lamps with photo controls, as certified by the Design Lights Consortium, should be used for all public realm lighting, and hours of operation should be monitored and limited to avoid waste.

Levels, Direction, and Quality of Illumination

- A. **Limit Light Pollution.** Illumination generally should be focused down toward the ground, avoiding all unnecessary lighting of the night sky. In addition to standard street light poles, light sources that are mounted closer to and focus illumination directly onto the ground plane, such as bollard-mounted lighting, stair lighting, and wall- and bench-mounted down-lighting, are desirable. Light fixtures should include internal reflector caps, refractors, or shields that provide an efficient and focused distribution of light and avoid glare or reflection into upper stories of adjacent buildings.
- B. **Levels of Activity and Illumination.** Levels of illumination should be responsive to the type and level of anticipated activity, without over-illuminating the area (i.e., bright, uniform lighting of all public right-of-ways is not desirable). The level of illumination for pedestrian areas generally should range from 0.5 foot candles in lower activity areas up to 2.0 foot candles in more critical areas (A foot candle is a unit of illumination, measured at the distance of one foot from the source of light.)
- C. **Illumination of Pedestrian Realm.** Street lighting should focus on illuminating the pedestrian zone (e.g., sidewalks, paseos, plazas, alleys, transit stops), rather than the vehicular zone (i.e., the street).
- D. **Illumination of Conflict Areas.** Higher lighting levels should be provided in areas where there is potential for conflict between pedestrians and vehicles, such as intersections and crosswalks, changes of grade, and areas with high levels of nighttime activity. Thus, commercial shopping streets should have higher levels of illumination than side streets that are more residential in character and have lower levels of nighttime activity.



Figure 3-64. Light standards with banners add visual interest to the streetscape.

- E. **Color Balance.** Color-balanced lamps that provide a warm white illumination and realistic color rendition are recommended.

C. Pedestrian Realm

C.3.5. Street Furnishings and Amenities - Other

Drinking Water Fountains

1. Drinking water fountains should be “high-low” type to provide comfort and accessibility for tall people or those who have difficulty bending, as well as for children, short people, or those in wheelchairs. The city should choose one standard type if possible.
2. Consider the need to provide bollards or other detectable barriers for the blind as the ends of protruding drinking fountain arms.

News Racks

1. Consolidate newspaper racks into consistently designed newspaper boxes to reduce the physical and visual clutter of individually placed newspaper boxes.
2. Prohibit the clustering and chaining of news boxes to trees, street signs, and utility poles.
3. Newspaper racks generally should be located at intersections, and where possible, co-located with transit stops, to provide an amenity to transit riders.

Wayfinding Signage

1. The City’s existing wayfinding system should be expanded and enhanced to serve both the needs of out-of-town visitors as well as citizens of Sacramento.
2. The Central City wayfinding system should:
 - Provide directional and information signs that are attractive, clear and consistent in theme, location, and design.
 - Identify key historic, cultural, civic, and shopping destinations and facilities, e.g., public parking structures, parks and open space areas, transit routes and stops, etc.
 - Be co-located with other streetscape furniture (e.g., light standards, transit shelters) where possible to reduce visual clutter in the public realm.
 - Be expanded to cover the entire Central City, including redevelopment areas.



Figure 3-65. Consolidated newsracks provide an opportunity for adding artistic elements to the streetscape.



Figure 3-66.
Kiosk



Figure 3-67.
Wayfinding Signage

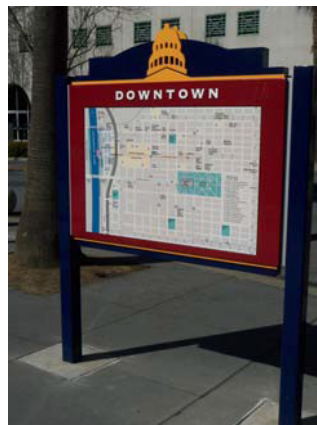


Figure 3-68.
Downtown Map



Figure 3-69.
Convention Center Map

C. Pedestrian Realm

C.3.5. Street Furnishings and Amenities - Other (continued)

Kiosks and Rest Rooms

1. Kiosks and rest rooms should be located in high activity areas such as public plazas and intersections. They should be constructed of durable materials that can be easily maintained.
2. Kiosks are places for both permanent and temporary signs. The kiosks should be designed with permanent signage in mind that ties into the wayfinding system; surfaces should be provided for taped or stapled temporary signs. Temporary signs should be removed regularly (e.g. monthly) to avoid clutter.
3. Design systems should be explored that combine rest rooms and kiosks into a single structure.



