

## Debby Green

13471 Blundell Road, Richmond, BC V6W 1B6  
(604) 727-5200

March 3, 2003

Mayor and City Council  
City of Richmond  
Richmond, BC

Dear Mayor and Richmond City Council Members,

Old, big, beautiful TREES,,,

Take them seriously, they are all of ours to keep...at least Vancouver thinks so.

Vancouver City Hall is a voice for the TREES . There are great regulations that Richmond would greatly benefit to adopt. Why? Because we can't replace them and far too many have been taken away.

Vancouver's natural beauty is from trees, mountain backdrop and ocean setting. No doubt, it is the tree protection bylaws that have kept private homeowners from randomly removing older single and multiple stands of trees in Vancouver. In effect this is why Vancouver has retained its beauty. We need immediate bylaws like this.

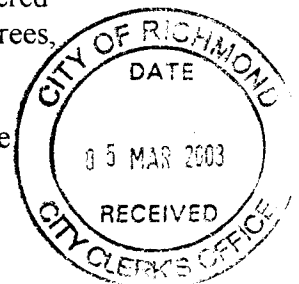
I am a Richmond native. Obviously I have seen great population and economic changes. I live in the Agricultural Land Reserve area for the natural country setting, yet 'monster home' builders are allowed to clear-cut all around the area. In effect, these monster homes clear-cut 100%, take away the natural country setting and the west coast beauty in our community. In the end, you cannot replace the old trees and the monster homes look like they should belong in Terra Nova or city centre.

Landscape nursery seedlings and shrubs are an inadequate excuse for replacement of the gorgeous beauty the old trees gift and which grace our life and neighbourhoods.

So, this is how it goes...

Recently, on Friday last, the new property owners next door to me (13511 Blundell Road) declared that their priority and intention is to bulldoze and destroy all the old trees on the property. Her reason is the trees are "too old and unsightly". In fact, the woman offered us that if we could organize faster than they can to remove all the old cedar and fir trees, that we can keep the money ourselves. We just have to do it 'very fast'.

We don't want the money, we want the trees for the beauty and natural setting in the community and for generations to come. They claim they are nature lovers and will



replace the old trees with something that will grow. They would have no right to do this in Vancouver, why should they here? We are a booming city now, we need to save our trees.

One of the issues is that almost all of the trees are right along the property lines, on both sides of the property, and are serving as shade and beauty for both properties and aesthetic beauty for all the neighbourhood. It's completely unnecessary to remove them for building purposes. The oldest granddaddy of them all is just slightly in from the boundary line and should never be removed. If you look at the situation logically, from a building standpoint, the best view on this acreage, located at 13511 Blundell Road, is northbound, which is an unobstructed view of Grouse Mountain. What more can anyone want? The trees they want to remove are East, West and Southbound. They can easily keep the trees, get their prime view, have a longer driveway, have privacy and create an estate type setting. I mean, after all isn't this what the monster home idea is all about...the estate type prestige and glamour?

Instead, to destroy the old trees unnecessarily, which would never be allowed in Vancouver, they take away the beauty and natural setting in the A.L.R., privacy, and a sound buffer from Blundell Road traffic. Not to mention, removing the trees in front gives them an unobstructed view of the kennel across the street in lieu of Grouse mountain. These people are definitely not Nature Lovers. This is outrageous and shouldn't be allowed, in any part of Richmond.

The media and public response on this issue is building and everyone has a heart for these trees. This is a very real issue to address. Attached are Vancouver City Rules we need to take a serious look at to save these trees! The minority view seems to be, "hey, the guy bought the property, it's his use, his decision what to do with it, leave him alone".

We are all under restrictions every day, all the time. Private property use and building has many restrictions, caveats, rights of way, creek and well restrictions, land air and water, so where are the restrictions for the trees? Vancouver has them, we need them, and right away.

I want to appear to address Richmond City Council, immediately, Monday, March 10, 2003 ,before these trees are removed and see regulations for tree removal similar to Vancouver Cities. Everything is already spelt out for you.

Sincerely,



Debby Green

PS:

*Trees. Aww, who doesn't have childhood memories of laying in the grass, exhausted from sports, or maybe just thinking things through... and looking up through trees. If you recall, and really think about it... those moments recall a harmony, calmness and peace within yourself. This is so true. How about for you?*

*So, do those childhood memories serve you to bring up feelings in your heart to save these trees and the wonderful, irreplaceable value, equilibrium and harmony they share with us. We are blessed to have them. As adults, the relief from trees is felt from the energy they create when we leave the stress and tension of the city and "feel" the spirit of the trees reaching out to us in the country.*

*Take them seriously, they are all of ours to keep and protect... at least Vancouver thinks so, why not Richmond?.*



**To:** Mayor and Councillors  
**From:** Dave Semple  
Director of Parks Operations  
**Date:** March 3, 2003  
**File:** -  
**Re:** TREE DISPUTE - 13000 BLOCK BLUNDELL ROAD, RICHMOND, BC

Global TV's 11:30pm News on Sunday, March 2, 2003 carried a story regarding a tree dispute amongst homeowners on the 13000 block Blundell Road. An owner had purchased property with the intent to tear down and build a house single dwelling. To accomplish this he plans to remove some trees along the adjacent owner's property line. The adjacent neighbour whose property is being impacted by the proposed removal of the trees is against this happening and has gone to the press over this issue.

I met with Deborah Green, one of the concerned neighbours today and toured the site with her. The trees, which I believe are Fir trees, are quite significant in stature and estimated to be over 50 years old. As the Parks Department's responsibility is tree management on City property we are not in a position to address issues related to private property. The City does not have a current bylaw regarding trees on private property. These trees appear to be partially on both owners' properties and it is up to them resolve.

Ms. Green said she plans to attend the Council meeting March 10th with the view to discussing the need for a City bylaw on tree cutting on principle property, similar to the City of Vancouver's.

Please see attached notes for further information. Should you have any questions please call me at 233-3350.

Dave Semple  
Director of Parks Operations

DCS:bh

pc: Cathy Volkering Carlile

City of Vancouver

SINGLE TREE REMOVAL

Application for a Permit

TR PERMIT #: \_\_\_\_\_ (office use only).

Please complete the following information to help us process your application. This includes the written information on the front of this form and a sketch of the property on the back of this form.

1. SITE ADDRESS: \_\_\_\_\_

2. NAME OF APPLICANT: \_\_\_\_\_ PHONE #: \_\_\_\_\_

3. ADDRESS OF APPLICANT: \_\_\_\_\_ POSTAL CODE: \_\_\_\_\_  
\_\_\_\_\_

4. NAME OF OWNER \_\_\_\_\_ PHONE #: \_\_\_\_\_  
(IF DIFFERENT THAN ABOVE)

5. ADDRESS OF OWNER: \_\_\_\_\_ POSTAL CODE: \_\_\_\_\_  
\_\_\_\_\_

6. Type of Tree to be Removed: \_\_\_\_\_

7. Diameter of Tree to be Removed: \_\_\_\_\_  
[Measured at 1.4 m (4 feet 6 inches) above the ground straight across the trunk of the tree.]

8. Reason for Removal: (Please circle one of the following numbers that best describes your situation.)

- |  |                                   |
|--|-----------------------------------|
| 1. too close to foundation             | 9. too large for size of property |
| 2. too close to garage                 | 10. blocking sunlight             |
| 3. dead or dying                       | 11. attracting wildlife           |
| 4. hazardous                           | 12. causing sidewalk problems     |
| 5. interfering with utility wires      | 13. leaves causing problems       |
| 6. interfering with water/sewer/drains | 14. blocking site access          |
| 7. interfering with view               | 15. feng shui                     |
| 8. unattractive                        | 16. affecting house value         |
|  | 17. other: _____                  |

9. Type of Replacement Tree: \_\_\_\_\_

As owner or owner's agent, I have verified that the information contained within this document and associated applications and plans is correct. I acknowledge that responsibility for by-law compliance rests with the owner and the owner's employees, agents and contractors. I will indemnify and save harmless the City of Vancouver, its officials, employees and agents against claims, liabilities and expenses of every kind, in respect of anything done or not done pursuant to this application or fact sheet or ensuing permit, including negligence and/or the failure to observe all by-laws, conditions, acts or regulations.

SIGNED AT VANCOUVER, B.C. THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ YEAR \_\_\_\_\_ SIGNATURE OF APPLICANT

# MAKE A SKETCH OF THE PROPERTY

ADDRESS: \_\_\_\_\_

TR # \_\_\_\_\_

**YOUR PROPERTY SKETCH MUST INCLUDE:**

STREET

PROPERTY LINE

LANE

- ◆ The dimensions of the property and location of the street/lane.
- ◆ The location of the house and other buildings on the property.
- ◆ The exact location and type of tree that you wish to remove.
- ◆ The planting location and type of replacement tree.
- ◆ The location and types of any other trees on the property.

**THE CITY OF VANCOUVER  
ENCOURAGES THE RETENTION  
OF TREES  
WHENEVER POSSIBLE.**

*A list of I.S.A Certified Arborists is available form our staff to help answer any questions about trees.*



## **BOULEVARD AND ROADWAY PROTECTION AND REGULATION**

### **BYLAW NO. 6366**

EFFECTIVE DATE – OCTOBER 11, 1994

#### **CONSOLIDATED FOR CONVENIENCE ONLY**

This is a consolidation of the bylaws listed below. The amendment bylaws have been combined with the original bylaw for convenience only. This consolidation is not a legal document. Certified copies of the original bylaws should be consulted for all interpretations and applications of the bylaws on this subject.

AMENDMENT BYLAW

EFFECTIVE DATE

6807

September 8, 1997

The bylaw numbers in the margin of this consolidation refer to the bylaws that amended the Principal Bylaw No. 6366. The number of any amending bylaw that has been repealed is not referred to in this consolidation.

N/C

**CITY OF RICHMOND**  
**BOULEVARD AND ROADWAY PROTECTION**  
**AND REGULATION**

**BYLAW NO. 6366**

WHEREAS pursuant to Section 571 of the Municipal Act the right of possession of every highway in the City is vested in the City.

AND WHEREAS Section 582 of the Municipal Act empowers the City Council to adopt a bylaw to regulate all uses of a highway, including use of a boulevard, and prohibits any person from excavating in, encumbering, obstructing, injuring or damaging any portion of a highway, except as permitted by such a bylaw.

AND WHEREAS Section 734 (1) of the Municipal Act empowers the City Council to prescribe conditions generally governing the issuance and validity of building permits, and to levy inspection charges.

AND WHEREAS the City Council deems it desirable to regulate the use of boulevards and roadways during the construction of buildings and structures and to provide for the protection of boulevards and roadways.

NOW THEREFORE the Council of the City of Richmond, in open meeting assembled, enacts as follows:

**CITATION**

1. This Bylaw may be cited for all purposes as "Boulevard and Roadway Protection and Regulation Bylaw No. 6366".

**DEFINITIONS**

2. In this Bylaw:
  - (a) "Boulevard" includes the portion of a highway between the roadway and boundary of a parcel adjacent to the highway, and includes without limitation any trees, landscaping, sidewalk, underground utilities or other improvement located within the boulevard.
  - (b) "Highway" includes a street, road, lane, bridge, viaduct and any other way open to public use, but does not include a private right-of-way on private property.
  - (c) "Roadway" means that portion of a highway which is improved for use by vehicular traffic and includes paving, underground utilities, curbs and gutters.



- (d) "Statutory Right-Of-Way" means any statutory right-of-way registered in the Land Title Office in the name of the "City of Richmond".

**REGULATIONS**

- 3. Every person who uses, excavates in, encumbers or obstructs a boulevard or statutory right-of-way during the construction or demolition of a building or structure shall ensure that the boulevard is maintained to a condition suitable for pedestrian usage at all times (unless such usage was not possible prior to construction or demolition), and that the boulevard and statutory right-of-way is fully restored upon completion of all ancillary works including landscaping.
- 4. Every person who uses a roadway for the movement or parking of construction equipment or the transportation of materials during the construction or demolition of a building or structure shall ensure that the roadway is immediately cleared of debris, dirt and mud at all times, and the roadway is fully restored and cleaned upon completion of all ancillary works including landscaping.
- 5. In order to ensure that the requirements in Section 3 and 4 of this Bylaw are observed and to restrain contraventions of Sections 3 and 4, any owner or agent applying for a building permit or demolition permit shall submit to the City, prior to issuance of the permit:

- (a) Security in the following amounts:

	Type of Construction	Amount
(i)	Additions & Accessory Buildings (for Single or Two Family Dwellings) over 10 sq. m. in size; In-ground Swimming Pools; & Demolitions	\$500
(ii)	Move-Offs; Single or Two Family Dwelling Construction	\$1,500
(iii)	Combined Demolition & Single or Two Family Dwelling Construction	\$2,000
(iv)	Commercial; Industrial; Multi-Family; Institutional; or Government Construction	\$5,000
(v)	Combined Demolition and Commercial; Industrial; Multi-Family; Institutional or Government Construction	\$5,500

- (b) The non-refundable inspection charge required by Section 10.
- 6. The security and inspection charge required in Sections 5 and 11 will not apply to any application which covers:
  - (a) Developments under an agreement with the City which contain provisions for City inspections.
  - (b) Interior alterations within the confines of exterior walls and not altering or affecting City services.
- 7. The security required by Section 5 (a) shall be in the form of cash or cheque payable to the City.

- 8. In the event of any non-compliance with Sections 3 or 4, the security may be applied by the City toward the cost of restoration or cleaning of the boulevard, roadway and/or statutory right-of-way.
- 9. If the security is used by the City, any unused portion of the security shall be returned to the owner or agent. In the event the cost of restoration or cleaning exceeds the amount of the security, nothing in this Bylaw shall limit the liability of the owner or agent with respect to those costs.
- 10. If the boulevard, roadway and statutory right-of-way are undamaged and the roadway is clean upon completion of all ancillary works including landscaping, the security shall be returned.

**INSPECTION CHARGE**

**Bylaw 6807**

- 11. (a) A non-refundable inspection charge in the following amount shall be payable at the same time as the security, toward the cost of inspection of the boulevard, roadway and statutory right-of-way. The charge covers two inspections, once before and once after demolition and/or construction.

	Type of Construction	Amount
(i)	Additions & Accessory Buildings (for Single or Two Family Dwellings) over 10 sq. metres in size; In-ground Swimming Pools; & Demolitions	\$75
(ii)	Move-Offs; Single or Two Family Dwelling Construction	\$75
(iii)	Combined Demolition & Single or Two Family Dwelling Construction	\$75
(iv)	Commercial; Industrial; Multi-Family; Institutional; or Government Construction	\$100
(v)	Combined Demolition & Commercial; Industrial; Multi-Family; Institutional or Government Construction	\$100

**Bylaw 6807**

- (b) If additional inspections are required as a result of the final inspection showing failure on the part of the owner or agent to complete all ancillary works including landscaping, a charge of \$75 shall be payable for each additional inspection.

1080  
1081

**OFFENCE AND PENALTY**

12. Any person who contravenes any provision of this Bylaw commits an offence punishable on summary conviction and shall be liable to a fine not exceeding \$5,000.

This Bylaw may be cited as "Boulevard and Roadway Protection and Regulation Bylaw No. 6366".



**City of Richmond**  
 6911 No. 3 Road  
 Richmond, BC V6Y 2C1  
 (604) 276-4000

**Bulletin**  
**Development Applications Department**

Contact (604) 276-4122 Fax (604) 276-4052

**Protection of Existing Trees During Construction**

**No.: DEVAPPS-04**  
**Date: 1996-01-08**  
**Reissued: 2002-09-17**

**Purpose:**

- To inform **all applicants for Development Permits** that these instructions apply once the Landscape Architect and Arborist have determined which trees are to be retained.

**Background:**

- Applicants should not move or cut any trees on the site until a building permit has been issued.
  - A fence shall be placed outside of the drip-line of retained trees which may be affected by the project prior to issuance of any permits (demolition, development, building). The fences shall be snow-fence or equivalent solid fence material. The tree protection fence shall be clearly signed "Tree Retention Area - Keep Out" using either flagging tape or custom made signs.
  - Appropriate information regarding existing tree preservation shall be placed on the landscape drawings. This is to include:
    - The location of all protective tree fencing;
    - A grading plan or cross-section showing finished grade; and
    - A drainage plan for the site.
  - Pruning, root pruning, and all work within 1.5 (times) the existing trees' drip-line shall be supervised by an Arborist.
  - No excavation, storage of materials, parking, preload or fill shall occur within the trees' drip-line.
  - The applicant shall protect trees on City property, boulevards or adjacent sites. City boulevard trees are subject to Boulevard and Roadway Protection and Regulation Bylaw No. 6366, and a damage deposit is required.

Joe Erceg  
 Manager, Development Applications **170**



## **POLICY 7702:**

It is Council policy that:

1. Council encourages the preservation of trees on City property wherever possible, including rights-of-way and highways.
2. Tree removal requests be decided individually, against the following criteria:
  - a) the tree is diseased;
  - b) the tree is damaging or in conflict with utilities;
  - c) the tree is in conflict with necessary new construction works;
  - d) the tree creates a hazardous or dangerous situation;
  - e) the tree is damaging private property;
  - f) the tree has heritage, environmental, or other values supporting preservation.
3. Authorization for resolving tree removal requests be given to:
  - the City Engineer, for removal on road rights-of-way;
  - the Director of Parks & Leisure Services, for removal within City Parks;
  - the Director of Planning, for removal on City property other than road rights-of-way or parks.

If the scope of work for tree removal is of a major proportion, the request is to be submitted to the appropriate Standing Committee for recommendation to Council.

(Engineering Department)



Page 1 of 1

Adopted by Council: July 10/95

**POLICY 5032**

File Ref: 6550-00

**TREE PLANTING (UNIVERSAL)**

**POLICY 5032:**

It is Council policy that:

In recognition of the many benefits derived from urban trees, including cleaning the air, enhancing our neighbourhoods and beautifying our community, Council encourages all owners of property in Richmond to plant and maintain at least two trees on every lot.

