



DEPARTMENT OF
PLANNING AND DEVELOPMENT

CITY OF SACRAMENTO
CALIFORNIA

1231 I STREET
SACRAMENTO, CA

December 6, 1990

ADMINISTRATION
ROOM 300
95814-2987
916-449-5571

City Planning Commission
Sacramento, California

ECONOMIC DEVELOPMENT
ROOM 300
95814-2987
916-449-1223

NUISANCE ABATEMENT
ROOM 301
95814-3982
916-449-5948

Members In Session:

**SUBJECT: ALHAMBRA CORRIDOR DESIGN GUIDELINES -
LANDSCAPE PROVISIONS**

LOCATION From 26th to 34th Streets and from A to W Streets

SUMMARY

The Planning Commission requested that the landscape provisions of the Alhambra Corridor Design Guidelines being brought back for final review and recommendation. The attached Exhibit A identifies changes that were recommended by a committee that was selected by the Design Review Board for this purpose. The changes consist of revised planting standards and the deletion of some species that were determined not to be suitable for Sacramento.

BACKGROUND

The Design Guidelines for the Alhambra Corridor were reviewed and approved by the City Planning Commission at their October 4th meeting. The Commission was informed of the Boards request for further review of the landscape provisions. The Commission requested that the landscape guidelines be brought back for their final consideration prior to being transmitted to the City Council. The Design Review Board is scheduled to review and make recommendation on December 12th. The Boards comments will be presented to the Commission at the meeting. Upon final recommendation by the Planning Commission the Alhambra Corridor Design Guidelines will be transmitted to the City

Council for adoption. This will complete Phase 2 of the Alhambra Corridor Plan. Phase 3 will consist of land use, zoning and development standards and is expected to be presented to the community during a workshop in late January. The Commission will be presented with Phase 3 of the Plan in February or March of 1991 or a status report will be made on the plans progress.

On September 26, 1990 the Design Review Board considered a set of Design Guidelines for use in the Alhambra Corridor. These provisions also called for the expansion of the Design Review District east to 34th Street. The Board approved of the Guidelines and expansion of the District with the exception of the landscape provisions. The Board requested that a committee be formed, consisting of the City Arborist, Landscape Architect, Design Review Board member and a Wholesale landscaper. The Board also requested that the landscape guidelines be brought back for final review and approval prior to being transmitted to the City Council. The purpose of the Committee was to review the recommended landscape provisions and modify them as needed. The Committee held two meetings to discuss these provisions and the attached landscape guidelines (see Exhibit A) were changed accordingly.

COMMITTEE CHANGES

The Committee recommended that the street tree list be limited to three or four species to establish a theme for the Corridor. The following trees were identified for this purpose: Plantanus acerifolia (v Bloodgood London Plane) or Platanus acerifolia (v Yarwood London Plane Tree); Celtis sinensis (Chinese Hackberry) and Pistacia chinensis (Chinese Pistache).

The Committee further identified some species that should be removed from the list due to problems associated with susceptibility to environmental stress or because they were messy. They also noted availability of the recommended trees on the list for use in the Corridor. The trees that the Committee recommended eliminating include: Schinus terebinthifolius (Brazilian Pepper Tree); Telia cordata (little leaf Linden Tree); Sorbus aucuparia (European Mountain Ash) and Pinus pinea (Italian Stone Pine).

TREE PLANTING STANDARDS

The Committee recommended the following standards for tree planting in the Corridor:

1. A 10' radius (applies to the root area underneath the paving regarding excavation).
2. 10' setback for the third story and above (10' measured from back edge of sidewalk) in addition to an 8' planting strip and sidewalk width or plant trees with a columnar spread versus a rounded spread although the former approach is favored over the latter.

3. Encourage park strips in back of the curb between the sidewalk and street, and encourage large shade trees.

OTHER RECOMMENDATIONS

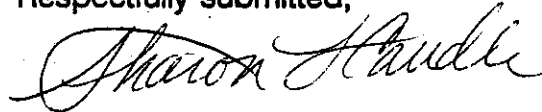
1. The Committee also indicated that surface spray systems should be discouraged for tree watering.
2. A low-flow bubbler with 3/4 crushed rock inside of a 4" diameter AB5 3' depth pipe should be encouraged.
3. Encourage cone root deflectors which funnel growth of structural roots downward, even though over time, the feeder roots may grow upward.

This provision was derived from the Los Angeles City Codes. Examples of a deflector can be seen in Exhibit B.

STAFF RECOMMENDATION

Staff recommends approval of the attached landscape guidelines as modified by the Committee.

Respectfully submitted,



SHARON CAUDLE
Associate Planner

Recommendation Approved by



SCOT MENDE
Senior Planner

SM:SC:pc
M90-010.CPC

Attachment

EXHIBIT A

Species	Height	Canopy Width	Deciduous/ Evergreen	Flowering	Street Tree	Accent Tree	Courtyard/ Other	Eastside	Westside
1. * <u>Platanus acerifolia</u> (V. Bloodgood) (London Plane Tree)	80'	30' - 40'	D		X	X		X	
2. * <u>Platanus acerifolia</u> (V. Varwood) (London Plane Tree)	80'	30' - 40'	D		X	X		X	
3. * <u>Celtis sinensis</u> (Chinese Hackberry)	40'	50' - 60'	D		X	X		X	
4. * <u>Quercus lobata</u> (Valley Oak) (Limited availability)	70'	60' - 80'	D		X	X		X	
5. * <u>Pistacia chinensis</u> (Chinese Pistache)	40' - 60'	40' - 50'	D	Fall color	X	X			X
6. * <u>Crataegus phaenopyrum</u> (Scarlet Hawthorne)	25'	20'	D	Pink flower		X			X
7. * <u>Pyrus calleryana</u> (Aristocrat Pear)	35'	30'	D	Fall color		X			X
8. <u>Cinnamomum camphora</u> (Camphor) (36" min box size with deflectors)	50+	65' - 70'	E			X		X	
9. <u>Magnolia grandiflora</u> (V. Samuel Sommers) (Magnolia) 24" min box size)	30-40'	30+	E	White		X			X
10. <u>Geijera parviflora</u> (Australian Willow)	25' - 30'	20'	E			X			X
11. <u>Ceratonia siliqua</u> (Carob)	30'	30'	E			X			X
12. <u>Podocarpus elongatus</u> <u>V. gracilior</u> (fern Pine) 36" min box size)	40' - 50'	10' - 20'	E			X			X