Figure 3-70.
Public Restroom

Seating

1. Benches and other forms of seating (e.g., low walls, planter edges, wide steps, etc.) should be provided throughout the Central Core, with more seating provided in areas with ground-level retail frontages and at entrances to major employers.
2. Attractively designed City benches should be provided in sidewalks, plazas, parks and other high pedestrian use areas to further promote pedestrian use. These benches should be fixed in place and constructed of durable and low-maintenance materials. Benches at bus stops should be incorporated into the design of the bus shelter.
3. Use of individual, movable chairs is encouraged where there is an organization which is willing to manage their use (e.g., secure the seats at night). Such seating provides appealing flexibility that can enhance public use.
4. The creation of seat walls, steps, and planters that can serve as informal seating areas is encouraged as a means of expanding the seating potential and providing diverse opportunities for social interaction.



Figure 3-71.
Seating Area



Figure 3-72. Expanded sidewalk creates additional space for seating and other amenities. (Examples: University Avenue, San Jose, CA and Castro Street, Mountain View, CA)

C. Pedestrian Realm

C.3.5. Street Furnishings and Amenities - Other (continued)

Trash and Recycling Receptacles

1. Separate trash and recycling receptacles should be located regularly at intersections, near major building entrances, near bus stops and light rail stations, and adjacent to outdoor seating areas.
2. Each receptacle should accommodate recycling, prevent wind and rain from entering the container, facilitate convenient access to the liner, and have the option of being anchored to the pavement.
3. The style and color of the City's trash receptacles should be coordinated with the selected bench design and be consistent throughout a district or the Central City.

Bollards

1. Where necessary, bollards with should be used to prevent vehicles from entering pedestrian zones.
2. Bollards may also be used to mark pathway entries at public-private interfaces.
3. Bollard placement and design should be coordinated with emergency vehicle access; in certain locations, removable bollards may be appropriate to balance pedestrian protection with emergency access.
4. Bollard style and color should match the selected bench and be consistent throughout a corridor or district.

Tree Grates

1. Tree grates should be used in commercial districts and areas with high pedestrian activity to protect trees and reduce safety hazards.
2. Tree grates should be used in all tree wells that are surrounded by paving, unless the wells are specifically designed for accent planting. In areas with lower levels of pedestrian activity, decomposed granite or gravel instead of tree grates may be permitted.
3. Grates that allow for integrated tree guards, are encouraged.

Parking Meters

1. The City should move toward installing pay-and-display solar powered parking meters throughout the Central City. These meters are well-designed, reduce clutter in the pedestrian realm, conserve energy, increase revenues, and are customer friendly.



Figure 3-73. Tree grate with integrated tree guards in areas with high pedestrian use.



Figure 3-74. Cafe seating

Parklets

1. Parklets are curb extensions that replace one or two parallel parking spaces in sequence. They can be temporary or permanent, and provide room for an expansion of sidewalk activity.
2. Generally, no more than one parklet (up to two contiguous parking spaces) should be permitted on any block, unless permitted by the Planning Director, or as part of a streetscape plan that identifies multiple parklets on a given block.

D. Landscape

.....
PRINCIPLE: Trees and other plant materials shall be provided as a means of enriching the pedestrian experience, enhancing downtown aesthetics, and improving the ecological function of the urban environment.
.....

Rationale

Traditionally, as core centers became denser and more urban, they also tended to eliminate or severely reduce the amount of greenery in the urban environment. While sustaining plants in an urban environment is more challenging, urban environments need not be devoid of plant materials. Growing plants are one of the most important elements in creating a humane streetscape and attractive public realm. For this reason, Sacramento’s reputation as the “City of Trees” is a key component in its desire to be America’s most livable city.

Trees and plants soften the city’s hard surfaces and sharp edges, not just by screening but also by adding organic forms, colors, textures, and movement to the urban setting. They also add scale to the Central Core environment that people can readily relate to, and, as living organisms that grow and change with the seasons, introduce a dynamic quality that mitigates the largely inanimate character of the built environment. Of course, coordinated selection and spacing of tree species and other plantings also can help to establish a distinctive identity for a corridor or district.

