

PURSUANT TO ORDINANCE NO. 165-95, REGULATING THE PLANTING, MAINTENANCE, OR REMOVAL OF TREES AND LANDSCAPE MATERIAL ON PUBLIC SIDEWALK AREAS AND SUPERCEDING ORDER NO. 170,735 AND NO. 169,946.

**I. PURPOSE**

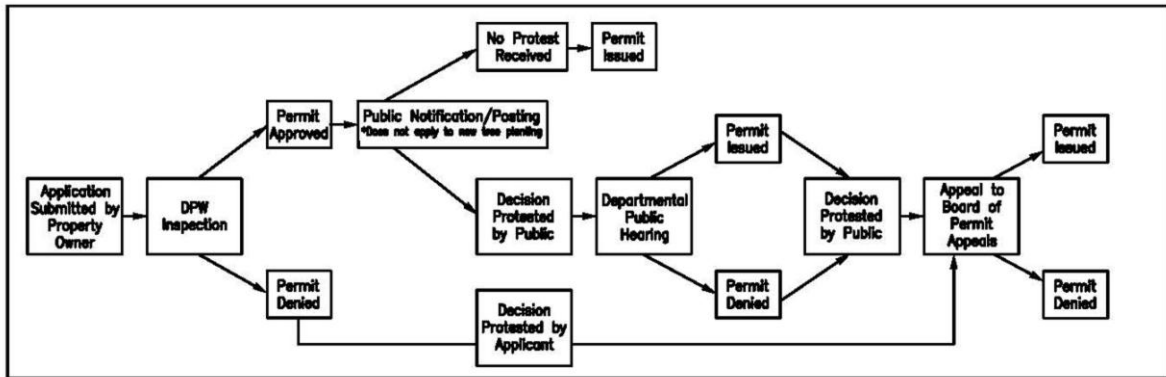
A. *Objective.* Planting street trees and landscaping in the public right-of-way enhances the physical, ecological, and cultural aspects of the city. Because street trees are the most important organizing element of the streetscape environment, appropriate tree species selection, location and design of the planting site is essential. Proper tree selection and planting will ensure the healthy growth and longevity of trees, enhance streetscape character, and maximize the City's investment.

B. *Authority.* Article 16 of the Public Works Code authorizes the Director of Public Works to regulate the planting, maintenance, or removal of trees and landscape material on the public sidewalk. This Department of Public Works (DPW) Order provides detailed guidelines regarding tree and landscape plantings in the public right-of-way. These guidelines are intended to provide sufficient information for plan development and submission. \*\*Please note that all permit applications are reviewed on a case-by-case basis, and the Department must approve tree and landscape applications before any installation begins.

C. *Relation to Sidewalk Landscape Permit.* Street trees and landscaping are both elements of the city's urban forest. Generally, this DPW Order provides guidance on placement of street trees and the size and dimensions of tree planters. In many cases, the City encourages tree basins larger than those recommended in this Order so as to allow landscaping and increased permeability within the right-of-way. A sidewalk landscape permit is required for planters, with or without a street tree, that are sized larger than the standard dimensions included in this Order.

**II. STREET TREE AND LANDSCAPE MATERIAL PERMIT APPLICATION AND APPROVAL PROCESS**

A. *Adding or removing a tree.* Contact DPW, Urban Forester, to request a permit to plant or remove trees or landscape material on a public sidewalk. The application process is summarized in the following flow chart:



A removal permit is required for removal of any tree (alive or dead) in the public right-of-way, and certain protected trees on private property. See Section 810 of Article 16 of the Public Works Code regarding “Significant” and “Landmark” trees. The Department of Public Works may not grant all tree removal permit applications. A DPW certified arborist will evaluate the tree and determine if it is healthy and structurally sound. In most cases a tree removal permit will not be granted if the tree is healthy and structurally sound.

