City of Stockton

Street Design Guidelines

November 2003

City of Stockton
Public Works Department
Engineering Division
425 N. El Dorado Street
Stockton, CA 95202

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I. INTRODUCTION

This document describes proposed changes to the City of Stockton design standards for new streets. Changes would include reduced roadway widths for new neighborhood streets, the introduction of landscape strips between the curb and sidewalk for many new streets, and requirements for round-abouts and traffic circles at many new intersections. Intersection treatments that facilitate safe and convenient pedestrian crossing distances are included. Additionally, City staff has included provisions that would establish sidewalk bicycle paths along new arterial and collector streets.

A workshop was held on January 24, 2003, to establish the parameters that form the basis for this document. The workshop was attended by City staff from Public Works, Parks and Recreation, Community Development, Fire and Police, and representatives from San Joauin Regional Transit. Desirable street elements were discussed and defined, and preliminary standards were determined with regard to street classifications, street width, landscape strips, sidewalks and block length.

Following review of the draft street design standards and input from the development, contracting and engineering community, the proposed street design standards will be considered for adoption.

The purpose of the proposed street standard revisions is to:

- Improve the function and appearance of new streets
- Encourage pedestrian and bicycle travel
- Reduce the potential for speeding and other concerns associated with wider streets, which frequently result in requests for "traffic calming" measures in existing neighborhoods

- Introduce desirable design elements, such as landscaped strips and detached sidewalks that are commonly found in older residential neighborhoods

- Encourage shorter blocks in new development. Longer block lengths, particularly blocks that exceed 600 feet in length, tend to encourage higher travel speeds

The City of Stockton is currently developing *Traffic Calming Guidelines* to define a process for implementing "traffic calming" measures to address safety concerns, traffic problems and quality-of-life issues related to speeding on neighborhood streets. The proposed revisions to the street design standards arose in part to reduce the need to implement traffic calming measures in the future.

Key elements of the proposed revisions to the street design standards are as follows:

- The minimum width of local residential streets would be reduced to 30-32 feet depending on the expected traffic volume. Current standards require 34-36 feet
- Landscape strips, separating the curb from the sidewalk, would be required on most new streets, and raised landscaped medians would be required on new arterial streets
- Maximum block length would be reduced to 600 feet for low-volume residential streets, 800 feet for medium-volume residential streets and non-residential local streets, and 1,000 feet for collector streets
- Bulbouts (curb extensions) would be encouraged at intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections
- Roundabouts at many new collector street intersections, to reduce the need for stop signs and traffic signals
- Traffic circles at many new local street intersections and at intersections of residential collector and local streets
- Wider sidewalks would accommodate bicyclists along many new arterial and collector streets

II. EXISTING STANDARDS

The existing street design standards for the City of Stockton are summarized on Table 1. As is the case with standards adopted in many cities, these standards are characterized by their lack of flexibility in applying width, treatment and design requirements to streets that may carry different traffic volumes and serve different needs. For example, a quiet residential street carrying a relatively low volume of traffic is required to have a width similar to a busier street serving higher intensity land uses.

Traffic engineers and planners have traditionally defined street systems as a functional hierarchy consisting of three basic types[1]:

- ***Arterial Streets –*** These are either relatively high speed/high capacity roads that provide access to regional transportation facilities and serve relatively long trips, or medium speed/medium capacity roads for intra-community travel, as well as access to the rest of the county-wide arterial highway system. Access to arterials should be via collector roads and local streets

- ***Collector Streets –*** A collector is a relatively medium speed/medium volume street, typically two lanes, for circulation within and between neighborhoods. These roads serve relatively short trips and are meant to collect trips from local streets and distribute them to the arterial network

- ***Local Streets –*** These are low speed/low volume roadways that provide direct access to abutting land uses. Driveways to individual units, on-street parking and pedestrian access are usually allowed

Standards for the design or operation of each street within a roadway network are typically derived from its functional classification. These standards affect lane width, intersection and signal spacing, travel speed, volume and local access (such as whether or not driveway access or on-street parking is allowed). The provision of pedestrian, bicycle or transit amenities may also be dependent upon a particular street's functional classification.

[1] Freeways and expressways are sometimes included as a separate classification in a functional classification system.

Key concerns regarding the existing standards that caused the need for new standards include:

- Wide streets, especially in residential areas, which often results in increased travel speeds for motor vehicles (see page 8)

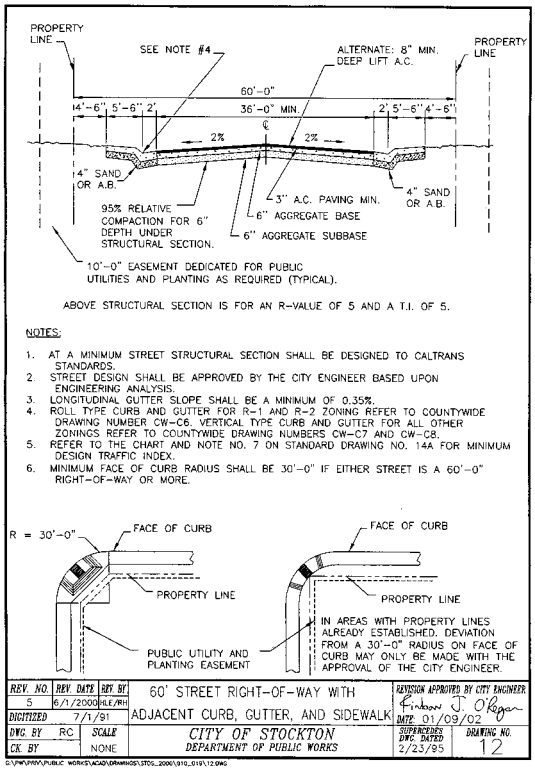
- Long blocks that increase travel distances and result in increased travel speeds (see page 9)

- Lack of design amenities such as landscape strips between curbs and sidewalks that can the appearance of streets and benefit pedestrians (see page 10)

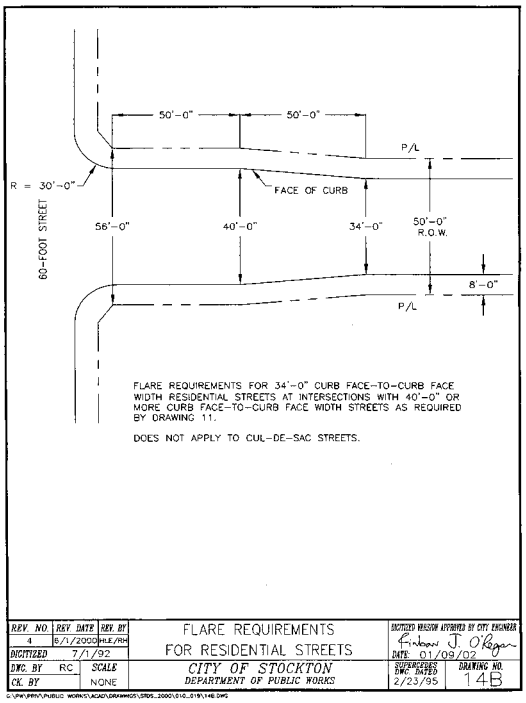
Table 1: Existing Standards

Street Type	Scenario	Curb-to-Curb Width (feet)	Planter Strip	Bike Lanes	Parking	Median	ROW (feet)
Local	Low Volume	34 / 36 [2]	No	No	Yes	No	50
	Medium Volume	36	No	No	Yes	No	60
	Non-residential	44	No	No	Yes	No	64
Collector	----------	40-64	Optional (4')	No	Yes	No	60-84
Arterial	Minor	64-90	No	(Allowed)	No	No	84-110
	Major	114	No	(Allowed)	No	Yes (16')	134

[2] Existing standard width for low-volume residential streets includes three-foot wide rolled curb.



