



Section A

Guidelines

For Walking

Overview

Sections A through E provide guidelines to implement recommendations of this plan.

Walking, Bicycling and Livable, Healthy Streets must be provided the highest possible levels of support. Most of Marina's growth has occurred in America's well funded, policy driven, post-auto, suburban-style development era. This timing produced many ill effects. Transportation in Marina today is highly car dependent. Many land use and roadway designs unintentionally overlooked the needs of people-centered activities in favor of auto convenience. Support for automobiles led to significant off-street parking requirements, poor connectivity, single-use zoning and every level of land use accommodation for automobiles.

This situation has had the unintended result of making Marina residents highly car dependent, leading to degradation of air quality, water pollution and many social ills. It has also resulted in poor transit links, poor bicycling conditions, and poor access for youths, seniors and people with disabilities.

Most unfortunate, this situation has led to the highest possible per capita costs for personal mobility, poor social interaction, low levels of identifying Marina as a distinct community, generally poor place-making and a non sustainable urban fabric. Of course, not all of these ills will be solved through this plan. However, without close adherence to the principles of walkability and good town-making these significant problems will not be overcome.

Many conventional bicycle and pedestrian master plans try to soften these effects and create enclaves where people can go to walk or bicycle. These plans dedicate trails, find safe routes to school, and designate those

roadways that can be altered to make basic links to key destinations. This plan takes a more holistic approach. Nothing will work short of healing the many injuries of previous planning and road building practices.

This community healing requires changing many roadway-making, operations, maintenance and funding policies and practices. Revised policies and practices should focus on always providing choice in transportation. Through partnership with land use policies and practices, active transportation options should become preferred modes. Walking and bicycling are viewed as healthier for people and towns. These actions call for changing many existing local, county, regional, state and federal guides. This plan requires full time focus on the often laborious attention to detail of bringing change.

This plan provides new policies for creating new walking and bicycling environments. It creates a set of public and private responsibilities that makes walking and bicycling truly enjoyable. Half hearted attempts to make walking work are insufficient. Today and in the future the basic needs of people-centered mobility must be addressed.

Format of Recommendations

Three sections have been developed. Section A addresses guidelines for walking. Section B provides guidelines for bicycling. Section C provides guidelines for building or converting healthy streets for healthy living. These three sections should be read as a group for a full understanding of the dynamics of healthy streets and healthy transportation systems.

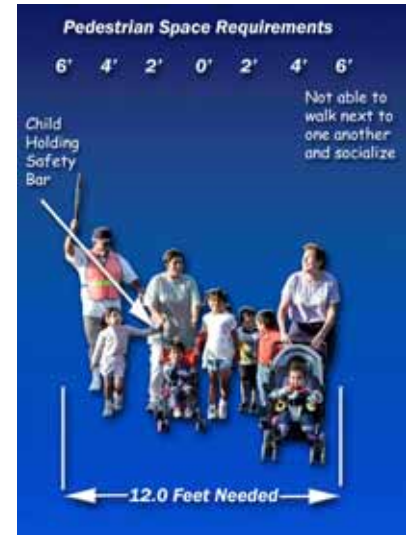
Good Main Streets Reward Low Speed

Pedestrian Space Needs

Space needs of pedestrians are often misunderstood. In all cases pedestrians need more sidewalk width than their actual widths (actual body widths are usually 18 to 30 inches). People in motion have added space needs of up to 4 feet of sidewalk width per person.

Walking is a social activity. Facilities should be designed so that at least two people can walk side by side. Two people walking alongside one another with no baggage, added clothing or other special needs can be accommodated in five feet of sidewalk width. Physical sidewalk widths less than five feet will not work comfortably for two people walking side by side, hence the minimum width for any sidewalk should be 5.0 feet.

Children en-route to school, especially along busy roads, need buffers to these streets. Although minimum width of 8.0 feet is adequate for sidewalks in many school areas, when possible widths of 12.0 feet and wider should be provided.



Space Width Needs Vary by Activity and Location

People who are comfortable with one another walk more closely together, especially when traffic or noise levels are high and they wish to talk. People also walk with different separations based on their types of activity:

- Walking for Pleasure: 30-35 feet of separation
- Recreational Walking: 16-24 feet of separation
- Traditional Shopping Separations: 12 feet of separation
- Festivals and Events: 6 feet of separation

Reference: *Pedestrian Planning and Design*, by John Fruin.

Walkways (Sidewalks, Paths)

Definition: Walkways are facilities built for use by pedestrians, including persons in wheelchairs. Walkways include sidewalks, paths, and links, and in rural locations, paved shoulders.

The City of Marina has a reasonably complete system of street sidewalks in built-out areas, but there are notable gaps. As new development occurs, the design, dimension and placement of sidewalks and paths will be made based on the levels and types of usage. To simplify this process and to clarify City guidelines for builders, sidewalks and paths are classified by the following categories:

1. Local Streets
2. School Zones (within 600 feet of nearest corner)
3. Transit Hubs
4. Avenues and Boulevard Streets
5. Main Street and Commercial Streets

Each of these locations has its own sidewalk standards that are detailed in pages to follow. Most important, sidewalks along Main Street and commercial and town center locations need many added components. Commercial and other special use



locations require significant levels of sensitivity and care to the placement of walkways of appropriate widths and materials, with street furniture and barrier free compliance.

Sidewalk Exceptions:

As a general rule there are no exceptions on minimum widths and other elements shown in the guidelines, unless the project proponent can demonstrate that the alternative is superior in aesthetics, safety and comfort for pedestrians.

