

CHAPTER VI - STREET DESIGNATIONS AND STANDARDS

A. GENERALIZED STREET AND HIGHWAYS CROSS SECTIONS/TYPES

These generalized cross sections represent fully dedicated and improved streets by designation and type.

The City's official standard street dimensions are depicted in the Department of Public Works Standard Plan, which reflects street standards adopted by the City Planning Commission, as recommended by the City's Street Standards Committee, pursuant to LAMC 17.05-A. City Council may by ordinance adopt specific standards for individual streets which differ from these generalized cross sections. Illustrative cross sections are found on pages 70 through 74. Explanatory notes are found on p. 76. Highway cross sections which accommodate Class II bikeways and experimental commuter bikeways are found in the City Bicycle Plan (Chapter IX).

1. Major Highway-Class I ^{(1) (2)(4)} • 126' ROW
 - 12' sidewalk/pkwy. + 13' curb lane
 - 6 full-time through lanes
 - 2 part-time parking lanes
 - 1 median/left turn lane

NB. The standard Major Highway-Class I cross section can accommodate transit priority treatment without lane or roadway modification. Peak-hour parking restrictions (TANS) may be required.

2. Major Highway-Class II ⁽¹⁾⁽⁴⁾
 - a. standard ⁽²⁾ • 104' ROW
 - 12' sidewalk/pkwy. + 13' curb lane
 - 4 full-time through lanes
 - 2 part-time parking lanes
 - 1 median/left turn lane

NB. The standard Major Highway-Class II cross section can accommodate transit priority treatment without lane or roadway modification. Peak-hour parking restrictions (TANS) may be required.

- b. pedestrian priority segments ⁽³⁾ • 17' sidewalk/pkwy. + 8' curb pkg.
 - 4 full-time through lanes
 - All-day parking
 - 1 median/left turn lane
3. Secondary Highway ⁽¹⁾
 - a. standard ⁽²⁾ • 90' ROW
 - 10' sidewalk/pkwy. + 19' curb lane
 - 4 full-time through lanes
 - All-day parking
 - 1 median/left turn lane
 - b. pedestrian priority segments ⁽³⁾ • 15' sidewalk/pkwy. + 8' curb pkg.
 - 4 full-time through lanes
 - All-day parking

NB. Left turn lanes may be necessary at intersections with major or secondary highways, requiring removal of curb parking on both sides of the street and both sides of the intersection for the entire length of the standard flare section.

4. Transitional Extensions

Where a designated major highway (Class I or II) or secondary highway crosses another designated highway and then changes in designation to a street of lesser standard width, the street of lesser standard width shall be widened on both sides from the intersection and tapered over the entire length of the standard flare section.

5. Collector Streets

- a. standard • 64' ROW
 - 10' sidewalk/pkwy.
 - 2 full-time through lanes

- 2 full-time parking lanes
- b. industrial
 - 64' ROW
 - 8' sidewalk
 - on-street parking restrictions
 - 2 full-time through lanes
 - Minimum 35' curb radius
- c. hillside
 - 50' ROW
 - 5' sidewalk
 - 2 full-time through lanes
 - 2 full-time parking lanes

6. Transit Priority Street Treatment

Major highways designated as Transit Priority streets shall include the following features:

1. Peak hour parking restrictions (Tow Away/No Stopping)
- b. Minimum thirteen (13) ft. curb lane
3. Traffic signal modifications (queue jumping, signal preemption or other)
- d. For primary transit priority streets: bus-only or bus-only/right turn-only curb lanes during peak hours may be installed in addition to signal modifications.

7. Pedestrian Priority Street Segment Treatment

Major-Class II or Secondary Highway street segments designated as Pedestrian Priority shall include the following features:

1. Wide sidewalks (15-17 ft. width)
- b. Curb side parking, even during peak hours
3. Wide crosswalks (15 ft. width minimum)
- d. Traffic signal modifications to ensure longer pedestrian crossing time, where warranted.

Note that certain Community Plans and Specific Plans have established modified designations and/or standards for some specific highways or highway segments. These are listed in Appendix D of this Element.

Notes:

- (1) Where major or secondary highways are divided by a raised and/or landscaped median and are designated as divided highways, the width of the raised median shall not be considered as part of the highway for the purpose of calculating the width of the half-street dedication or the width of the half-street improvements.
- (2) Minimum sidewalk/parkway width on all block faces adjacent to a fixed rail portal or platform shall be 15'. Easements may be required in addition to the dedication indicated to achieve this width.
- (3) Pedestrian priority segments may include up to 3' of landscaped parkway at mid block as part of the 15'-17' sidewalk/pkwy. width; refer to Streetscape Guidelines (Section VI-C. of this Chapter).
- (4) Flare sections on Major Highway-Class I or -Class II streets may be required at intersections with other major highways, in order to provide dual left turn lanes. An additional ten (10) feet of right-of-way would be necessary with a flare section designed to City standard.

B. SELECTION/PERFORMANCE CRITERIA FOR STREET DESIGNATIONS

1. The street designations and generalized cross sections presented in Section VI-A. above indicate configurations based on full dedication and improvement. It is acknowledged that complete implementation of the Transportation Element's highway and freeway system will not occur during the planning horizon of this Element (Year 2010). In order to guide incremental implementation, the following minimum performance criteria are set forth for each street designation, expressed in both laneage and vehicular volume capacity for all arterial streets with intersections operating at

level of service D or worse during peak hours; selection criteria for designations are expressed in average daily trips (ADT):

a. Major Highway - Class I

Selection Criteria: more than 50,000 ADT

Performance Criteria:

- four travel lanes in each direction during peak hours
+ left turn lanes at signalized intersections
- 3200 vehicles per hour (vph) in each direction during peak hours

b. Major Highway - Class II

Selection Criteria

- Major highways (Class II) should typically be located one mile apart in a grid system.
- 30,000 to 50,000 ADT

Performance Criteria:

- three travel lanes in each direction during peak hours
+ left turn lanes at signalized intersections.
- 2400 vph in each direction during peak hours

c. Secondary Highway

Selection Criteria:

- Secondary highways supplement the through-traffic carrying characteristics of major highways. They should typically be located one mile apart midway between major highways in a grid system.
- 20,000 to 30,000 ADT

Performance Criteria:

- two travel lanes in each direction during peak hours
+ left turn lanes at signalized intersections.
- 1400 vph in each direction during peak hours

d. Collector Streets

Selection Criteria:

- Collector streets are intended to assist local traffic flow to major and secondary highways. They should be located at no greater than one quarter mile intervals between parallel major or secondary highways in a grid system whenever practicable. Greater flexibility in designation of collector streets is called for in hillside areas and in areas planned exclusively for low density residential use as there may be limited or no need for collector streets in these areas. Collector streets are also necessary around the perimeter of school sites.
- Industrial collector streets are intended to assist the flow of truck traffic within industrial districts to major and secondary highways. The roadway should be slightly wider than standard collector streets. On-street parking is to be discouraged, and a wider curb radius is required to facilitate turning movements.
- Hillside collector streets perform the same function as standard collector streets. They are appropriate for use in low density districts located in designated Hillside Areas, as depicted in Bureau of Engineering Basic Grid Map N^o. A-13372. The roadway width should be approximately the same as for collector streets in

flatlands, but the overall right-of-way width is reduced through elimination of parkway.