The Department will typically approve a removal permit application for tree removal in the following cases:

- i. If the tree is unhealthy, and not likely to recover, or has structural wounds or deficiencies that represent a potential public safety hazard, or if the tree is dead or dying;
- ii. If the applicant proposes to relocate the existing tree at the same property and the Department determines the transplant is likely to succeed.

In select cases if the tree proposed for removal can be replaced with a tree (or trees) that matches or exceeds the canopy and trunk diameter of the tree to be removed, the Department may grant the removal application. The canopy and trunk diameter of the replacement tree(s) must match or exceed that of the tree to be removed at the time of planting.

If the Department approves a tree removal permit application, a notice is placed on the tree, as described in Sec. 806 (a) of Article 16 of the Public Works Code. Members of the public can appeal the decision and a public hearing will be held by the Department.

B. *Fee schedule for street tree activities:*

i. A street tree removal permit fee, as described in Sec.806. (b)(3) of Article 16 of the Public Works Code, is payable upon submittal of the application. Contact DPW, Urban Forester for a fee schedule and application.

ii. An “In Lieu” planting fee is required, as described in Sec.802. (h) of Article 16 of the Public Works Code, for each tree not planted pursuant to Section 143 of the Planning Code, for existing trees removed without replacement, or for empty tree basins not planted.

C. *Enforcement.* Pursuant to Sec. 118 of the Public Works Code, violators of this order may be subject to criminal, civil or administrative penalties.

D. *Exceptions.* Exceptions due to hardship or unusual circumstances may be submitted for approval to DPW. DPW will conduct reviews on a case-by-case basis.

### III. SELECTING AN APPROPRIATE TREE SPECIES

*Objective.* The selection of tree species and their placement in the public right-of-way should be consistent with the goals of a particular street. Ceremonial streets, major throughways, commercial streets and other streets important to the city pattern should use formal, consistent planting palettes chosen for their distinct design qualities to provide strong aesthetic character and facilitate place recognition. Neighborhood residential or smaller streets may use a more diverse, less formal planting palette to indicate neighborhood preference and create a rich planting variety. On DPW maintained streets, the Urban Forester may require specific tree species.

B. *Guidelines.*

- Climate-appropriate trees are encouraged
- Trees with columnar form are appropriate for narrower planting spaces such as small streets and alleys, narrow medians, or narrow sidewalks with minimal building setback (some columnar species may be inappropriate due to low branching);
- Medium-sized trees with light to medium density foliage are appropriate on neighborhood residential and commercial streets;
- Trees with overarching canopies and medium density foliage are appropriate on wider streets, such as mixed-use streets, throughways and boulevards.

### IV. SELECTING AN APPROPRIATE SITE FOR ADDING A TREE

A. *Spacing.* Street tree spacing should be determined by the expected mature size of the tree. Generally, trees should be planted with the following spacing:

- Small trees (<20' crown diameter at maturity) should be planted 15 to 20 feet on center;
- Medium trees (20-35' crown diameter at maturity) should be planted 20-25 feet on center;
- Large trees (>35' crown diameter at maturity) should be planted 35 feet on center.

B. *Clearances from elements on the sidewalks and medians:*

- i. If sidewalk elements interfere with a planting site, it is generally preferable to move the tree site a few feet in either direction than to skip a planting site entirely.
- ii. Wherever feasible, when designing a new street or renovating an existing street, effort should be made to locate or relocate utilities and other elements so that the regular tree spacing listed in section IV(A) can be attained.
- iii. When adding trees to an existing streetscape, movable site furnishings should be relocated, where feasible, to allow for street tree planting at an appropriate spacing listed above in section IV(A).

iv. Tree clearance from site furniture:

<b>SIDEWALK FURNITURE</b>	<b>CLEARANCE FROM SITE FURNITURE*</b>
<b>Utility Boxes</b>	<b>3 Feet</b>
<b>Sewers</b>	<b>5 Feet</b>
<b>Fire Hydrants</b>	<b>5 Feet</b>
<b>Parking Meters</b>	<b>3 Feet</b>
<b>Fire Escapes</b>	<b>10 Feet</b>
<b>Pedestrian Furniture</b>	<b>3 Feet</b>
<b>Utility Poles</b>	<b>5 Feet</b>
<b>Parking Sign</b>	<b>3 Feet</b>
<b>Traffic Sign</b>	<b>5 Feet</b>
<b>Variable Message Sign or other electronic sign</b>	<b>Please consult with SFMTA for these specialized signs</b>

\*Measurement is from the center of the tree basin to the edge of the utility or furniture.