(Urban Development Division)

**City of Vancouver**  
BRITISH COLUMBIA



# **Private Property Tree By-law and Guidelines**



## Private Property Tree By-law Subscription Service

Copies of An Introduction to the Private Property Tree By-law, the Private Property Tree By-law and Guidelines can be purchased from the Planning Department at a cost of \$10.00 (plus 7% for GST). If you wish to purchase the By-law and the Guidelines, **please make a cheque payable to the City of Vancouver in the amount of \$10.70.** The By-law and the Guidelines are updated to the date shown on page (i) of the Explanatory Note of each document, located immediately following the front covers of the looseleaf binders.

The Introduction, By-law and Guidelines are occasionally amended and must be kept up to date if you intend to use them over a period of time. Replacement pages are issued whenever the Introduction, By-law and Guidelines are amended and may be obtained by subscribing to our update service. **This service is only available to holders of the By-law and must be applied for within one month of purchasing the By-law.**  
**NOTE: At this time there is no charge for this service.**

Should you wish to take advantage of this service, please complete this form and return it to the City of Vancouver, to:

City of Vancouver  
Planning Department  
453 West 12th Avenue  
Vancouver, B.C.  
V5Y 1V4

FIRM (if applicable):

\_\_\_\_\_ (please print)

NAME:

\_\_\_\_\_

MAILING ADDRESS:

\_\_\_\_\_ (street)

\_\_\_\_\_ (city)

\_\_\_\_\_ (province) \_\_\_\_\_ (postal code)

DATE BY-LAW UPDATED TO: January 1, 2002

BINDERS PURCHASED:

\_\_\_\_\_

**Please Note You Must Subscribe to Receive Replacement Pages Within One Month of the Date You Purchased Your By-law.**

FOR OFFICE USE ONLY	
Date Received _____	
Subscription Begins _____	
Subscription Expires _____	



## **Explanatory Note**

### **Date**

The Introduction to the Private Property Tree By-law reflects the most recent changes to the Private Property Tree By-law. The Private Property Tree By-law has been amended up to **January 1, 2002**

The Tree Retention, Relocation and Replacement Guidelines were adopted by Council on November 1, 1994.

### **Organization**

This binder is divided into three sections:

1. The Introduction to the Private Property Tree By-law provides an overview of the most recent changes to the By-law and summarizes other By-law requirements.
2. The Private Property Tree By-law itself is divided into sections listed in the Table of Contents for easy reference. The date when each page was last revised is included on the bottom right-hand corner of the page.
3. The Tree Retention, Relocation and Replacement Guidelines form Section 3 with a separate Table of Contents. As with the Tree By-law, the date when each page was last revised is included in the bottom right-hand corner of the page.

### **Subscription Service**

The Introduction, By-law and Guidelines are occasionally amended and you must keep it up to date if you intend to use it over a period of time. Replacement pages are issued whenever the Introduction, By-law and Guidelines are amended.

For a subscription fee, replacement pages will be mailed to you. Details on the subscription service can be obtained from the Planning Department Receptionist on the Third Floor of the East Wing of City Hall, 453 West 12th Avenue, Vancouver, B.C., V5Y 1V4 (phone 873-7344).

### **Further Information**

If you have further questions regarding the Private Property Tree By-law, please phone our Tree Information Line at 871-6378.

**Table of Contents**

<b>Section</b>		<b>Page</b>
Section 1	Title .....	1
Section 2	Definitions .....	1
Section 3	Transition .....	1
Sections 4 - 8	Tree Plans .....	2
Section 9	Siting of Replacement Trees .....	2
Sections 10 - 12	Prohibitions .....	3
Sections 12A - 12C	Permits .....	3
Sections 13 - 14, 14A	Relaxation .....	3
Sections 15 - 19	Tree Protection .....	4
Sections 20 - 22	Replacement of Damaged Trees .....	4
Section 23	Emergency Removal .....	4
Section 24	Maintenance .....	4
Sections 25 - 26	Inspections .....	4
Section 27	Orders .....	5
Section 27A	Exemptions .....	5
Section 28	Offences and Penalties .....	5
Section 29	Schedules .....	5

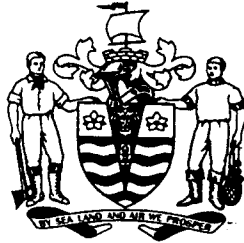
**Schedules**

Replacement Trees .....	Schedule A
Maximum Tree Requirement for Retained and Replacement Trees .....	Schedule B
Siting of Retained Trees .....	Schedule C
Tree Protection .....	Schedule D

**Appendices**

List of Amending By-laws to By-law No. 7347 .....	Appendix A
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**CITY OF VANCOUVER**  
**British Columbia**



**TREE BY-LAW**  
**No. 7347**

**And Associated Information**

1. An Introduction to the Private Property Tree By-law
2. Private Property Tree By-law
3. Tree Retention, Relocation and Replacement Guidelines



## **An Introduction to the City of Vancouver Private Property Tree By-law No. 7347**



*The Private Property Tree By-law, originally enacted on November 1, 1994, replaced the tree-related provisions of the Zoning and Development By-law that were enacted in 1991.*

This pamphlet provides an introduction to the Private Property Tree By-law, No. 7347. Also available are the Tree Retention, Relocation and Replacement Guidelines, as well as the By-law itself. Applicants for tree permits should always refer to the By-law and Guidelines when determining tree requirements for their sites.

Copies of the By-law and the Guidelines may be purchased from the City of Vancouver Planning Department at 2675 Yukon St. (East Wing, 3rd Floor Reception), phone 873-7344.

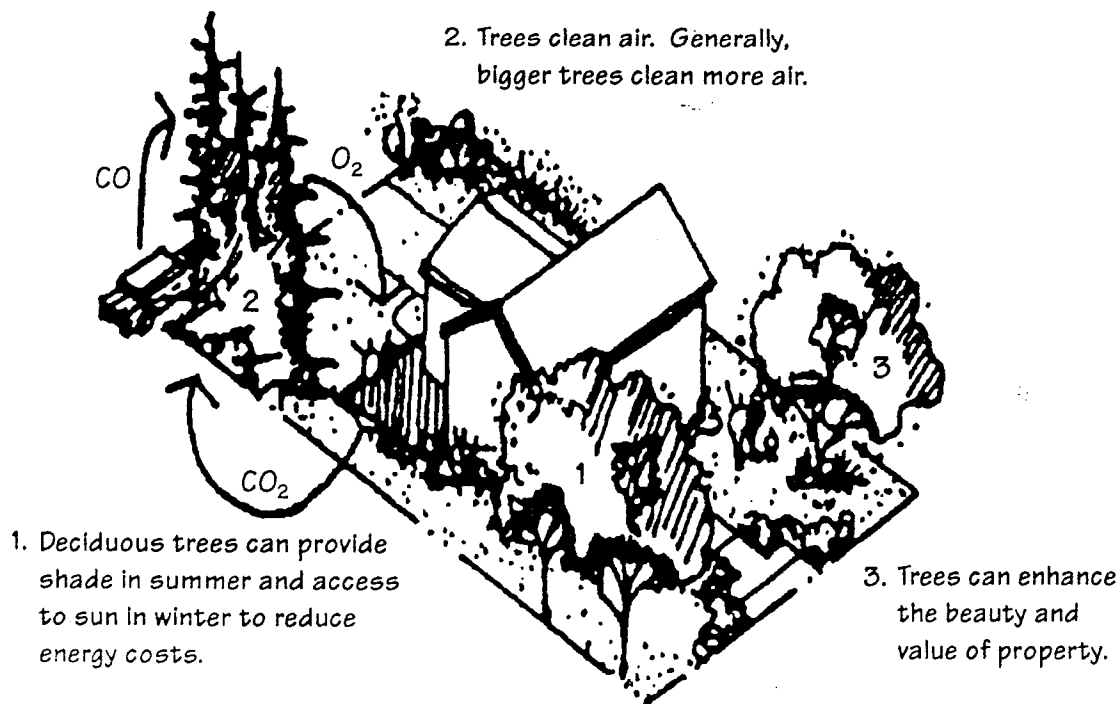
## **Did you know that trees are one of Vancouver's most valuable assets?**

City trees improve the quality of urban life and contribute to a sense of community. Aesthetically pleasing, they also provide vital links to the natural world in the heart of the city. They soften the hard edges of the urban core, provide continuity in areas undergoing dynamic change, and visually connect and define the character of entire neighbourhoods.

Urban trees provide vital environmental benefits. They clean the air (urban trees are 15 times more effective at reducing carbon dioxide than rural trees), buffer noise, provide catchment for rain water, protect against the sun's harmful ultraviolet rays, moderate temperature extremes, and provide shade during the summer months while allowing sunlight access during the winter months (*Figure 1*).

Trees also enhance property values. Studies have shown that the retention of trees on private property can increase home values by more than 20 percent.

These aesthetic, environmental and economic considerations reflect the critical need to retain and enhance Vancouver's urban forest. In keeping with these considerations, City Council has revised the Private Property Tree By-law to ensure better tree management throughout Vancouver.



**Figure 1 - Environmental Benefits of Tree Retention**

The Private Property Tree By-law encourages and improves the quality of tree retention, relocation and replacement, benefiting both neighbourhoods and the sustainability of our urban forest. The By-law also requires that these trees be properly maintained after they are planted.

Protecting and enhancing Vancouver's urban forest is beneficial for everyone. Retaining, relocating and replacing existing trees on private property, through the Private Property Tree By-law, is just one of the many initiatives taken by the City to ensure the urban forest flourishes for future generations.

## 1 Tree Removal and Replacement Permit

### How does the By-law affect property owners?

The Private Property Tree By-law requires that all property owners obtain a tree permit to remove any tree, whether they are redeveloping or not. As in the original By-law enacted in November, 1994, a tree is defined as having a diameter greater than 20 cm (8 inches), measured 1.4 m (4' 6") above the ground. Normal pruning of trees is not affected by this By-law.

Property owners may remove one tree in each 12 month period, subject to the replacement tree requirements of the By-law. The cost for a single tree removal permit is \$25.00 and requires a sketch showing the location, the size and species of the existing and replacement trees.

When a property owner wants to remove more than one tree in any 12 month period, at least one of the five following criteria must be met regarding the tree in question:

- the tree is located within the building envelope (e.g., the area within which a building will be constructed);
- the tree is dead or dying;
- the tree is interfering with or in such close proximity to utility wires as to be a danger, and cannot be pruned and still maintain its health or reasonable appearance;
- the roots of the tree are interfering with, blocking or damaging a drainage or sewer system; or
- the tree is located such that the proposed garage or other accessory building cannot be located so to retain the tree.

These exceptions must be verified in a report by a certified arborist. The permit fee for the removal of more than one tree in a 12-month period is \$50.00 for the first tree and \$25.00 for any additional trees.

Any person who commits an offence against the By-law is liable for a minimum fine of \$500.00 and a maximum fine of \$20,000.00.

Development applications, for the most part, will continue to have their own special requirements. As before, development applications, excluding those in RS-1 and Industrial zones, require tree retention in accordance with the guidelines for the individual zones.



Figure 2 - Selecting the right replacement tree for your site is important. (See Tables A and B of Schedule A 'Replacement Trees')

Replacement trees must be planted within 6 months of the issuance of a Tree Removal Permit for non-development sites, or before building occupancy for sites where a building permit has been issued. A list of replacement tree suppliers is available from the Landscape Review Counter in Permits and Licences.

## 2 Tree Retention

### How can trees be successfully retained?

Trees can be retained only if an adequate root mass can be maintained in good condition. Trees retained with inadequate roots, or where roots sustain significant damage due to construction, will most likely die within a few years. If the damage is severe, they can soon become hazardous and fail, potentially causing damage to persons and property.

### Protective barriers

Retaining significant trees when properties are redeveloped is important in maintaining the established natural character associated with many of Vancouver's neighbourhoods. Their continued healthy growth is greatly enhanced by the By-law requirement of providing special protective barriers. Barriers are required to protect the roots, trunks and branches of trees on private property as well as on City property prior to and during on-site construction (*Figure 3*).

*(To calculate the dimensions for tree barriers on private property, refer to Schedule D 'Tree Protection Distance Table' below. For trees on City property, refer to Section 4.2 of the Tree Retention, Relocation and Replacement Guidelines.)*

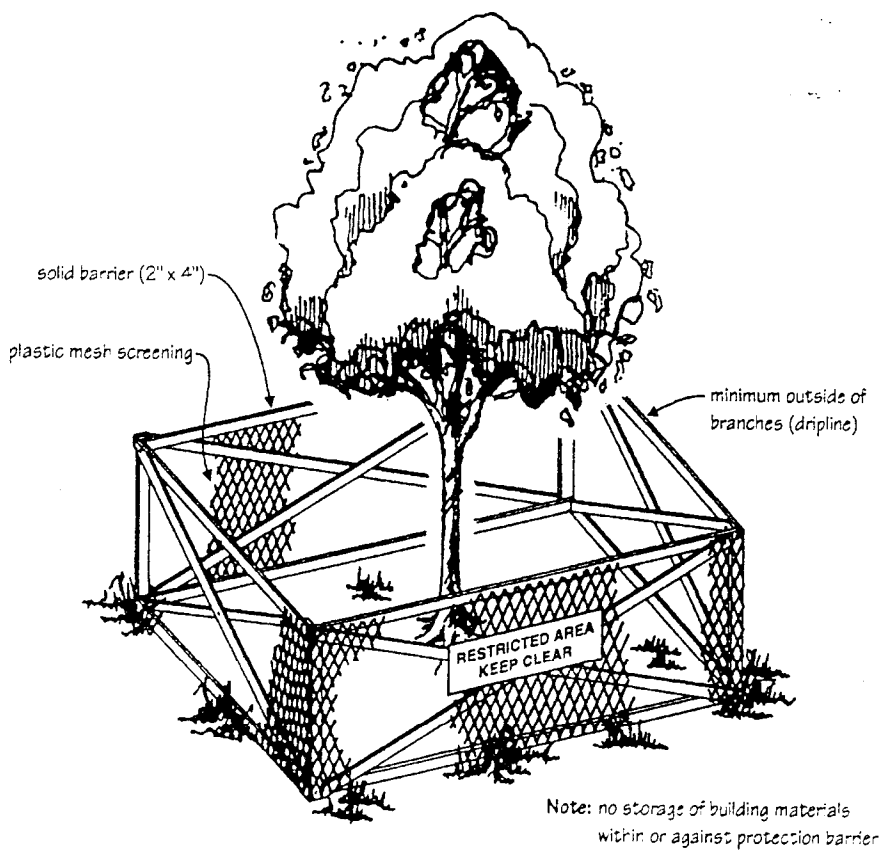


Figure 3 - Tree Protection Barrier

Schedule D \*  
Tree Protection Distance Table

Trunk Diameter (cm)	Minimum Protection Req'd Around Tree (distance from trunk in metres)
20	1.2
25	1.5
30	1.8
35	2.1
40	2.4
45	2.7
50	3
55	3.3
60	3.6
75	4.5
90	5
100	6.0

\* Table reproduced from the By-law

### Safe distances from all buildings except accessory buildings

For a tree to be counted as a retained tree, it cannot be located any closer to a proposed building (e.g., a new house or apartment building with a basement or underground parking structure) than the distances indicated in the By-law. (Refer to Schedule C, Table 1 below, 'Siting of Retained Trees: Distances From All Buildings Except Accessory Buildings').

### Safe distances from accessory buildings

To be counted as a retained tree, a tree located adjacent to a proposed accessory building, such as a garage or a gazebo (buildings that don't normally have basements or crawl spaces), must be located no closer to the building than the distances indicated in the By-law (refer to Schedule C, Table 2 below, 'Siting of Retained Trees: Distances From Accessory Buildings').

## Schedule C \* Siting of Retained Trees

**Table 1**

Distances From All Buildings Except Accessory Buildings \*\*

Trunk Diameter (cm)	Distance (metres)
20-30	2
31-32	2.1
33	2.2
34-35	2.3
36	2.4
37-38	2.5
39	2.6
40-44	2.7
45-49	3
50-54	3.3
55-59	3.7
60 & above	4

**Table 2**

Distances From Accessory Buildings \*\*

Trunk Diameter (cm)	Distance (metres)
20-24	1
25-29	1.3
30-34	1.5
35-39	1.8
40-44	2
45-49	2.3
50-54	2.5
55-59	2.8
60-64	3
65-69	3.3
70 & above	3.5

\* Table reproduced from the By-law

\*\* Measured as the shortest distance from the main trunk of the tree at 1.4 m above existing grade to the outside wall of the proposed building.



### What if a tree cannot be successfully retained?

The Private Property Tree By-law provisions recognize that some significant existing trees cannot always be successfully retained. In those cases, the following options apply:

- 1) **Relocating** the tree elsewhere on the site (if possible).
- 2) **Removing** the tree and providing a replacement tree (refer to Schedule C).
- 3) In the case of new development, request a siting or setback **relaxation** to allow tree retention (refer to Sections 13-14A of the Private Property Tree By-law and Section 3.2.6 of the Zoning and Development By-law).

### 3 Tree Relocation

Relocation is another way of retaining a tree. In cases where good trees cannot be retained in place, transplanting them elsewhere on the property may be an alternative (where possible).

To successfully relocate trees, it is important to consider the following: size, current siting conditions, time of year, adequate preparation and post-transplanting care. These considerations are critical to ensure a high survival rate. Professional advice and/or assistance is highly recommended, especially with larger mature trees.

A relocated tree is considered the same as a retained tree for the purpose of the Private Property Tree By-law calculations. In the case of a new development, it also requires that protection barriers be installed around them once they are moved to their new locations. Trees are normally relocated prior to the commencement of any demolition or construction (*Figure 4*).