- up to 10,000 ADT

Performance Criteria:

- one travel lane in each direction
- 600 vph in each direction
- 500 vph in each direction for hillside collectors

e. Alleys

Alleys parallel to major and secondary highways provide an essential service function, enable limitations on curb cuts, and assist traffic flow on arterial streets. Alleys should be required at the rear of all lots which front a major or secondary highway.

f. Sidewalks

A minimum sidewalk width of ten (10) feet is necessary for all major and secondary highways for pedestrian safety and disabled access, whether the roadway is fully improved to standard or not.

NOTE: In the interim period prior to full dedication and improvement to established standards, streets may require special treatment in order to achieve the minimum performance standards set forth herein. The minimum performance standards set forth above apply to all street designations regardless of differentiated type (e.g. transit priority, commuter bikeway) with the exception of pedestrian priority street segments and one-way couplets.

2. Selection Criteria for other Designations/Types

a. Scenic Highways

Any proposed Scenic Highway should correspond to one of the following basic types:

- (1) An arterial street or state highway which traverses area(s) of natural scenic quality in undeveloped or sparsely developed areas of the City; OR
- (2) An arterial street which traverses urban area(s) of cultural, historical or aesthetic value which merit protection and enhancement.

Specific criteria to be considered in the evaluation of proposed scenic highways include:

- (3) Visual impact of scenic features or area,
- (4) Type/angle/duration of view + location of viewer,
- (5) Vegetation (type and extent), and/or
- (6) Scenic characteristics

2. Scenic Byways

Any proposed Scenic Byway to be designated by a Community Plan shall correspond to one of the following basic types:

- (1) A non-arterial street which traverses an area of natural scenic quality in an undeveloped or sparsely developed area of the City; OR
- (2) A non-arterial street which traverses or borders significant Open Space (as depicted in Figure 6-1 of the Citywide General Plan Framework).

3. Transit Priority Streets

Any proposed transit priority street shall meet the following minimum selection criteria:

- (1) Designated major highway - (Class I or II); and
- (2) Minimum performance standard in regard to travel lanes during peak hours, as prescribed in Section B. 1. above, per respective designation; and
- (3)
 - a. Served by a minimum of three MTA and /or municipal bus lines and with maximum ten (10) minute headways during peak hours on at least one MTA bus line serving the proposed alignment OR
 - b. Served by a minimum of three MTA and /or municipal bus lines and with maximum five (5) minute headways during peak hours on at least one MTA bus line serving the proposed alignment for primary transit priority treatment; and
- (4) Minimum street alignment length of one and one-half (1.5) miles [2.3 km]; this minimum length need not be located entirely within the boundaries of the City.

d. Pedestrian Priority Street Segments

Any proposed pedestrian priority street segment shall meet the following minimum selection criteria:

- (1) Located within a CGPF-identified Community Center, Neighborhood District or a Mixed Use corridor node; or within an adopted Pedestrian Oriented District, established pursuant to LAMC 13.07; and
- (2) Not located along any street alignment designated as a Major Highway- Class I or as a Transit Priority Street or Future Transit Priority Street (Map B.2 of this Element); nor along an arterial street included in the Los Angeles County CMP Highway and Roadway System; and
- (3) Street segment length does not exceed five (5) blocks or approximately 0.6 mile [1 km]; and
- (4) Area exhibits variety of commercial uses and activities characterized by ground floor retail and service uses oriented to pedestrians along the sidewalk.

3. STREETScape - DESIGN OBJECTIVES, STANDARDS AND GUIDELINES

The following streetscape design objectives, standards and guidelines are hereby established for major and secondary highways in each of the three types:

1. Pedestrian Priority Street Segments
2. Transit Priority Streets
3. Standard (vehicle priority) Streets

See pages 82 through 84 for typical cross sections and plan views of major and secondary highways of these respective types.

As Pedestrian Priority Street segments are designated in the Community Plans, standards/ guidelines specific to each such segment may be prepared and adopted which will supersede these generic standards and guidelines. In addition, streetscape plans associated with specific plan ordinances may be prepared and adopted for individual streets and/or street segments. Such streetscape plans also supersede these generic standards and guidelines. Guidelines presented in this chapter of this Element may be further refined as part of this Element's implementation programs, as appropriate. For reference, those implementation programs listed in Chapter VII of this Element which relate to streetscape

improvements are: P1, P 6, P 8, P 13, P15, P 21, P30, P 35, and P 37.

Note: Streetscape enhancements - such as the provision of additional pedestrian amenities, or greater variety and extent of parkway planting - invariably lead to increased maintenance demands and costs.

Interpretation Note:

* guideline(s): to be implemented in a flexible manner with consideration to local conditions and constraints; guidelines must, however, be consulted in the design of public street improvements.

* standard(s): mandatory implementation in the design of public street improvements

1. Pedestrian-Priority Street Segments

a. Crosswalks

1. Design Objectives

- (1) To create an identifiable zone dedicated to pedestrians.
- (2) To increase safety in crossing the street.
- (3) To provide warning to motorists as they approach a pedestrian zone.

ii. Transportation Element Standard

- (1) Minimum 15 ft. wide crosswalk (20 ft. width recommended).
- (2) Special paving (such as bricks or stamped asphalt) or alternatively, bold/extensive striping is required for crosswalks at controlled intersections.

2. Curb Ramps

1. Design Objectives

- (1) To improve slope/texture/ transition to pavement and sidewalk.
- (2) To accommodate visually and physically impaired persons, including wheel chairs, baby carriages, and luggage carts.

ii. Transportation Element Guideline

- (1) Expanded design standards are needed for optimal design/texture for detection by the blind and utilization by disabled in wheelchairs; these improvements must also comply with mandatory State and Federal standards.

3. Sidewalks

1. Sidewalk Dimension

(1) Design Objectives

- To promote pedestrian activity.
- To promote safety by creating greater distance between the pedestrian and motor vehicles.
- To allow more space for street furniture and other amenities including outdoor dining adjacent to restaurants.

(2) Transportation Element Standards

- Minimum 17 ft. width (sidewalk/parkway combined) for major highways.
- Minimum 15 ft. width (sidewalk/parkway combined) for secondary highways.

ii. Sidewalk Paving

(1) Design Objectives

- To further define the space set aside for pedestrians.
- To a special theme or follow an existing one where a precedent

has been set.

- To select paving materials compatible with those used in buildings within a certain community, which might have significant historic and/or cultural value.