*v. Clearances from parking and traffic signs:*

- a) No tree should be planted within 3-feet of an existing parking sign. Consider sign relocation where feasible and approved by the SFMTA. Permittee is required to pay for the sign relocation costs if the relocation is necessary.
- b) No tree should be planted within 5-feet of an existing traffic sign. Consider sign relocation where feasible and approved by the SFMTA. Permittee is required to pay for the sign relocation costs if the relocation is necessary.

*vi. Clearances from street lights:*

<b>SIZE OF TREE* (at maturity)</b>	<b>CLEARANCE FROM STREET LIGHT</b>
<b>Small</b>	<b>No Closer than 9 Feet</b>
<b>Medium</b>	<b>No Closer than 15 Feet</b>
<b>Large</b>	<b>No Closer than 21 Feet</b>

\*Mature size of tree determined as shown in IV(A), and by the Urban Forester

vii. *Clearances from overhead trolley wires:*

- a) No tree should be planted within 8-feet of an existing trolley wire. Trees planted adjacent to trolley wires should be selected so that mature tree canopy will not interfere with trolley wires. Refer to PUC General Order 95.

C. *Maintaining visibility when planting trees or landscape material adjacent to a street intersection:*

In order to provide adequate safety and visibility at intersections, street trees and landscaping adjacent to intersections should be located per the following guidelines:

- i. Landscape material may be planted up to the crosswalk edge on sidewalks and medians provided that it does not exceed 3'-6" as measured from the street.
- ii. Trees may be planted up to 25' from the crosswalk edge on sidewalks and medians at the near side of intersections.
- iii. Trees may be planted no closer than 5' from the crosswalk edge on sidewalks and medians at the far side of intersections.

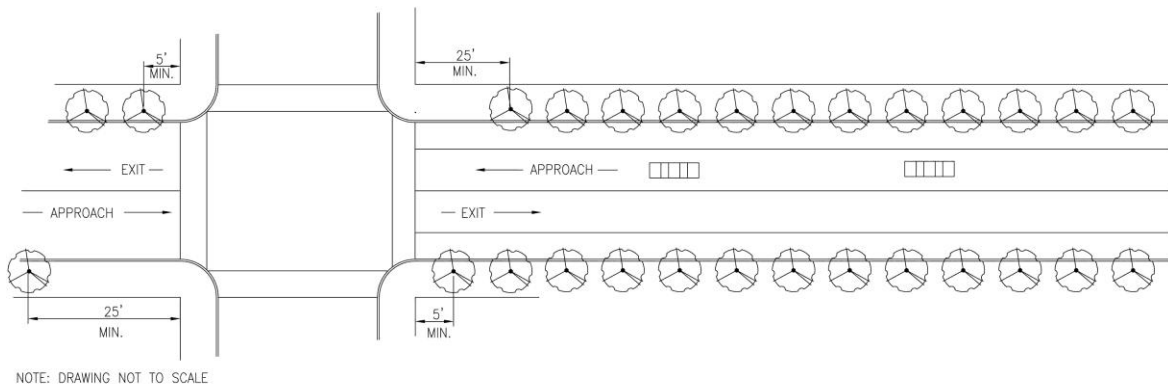
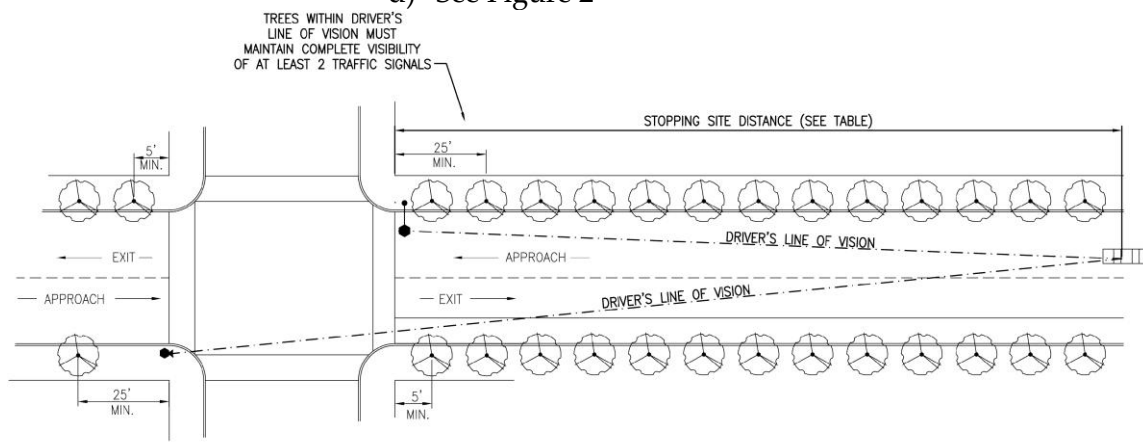