The City's existing street standards do not require landscape strips or detached sidewalks.



Existing standards include "flare requirements" for many intersections that facilitate traffic flow but result in longer crossing distances for pedestrians.

III. STREET DESIGN CONCEPTS

A key goal in considering the development of revised standards is the emerging concept in street design that has resulted in many cities revising their standards to allow narrower streets and require or encourage design elements that are common in older neighborhoods, such as shorter blocks, a grid pattern of streets instead of cul-de-sacs, landscape strips and detached sidewalks. These concepts and relevant research are discussed in the following pages.

Conventional street design standards often result in wide streets with minimal landscaping and an inhospitable pedestrian environment.

Street Width

It is frequently assumed that narrower streets result in slower travel speeds. This assumption has been supported by research conducted in the City of Longmont, Colorado. Longmont has a population of 72,000 people. Approximately 20,000 police accident reports were reviewed to evaluate the impact of street design in contributing to accidents. The most significant relationship between injury accidents and street design was found with regard to street width and curvature. As street widths widen, accidents per mile increase exponentially.[3]

Additional research has found that[4]:

- Wider streets experience higher average and 85th percentile speeds than narrow streets

- On-street parking significantly affects speeds. On-street parking on both sides of the street defines the "effective" width of the street. High parking densities on narrow streets can dramatically reduce travel speeds. Narrow streets with low parking density have an effective width similar to wide streets with no high parking density. Narrow streets with high parking density have the highest "traffic calming" effect

- Residents' perception of the impact of traffic on quality of life correlate highly with speeds. Where speeds are high, residents are more likely to perceive a degraded quality of life

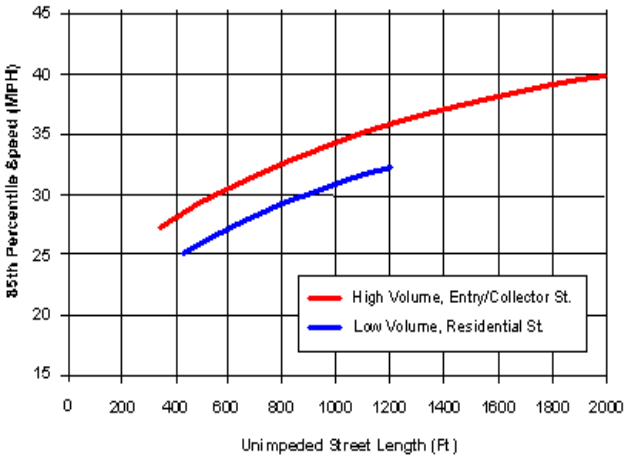
3 Peter Swift, "Residential Street Typology and Injury Accident Frequency" , 2003
4 James Daisa and John Peers, Fehr & Peer, "Narrow Residential Streets: Do They Really Slow Down Speeds", 1997; and Matthew Ridgway, Fehr & Peers, "Residential Streets – Quality of Life Assessment", 1997

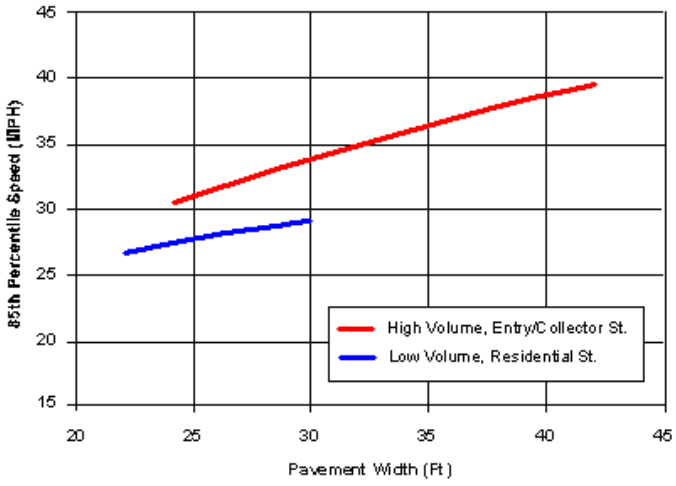
Block Length

The City of San Antonio, Texas, received many complaints regarding speeding in residential areas. Citizens perceived speeding on residential streets as a quality of life issue. Efforts ensued to implement traffic calming measures on existing streets. As part of this effort, data was collected to establish a relationship between travel speeds, unimpeded block length and street width. Unimpeded block length is the distance drivers may travel on a particular street segment without being required to slow or stop.

The study found that streets exceeding 600-800 feet in unimpeded block length were found to have an 85th percentile speed exceeding the speed limit (30 miles per hour on San Antonio residential streets). As a result of these findings, new street standards were developed that limited the unimpeded street length to 900 feet when traffic volume exceeds 500 vehicles per day (and further limits the unimpeded street length to 700 feet in cases). With regard to street width, the data collected in San Antonio also observed that travel speeds increased with wider streets.

Correlation Between Width, Unimpeded Block Length and Speed





Stockton's current street standards allow 1200-1,300-foot block lengths in new subdivisions.

Pedestrian Amenities

Pedestrian travel can be facilitated though the creation of shorter blocks, enhanced crossings and increased connectivity within neighborhoods. Pedestrian safety can be enhanced though reduced travel speeds and improvements to intersections and crossings. The City of Stockton is concurrently developing *Pedestrian Safety and Crosswalk Installation Guidelines* to address standards for the placement and design of pedestrian crossings. For the purposes of the *Street Design Guidelines*, the inclusion of shorter street widths, detached sidewalks and landscape strips will serve to enhance pedestrian travel. Additional design elements that would not be required but should be considered on a case-by-case basis to benefit pedestrians include bulbouts and street furniture.

Design elements such as detached sidewalks and landscape strips can benefit pedestrians.

Bicycle Facilities

Given the size and topography of Stockton, bicycling as a form of transportation may be an attractive option. In urban areas, bicycle travel is typically facilitated through the installation of bicycle lanes (Class II bikeways according to Caltrans standards) on City streets.

Another type of bicycle facility is the separated bicycle path (Class I bikeway), which can also accommodate pedestrian travel. These facilities are usually 10-12 feet wide (minimum of 8 feet) and commonly utilize utility or railroad rights-of-way. American Association of State Highway and Transportation Officials (AASHTO) guidelines recommend that sidewalk bicycle paths be limited to high-speed or heavily traveled roadways having inadequate space for bicyclists and uninterrupted by driveways and intersections for long distances. Caltrans standards for placement of a "Class I" bicycle path along a roadway require a raised barrier or at least five feet of separation between the path and roadway.

The *Street Design Guidelines* require wider sidewalks to accommodate bicycle travel along new arterial and collector streets. Special concerns may arise on streets with frequent intersections or driveways, or high volumes of pedestrians. Special design treatments would be recommended at intersections because motorists are often not accustomed to bicyclists traveling through crosswalks and bicyclists are often less visible to motorists when traveling on an off-street path. Bicycle lanes may be required on arterial roadways in lieu of sidewalk bicycle paths at the discretion of the Public Works Director.

