

LIGHTNING PROTECTION

Benefits of a Lightning Protection System

Tree Size

Tree size is the main point of consideration for lightning protection systems. Not only are larger trees at a greater risk of lightning strikes, but their size also determines how the system is to be designed and installed. Trees with wide spread canopies over 35 feet in radius need multiple air terminal rods installed in them.

Safety Risks

Lightning is extremely dangerous and can lead to fires and personal injury. A lightning protection system helps lessen these risks.

Tree Damage

Immediate tree damage is very common in trees that are struck by lightning. Large branches can fail, significant sections of bark can be removed, and a tree can be killed outright by a lightning strike. Factors like wood porosity, moisture content, and bark thickness can all affect the extent of lightning damage experienced by different trees.



Why would I install a lightning protection system?

A lightning protection system will greatly limit the chances of a tree getting damaged by lightning. Because trees are often the tallest target in a given area, lightning will strike them with damaging impact. This can result in having to remove the tree.

What is a Lightning Protection System?

They are composed of copper conductors to allow lightning to travel through them, instead of through the tree. An air terminal rod is placed at the top of a tree's canopy. When lightning strikes, it will hit that target. From there, the current will pass through a copper conductor cable that runs down the trunk of the tree. Once it reaches the ground, the system ends with a ground terminal that is buried in the earth, and from which lightning can dissipate.

Future Tree Damage

It is estimated that over 20% of trees struck by lightning carry no visible signs of damage. However, interior damage to the structure or vascular systems can lead to long term tree failure. A tree's ability to fight both biotic and abiotic stresses can be inhibited by a lightning strike. Sometimes, there are no visible signs of damage for a year or more. However, the damage can make a tree more susceptible to borer insects, decay, and structural degradation, which can lead to a tree's ultimate failure.

Other Services

Our arborists at Prestige are trained to identify good candidates for lightning protection systems and to design and install them in a manner that will limit risks associated with lightning damage. A lightning protection system does not guarantee that there will be no lightning damage, but it is the best step you can take to protect your trees from it. In addition to lightning protection systems, we offer a full range of tree care services including removal, pruning, tree healthcare, and installation of new trees. Speak to one of our arborists today about any trees that you feel may be at higher risk of lightning strikes, or any other concerns you may have.

Which Trees Should be Protected?

Any very tall tree, especially those near houses, buildings, or areas where people congregate is a good candidate for lightning protection. Similarly, trees near water, alone in a field, and those of particular historic, economic, or sentimental significance should be considered. Lightning normally strikes the tallest point in an area, so only your tallest trees need lightning protection.

Maintaining My Lightning Protection System

The International Society of Arboriculture and the Maryland Department of Natural Resources recommends annual inspections by an arborist of all lightning protection systems. A proper inspection ensures that the system is still functioning as it was designed, ensures there are no breaks or kinks in the conductors, and addresses any issues identified.

If you have any questions about lightning protection systems, or any other tree care services, please reach out to one of our arborists!

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