FIGURE 1  
TYPICAL INTERSECTION

- iv. Trees may be planted within 25' of the crosswalk edge on sidewalks and medians provided that they meet the following criteria:

Signalized intersections

- a) A minimum of two traffic signals per intersection should be completely visible from a stopping site distance based on speed limit of the street listed on table below<sup>1,2,3</sup>
- b) Trees that fall within the driver stopping sight distance zone should have a vertical clearance of the lowest branch of 14 feet in height.
- c) Where left turns are allowed, median planting should allow left turning vehicles to see approaching vehicles consistent with Stopping Sight Distances in the table below.
- d) See Figure 2



NOTE: DRAWING NOT TO SCALE  
**FIGURE 2**  
**SIGNALIZED INTERSECTION**

**Stopping Site Distance**

Speed Limit of Street	Stopping Sight Distance
20 MPH	150'
25 MPH	200'
30MPH	225'
35 MPH	250'

<sup>1</sup>Stopping site distance should be determined from the driver's point of view for each travel lane, approximately 5 feet behind the stopping sight distance line, and approximately 7' to the left of the edge of each lane.

<sup>2</sup>Manual on Uniform Traffic Control Devices; in cases where this sight distance cannot be met, an advance warning sign should be used.

<sup>3</sup>Where sidewalk signals may be blocked, consider the feasibility of adding a mast arm signal where one does not currently exist.

### STOP-controlled intersections

- a) A minimum of one STOP sign should be visible from the driver stopping sight distance zone, as described above in *iv.a*).
- b) Trees that fall within the driver stopping sight distance zone should have a vertical clearance of the lowest branch of 14 feet in height.
- c) Where left turns are allowed, median planting should allow left turning vehicles to see approaching vehicles consistent with Stopping Sight Distances in the table on page 7.
- d) See Figure 3

