PRIMARY USE: Understand the underground structure of trees.
ADDITIONAL USES: Being aware of tree root locations can affect land development, location of use areas that could cause compaction of soils, and landscape management activities.
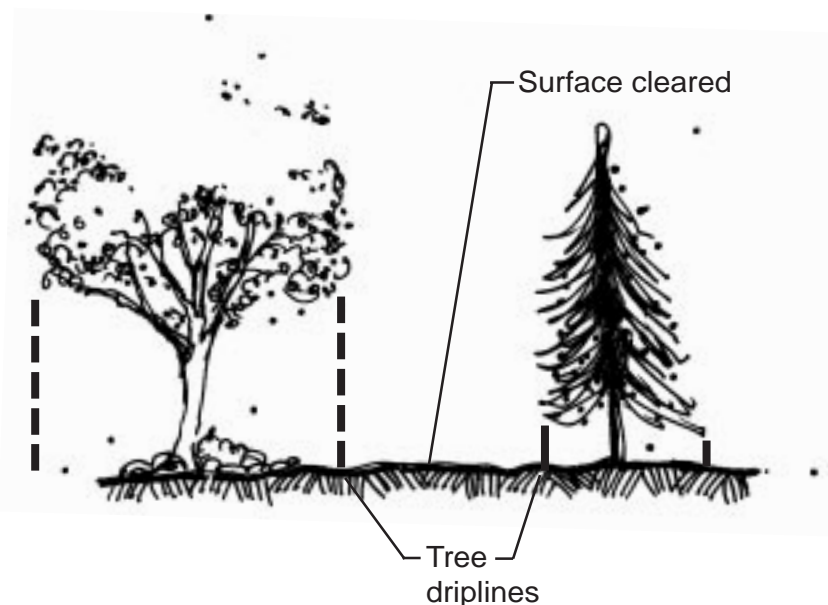
TREE DRIPLINES & ROOT LOCATIONS

What is it? A tree's dripline is a ring around the tree canopy on the ground level that receives most of the rainwater shed from the tree canopy.   Feeder root locations go beyond the dripline to get moisture and nutrients being created from organic matter in and on top of the soil. Microorganisms transform the organic matter and create the useful nutrients taken up by feeder roots.

Purpose

This nonstructural BMP is useful for expanding knowledge about tree physiography. The knowledge contained herein will affect decisions about land planning, land development, and landscape management needs of trees planted in the built landscape.

**Individual Plant
Drip Line Locations
Section View**

Surface cleared

Tree driplines

Limitations

The tree canopy dripline is the beginning point of where the tree begins to get moisture from the soil. Tree root locations are oportunistic, though, and will travel a distance equal to the height of the tree to get moisture. In a natural, undisturbed situation, tree roots go beyond the tree canopy easily a third the distance of the tree radius. Feeder roots are concentrated in the upper 6-8in (152-203mm) of soil, where there is abundant oxygen and moisture. Here a relationship between microorganisms and the tree roots occurs where the microbes break down
organic matter and convert it into forms that can be directly taken up by feeder roots. Roots under the tree canopy are mainly for support. Deeper roots are for support and they seek water during dry conditions.

Materials
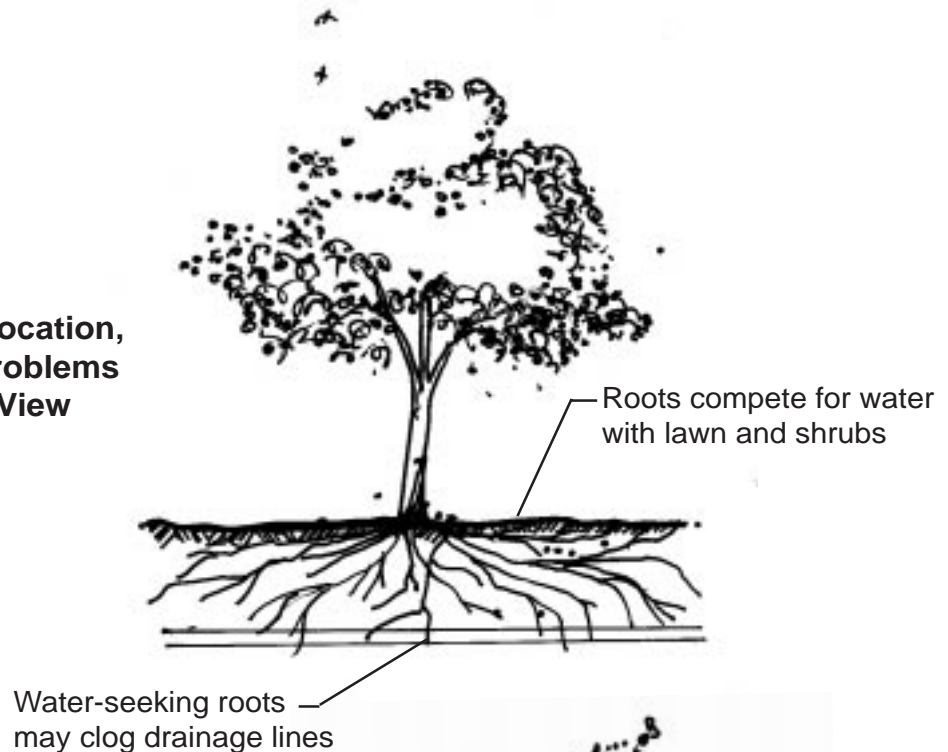
Non-structural.