Sidewalks can be excluded:

1. On most alleys
2. When fewer than 100 cars are anticipated per day on the block, and speeds can be held to 15 mph through street design
3. When a woonerf design is preferred
4. In some rural areas, where bike trails or wide paved shoulders are immediately available

City of Marina Sidewalk Specifications by Travelway Type and Location					
Local Travel Ways		Sidewalk	Planter Strip	Details	
Alleys, No sidewalks Lanes, None under 10 houses Streets, None under 10 houses		5 foot width Two ramps per corner Concrete preferred Non-mountable curb	6 foot width Trees, 30-50 feet Lighting optional	Both sides of street Underground utilities Barrier-free Walls, add 2 feet	
					
Schools Elementary Middle, High Colleges		8 foot width Two ramps per corner Concrete preferred Non-mountable curb	6 foot width Trees, 30-50 feet Lighting required	Both sides of street Underground utilities Barrier-free Walls, add 2 feet	
					
Primary Roads Avenues Boulevards		6 foot width Two ramps per corner Concrete preferred Non-mountable curb For attached walks add 2 foot width	6 foot width Trees, 30-50 feet Lighting recommended	Both sides of street Underground utilities Barrier-free Walls, add 2 feet	
					
Commercial Areas Main Street Other Commercial		8-20 foot width Two ramps per corner Concrete / pavers OK Non-mountable curb	6 foot width Trees, 30-50 feet Lighting required	Both sides of street Underground utilities Barrier-free Walls, add 2 feet	
					
Special Transit Parks Pedestrian Parks Woonerven (People Streets) Other Special Use		15 or more width Two ramps per corner Concrete preferred Non-mountable curb	6 foot width Trees, 30-50 feet Lighting required	Both sides of street Underground utilities Barrier-free Walls, add 2 feet	
					

City of Marina Sidewalk Specifications by Travelway Type and Location

Local Travel Ways

Alleys, No sidewalks
 Lanes, None under 10 houses
 Streets, None under 10 houses

Schools

Elementary
 Middle, High
 Colleges

Primary Roads

Avenues
 Boulevards

Commercial Areas

Main Street
 Other Commercial

Special

Transit Parks
 Pedestrian Parks
 Woonerven (People Streets)
 Other Special Use



Lane



Elementary School



Avenue - Mixed Use



Main Street



Transit Station



Street



Campus



Boulevard



Other Commercial



Waterfront District

Sidewalk

5 foot width
 Two ramps per corner
 Concrete preferred
 Non-mountable curb

8 foot width
 Two ramps per corner
 Concrete preferred
 Non-mountable curb

6 foot width
 Two ramps per corner
 Concrete preferred
 Non-mountable curb
 For attached walks
 add 2 foot width

8-20 foot width
 Two ramps per corner
 Concrete /pavers OK
 Non-mountable curb

15 or more width
 Two ramps per corner
 Concrete preferred
 Non-mountable curb

Planter Strip

6 foot width
 Trees, 30-50 feet
 Lighting optional

6 foot width
 Trees, 30-50 feet
 Lighting required

6 foot width
 Trees, 30-50 feet
 Lighting
 recommended

6 foot width
 Trees, 30-50 feet
 Lighting required

6 foot width
 Trees, 30-50 feet
 Lighting required

Details

Both sides of street
 Underground utilities
 Barrier-free
 Walls, add 2 feet

Both sides of street
 Underground utilities
 Barrier-free
 Walls, add 2 feet

Both sides of street
 Underground utilities
 Barrier-free
 Walls, add 2 feet

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Levels of Quality

Most streets in the best known walkable communities maintain level of quality “good” or better in each of a number of criteria. There are more than 20 street elements or patterns that encourage people to walk. On this page and pages to follow many of these elements are highlighted. We discuss how to improve these streets step by step. In many cases making changes that benefit pedestrians also benefits most, if not all, users of streets.

This plan calls for the Level of Quality for Walking in the City of Marina to be “good” or better in all categories (see chart on the next page.)

In the small image to the right, the quality level is exemplary. There are (1) high levels of security (eyes elevated and watching over the street), (2) convenient walkway systems on both sides of the street (3) high levels of efficiency in the neighborhood (mixed use) which also has great connectivity, (4) high levels of comfort — the surface is more than 10 feet wide, smooth, even, and colorful, and the walkway is shaded, and (5) people feel welcomed to the neighborhood by the well landscaped and beautifully maintained environment. People walking here feel a sense of history, and even on the 50th, 100th or 1000th walk find new visual rewards.

The middle main street photo depicts excellent to good quality. The sidewalk width is ample (6.0 feet), with tree canopy and on-street parking separating sidewalks from the street. Again, many eyes on the sidewalk make it more secure.

The bottom photo depicts a condition where no sidewalk exists. However, walking conditions are actually fair to good... the street is only one block long, has a tree canopy, and light traffic volumes (perhaps as few as 100 car trips daily or less than one every ten minutes). Quality is slightly reduced, since homes are set back from the street a large distance.



Walking -- Levels of Quality

A **B** **C** **D** **E** **F**

Exemplary

Excellent

Good

Fair

Poor

Half of Strame



Sidewalks
Walkability increases with added width, buffers to the street, many eyes on the walk, attractive edges. Five-foot minimum widths are needed. Conditions improve as numbers of driveways are reduced, or set back. Non-maintainable curbing is important.

Main Streets



Main Street walks should be wide, attractive, with many shops and residential units watching over the street. Many activities are needed to keep sidewalks in use many hours a day. Good lighting and street furniture are essential. Maintenance is key.

Local Streets



Local streets should be narrow, well landscaped, with on-street parking to act as sidewalk buffers. Driving speeds of 15-20 mph are best. 20-25 are acceptable. Knees should be proximate to the street.

Avenue/Boulevard



Avenues and boulevard side-walks should be 5-6 feet wide in most applications. Planter strips and blue lanes create essential separation from motorists. Trees, other landscaping, medians help slow motorists. Medians help narrow as 10 feet.

Crossings



Crossings should be well marked, accentuated by curb extensions. On multi-lane boulevards it is essential to have exceptionally well marked crossings. In some cases signals are warranted.