Species	Height	Canopy Width	Deciduous/ Evergreen	Flowering	Street Tree	Accent Tree	Courtyard/ Other	Eastside	Westside
13. <u>Quercus suber</u> (Cork Oak)	70'-100'	70'-100'	E			X	X	X	
14. <u>Quercus ilex</u> (Holly Oak)	40'-70'	40'-70'	E			X	X	X	
15. <u>Filix-cordata</u> (Little-Leaf Linden) (Probleme)	50'	15'-30'	D			X	X		X
16. <u>Celtis australis sinensis</u> (European Hackberry)	40'	40'	D			X	X	X	
17. <u>Celtis occidentalis</u> (common Hackberry)	50'	40'-50'	D			X	X		
18. <u>Quercus coccinea</u> (Scarlet Oak)	60'	35'-50'	D	Colorful (Red fall leaves)		X	X		
19. <u>Quercus rubra</u> (Red Oak)	90'	40'-70'	D	Red fall color		X	X		
20. <u>Sorbus aucuparia</u> (European-Mtn-Ash)		15'-20'	D	White Flowers Red Berries		X	X		
21. <u>Sapinum sebiferum</u> (Chinese Tallow Tree)	35'	35'		Fall Color			X		
22. <u>Lagerstroemia indica</u> (Crape Myrtle) (mildew resistant variety)	25'-30'	15'-20'	D			X	X		
23. <u>*Quercus agrifolia</u> (Coast Live Oak)	30'-60'	50'-60'	E			X		X	
24. <u>Washingtonia robusta</u> (Mexican Fan Palm)	100'	15'	E			X	X		
25. <u>Washingtonia filifera</u> (Calif. Fan Palm)	60'	12'	E			X	X		

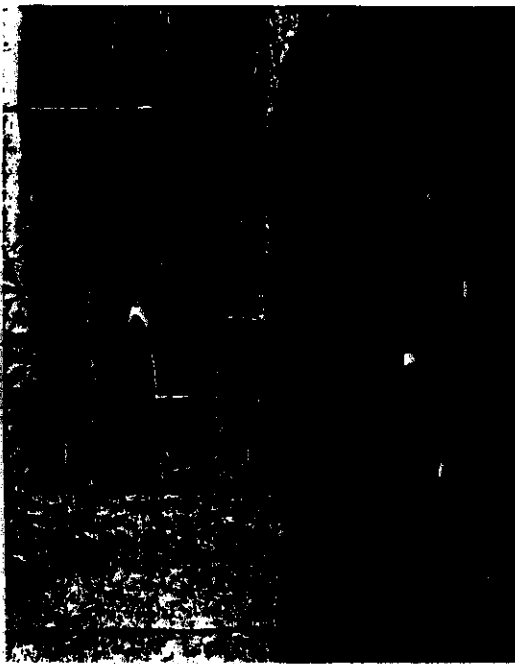
Species	Height	Canopy Width	Deciduous/ Evergreen	Flowering	Street Tree	Accent Tree	Courtyard/ Other	Eastside	Westside
26. <u>Arecastrum romanoffianum</u> (Brazilian Queen Palm)	40'-50'	15'-20'	E			X	X		
27. <u>Pinus pinea</u> (Italian Stone Pine) Overall not recommended						X	X	X	
28. <u>Schinus molle</u> (Brazilian Pepper Tree)	25'	25'	E			X	X		X
29. <u>Schinus molle</u> (Calif. Pepper Tree)	25'-40'	30'	E			X			X

*Preferred street trees that conform to the Mediterranean theme for Alhambra Boulevard.

SC:ob
11/07/90
species.trc

RECEIVED
DEC 0 1986

Introducing . . .
"ROOT BOOSTER"
Root Diversion Box For Street Trees



- Helps prevent cracking of streets & sidewalks caused by uncontrolled root growth.
- Helps promote tree growth by providing easy access to tree roots for deep watering & feeding.

Shawtown Industries, Inc.
Westlake Village, California, 91362

805 787-5309
805-465-2522

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(818) 706-2285

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Westlake Village, California 91362

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Call for Information or Distributor in your area



"ROOT BOOSTER"

Root Diversion Box For Street Trees

What Is It?

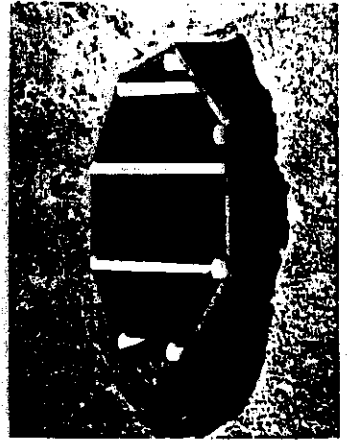
ROOT BOOSTER is an effective root diversion box. Its unique design also provides for easy deep feeding and watering of trees. ROOT BOOSTER promotes growth — prevents damage.

How Does It Work?

The tapered sides promote the downward development of roots, preventing immediate outward growth and subsequent damage to sidewalk, etc. The interior ribs prevent roots from circling the root ball, impairing normal growth. The feeder tubes allow for fertilization of the roots at the depth expansion is desired, drawing the roots to this fertile soil.

Are They Hard To Install?

No, use auger (or shovel) to dig 30" hole. Place the ROOT BOOSTER at finish grade. Set the tree so top of root ball is 1/2" to 1" above the rim, water and backfill per planting specs. Install crushed rock between outer walls of the box and sides of the hole and backfill. That's it!



What About Larger Trees?

ROOT BOOSTER sheet material is also available for larger tree use. It will allow any size tree to be adapted to a variation of hole sizes.

When You Root Prune?

The sheet material may be used for root pruning situations. When the trench is cut the sheet barrier is placed directly in the trench prior to backfilling.

Root Diversion Box For Street Trees

Why Is "Root Booster" Better?

- Boxes fit into augered hole — no need to "square" the hole by hand.
- Boxes are available two ways; assembled for immediate installation or boxed for easier shipping and storage.
- Sheet material available in three standard heights; 12", 18", & 24" all 20' long rolls.
- Sheet material is separable at 6" intervals and comes with four sets of coupling connectors.
- Barriers can be custom made in varying heights & lengths for special circumstances.
- All products provide ability to easily deep water and feed at the depth of barriers — promotes growth where you want it!



ABOVE FINISH GRADE.
FINISH GRADE TO BE LEVEL
WITH TOP OF CURB.

PRIOR TO SPOTTING OF
STREET TREES. 714-736-
2241.