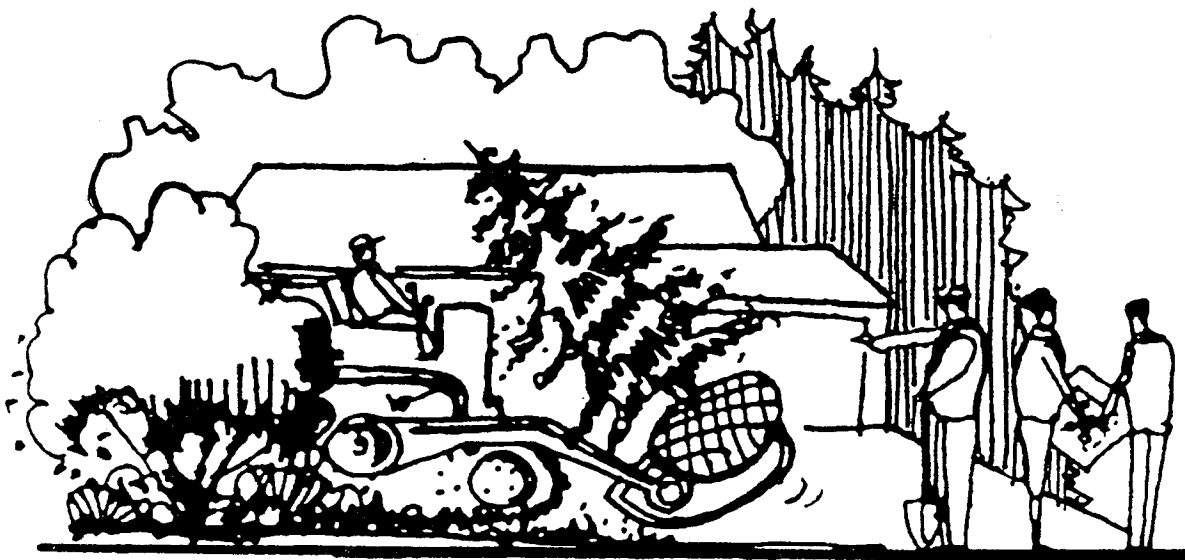


Figure 4 - Tree moving equipment

### 4 Tree Replacement

When are replacement trees required?

Tree replacement is required when trees are to be removed. Applicants who remove trees are required to have a permit and select replacement trees based on guidelines set out in the By-law. These guidelines require the following:

- Replacement trees are to be selected from lists that specify the size requirements for each species (refer to Schedule A, Tables A, B & C, "Replacement Trees").
- The maximum number of trees required on a site is to be determined by site size and the number of existing trees already on the site (see "How Many Trees are Enough", at the end of this article and refer to Schedule B, "Maximum Tree Requirement for Retained and Replacement Trees" in By-law).

- Minimum distances from other trees or features such as property lines, buildings and utilities are to be maintained when determining where to locate new trees on the site (refer to Section 9, Siting of Replacement Trees).

A replacement tree must be planted prior to building occupancy where a building permit is in place or within six months of the permit issuance for a non-development tree removal.

**What type of replacement tree should be selected?**

Replacement trees do not need to be of the same species as those removed, but should be appropriate to the particular site. In determining types and locations of replacement trees, an applicant should consider whether other properties along the street have a particular type of tree planted, or whether trees are located in any characteristic patterns or relationships to buildings in the neighbourhood. Consideration should also be given to soils, underground services, personal preferences for particular species of trees and availability of selected trees.

**Choosing replacement trees from Schedule A**

There are three options for selecting replacement trees, presented in three tables (Tables A, B and C of By-law Schedule A). The following is a description of each table:

**Table A:**

This group includes many of the more commonly used shade trees, native species and large conifers (e.g., Atlas Cedar, American Beech, Big Leaf Maple, Red Oak and Douglas Fir).

- One replacement tree must be provided from Table A for each tree removed up to the maximum number required.

**Table B:**

This group includes less common, smaller, ornamental trees (e.g., Goldenrain Tree, English Holly, Saucer Magnolia, Vine Maple and Hinoki False Cypress).

- Two replacement trees may be provided from Table B instead of one replacement tree from Table A.

**Table C:**

This group includes trees which should not exceed 10 metres at maturity. Applicants for developments on sites with a grade difference of more than 3.7 metres must select from this table to respect other residents' desire to maintain their views.

- Where the rear of a site is higher or lower than the front of the site by more than 3.7 metres, one replacement tree must be provided from Table C, up to the maximum number required. (*Note: Table C is not an option for those development sites with a grade difference of less than 3.7 metres.*)

It is the applicant's responsibility to ensure the availability of the selected tree in the minimum size specified.

### How many trees are enough?

You will need to determine the number of trees required for your property. Replacement is based on a one-for-one basis if trees are selected from Tables A or C of Schedule A, or two-for-one if selected from Table B. However, there is a maximum number of retained, relocated and/or replacement trees that will be required. This maximum relates to the size of your property. (Refer to Schedule B, 'Tree Plan Determination Table').

For example, if you had 9 mature trees on a 700 m<sup>2</sup> lot, you would be required to have no more than 5 trees in total on the property. If you retained the best 3 trees, and could not relocate any of the others, you would only have to replace 2 of the 6 trees removed, making for a total of 5 trees on the property. If you chose all your replacement trees from Table B, you would have to add 4 new trees, making for a total of 7 trees on the property.

### Schedule B \* - Tree Plan Determination Table

Site Area m <sup>2</sup>	Maximum Number of Trees
less than 365	2
from 365-450	3
from 451-565	4
from 566-750	5
from 751-1000	6
from 1001-1250	7
from 1251-1600	8
from 1601-1850	9
from 1851-2200	12
from 2201-2550	16
from 2551-2900	20
from 2901-3250	25
over 3250	30

\* Table reproduced from the By-law

#### Note:

1. Trees to be retained or relocated must be clearly located on the site and not on City-owned or adjacent properties.
2. All replacement trees and all trees proposed for relocation on a site must be planted in accordance with the guidelines for Tree Planting, Transplanting, Root Pruning and Branch Pruning in the Council approved Tree Retention, Relocation and Replacement Guidelines, (see Figures 5 and 6).

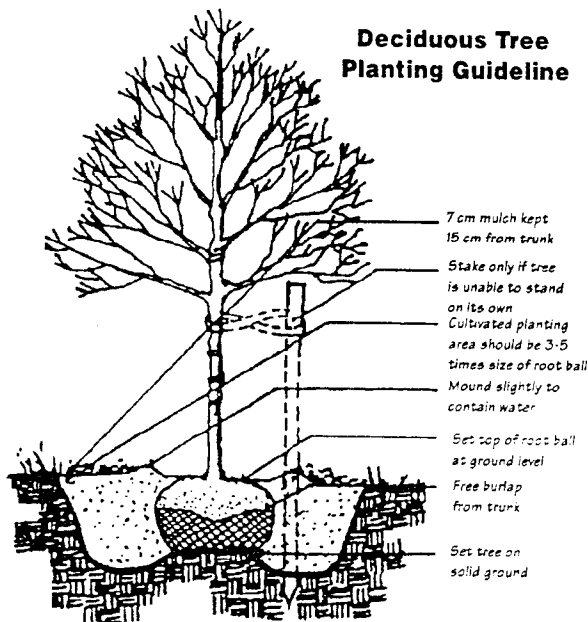


Figure 5 - Deciduous Tree Planting Guideline



Figure 6 - Coniferous Tree Planting Guideline

### **For More Information**

If you would like further advice or require clarification of any By-law provisions, please call the Planning Department Landscape Architectural Technicians at the *Tree Information Line* at 871-6378.

For more information about street trees or other city trees, please call the City of Vancouver Park Board at 257-8600.

## **Private Property Tree By-law No. 7347**

A By-law to provide for the retention, replacement and maintenance of trees on private property.

THE COUNCIL OF THE CITY OF VANCOUVER, in open meeting assembled, enacts as follows:

1. This By-law may be cited as the "Private Property Tree By-law".

### **Definitions**

2. The following definitions apply, unless the context otherwise indicates.

**Building Envelope** means the part of a site that, on application of the applicable provisions of the Zoning and Development By-law, is available for the placement of a building.

**Development** means development as defined in Part XXVII of the Vancouver Charter but does not include a development that does not, by reason of the Zoning and Development By-law, require a development permit.

**Drip Line** means the outermost limit of the canopy of a tree as delineated by the perimeter of its branches and which, extended perpendicularly to the ground, encloses the tree.

**Retained Tree** means a tree that is shown on a tree plan as a tree to be retained during and after development of a site.

**Replacement Tree** means a tree that is shown on a tree plan as a tree which is intended to replace an existing tree on the same site.

**Tree** means a self-supporting woody plant that

- (a) has a trunk or stem with a diameter, measured 1.4 m above the existing grade of the ground adjoining its base, of 20 cm or greater, or
- (b) has a combined diameter of its 3 largest trunks or stems, measured 1.4 m above the existing grade of the ground adjoining its base, of 20 cm or greater,

except that clauses (a) and (b) do not apply to a replacement tree.

**Tree Permit** means a permit issued by the Director of Planning granting permission to remove a tree.

**Tree Plan** means a plan, when viewed from above, which indicates the location of one or more trees and which forms part of an approved development permit or building permit or an application for a development permit.

### **Transition**

3. Any plan showing trees affected by development or replacement trees which are to be provided as part of a development and which was submitted pursuant to section 4.1.4 of the Zoning and Development By-law as it existed immediately before the coming into force of this By-law shall be deemed to be a tree plan for the purpose of this By-law.

**Tree Plans**

4. An applicant for a permit to undertake development on land must, as part of the application, submit one or more plans which identify trees proposed to be retained, to be located elsewhere on the site or to be removed and trees proposed to be provided in replacement of those which are to be removed. The plans must identify the number, location, species and size of the trees and must include any planting specifications that relate to them.
5. Each tree proposed to be removed must be replaced by one or more replacement trees selected from Schedule A except that the combined number of retained trees and replacement trees need not exceed the maximum number computed using Schedule B.
6. For the purposes of computing the number of trees in order to satisfy the requirements of section 5, the following cannot be counted:
  - (a) a tree that in the opinion of the Director of Planning has been topped or pruned to the extent that it is unlikely to ever attain its characteristic appearance;
  - (b) a tree that in the opinion of the Director of Planning is so damaged that it will likely become diseased or die prematurely or otherwise pose a dangerous condition that is hazardous to persons or property;
  - (c) a tree that in the opinion of the Director of Planning is dead or dying to the extent that it will likely be dead within 6 months;
  - (d) a tree that is one of at least 5 trees which comprise a hedge where none of its trees are greater than 5 m in height and none are planted more than 1.25 m apart; and
  - (e) a tree that is located closer to a building than the minimum distance specified for its size in Schedule C.
7. For the purposes of computing the number of trees in order to satisfy the requirements of section 5, a tree that is shown on a tree plan as one to be located elsewhere on the site may be counted as a retained tree provided that it will be transplanted in compliance with the standards set out in Schedule C and provided it is not one of the following:
  - (a) a tree that in the opinion of the Director of Planning has been topped or pruned to the extent that it is unlikely to ever attain its characteristic appearance;
  - (b) a tree that in the opinion of the Director of Planning is so damaged that it will likely become diseased or die prematurely or otherwise pose a dangerous condition that is hazardous to persons or property;
  - (c) a tree that in the opinion of the Director of Planning is dead or dying to the extent that it will likely be dead within 6 months; and
  - (d) a tree that is one of at least 5 trees which comprise a hedge where none of its trees are greater than 5 m in height and none are planted more than 1.25 m apart.
8. If, in the opinion of the Director of Planning, a tree is part of a group of trees in such close proximity to each other that the removal of one tree will likely damage it or others in the group, the Director of Planning may require that the group of trees be considered as one tree for the purpose of section 5.

**Siting of Replacement Trees**

9. A replacement tree must be planted at least
  - (a) 1 m away from a side property line, an accessory building and any other structure or thing likely to be affected by the tree,
  - (b) 1.5 m away from a principal building,
  - (c) 2.5 m away from another tree, and
  - (d) prior to building occupancy or within 6 months of permit issuance, whichever is less.

**Prohibitions**

- 10. No person shall
  - (a) remove or relocate a retained tree, or
  - (b) remove or relocate a replacement tree, except in compliance with a tree plan.
- 10A. No person shall remove a tree without first obtaining a tree permit.
- 11. No person shall
  - (a) light a fire within the drip line of a tree, a retained tree or a replacement tree,
  - (b) remove bark from a tree, a retained tree or a replacement tree, or
  - (c) cause any other damage to a tree, a retained tree or a replacement tree.
- 12. No person shall alter the existing grade around a retained tree except that a person may raise the grade by no more than 5 cm within 1 m of the trunk and by no more than 10 cm from that point out to the drip line of the tree.

**Permits**

- 12A. The owner of any property may apply to the Director of Planning to remove one or more trees from the property and the Director of Planning may grant a tree permit upon being satisfied that one or more of the following conditions exists:
  - (a) the tree is located within the building envelope;
  - (b) the tree is dead or dying;
  - (c) the tree is interfering with or in such close proximity to utility wires as to be a danger and cannot be pruned and still maintain its health and reasonable appearance;
  - (d) the roots of the tree are interfering with, blocking or damaging a drainage or sewer system; or
  - (e) the tree is located such that a proposed garage or other accessory building cannot be located so as to retain the tree;except that one tree may be removed from the property in every twelve month period without the Director of Planning being satisfied as to the existence of any of the conditions in clauses (a) to (e).
- 12B. A non-refundable application fee of \$42.00 shall be charged for a tree permit to remove one tree, and where more than one tree are to be removed by permit within a 12 month period the fee shall be \$42.00 for the first tree and \$68.00 for each subsequent tree.
- 12C. The Director of Planning may revoke a permit after written notice to the permit holder if
  - (a) there is a contravention of any condition under which the permit was issued,
  - (b) the permit was issued in error, or
  - (c) the permit was issued on the basis of false or incorrect information.

**Relaxation**

- 13. The Director of Planning may, where satisfied that a tree warrants retention and can normally be expected to survive with standard arboricultural care and appropriate construction techniques, relax the minimum distance specified in Schedule C for the tree.
- 14. The Director of Planning may, where satisfied that there are no trees which may be affected by a proposed development or that there will be insufficient space on the site after development to locate replacement trees, exempt a person from the provisions of this By-law.

- 14A. Despite section 12A, where the Director of Planning has relaxed a regulation of the siting of a building pursuant to Section 3.2.6 of the Zoning and Development By-law, the tree retained with regard to granting the relaxation must not be removed unless authorized under clauses 12A(a) to (e).

### **Tree Protection**

15. All retained trees and all replacement trees must be protected by a tree and root protection barrier constructed, located and maintained in accordance with Schedule D.
16. No person shall commence construction on a site where a tree and root protection barrier is required by this By-law unless and until the barrier has been installed in compliance with Schedule D.
17. Any tree which is located within 2 m of a development site or on a street or lane and adjacent to a development site shall be protected by a tree and root protection barrier on the site in accordance with Schedule D, except that the tree and root protection barrier need not extend into the required sideyard of the site by the lesser of 50% of the distance between the building envelope and the property line, or 1 m.
18. Where a tree and root protection barrier has been erected around a retained tree or a replacement tree, no person shall
- (a) undermine or in any other way damage the roots of a tree located within the barrier, or
  - (b) remove soil from within the barrier or otherwise alter the existing grade of the land within the barrier.
19. No tree and root protection barrier shall be removed or altered until demolition and construction have been completed.

### **Replacement of Damaged Trees**

20. Where, as a consequence of construction, a retained tree or a replacement tree is damaged to the extent that, in the opinion of the Director of Planning, it will likely become diseased or die prematurely or otherwise pose a danger to persons or property, it must be replaced by a tree in compliance with Schedule A.
21. Where, as a consequence of construction, a retained tree or a replacement tree has been accidentally removed and cannot be replanted in the same location, it must be replaced by a tree in compliance with Schedule A.
22. Where a tree is provided pursuant to section 20 to replace a damaged tree or pursuant to section 21 to replace a tree accidentally removed, the owner of the property containing the tree must as soon as possible provide the Director of Planning with details of the new tree.

### **Emergency Removal**

23. If all or part of a tree, a retained tree or a replacement tree
- (a) has been severely damaged by a natural cause and is not, in the opinion of the Director of Planning, likely to survive, or
  - (b) is in imminent danger of falling and causing injury to persons or property,
- the tree or the part of it that is affected may be removed notwithstanding any other provision of this By-law.



**Maintenance**

- 24. An owner of property that is subject to a development permit that includes a tree plan must maintain the replacement trees in accordance with the plan.

**Inspections**

- 25. The Director of Planning, the City Building Inspector or any other city employee authorized by the Director of Planning or the City Building Inspector may at any time upon reasonable notice enter any property for the purpose of inspecting and assessing trees to ascertain if there is compliance with the provisions of this By-law or any condition of a permit which relates to the property and includes a reference to trees.
- 26. No person shall prevent the Director of Planning or any City employee authorized by the Director of Planning from carrying out a lawful inspection pursuant to this By-law.

**Orders**

- 27. The Director of Planning, the City Building Inspector or any other person authorized by resolution of City Council may order or direct any person to do any one or more of the following:
  - (a) discontinue or refrain from proceeding with any work that is in contravention of this By-law,
  - (b) carry out any work or do anything to bring any land into conformity with this By-law,
  - (c) discontinue doing anything that is in contravention of any term or condition of a tree permit, a tree plan or any other plan showing trees which was approved in conjunction with or forms part of a development permit or a building permit, or
  - (d) carry out any work or do anything to bring any land into conformity with any terms or conditions of a tree permit, a tree plan or any other plan showing trees which was approved in conjunction with or forms part of a development permit or a building permit.

**Exemptions**

- 27A. Despite any other provision of this By-law, a permit is not required for the removal or replacement of trees as a consequence of
  - (a) the construction or maintenance of a public utility placed in or upon a public thoroughfare or public utility easement,
  - (b) the construction, widening, improvement, maintenance or repair of any highway, lane, street, bridge or other public thoroughfare, or
  - (c) the improvement or maintenance of any lands under the jurisdiction of the Vancouver Board of Parks and Recreation.

**Offences and Penalties**

- 28. (1) Every person who violates any of the provisions of this By-law or who suffers or permits any act or thing to be done in contravention or in violation of any of the provisions of this By-law or who neglects to do or refrains from doing anything required to be done by any of the provisions of this By-law or who does any act which violates any of the provisions of this By-law or who fails to comply with any order given under this By-law, shall be deemed to be guilty of an offence against this By-law and liable to the penalties hereby imposed.  
(2) Every person who commits an offence against this By-law is liable to a fine and penalty of not more than \$20,000.00 and not less than \$500.00 for each offence or, in the alternative, to imprisonment for any period not exceeding two months.

**Schedules**

- 29. The Schedules marked "A", "B", "C" and "D" are attached to and form part of this By-law.