Walking Systems

There are vast differences between areas where people *can* walk (see photo to the right) and areas where people *actively* walk, play and get to know their neighbors. The decision, to walk or not to walk, is not influenced solely by the existence of a walkway or totally quiet street ... quality is a central issue. When a place has the right ingredients, or qualities, people walk. Land use and street designs are major factors.

Walking is Not Performed in a Vacuum

Neighborhoods where people walk provide continuity, places to go, things to do, many eyes on the street and a well defined sense of place. Unfortunately many streets in Marina are disconnected; land uses are isolated; streets are barren; speeds are high, and homes do not always relate well to streets. Fortunately many of these issues can be addressed, and the City's community fabric can be repaired. An important part of these recommendations will deal with the healing steps and process.

This most fundamental and complex area must be addressed to set Marina's plan in motion. In order to put walking on an equal footing with driving, it is essential to provide systems that are (1) secure, (2) convenient, (3) efficient, (4) comfortable and (5) welcoming.

Merely adding sidewalks does not put walking and transit in competition with driving. People need places to sit, shade, access to public rest rooms, convenient ways to cross streets and more. Buildings need proper relationships to streets. Driveways should be limited in commercial zones. Even homes in urban places should not be set back too far from the street.

The previous page introduces a chart defining in simple terms a visual means of establishing levels of quality for every type of walkway system. In all cases, the above five elements (security, convenience, efficiency, comfort and welcome) will be key indicators of healthy walking environments.



There are many reasons why a person might choose to walk in the environment depicted below and prefer to drive in the scene above.



Residential Lanes and Streets

All streets 200 feet long or more, or having more than 20 houses at build-out, should have sidewalks on both sides of the street. Rare exceptions can apply in conservation districts or in other locations where housing is built on only one side of the street.

Minimum Sidewalk Dimensions

Sidewalks should be 5 feet wide or wider and generally set back from the curb edge. In rare cases where sidewalks must be attached to the curb, minimum dimensions should be at least 6 feet.

Construction and Maintenance

Sidewalks shall be constructed and maintained in good order to permit comfortable and pleasant walking conditions at all times.

Fences, Landscaping

In order to maintain maximum comfort and safety, no fences bordering sidewalks should be above a height of 4.0 feet.

Planting Strips

Landscaping will be provided in a dedicated strip between the roadway and the sidewalk, generally 4-8 feet wide. This buffer zone is ideal for tree planting (encouraged), elevation changes of driveways, sign stock, hydrants and other public uses.

Driveways

Special care must be taken at each driveway to maintain a 40-inch wide flat zone to allow wheelchairs to pass. Driveways shall be sufficiently long, beyond the sidewalk (25-30 feet), to permit a car to park in the driveway without blocking the sidewalk.

Sidewalk Completion

Sidewalks in a neighborhood shall be constructed concurrent with placement of streets, sewers, lighting and other street elements.

Curbing

All curbing will be Positive, Type D, or similar curbing that does not permit easy mounting by motor vehicles.

More specific language for each of these treatments, and more details, are provided in the following section under Design Details.



School Area Streets and Sidewalks

Any roadway within 1400 feet of a school will have sidewalks on both sides of the street. Exceptions apply in conservation districts or in other locations where housing is built on only one side, and in such cases, where it is easy and convenient for pedestrians to cross streets to available sidewalks.

Minimum Sidewalk Dimensions

Sidewalks will be 6 feet wide, or wider, and generally set back from the curb edge. In rare cases where sidewalks must be attached to the curb, minimum widths are 8 feet.

Construction and Maintenance

Sidewalks shall be constructed and maintained in good order to permit comfortable and pleasant walking conditions at all times.

Fences, landscaping

In order to maintain maximum comfort and safety, no fences along sidewalks will be above a height of 4.0 feet.

Planting Strips

Landscaping will be provided in a dedicated strip, generally 4-8 feet wide. This buffer zone is ideal for tree planting (encouraged), elevation changes of driveways, sign stock, hydrants and other public uses.

Driveways

Special care must be taken at each driveway to maintain a 40-inch wide flat zone to allow wheelchairs to pass. Driveways shall be sufficiently long, beyond the sidewalk (25-30 feet), to permit a car to park in the driveway without blocking the sidewalk.

Sidewalk Completion

Sidewalks in a neighborhood shall be constructed concurrent with placement of streets, sewers, lighting and other street elements.

Curbing

All curbing will be Positive, Type D, or similar curbing that does not permit easy mounting by motor vehicles.

More specific language for each of these treatments and more details are provided in the following section under Design Details.



Avenue and Boulevard Sidewalk Guidelines

All non-commercial or low-commercial avenues and boulevards shall emphasize pleasant walking conditions. In general sidewalks will be detached from curbs and set back to the right-of-way line.

Sidewalk Width

All sidewalks will be 5 feet wide or wider. Near schools, parks, most retail or other areas that generate greater pedestrian traffic, sidewalks will be 6-8 feet wide, or wider especially on Main Streets (see previous section).

Sidewalk Materials

Sidewalks can be constructed of concrete, asphalt or paver stones. All three are useful in different environments. Whichever material is chosen, sidewalk construction methods must assure seamless, nearly level (2% cross slope or less), stable surfaces with long lasting quality. Often a concrete deck is placed below pavers. Pavers shall provide non-slip surfaces in all weather conditions. Sidewalks must be reinforced at each driveway.

Sidewalk Condition, Barrier Free

Sidewalks shall be constructed and maintained to ensure pleasant, uninterrupted conditions. Street furniture, including utilities, signal control boxes, sign stock, fire hydrants, trees and other elements will be placed to minimize uncomfortable walking conditions. In all cases a 4-foot width will be maintained for wheelchair access.

Location

When topography or other conditions prevent sidewalks set back from curbs, the walkways shall be 7 feet wide, or wider, and, if possible buffered from moving traffic by either on-street parking, bike lanes, or both.

Trees, Landscaping

In most settings shade should be provided. In other locations attractive landscaping or other treatments will assure pleasant walking conditions.

