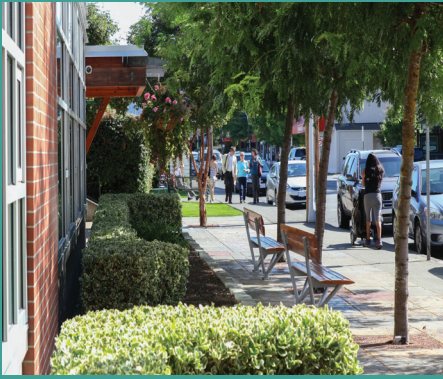


# DEVELOPER'S GUIDE TO URBAN FOREST MANAGEMENT



*The City of Duncan will be a community identified by its trees.*



The City of Duncan is implementing its **Urban Forest Strategy**, which provides a vision and plan for long term, sustainable urban forest management. This guide was created to provide a broad understanding of operational directives to protect, maintain and enhance the urban forest.

The City of Duncan wishes to foster a sense of ownership and community stewardship by emphasizing the importance of trees, forested ecosystems and their associated values. Development Permit Applications need to address how the urban forest will be protected or improved by a proposed development.

Developers are encouraged to protect trees when planning and during construction, as well as to employ an arborist in the early planning stages of a development. **A Development Permit is required prior to removing trees on a commercially zoned or multifamily residential property.**

## BENEFITS OF THE URBAN FOREST

Trees in the urban environment provide significant environmental, economic and social benefits to the community.

**These values are improved by maintaining and increasing tree cover:**

Environmental	Economic	Social
Cleaner air & water	Property value	Sense of safety
Wildlife habitat	Reduced heating & cooling costs	Community beautification
Reduced stormwater runoff		Traffic calming

## BENEFITS OF PLANTING & PRESERVING TREES

- Enhance developer reputation and legacy
- Improve the evaluation of compliance of an application with City Bylaws and Development Permit Area Guidelines
- Reduce stormwater runoff and energy costs for the development
- Increase property values and provide a selling feature to potential buyers

## POTENTIAL CONSTRUCTION DAMAGE

The potential risks of construction to tree root systems should be considered when planning a development project. Tree protection cannot wait until construction has already begun.

- Removal of trees can reduce the stability of a tree stand from wind.
- Mechanical injury to a tree from large machinery can cause significant damage.
- Peripheral excavation can damage tree roots which are extremely vulnerable.
- Soil compaction around the root zone caused by large machines operating on a site can negatively impact the health of trees.



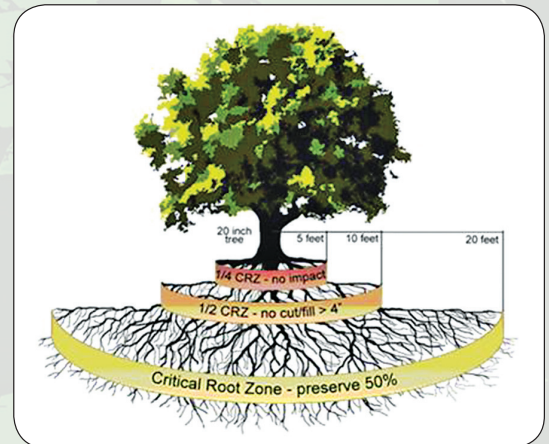
## PLAN TO PROTECT TREES DURING CONSTRUCTION

A tree's **Critical Root Zone (CRZ)** is the area around the trunk where roots essential for tree health and stability are located.

A **Tree Protection Zone (TPZ)** is an arborist-defined area surrounding the trunk intended to protect the roots and soil within the Critical Root Zone and beyond to ensure future tree health and stability.

A tree's TPZ should be delineated by sturdy fencing being placed around the boundary to avoid disturbance to a tree and its root zone during construction.

### A tree's Critical Root Zone



### Tree Protection Zone Delineation



**Acceptable**



**Acceptable**



**Not Acceptable**

## TREE PRESERVATION TIPS

- Make an ISA-Certified arborist part of your planning team
- Complete a detailed tree survey for the development site
- Identify which trees are suitable and not suitable for retention
- Prepare and implement a tree protection plan
- Monitor tree health during construction and for up to two years upon completion of construction
- Consult an arborist, landscape designer or landscape architect, and the City's recommended Planting List when choosing new trees to plant
- Consider potential infrastructure conflicts with trees
- Ensure adequate soil volume and adhere to planting standards to ensure healthy tree growth



## RESOURCES

For more information refer to the City of Duncan *Urban Forest Strategy*: [www.duncan.ca](http://www.duncan.ca)

*Trees and Development: A Technical Guide to Preservation of Trees During Land Development.*

Nelda Matheny and James R. Clark. International Society of Arboriculture. [www.isa-arbor.com](http://www.isa-arbor.com)

*Best Management Practices: Managing Trees During Construction.* Kelby Fite and E. Thomas Smiley. International Society of Arboriculture. [www.isa-arbor.com](http://www.isa-arbor.com)