**Schedule A  
Replacement Trees**

One replacement tree must be provided from Table A for each tree removed or proposed for removal from a site except that

- (a) two replacement trees may be provided from Table B, instead of one replacement tree from Table A, for each tree removed or proposed for removal from a site,
- (b) where the rear of a site is higher or lower than the front of the site by more than 3.7 m, one replacement tree must be provided from Table C instead of one replacement tree from Table A, for each tree removed or proposed for removal from a site, and
- (c) each replacement tree must be at least the minimum size specified for it in the applicable table,

**TABLE A**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

<b>Common Name</b>	<b>Botanical Name</b>	<b>Minimum Size</b>
Amur Cork Tree	Phellodendron Amurense	6 cm
Ash		6 cm
Autumn Purple	Fraxinus Americana Autumn Purple	6 cm
European Ash	Fraxinus Excelsior	6 cm
European Mountain Ash	Sorbus Aucuparia	6 cm
Flowering Ash	Fraxinus Ornus	6 cm
Green Ash	Fraxinus Pennsylvanica	6 cm
Raywood Ash	Fraxinus Oxycarpa Raywoodii	6 cm
White Ash	Fraxinus Americana	6 cm
Basswood	Tilia Americana	6 cm
Beech		
American Beech	Fagus Grandifolia	6 cm
European Beech	Fagus Sylvatica	6 cm
Copper Beech	Fagus Sylvatica 'Atropurpurea'	6 cm
Birch		
Asian White Birch	Betula Platyphylla	6 cm
European White Birch	Betula Pendula	6 cm
Jacquemontii Birch	Betula Jacquemontii	6 cm
Paper Birch	Betula Papyrifera	6 cm
River Birch	Betula Nigra	6 cm
Catalpa		
Common Catalpa	Catalpa Bignonioides	6 cm
Cedar		
Atlas Cedar	Cedrus Atlantica	3.5 m
Golden Cedar	Thuja Plicata Aurea	3.5 m
Blue Atlas Cedar	Cedrus Atlantica Glauca	3.5 m
California Incense Cedar	Calocedrus Decurrens	3.5 m
Deodar Cedar	Cedrus Deodara	3.5 m
Western Red Cedar	Thuja Plicata Excelsa	3.5 m
Cedar of Lebanon	Cedrus Libani	3.5 m
Chestnut		
Common Horse chestnut	Aesculus Hippocastanum	6 cm
Red Horse chestnut Ruby Red	Aesculus X Carnea	6 cm
Horse chestnut	Aesculus X Carnea Briotti	6 cm
Cypress		
Nootka Cypress	Chamaecyparis Nootkatensis	3.5 m

**TABLE A**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

Common Name	Botanical Name	Minimum Size
Dogwood		
Chinese Dogwood	Cornus Chinensis	5 cm
Eddie's White Wonder	Cornus Eddie's White Wonder	5 cm
Giant Dogwood	Cornus Controversa	5 cm
Kousa Dogwood	Cornus Kousa	3.5 m
Pacific Dogwood	Cornus Nuttallii	5 cm
Dove Tree	Davidia Involucrata	5 cm
Elm		
American Elm	Ulmus Americana	6 cm
Scotch Elm	Ulmus Glabra	6 cm
Siberian Elm	Ulmus Pumila	6 cm
Empress Tree	Paulownia Tomentosa	6 cm
Fir		
Alpine Fir	Abies Lasiocarpa	3.5 m
Balsam Fir	Abies Balsamea	3 m
Douglas Fir	Pseudotsuga Menziesii	3.5 m
Fraser's Fir	Abies Fraseri	3.5 m
Grand Fir	Abies Grandis	3.5 m
Noble Fir	Abies Procera	3.5 m
White Fir	Abies Concolor	3.5 m
Ginkgo	Ginkgo Biloba	6 cm
Common Hackberry	Celtis Occidentalis	6 cm
Hemlock		
Mountain Hemlock	Tsuga Mertensiana	3 m
Western Hemlock	Tsuga Heterophylla	3.5 m
Hornbeam		
European Hornbeam	Carpinus Betulus	6 cm
Japanese Zelkova	Zelkova Serrata	6 cm
Katsura Tree	Cercidiphyllum Japonicum	3.5 m
Katsura Tree	Cercidiphyllum Japonicum	6 cm
European Larch	Larix Decidua	3.5 m
Linden		
Crimean Linden	Tilia Euchlora	6 cm
Little Leaf Linden	Tilia Cordata	6 cm

**TABLE A**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

Common Name	Botanical Name	Minimum Size
<b>Locust</b>		
Black Locust	Robinia Pseudoacacia	6 cm
Honey Locust	Gleditsia Triacanthos	6 cm
Pink Locust	Robinia Ambigua Idahoensis	6 cm
Sunburst Honey Locust	Gleditsia Triacanthos Sunburst	6 cm
Thornless Honey Locust	Gleditsia Triacanthos Inermis	6 cm
Yellow Leafed Black Locust	Robinia Pseudoacacia Frisia	6 cm
<b>Maple</b>		
Armstrong Red Maple	Acer Rubrum Armstrong	6 cm
Bigleaf Maple	Acer Macrophyllum	3.5 m
Crimson King Norway	Acer Platanoides Crimson King	6 cm
Crimson Sentry Norway	Acer Platanoides Crimson Sentry	6 cm
David Maple	Acer Davidii	6 cm
Hedge Maple	Acer Campestre	6 cm
Morgan Red Maple	Acer Rubrum Morgan	6 cm
Norway Maple	Acer Platanoides	6 cm
Deborah's Norway Maple	Acer Platanoides Deborah	6 cm
Pacific Sunset Maple	Acer Truncatum Warren Red	6 cm
Paperbark Maple	Acer Griseum	5 cm
Red Maple	Acer Rubrum	6 cm
Red Sunset Maple	Acer Rubrum Red Sunset	6 cm
Scanlon Red Maple	Acer Rubrum Scanlon	6 cm
Scarlet Sentinel Maple	Acer Rubrum Scarlet Sentinel	6 cm
Schwedler Norway	Mapleacer Platanoides Schwedleri	6 cm
Silver Var Norway Maple	Acer Platanoides Drummondii	6 cm
Sugar Maple	Acer Saccharum	6 cm
Silver Maple	Acer Saccharinum	6 cm
Sycamore Maple	Acer Pseudoplatanus	6 cm
Monkey Puzzle Tree	Araucaria Araucana	3 M
<b>Oak</b>		
English Oak	Quercus Robur	6 cm
Pin Oak	Quercus Palustris	6 cm
Red Oak	Quercus Rubra	6 cm
Scarlet Oak	Quercus Coccinea	6 cm
Shumard Oak	Quercus Shumardii	6 cm
<b>Madrone</b>		
Pacific Madrone	Arbutus Menziesii	3 m

**TABLE A**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

<b>Common Name</b>	<b>Botanical Name</b>	<b>Minimum Size</b>
<b>Pine</b>		
Austrian Pine	Pinus Nigra	3.5 m
Eastern White Pine	Pinus Strobus	3.5 m
Himalayan White Pine	Pinus Agriffithii Wallichiana	3.5 m
Japanese Black Pine	Pinus Thunbergii	3.5 m
Monterey Pine	Pinus Radiata	3.5 m
Ponderosa Pine	Pinus Ponderosa	3.5 m
Red Pine	Pinus Resinosa	3.5 m
Scotch Pine	Pinus Sylvestris	3.5 m
Umbrella Pine	Sciadopitys Verticillata	3.0 m
Western White Pine	Pinus Monticola	3.5 m
<b>Plane Tree</b>		
London Plane Tree	Platanus Acerifolia	6 cm
Oriental Plane Tree	Platanus Orientalis	6 cm
Dawn Redwood	Metasequoia Glyptostroboides	3 m
<b>Sequoia</b>		
Giant Sequoia	Sequoiadendron Giganteum	3 m
Redwood	Sequoia Sempervirens	3 m
<b>Snowbell</b>		
Fragrant Snowbell	Styrax Obassia	6 cm
Japanese Snowbell	Styrax Japonica	6 cm
Sourwood	Oxydendrum Arboreum	3.5 m
<b>Spruce</b>		
Norway Spruce	Picea Abies	3.5 m
Serbian Spruce	Picea Omorika	3.5 m
Sitka Spruce	Picea Sitchensis	3.5 m
White Spruce	Picea Glauca	3.5 m
Sweetgum	Liquidambar Styraciflua	6 cm
American Sycamore	Platanus Occidentalis	6 cm
Tree-of-heaven	Ailanthus Altissima	3.5 m
Tulip Tree	Liriodendron Tulipifera	6 cm
Walnut	Juglans	5 cm
<b>Willow</b>		
Corkscrew Willow	Salix Matsudana Tortuosa	6 cm
Golden Weeping Willow	Salix Alba Tristis	8 cm
Weeping Willow	Salix Babylonica	8 cm
White Willow	Salix Alba	6 cm

**TABLE B**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.		
<b>Common Name</b>	<b>Botanical Name</b>	<b>Minimum Size</b>
Weeping Birch	Betula Lanciniata	6 cm
Boxelder	Acer Negundo	6 cm
Ornamental Cherry		
Black Cherry	Prunus Serotina	6 cm
Cornelian Cherry	Cornus Mas	3 m
Higan Cherry	Prunus Subhirtella	6 cm
Japanese Flowering Cherry	Prunus Serrulata	6 cm
Sargent Flowering Cherry	Prunus Sargentii	6 cm
Yoshino Cherry	Prunus Yedoensis	6 cm
Common Chokecherry	Prunus Virginiana	6 cm
Crab Apple		
Prairiefire Crab Apple	Malus Prairiefire	6 cm
Cucumber Tree		3 m
Cucumber Tree Magnolia	Acuminata	3 m
Yellow Cucumber Tree Magnolia	Cordata	
Cypress		
Drooping Nootka Cypress	Chamaecyparis Nootkatensis Pendula	3 m
Hinoki False Cypress	Chamaecyparis Obtusa	3 m
Sawara False Cypress	Chamaecyparis Pisifera	3 m
Flowering Dogwood	Cornus Florida	5 cm
Filbert		
Giant Filbert	Corylus Maxima	3 m
Purple Giant Filbert	Corylus Maxima Purpurea	3 m
Goldenchain Tree	Laburnum Watereri 'Vossii'	6 cm
Goldenrain Tree	Koelreuteria Paniculata	3 m
Lavalle Hawthorne	Crataegus Lavallei	6 cm
Hemlock		
Canadian Hemlock	Tsuga Canadensis	3.5 m
Holly		
English Holly	Ilex Aquifolium	3.5 m
Japanese Angelica Tree	Aralia Elata	3 m
Japanese Pagoda Tree	Sophora Japonica	3 m
Portugal Laurel	Prunus Lusitanica	3 m



**TABLE B**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

Common Name	Botanical Name	Minimum Size
Magnolia		
Dawson Magnolia	Dawsoniana	3 m
Kobus Magnolia	Kobus	3 m
Saucer Magnolia	Soulangiana	3 m
Southern Magnolia	Grandiflora	3 m
Southern Magnolia	Grandiflora	3 cm
Maple		
Amur Maple	Acer Ginnala	4 cm
Japanese Maple	Acer Palmatum	3 m
Manitoba Maple	Acer Negundo	6 cm
Rocky Mountain Maple	Acer Glabrum	3 m
Vine Maple	Acer Circinatum	3.5 m
Mulberry		
White Mulberry	Morus Alba	5 cm
Palm		
Windmill Palm	Trachycarpus Fortunei	3 m
Persian Parrotia	Parrotia Persica	6 cm
Pine		
Shore Pine	Pinus Contorta	3.5 m
Weeping Red Pine	Pinus Densiflora Pendula	3.5 m
Ornamental Plum		
Flowering Plum	Prunus Triloba	6 cm
Japanese Flowering Plum	Prunus Bliireana	6 cm
Purple Leaf Plum	Prunus Cerasifera Pissardi	6 cm
Redbud		
Eastern Redbud	Cercis Canadensis	5 cm
Silk Tree	Albizia Julibrissin	3 m
Silverbell		
Mountain Silverbell	Halesia Monticola	3 m
Spruce		
Colorado Spruce	Picea Pungens	3 m
Colorado Blue Spruce	Picea Pungens Glauca	3 m
Hoop's Blue Spruce	Picea Pungens Hoopsii	3 m
Koster Blue Spruce	Picea Pungens Koster	3 m
Strawberry Tree	Arbutus Unedo	3 m
Staghorn Sumac	Rhus Typhina	3 m

**TABLE C**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

<b>Common Name</b>	<b>Botanical Name</b>	<b>Minimum Size</b>
Mountain Ash European Mountain Ash	Sorbus Aucuparia	6 cm
Ornamental Cherry		
Black Cherry	Prunus Serotina	6 cm
Cornelian Cherry	Cornus Mas	3 m
Higan Cherry	Prunus Subhirtella	6 cm
Japanese Flowering Cherry	Prunus Serrulata	6 cm
Sargent Flowering Cherry	Prunus Sargentii	6 cm
Yoshino Cherry	Prunus Yedoensis	6 cm
Common Chokecherry	Prunus Virginiana	6 cm
Crab Apple		
Prairifire Crab Apple	Malus Prairifire	6 cm
Cucumber Tree		
Cucumber Tree	Magnolia Acuminata	3 m
Yellow Cucumber Tree	Magnolia Cordata	3 m
Cypress		
Hinoki False Cypress	Chamaecyparis Obtusa	3 m
Sawara False Cypress	Chamaecyparis Pisifera	3 m
Dogwood		
Flowering Dogwood	Cornus Florida	3.5 m
Filbert		
Giant Filbert	Corylus Maxima	3 m
Purple Giant Filbert	Corylus Maxima Purpurea	3 m
Fringe Tree	Chionanthus Virginicus	3 m
Hemlock		
Canadian Hemlock	Tsuga Canadensis	3.5 m
Holly		
English Holly	Ilex Aquifolium	3.5 m
Japanese Angelica Tree	Aralia Elata	3 m
Portugal Laurel	Prunus Lusitanica	3 m
Magnolia		
Saucer Magnolia	Magnolia Soulanguiana	3 m
Maple		
Hedge Maple	Acer Campestre	6 cm
Japanese Maple	Acer Palmatum	5 cm
Vine Maple	Acer Circinatum	3.5 m

**TABLE C**

Note to Table: In the minimum size column, reference to a Figure in centimetres (cm) is a measurement of trunk diameter 15 cm above the ground. Reference to a figure in metres (m) is a measurement of height above the ground.

<b>Common Name</b>	<b>Botanical Name</b>	<b>Minimum Size</b>
Mulberry White Mulberry	Morus Alba	5 cm
Palm Windmill Palm	Trachycarpus Fortunei	3 m
Persian Parrotia	Parrotia Persica	3 m
Umbrella Pine	Sciadopitys Verticillata	3 m
Ornamental Plum Flowering Plum	Prunus Triloba	6 cm
Japanese Flowering Plum	Prunus Blireana	6 cm
Purple Leaf Plum	Prunus Cerasifera Pissardi	6 cm
Eastern Redbud	Cercis Canadensis	5 cm
Silk Tree	Albizia Julibrissin	3 m
Snowbell Fragrant Snowbell	Styrax Obassia	6 cm
Japanese Snowbell	Styrax Japonica	6 cm
Strawberry Tree	Arbutus Unedo	3 m
Staghorn Sumac	Rhus Typhina	3 m



**Schedule B**  
**Maximum Tree Requirement for Retained and Replacement Trees**

The total number of retained trees and replacement trees on a site need not exceed the maximum computed using the following table.

<b>Tree Plan Determination Table</b>	
<b>1</b>	<b>2</b>
<b>Site Area m<sup>2</sup></b>	<b>Maximum Number Of Trees*</b>
less than 365	2
from 365 - 450	3
from 451 - 565	4
from 566 - 750	5
from 751 - 1000	6
from 1001 - 1250	7
from 1251 - 1600	8
from 1601 - 1850	9
from 1851 - 2200	12
from 2201 - 2550	16
from 2551 - 2900	20
from 2901 - 3250	25
over 3250	30

\* **Notes:**

- (1) In computing the number of replacement trees, two trees from Table B of Schedule A will be considered the equivalent of one tree.
- (2) Trees to be retained or relocated must be clearly located on the site and cannot be on City-owned or adjacent properties.
- (3) All replacement trees and all trees proposed for relocation on a site must be planted in accordance with the guidelines for Tree Planting, Transplanting, Root Pruning and Branch Pruning in the Council-approved "Tree Retention, Relocation and Replacement Guidelines".



**Schedule C  
Siting of Retained Trees**

1. For a tree to be counted as a retained tree for the purpose of section 5 it must be located no closer to a proposed building than the distance indicated on the following table:

<b>Distances* From All Buildings Except Accessory Buildings</b>			
<b>Tree Diameter</b>	<b>Distance</b>	<b>Tree Diameter</b>	<b>Distance</b>
cm	m	cm	m
20 - 30	2.0	39	2.6
31 - 32	2.1	40 - 44	2.7
33	2.2	45 - 49	3.0
34 - 35	2.3	50 - 54	3.3
36	2.4	55 - 59	3.7
37 - 38	2.5	60 and above	4.0

\* measured as the shortest distance from main trunk of the tree at 1.4 m above existing grade to the outside wall of the proposed building

2. For a tree to be counted as a retained tree for the purpose of section 5 it must be located no closer to a proposed building without a basement or crawl space (accessory building) than the distance indicated on the following table:

<b>Distances* From Accessory Buildings</b>			
<b>Tree Diameter</b>	<b>Distance</b>	<b>Tree Diameter</b>	<b>Distance</b>
cm	m	cm	m
20 - 24	1.0	50 - 54	2.5
25 - 29	1.3	55 - 59	2.8
30 - 34	1.5	60 - 64	3.0
35 - 39	1.8	65 - 69	3.3
40 - 44	2.0	70 and above	3.5
45 - 49	2.3		

\* measured as the shortest distance from main trunk of the tree at 1.4 m above existing grade to the outside wall of the proposed building





**Schedule D  
Tree Protection**

All trees to be retained or relocated on a site must be protected and cared for in accordance with the guidelines for Tree Retention in the Council-approved "Tree Retention, Relocation and Replacement Guidelines" and during construction and demolition must be provided with a tree protection barrier in accordance with the following:

<b>Tree Protection Distance Table</b>	
<b>Trunk Diameter</b>	<b>Minimum Protection Required Around Tree</b>
cm	Distance* From Trunk (Metres)
20	1.2
25	1.5
30	1.8
35	2.1
40	2.4
45	2.7
50	3.0
55	3.3
60	3.6
75	4.5
90	5.0
100	6.0

\* measured as the shortest distance from the main trunk of the tree at 1.4 m above existing grade

Tree protection barriers must be at least 1.2 m in height and constructed of either snow fencing securely fastened to metal stakes spaced no further than 1 m apart, plywood nailed to wood stakes, or another form of barrier satisfactory to the City Building Inspector or, where the barrier is all or partially located on a street or lane allowance, the City Engineer.