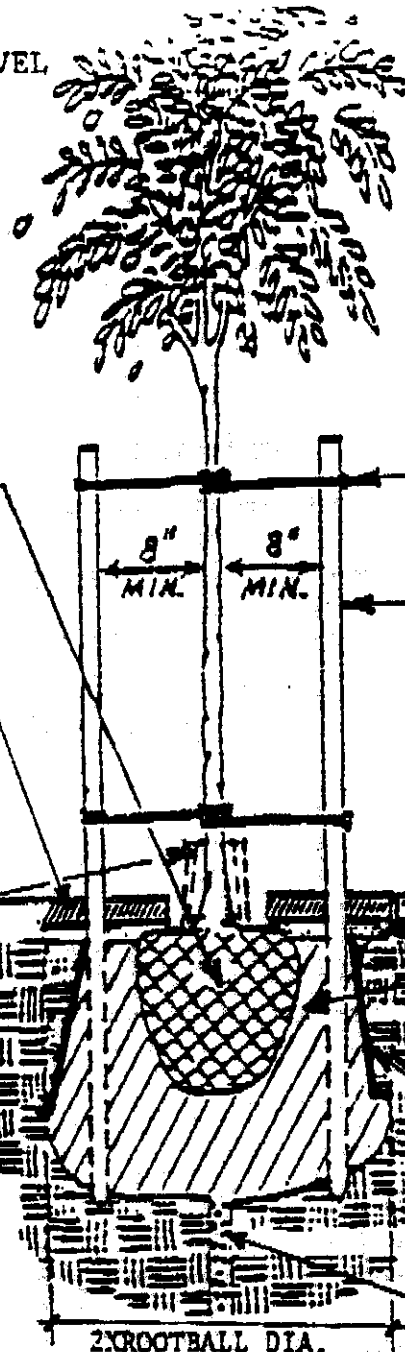
ROUGHEN SURFACE
OF ROOTBALL & PLANT
AS SPECIFIED IN STANDARDS
OF DIRECTOR OF PARKS

TREE GRATES OR BRICK
REQUIRED IN HEAVY TRAF-
FIC AREAS AT DISCRETION
OF PARKS & REC. DIRECTOR

VENTILATED TRUNK
PROTECTORS.

2X ROOTBALL
DEPTH.

ALL STREET TREES REQUIRE
AUTOMATIC IRRIGATION TO
BE APPROVED BY PARKS AND
RECREATION DIRECTOR



RUBBER CINCH TIE OR EQUAL.
NO HOSE AND WIRE.

LODGEPOLE PINE
TREE STAKES (2\"/>

FINISH GRADE.

3\"/>

NATIVE SOIL BACKFILL
UNLESS SPECIFIED.

DEEP ROOT CORP. OR SHAWTOWN
INDUSTRIES, 1 PIECE MOLDED
AND RIBBED ROOT BARRIER, 22\"/>

6\"/>

2X ROOTBALL DIA.

NOTES:

PLANT ALL STREET TREES ACCORDING TO THE FOLLOWING:

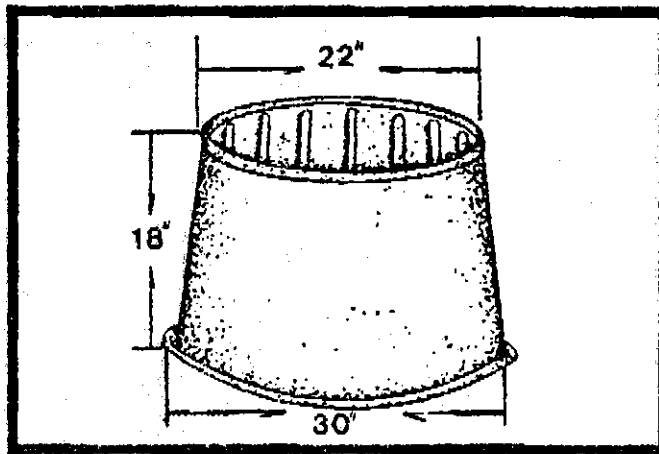
1. 5' FROM FIRE HYDRANTS.
2. 15' FROM STREET LIGHTS.
3. 5' FROM DRIVEWAYS.
4. 25' FROM STREET CORNERS
5. 5' FROM UNDERGROUND UTILITIES OR BOXES
6. 5' FROM SEWER LATERALS
7. STREET TREES ARE TO BE CENTERED BETWEEN THE BACK OF CURB AND THE SIDEWALK IN THE PARKWAY.

Revised	Drawn	Date Nov. 1985	CITY OF CORONA PUBLIC WORKS DEPARTMENT	
10-22-87	Approved	Date 11/16/85		
7-11-88	<i>Joseph R. Palencia</i> Director of Public Works		STREET TREE PLANTING	6140
3-25-88				
	<i>John E. ...</i> Director of Parks & Recreation			

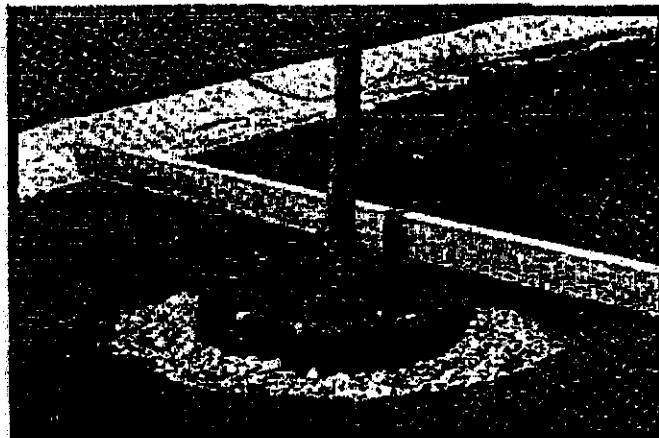
ONE PIECE ROOT CONTROL BOX FOR 15 GAL. TREES

For use where:

1. Sectional Box is not desired.
2. Standard Planter is 22" x 29" x 18".
3. Taper walled container is required.
4. Auger is used to Excavate.
5. Labor saving installation is desired.
6. No assembly is wanted.



F.I. 15



Always place at or above finish grade.