Commercial Driveways

Commercial driveways will be limited through access management. Effective use of medians, proper turn ramps, bike lanes, shared driveway entrances and other features will improve conditions for pedestrians by having fewer and better designed driveway openings. (In residential sections driveways must also be carefully designed to minimize barriers and other conditions that make walking less pleasant.)



Commercial Sidewalk Guidelines

All emphasis in design shall be on place-making. Sidewalks in commercial areas must enhance village-style development. The example street section to the right illustrates each part of the walking and driving environment, emphasizing scale, depth and relationships of each element. The City of Marina's guidelines should allow some flexibility in design, in order to allow each commercial district to develop its own unique identity. Emphasis should be on creating personality or character for entire blocks or several block segments.

Some commercial sidewalks can have adjacent parking. However, these areas must be well buffered, attractive and create no discomfort for pedestrians. As the area develops, large parking lots may be converted to buildings or plazas, as appropriate.

Sidewalk Width

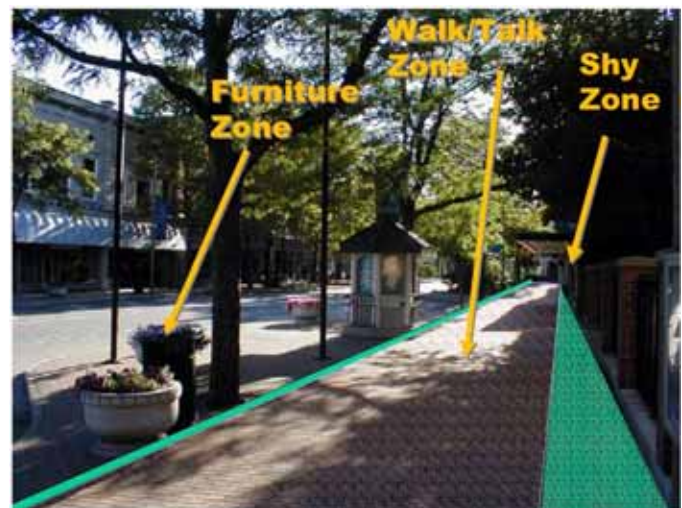
As with roadways, sidewalks should be wide enough for multiple directions of travel, mix, diversity of uses, outdoor furniture, shy zones and other needs. Most commercial sidewalks range in width from 8 feet to more than 30 feet.

Surfaces

Surfaces must be clean, smooth, well maintained and attractive. White, scored concrete with decorative edging treatments are among the most popular. In cases where pavers or stamped, colored concrete treatments are applied, it is essential that the surface remain smooth and easy to navigate.

Trees, Landscaping and Furniture

The City of Marina's commercial sidewalks should provide quality shade and sufficient ground cover to be attractive. Outdoor cafes and other sidewalk activities should be encouraged, but they must be operated in a fashion permitting comfortable access across these public/private uses. Effective place-making will bring about the highest and best uses of each commercial street.



Good Main Streets Reward Low Speed

Shown here are three very different, eclectic examples of building styles, mixes, patterns and features rewarding casual three mile-per-hour walking speeds. People have so much to look at, study and experience that their natural inclination is to spend a while.

Although it is rewarding to bicycle or drive through such spaces at moderately higher speeds, the ultimate reward goes to those who choose to emerge from or climb out of their vehicles and join the parade of people, events and happenings.

Meanwhile, attention must be paid to every level of street making. No one will join a parade when there are no people. Attention to every level of street making detail, including good management of key stores and public space is essential.

Long term, City of Marina street scenes should match these example scenes in richness, variety and reward. These places were transformed over time to become vibrant. (Photos from top to bottom: (1) San Diego's Gas Lamp District, (2) Mountain View's Castro Street, and (3) Santa Barbara's rail station.)



Pedestrian Oriented Buildings on Streets

Pedestrian-friendly walking environments provide rich, ornate detail to keep people focused on their surroundings. Although environments will include repetitions and themes along given blocks, each window and each architectural element of buildings offer new rewards, seen at-grade, midlevel and on top floors.

The scenes on this page and the next page are from the same street. The buildings are directly across the street from one another. One provides high levels of visual change, interest and appeal and the other far less.

Ironically, the more traditional building shown here was built to sell automobiles. In contrast, the conventional, modern-style building on the next page was built to improve people's health. Its contribution to the street is less rewarding to pedestrians, and more rewarding to higher speed motorists, who seek less detail as they cruise along.



Motorist Oriented Buildings on Streets



At faster speeds, visual appeal for motorists must be subdued. Less complex, less interesting buildings allow motorists to feel more comfortable at 30 and 40 mph. Buildings are elongated and smoothed out so drivers are not disturbed by too much detail, variety and too many unexpected features.

On streets designed more for motorists' comfort, pedestrians may get bored. In his book, *Accommodating the Pedestrian*, Richard Undermann states:

"Geometric and repetitive patterns that reoccur may set up a rhythm causing the pedestrian to consciously count each step. If there is little break in the repetitive pattern, the walk may seem longer and progress may seem slower."



Pedestrian Space Varies In Historic and Modern Communities



Link / Connector



Rural Area Asphalt Path



Sidewalk



Main Street



Entertainment District



Campus Walkway



Historic District, Pennsylvania Avenue, Washington, D.C.

Fifty/Fifty Rule
 Well balanced roadways devote 50% of the building-to-building width as pedestrian related space (sidewalk, planter and parking lane). Travel lanes balance the remaining 50%. Pennsylvania Avenue carries 6-8 lanes of traffic and has a combined 70 feet of pedestrian space.



Transit Hub and Station Guidelines

Any street within 2000 feet of a transit station or transit hub must have sidewalks on both sides. Exceptions apply in conservation districts or in other locations where housing is built on only one side, and in such locations where it is easy and convenient for pedestrians to cross streets to available sidewalks.