After tree protection barriers have been installed, they must be inspected and approved by the City before a Building Permit will be issued.



**Appendix A**  
**List of Amending By-laws to the Private Property Tree By-law**

7610 7797 7894 7938 8064 8242 8397 8398





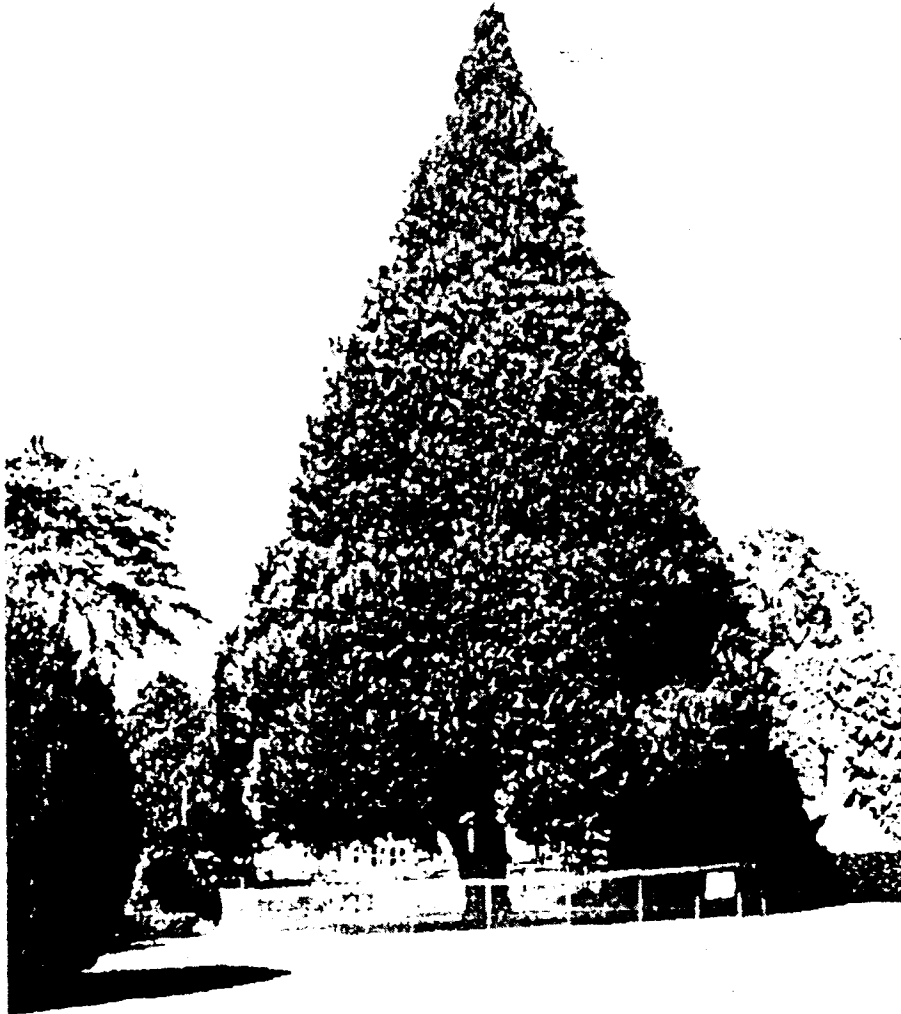
**C O M M U N I T Y S E R V I C E S G R O U P**

**Planning - Land Use and Development Policies and Guidelines**

City of Vancouver 453 West 12th Avenue, Vancouver, British Columbia V5Y 1V4 (604) 873 - 7344 Fax (604) 873 - 7060

# **TREE RETENTION, RELOCATION AND REPLACEMENT GUIDELINES**

*Adopted by City Council November 1, 1994*



# CONTENTS

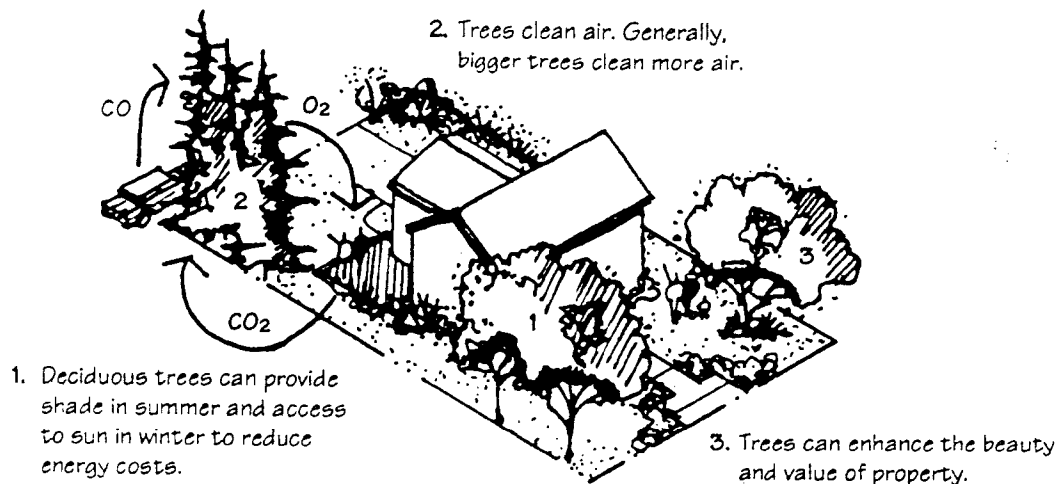
	<b>Page</b>
<b>1 Application and Intent</b> .....	1
<b>2 General Design Considerations</b> .....	2
<b>3 Landscape Submission Requirements</b> .....	5
3.1 Survey Plan .....	6
3.2 Tree Plan .....	7
3.3 Construction Management Plan for Tree Retention .....	8
3.4 Professional Consultation .....	9
<b>4 Technical Guidelines</b> .....	10
4.1 Tree Retention .....	10
4.2 Tree Retention on Boulevards Adjacent to Construction Sites .....	11
4.3 Excavation Adjacent to Retained Trees .....	12
4.4 Root Pruning .....	13
4.5 Branch Pruning .....	14
4.6 Transplanting Trees .....	15
4.7 Replacement Trees .....	16
4.8 Tree Planting .....	16

## 1 Application and Intent

On April 9, 1991, City Council enacted amendments to the **Zoning and Development By-law No. 3575** which introduced tree management on private property (all planning zones) in Vancouver as part of the development application process. These provisions (except for section 3.2.6 which continues to allow the relaxation of the siting of a building for tree retention) were superseded by the **Private Property Tree By-law, No. 7347** enacted on November 1, 1994. The By-law was further amended on August 1, 1996 and July 10, 1997 to further improve tree management on private property. The intent of the By-law is to encourage tree retention and relocation, whenever feasible and desirable, combined with the planting of new trees, to enhance Vancouver's urban forest.

Trees are an invaluable asset for Vancouver. They increase the livability of our city and reinforce its natural heritage and context. Their seasonal rhythms transform our environment daily, and add to the enjoyment of the places where we live, work and play. Vancouver's trees also provide important environmental benefits. They clean air, buffer noise, provide catchment for rain water, attract wildlife, reduce heat during summer months, provide shade in summer and allow sunlight access during winter months. These also affect property values. The U.S. Forest Service estimates that the market value of homes can be increased from seven to twenty percent by the presence of trees.<sup>1</sup> These aesthetic, environmental and economic considerations reflect the critical need to retain and enhance Vancouver's urban forest.

These guidelines are intended to complement, and to be used by developers, designers, contractors and property owners in conjunction with, the provisions of the **Private Property Tree By-law**. Applicants for Development and Building Permits should always refer to the **Private Property Tree By-law**, as well as these Guidelines, in determining Tree Plan requirements for their sites.



### Environmental Benefits of Tree Retention

The following are the goals and objectives of these guidelines:

#### Goals:

1. To provide a consistent technical framework to improve the quality of tree retention, relocation and replacement as part of new development and redevelopment.
2. To encourage significant tree retention and relocation through innovative site planning that is responsive to existing vegetation.
3. To promote responsible management and maintenance of trees on private property within the context of the neighbourhood and the city.

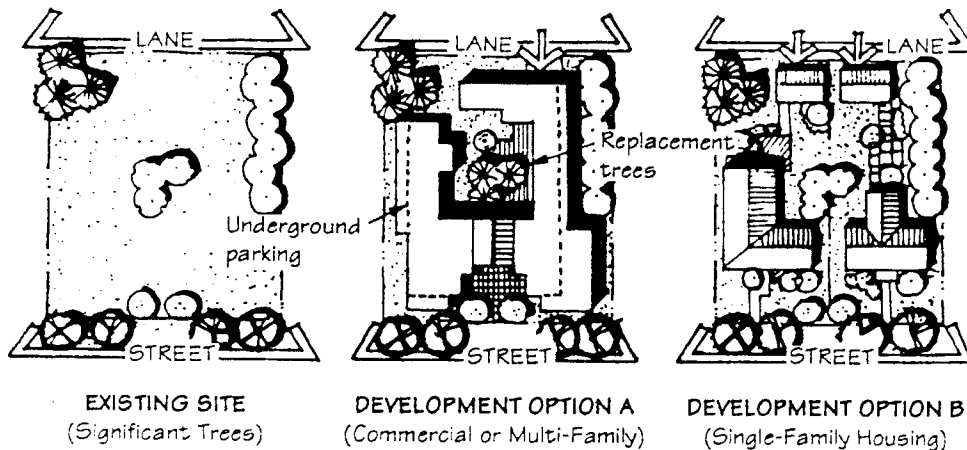
<sup>1</sup> Moll, G. and Ebenreck, S. 1989. *Shading Our Cities*. Washington: American Forestry Association.

### Objectives:

1. To promote efficient and sensitive construction management that coordinates such things as access and storage to minimize damage to existing trees.
2. To illustrate required protection barriers to be erected around trees prior to construction to prevent tree damage.
3. To avoid root damage in situations where excavation will take place close to existing trees.
4. To outline root pruning and branch pruning methods that provide for continued healthy tree growth, while enhancing views, improving safety and allowing more sun to the site where desired.
5. To outline the extent of services of an Arborist, certified by the International Society of Arboriculture, that may be necessary to ensure adherence to proper tree retention procedures.
6. To provide planting guidelines for replacement and relocated trees.
7. To help applicants for new developments or redevelopments avoid conflicts with underground and overhead utilities on both private and public property.

## 2 General Design Considerations

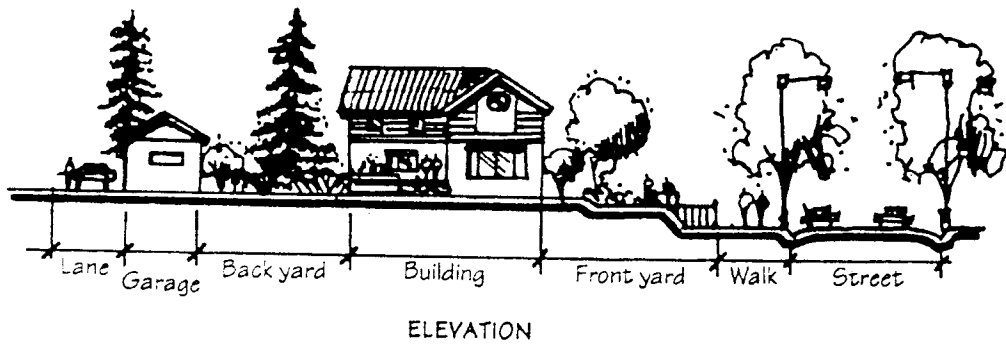
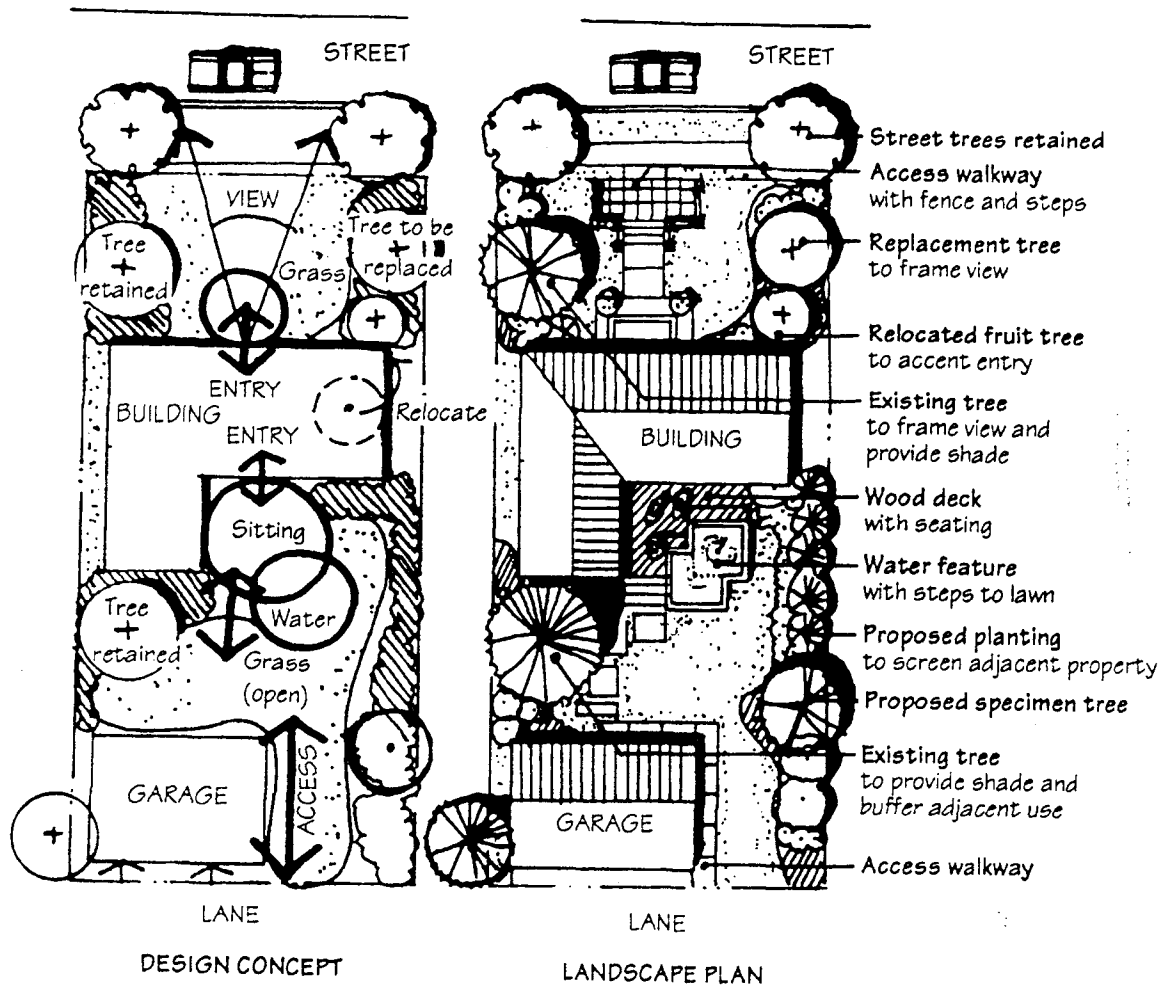
The purpose of encouraging significant tree retention is to maintain existing character and natural amenity values associated with Vancouver's urban forest. Retained trees normally require special protective measures during construction to ensure their continued healthy growth. Selective branch pruning can modify existing trees in harmony with new development to enhance views and alleviate potential hazardous conditions. The adjustment of a proposed building's siting can also retain trees without incurring unnecessary costs of tree removal and replacement. The Director of Planning may relax By-law regulations regarding the minimum distances between an existing tree and a proposed building in order to facilitate the retention of trees. Under certain circumstances, such as insufficient space for tree planting on a site, the Director of Planning may waive the replacement tree requirement.