Style	Thickness	TENSILE PROPERTIES AS TM D638		FLEXURAL PROPERTIES AS TM D 790	
		Strength	Elongation	Flexural Modulus	Stiffness in Flexure
FI 15 BOX	280	1750 PSI	740 %	140,000 PSI	92,000 PSI

COMPUTATION SHEET

FOR DETERMINING AMOUNT OF BARRIER (SM18, SM24, SM48)
NECESSARY PER TREE UNDER NORMAL CONDITIONS

TREE SIZE		LINEAR FOOTAGE OF MATERIAL PER TREE	TREES/ROLLS
CONTAINER	BALLED IN BURLAP OR FIELD GROWN (dla.)		
15 Gal.	Up to 16"	5 feet	4/1
20" Box	Up to 24"	7 feet	3/1
24" Box	Up to 32"	9 feet	2½/1
30" Box	Up to 38"	10 feet	2/1
36" Box	Up to 48"	13 feet	1½/1
42" Box	Up to 55"	15 feet	1½/1
48" Box	Up to 65"	17 feet	1¼/1
60" Box	Up to 78"	20 feet	1/1
72" Box	Up to 94"	25 feet	1¼/2
84" Box	Up to 112"	30 feet	1½/2
96" Box	Up to 125"	34 feet	1¾/2

CALCULATIONS

EXAMPLE SIZE	TOTAL INCHES	÷ 12" = Feet	EXTRA FOR BACKFILL	LINEAR FOOTAGE OF MATERIAL
Boxed Tree 24" × 4 sides =	96"	÷ 12" = 8 ft.	+ 1.0 ft. =	9 ft.
Balled Tree 48" × 3.14 (pi) =	150"	+ 12" = 12.5 ft.	+ 0.5 ft. =	13 ft.

ROOT BOOSTER SHEET MATERIAL INSTRUCTIONS

- 1 Measure circumference of root ball. Example: $24" \times 4 = 96"$
 $36" \times 4 = 144"$
 $48" \times 4 = 192"$

- 2 Round the total up to the nearest foot, or to next gap between ribs in roll.

- 3 Place the scribing template at base of material (between the ribs) and pull upwards, cutting a line, bottom to top. (See Figure 1)

- 4 Bend at this scribe line in opposite direction than material is rolled. (Figure 2)

- 5 Apply glue from top to bottom along one edge of the extrusion. Install extrusion to the end making sure it slips on completely.

- 6 Apply glue along other edge of extrusion and insert the barrier into it. (See Figure 3)

- 7 Place Root Booster barrier in hole so that top edge of material is at finish grade.

- 8 Water and backfill tree with amended soil and fertilizer. Place gravel around exterior of barrier.

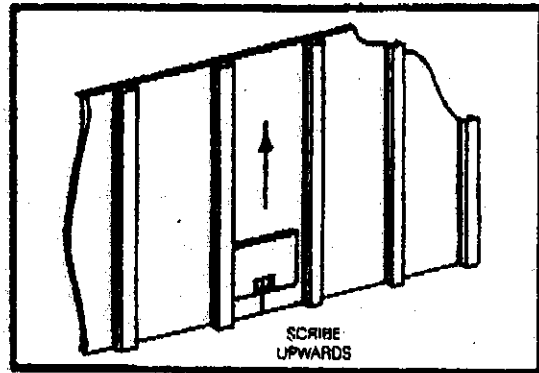


Fig. 1

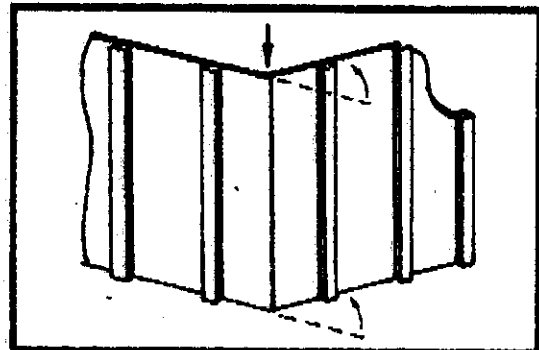


Fig. 2

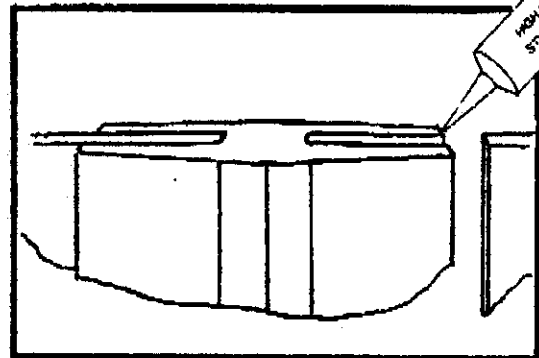
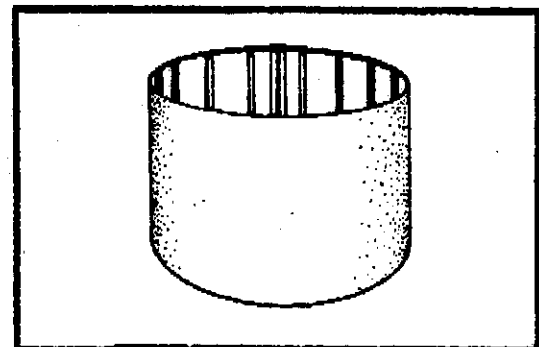


Fig. 3



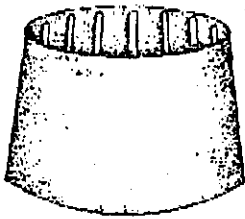
COMPLETED ASSEMBLY

Type	Thickness	TENSILE PROPERTIES ASTM D 638		Resilience %	FLYSIBAL PROPERTIES ASTM D 750 E		IMPACT PROPERTIES ASTM D 226-73	
		Strength psi	Modulus of Elasticity psi (10 ³)		Strength psi	Modulus Elasticity psi (10 ³)	Max Test Speeds	Energy Falling Dart Inch-Pounds
ONE PIECE BARRIER ROLL	060	3800	2.5	35	6500	30	20	0

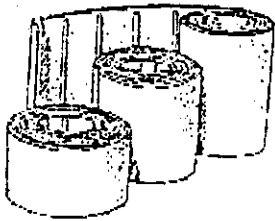
ROOT BOOSTER PRODUCT LINE



- 15 gal. Solid Planter (FI-15)

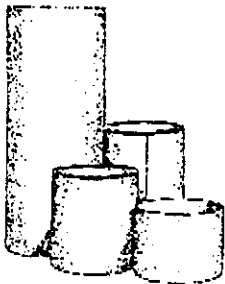


- 24" Box Tree (OP-24)



- One-Piece Barrier Roll
20' per roll

12" High	(SM12-20)
18" High	(SM18-20)
24" High	(SM24-20)
48" High	(SM48-20)



- Water Barrier
Available by the Foot

12" High	.060 Th
18" High	.060 Th
24" High	.060 Th
48" High	.060 Th



- Trunk Protectors
8" x 12" vented and coiled to protect trees in turf areas.

