Appendix 8

Tree Protection Guidelines for Construction

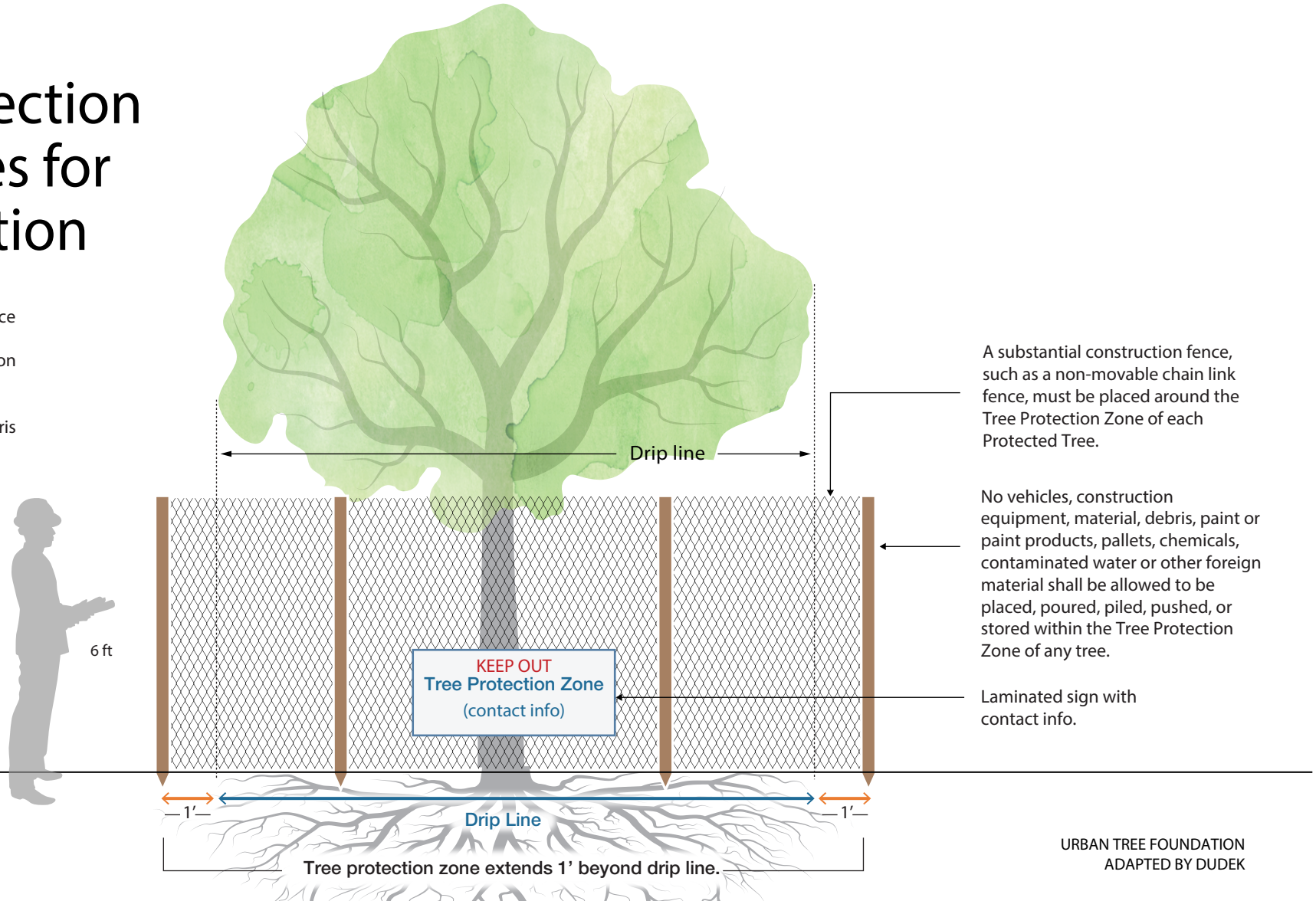
Introduction

Construction for development, maintenance, and renovation can pose threats to tree survivability in numerous ways. Threats include injury to roots, trunks, and branches; soil compaction; soil contamination; and improper pruning. Including an arborist in the planning stages of construction helps avoid damage when trees intersect with the built environment. Arborists identify which trees will be retained or removed, create site-specific tree protection protocols, and establish areas where replacement trees will be planted. Tree protection requirements may have significant benefits on the urban forest, as described below:

1. **Tree Protection Zones:** A Tree Protection Zone (TPZ) is an area surrounding a tree and its critical root zone where no grading, excavation, construction activity, equipment storing, or vehicle parking is to occur. The purpose of the TPZ is to protect all parts of the tree, both above and below ground. The size of TPZ ranges between tree owners; however, research suggests that a TPZ should be at least 1.5 inches wide per every inch DSH (Day et al. 2010). A successful TPZ is surrounded by signed fencing that reads “Keep Out: Tree Protection Zone.”
2. **Reducing Compaction:** When soil is compacted, water and oxygen available to tree roots is limited, leading to detrimental issues for a tree. In construction areas, compaction occurs purposefully through mechanical compaction or incidentally through the passage of vehicles and construction equipment over soil containing a tree’s roots.
3. **Minimizing Effects of Grade Changes:** The optimal zone for root growth is within the first 12 inches of soil depth. Any change in grade within a tree’s rooting zone will likely cause negative impacts for tree health. The degree to which these impacts affect the tree depends on the age of the tree, species, prior stressors, and environmental factors.
4. **Inspection:** Trees impacted during construction, maintenance, or renovations, should be monitored for decline annually by an ISA Certified Arborist for the first 5 years after construction. Monitoring should include photographs, annual reports, and mitigation techniques if necessary.

Tree Protection Guidelines for Construction

Tree protections shall be in place prior to any construction equipment or materials being on site. Fencing shall remain in place until construction equipment, materials, and debris have been removed from the site and approval from the City Arborist has been given for removal.



A substantial construction fence, such as a non-movable chain link fence, must be placed around the Tree Protection Zone of each Protected Tree.

No vehicles, construction equipment, material, debris, paint or paint products, pallets, chemicals, contaminated water or other foreign material shall be allowed to be placed, poured, piled, pushed, or stored within the Tree Protection Zone of any tree.

Laminated sign with contact info.

URBAN TREE FOUNDATION
ADAPTED BY DUDEK