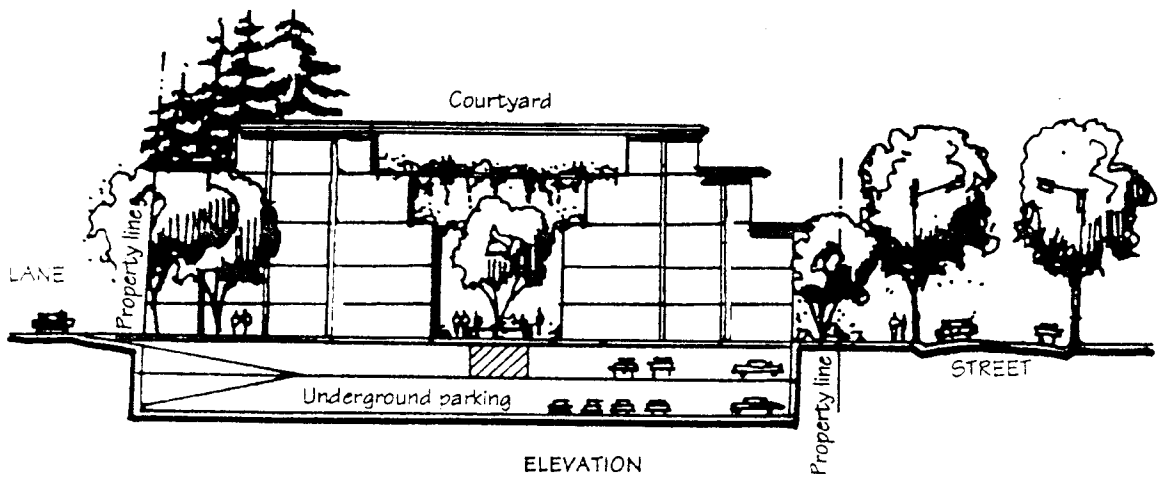
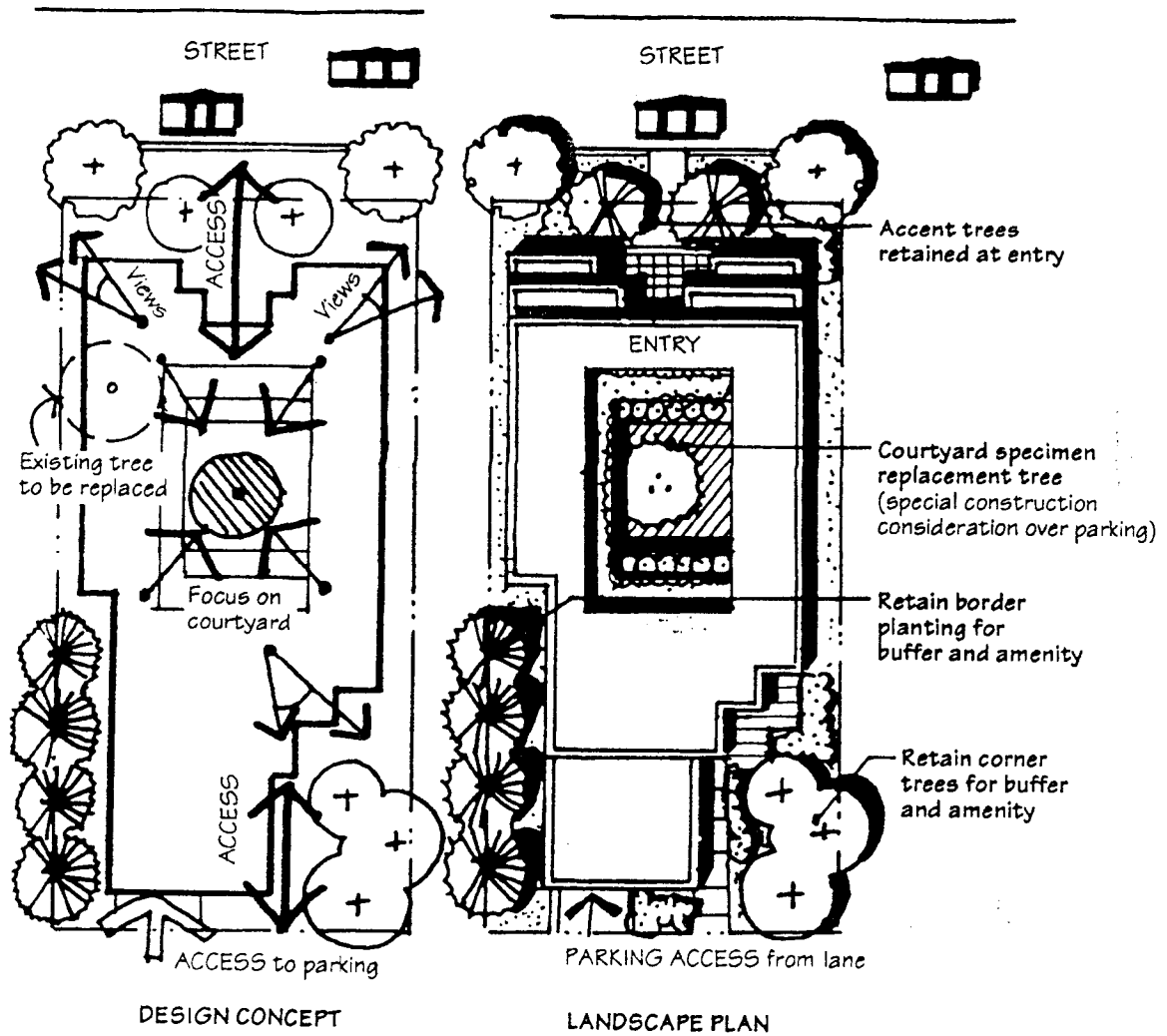
### Site Planning Responsive to Vegetation

The following drawings represent potential responses to tree retention, relocation and replacement opportunities as part of site planning and development.





**Residential Development (Single-Family)**



**Commercial or Residential  
(Multi-Family) Development**

Selected replacement trees should be appropriate to the particular site. However, replacement trees need not be the same species as those being removed. In determining types and locations of replacement trees, an applicant should consider whether other properties along the street have a particular type or types of trees planted, or whether trees are located in any characteristic patterns or relationships to buildings or the street. In addition, consideration should be given to soils, topography, drainage or other conditions such as overhead wires or underground services, and whether there is preference for a particular species of tree. For more detailed planning and landscape considerations concerning power lines, contact B.C. Hydro, Environmental Resources.

Replacement trees should consist of high quality and nursery grown trees that meet the **British Columbia Landscape Standard** published by the B.C. Society of Landscape Architects and the B.C. Nursery Trades Association.

When considering tree retention, relocation, replacement, and other design decisions affecting the landscape, landscape professionals such as Arborists, Landscape Architects, Horticulturists and nursery representatives, as well as representatives of any utilities on or adjacent to the site, should be consulted to obtain the necessary expertise and information.

Street trees must not be pruned, moved or otherwise disturbed without written prior permission of the Park Board in accordance with the **Street Tree By-law No. 5985**. Street trees must be protected, to the satisfaction of the City Engineer, during the construction process.

When selecting replacement trees from Schedule A, applicants should ensure that the variety or varieties selected are available commercially. Planning staff can provide a list of tree suppliers in the greater Vancouver area.

### **3 Landscape Submission Requirements**

The following guidelines related to permit submission requirements are designed to ensure that trees designated for retention, relocation, or replacement receive the treatment and protection they require for survival during and subsequent to the construction process.

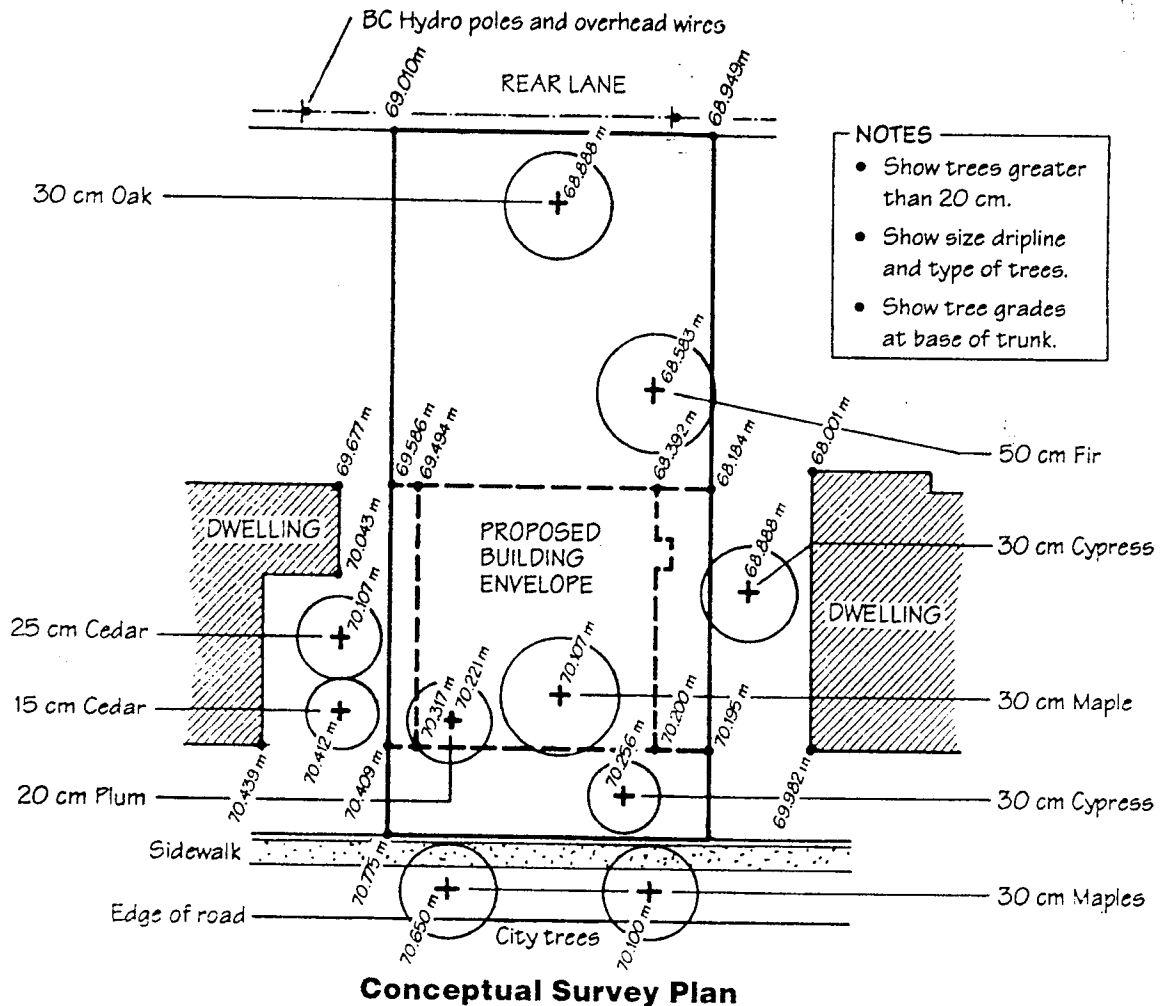
Any encroachment into the tree protection zone by vehicles, excavation materials or other by-products of construction will cause soil compaction in the root zone, decreasing the amount of air space in the soil necessary to maintain the health, vigour and life of the tree. Any such damage can be irreversible but may not become evident, in terms of tree decline and eventual death, for one to three years.

### 3.1 Survey Plan

Survey Plans are normally required with any development application for a new building. Only some additions or alterations are exempt from this requirement.

The Survey Plan should show:

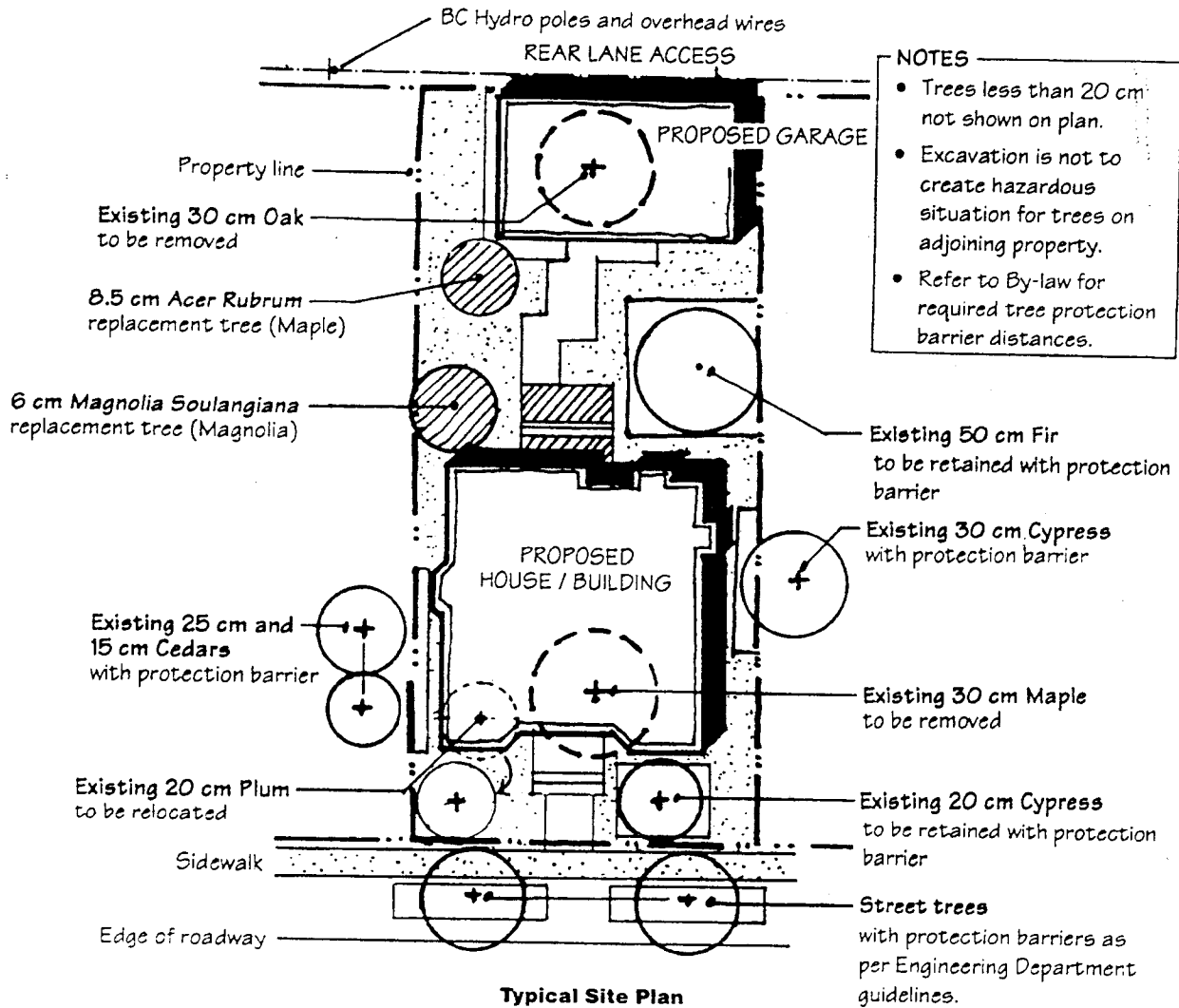
- All trees greater than 20 cm in diameter measured 1.4 m above the ground, including adjacent property trees within 2 m of the property line, and trees on any City street or lane allowances adjacent to the site. In the case of multi-stemmed trees, those trees whose three largest trunks or stems, when added together, are greater than 20 cm.
- Tree grades (existing tree base elevations) for those trees exceeding 20 cm in diameter that are affected by development.
- The drip line (crown of trees or extent of tree branches) and species (type) of trees, exceeding 20 cm in diameter measured 1.4 m above the ground.



### 3.2 Tree Plan

The Tree Plan should show:

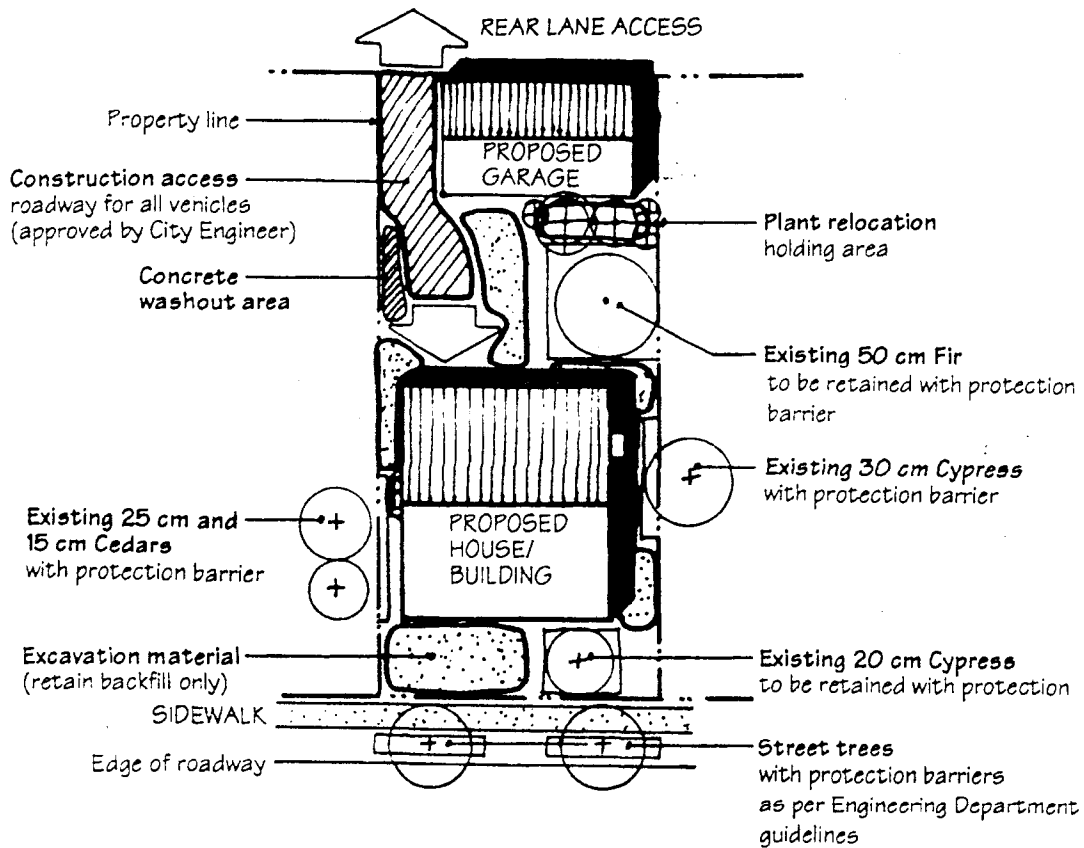
- All trees exceeding 20 cm in diameter to be retained, relocated and removed (species, diameter and condition).
- Protective fencing, required by the **Private Property Tree By-law** (to be installed prior to any site work), to protect trees to be retained during construction.
- Trees greater than 20 cm in diameter on adjacent properties within 2 m of the property line, and all adjacent City street trees, including required protection barriers for those trees.



### 3.3 Construction Management Plan for Tree Retention

It is recommended that a Construction Management Plan be completed prior to development permit issuance to ensure the protection of trees during construction. The Plan should consider the following:

- Excavation/building material storage should be located away from retained trees. All excess excavation material beyond what is required for backfilling should be removed immediately from the area. Storage of construction materials on the street allowance is generally not permitted.
- The access roadway to the excavation should be distinctly marked by flagging tape to avoid tree damage. It is further recommended that a 15 cm layer of wood chip mulch or similar material be used where the access road will impact existing tree roots. Temporary and permanent access must be approved by the Engineering Department.
- Concrete washout areas should be located away (and preferably downslope) from retained trees as well as existing and proposed planting areas. These washout areas are not permitted on City property.