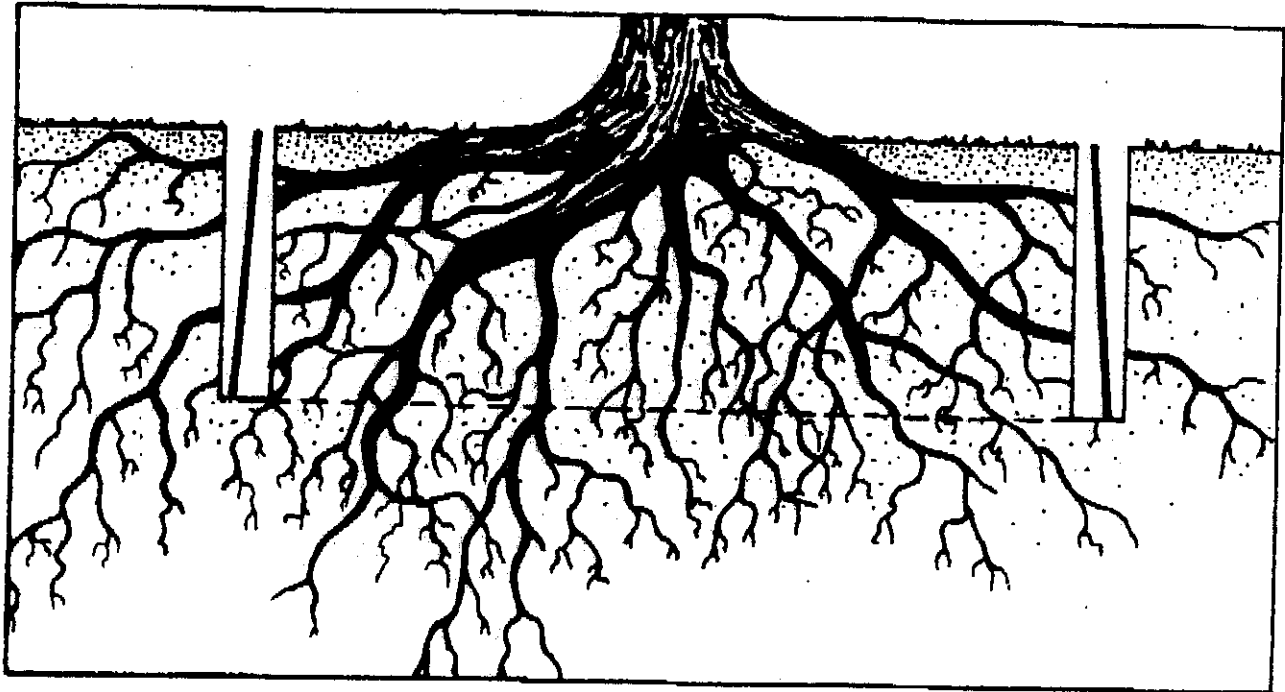
WARRANTY

Shawtown Industries warrants its products against defects in workmanship and materials and will replace, free of charge, any defective

ROOT PRUNING

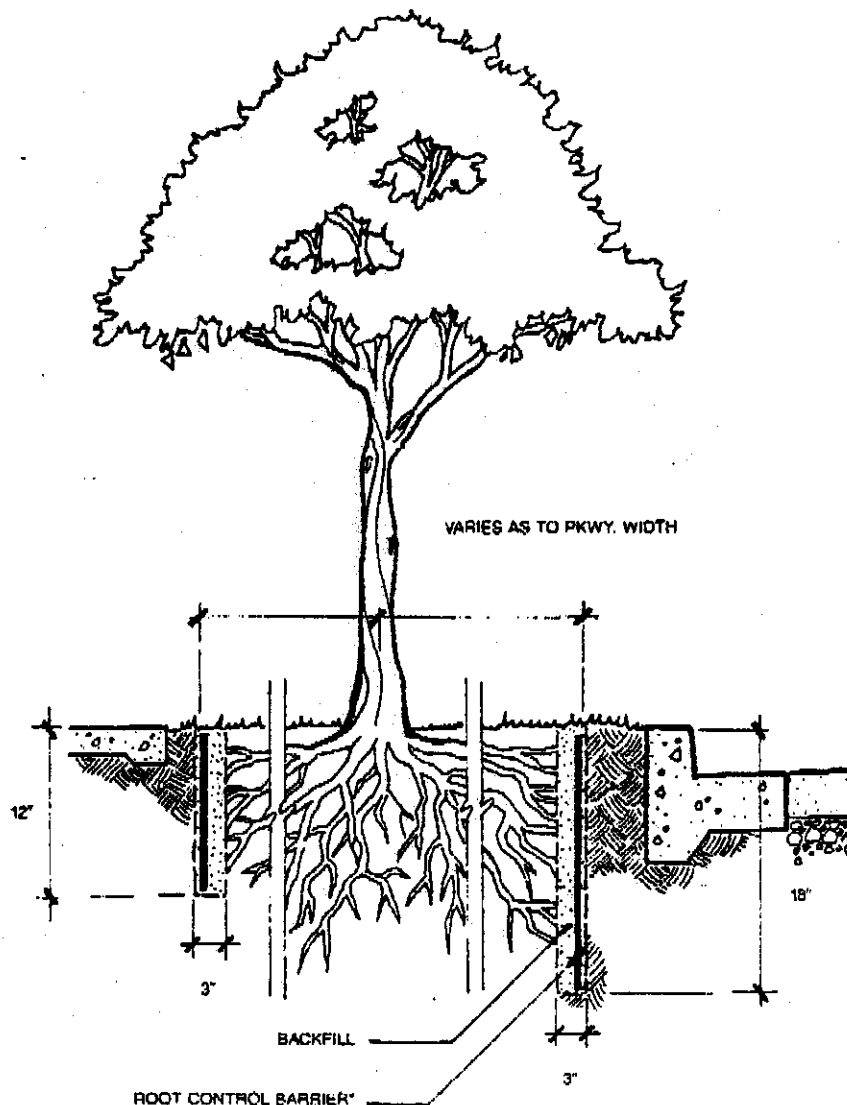
The following few pages will be devoted specifically to the trimming, or "pruning" of tree roots, to prevent the upheaval of nearby hardscape areas.

Root pruning has been performed successfully for many years as an ongoing operation. The regrowth of these surface roots necessitated a re-pruning every few years, until the recent introduction of root barrier materials. Root Booster root control barriers help direct the new growth downward at the hardscape areas, to deter future root damage.