Minimum Sidewalk Dimensions

Sidewalks will be 8 feet wide, or more, and generally set back from the curb edge. In rare cases where sidewalks must be attached to the curb, minimum width is 10 feet. Directly in front of transit stations there shall be a minimum width of 8 feet of clear walking space. Any benches or passenger queuing areas shall be set back to create clear walking space.

Construction and Maintenance

Sidewalks shall be constructed and maintained in good order to permit comfortable and pleasant walking conditions at all times.

Fences, Landscaping

In order to maintain maximum comfort and safety, no fences along sidewalks should be above a height of 4.0 feet.

Planting Strips

Landscaping will be provided in a dedicated strip, generally 4-8 feet wide. This buffer zone is ideal for tree planting (encouraged), elevation changes of driveways, sign stock, hydrants and other public uses.

Driveways

Special care must be taken at each driveway to maintain a 4-foot wide flat zone to allow wheelchairs to pass. Driveways shall be sufficiently long, beyond the sidewalk (25-30 feet), to permit a car to park in the driveway without blocking the walkway.

Sidewalk Completion

Sidewalks in transit locations shall be constructed concurrent with placement of streets, sewers, lighting and other street elements.

Curbing

All curbing will be Positive, Type D, or similar curbing that does not permit easy mounting by motor vehicles.

More specific language for each of these treatments, and more details are provided in the following section under Design Details.



Transit Link to Neighborhood

The City of Marina has a special opportunity to create an attractive vertical connection from the proposed transit village to adjacent neighborhoods.

As a feature of the transit village, a top quality vertical pedestrian link should be created. The vertical connection should include a terminating vista, attractive walls, attractive stairs, central green space and other features rewarding users of the link and those making use of the new commons in the transit village.

The vertical connector could also serve as an activity and entertainment site and public park.

The current auto-oriented access to the post office must be adapted to create a welcoming center for all modes. This change can be handled in a way that links the added civic, transit, retail and other activities in the transit station to the existing postal building.



Design Details

Vehicular Curb Cuts (Driveways)

Vehicular curb cuts allow motor vehicles to cross sidewalks — the pedestrian space. They create the potential for conflict with pedestrians or children playing in the area. They also can present potential tripping hazards for pedestrians, especially elderly people and children. As such, vehicular curb cuts should be kept to minimum numbers and widths.

City of Marina curb cuts shall be designed to emphasize to motorists that they are intruding into pedestrian space, as opposed to having pedestrians feel they are intruding into motor vehicle space.

Vehicular curb cuts must be installed so that a minimum 3-foot wide path of travel is maintained across the curb cut at the same grade as the sidewalk on either side (with maximum 2% cross-slope).

In these areas the straight curb and concrete material should be sloped down to meet the pavement. The adjacent sidewalk material should always be carried across the curb cut to alert drivers that they are crossing a sidewalk. Driveway curb cuts cannot be closer than 25 feet from intersections or 15 feet from crosswalks.

Wherever possible, vehicular curb cuts should be constructed to leave the pedestrian travel zone free of curbs and grade changes.

The maximum width of a curb cut in residential districts is 20 feet at the street line. In open space, business, and industrial districts, the maximum width is 30 feet. In rare cases, where tanker trucks must enter gas stations, wider widths are permitted. No more than one curb cut per lot is allowed for lots with less than 100 feet of frontage. For lots with over 100 feet of frontage, no more than one curb cut is allowed for every 100 feet or portion of 100 feet.



Seating and Benches

Benches are an important sidewalk amenity, providing pedestrians with opportunities to sit and rest, wait for the bus, meet friends, or read the paper.

Private property owners are encouraged to provide benches for use by the public on their properties adjacent to the right-of-way.

Seating areas should include trash receptacles and shade where possible. Benches in Main Street locations should be convenient for older citizens; recommended placement is every 200 feet or less.

When used appropriately, benches add visual interest to streetscapes, making the pedestrian experience more enjoyable. Consider the use of local stones or building materials, or construction materials complementing area buildings, monuments or other prominent features.

Benches should be considered wherever extra sidewalk width offers the opportunity for pocket parks, as has been done, for example, in downtown Monterey and Carmel-by-the-Sea.

The placement of benches should be site-specific, depending on circumstance. Seating space can be included on walls, in alcoves and along other edges or decorative treatments.

Shelter from the elements and places that provide opportunities to watch passing pedestrians are both desirable where possible. On streets with very wide sidewalks, benches may be oriented perpendicular to the right-of-way as long as they do not project into pedestrian travel zones.

Benches should be installed only on streets that have adequate sidewalk widths. They should not interfere with curb ramps, fire hydrants, parking meters, or emergency access. Benches should be installed in the furniture zone (a minimum of 2 feet from the curb) or in the shy zone, as long as they do not obstruct the pedestrian path of travel.



Place Making

People need places to associate, to gather and to feel the life, vitality, quality and personality of their city. People need to know that they belong to physical places... more than just governmental jurisdictions. These places must have a unique identity and personality that distinguishes them from other areas nearby.

As the City of Marina becomes walkable, it will have at least one strong center for people to gather at all hours of the day. There should also be small centers each one-half mile to encourage people in adjoining neighborhoods to associate.

"Each subculture needs a center for public life: a place where people can go to see other people and to be seen."
from *Pattern Language*, by Christopher Alexander



Kiosks, Transit Stops and Sidewalk Cafes

Kiosks, transit stops and sidewalk cafes can be used to provide the public with information such as newspapers, maps, directional signage, transit schedules, pleasant waiting areas or attractive settings for casual eating. In business districts, kiosks, transit stops and fine sidewalk dining can also serve as architectural landmarks.

Kiosks, transit stops and outdoor cafes should only be installed on streets that have adequate sidewalk widths and must not interfere with curb ramps, fire hydrants, parking meters, or emergency access. Kiosks, stations and cafes should be installed in the furniture zone, a minimum of 2 feet from the curb, or in the shy zone, with a built-in concrete pad for placement purposes.

