

# Tree Support Systems



## Hardware to Reduce the Risk of Limb or Stem Breakage and/or Splitting

Cables are installed in trees to provide support to weak or potentially hazardous limbs by connecting two or more limbs together. Tree conditions requiring mechanical support may be splits, decayed or poorly structured limb junctions or the inherent dangers of weak-wooded trees. Poorly structured, trees with more than one trunk are more susceptible to breaking under the stress of wind or the weight of accumulated ice or snow. It is important to keep in mind that support cables have limitations. Before installing cables, the tree should be properly pruned and its structure evaluated.

Hazardous and dead limbs should be removed. The wood to be cabled must be solid and large enough to support the hardware. Trees that are too severely damaged should not be cabled.

Multiple cables are often recommended to maximize strength; ideally, triangles or boxes should be formed between cabled leads. Only qualified Arborists should determine if and how a tree is to be cabled. The installation of cables in a tree represents an ongoing responsibility. All hardware in trees should be inspected annually to ensure proper placement and manage adjustments. **All cabling systems should be updated or replaced after 7-10 years.**

## Dynamic and Static Cabling Systems

**Dynamic** systems allow a tree to continue moving unrestricted unless the tree encounters high winds. The benefit is; the tree continues to strengthen around the weak location, creating "reaction wood" with no damaging drilling required.

Rainbow Treecare currently utilizes a form of dynamic cable system. The cable is made up of synthetic fibers with high UV resistance.

**Static** cable systems are best utilized with trees that are cracked, are in imminent danger of failure or too heavy to be supported by dynamic cables. Static systems use a steel cable which is stronger than a synthetic fiber cable and will constantly give support to the weak point. The problems encountered with static systems are decay at points of installation in the tree, and the resulting rigidity in the tree structure that prevents the tree from flexing to accommodate mechanical stresses.



Dynamic cable systems allow trees to naturally flex and will not cause additional damage.



Weak crotch joints, cracking and included bark are prime indicators of potential tree failure.



Steel cables are stronger than synthetic cable and will constantly give support to weak point.