Watch for Possible Tree Defects
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Once shade trees drop leaves, branching patterns are easier to see. This is a good time to assess trees for form and structure, susceptibility to storm damage, and late winter pruning needs.

When tree pruning is neglected, especially during the first 10 to 15 years after planting, structural defects develop. Trees with defects have an increased risk of storm damage while those with good structure are better at withstanding storms.

Homeowners can become aware of defects to watch for in their trees. Once a concern is noticed, a certified arborist or experienced tree care professional is best called in to inspect the tree.

A tree care professional cannot guarantee a tree will not fail. Any tree could fail under the right conditions. Experienced tree care professionals are better at assessing structural defects along with the likelihood of failure and of hitting a target such as a house or pedestrian.

If you have a tree planted in the last 5 to 10 years, keep in mind correct pruning of younger trees is the best way to prevent defects. Don't wait until a tree develops a major problem to call an arborist. Take care of pruning needs as a tree grows to avoid difficult to correct issues.

Following is a list of defects for homeowners to watch for in trees of all ages. While younger trees can develop defects, they are much easier to correct in a young tree than a larger tree, and the risk of decay in larger pruning wounds is reduced.

A key defect is co-dominant leaders or two or more trunks of equal or near equal size, both growing fairly upright. Co-dominant leaders are best addressed at planting time or during the first year after planting. They are one of the most difficult to correct defects as a tree grows larger.

Co-dominant leaders are a problem because included bark and cracks will develop at the fork where the two or three leaders join. Included bark is a sign of a weak attachment. Cracks allow in moisture and decay sets in.

Included bark is also called ingrown bark. When two branches grow closely together, especially in a narrow V, bark will grow inward rather than being pushed upwards to create a branch bark ridge. Included bark are common areas of failure. They are found in co-dominant leaders and other branch forks.

Signs of decay and cracks on the trunk, branches, and especially in branch forks are a concern. Decay is softened or discolored areas. It is most likely to develop in pruning cuts that do not seal, cracks, or at the base of a trunk where injuries from a lawn mower or weed trimmer have occurred. Mushrooms or other fungal bodies growing on a tree are signs of decay.

Look for overextended branches that have grown well beyond the trees canopy. If relatively large, they can exert a large amount of pressure on the main trunk. Signs of a leaning tree, another defect, are exposed roots or a bump of raised soil on one side of the trunk.

In older trees, be aware of incorrect pruning that leads to increased risk. Topping, where the ends of all branches are severely cut back, is a classic example. Lion's tailing is the removal of almost all inner branches, leaving the majority of foliage on branch ends that are whipped around in wind; or, when too many lower branches have been removed leaving the tree top heavy.

Deep planting and stem-girdling roots increase the risk of failure during storms. If the trunk has no taper at the ground and looks like a telephone pole going into the ground, it was planted too deep. Stem girdling roots are roots that encircle the trunk putting pressure on it as it grows. They may be seen aboveground, or a tree trunk may appear constricted near the soil on one or more sides.