Like other street furniture, kiosks should not be installed in bus stop zones.



Bicycle Parking

Bicycle parking installed in the furniture zone must be a minimum of 2 feet from the curb and cannot obstruct the path of travel. On narrow sidewalks, bicycle parking is oriented so the locked bicycle is parallel to pedestrian traffic flow. On streets with very wide sidewalks, bicycle parking may be oriented with locked bicycles perpendicular to the right-of-way as long as they do not project into the pedestrian travel zone.

Private property owners are also encouraged to provide bicycle parking for use by the public on their properties adjacent to the right-of-way. Such parking should be installed so that locked bicycles do not project into the sidewalk space.

Hitching post, cylinder post or bicycle shape designs shown in the lower photos are recommended for general installation on each block along streets such as Del Monte Boulevard and Reservation Road, as well as other popular destination streets. Cluster, protected or other higher concentration bicycle parking is recommended for village centers, transit stations, resorts and popular campus areas. Bicycle parking rings or hitching posts are designed to secure bicycles and prevent them from falling over and becoming obstacles to walking.



Bollards, Walls, Edges

Bollards, walls and curb extensions can be used to restrict vehicular access to pedestrian areas or to protect other street elements from damage. If executed with sensitivity to the surrounding architecture, bollards can be an attractive streetscape element.

Bollards and walls installed in the furniture zone should be a minimum of 2 feet from the curb. Bollards that include lighting can add dramatic touches to the setting and help enliven an otherwise drab night-time environment.



Lighting

Good lighting for pedestrians makes many people feel more secure and safe at night. By increasing the number of people actively using a space, real security increases.

Streetlights are installed in the furniture zone, a minimum of 2 feet from the curb to avoid damage from trucks that pass too close. Street lighting at intersections must be placed so that pedestrians are visible to motorists.

Pedestrian light fixtures are usually placed at a lower height than street illumination fixtures and should direct the light toward the sidewalk.

Trees should be pruned regularly to ensure that branches do not block streetlights or pedestrian illumination.



Lighting Details

Lighting Main Street is not only about providing fixtures. There are three sources of lighting available to create pleasant walking conditions. The first source is traditional lighting from street lamps. The second is the use of accent lighting to create unique styles along streets. This treatment is often achieved with up lighting on buildings, trees, landscaping or other features. The third source of lighting is the warm glow of light emerging from shop windows and doors. Although stores are rarely open at night, by mutual agreement, merchants can leave their window displays lit on timers until 11:00 at night to help create a pleasant street ambiance.

Also note that some of the most lively entertainment and shopping streets maintain relatively low levels of lighting, creating an air of intrigue. Lighting plans for streets can be carefully formulated to ensure that pedestrians have ample ground lighting to prevent tripping, and hiding places.

Night life

People need places to go to at night in their own towns that are comfortable and well populated by other people. A mixed use village is a good start. There should be six to ten activity centers, such as an ice cream store, small book shop, restaurant, deli, hotel, small grocery, movie theatre, play house and other activity sites that blend and encourage visitation. This type of setting is important not only to the economic life of the town, but for social exchange, walking exercise and many other reasons. Even small towns, like Carmel-by-the-Sea, can produce vibrant night settings, for pleasant strolls and many other benefits of night time activity.

Lighting Levels

As a general rule it is best to provide less light than engineering standards suggest. Most standards were developed by supply houses and are excessive. Over lighting not only wastes energy and costs more, but it also ignores the design opportunities of varying light and darkness. Over lighting eliminates shadows from buildings, pavement and other landscape elements which provide interest and dimension. Lower light levels need not be considered unsafe if properly handled.

From *Accommodating the Pedestrian*,
By Richard Undermann



Newspaper Racks

Newspaper racks can be useful sidewalk amenities. However, they can proliferate to the point where some are blocking sidewalks and crosswalks, obstructing access to buses, taxi stands, bicycle racks, and other facilities. In addition, many are not properly maintained and collect dirt and graffiti.

To deal with the proliferation of newsracks on sidewalks, and to improve the appearance of the boxes, many cities have established detailed standards for placement and maintenance of newspaper racks. The Marina Department of Public Works is responsible for issuing permits for newsracks.



Planters

Plant material can help create more attractive streetscapes, adding color to the environment, improving air quality, and creating buffers between pedestrians and automobiles.

Trees should be placed in planters only if they will not survive in the ground.

Planters should only be installed on streets that have adequate sidewalk widths and must not interfere with curb ramps, fire hydrants, parking meters, or emergency access. Planters should be installed in the furniture zone, a minimum of 2 feet from the curb, in the shy zone, or within property lines.

Materials used to construct planters should be coordinated with the surrounding sidewalk and building materials.

Plant material should be selected and maintained so as not to extend beyond the edges of planters until the greenery has grown to a height of 7 feet above the ground. Otherwise branches can interfere with pedestrian space needs.

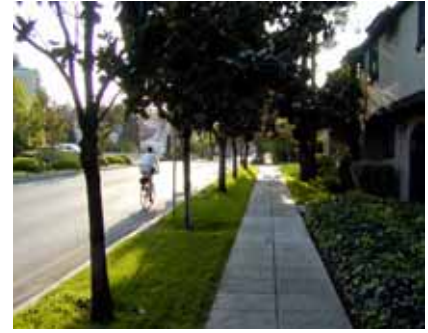


Trees

Trees help create more attractive streetscapes, providing shade in summer and visual relief year round. Trees improve air quality and create buffers between pedestrians and automobiles. Trees should only be planted on streets having adequate right-of-way widths to maintain the minimum 5-foot width for sidewalks. On sidewalks that are too narrow to accommodate trees without infringing on pedestrian travel zones or utilities, residents can be encouraged to plant trees in their yards near sidewalks. Trees can be planted in curb extensions and tree wells provided they do not interfere with the visibility of pedestrians waiting to cross streets or motorists turning corners. Trees should not be planted where they would hinder people getting on or off transit. Trees and utility operations will need to be closely orchestrated.