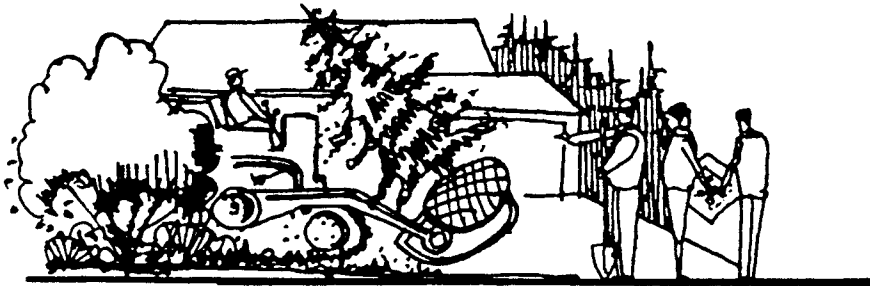
**Typical Construction Management Plan**

### 3.4 Professional Consultation

The services of an Arborist can often be required. The Director of Planning may require a professional Arborist, certified by the International Society of Arboriculture, to provide any or all of the following:

- a) A written report on:
  1. the condition and size of trees proposed for retention;
  2. the impact of a proposed development on the health (and potential hazard) of trees to be retained; and
  3. development limitations and recommended construction practices to protect trees during and after construction.
- b) A written undertaking that he/she shall perform or supervise:
  1. pre-construction treatment as required (e.g. root and branch pruning);
  2. regular on-site inspections and will report any infractions on private property to the Director of Planning or the City Engineer on City property;
  3. restorative landscape treatment, including soil renovation as required;
  4. selection and planting of any required replacement trees; and
  5. a post-construction inspection and written report, to be submitted to the Director of Planning.

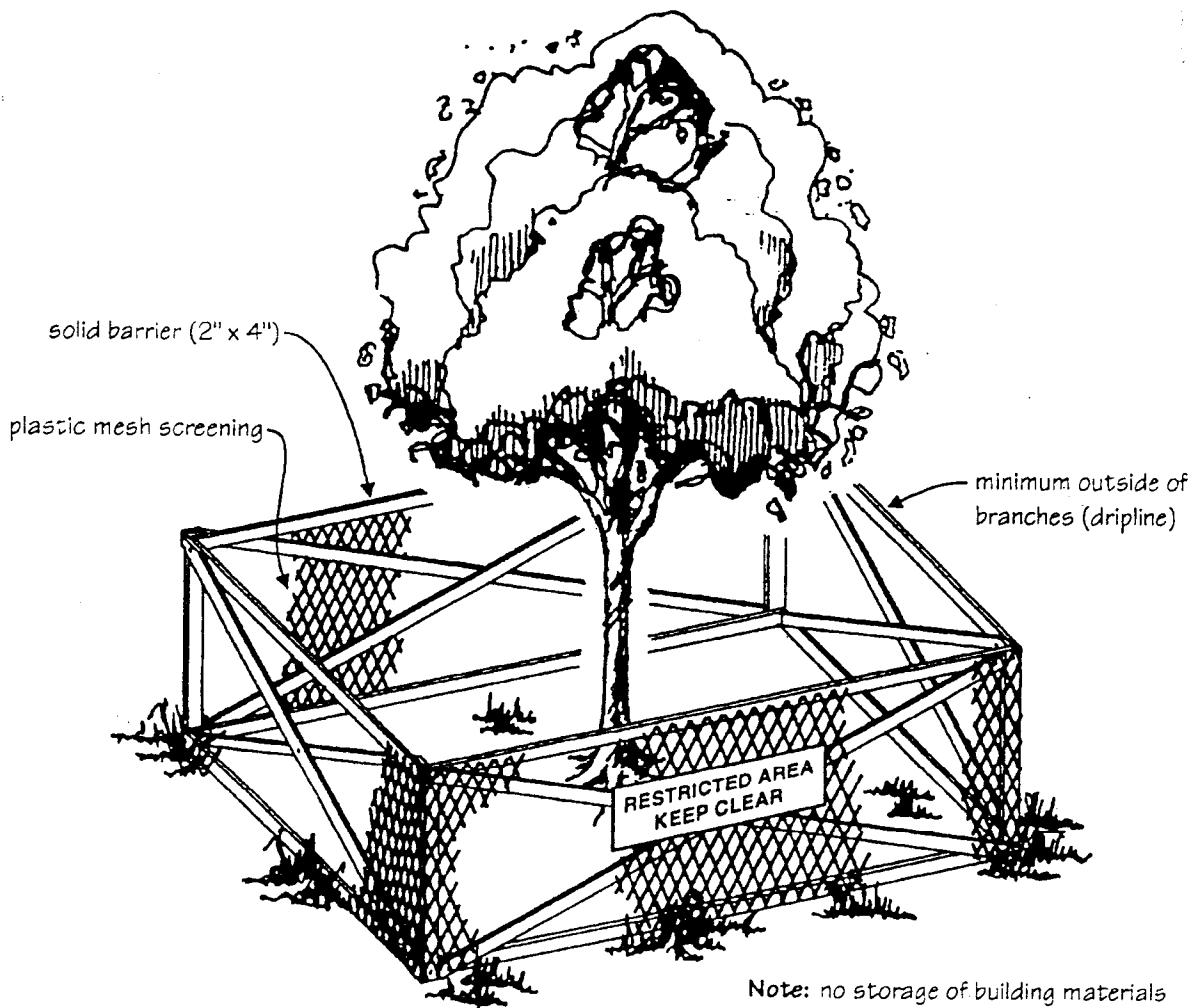
Letters of credit may be required where relaxations are granted, or in other instances where deemed appropriate by the Director of Planning. Where they are required, the Arborist shall conduct an inspection and provide a written report to the Director of Planning prior to the release of the letter of credit. This is to ensure adequate compliance.



## 4 Technical Guidelines

### 4.1 Tree Retention

- a) Where trees are to be retained on a site, protection barriers must be installed as specified in the **Private Property Tree By-law**.
- b) Any required excavation in or around the protection barrier to accommodate underground services, footings, etc. should be indicated on the plan and done by hand.
- c) Trees inside the protection zone should be cared for throughout the construction process, i.e., they must be watered sufficiently, particularly if a portion of the tree's root system has been disturbed by excavation.
- d) Root and branch pruning, where necessary, must be done in accordance with Sections 4.4 and 4.5. Only the Park Board is authorized to prune trees on City property.

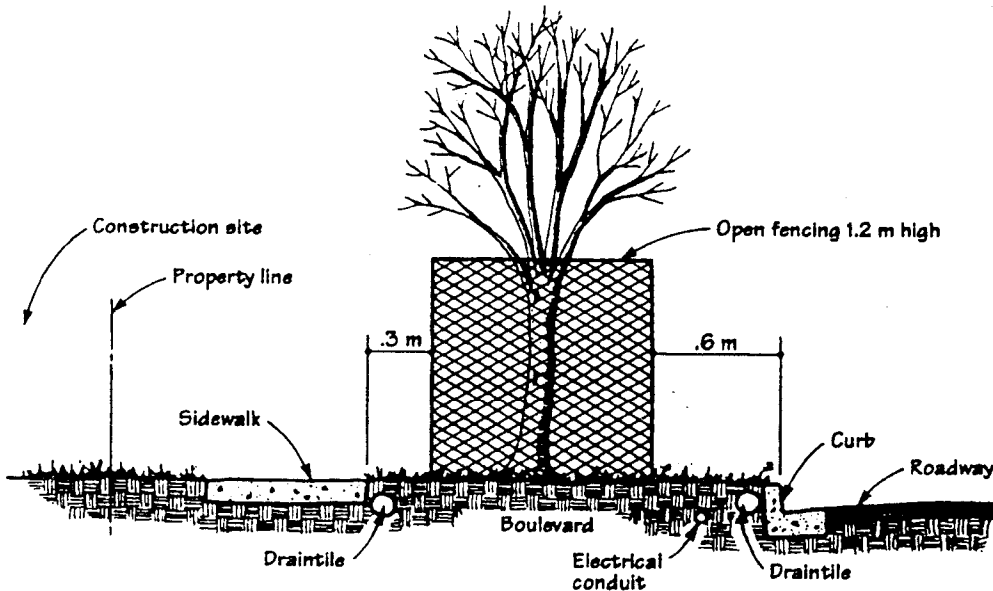


Tree Retention Guideline



**4.2 Tree Retention on Boulevards Adjacent to Construction Sites**

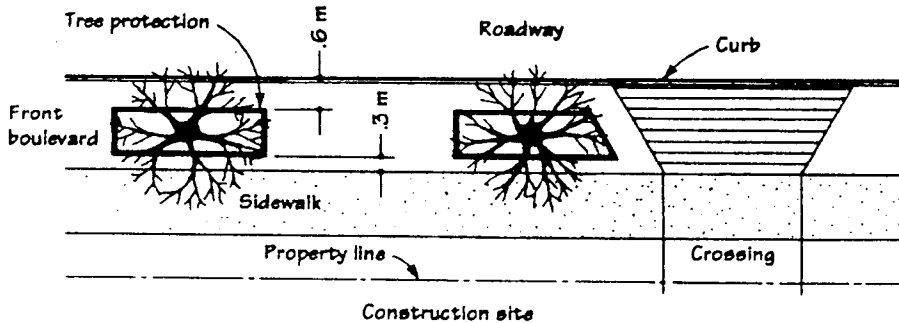
Boulevard trees adjacent to construction sites, including those of less than 20 cm diameter, must be protected in accordance with these Engineering Department guidelines and cannot be pruned, moved or otherwise disturbed without prior written Park Board permission.



Barrier fencing used for tree protection must:

- a) allow for free and clear passage of pedestrians on the sidewalk and adjacent portion of boulevard;
- b) provide for clear visibility of fire hydrants, driveway access, crosswalks, etc. ("see-through" fencing should be used);
- c) be 0.6 m or more from the curb to provide for the opening of car doors; and
- d) be 0.3 m or more from the edge of any sidewalk located within a grass boulevard.

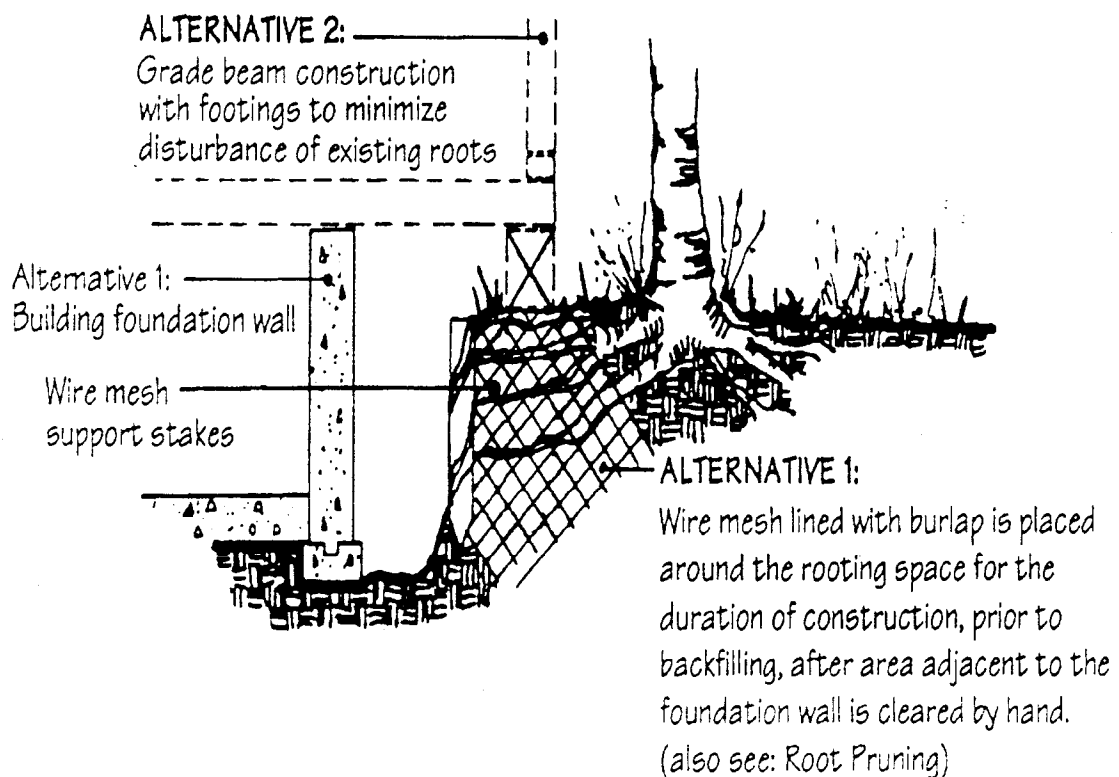
**NOTE:** These setbacks also reduce the possibility of interference with underground utilities when staking fences in place.



### 4.3 Excavation Adjacent to Retained Trees

In cases where proposed building excavation will affect existing trees to be retained, special attention should be given to proper root pruning and care for the remaining root system. Alternatively, a post and beam structure for the building may be considered to retain the rooting space (see diagram, Alternative 2). It is important to note that most roots are located in the top 60 cm of soil, with the major roots for water and nutrients absorption in the top 20 to 30 cm.

- a) In order to minimize root damage, soil erosion and tree disturbance, a temporary root curtain<sup>2</sup> should be wrapped around the root zone to retain and protect the exposed area. The root curtain should consist of heavy wire mesh or similar material lined with burlap (to retain moisture) and supported by posts. Backfill should be used as required to ensure that none of the roots are left exposed. Only hand excavation should be used in the root zone area.
- b) It is critical that the root zone system (or roots of the tree) be kept moist by watering as required throughout the construction process.
- c) Once the foundation is ready to be backfilled, the root curtain can be carefully removed. It is of utmost importance that the area surrounding the tree be kept free of building materials, as well as pedestrian and vehicular traffic, to avoid soil compaction.
- d) Tunnelling rather than trenching should be considered when installing underground utilities and drainage lines to minimize damage to existing trees. This technique entails boring a hole under or through the root system with minimum disturbance. To ensure that the work is undertaken in the appropriate manner, a certified Arborist or similarly qualified landscape professional should be consulted if the applicant decides to use this technique.



<sup>2</sup> A root curtain is a material such as wire mesh that helps retain the roots and soil in place.

#### 4.4 Root Pruning

Root pruning is the practice of removing a portion of a tree's root system. As a first alternative, adding soil and reseedling is recommended to prevent the removal of key structural roots. However, root pruning sometimes becomes necessary in order to accommodate landscape features such as walks, retaining walls, drains or utilities. Root pruning may also be necessary when existing roots begin to interfere with the routine maintenance of surrounding lawns and shrub beds. For example, it would be better to remove a surface root which is continually wounded by a lawn mower blade rather than to increase potential for disease through open wounds in the root. Other reasons for root pruning may include transplanting and undesirable growth patterns.

The circumstances necessitating root pruning vary, but the objective of tree root pruning is always to ensure the health, stability and longevity of the tree. Therefore, major root pruning should only be done by, or in consultation with, an Arborist or other qualified landscape professional.

The following general guidelines for root pruning are provided for your convenience:

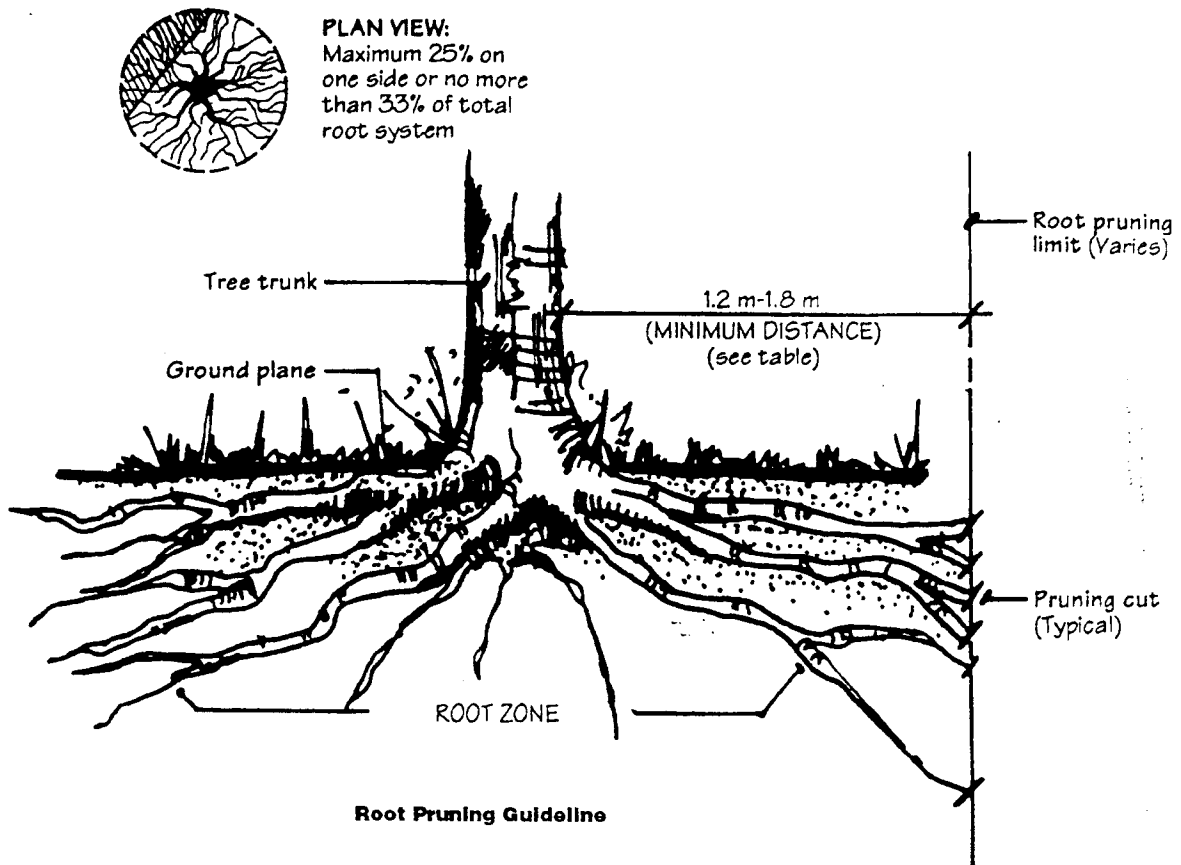
- a) A tree should be root pruned only if the problem can be solved by removing less than 33 percent of the tree's roots, with no more than 25 percent from one side.
- b) For trees 30 cm in diameter and less, roots should not be removed within 1.2 m of the outer edge of the tree base. Trees with diameters over 30 cm should be allowed an additional 30 cm for every extra 7.5 cm of trunk diameter measured at a point 1.4 m above ground. For example, a tree with a 37.5 cm diameter trunk measured 1.4 m above the ground would require a minimum 1.55 m allowance around it.