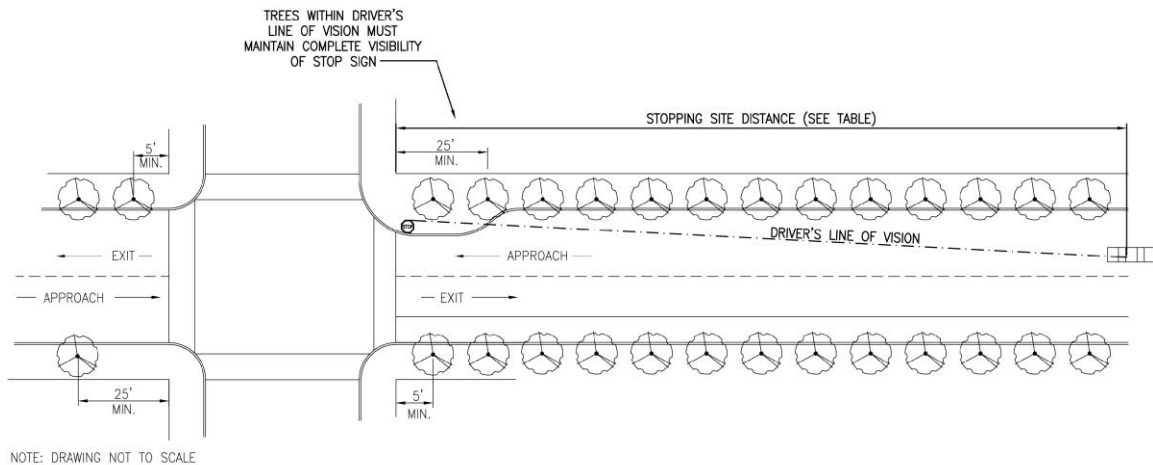


FIGURE 3  
STOP CONTROLLED INTERSECTION

### Uncontrolled intersections

- a) At uncontrolled intersection approaches, trees or landscape material on sidewalks and medians should be located such that oncoming traffic is visible to the crossing vehicle in either direction within the stopping sight distance zone, as described above in *iv.a*).
- b) Trees located in the median within 250' of an intersection should have a vertical clearance of the lowest branch of 8' in height over the median, and 14' in height for any portion of the tree that overhangs the roadway. Tree species within this zone should be selected that have a high-branching canopy, narrow trunk diameter, so as not to block visibility. Shrubs



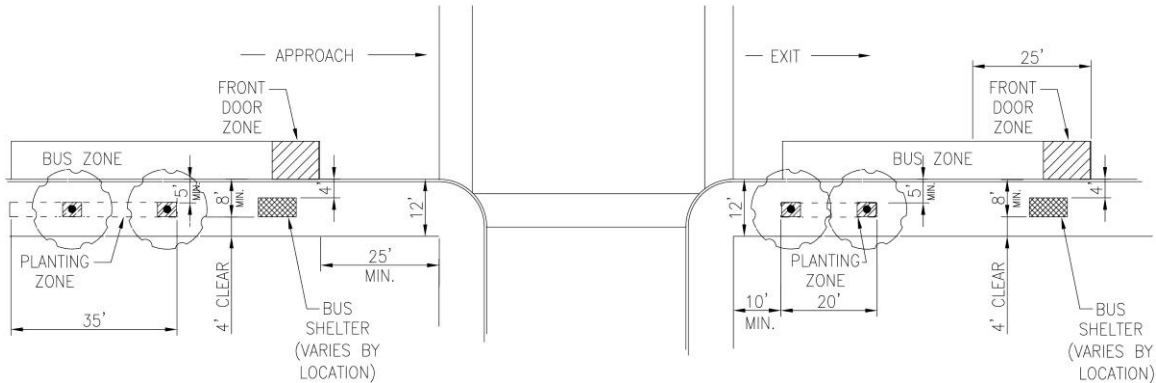
- planted in medians shall have a maximum height no greater than 3'-6' as measured from the street.
- c) Trees located on the sidewalk within 250' of an intersection should have a vertical clearance of the lowest branch of 80" in height over the sidewalk, and 14' in height for any portion of the tree that overhangs the roadway. Tree species within this zone should be selected that have a high-branching canopy, narrow trunk diameter, so as not to block visibility.
  - d) Where left turns are allowed, median planting should allow left turning vehicles to see approaching vehicles consistent with Stopping Sight Distances in the table on page 7.