The selection of trees should be coordinated with the City arborist. Trees with root systems that won't become trip hazards should be selected. Continued reviews should be conducted on types of trees and planting techniques to maintain properly accessible sidewalks.

Trees should be pruned to ensure that their branches do not interfere with pedestrian and vehicular visibility and movement. Along the sidewalk, 8 feet of clear space above the ground should be maintained. On roadways 14 feet should be maintained.



Trash Cans, Water Fountains, Clocks, and Rest Rooms

Trash cans, clocks, drinking fountains and public rest rooms are necessary elements in the streetscape. Standard heavy gauge black metal trash cans are among the most useful and popular. Meanwhile, it is also appropriate that even the most mundane furniture can be works of art to help enliven streetscapes.

Trash cans should be placed in the furniture zone at a minimum of 2 feet from the curb, on private property, or in the shy zone near building entrances.

Public trash cans should also be placed near food service establishments, bus stops, and seating areas. Public/private trash removal partnerships should be encouraged near food service establishments in particular, where it is not feasible or reasonable for the City to keep up with the volume of trash needing removal.

Drinking fountains and public restrooms are essential to downtowns and shopping districts. Although many social issues can arise, these are best addressed by providing social services in locations where they best meet the needs of people such as the homeless and others who are not likely to feel fully comfortable in successful main street environments.





Street Furnishings can include a mix of both public and private investments. In all main street environments it is essential to take stock of overall visual qualities, then invest in those features that provide the most common and basic needs of society. These features should also create the greatest possible sense of welcome and present the best “front porch... we are open for business” appearance. Main streets should be designed for people we are trying to attract and not be unduly influenced by those we are trying to keep away.



Utility Poles, Dumpsters and Structures

The City's underground and overhead network of utility services greatly impacts sidewalks. Utility poles, traffic signals, and fire hydrants should be installed outside the pedestrian travel zone.

Electrical boxes should be located on utility and traffic signal poles so they do not create unexpected hazards to pedestrians. Utility vaults and access boxes should be located outside the pedestrian travel zone and be constructed from non-slip materials flush with the sidewalk, in conformance with ADA requirements, preferably outside the City right-of-way. The preferred placement is on private property. Dumpsters should be carefully screened to keep unsightly trash from public view.



Wayfinding

One of the important needs of tourists and visitors to local parks, village centers and shopping districts is help in wayfinding. Various aids must be created to assist with navigation.

The City of Marina should consider creating a unique marking system for its trails, in the town center and each village or hamlet. Uniquely crafted and consistently posted street signs, banners and kiosks can become hallmarks of a city and help create a distinct sense of place.

Key buildings should be constructed to create terminating vistas on streets. If these buildings can be seen from long distances, they become landmarks. Careful attention should be paid to crafting an observation tower or two to allow proper viewing of dunes, surf and other natural features. These observation decks should fit well with the land and history of place.

Sidewalk imprints that identify streets can also play an attractive and key role in navigation and defining the character and personality of an area. One example sidewalk marker from Santa Barbara, California, is depicted below (bottom right photo).



Public Art, Architecture and Place Making

Public art adds to the appeal and zest of taking walks in a community, riding bicycles or just “hanging out.” By increasing the number of people using a trail, sidewalk system or town center, the area becomes more secure and attractive for greater numbers of people and more vital and economically viable.

The City of Marina should celebrate public art with a focus on fun things taking place along several principal streets and trails. A master plan and funding strategy for bringing about these types of changes will assist the process.

The City of Marina is fortunate to have an active arts community, and they should be encouraged to create a series of places where investments in public art can be seen, touched and heard by the community. Art can be as miniscule as jewel-like glass imbedded in lamp posts, to spectacular as an entire building that lights up and plays music that pulses into the night.





Mesa, Arizona
Street Sculptures

Celebrate History of Place

Encinitas is an example of one town that proudly celebrates its roadway history (located on popular Route 101). As the Main Street through town was reinvented at the turn of the new century (2000), the street itself became a reason to visit and linger – celebrated in banners, tree wells, inlaid sidewalk mosaics, plaques, benches, litter cans and more.

Although some streets have more history than others, if your street has a reason for celebration, from the first animal trails, to Indian trails, to early wagon trails, to national highways, show off the pride of history as places are renewed and re-established.



Parking Policies and Practices

As the City of Marina develops into a more compact village, on-street parking will need to be maximized and off street parking must be placed according to new rules. A formal parking study, defining practices and policies will be needed. This section provides an essential parking facilities menu and check list.

Parking maximums should be emphasized, and minimum parking requirements for each property owner should be retired. This policy change will create new opportunities, incentives and growth, maximizing land use density, diversity and mix. This policy will also make parking in some locations a scarce commodity, which can help encourage use of alternate modes.

As a general rule off-street parking should be used by many groups. One lot can serve church, offices, retail and residential needs. Single purpose lots should be minimized.

In Addition:

- Parking should be municipally managed.
- Private lots should be retired or phased into municipal lots.
- Designs should encourage many eyes on parking lots, preferably from mixed use buildings.
- Lots should be conveniently located, and attractive signs will help people find the most convenient parking.
- Staff parking is remote, while faster turnover parking should be available in many key locations, such as postal services, libraries, city services.
- In lieu of required parking, the City of Marina should create a parking trust fund and construct needed municipal lots or parking structures, if needed.

Existing sites can be changed over time, with new villages laid out to take advantage of easy entry and exit, angled and direct pull-in parking from Main Street and side street locations.

Candidate roadways for such treatments over time include Seacrest and Crescent Streets.

New villages and shopping plazas shall also be designed to create quality walking environments.



Top left photo: Abacoa, Florida, has maximized convenient parking. Dark areas in blue are on-street parking. Lighter areas are well hidden courtyard style parking with many eyes on the parking lots, while the light shaded areas are structured parking.