Alternative Types of Intersection Control

Roundabouts are a unique traffic control device that may be useful in a variety of situations. They are often used in lieu of all-way stop control or traffic signals as a means of increasing the capacity of the intersection and improving its safety and operations. Roundabouts have complex design features that will vary from location to location. A generic design standard is included in this document. However, roundabouts should generally have the following characteristics:

- A circular travel lane operating counter-clockwise for collecting and distributing traffic
- A raised center island
- Flared and channelized approaches with splitter islands
- Yield control at all approaches
- Tapered approaches to encourage entering vehicles to travel in the correct direction through the circular travel lane

In general, roundabouts in the United States tend to be used on collector streets and on low-volume minor arterial streets. The use of roundabouts is primarily constrained by traffic volumes and by geometrics. The design of every roundabout should be customized using traffic and geometric information and procedures beyond what is presented in this report. The following examples illustrate cases where a roundabout may be appropriate:

- ***History of Accidents*** **–** Roundabouts are often placed at intersections with a history of accidents, especially head-on collisions and right-angle collisions. A roundabout can help improve safety by substantially reducing the number of conflict points and by simplifying interactions between vehicles

- ***Minimizing Queues –*** Another possible application is a collector/arterial intersection located near an arterial/arterial intersection. A roundabout may be useful here because it can allocate right-of-way between both the arterial and the collector, while minimizing the queues on the approach stemming from the arterial/arterial intersection

- ***Handling Irregular Approach Geometry –*** An intersection with greater than four approaches or with approaches that meet the intersection at irregular angles may be a candidate for a roundabout

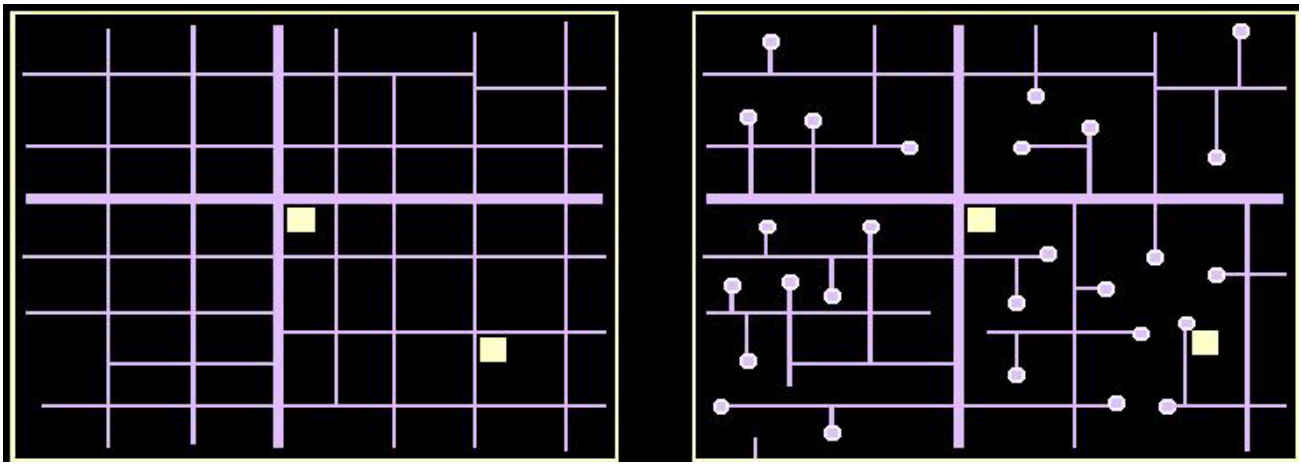
- ***Inexpensive Traffic Control –*** In some cases, traffic volumes at an intersection may be too high to allow acceptable operations with all-way stop control and a traffic signal might be considered inappropriate due to sight distance or other constraints. If ample right-of-way is already available, a roundabout may be considered

- ***High Proportion of U-Turns –*** If an intersection is situated where U-turns are frequent, a roundabout can facilitate those U-turns without adversely affecting the operations of the intersection as a whole

- ***Pedestrian Accommodation –*** Roundabouts represent a trade-off for pedestrians. They can be inconvenient for pedestrians because the crosswalks are set back farther from the intersection. They may also present difficulties for visually impaired pedestrians. However, crossing distances are shorter (fewer lanes) and are broken by pedestrian refuge islands, and pedestrians do not need to wait for a long traffic signal cycle. Pedestrian crash rates are lower in roundabouts than at signalized intersections

Connectivity

The design of new neighborhoods across the nation since the 1950s has typically included street networks that contain wider streets than older neighborhoods and a prevalence of dead-end "cul-de-sacs" to discourage cut-through traffic. This pattern of street development limits overall connectivity and emergency access, and often results in traffic congestion on arterial, collector and some local streets, as traffic is limited to a few through routes. During the past 15 years, some cities have considered adopting street standards that encourage a return to the traditional grid pattern of street design, which includes narrower streets, multiple access routes to disperse traffic, greater street connectivity and an enhanced pedestrian environment. Reducing block lengths for new local and collector streets is a means of increasing street connectivity in Stockton.



A grid pattern of streets (as shown on the left) disperses traffic across multiple streets and provides multiple emergency response routes.

What Are Other Cities Doing?

Many cities have revised their street design standards in recent years to include many of the design concepts discussed on the preceding pages.

Sacramento

The City of Sacramento updated it streets design standards in 1998. The update was in response to a consistent message from residents that previous standards did not result in livable neighborhoods, protests from the development community that the previous standards were too rigid, and City staff's desire to improve the clarity of the design standards.

Many neighborhood groups had complained that residential traffic volumes and speeds had contributed to a decline in quality-of-life. In response, the City initiated an aggressive program of traffic calming to reduce travel speeds on existing streets with identified problems. However, the City recognized that this program required substantial resources and could only address the existing street system.

The development of new street standards arose from a desire to improve the design of streets at the outset. Additionally, it was felt by many that the "best" streets in Sacramento included elements such as detached sidewalks and landscaped medians that were no longer allowed in the standards.

In developing the new standards, City staff adopted certain guidelines for the development of the new street standards, with regard to right-of-way width, width of parking spaces, sidewalk design, Fire Code requirements and tree planter specifications. Some trade-offs were necessary; for example, may residents and developers wanted narrower streets while the fire department wanted wider streets. Residents wanted vertical curbs while developers wanted rolled curbs. Others advocated for wider landscaped strips and bicycle lanes, while developers desired to limit the width of the overall right-of-way.

Following the development of draft standards and a public participation process, the City of Sacramento developed new standards that included:

- The minimum width of local residential streets was reduced from 36 feet to 30 feet
- Flexibility in the design of new streets was introduced by providing options. For example, sidewalk and planter strips were designated as minimums and can be increased at the request of the developer
- For collector streets, landscaped medians are required if the projected traffic volume exceeds a specific threshold
- Parking will be included based on the adjacent land use and requires an additional 7 feet per direction
- Bicycle lanes are required on arterial streets
- Planter strips are required on all streets, with minimum widths designated that can be increased by the developer
- Traffic calming devices such as bulbouts or traffic circles are encouraged to enhance the pedestrian environment

Eugene, Oregon

The City of Eugene adopted a Local Street Plan in 1996 that responded to desires for narrower streets, shorter blocks, greater street connectivity and a desire for the reintroduction of elements such as planter strips, detached sidewalks and alleys, commonly found in older neighborhoods, into new subdivisions.

The new street standards included a reduction in the maximum block length for a residential street from 1,200 feet to 600 feet. The new standard was based on the existing grid pattern found in Eugene's older neighborhoods, which contained blocks measuring 400 feet by 600 feet.