Installation

Site specific

Source: Home Landscapes, Planting Design and Management by Ed Martin and Pete Melby-Timber Press, Simplified Irrigation Design, by Pete Melby-John Wiley and Sons
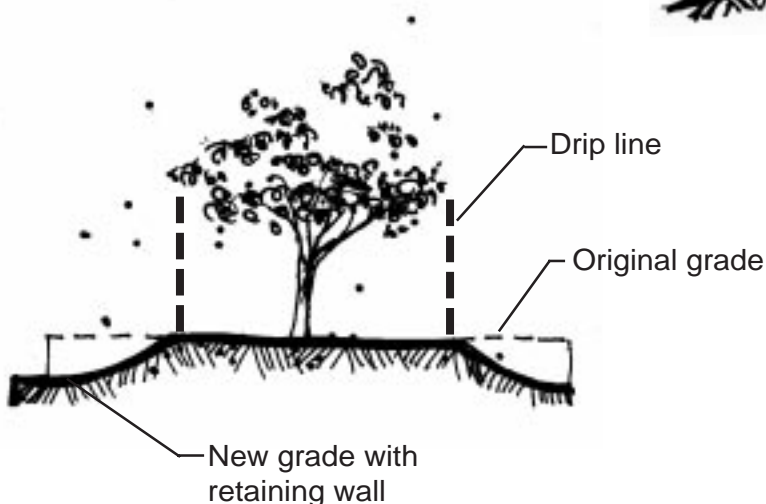
TREE DRIPLINES & ROOT LOCATIONS

Additional Drawings:

**Tree Root Location,
Potentail Problems
Section View**

Roots compete for water
with lawn and shrubs

Water-seeking roots
may clog drainage lines

**Guidelines for Preserving
Natural Vegetation
Section View**

Original grade

New grade with
retaining wall

Mixture of
peat moss/soil
or leaf mold/ soil

Drip line

Original grade

**Guidelines for Preserving
Natural Vegetation
Section View**

New grade with
retaining wall

Source: Home Landscapes, Planting Design and Management by Ed Martin and Pete
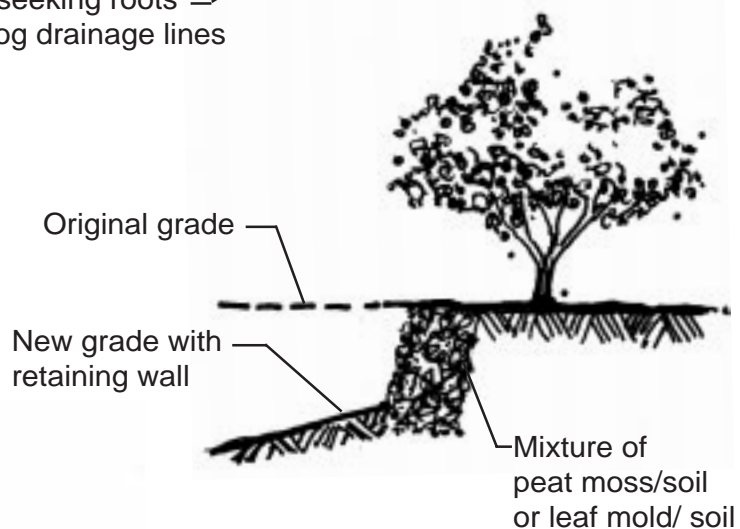Melby-Timber Press, Simplified Irrigation Design, by Pete Melby-John Wiley and Sons