D. *Planting a tree adjacent to a Bus Zone:*

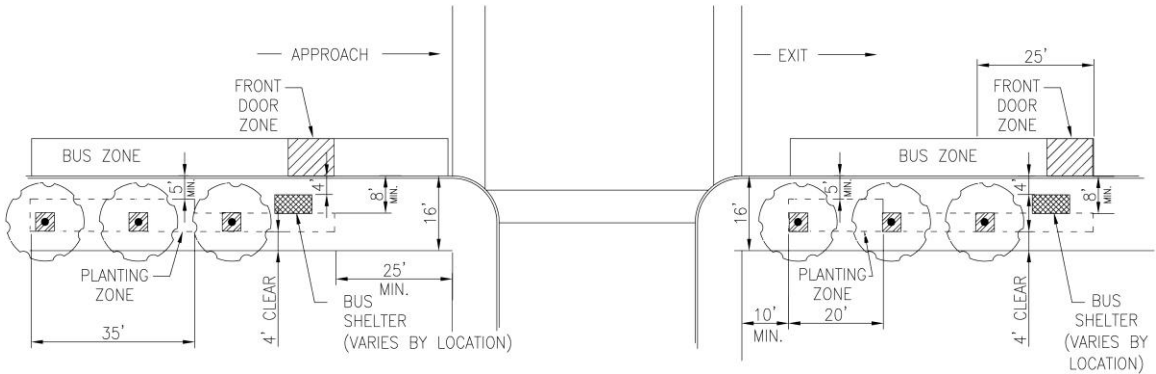
- i. No tree or landscape material should be planted adjacent to a bus zone when the sidewalk, including the curb, is less than 12-feet wide.
- ii. No sidewalk landscape material or planters will be permitted adjacent to a Bus Zone. Exceptions may be considered by DPW and SFMTA on a case-by-case basis.
- iii. When the sidewalk is greater than or equal to 12-feet wide, including the curb, each site should be reviewed by DPW and SFMTA on a case-by-case basis. Minimum requirements as follows (please see illustrations on next page):
  - a) 8' clear from the face of curb to the edge of the tree grate must be maintained unless otherwise indicated below. This Distance may be reduced to 5' clear from the face of curb to the edge of the tree grate if not interfering with the ADA lift at the front door zone or the rear door.
  - b) *Approach-Side Bus Stop.* Within 35' from the rear of the bus zone, trees may be planted as long as the basin edge is set back at least 5' from the curb edge. In remaining bus zone area, trees may be planted if 8' clear from the face of the curb to the edge of the tree grate is maintained. Trees should be set back at least 25' from the inside edge of the crosswalk.

- c) *Exit-Side Bus Stop.* Trees may be planted within 20' from the rear of the bus zone as long as the basin edge is set back at least 5' from the curb edge. In remaining bus zone area, trees may be planted if 8' clear from the face of the curb to the edge of the tree grate is maintained. Trees should not be planted within 10' of the inside edge of the crosswalk.
- d) These requirements are subject to review and change based upon the specific site situation and review by DPW and MUNI.

**12'-0" Wide Sidewalk:**



**16'-0" Wide Sidewalk:**



- e) When planting a tree within a Bus Zone, an enlargeable basin cover or metal tree grate must be used in the tree basin. An enlargeable tree basin cover allows for the removal of portions of the grate or basin cover as the tree diameter increases, so that the tree trunk does not grow into the tree grate or basin cover. Tree grates or basin covers must be maintained to prevent damage to tree trunks and to prevent tripping hazards from lifted grates or basin covers.

- f) Clearances. When planting a tree within a Bus Zone, a minimum of 6' clear from the bus shelter must be maintained. If site furniture or other obstructions are movable, consider relocating obstruction(s) to accommodate tree planting. Consolidating newsracks should also be considered.

E. *Planting a tree or landscaping adjacent to a restricted parking Blue Zone:*

No tree or landscape material should be planted adjacent to a restricted parking Blue Zone when the sidewalk, including the curb, is less than 12' wide. If the sidewalk is wider, trees may be planted so long as 8' is maintained clear as measured from the curb.

F. *Planting a tree or landscaping in a median island:*

- i. Intersection visibility should be maintained as described in section IV(C).
- ii. New median tree planting and/or landscape material should be reviewed and approved by DPW and MTA.