While creating a more attractive environment is important, it is only one of the benefits gained from maintaining a well landscaped urban area. Landscaping also contributes to creating a healthier and more sustainable environment. A diverse and healthy urban forest provides many environmental benefits, including enhanced energy efficiency, stormwater management, air quality, and wildlife habitat.

Trees provide an inexpensive form of “air-conditioning” by contributing to micro-climate control during the hot summer months. The shade provided by a mature tree canopy reduces the buildup of surface temperatures in paving and buildings (i.e., the “urban heat island effect”). This, in turn, makes streets more comfortable for pedestrians and reduces air conditioning required for buildings, both of which result in reduced energy consumption and improved air quality. A more comfortable pedestrian environment means fewer vehicle trips, less gas consumption, and fewer carbon



Figure 3-75. Street trees supplemented with additional landscaping create an inviting streetscape.



Figure 3.76. Permeable pavement and rain gardens provide stormwater management benefits (Portland, OR).

emissions. Reduced air conditioning means less electricity used and less air pollution related to power generation.

The combination of foliage cover, permeable surfaces, and evapotranspiration provided by trees and other vegetation contribute to improved stormwater management and water quality, and reduced demand on City infrastructure. The combination of foliage cover and permeable soil slows stormwater runoff and increases groundwater infiltration. By doing so, it also reduces peak storm flows that periodically contribute to exceedances in the capacity of the City’s combined sewer system and the resulting overflow of

D. Landscape (continued)

untreated water onto streets and into the river. The City's Storm-water Quality Design Manual should be consulted for planning and design guidance and requirements.

The urban forest also helps battle climate change, by removing carbon, a major contributor to the "greenhouse effect", from the atmosphere. Through the process of photosynthesis, trees remove carbon dioxide (CO₂) from the atmosphere and store it in their cellulose. Tree and other plant foliage also absorb other gaseous pollutants through their leaf surfaces and can remove up to 60% of the particulate matter from the atmosphere.

Clearly Sacramento's robust urban forest is a significant amenity and asset. The mature tree canopy that graces the Central Core streets and parks leaves an indelible impression on those who visit Sacramento and engenders great pride for Sacramentans. Maintaining and expanding that urban forest represents an ongoing challenge. There has been increasing concern about the potential implications for the health of the urban forest as taller buildings with subsurface garages are built to right-of-way lines, occupying space previously available for tree canopies and roots. With redevelopment. There is an opportunity to ensure that future development reserves the space needed for a healthy urban forest.

The very maturity of the City's urban forest raises another challenge, which is how to maintain its health as existing trees reach an age at which they naturally begin to decline. Finally, today's urban forest was planted primarily to provide shade and enhance neighborhood aesthetics. As the City embarks on an agenda to become more sustainable, a more comprehensive strategy for landscaping the urban environment is needed that more fully engages the urban forest's environmental function and optimizes its role as part of Sacramento's green infrastructure.



Figure 3-77. Seating and landscaping in a commercial plaza.



Figure 3-78. Large expanses of pavement should be broken up with landscape elements.

*The term "heat island" refers to urban air and surface temperatures that are higher than in nearby rural areas due to decreased vegetation, reduced air flow due to buildings, and waste heat from cars, air conditioners, and other forms of energy consumption. Concrete and masonry materials store heat during the day and re-radiate it at night.