The accompanying Root Pruning Table provides a guideline for root pruning different tree sizes.

**Root Pruning Table**

Tree Diameter [Measured 1.4 m above ground]	Distance From Trunk	
	Minimum	Preferred
15 cm	1.2 m	1.5 m
22.5 cm	1.2 m	1.5 m
30 cm	1.2 m	1.8 m
37.5 cm	1.5 m	2.1 m
45 cm	1.8 m	2.4 m
52.5 cm	2.1 m	2.7 m

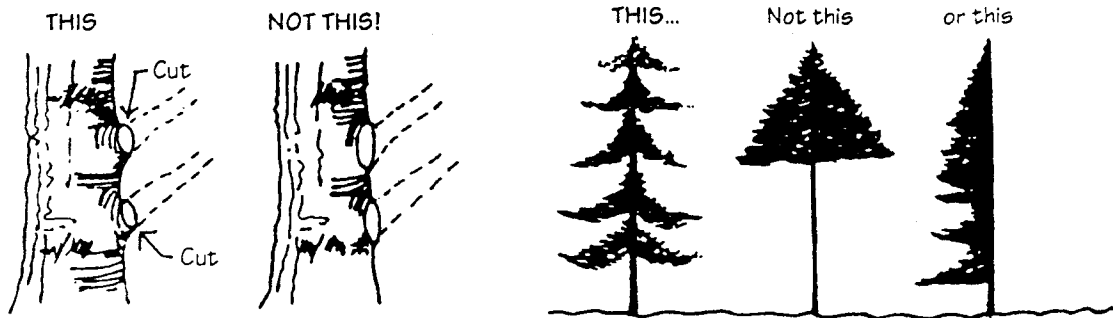
- c) Cut roots cleanly after excavation with clean, sharp tools, to promote callous formation and wound closure. Wounds may be dressed with a tree rooting hormone compound that is available at garden centres.
- d) Backfill the excavation as soon as possible and water the soil around roots to avoid leaving air pockets.
- e) Mix soil improvements (e.g. peat moss) with fill soil to promote new root growth, especially if the existing soil is of poor quality. The soil quality can be easily determined by using a basic soil testing kit which is readily available at most nursery supply stores. Do not add fertilizers until improved tree growth is noticed, generally after 6 to 8 weeks during a growing season. Soil testing will better determine soil deficiencies and additional amendment requirements.
- f) Surface roots which interfere with other elements in the landscape can be removed under the supervision of an Arborist or other qualified landscape professional. Each tree has a different root system and requires individual analysis and treatment.



#### 4.5 Branch Pruning

Branch pruning can perform a number of functions. Most importantly, it is critical to the long-term health and vigour of the tree. Periodic pruning can cut away dead or diseased wood that is limiting growth. It can also contribute to enhancing views and limiting potential hazardous conditions.

- a) Branch pruning should generally be undertaken during the dormant or less active periods of the year, during winter or summer, depending on the tree species (type). Pruning should be avoided if possible during spring, due to new growth, and fall, due to potential disease.
- b) Branches should be cut cleanly with a proper saw or shears, depending on the size of the branch. The cut should be located adjacent to a node (swelling) in branch. Along the tree trunk, branches should be cut at the swelling at the base of the branch (i.e., branch collar), not flush to the tree trunk, to avoid unnecessary tissue damage.
- c) Pruning should provide for attractive tree form and not create unnecessary stress on the trunk. The branches should be adequately spaced along and around the tree trunk. In the instance of large trees, one tree trunk should normally be used as the major support for the tree to avoid potentially hazardous situations. Tree paints on cut branches are no longer considered necessary but the application of tree pruning hormones, in certain instances, can prevent excess growth of new stems.
- d) Contact B.C. Hydro if pruning is required close to power lines.
- e) Boulevard trees, owned by the City, must not be pruned without prior written approval of the Park Board, in accordance with the **Street Tree By-law, No. 5985**.



#### 4.6 Transplanting Trees

In cases where tree retention is not practical or desirable, transplanting trees should be considered as an alternative. It is important to consider the special conditions required to relocate trees. Size, time of year, preparation and post-transplanting care are critical to ensure a higher survival rate. Generally, a 10 cm diameter tree can be moved without special equipment. A tree spade can be used to move trees up to a 30 cm diameter.

Larger trees generally require special procedures and equipment but greater costs make these cases more unusual. Local tree nurseries might also be interested in acquiring specimen trees and relocating them at their own cost. The following procedures should be used as guidelines for transplanting trees:

- a) Trees should be generally moved during their least active or dormant period. Deciduous trees should only be transplanted when their leaves are absent from the tree, normally in late fall, winter or early spring. Coniferous trees are best moved in late fall or winter. However, adequate water uptake prior to dormancy is critical to the coniferous tree surviving winter transplantation. Broadleaf evergreen trees are generally best moved as growth begins in spring.
- b) The soil should be irrigated to a depth of 50 cm two to three days prior to digging and the soil should not be soaked. One additional day for the tree to absorb the moisture and excess water to drain away from the roots should be allowed. Penetrating the soil area with a bar or similar implement within the drip line (extent of branches) of the tree at 30 cm intervals will aid in water penetration, especially in grassed areas. Specific transplanting fertilizers may be used in consultation with a landscape professional to reduce dehydration and other potentially damaging factors associated with transplanting.
- c) As a general rule, root ball diameter for transplanting should be 30 cm per 2.5 cm diameter of tree trunk measured 1.4 m above the ground. For example, a 10 cm diameter tree should have at least a 1.2 m diameter root ball. Roots should be cut by hand using an axe, chainsaw, or tree spade, depending on the size of the root ball. Do not use a back hoe or similar equipment to sever roots, as this will cause unnecessary damage to the root system. If root damage such as root splitting occurs, ensure that the proper repair (i.e., pruning) is undertaken prior to transplanting.
- d) Before transplanting a tree to a new site, the prepared ground should be made moist but not wet. Stake or guy the tree only if it is unable to stand on its own. The planting area should be irrigated, but avoid applying fertilizers until new growth is evident.



**A tree spade is a mechanized tree mover normally attached to a truck.**

#### 4.7 Replacement Trees

- a) Refer to the **Private Property Tree By-law** for replacement tree requirements for determining the total minimum number of trees (based on site size and number of existing trees on site), species selection, minimum sizes, and siting restrictions.
- b) When selecting replacement trees, consideration should be given to ultimate size, form and habit as well as specific site aspects including soils, topography and drainage. Replacement trees should also respect the building architecture, surrounding buildings, landscape elements, space restrictions, and general neighbourhood character.
- c) In determining what type of tree or trees to choose as replacement trees, the following are some very basic considerations for the homeowner or developer:
  - What overall landscape character is to be achieved for the property? For the street or neighbourhood?
  - What functions are the trees to fulfil? Provide shade? Frame views? Screen undesirable views? Or attract birds?
  - How great a concern is maintenance (e.g. raking leaves, pruning, etc.)?
  - Are trees that produce flowers, fruit or nuts desirable?
  - Are native species appropriate?

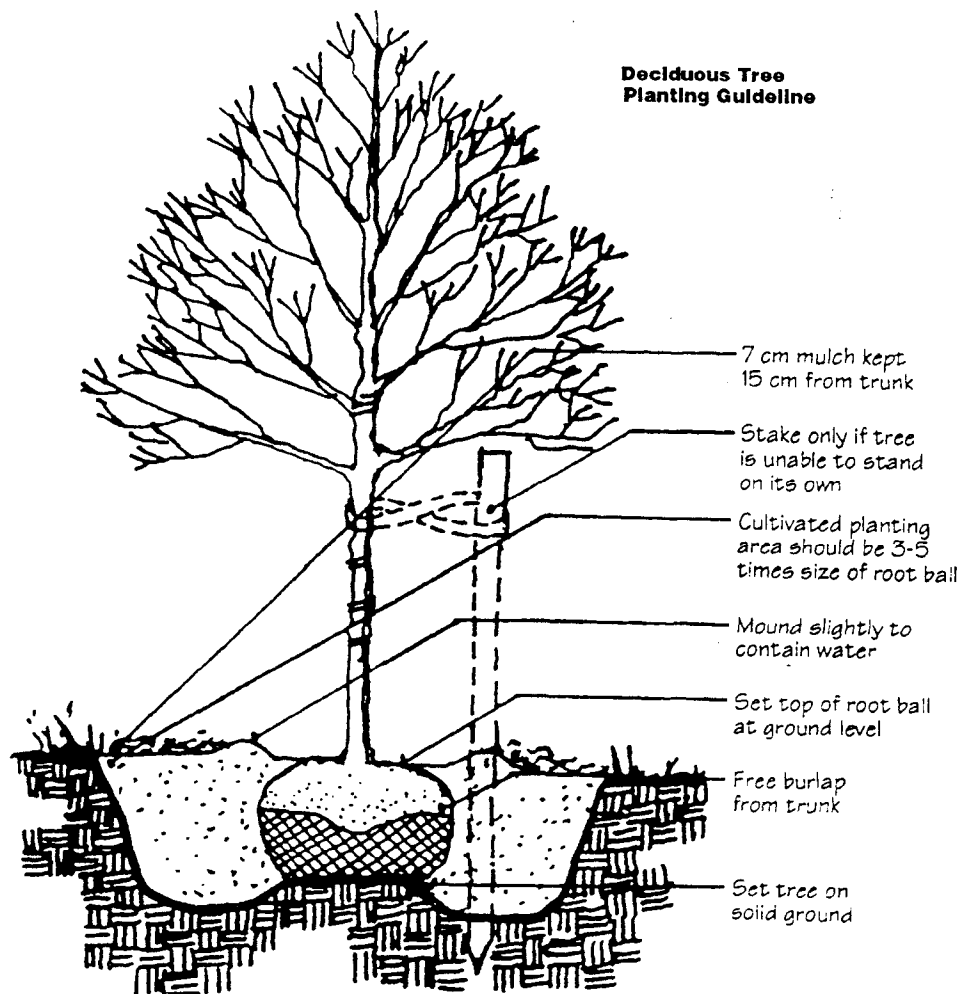
#### 4.8 Tree Planting

The following tree planting guidelines are based on the most recent recommended practice by the American Forestry Association. Refer also to the **Private Property Tree By-law**.

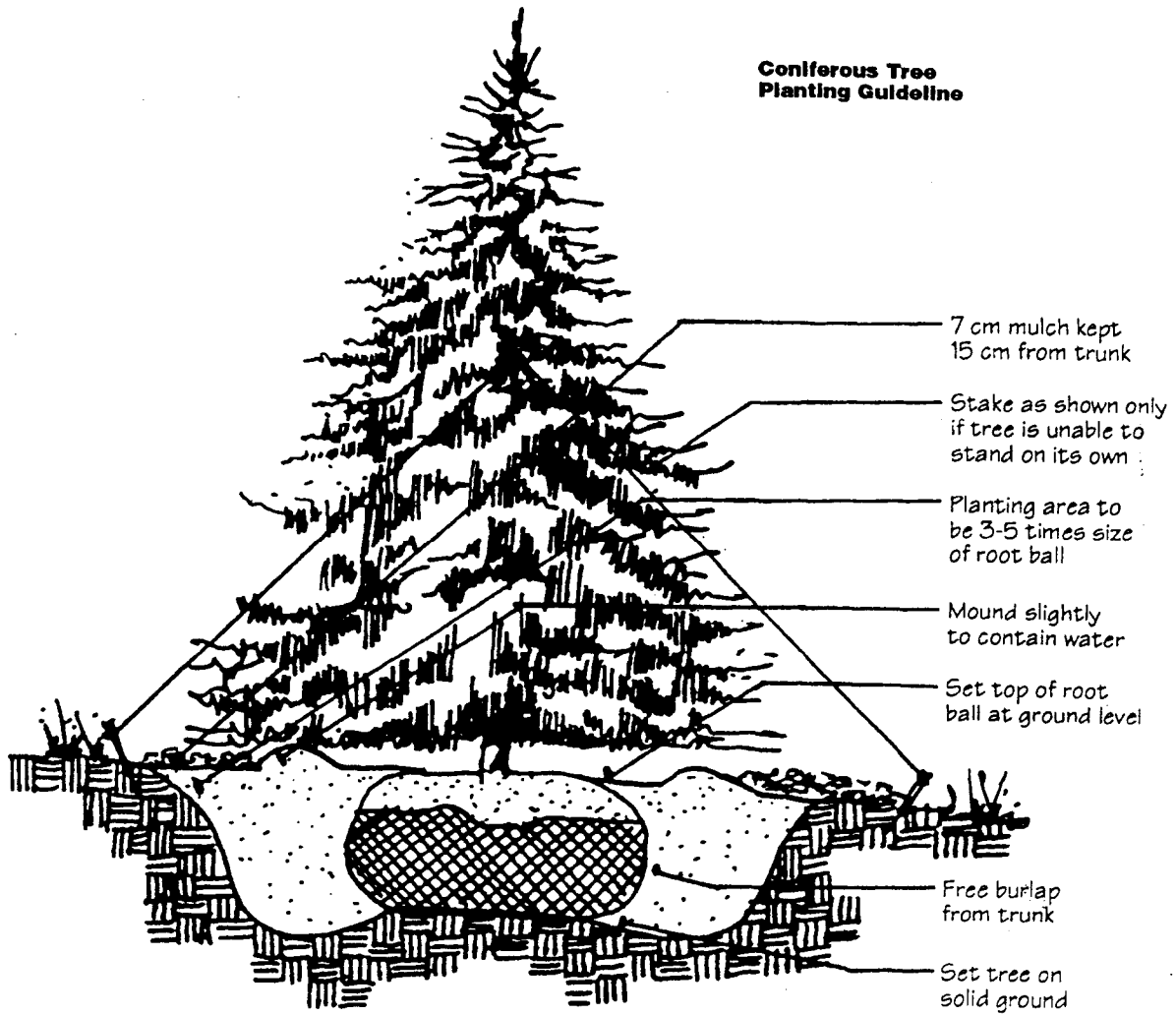
- a) Select the location of replacement trees in accordance with the provisions of the **Private Property Tree By-law** and to ensure that the trees will be able to develop their natural form and ultimate size without creating a negative impact on the tree, its surroundings or any overhead or underground utilities.
- b) Ensure that the root ball is uniformly watered one day prior to planting, if possible. Water the newly planted tree once a week, soaking the cultivated area thoroughly.
- c) The area surrounding the planting site should be prepared and cultivated 50 cm deep, or the depth of the root ball if deeper, and 2.5 m wide. Cultivate the planting area with a rototiller or shovel. Set the tree in the centre of the planting area on firm ground.
- d) Soil composition should generally be approximately 50% loam, 30% decomposed organic matter, and 20% sand. Soil testing kits are normally available through local nurseries. The Department of Agriculture or private laboratories will also test soil samples.

- e) Generally 4.5 kg of dolomite lime per 9.3 m<sup>3</sup> should be cultivated uniformly into the planting area. A unique soil composition and planting might require an alternative treatment.
- f) The root ball should normally be set at the same level as it was growing in the nursery or tree farm. Where drainage is poor, it may be beneficial to plant the tree 2.5 cm to 5 cm higher than the surrounding ground. Under no circumstances should the top of the root ball be buried.
- g) Soil should be compacted with a water sprinkler or hose and heavy foot traffic around the planting area should be avoided.
- h) A 5 to 7.5 cm layer of mulch (peat, mushroom manure, leafmould, etc.) may be applied to the planting area but must be kept 15 cm away from the tree trunk.
- i) A tree should only be staked if it is unable to stand on its own. When staking, the stake should be placed on the windward side of the tree avoiding damage to the trunk and root ball. The stake should not be driven through the root ball. The tree should be tied to the stake, allowing for natural movement of the trunk. The stake should be fastened to the tree with a figure-eight loop tie of a soft elasticized material, i.e., rubber tubing, or similar fastener, that is appropriate to the size, type and condition of the tree. The stake should be removed after one year or when the tree is established.
- j) A regular maintenance program should be adopted for one year after planting to ensure survival and establishment, including pruning, watering, and cultivating the planting area. Do not fertilize until late spring of the second year following planting.

NOTE: The accompanying tree detail illustrations characterize a generally flat site condition in an unrestricted area. Special planting considerations are required in sloped conditions, roof decks or other unique situations.



### Coniferous Tree Planting Guideline



### Additional Sources of Tree Information

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B.C. Hydro. **Planting Near Power Lines.** (Pamphlet)

C.M.H.C. 1979. **Roof Decks Design Guidelines.**

Harris, Richard W. 1983. **Arboriculture: Care of Trees, Shrubs and Vines in the Landscape.**

Shigo, Alex L. 1986. **A New Tree Biology.**

Shigo, Alex. L. 1989. **Proper Pruning of Trees.**

Shigo, Alex L., Vollbrecht, K., and Hvas, N. 1987. **Tree Biology and Tree Care.**





## City of Richmond

6911 No. 3 Road, Richmond, BC V6Y 2C1  
Telephone (604) 276-4000  
[www.city.richmond.bc.ca](http://www.city.richmond.bc.ca)

March 6<sup>th</sup>, 2003  
File: 0150-01

Ms. Debby Green  
13471 Blundell Road  
Richmond, BC V6W 1B6

Dear Ms.Green:

Re: Removal of Trees at 13511 Blundell Road

In response to your letter dated March 3<sup>rd</sup>, 2003, this is to confirm your appearance as a delegation to Council on the above matter at the Council Meeting scheduled for Monday, March 10<sup>th</sup>, 2003, at 7:00 p.m. in the Council Chambers, Richmond City Hall. Because this item is not on the agenda you will be heard at or near the end of the Council meeting.

As you are aware, Council procedures allow five minutes for you to make your presentation, not including any questions which Council members may ask. This five-minute limit is strictly enforced to ensure that all business for the meeting is dealt with.

Please conclude your presentation with a specific request on what you are seeking by appearing before Council as a delegation.

Yours truly,

David Weber  
*Acting City Clerk*

fja