## V. GUIDELINES FOR NEW TREE BASIN CONSTRUCTION AND DIMENSIONS

A. *Description and Intent.* The tree basin is the sidewalk area removed for tree planting. The size of the tree basin varies based on many site opportunities and constraints. A larger tree basin provides increased stormwater benefit and also allows more area for root growth, both of which are beneficial for the tree. The tree basin size should also be balanced with available sidewalk area and maintenance needs.

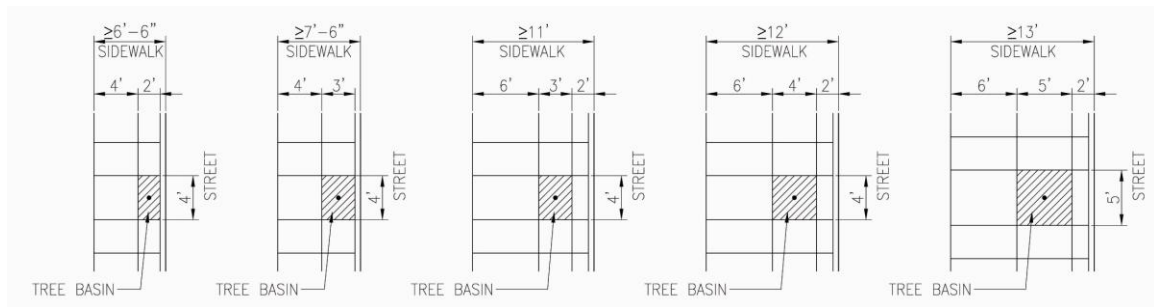
B. *Placement on Sidewalk.*

- i. A street tree should be planted in the center of the tree basin. In no case may new street trees result in an unobstructed sidewalk width of less than four feet. Trees should be placed in alignment with existing trees. In locations where minimum unobstructed sidewalk width will not be impacted, trees should be setback from the curb. Alignment should be approved by DPW.
- ii. No street tree planting will be allowed in sidewalks with a width less than 6'-6". Exceptions may be granted on a case-by-case basis, as approved by DPW.

iii. The diagrams below list basic tree basin standards. It is recognized that larger basins allow for greater tree health, increased water permeability, reduced sidewalk upheaval by tree roots, and greater opportunities for landscaping. Larger basins and/or rectangular basins, where the dimension parallel to the curb is longer, are encouraged but must be reviewed on a case by case basis by the Urban Forester and may require a sidewalk landscaping permit issued by the Urban Forester. *See also Section I(C).*

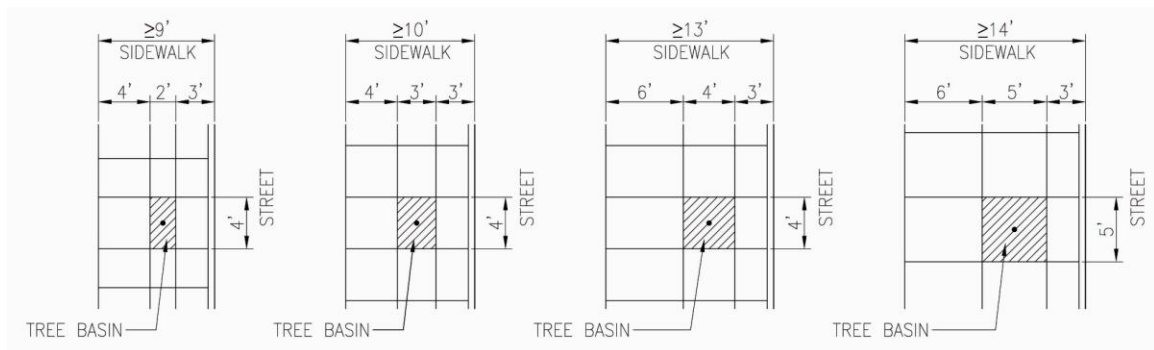
iv. *Planters where parallel or no parking exists:*

The diagrams below show standard recommended basin placement for some typical sidewalk widths. Alternate basin sizes and layouts may be approved by DPW on a case-by-case basis.