(2) Transportation Element Guidelines

- Alternative color and/or texture such as stamped concrete and exposed aggregate.
- Integrating other paving materials such as brick or combination of standard grey concrete and brick borders; or a permeable walkable surface such as decomposed granite or interlocking bricks in order to improve growing conditions for the street trees and reduce the likelihood of root damage to the sidewalks.
- Special patterns in different parts of the City.

d. Parkways - Area between the sidewalk and the curb

1. Design Objective

- (1) To devote more area to drought tolerant landscaping in order to create an attractive and pleasing balance between the hardscape and softscape. This area which is often presently paved with concrete and includes tree wells, light poles and traffic signs, should also be landscaped with street trees, shrubs and ground covers as well. The parkway landscaping should be interrupted at certain intervals in order to provide the pedestrian with access into and out of the sidewalk.

ii. Transportation Element Guidelines

- (1) In addition to street trees, parkways should be planted with ground cover as well. The ground cover is, whenever practicable, not to be planted within 3 feet of the root crown of any street tree. Furthermore, in an effort to eliminate wet sidewalks and potential inconvenience/hazard to pedestrians, the parkways are to be irrigated with bubblers.
- (2) Minimum 2 ft. wide planting area for Secondary highways, minimum 3 ft. wide planting area for Major Highways Class II in commercial districts along pedestrian priority street segments;
- (3) Due to the size of the root ball of the trees for the parkways, street tree wells will extend beyond this planting area. A five foot by five foot (5' x 5') tree well is recommended. Permeable tree grates are to be used in order to reclaim that portion of the sidewalk occupied by the tree well. Tree grates shall be adjustable, with knock-out rings to allow for the proper and uniform growth of the trunk as the tree continues to mature.
- (4) On those segments of the street where on-street parking is allowed, a street/sidewalk connector path (a two feet by two feet broom-finished concrete path, constructed within the landscaped parkway) should be installed in order to provide pedestrian access between the street and the sidewalk. The "street/sidewalk connector paths" are to provide clear access between the street and the sidewalk at all times. Therefore, all street furniture shall be installed in between these paths in such a way that the street-sidewalk access is not blocked. Furthermore, on-street parking spaces and/or meters must be adjusted to provide the pedestrian with clear and visible access to the connector path. The above referenced connector paths are to be installed 15 feet on center maximum. No connector path shall be installed closer than 20 feet from the "limit line" or the approach line of the pedestrian crosswalk.
- (5) In an attempt to prevent jay-walking and more importantly, to limit and direct all of the street crossing to the pedestrian crosswalks, in those segments of the street where on-street parking is prohibited, the above referenced connectors shall not be installed.
- (6) Parkway related shrub and ground cover are listed below. The recommended trees for parkway planting are indicated in the street tree subsection which follows.

Shrub:

Botanical Name

Common Name

Quantity/Spacing

Size

Lavandula angustifolia English Lavender 8" o.c. 1 Gal.
'Munstead'

Features: Small evergreen shrub with a slow growth to 18" tall and deep lavender blue flowers with grayish aromatic foliage.

Comments: This shrub is to be planted along the street curb and sides of the parkway (excluding the side adjacent to the sidewalk) at the spacing indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 4-24.

Ground Cover:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Aptenia cordifolia	Red Apple	12" o.c.	flats

Features: A perennial ground cover, it grows about 6-8 inch high and spread to 2 feet. Leaves are oval, bright green and fleshy. Purplish red, inch-wide ice plant flowers in spring and summer.

Comments: After the planting of the street trees and the shrubs, the balance of the parkway is to be planted with this ground cover at the spacing indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 17, 21-24. See also subsection f.vi. (Planters) for an alternative to parkway planting.

e. Signalization

1. Design Objectives

- (1) To assist slower pedestrians, especially children, the disabled and the elderly to cross the street.
- (2) To increase safety and security.

ii. Transportation Element Guideline

- (1) A longer time period is needed for pedestrian crossing in pedestrian oriented areas; phasing of pedestrian actuated signals should be designed for maximum pedestrian speed of 2 ft./second.

f. Street Furniture

Note that virtually all street furniture require the issuance of a revocable permit from the Bureau of Street Services prior to placement in the public right-of-way.

1. Benches

- (1) Design Objectives
 - To provide a comfortable place to rest, especially disabled and elderly.
 - To encourage frequent and longer visits to the area.
- (2) Transportation Element Guidelines
 - Install 2 - 3 per block face.
 - Install sturdy benches with attractive design.

ii. Bike Racks

- (1) Design Objectives
 - To promote the use of bicycles as an alternative to cars.
 - To provide convenient and secure parking facilities at public buildings, shopping centers, multiple housing developments, theaters, parks, and similar trip generators.
- (2) Transportation Element Guideline
 - Install sufficient number of bike racks per block face depending on the type and number of businesses; coordinate efforts with Bicycle Plan Implementation Program P16. These may include parking meter-mounted bike racks.

- iii. Bollards
 - (1) Design Objectives
 - To allow for creation of pedestrian activity zone by separating sidewalk from the roadway through a physical barrier in addition to the curb;
 - When equipped with illumination, to provide a low level light source for pedestrians.
 - (2) Transportation Element Guideline
 - Bollards should be considered around buildings where due to height, design constraints, or zoning requirements much deeper front or side yard(s) have been set aside.

- iv. Bus Shelters
 - (1) Design Objectives
 - To encourage transit use.
 - To provide shelter against atmospheric changes/wind/sun.
 - (2) Transportation Element Standard
 - Install at all bus stops along pedestrian priority segments with sidewalk widths greater than or equal to 10 feet and a minimum of 100 daily boardings.

- v. Newspaper Racks
 - (1) Design Objectives
 - To be grouped with another use and located in an area that would be easily identified.
 - To control the number of newsstands within the block.
 - To provide for adequate circulation that would allow for customer-vendor interaction and proper service without blocking pedestrian movement on the sidewalk. The customers often stand by to check the magazine before purchase or simply take time to check the availability and/or selection.
 - To serve as a vehicle for providing graphics, street direction, and other pedestrian signage.
 - (2) Transportation Element Guidelines
 - Install news racks in connection with the bus shelter as one unit.
 - Establish consistent design and uniform standards.

- vi. Planters
 - (1) Design Objectives
 - To introduce a drought tolerant landscape element or an alternative to parkway landscaping.
 - To be used in connection, or to be combined, with bollards; particularly along streets where parkway landscaping is not feasible.
 - (2) Transportation Element Guidelines
 - Material, texture, and design of planters may be selected to match other street furniture and be placed on an stand alone basis or in connection with one or more of the above referenced furniture. Planters should not exceed 36 inch in height.
 - (3) Application
 - Along those streets in commercially zoned areas of the City where the existing sidewalks are too narrow (less than 12 feet) for meaningful landscaped parkways as referenced above. Minimum sidewalk width for placement of planter boxes is 10 feet. Only one of the following options may be selected for each set of block faces of a given street:
 - Four planters are to be placed and spaced at regular intervals between street lights but a minimum of 15 feet from the tree trunk of any street tree. No planter shall be installed closer than 20 feet from the limit line or the approach line of a pedestrian crosswalk; and will be planted with the following tree and ground covers: (ground covers are to be planted alternatively and never mixed in one planter).
 - In ground level plazas, in connection with, or in place of, the required landscaping for the front setback.
 - Planters are to be planted with drought tolerant, and sun loving ground covers and trees.

Option 1:Tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Thevetia peruviana	Yellow Oleander	1	5 Gal.

Features: A small evergreen tree with fast growth to 10 feet or more. Leaves are 3-6 inch long and very narrow. Fragrant flowers bloom any time (mostly June through November); Yellow to apricot, 2-3 inch long, in clusters at branch ends.

Comments: The trees are to be untopped. Minimum size shall be 5 Gallon. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 13, 14, 21-24.

Ground Cover:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Hypericum calycinum	Creeping St. Johnsworth	18" o.c.	flat

Features: Evergreen ground cover with fast growth of 12" tall. Flowers are bright yellow, 3 inches across.

Comments: Three plants per planter only. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 2-24.

Ground Cover:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Vinca Major	Periwinkle	6" o.c	flat

Features: Fast spreading perennial ground cover with oval, dark green, glossy leaves. Flowers are lavender blue 1-2 inches across.