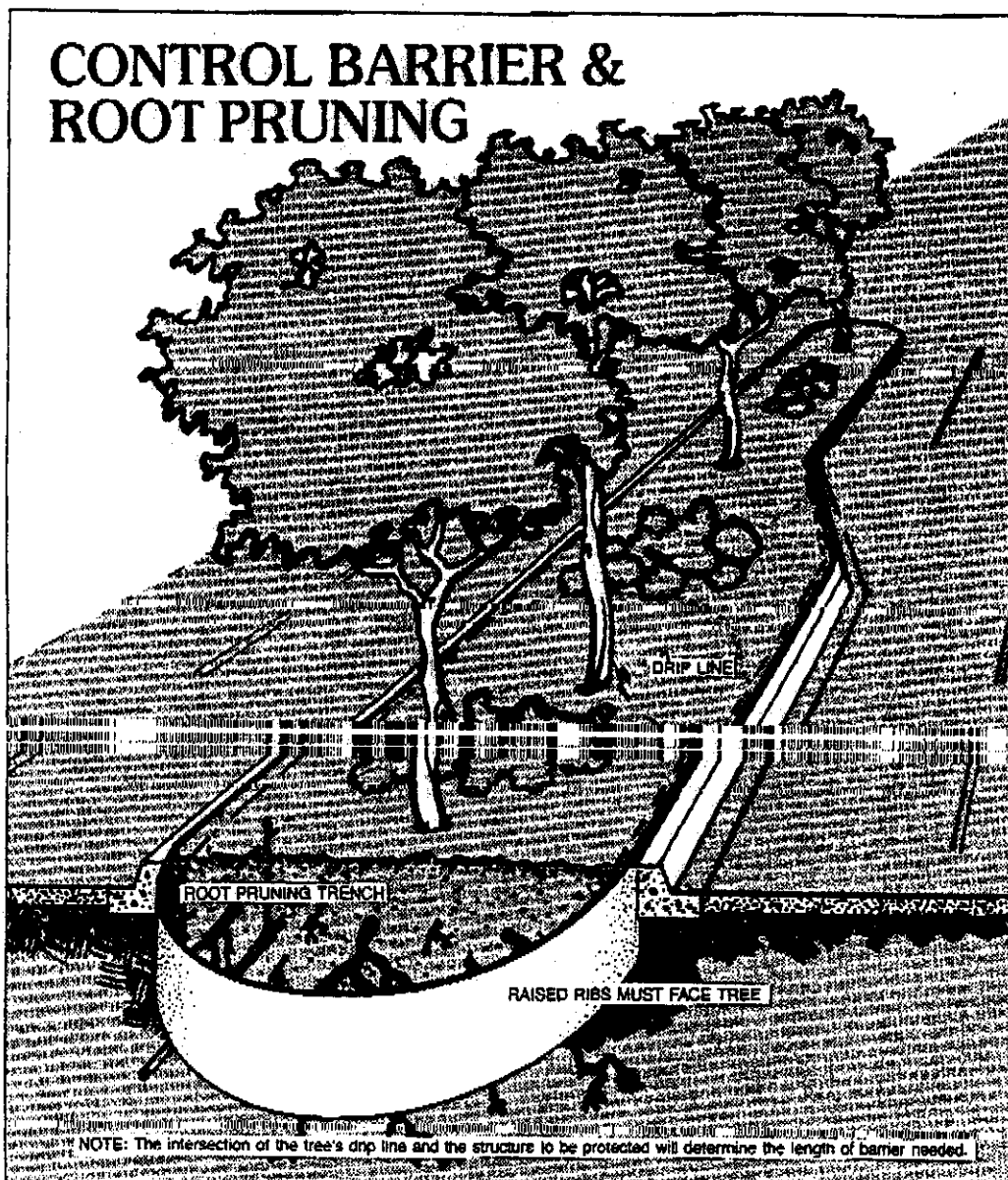
ROOT BOOSTER ROOT PRUNING BARRIER INSTALLATION DIRECTIONS

- 1 Top of barrier must be at finish grade.
- 2 Install barrier with ribs facing the tree, angling outwards as it descends.
- 3 Gravel may be mixed with backfill materials to help keep soil loose for penetration of water.
- 4 Amending backfill is not necessary as wood chips from cut roots will be mixed with the soil.
- 5 Jagged root edges should be cut smooth to promote seal over and decrease the chances of root disease.