Other key elements of the new standards for local streets included:

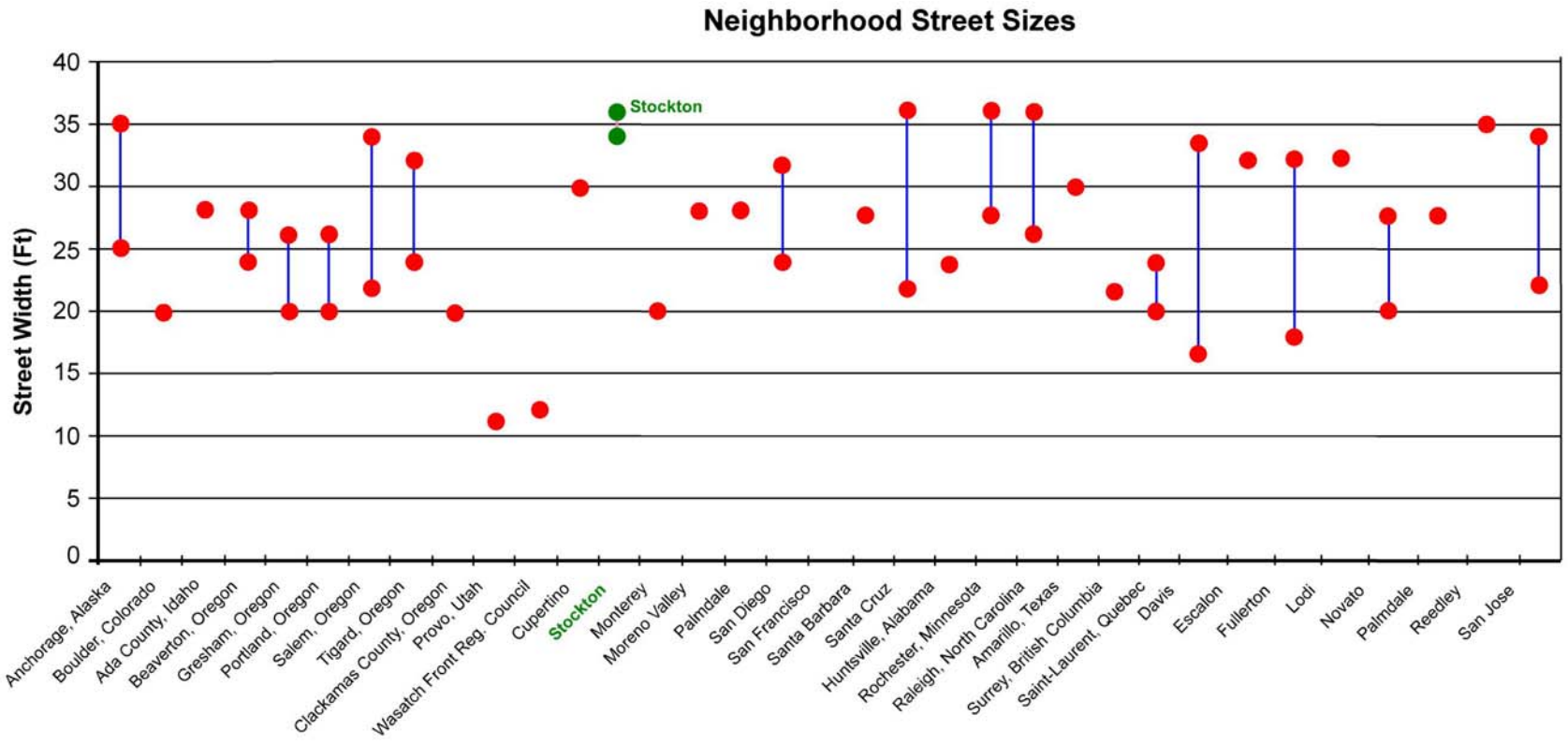
- A range of local street classifications, based on expected traffic volume, that included minimum widths varying from 21 feet for an "access lane", carrying less than 250 average daily traffic (ADT), to 34 feet for a medium-volume residential street carrying up to 750 ADT. Residential alleys were permitted with a width of 12 feet for one-way traffic or 16 feet for two-way traffic

- Local commercial and industrial streets would have a width of 30 to 44 feet

- Street connectivity was required and cul-de-sacs were discouraged unless necessitated by topographic or other physical barriers; if cul-de-sacs were necessary, then bicycle and pedestrian connections were required, wherever possible, to connect the ends of cul-de-sacs

Other Cities

As shown on the following page, Stockton's residential street width requirements exceed that of many other cities.



Source: Neighborhood Traffic Management Survey, Ransford S. McCourt, 1996 ITE District 6, Compendium of Technical Papers. City of Stockton.

IV. PROPOSED STREET STANDARDS

The proposed street standard revisions are summarized on the following pages. Key changes are indicated below.

Local Streets

Key revisions to the local street standards are:

- The minimum width of local residential streets would be reduced to 30-32 feet depending on the expected traffic volume. Current standards require 34-36 feet
- Landscape strips, separating the curb from the sidewalk, would be required on local residential streets
- Maximum block length would be reduced from 1,200 feet to 600 feet for low-volume residential streets and from 1,300 feet to 800 feet for medium-volume residential streets
- Rolled curbs would no longer be permitted
- Traffic circles would be required at intersections of two local streets where the ultimate combined volume will exceed 1,000 vehicles daily or the unimpeded distance on any of the approaches not subject to stop control exceeds 600 feet. The Public Works Director would have discretion to waive this requirement on a case-by-case basis

Collector Streets

Key revisions to the collector street standards are:

- Landscape strips, separating the curb from the sidewalk, would be required on most new streets
- Maximum block length would be reduced from 1,300 feet to 1,000 feet for collector streets
- Bicycle travel could be accommodated on sidewalks along new collector streets

- Bulbouts would be encouraged at intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections

- Traffic circles would be required where a residential collector intersects a local street and the ultimate combined volume will exceed 1,000 vehicles daily or the unimpeded distance on any of the approaches not subject to stop control exceeds 600 feet. The Public Works Director would have discretion to waive this requirement on a case-by-case basis

- A roundabout would be required where two collector streets intersect and the ultimate combined entering traffic volumes will exceed 2,000 vehicles daily. A traffic signal may be required in lieu of a roundabout at the discretion of the Public Works Director

Arterial Streets

Key revisions to the arterial street standards are:

- Bulbouts would be allowed at some intersections to reduce the crossing distance for pedestrians and discourage speeding through intersections

- Bicycle travel could be accommodated on sidewalks along new arterial streets

Table 2: Proposed Street Standards

Item	Local				Collector		Minor Arterial	Major Arterial
	Low Volume Residential	Medium Volume Residential	Commercial	Industrial	Residential (Back-Up)*	Non-Residential		
Average Daily Traffic (ADT)	0 - 750	750 - 1,500	< 5,000	< 5,000	1,500 - 5,000	< 13,000	< 25,000	
Street Characteristics								
Number of Travel Lanes	2	2	2	2	2	2	4	6-8
Width (curb-to-curb) (feet)	30	32	34	40	26	48	66	90-112
On-Street Parking Allowed?	Yes	Yes	Yes	Yes	No	Yes	No	No
Parking Lane Width (feet)	7	7	7	8	None	8	None	None
Travel Lane Width (feet)	8	9	10	12	13	11	11-14	11-15
Left-Turn Lane Width (feet)	None	None	None	None	None	10	10-12	10-12
Raised Median (feet)	None	None	None	None	None	None	14	14
Block length (feet)	600	800	800	800	1,000	1,000	1,300	1,300
Sidewalk width (feet)	4	4	4 (detached) / 4.5 (attached)		8 (min.)	8 (min.)	8 (min.)	8 (min.)
Sidewalk Bike Path?	No	No	No	No	Yes	Yes	Yes**	Yes**
Detached Sidewalk Required?	Yes	Yes	Optional	Optional	Yes	Yes	Yes	Yes
Landscape Strip Width (feet)	6	6	6 / 5.5***		15 (including sidewalk)			

* Residences do not face collector or have driveways on collector.
** Bicycle lanes may be required in lieu of sidewalk bicycle paths at the discretion of the Public Works Director.
***6 ft. (detached sidewalk); 5.5 ft. (attached sidewalk).