v. *Planters where perpendicular or angled parking exists:*

In order to prevent the overhang of vehicles from damaging a tree, planters should be recessed from the curb edge such that the tree trunk or center line is located a minimum of 3 feet from the curb edge. It is also possible to locate the tree in alignment with the parking stripe if the above recess is not feasible. Exceptions may be granted on a case by case basis by the Urban Forester.



vi. *Planters where perpendicular or angled parking is proposed.*

Where existing trees have been planted within the first 3 feet in from the curb, parking stalls should be demarcated such that

existing trees align with the parking stripes to avoid conflicts with parking vehicles. Exceptions may be granted on a case by case basis by the Urban Forester and the MTA. This dimension may be reduced where bollards or wheel stops are used to protect the tree.

B. *Tree basin surface and design.*

- i. *Basin surfacing.* Tree basin grade should be maintained at the existing sidewalk grade. Decomposed granite, approved hardscape, such as a perimeter of brick or paving stones, or a Title 24 approved basin cover, may be installed and must be maintained at the existing sidewalk grade. The basin cover opening should not be greater than 6-inches, or less than 4-inches, to the base of the tree. The tree trunk should be centered within the tree basin. Generally, tree grates and other structural basin covers are discouraged, as over time, they can become a tripping hazard and can interfere with the growth of the tree.
- ii. *Tree guards.* Tree guards are generally discouraged but may be appropriate on heavily traveled sidewalks for protection of newly planted trees that are established and no longer require staking. Tree guards must be approved by the Urban Forester.
- iii. *Basin railings and edging.* Tree basins may be edged with low fences between 6" and 18" in height where sidewalks have a minimum of 4 feet between the tree basin and a building wall. Railings must be continuous, and must be maintained so that they do not fall into the sidewalk, allow for water to percolate into the tree basin, and do not contain pointed finials. Railings may be constructed of wood or metal so long as no sharp edges exist. Edging the planting zone with a contrasting material such as cobbles or brick paving is an appropriate design treatment and effectively demarcates the basin edge. Edging must be maintained at grade with the sidewalk.

## **VI. MAINTENANCE GUIDELINES FOR TREES AND LANDSCAPE MATERIAL ON PUBLIC SIDEWALKS AND MEDIANS**

A. Pruning and maintenance guidelines:

- i. On the pedestrian side of the sidewalk, newly planted trees should not have branches that extend beyond the perimeter of the tree basin below the 80" minimum vertical clearance. An 80" minimum vertical

clearance from the lowest branch of a mature tree should be maintained.

- ii. On the vehicular traffic side of the sidewalk, the lowest branch should provide a 14' minimum clearance.
- iii. Tree or landscape material should not obscure traffic or parking signs/signals or vehicular sightlines.
- iv. Tree foliage should be maintained to provide a minimum 6' clearance from any public streetlight.
- v. All tree maintenance work shall comply with Pruning Standards for Public Trees in the City & County of San Francisco, available from the Urban Forester. Article 16 of the Public Works Code authorizes the Department to impose fines and other penalties for excessive pruning.
- vi. The permit holder is responsible for maintaining the trees and/or landscape material in a condition that is safe to pedestrians and vehicular traffic, free of litter and unsightly weeds, and is responsible for maintaining plants with appropriate pruning, watering, and other care as needed, and ensuring that trees and/or landscape material do not encroach into the 4-foot minimum accessible path of travel as described in Section E above.
- vii. Tree basin grade should be maintained flush with the existing sidewalk grade to prevent a tripping hazard.
- viii. Pruning of mature trees around electrical hazards:
  - a. PG&E is responsible for pruning away from high voltage lines. Property owners should contact P&E if the tree adjacent to their property is potentially impacting high voltage electrical transmission lines.
  - b. Property owners should hire an electrical hazard certified arborist for any pruning around high voltage overhead trolley wires. Tree branches should be maintained to allow at least three feet clearance from these wires.

Edward D. Reiskin

Director of Public Works

Approved: