



*Included bark occurs when branches grow together in a v-shaped crotch, as with this live oak (left photo). If not corrected when young, this weak arrangement will cause trunk splitting during high wind storms. The included bark is evident in the break (right photo) by the “ears” where these tabebuia branches were growing against each other.*

## **Proper Pruning and Cabling Reduces Storm Damage Potential**

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If nothing else, the recent high winds from offshore Hurricane Charley have provided some interest in proper tree pruning with lots of examples to look at. Many trees would not have had as much damage if they had been shaped better when they were younger. Besides shallow roots and brittle wood, the main problem, and close observation of broken branches will confirm, is included bark. Included bark is the term used when two branches grow with a **V**-shaped angle between them instead of the stronger **U**-shaped formation. With the V-shaped attachment, the two branches push against each other and a visible bark ridge testifies to the struggle of branches growing against each other and forming a dangerously weak union. With the U-shaped crotch the two branches are knitted together and form a strong union.

Look for poor branch unions when branches are smaller (less than 3 inches in diameter) and prune the tree to select the best leader. Cut the branch that is growing in a direction that you think will end up looking less attractive or is too close to the house. The entire branch may be removed, if it is less than 25% of the total canopy or it may be cut back over several years by removing 1/3 of the length each time. This gradual cutback also funnels nutrients into the larger branch and the pruned branch will get the idea that it isn't wanted, so to speak, and not grow as strongly. This is called subordination pruning and if practiced, it will result in less damage when the storms arrive. Correct pruning will also reduce property and personal injury by developing a tree with a stronger structure.

If trees haven't been pruned to help them grow into a strong structural formation, there are remedial remedies. One approach that I don't see used often enough in south Florida is

cabling. Cabling trees that have weak branch structure, multi-stemmed trunks, included bark and V-shaped crotches minimizes “break-out” damage due to branch failure in high winds. Cabling strengthens weak branches by securing them to a stronger branch or the trunk. This reinforcement means less potential for tree damage to homes, cars, or people. And because cabling will reduce the chances for large trees to break apart, they will live longer and you may avoid removal and replacement costs associated with storm damaged specimen trees.

In the past, arborists used flexible steel strand cables to reduce stress damage from high winds. A newer system that consists of polypropylene rope that is looped and spliced around the tree and because it requires no drilling, no wounding takes place. This new approach is called the Cobra™ cabling system(<http://www.wtsherrill.com/PDF/CobraInstruct.pdf> ). It originated in Europe and it is just starting to be used in the states.

Branches or trees that pose a potential threat to property or people should be evaluated for cabling. Before installing cables, trees should be properly pruned (instructions in writing) by a certified arborist to reduce foliage weight and remove hazardous branches and to improve the overall soundness or integrity of the tree’s structure. This pruning will insure better results once the cabling is installed.

Whether the steel or the new rope system is used, the tree will need to be inspected by an arborist periodically for deterioration of materials and changes in the tree that may make adjustments necessary.



*This V-shaped branch attachment was reinforced with the flexible, non-invasive cabling system (see gear in photo right) to minimize breakout damage due to high winds.*

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