Table 3: Comparison of Existing Versus Proposed Street Standards (Local Streets)

Street Type	Scenario	Curb-to-Curb Width (feet)	Planter Strip	Bike Lanes Required	On-Street Parking Allowed	Median	ROW (feet)
Local: Low-Volume Residential [5]	Existing	34 / 36 [6]	No	No	Yes	No	50
	Proposed	*30*	*Yes (6 feet)*	*No*	*Yes*	*No*	*50*
Local: Medium-Volume Residential [7]	Existing	36	No	No	Yes	No	60
	Proposed	*32*	*Yes (6 feet)*	*No*	*Yes*	*No*	*52*
Local: Non-Residential [8]	Existing	40	No	No	Yes	No	64
	Proposed	*34 (Comm.) / 40 (Indust.)*	*Optional (6 feet)*	*No*	*Yes*	*No*	*54 (Comm.) /60 (Indust.)*

[5] Low-volume residential local streets would carry up to 750 vehicle trips per day.
6 Curb-to-curb width for existing street standards includes rolled curb. For new streets, measurement is from curb to curb. 34-foot width is permitted if average daily traffic (ADT) is 400 or less.
[7] Medium-volume residential local streets would carry up to 1,500 vehicle trips per day.
[8] Non-residential local streets would carry up to 5,000 vehicle trips per day.

Table 4: Comparison of Existing Versus Proposed Street Standards (Collector Streets)

Street Type	Scenario	Curb-to-Curb Width (feet)	Planter Strip	Bike Lanes Required	On-Street Parking Allowed	Median	ROW (feet)
Collector: Residential	Existing	40-64	Optional (4 feet)	No	No	No	60-84
	Proposed	*26*	*Yes (15 feet including 8 foot minimum sidewalk)*	*No*	*No*	*No*	*56*
Collector: Non-Residential	Existing	40-64	Optional (4 feet)	No	Yes	No	60-84
	Proposed	*48*	*Yes (15 feet including 8 foot minimum sidewalk)*	*No*	*Yes*	*Yes*	*78*

Table 5: Comparison of Existing Versus Proposed Street Standards (Arterial Streets)

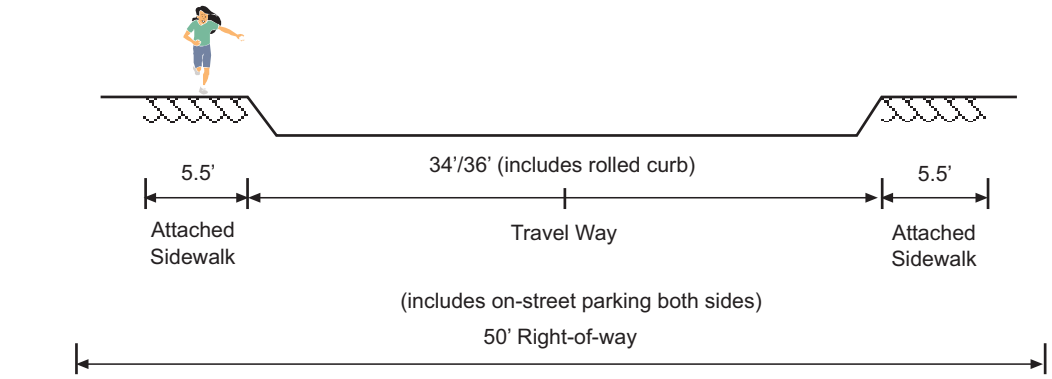
Street Type	Scenario	Curb-to-Curb Width (feet)[1]	Planter Strip	Bike Lanes Required	Parking	Median	ROW (feet)
Minor Arterial	Existing	64-90	No	No	No	No	84-110
	Proposed	*66*	*Yes (15 feet including 8 foot minimum sidewalk)*	*If included in Bicycle Plan*	*No*	*Yes*	*96*
Major Arterial	Existing	114	Yes (16 feet)	No	No	Yes	134
	Proposed	*90*	*Yes (15 feet including 8 foot minimum sidewalk)*	*If included in Bicycle Plan*	*No*	*Yes*	*120*

Cross Section Diagrams

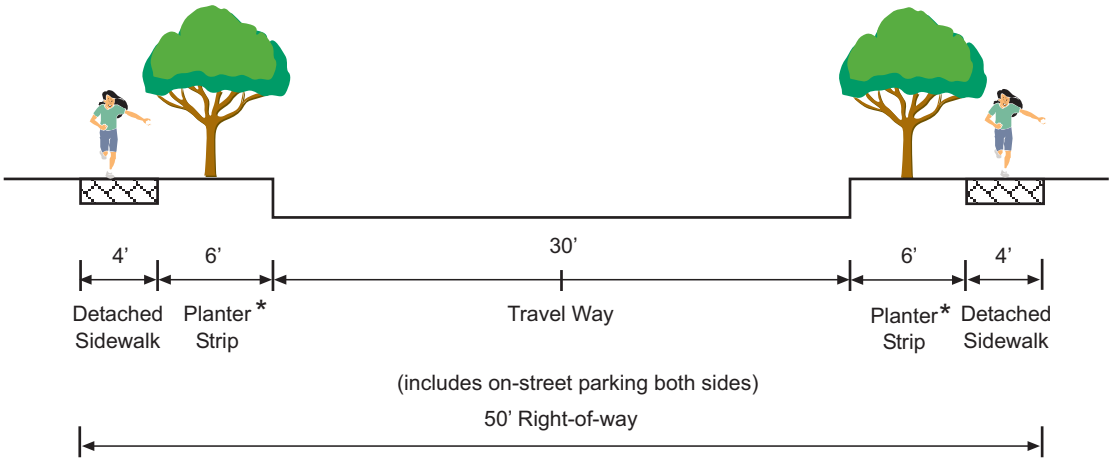
Figures A through H on the following pages contain cross sections portraying the required elements within each street classification under the proposed standards and a comparison with the elements and width requirements contained under the current standards.

LOCAL STREETS

Low Volume Residential



Existing



Proposed

* Width includes vertical curb.