D. Landscape

D.1. General Landscaping Guidelines

Guidelines

1. **Comfort and Interest.** Landscaping shall be introduced to the public realm to contribute to the quality of the pedestrian experience by adding color, texture, and form that add visual interest, and providing scale, shade, and buffering that contribute to the sense of comfort.
2. **Planters.** In order to provide variety and visual interest, public realm landscaping may include permanent above-grade planters, movable pots and planters, and hanging planters in addition to tree wells and planting strips.
3. **Location.** Typically, the Public Amenity Zone separating the sidewalk from the street will be the primary landscape zone, although landscaping can be introduced to all sidewalk zones as long as adequate clearance is maintained.
4. **Urban Context.** Plant materials should be in scale and compatible with the adjacent land uses and buildings. Plant materials and landscaped areas should be used to enhance the appearance of structures, define site functions and edges, and screen undesirable views.
5. **Local Climate and Ecology.** Plant species should be selected that are suited to climatic conditions in Sacramento, including native or naturalized species that provide potential habitat for local wildlife.
6. **Reduction of Water Consumption.** To minimize maintenance and water consumption, emphasis should be placed on the selection of native, drought-tolerant species, and all landscape areas should be irrigated with high-efficiency automatic drip and low-flow watering systems.
7. **Water Reuse.** To minimize water consumption associated with public realm landscaping, the use of rainwater harvesting and recycled water for irrigation purposes should be encouraged and expanded.
8. **Planting Conditions.** When selecting trees and planting material, consideration should be given to their compatibility with the physical conditions of the urban setting, such as limited space for roots and canopies, limited soil fertility, impervious coverage of the root zone, heat buildup, increased urban pollution, and compatibility with adjacent uses.



Figure 3-79. Raised planters create informal seating opportunities



Figure 3-80. Landscaping can be accommodated in a combination of planting strips and pots. Native drought-tolerant plants are recommended

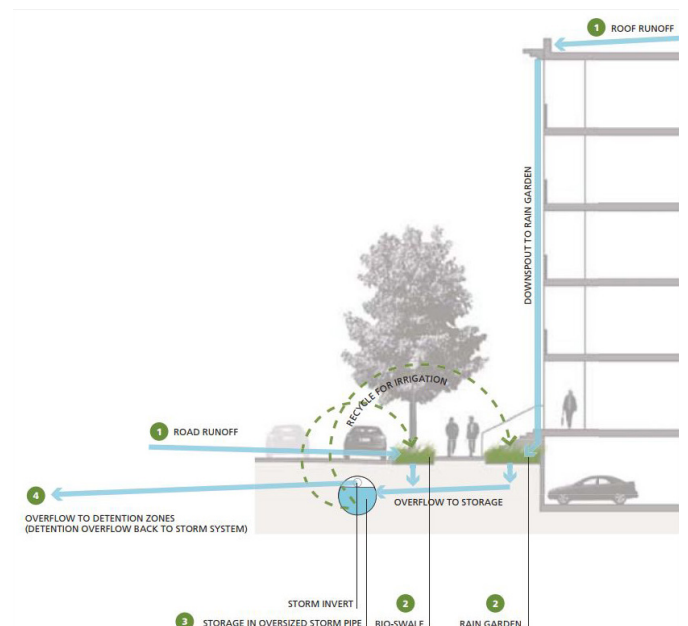


Figure 3-81. A network of stormwater management strategies should be employed in the Central Core where possible.

D. Landscape

D.1. General Landscaping Guidelines (continued)

9. **Plant Selection.** Plant species should be responsive to climate, existing species and planting patterns, although planting diversity is allowed where it complements and does not detract from a prevailing planting theme or pattern.
10. **Plant Selection for District/Corridor Identity.** Species selection should include one or two species that are repeated regularly over the length of a block) or throughout a district to provide visual continuity.
11. **Maintenance.** Landscaped areas should be properly maintained, which includes watering, removing debris and litter, modifying tree grates, and pruning and replacing plants when necessary. Adjacent private property owners are required to maintain the grounds and trees on any unpaved portion of the adjacent public street right-of-way where space is provided for a city street tree or other planting, regardless of whether the adjacent property is developed.
12. **Vertical Clearance.** To maintain proper clearance:
 - Shrubs should be trimmed to three (3) feet or less in height above the grade of the sidewalk
 - Tree canopies should be trimmed up to at least eight (8) feet over the sidewalk and fourteen (14) feet above the street
13. **Seating.** Permanent above-ground planters should be designed so that the height and width of planter walls create suitable opportunities to double as informal seating areas.
14. **Storm-water Management.** Wherever feasible, landscaped areas should incorporate permeable or unpaved surfaces to reduce the “heat island effect,” aid in storm-water management, and supply water to the root system of adjacent plants. The Stormwater Quality Design manual for Sacramento and South Placer county should be referenced for further guidance.
15. Applicable city standards for sight-lines should be consulted.



Figure 3-82. Landscaping contributes significantly to the identity of an area.