Left center photo: Holland, Michigan, has a number of municipal lots with well marked and easy access. Many eyes on these lots, and easy double-front entries are key main street store business.

Third photo from top: Winter Park, Florida, blends on and off street parking in an attractive, walkable mix.

Off-Street Parking

Significant off-street parking, especially in plazas or strips, needs to be adapted. The following policies and practices will direct existing off-street parking, and guide future development.

All parking lots will be modified as each change in use permit is granted to perform the following:

- Create clear and direct connections with adjacent streets and other arrival points. This treatment is especially important on corners.
- Improve connections to streets with a minimum spacing of each 400 feet.
- Emphasize direct access using trails or other connectors into appropriate nearby neighborhoods.
- Clearly define crossing areas and pathway systems through lots using colors, markings, materials and raised speed tables as appropriate.
- Design parking lots to encourage speeds no greater than 10 mph.
- Convert existing plazas to village style developments when practicable, emphasizing village scale with many connections and landscaping features.
- Create shopping plazas with a minimum of 15% of space devoted to place making (landscaped areas appealing to the public).



On-Street, Parallel Parking

Parallel parking is the most common and easy to apply form of on-street parking. Note in the bottom photo the clean, crisp visual appeal of on-street parking.

In general, on-street parking is a strong design element in support of walking space. On-street parking creates a buffer between pedestrians and motorists.

Properly done, on-street parking can be applied to streets up to and including 15,000 vehicles per day for two lanes, and 40,000 for four lanes. Keep in mind that capacity is handled at intersections.

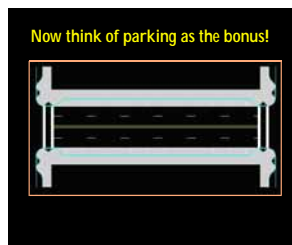
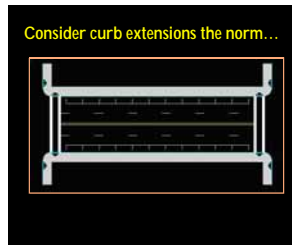
One recent advance in on-street parking design is inset parking with corner and mid-block curb extensions (see left group of photos). Tree wells are easily accommodated in this design.

Another advance is popularization of the valley gutter (see right group of photos). By using the valley gutter, it is possible to get parking bays down to 6.0 feet in width. The 2.0 foot valley gutter creates an automatic buffer between the parked car and moving vehicles.

Bike lanes can be added to the parking mix by assuring that the bike lane is 5.0 feet wide or wider.

By varying materials with inset parking it is possible to visually narrow a street. This design aids traffic calming and helps build a pleasant, comfortable looking street. On-street parking is also considered a mild to strong form of traffic calming. Most people drive slower on streets with on-street parking.

Del Monte Boulevard and Reservation Road are two streets that can maximize on-street parking using these modern techniques.



On-Street, Angled Parking

Angled parking is the most efficient form of parking. It is often possible to double the amount by going to 60 degree angled parking. Parallel parking generally requires 22 feet per vehicle, while 60 degree angled parking only requires 10 feet of street frontage.

On narrow streets angled parking can still be achieved by reducing the curb angle to 30 degrees. This treatment can result in 50% increase in parking, versus parallel.

It is possible to place angled parking on one side of the street and use parallel on the opposite side. By switching diagonal parking from side to side each block, traffic calming effects are achieved.

Palo Alto's University Avenue has used this parking design and still moves 18,400 vehicles per day down this highly successful and popular main street. This treatment has been in operation for 25 years.

To absolutely maximize parking, on side streets, consider straight-in parking. Parking stalls can be kept to 7.0 feet per vehicle, even with the large number of today's super-size vehicles.



Tip: Angled parking layout should be designed to insure that a parked car will not back into a crossing area. Always use deep and wide curb extensions.



On-Street Parking and Traffic Calming

On-street parking can also serve as a highly effective way to slow traffic in main street and neighborhood environments. As mentioned on the previous page, University Avenue in Palo Alto, California, makes effective use of diagonal parking on one side of the street while using parallel parking on the opposite side. At each new block parking types are switched, creating a light bend of both a visual and geometric change. Despite the high volume of traffic (18,400 for two lanes with parking), traffic crashes are very minor and injury producing crashes are highly unlikely.

This parking type switch effect is used to a greater extent on a low volume, low speed street in Victoria, British Columbia (photo #2). One-way traffic meanders slowly down the street.

The series of illustrations below shows the use of these techniques on neighborhood streets.

As more compact land use becomes the norm, driveways will be eliminated. The convenience of on-street and guest parking will become a valuable commodity. When block lengths become longer than 400 feet, there is a tendency for motorists to speed. Use of chicanes and planter islands on longer blocks will help visually terminate a street, allow maximum parking and retain a low-speed village quality to each street.



Back-In Angled Parking

Back-in angled parking solves a number of perceived and actual problems with more efficient parking angles. These treatments can be applied in both neighborhood and commercial areas, including higher volume streets of 10,000 to 20,000 vehicles.

Most motorists see the quick advantage of backing in – the first step of parallel parking – it is fast and easy, and done while controlling traffic. They see the main advantage in having a clear view of entry when they are ready to exit. Other advantages include:

- Opening door angles force children back to the curb rather than out to traffic.
- When pulling out drivers have easier and safer visual access to identify bike riders or large, fast vehicles.
- Easy access to car trunks, placed conveniently at the curb.
- Like other angled parking, this design can increase parking spaces by 100%

This design is now used on streets, such as Washington D.C.'s Pennsylvania Avenue as an added security measure.

This design has been used in the Adams Morgan area of Washington, D.C. for the past ten years with great success. The treatment runs for more than 1500 feet.



As old as the hills... the scene on the bottom left, from Alma, Michigan, is an example of early back-in parking practiced on American Streets.