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April 2003
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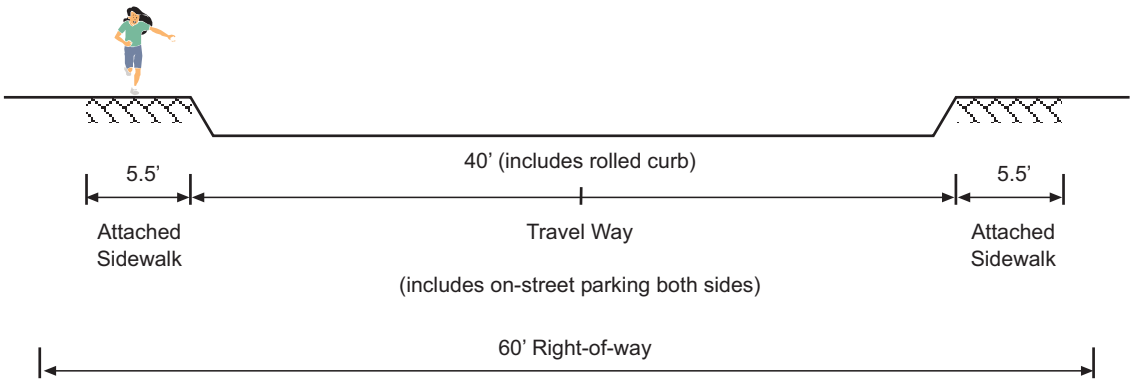
FIGURE A

LOCAL STREETS

Medium Volume Residential



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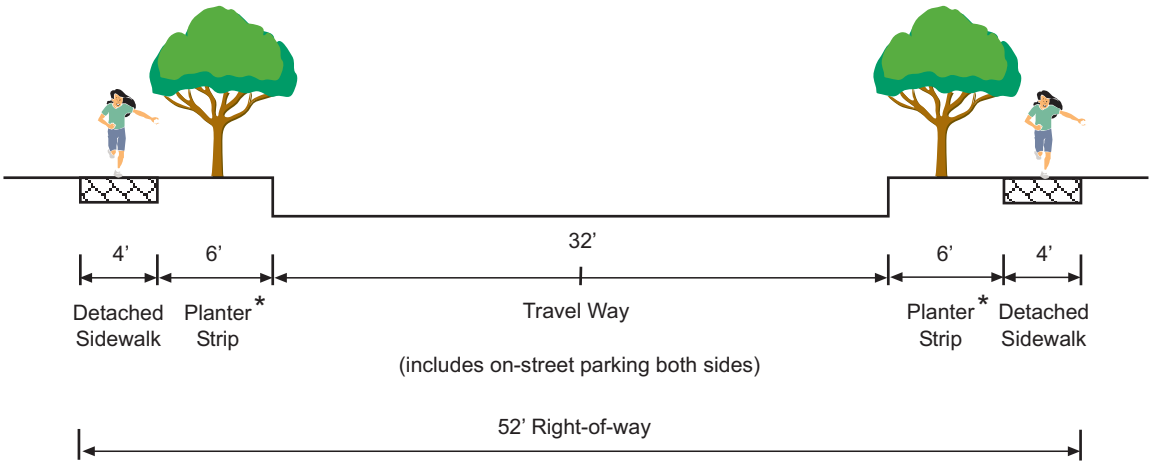

Proposed

* Width includes vertical curb.

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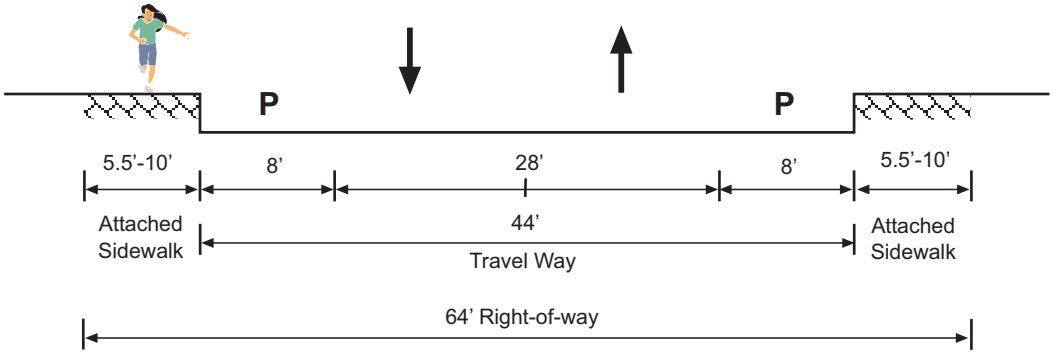
City of Stockton

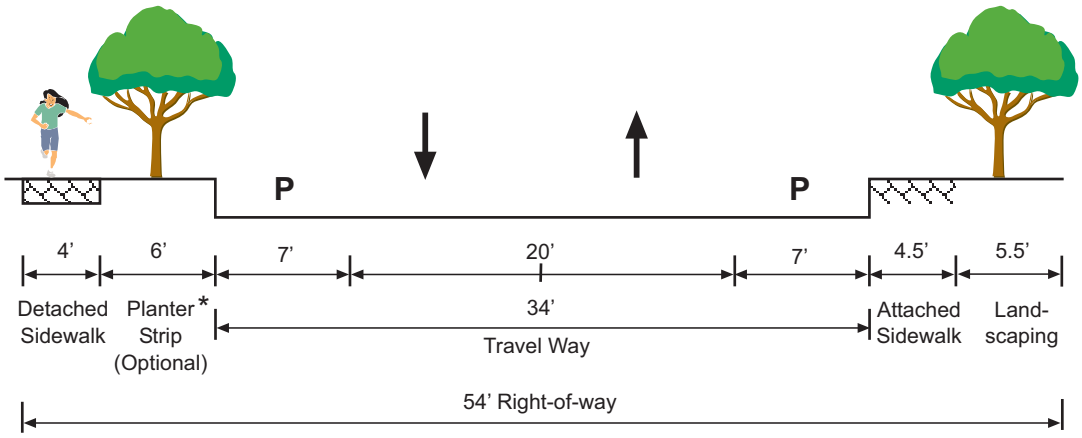
DRAFT STREET STANDARDS

FIGURE B

LOCAL STREETS
Commercial



Existing



Proposed

* Width includes vertical curb.

P = Parking

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FIGURE C

September 2003
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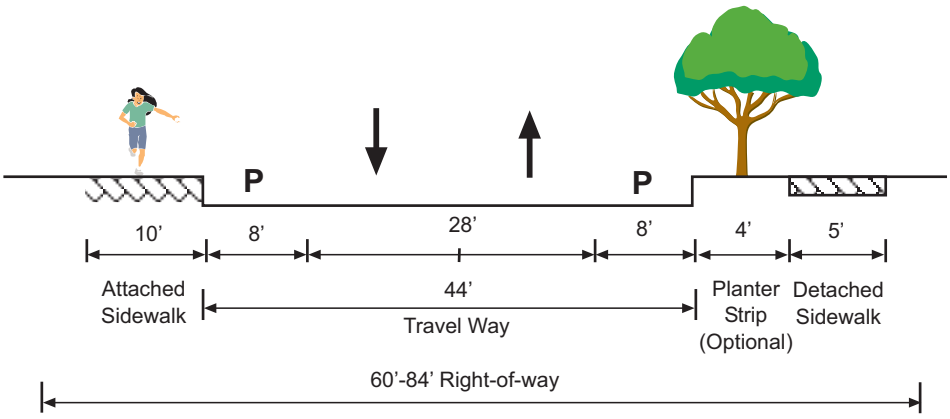
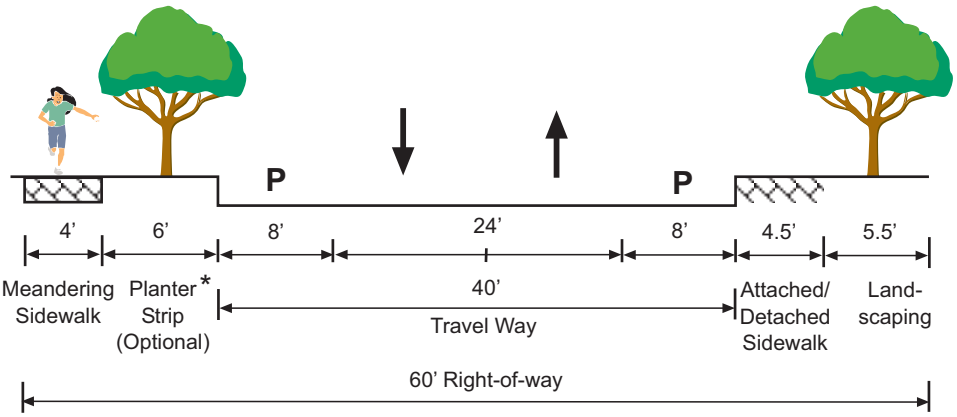
LOCAL STREETS