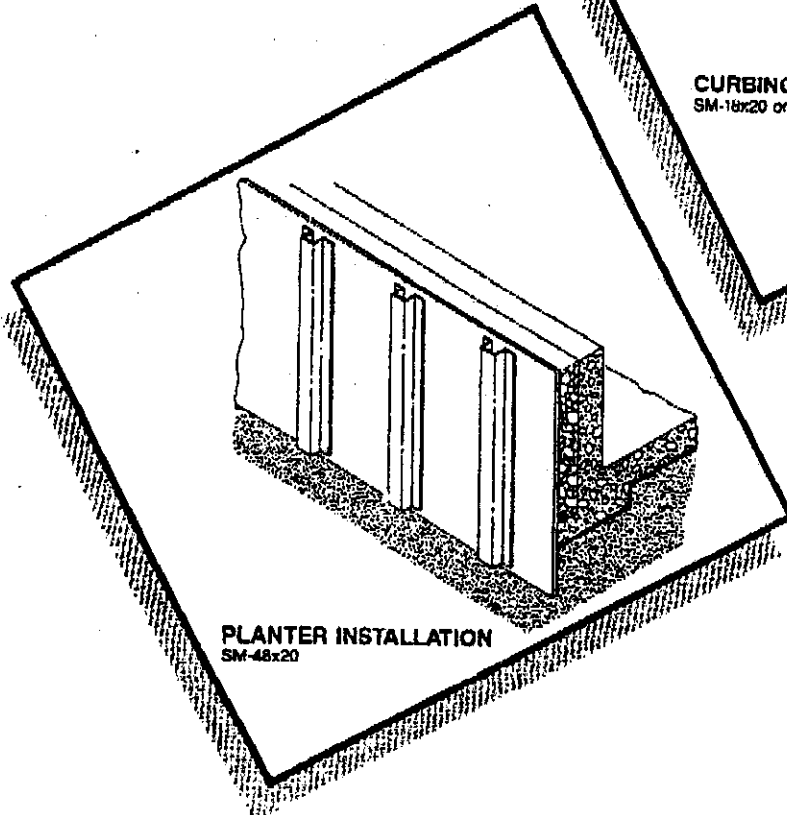
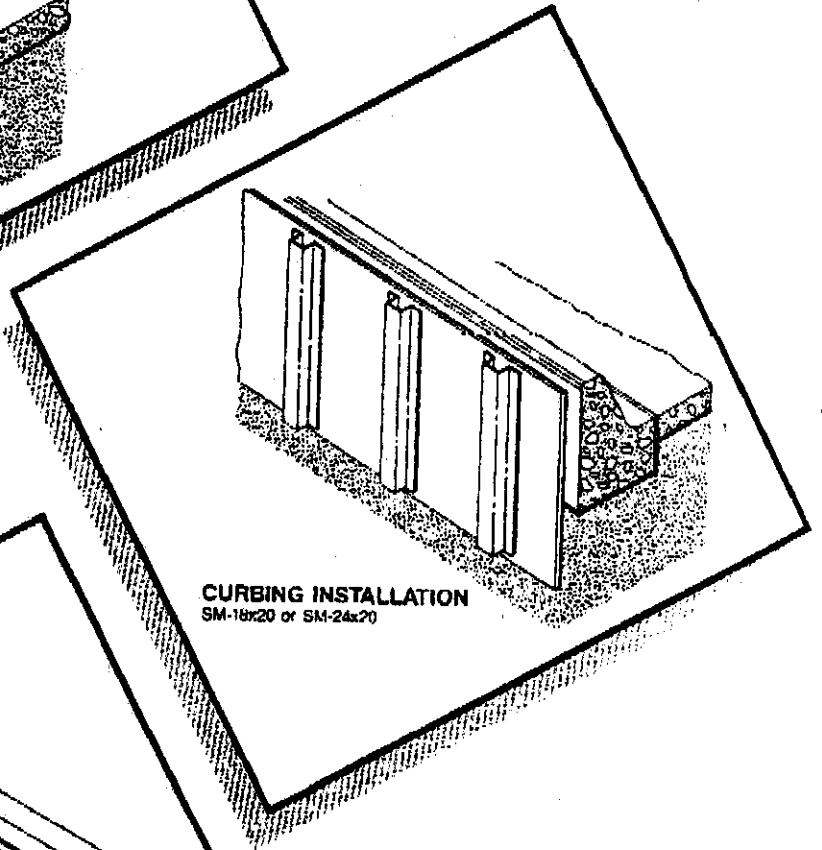
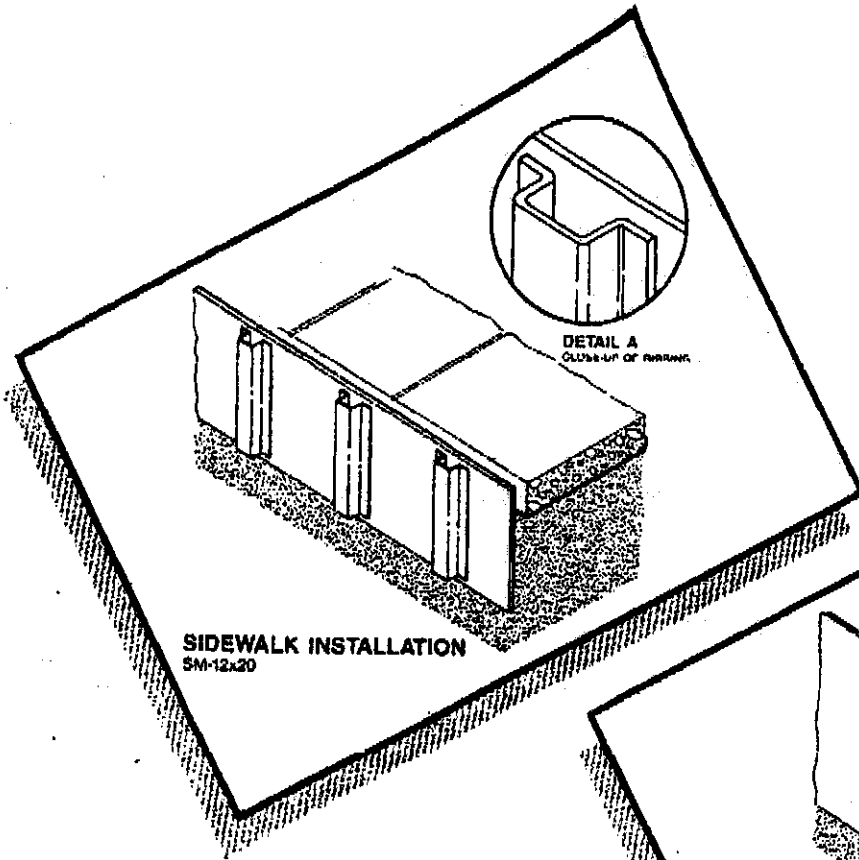


GUIDELINES TO ROOT PRUNING

1. An arborist should be consulted in all instances due to the varying conditions that may exist.
2. Canopies of trees to be root pruned should be comparably trimmed. For example: If one-fourth of the roots are to be pruned, at least one-fourth of the canopy should also be trimmed.
3. It is always better to overtrim the canopy than to under-compensate for root pruning. Reducing the wind mass of the canopy is foremost in preventing root pruned trees from falling over.
4. Don't plan on root pruning prior to, or during, windy and rainy weather.
5. If possible, it is recommended that only one-fourth of the root system be trimmed in one season.
6. Root booster SM12-20 is used on the sidewalk while SM18-20 is recommended for the curb side.
7. Once the pruning trench has been cut, the amount of severed roots should be observed. At this time canopy should be re-evaluated, to be sure enough canopy has been removed.
8. The extent of barrier needed varies with each tree. As a general rule the barrier should extend to the drip line of the tree.



ROOT BOOSTER PRODUCTS IN ROOT PRUNING APPLICATIONS



- c. Visual disruptions to the existing street scape are strongly discouraged in the Neighborhood Preservation Areas. These areas were created to ensure the compatibility of new construction to the existing residential neighborhood. Disruptive features would include inappropriate setback on the site, excessive massing of the building and incompatible architectural design.
- d. A landscape element should be included as part of the overall design. Landscaping will soften the hard edge of commercial development when it is adjacent to residential use. The landscape element should adhere to the criteria and plant list identified in Section II-E of these guidelines.

E. LANDSCAPE ELEMENT

The following provisions and tree species have been identified for use in the Alhambra Corridor to ensure a healthy environment for landscape features and corridors.