Comments: Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 5-24.

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Ajuga reptans 'Purpurea'	Carpet Bugle	3	1 Gal.

Features: A fast spreading perennial of 10" high. Violet blue flowers are not obvious among the large leaves.

Comments: Three plants per planter only. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in all climate zones of the western region of the USA.

Option 2:Tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Caesalpinia pulcherrima	Red Bird of paradise	1	5 Gal

Features: A small deciduous tree with fast, dense growth to 10 feet, 10 feet wide. Dark green leaves with many 3/4 inch long leaflets. Blooms through the warm weather; flowers orange and red, clustered with long red stems.

Comments: The trees are to be untopped. Minimum size shall be 5 Gallon. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 12-16, 18-23.

Ground Cover:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Gardenia Jasminoides 'Radicans'	Gardenia	3	1 Gal.

Features: Evergreen ground cover with moderate growth of 6"-12" tall. Small

dark green leaves with white fragrant flowers only 1" wide.

Comments: Three plants per planter only. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 7-9, 12-16, 18-23.

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Lantana montevidensis	Trailing Lantana	3	1 Gal.

Features: An evergreen ground cover with fast growth of 8"-12" tall. Fast spreading with rosy lilac flowers in 1-1 ½ inch wide clusters.

Comments: Three plants per planter only. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 12, 13, 15-17, 18-22.

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Pelargonium peltatum 'Summer Showers'	Ivy Geranium	6" o.c.	flat

Features: Fast spreading Perennial ground cover with succulent glossy bright green leaves and flowers that appear in rounded cluster. The above referenced variety comes as a mixture of white, pink, red, lavender, and magenta.

Comments: Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 12-17, 21-24.

- vii. Trash Receptacles
 - (1) Design Objectives
 - To promote the use of trash receptacles, thereby improving the streetscape.
 - To enhance community character.
 - (2) Transportation Element Standards
 - Install 2 - 3 per block face, in connection with the bench, news rack, and planter box or free standing.
 - Construct with sturdy, solid material with special design and covered top.
- 4. Street Lights
 - 1. Design Objectives
 - (1) To provide safety and security for motorists.
 - (2) To provide appropriate night time illumination for pedestrian safety and security.
 - (3) To create community character and enhance community identity.
 - ii. Transportation Element Standards
 - (1) Roadway lighting: 90-95 ft. spacing, with a fixture height of 35-45 feet.
 - (2) Roadway as well as pedestrian scale lighting (dual system); pedestrian lighting: 30-45 ft. spacing with a maximum fixture height of 15 feet.
 - (3) Decorative pole with larger base is recommended.
- g. Street Trees
 - 1. Design Objectives
 - (1) To create an attractive environment for pedestrians.
 - (2) To provide shade and therefore a comfortable environment for pedestrians.
 - (3) To create a space which is designed to respond to human scale in which a pedestrian can relate and function comfortably.
 - (4) To improve the streetscape by giving dominance to the tree canopies rather than to signs.
 - (5) To enhance street identity by selecting certain species for the different street types throughout the City, thus providing visual differentiation for the pedestrian

- priority streets.
- ii. Transportation Element Standards
 - (1) Precise siting of street trees shall be determined by the Street Tree Division of the Bureau of Street Services on a case by case/block face by block face basis. However, the generalized spacing of street trees, described in the following section, shall be maintained.
 - (2) The size of each tree at the time of planting is specified in the planting schedule according to growth habit of the tree. Those species with slow growth habit are indicated at 24" box, while others with fast growth habit are to be in 15 gallon containers. When commercially available, every attempt must be made to select the size as specified. Otherwise, a 15 gallon tree may be substituted for a 24" box tree.
 - iii. Application
 - (3) Streets with no overhead utilities and 90-95 ft. standard roadway lighting
 - Select one of the two options which includes a principal tree and a companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. Only one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Albizia julibrissin	Silk Tree	1	15 Gal

Features: A semi-evergreen tree with a rapid growth to 40 feet in height with wider spread. Pink, fluffy flowers like pincushions; ferny-leaved branches in summer. Leaves are light sensitive and fold at night. With ample water grows fast; however, it is considered to be a low to moderate water requiring plant once established.

Comments: Standard trunk trees only are to be planted. The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 2-23.

Companion tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Pyrus kawakamii	Evergreen Pear	1	24" Box

Features: An evergreen to partially deciduous tree to 20 feet high with smaller spread. Clustered white flowers appear in sheets and masses in winter and early spring.

Comments: Multi trunk trees are to be used only. The trees are to be untopped. Minimum size shall be 24" inch box. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 8, 9, 12-24.

Option 2:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Acacia baileyana	Bailey Acacia	1	24" Box

Features: A briefly deciduous tree with moderate growth to 30 feet tall and a canopy width of about 40 feet with an eventual height of 20-35 feet. Leaves are feathery, finely cut, blue grey, while the flowers appear in yellow ball-like clusters. The flowers are fragrant and profuse from January to February.

Comments: Standard trunk trees only are to be planted. The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation

of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, a smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 7-9, 13-24).

Companion tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Lagerstroemia indica 'Purple'	Crape Myrtle	1	24" Box

Features: A deciduous tree to 25 feet high with smaller spread. Spring foliage is light green, tinged bronze red; mature leaves 1-2 inch long, oval, deep glossy green. Crinkled, crepe like, 1½ inch flowers in rounded, slightly conical clusters, 6-12 inch long, at the end of branches. Long flowering period, July-September.

Comments: Only standard trunk trees to be used. The trees are to be untopped. Minimum size shall be 24" inch box. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 7-9, 12-14, 18-21.

- (4) Streets with no overhead utilities and where roadway lighting spacing does not conform to the 90-95 ft. standard (but is not less than 80 ft.),
- Select one of the two following options which includes a principal tree and a companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. Only one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Liriodendron tulipifera	Tulip Tree	1	15 Gal.

Features: A deciduous tree with a fast growth to 60-80 feet in height, with eventual spread to 40 feet. Tulip shaped flowers in late spring are 2 inch wide greenish yellow, orange at the base. The flowers are quite handsome at close range, but due to the dense foliage, can not be seen from distance. The foliage turns yellow in fall.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 15 gallon. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 1-12, 14-23.

Companion tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Pyrus kawakamii	Evergreen Pear	1	24" Box

[See page 93 for Features and Comments]

Option 2:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Metrosideros excelsus	New Zealand Christmas Tree	1	24" Box

Features: An evergreen tree to 30 feet or more in height with dark scarlet flowers and glossy green leaves. Flowers appear May-July.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion the installation of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, a smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the

Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 17, 23, 24.

Companion tree:

Lagerstroemia indica 'Purple'. See page 94 for Features and Comments.

- (3) Street trees for streets with overhead utilities and where the standard roadway lighting spacing of 90-95 ft. is maintained.
- Select one of the following two options which includes a principal tree and a companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. Only one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Magnolia grandiflora 'Edith Bogue'	Magnolia	1	24" Box

Features: An evergreen tree to 35 feet high and 20 feet spread. Flowers are pure white, aging buff; large (8-10 inch across), powerfully fragrant carried throughout summer and fall. Unpredictable in form and age of bloom.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 4-12, 14-24.

Companion tree:

Pyrus kawakamii. See page 93 for Features and Comments

Option 2:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Olea europea "Swan Hill"	Fruitless Olive	1	24" Box

Features: A small evergreen tree with slow growth reaching to 25-30 feet high and as wide. Drought tolerant.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, a smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 8, 9, 11-24.

Companion tree:

Lagerstroemia indica 'Purple'. See page 94 for Features and Comments.

- (4) Streets with overhead utilities and where roadway lighting spacing does not conform to 90-95 ft. (but is not less than 80 ft.),
- Select one of the two following options which each include a principal tree and companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. Only one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Bauhinia purpurea	Purple Orchid	1	15 Gal.

Features: Partially to wholly deciduous tree with light green, broad-lobed leaves which generally drop in midwinter. The tree displays a wonderful show of light pink to orchid purple, broad-petaled 2-3 inch wide flowers usually January to April. Staked and pruned, becomes attractive 25-30 feet tree.

Comments: Standard trunk trees only are to be planted. The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 15 gallon. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 13, 15, 16, 18-23.

Companion tree:

Pyrus kawakamii. See page 93 for Features and Comments

Option 2:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Cassia leptophylla	Gold Medallion Tree	1	15 Gal.

Features: An evergreen fast growing tree to 25 feet. Foliage is open and spreading, tends to weep. Deep yellow flowers are 3 inches wide and appear July-August.

Comments: Standard trunk trees only are to be planted. The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 15 gallon. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 21-24.

Companion tree:

Lagerstroemia indica 'Purple'. See page 94 for Features and Comments.

Shrubs and Ground Covers.

These plant materials are listed on page 87.

2. Transit Priority Streets

1. Crosswalks

1. Design Objectives

- (1) To create an identifiable zone dedicated to pedestrians as well as to transit riders.
- (2) To increase safety in crossing the street.
- (3) To provide adequate warning to motorists as they approach a transit zone.

ii. Transportation Element Standards

- (1) Minimum 15 ft. wide crosswalk with single 12" wide stripe line on each side.
- (2) Minimum 15 ft. wide crosswalk (20 ft. width recommended) at intersections adjacent to transit rail platforms/portals and bus stops.
- (1) Bold/extensive striping is required for crosswalks at controlled intersections adjacent to transit rail platforms/portals and bus stops.

b. Curbs

1. Curb Radius

Transit Priority Streets are presumed to have peak hour parking restrictions and minimum 30 ft. curb radius.

- ii. Curb Ramps
 - (1) Design Objectives
 - To improve slope/texture/ transition to pavement and sidewalk.
 - To accommodate visually and mobility impaired persons, including wheel chairs, baby carriages, and luggage carts.
 - (2) Transportation Element Guideline
 - Expanded design standards are needed for optimal design/texture for detection by the blind and utilization by disabled in wheelchairs; these improvements must also comply with mandatory State and Federal standards.
3. Parkways - area between the sidewalk and the curb

- 1. Design Objective
 - (1) To devote more area to landscaping in order to create an attractive and pleasing balance between the hardscape and softscape. This area which is often presently paved with concrete and includes tree wells, light poles and traffic signs, could also be landscaped with street trees, and drought tolerant ground covers. The parkway landscaping should be interrupted at certain intervals in order to provide pedestrian with access to and from the sidewalk and at bus stops/transit stations.

- ii. Transportation Element Guidelines
 - (1) In addition to the street trees, parkways should also be planted with ground covers. The ground cover is, whenever practicable, not to be planted within 3 feet of the root crown of any street tree. Furthermore, in an effort to eliminate wet sidewalks and potential inconvenience/hazard to pedestrians, the parkways are to be irrigated with bubblers only.
 - (2) Minimum 2 ft. wide planting area in commercial districts and along mixed-use boulevards at mid block should be considered; due to the size of the root ball of the trees for the parkways, street tree wells will extend beyond this planting area. A five foot by five foot (5' x 5') tree well is recommended. Permeable tree grates are to be used to cover the tree well in order to reclaim that portion of the sidewalk occupied by the tree well. The above referenced tree grates shall be adjustable, with knock-out rings to allow for the proper and uniform growth of the trunk as the tree continues to mature.
 - (3) On those segments of the street where on-street parking is allowed, a street/sidewalk connector path (a one foot wide by two feet long broom-finished concrete path, constructed within the landscaped parkway) should be installed in order to provide pedestrian access between the street and the sidewalk. The "street/sidewalk connector paths" are to provide clear access between the street and the sidewalk at all times. Therefore, all street furniture shall be installed in between these paths in such a way that the street-sidewalk access is not blocked. Furthermore, on-street parking spaces and/or parking meters must be adjusted to provide the pedestrian with clear and visible access to the connector path. The above referenced connector paths are to be installed 15 feet on center maximum. No connector path shall be installed closer than 20 feet from the "limit line" or the approach line of the pedestrian crosswalk.
 - (4) Parkways are to be landscaped with trees and ground covers. Street trees and planters are discussed in a separate subsection. Related ground cover is indicated below:

Ground Cover:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Verbena peruviana	Verbena	24" o.c.	flat

Features: A very showy perennial ground cover with small closely set neat leaves. that forms a very flat mat of no more than 6"-8". Fast spreading with bright colorful, and attractive small flowers.

Comments: After the planting of street trees, the balance of the parkway is to be planted with this ground cover at the spacing indicated above. Size standards are to be comparable with those listed in the Valley Crest

Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 8-24.

4. Sidewalks

i. Sidewalk Dimension

(1) Design Objectives

- To create a safe, comfortable and pleasant experience for the pedestrian and potential transit rider.
- To create an adequate additional sidewalk area at transit stations/bus stops.

(2) Transportation Element Standards

- Minimum 12 ft. sidewalk/parkway combined (12 ft. sidewalk extends into and occupies the parkway at bus stops).
- Minimum 15 ft. width on all block faces in the vicinity of a fixed rail portal or platform (15 ft. sidewalk extends into and occupies the parkway adjacent to transit portals or platforms). Easements may be required in addition to the standard dedication in order to achieve this width.

ii. Sidewalk Paving

(1) Design Objective

- To define this more intensely used sidewalk by selecting a paving material unique to this use.

(2) Transportation Element Guidelines

- Alternative texture such as exposed aggregate or rock salt finish concrete; or a permeable walkable surface such as decomposed granite or interlocking bricks in order to improve growing conditions for the street trees and reduce the likelihood of root damage to the sidewalks.
- Special patterns in different parts of the City.

iii. Transit Station Vicinity Sidewalk Paving

(1) Design Objectives

- To better define the space set aside for users of the mass transportation system.
- To create a special theme or follow an existing one where precedent has been set.
- To select paving materials compatible with those used in buildings within a certain community, which might have significant historic and/or cultural value.

(2) Transportation Element Guidelines

- Alternative color and/or texture such as stamped concrete and exposed aggregate at transit stations and bus stops.
- Use of other paving materials such as brick, or combination of standard grey concrete and brick borders at transit stations and bus stops.
- Special paving patterns at transit stations and bus stops.

e. **Signalization**

Transit Priority Streets are presumed to have time-phased signalization, potentially with queue jumpers/signal preemption for buses. Nevertheless a pedestrian speed of 3 ft./second should be utilized to establish phasing.

f. **Street Furniture**

Note that virtually all street furniture require the issuance of a revocable permit from the Bureau of Street Services prior to placement in the public right-of-way.

1. Benches

(1) Design Objectives

- To provide a comfortable place to rest, especially for the disabled and the elderly.
- To encourage frequent and longer visits to the area.

- (2) Transportation Element Guidelines
 - Install 2 - 3 per block face.
 - Installation of a sturdy bench with an attractive design.
- ii. Bike Racks
- (1) Design Objectives
 - To promote the use of bicycles as an alternative to cars.
 - To provide a convenient and secure bike parking area for those who bike to transit stations to continue on to their destination through the mass transportation system.
 - To provide convenient and secure parking facilities at public buildings, shopping centers, multiple housing developments, theaters, parks, and similar trip generators.
 - (2) Transportation Element Guideline
 - Install minimum of ten (10) bike racks per transit station, plus sufficient number per block face depending upon the type and number of businesses; coordinate with Bicycle Plan Implementation Programs P16 and P26. These may include parking meter-mounted bike racks.
- iii. Bollards
- (1) Design Objectives
 - To allow for creation of special activity zone by separating sidewalk from the roadway and/or extended front yard through an additional physical barrier.
 - When equipped with illumination, to provide a low level light source for pedestrians.
 - (2) Transportation Element Guideline
 - Bollards should be considered around buildings where due to design considerations much deeper front or side yard(s) have been set aside for public plazas; and around transit plazas.
- iv. Bus Shelters
- (1) Design Objectives
 - To encourage transit use.
 - To provide shelter against atmospheric changes/wind/sun.
 - (2) Transportation Element Standard
 - Install at all bus stops along pedestrian priority segments with sidewalk widths greater than or equal to 10 feet and a minimum of 100 daily boardings.
22. Newspaper Racks
- (1) Design Objective
 - To provide mass transit users and others the opportunity to avail themselves of various newspapers as they need to.
 - (2) Transportation Element Guideline
 - Install a grouping of various newspaper racks for each limited bus stop; encourage news stands at all fixed rail portals and platforms.
- vi. Planters
- (1) Design Objectives
 - To introduce an additional landscape element or an alternative to parkway landscaping.
 - To be used in connection or combined with bollards; particularly where parkway landscaping is not possible.
 - (2) Transportation Element Guideline
 - Material, texture, and design of planters may be selected to match other street furniture and be placed on a stand alone basis or in connection with one or more of the above referenced furniture. Planter box height should not exceed thirty six (36) inches.
 - (3) Application
 - Along those streets in commercially zoned areas of the city where the existing sidewalks are too narrow (less than 12 feet) for meaningful

landscaped parkways as referenced above. Minimum sidewalk width for placement of the planter boxes is 10 feet. Select one of two options for each set of block faces.

- When used for this application, four planters are to be placed and spaced in regular intervals between street lights but a minimum of 15 feet from the tree trunk of any street tree. No planters shall be installed closer than 20 feet from the approach line of a pedestrian crosswalk.. Ground covers are to be planted alternatively and never mixed in one planter.
- In ground level plazas, in connection with, or in place of, the required landscaping for the front setback:
Planters are to be planted with drought tolerant, sun loving ground covers and trees.

Option 1:

Plant Material	Botanical Name	Common Name	Quantity/ Spacing	Size	Notes
Tree	Thevetia peruviana	Yellow Oleander	1	5 Gal.	See page 90 for Features and Comments
Ground Cover	Hypericum calycinum	Creeping St. Johnsworth	18" o.c.	flat	See page 90 for Features and Comments
Ground Cover	Vinca Major	Periwinkle	6" o.c.	flat	See page 90 for Features and Comments
Ground Cover	Ajuga reptans 'Purpur ea'	Carpet Bugle	3	1 Gal.	See page 91 for Features and Comments

Option 2:

Plant Material	Botanical Name	Common Name	Quantity/ Spacing	Size	Notes
Tree	Caesalpinia pulcherrima	Red Bird of Paradise	1	15 Gal.	See page 91 for Features and Comments
Ground Cover	Gardenia Jasminoides 'Radicans']	Gardenia	1	3 Gal.	See page 91 for Features and Comments
Ground Cover	Pelargonium peltatum 'Summer Showers'	Ivy Geranium	6" o.c.	flat	See page 92 for Features and Comments
Ground Cover	Lantana montevidensis	Trailing Lantana	3	1 Gal	See page 91 for Features and Comments

- vii. Trash Receptacles
 - (1) Design Objectives
 - To promote the use of trash receptacles, thereby improving the streetscape.
 - Enhance community character.
 - (2) Transportation Element Standards
 - Construct with sturdy, solid material and covered top.
 - Install 1-2 per block face in connection with transit station/bus stops

7. Street Lights

1. Design Objectives
 - (1) To provide safety and security for motorists.
 - (2) To provide appropriate night time illumination for pedestrian safety and security.
 - (3) To create community character and enhance community identity.
 - ii. Transportation Element Standards
 - (1) Roadway lighting: 90-95 ft. spacing with a fixture height of 35-45 ft.
 - (2) Roadway as well as pedestrian scale lighting (dual system) on block faces which include a rail portal/platform or bus stop. Otherwise, roadway lighting fixtures only.
 - (3) Pedestrian lighting: 30-45 ft. spacing, with a maximum fixture height of 15 ft.
8. Street Trees
1. Design Objectives
 - (1) To create an attractive and desirable environment for mass transit users.
 - (2) To provide shade and therefore a comfortable environment for the riders while waiting for the bus, and therefore help facilitate and increase more frequent use of mass transit.
 - (3) To improve the streetscape by giving dominance to tree canopies rather than to signs.
 - (4) To provide visual differentiation of transit priority streets throughout the City.
 - ii. Transportation Element Standard
 - (1) Precise siting of street trees shall be determined by the Street Tree Division of the Bureau of Street Services on a case by case/block face by block face basis. However, the generalized spacing of street trees, described in the following section, shall be maintained.
 - iii. Application
 - (1) The size of each tree at the time of planting is specified in the planting schedule according to growth habit of the tree. Those species with slow growth habit are indicated at 24" box, while others with fast growth habit are to be 15 gallon containers. When commercially available, every attempt must be made to select the size as specified. Otherwise, a 15 gallon tree may be substituted for a 24" box tree.
 - (2) Streets with no overhead utilities and where the standard roadway lighting spacing of 90-95 ft. is maintained
 - Select one of the following options which includes a principal tree and companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. No more than one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.
 - Other plant materials related to parkway landscaping is discussed in subsection 2.c. (Parkways).

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Platanus acerifolia	London Plane Tree	1	15 Gal.

Features: A deciduous, drought tolerant tree with fast growth with 40 to 80 feet high and 30 to 40 feet across. Tolerates most soils, stands up beautifully under city smog, soot, dust and reflected heat. Drought tolerant tree with smooth cream-colored upper trunk and limbs. Leaves are 3-5 lobed, 4-10 inch wide. Leaves are shiny green and heart shaped.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 2-24.

Companion tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Prunus c. 'Atropurpurea'	Purple-leaf Plum	1	24" Box

Features: A small deciduous tree with fast growth to 20-25 feet and a spread of 10-15 feet. Small 3/4-1 inch flowers are white with a tint of pink. Purple leaves are 2 inch long and are light shade of burgundy.

Comments: Multi trunk trees only are to be planted. The trees are to be untopped. Minimum size shall be 24 inch box. When 24 inch box trees are not available, smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 2-22.

Option 2:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Pinus halepensis	Aleppo Pine	1	15 Gal.

Features: An evergreen tree with a moderate to fast growth 30-60 feet high. The crown is open and irregular.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in inland as well as coastal areas. No specific climate zone is indicated.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

- (3) Streets with no overhead utilities and where roadway lighting spacing does not conform to the 90-95 ft. standard (but is not less than 80 ft.)
- shall be one of the following options which includes a principal tree and a companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. No more than one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Ginkgo biloba	Maidenhair Tree	1	24" Box

Features: A deciduous tree which is attractive in any season, especially in fall when the leaves suddenly turn gold color. Can grow 70-80 feet, but most mature trees are 35-50 feet in height. The initial growth habit is slow and the plant requires more water during this period; however becomes self sufficient once established.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, a smaller size tree may be planted; however, the spacing must remain as indicated above. Only the **male** of the species is to be planted. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 1-9, 14-24.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

Option 2:Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Pittosporum phillyraeoides	Willow Pittosporum	1	24" Box

Features: A small evergreen tree with weeping structure and slow growth to 20 feet high. Small, yellow, bell-shaped, fragrant flowers born along drooping branches in late winter, early spring, followed by deep yellow fruit. Plant tolerates heat and drought.

Comments: The trees are to be untopped. Minimum size shall be 24" inch box. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 9, 12-24.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

- (4) Streets with overhead utilities and where the standard roadway lighting spacing of 90-95 ft. is maintained
- Select one of the following options which includes a principal tree and a companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. No more than one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Fraxinus velunita	Arizona Ash	1	15 Gal.

Features: A small deciduous tree with fast growth to 30 feet and slightly wider spread. Water requirement for this plant is moderate to low.

Comments: Standard trunk trees only are to be planted. The trees are to be untopped. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 8, 9, 10-24.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

Option 2:Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Acacia farnesiana	Sweet Acacia	1	24" Box

Features: A deciduous tree with a moderate growth to 20 feet and 20-25 feet spread. Leaves are feathery and finely divided. Flowers are deep yellow, fragrant balls and are present most of the year.

Comments: The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 14-24.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

- (5) Street trees for streets with overhead utilities and where roadway lighting spacing

does not conform to the 90-95 ft. standard (but is not less than 80 ft.)

- Select one of the following options which includes a principal tree and a companion tree. The principal tree is to be centered between the street lights, while one companion tree shall be planted on either side of the principal tree, centered between the street light and the principal tree. No more than one category may be selected for each set of block faces of a given street. These trees are to be planted in a reasonably straight line within the parkways.

Option 1:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Rhus lancea	African Sumac	1	24" Box

Features: An evergreen tree with open, spreading habit and graceful weeping outer branches and slow growth to 25 feet. Leaves are willow like and dark green. Very drought tolerant, attractive airy tree, with interesting branch pattern and dark red, rough bark.

Comments: Multi trunk trees only are to be planted. The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 24 inch box. When 24 inch box trees are not available, smaller size tree may be planted; however, the spacing must remain as indicated above. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 8, 9, 12-24.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

Option 2:

Principal tree:

<u>Botanical Name</u>	<u>Common Name</u>	<u>Quantity/Spacing</u>	<u>Size</u>
Chilopsis linearis	Desert Willow	1	15 Gal.

Features: Deciduous, open, and airy when trained as a small tree. Fast growing initially, but slows down and levels off at about 25 feet high. Flowers look somewhat like catalpas', trumpet shaped with crimped lobes-pink, white, rose, or lavender, marked with purple. Flowers appear in spring and often through fall.

Comments: Multi trunk trees only are to be planted. The trees are to be untopped. Sidewalks are to be protected from root intrusion by the installation of a root barrier. Minimum size shall be 15 gallon. Size standards are to be comparable with those listed in the Valley Crest Nursery catalog. According to Sunset Western Garden, this plant thrives and does well in climate zones 11, 13, 18-21.

Companion tree:

Prunus c. 'Atropurpurea'. See page 105 for Features and Comments

(6) Other plant materials related to parkway landscaping is discussed on page 98.

Note: In certain parts of the City, existing streets lined with a single tree species may be replanted with the same species provided that (1) the tree is included on the Bureau of Street Maintenance Street Tree Division's Street Tree Selection Guide as a drought tolerant tree species and (2) the selection meets the Street Tree Division's approval.

3. Standard (Vehicle-Priority) Streets:

1. Crosswalks
 - i. Design Objective

- To create an identifiable zone for pedestrians to cross the roadway.
 - ii. Transportation Element Standards
 - Minimum 10 ft. wide crosswalk with single 12" wide stripe line on each side.
 - Minimum 15 ft. wide crosswalk (20 ft. width recommended) at controlled intersections adjacent to transit rail platforms/portals.
 - iii. Transportation Element Guideline
 - Bold/extensive striping is recommended for crosswalks at controlled intersections adjacent to rail platform/portals.

b. Curb Ramps

- i. Design Objectives
 - To improve slope/texture/ transition to pavement and sidewalk.
 - To accommodate visually and mobility impaired persons, baby carriages, luggage carts, etc.
- ii. Transportation Element Guideline
 - Expanded design standards are needed for optimal design/texture for detection by the blind and utilization by disabled in wheelchairs; these improvements must also comply with mandatory State and Federal standards.

3. Sidewalks

- i. Sidewalk Dimension
 - (1) Design Objective
 - To promote safety by providing adequate distance between the pedestrian and motor vehicles.
 - (2) Transportation Element Standards
 - Minimum 10 - 12 ft. width (this includes sidewalk and parkway). Refer to Section VI.A for specific minimum width for each street designation.
 - Minimum 10 ft. wide for arterial streets not fully dedicated and/or improved.
 - Minimum 15 ft. width on all block faces in the vicinity of fixed rail portal or platform (15 ft. sidewalk extends into and occupies the parkway adjacent to transit portals or platforms). Easements may be required in addition to the standard dedication in order to achieve this width.
- ii. Sidewalk Paving
 - (1) Design Objective
 - To define this less intensely used sidewalk by selecting a uniform pavement material.
 - (2) Transportation Element Standard
 - Plain light grey concrete; however, a permeable walkable surface such as decomposed granite or interlocking bricks should be considered in order to improve growing conditions for the street trees and reduce the likelihood of root damage to the sidewalks.
- iii. Transit Station Vicinity Sidewalk Paving
 - Design Objectives
 - To define space set aside for users of the mass transportation system.
 - To create a special theme or follow an existing one where precedent has been set.
 - To select paving materials compatible with those used in buildings within a certain community, which might have significant historic and/or cultural value.
 - (2) Transportation Element Guidelines
 - Alternative color and/or texture such as stamped concrete and exposed aggregate at transit stations and bus stops.
 - Use of other paving materials such as brick, or combination of standard grey concrete and brick borders at transit stations and bus stops.

- Special patterns at transit stations.

d. Signalization

It is presumed that vehicle priority streets have time-phased signalization; no single standard proposed.

e. Street Furniture

Note that virtually all street furniture require the issuance of a revocable permit from the Bureau of Street Services prior to placement in the public right-of-way.

i. Benches

(1) Design objective

- To provide an additional street amenity, especially for the elderly and the disabled.

(2) Transportation Element Guidelines

- Install 1 bench per block face.
- Install a sturdy bench with an attractive design.

ii. Bike Racks

(1) Design objectives

- To promote the use of bicycles as an alternative to cars.
- To provide a convenient and secure bike parking area for those who bike to transit stations to continue on to their destination through the mass transportation system.
- To provide convenient and secure parking facilities at public buildings, shopping centers, multiple housing developments, theaters, parks, and similar trip generators.

(2) Transportation Element Guidelines

- Install minimum of ten (10) bike racks per transit station, plus sufficient number per block face depending upon the type and number of businesses.
- Coordinate with Bicycle Plan Implementation Programs P16 and P26. These may include parking meter-mounted bike racks.

iii. Bollards

(1) Design Objectives

- To allow for creation of a special activity zone by separating sidewalk from the roadway or and extended front yard through an addition physical barrier.
- When equipped with illumination, to provide a low level light source for pedestrians.

(2) Transportation Element Guideline

- Bollards should be considered around buildings where due to design considerations much deeper front or side yard(s) have been set aside for public plazas.

iv. Bus Shelters

(1) Design Objectives

- To encourage transit use.
- To provide shelter against atmospheric changes/wind/sun.

(2) Transportation Element Standard

- Install at all limited bus stops and/or at intersections of major and secondary highways served by bus, provided that: existing sidewalk width is greater than or equal to ten (10) feet; and there are at least one hundred (100) daily boardings at the bus stop.

v. Newspaper Racks

(1) Design Objective

- To provide mass transit users and others the opportunity to avail themselves of various newspapers as they need to.

(2) Transportation Element Guideline

- Install a grouping of various newspaper racks near bus stops located at intersections of major highways with other major highways.
- vi Planters
- (1) Design Objectives
 - To introduce an additional landscape element or an alternative to parkway landscaping.
 - To be used in connection or combined with bollards; particularly where parkway landscaping is not possible.
 - (2) Transportation Element Guidelines
 - Material, texture, and design of planters may be selected to match other street furniture and be placed on a stand alone basis or in connection with one or more of the above referenced furniture.
 - Planters should not exceed 36 inches in height.
 - (3) Application
 - Along those streets in commercially zoned areas of the city where the existing sidewalks are too narrow (less than 12 feet) for meaningful landscaped parkways as referenced above. Minimum sidewalk width for placement of planters is 10 feet. Only one of the following options may be selected for each set of block faces of a given street:
 - Four planters are to be placed and spaced at regular intervals between street lights but a minimum of 15 feet from the tree trunk of any street tree. No planter box shall be installed closer than 20 feet from the limit line or the approach line of a pedestrian crosswalk; and will be planted with the following tree and ground covers: (ground covers are to be planted alternatively and never mixed in one planter).
Select one of the two following planting options:

Option 1:

Plant Material	Botanical Name	Common Name	Quantity/ Spacing	Size	Notes
Tree	Thevetia peruviana	Yellow Oleander	1	5 Gal.	See page 90 for Features and Comments
Ground Cover	Hypericum calycinum	Creeping St. Johnsworth	18"o.c.	flat	See page 90 for Features and Comments
Ground Cover	Vinca Major	Periwinkle	6" o.c.	flat	See page 90 for Features and Comments
Ground Cover	Ajuga reptans 'Purpur ea'	Carpet Bugle	3	1 Gal.	See page 91 for Features and Comments

Option 2:

Plant Material	Botanical Name	Common Name	Quantity/ Spacing	Size	Notes
Tree	Caesalpinia pulcherrima	Red Bird of Paradise	1	15 Gal.	See page 91 for Features and Comments
Ground Cover	Gardenia Jasminoides 'Radicans']	Gardenia	1	3 Gal.	See page 91 for Features and Comments
Ground Cover	Pelargonium peltatum	Ivy Geranium	6" o.c.	flat	See page 92 for Features and Comments

a standard roadway design or roadway realignment would destroy a scenic feature or preclude visual access to a scenic feature cited in Appendix E of this Element, design alternatives must be considered through preparation of an environmental impact report.

- b. Design characteristics such as curves, changes of direction and topography which provide identity to individual Scenic Highways shall be preserved to the maximum extent feasible.
2. Earthwork/grading
 - a. Grading for new cuts or fills shall be minimized. Angular cuts and fills shall be avoided to the maximum extent feasible.
 - b. All grading shall be contoured to match with the surrounding terrain.
 - c. In order to negate the environmental impacts of grading in designated Hillside Areas (as depicted on Bureau of Engineering Basic Grid Map N^o. A-13372), maximum effort shall be made to balance cut and fill on-site.
 3. Planting/landscaping
 - a. Fire-resistant native plants and trees shall be utilized in any parkway landscaping along Scenic Highways located within designated Hillside Areas.
 - b. In designated Hillside Areas, where previous plant material has been washed away or destroyed (due to excessive rainfall, fire, grading, etc.) erosion-controlling plants shall be planted to prevent erosion and mud/land slides. Such Hillside parkways and slope easements shall either be hydro-seeded, or terraced and then planted, with native fire-resistant plants.
 - c. Outstanding specimens of existing trees and plants located within the public right-of-way of a Scenic Highway shall be retained to the maximum extent feasible within the same public right-of-way.
 - d. Low-growing ground cover and/or shrubs shall be utilized as parkway planting along Scenic Highways in order to avoid blocking a desirable view of a scenic feature listed in Appendix E of this Element. Plant material size at maturity as well as overall scale of plants within the landscaped area must be carefully studied in the site analysis and design stages.
 - e. Landscaped medians of Scenic Highways shall not be removed. Such medians may be reduced in width (1) to accommodate left turn channelization within one hundred feet of a signalized intersection; or (2) to accommodate a designated Class II bikeway provided that there is compliance with Guideline 3c above, and that the resulting median width is not less than eight (8) feet.
 4. Signs/outdoor advertising
 - a. Only traffic, informational, and identification signs shall be permitted within the public right-of-way of a Scenic Highway.
 - b. Off-site outdoor advertising is prohibited in the public right-of-way of, and on publicly-owned land within five hundred feet of the center line of, a Scenic Highway.
 - c. A standard condition for discretionary land use approvals involving parcels zoned for non-residential use located within five hundred feet of the center line of a Scenic Highway shall be compliance with the sign requirements of the CR zone.
 - d. Designated Scenic Highways shall have first priority for removal of nonconforming billboards or signs. Such priority extends to properties located along, or within five hundred feet of the center line of, designated Scenic Highways.
 5. Utilities

- a. To the maximum extent feasible, all new or relocated electric, communication, and other public utility distribution facilities within five hundred feet of the center line of a Scenic Highway shall be placed underground.
- b. Where undergrounding of such utilities is not feasible, all such new or relocated utilities shall be screened to reduce their visibility from a Scenic Highway.

SCENIC BYWAYS GUIDELINES

Guidelines for Scenic Byways designated in the Community Plans should be established as part of the Community Plan Update or Revision process, with guidelines tailored to local considerations. Such guidelines may be incorporated into the Community Plan text or into a Community Design Overlay (CDO). Guidelines for scenic byway protection and/or enhancement should consider the following aspects:

1. Roadway design and alignment
 2. Parkway planting/landscaping
 3. Signs/outdoor advertising restrictions
 4. Utilities (e.g. undergrounding of new or relocated utility facilities)
 5. Opportunity for enhanced non-motorized circulation
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