Industrial



Existing



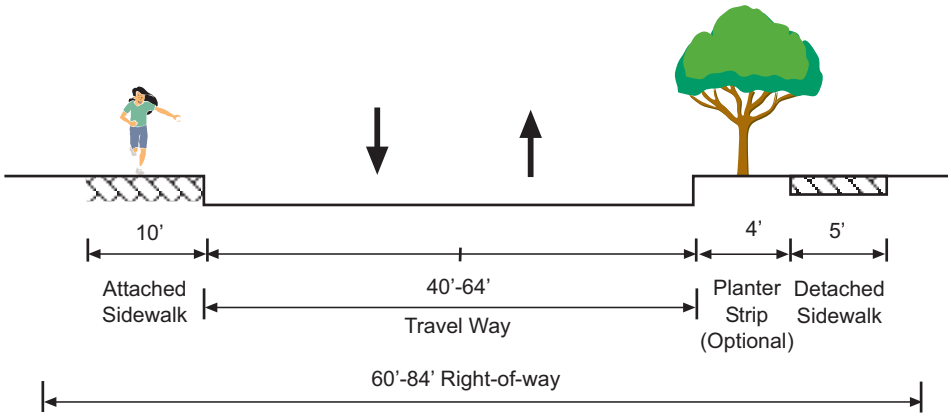
Proposed

* Width includes vertical curb.

P = Parking

COLLECTOR STREETS

Back-up Residential



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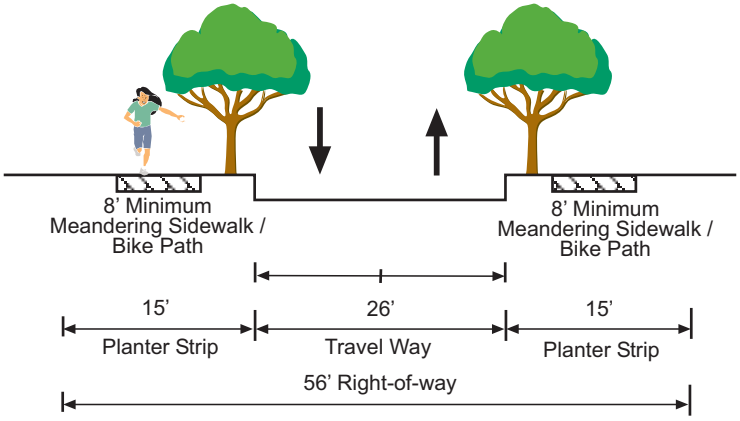
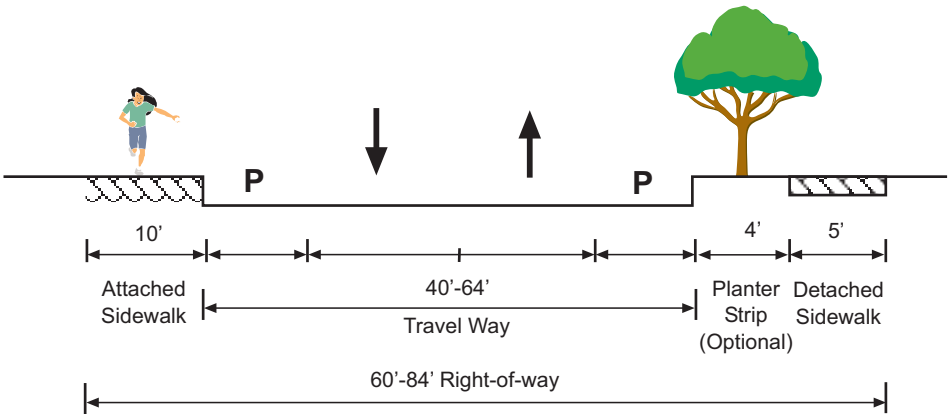


Proposed

* Width includes vertical curb.

COLLECTOR STREETS

Non-Residential



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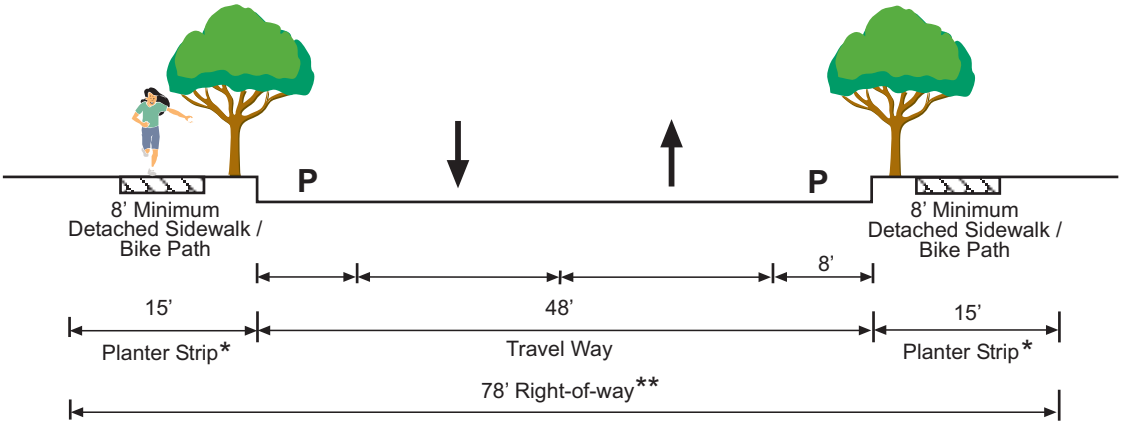

Proposed

* Width includes vertical curb.