1. Tree Planting Standards

- a. Tree planting areas should provide a minimum of ~~40~~ 10 feet of soil area radiating from the trunk of the tree with a minimum depth of 4 feet from the surface unless otherwise stated.
- b. *Ten-foot setback for the third story and above (10' measured from back edge of sidewalk) in addition to an 8' planting strip and sidewalk width or plant trees with a columnar spread versus a rounded spread although the former approach is favored over the latter.*
- b. ~~Structures should be designed to accommodate a 36-foot diameter for the tree canopy to allow for full growth.~~
- c. *Encourage park strips in back of curb between the sidewalk and street, and encourage large shade trees.*

2. Alhambra Boulevard From I Street to P Street

Alhambra Boulevard is currently lacking in trees due to natural loss and loss during new construction. Since this is a major pedestrian corridor, new projects will be required to provide tree planting in the

public right-of-way strip adjacent to the sidewalk. To ensure a uniform theme and continuity in this area, the use in the public right-of-way along Alhambra Boulevard should include trees that are compatible with the mediterranean features identified for this portion of the corridor. Based on this theme the following trees have been identified by the City Arborist for use in this area:

(A committee consisting of the City Arborist, City Landscape Architect, professional landscape architect, representative of the wholesale nursery trade, Dennis Subai from DRB and UC Extension tree specialist to determine tree species and standards).

a. Public Right-of-Way - East side of street

Evergreen Trees

- (1) Quercus suber (Cork Oak) - 70'to 100' high, equal spread
- (2) Quercus ilex (Holly Oak) - 40' to 70' high, equal spread

Deciduous Trees

- ~~(1) Tilia cordata (Little Leaf Linden) - 50' high with 15' to 30' spread, flowering~~
- ~~(2) Platanus acerifolia (London Plan Tree) - 80' high, 30' to 40' spread.~~
- (2) Celtis sinensis (Chinese Hackberry) - grows to 40' high with a 50' to 60' spread.
- (3) Quercus Lobata (Valley Oak) - to 70' high with a 60' to 80' spread.

b. Public Right-of-Way - West side of street

Evergreen Trees

- ~~(1) Ligustrum lucidum (Glossy Privet) - 30' to 40' high, 15' to 20' spread, flowering~~

Deciduous Trees

- ~~(1) Sophora japonica (Japanese Pagoda) moderate growth, 20' to 40' high, 20' to 40' spread, flowering.~~
- ~~(2) Aesculus carnea (Red Horsechestnut) is deciduous, 30' wide crown, 8" long plumes of soft pink or red flowers in April and May.~~
- (1) Pistacia chinensis (Chinese Pistache) - 40'- 60' high with 40'to 50' spread. Colorful Fall leaves.

3. Tree Suggestions For Other Areas in the Alhambra Corridor

Public right-of-way medians in other parts of the corridor that lack trees will be required to plant trees in these areas. The type of tree to be used should conform to those approved by the city arborist. On site landscaping should utilize trees that provide a canopy for pedestrian comfort and scale. The following is a list of trees that are approved for use in these areas:

- a. Large Trees (40' and over in height, to be planted where there are no overhead wires)

Evergreens

- (1) Quercus suber (Cork Oak) is evergreen and will grow to 70 - 100 feet high, with equal spread.
- (2) Cinnamomum camphora - Camphor grows to 50+' with 65' - 70' spread. (Needs deflectors min. size 36" box)
- (3) Overcus agrifolia (Coast Live Oak) - 30' to 60' high, 50' to 60' wide
- (4) Washingtonia robusta (Mexican Fan Palm) - to 100' high, with 15' spread.
- (5) Washintonia filifera (Calif. Fan Palm) - to 60' high, 12' spread.

Deciduous

- s (2) Celtis australis sinensis (European Hackberry) is

deciduous, will grow to 40 feet with 40 foot spread, with upright branching. There are no flowers, pods, etc. Or, C. occidentalis (Common hackberry) is larger than C. Australis, grows to 50 feet, branches more pendulous.

- ~~(3) Tilia cordata (Little Leaf Linden) is deciduous, has upright growth, to a height of 50 feet, a spread of 15-30 feet, flowers in July.~~
- (4) Platanus acerifolia (London Plane Tree) is deciduous, to 80' in height, 30' to 40' spread, withstands smog, soot, dust, reflected heat.
- (5) Quercus coccinea (Scarlet Oak) is deciduous, grows to 60' in height, bright scarlet leaves in fall.
- (6) Quercus rubra (Red Oak) is deciduous, fast growth to 90', broad crown, high spreading branches.

b. Medium Trees (30 to 40' in height)

Evergreens

- (1) Ligustrum lucidum (Glossy Privet) is evergreen, round headed, 15 - 20 foot spread, large clusters of small yellow flowers in Spring, followed by black berries.
- (2) Magnolia grandiflora (v *Samual Sommers*) (*Magnolia*) 30' - 40' high with a 30+' spread (flowering).
- (3) Geijera parviflora (*Australian Willow*) - 25' to 30' high with 20' spread.
- (4) Podocarpus elongatus v *gracilior* (*Fern Pine*) - 40' to 50' high with a 10' to 20' spread (36" min. box size).
- (5) Schinus molle (*California Paper Tree*) - 25' to 40' high, 30' spread.

Deciduous

- (1) ~~Sorbus aucuparia (European Mountain Ash) is deciduous, 15–20 foot spread with oval to rounded crown. Small white flowers in late spring, followed by clusters of red berries in summer.~~
 - (2) Sapium sebiferum (Chinese Tallow Tree) is deciduous with 35 foot diameter, round or conical crown, outstanding fall color.
 - (3) ~~Sephera japonica (Japanese Pagoda Tree). It is deciduous, moderate growth to 20 feet and ultimately to 40 feet in height, with equal or greater width. Long, open 8–12" clusters of yellow/white, 1/2" long flowers from July to September.~~
 - (4) Aesculus carnea (Red Horsechestnut) is deciduous, 30' wide crown, 8" long plumes of soft pink or red flowers in April and May.
 - (5) Lagerstroemia indica (Crepe Myrtle) is a small deciduous tree used for summer color accent. *Grows to 30' in height.*
 - (6) Crateagus phaenopyrum (Scarlet Hawthorne) to 25' high 30' spread.
 - (7) Lyrus callbryana (Aristocrat Pear) to 35' high with 30' spread.
4. On site landscaping elements should include trees as well as ground cover and shrubs. Appropriate trees include any of the trees mentioned in these guidelines. ~~as well as Erythrina Crysta Galli (Coral Tree) if protected within a garden court and Jacaranda Mimosaeifolia in larger unpaved landscaped features~~
 5. A maintenance plan utilizing professional landscape maintenance provisions should also be included in the plan. Street tree and landscape element watering should not interfere with pedestrian movement.
 6. Inspection by the City arborist shall be required if roots over

2" in diameter are located during construction and may not be cut without the approval of the City Arborist.

7. *Discourage surface spray systems for tree watering and encourage the use of the following system for street trees:*
 - a. *A low-flow bubbler with 3/4 crushed rock inside of a 4" diameter ABS 3' depth pipe should be encouraged.*
 - b. *Encourage cone root deflectors which funnel growth of structural roots downward, even though over time, the feeder roots may grow upward.*

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