Figure 3-83. Movable landscape elements provided by businesses

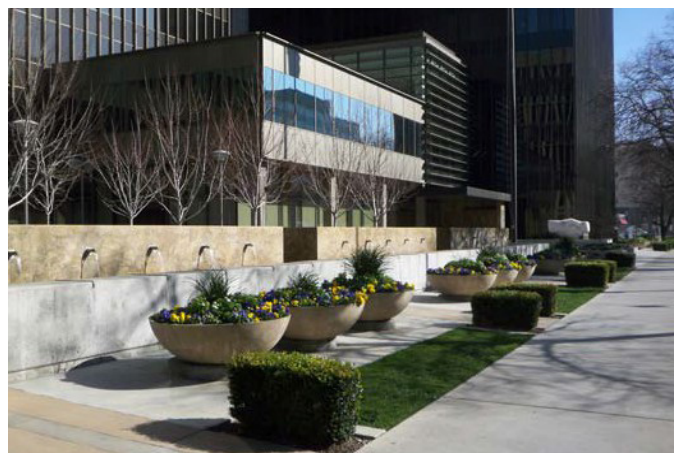


Figure 3-84. Fountain and landscape elements

D. Landscape

D.2. Street Tree Guidelines

Guidelines

1. **General.** In addition to playing important aesthetic and pedestrian comfort functions, the urban forest is also a vital component of the city's sustainability strategy. Street tree issues should be coordinated with the Urban Forestry Division.
2. **Tree Protection.** Maintain and protect existing trees wherever possible, including articulating the facades of adjacent buildings or stepping back of buildings above the street wall (refer to Private Realm guidelines for more discussion of building adjustments to preexisting street trees).
3. **New Tree Plantings.** New and/or replacement street trees should conform to the predominant existing planting pattern with respect to the scale, form and habit of species, spacing, and alignment. Species may need to be changed to reflect current horticultural best practices and site conditions.
4. **Trees in New Development Areas.** Street trees represent a critical framework element and piece of green infrastructure within the public right-of-way. In newly developing and/or redeveloping areas such as the Railyards, River District, and Docks Area, street tree design, including species selection, tree spacing, and planter dimensions, should occur concurrently with the development's build-to lines & setbacks. Street tree design should occur concurrently with, and guide, the selection and placement of public facilities such as street lights and signage, rather than being treated as an afterthought.
5. **Horizontal Clearance.** Appropriate horizontal clearance is dependent upon species and subject to approval. Chapter 12 of the Municipal Code and the DOT Design and Procedures Manual should be referenced. Generally, to maintain proper clearance and sight lines, street tree centerlines should be located no closer than:
 - 10-20 feet from a building façade, depending upon tree form,
 - 25 feet from the curb line of an intersection,
 - 5 feet from a driveway or alley,
 - 5 feet from fire hydrants, underground utilities, utility poles, and parking meters
 - 4 feet from sidewalk furniture,
 - Centered within the planter strip between the curb and the sidewalk
 - 15 feet from street lights
6. **Canopy Cover.** Street tree spacing and species selection should, in general, optimize tree canopy coverage throughout the city. While the maximum sustainable level of canopy coverage for a given location is dependent on individual site conditions, trees should be selected and placed in such a way as to create the most shade possible without unreasonably impeding on utility lines and the normal and expected use of the space.
7. **Tree Spacing.** The maximum spacing for street trees should not exceed 40 feet on center. The minimum spacing for street trees is 12 feet for trees with small mature size. The optimum spacing should be responsive to species type and canopy characteristics. As a general rule, the following spacing should be used:
 - Large canopy trees: 30 to 40 feet on center
 - Medium canopy trees: 20 to 30 feet on center
 - Small canopy trees: 15 to 20 feet on center

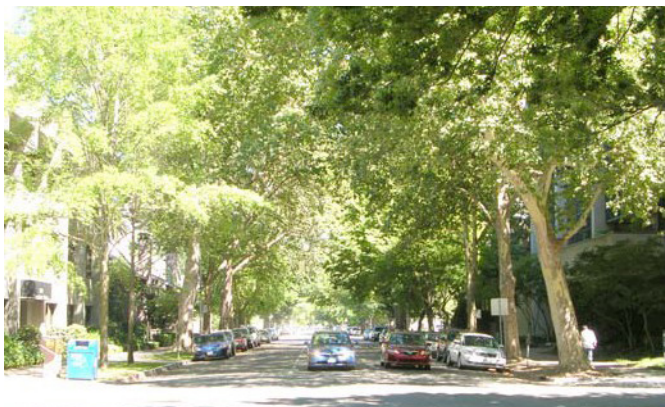


Figure 3-84a. Sacramento is renowned for its street trees. Preserving and enhancing the existing canopy is a top priority.

D. Landscape

D.2. Street Tree Guidelines (continued)**8. New Space for Additional Trees and Plantings.**

In order to achieve the City's objectives for canopy coverage and enhance its identity as the City of Trees even as development intensifies in the Central Core become more urban, alternative tree planting configurations should be pursued that allow for more trees of all sizes to be planted, including more large canopy trees. Changes in the public right-of-way that could accommodate additional and more sustainable tree planting include: narrowing streets (i.e., removing and narrowing lanes), adding medians and bumped out planting bulbs within the parking lane, and widening sidewalks and parkways. Corner sight-lines should be taken into consideration. Such actions require reconsideration of the design of the public right-of-way, and can only be done with full consideration of the implications for the circulation function of the street (see guidelines in Section B. Travelway Realm).

9. Double Rows of Trees. Generally, the Public Amenity Zone serves as the primary location for street trees in order to keep the pedestrian thoroughfare clear and to provide maximum space for tree canopies. However, on wide sidewalks a second row of trees may be planted interior to the amenity zone as long as adequate pedestrian way clearances are maintained. Similarly, additional rows of trees can also be added within the curb-to-curb street cross-section within the parking zone or in a center median.

10. Unified Tree Planting Scheme. To optimize the beneficial effects of street trees, both aesthetic and as green infrastructure, emphasis should be placed on establishing and maintaining a consistent and well-coordinated planting scheme within a district or along a specific corridor. A formal planting scheme that uses a single, regularly spaced, dominant species (or visually similar species of the same scale, form and habit) is appropriate for street trees in the Central Core Area. This should be done intermittently on a block basis to alleviate host specific diseases. Accent species that highlight special features or uses should be interspersed with the primary species, rather than replacing it.



Figure 3-85. Where sidewalks are wide enough, a second row of trees can be added for variety.

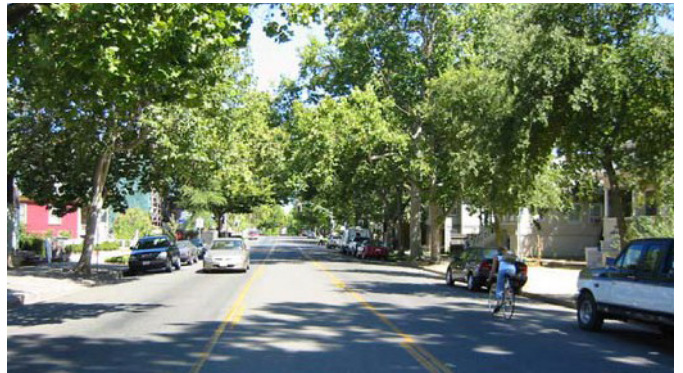


Figure 3-86. Streets shaded by mature tree canopies are an iconic image of Sacramento. Private development should be designed in relation to this urban community asset

D. Landscape

D.2. Street Tree Guidelines (continued)

11. **Pruning.** To maintain health of tree (e.g. safety, longevity) and provide a pleasing form, existing street trees should be pruned per ANSI standards, and not be topped.
12. **Vertical Tree Clearance.** Street trees should be selected that have a branching pattern and bottom canopy height at maturity generally fourteen (14) feet or higher that will not obscure commercial signage and storefront windows or conflict with truck access. Lower branching heights may be appropriate in plazas or other open spaces.



Figure 3-87. The east entry of the cal/EPA Headquarters building was setback around the canopy of an existing street tree. As a result, the tree provides strategic shade to a highly trafficked user route



Figure 3-88. Continuous planting trenches covered with permeable pavers provide for healthier trees.

D. Landscape

D.3. Tree Planting Guidelines

1. **Planting Conditions.** The urban environment is not the ideal setting for growing trees. Thus, it is critical that efforts be made to provide the best possible conditions for proper tree growth when planting new street trees, including ample soil planting depth, subsurface preparation, aeration, root protection, irrigation, and drainage. Newly planted street trees will need supplemental irrigation until they are established.
2. **Planting Trees in-ground v. in-planters.** Primary street trees should be planted directly in the ground. The use of above-grade pots or raised planters for primary street trees is discouraged. The use of above-grade pots or raised planters may be appropriate for smaller accent trees.
3. **Tree Wells.** Trees can be planted in parkway planting strips or in individual tree wells. Tree wells are preferred in higher intensity areas with high levels of pedestrian activity, particularly cross-traffic between on-street parking and adjoining buildings (e.g., retail districts, sidewalk cafes, etc.).
4. **Tree Well Dimensions.** In order to promote tree health, tree wells should generally be 6 feet by 6 feet or larger. In constrained areas, the minimum acceptable tree well is 4 feet by 6 feet. As existing trees are replaced, existing tree wells should be expanded wherever possible.
5. **Tree Grates.** In areas with high pedestrian activity, metal tree grates and tree guards may be used on all tree wells to protect trees, and allow for aeration and surface water collection. In areas with lower pedestrian traffic, decomposed granite in addition to park strips may be used. See expanded tree grate guidelines in Street Furnishings and Amenities section.
6. **Continuous Planting Trenches.** Even where tree wells are used, continuous planting trenches parallel to the curb should be installed, where possible, to provide maximum soil area for roots to spread. Trench areas may be filled with structural soil that prevents compaction and allows for better tree health. The sections of trench between tree wells may be covered with steel grating, cantilevered concrete, or pavers to create additional space for pedestrian amenities while also allowing air and water to penetrate.



Figure 3-89. Park strips for street trees are appropriate on residential streets within the Central Core.

7. **Parkway Planting Strips.** Where appropriate, new parkway planting strips should be 8 feet wide. Where conditions are constrained, parkway planting strips may be approved at less than 8' wide by expanding the underground planting area using Silva Cells (or similar technology) and permeable pavement. In areas where sidewalk zones are widened, existing narrow parkway planting strips should be widened to 6 or 8 feet, whichever is feasible and underground planting area expanded as described above. An increased distance from building façade will maximize the space available for tree branching, canopy cover, and root zones. Ground cover in parkway planting strips should be drought tolerant and trees should be on a separate irrigation valve.
8. **Protecting Tree Roots.** In order to avoid damage to pavement, appropriate, deep-rooted trees should be selected, and root barriers should be installed as necessary.

E. Small Publicly Accessible Places

PRINCIPLE: Small Public Places shall be provided throughout the central city, supplementing the main civic-scaled park system.

Rationale

The Sutter Plan called for a large park surrounding the Capitol, and a grid of full-block parks at regular intervals. The opportunity to add large parks in the Central Core has passed. However, the provision of additional park space at the neighborhood level and scale can supplement these civic-scaled open spaces. Small Publicly Accessible Places constructed as part of private development projects can provide needed open space for surrounding residences, offices, and commercial buildings, especially when larger land parcels are not available, as is the case in most of the Central Core. Small Public Places will help fill any park deficiency gaps and help to create public gathering places that will foster a sense of community. The scale and features of these small public places should be consistent with its context.

The inclusion of small parks and plazas is also intended to provide needed relief from the hardscape and intensity of the denser land use patterns within the Central Core. Small Publicly Accessible Places will serve as visible and positive places to gather and recreate for persons living, working or visiting nearby. The intent is that Small Publicly Accessible Places will help create a sense of community and provide both passive and recreational facilities and experiences through facility alternatives less available in the past. They should be easily accessed by the surrounding neighborhood, so as to become a community meeting place and neighborhood focus at a very local level. Their central location facilitates the good casual surveillance typical of local, community-vested amenities.

Their smaller size generally limits their use to casual and passive recreation (i.e. no ball games), dog walking, etc. Their layout may include seating areas and sometimes children's play areas, often combining hardscaped and landscaped spaces with features like water fountains or raised stage areas.

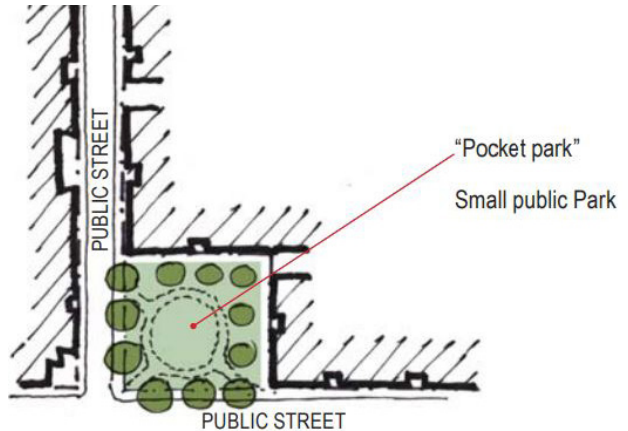


Figure 3-90. Small public places should be accessible from the public sidewalk.



Figure 3-91. Paley Park in New York City is a small, cobble urban room of just 4,200 sf (1/10 acre).



Figure 3-92. Neighborhood volunteers work to implement the Paige Booker pocket park in Indianapolis, IN.

E. Small Publicly Accessible Places (continued)

Although there is no minimum size, an example would be a small public space that fits on a single 40' x 80' lot. Small Publicly Accessible Places in many urban centers, like Paley Park (Figure 3-91) in New York City - at just 1/10 of an acre can provide valued respite from the city despite being small in size.

Small Public Places can contribute to local stormwater management strategies, serving as a storage area for runoff, with swales that may connect to larger systems, and through the provision of permeable areas.

Small Public Places may be public, private, or any form of partnership. They are often created on abandoned inner-neighborhood parcels. Many neighborhood groups provide the labor for implementation (Figure 3-92) and maintenance, while in some cases the City may want to perform this role.

Figure 3-92 is a project from Keep Indianapolis Beautiful Inc., a 30-year-old program aiming “to unite people to beautify the city, improve the environment, and foster pride in the community.”

Guidelines

1. The Parks and Recreation Master Plan should be referenced for policies and further guidelines for Small Public Places.
2. Design all new Small Public Places parks around a “purpose.” Applicants or Property Owners should identify an appropriate purpose for each of their proposed parks, preferably by meeting with the neighborhood and/or community to determine the most appropriate purpose of the future park, before it is designed. Categories of purposes could include Education; Socializing; Exercise; and Relaxation.
3. Small Public Places shall be designed to be accessible to the highest possible amount of users. They should be accessible from a public sidewalk and be inviting to the public.
4. Layout should include seating areas and central design features. The design should combine hard and soft landscape.
5. There is no minimum size for a Small Public Place, although established guidelines should be followed for a minimum size dependent upon the purpose of the park.

6. Encourage Small Public Places to contribute to local stormwater management strategies.



Figure 3-93. Aerial View & Plan of South Park, San Francisco (75' x 500'; 0.86 Ac)



Figure 3-94. Aerial View & Plan of Precita Park, San Francisco (120' x 800'; 2.2 Ac)

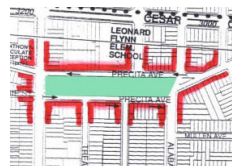


Figure 3-95. Panoramic view of the mini-park at 24th street in the Potrero Hill neighborhood of San Francisco

F. Public Art

PRINCIPLE: Public art shall be incorporated into the public realm to add visual interest for pedestrians and foster a distinct identity for individual districts and corridors.

Public art encourages pedestrian travel by adding visual interest to the public streetscape that enriches the pedestrian experience. Adding elements that visually and intellectually engage the community can be an effective means of encouraging pedestrian activity and fostering community identity. On a large scale, public art has the ability to enhance a district's identity, contribute to the creation of a new identity, or reinforce a design theme

Consideration should be given to the integration of public art into all aspects of the public and private realm. However, given the competition for space in the pedestrian realm, it is important to move beyond the concept of public art as discrete elements such as statues or sculpture that occupy their own space. Instead, public art should be conceived of as something that is integral to the design of the many elements that occupy the public streetscape making them more interesting, but not necessarily requiring more space. Thus, the design of all streetscape elements, including pavement treatments, street furniture, transit stops, light fixtures, etc., should consider the potential to incorporate public art.



The Sacramento Metropolitan Arts Commission (SMAC) is the coordinating body for public art in the Sacramento region, and should be consulted in coordinating public art at the beginning stages of projects.

See the Public Art Chapter of the Downtown Specific Plan for Public Art Guidelines



Public art should be engaging, either through physical movement or public interaction.