** NOTE: Intersections to be flared for left-turn lanes

P = Parking

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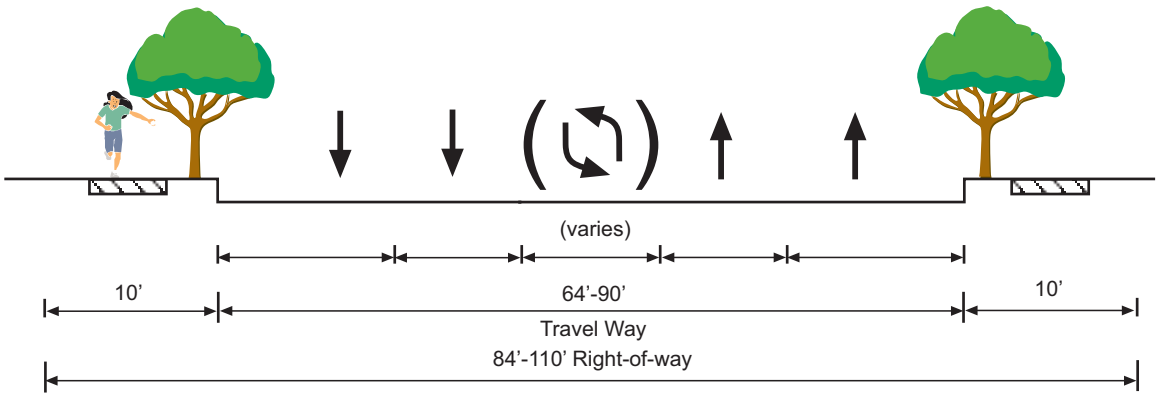
City of Stockton

DRAFT STREET STANDARDS

FIGURE F

ARTERIAL STREETS

Minor Arterial



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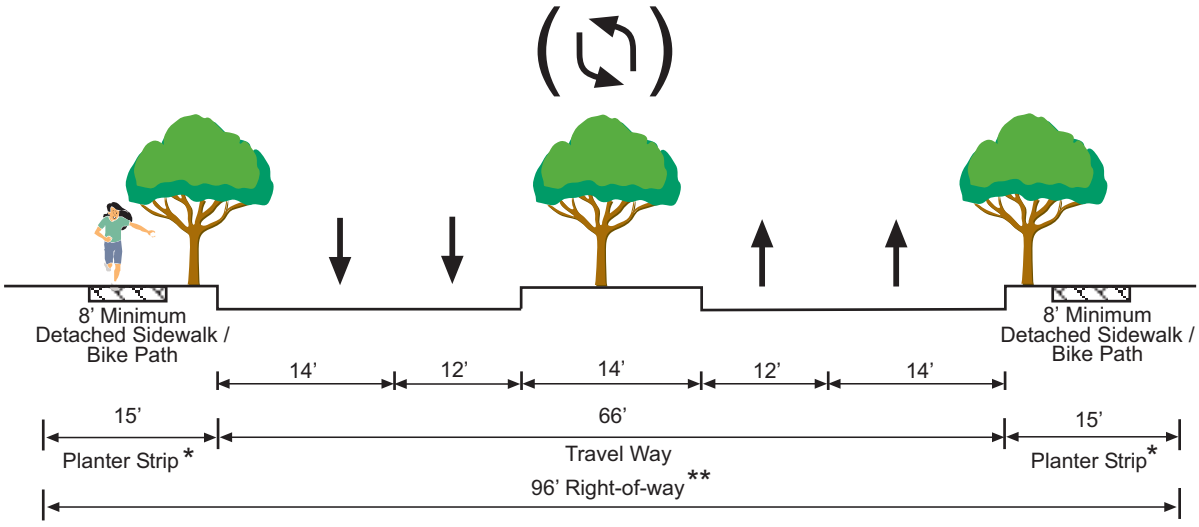

Proposed

* Width includes curb.

** NOTE: Intersections to be flared to allow for left-turn and/or right-turn lanes.

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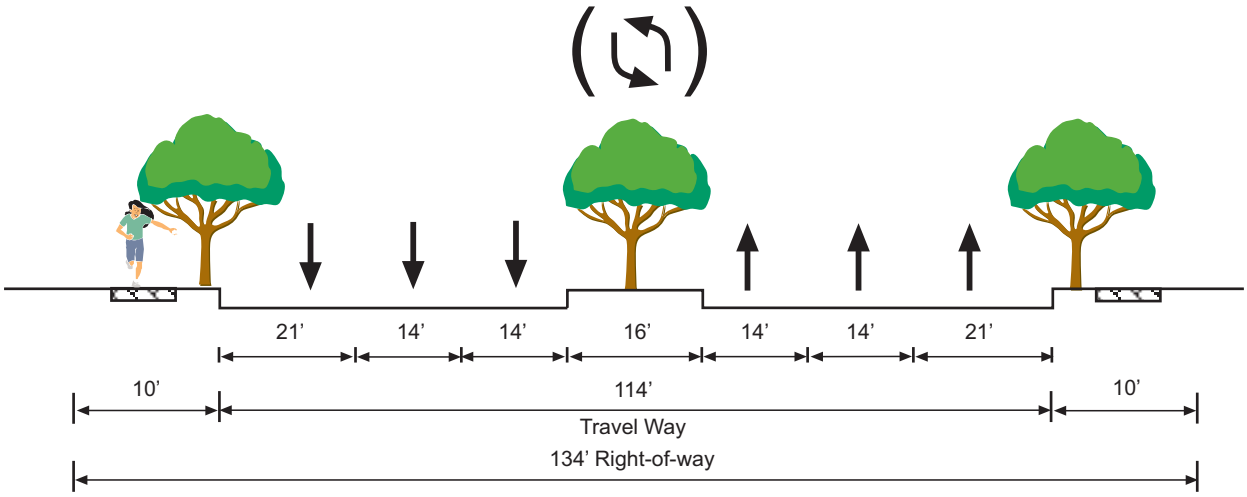
City of Stockton

DRAFT STREET STANDARDS

FIGURE G

ARTERIAL STREETS

Major Arterial



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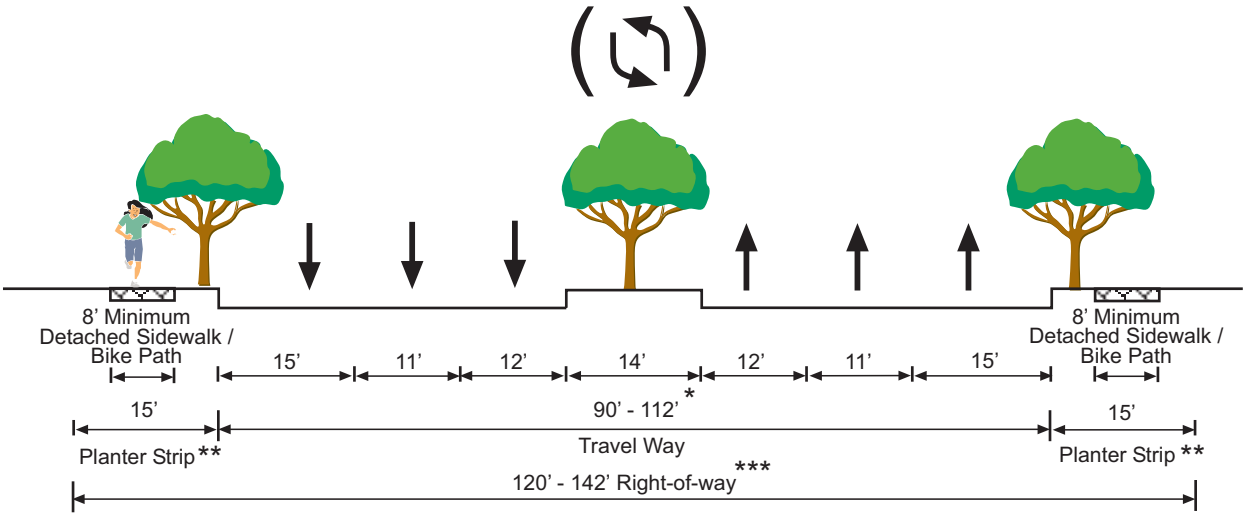

Proposed

* 112-foot travel way would apply if eight travel lanes are provided.

** Width includes curb.

*** NOTE: Intersections to be flared to allow for left-turn and/or right-turn lanes.

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City of Stockton

DRAFT STREET STANDARDS

FIGURE H