

EXCAVATIONS

When deep soil cuts are made over the entire area occupied by the roots, it is difficult to maintain the health of trees. Lowering the grade 6–8 inches will remove a major portion of the top soil and most of the feeder roots. A loss of $1/2$ to $1/3$ of these surface roots will kill the tree.

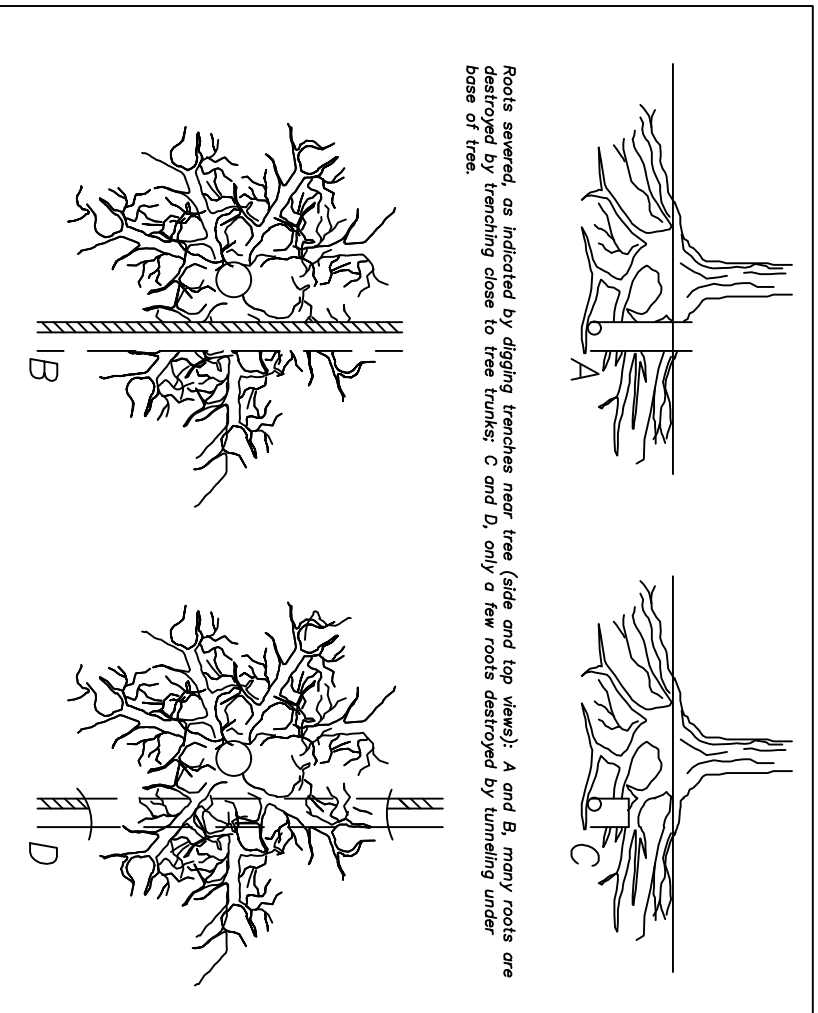
To preserve the tree and avoid root damage when cutting a grade, curve or zig-zag around the roots as much as possible. The area of the dripline should be sufficient. Top soil is an extremely important factor in the survival of a tree.

Roots should be cut cleanly.

Deep grade changes will require a retaining wall. The wall should be porous to allow for aeration. Construction is similar to dry well.

Water frequently until the tree becomes recovered. Severe root damage will require 6 months to a year for the tree to fully recover.

Oaks, maples, bays, and conifers are among the species most susceptible to grade changes.



Roots severed, as indicated by digging trenches near tree (side and top views): A and B, many roots are destroyed by trenching close to tree trunks; C and D, only a few roots destroyed by tunneling under base of tree.

Trees can be protected when excavation for water and sewer lines is performed. Start by considering the location of the trenches. If the trenches cannot be routed around the trees and outside the dripline, the next best thing is to tunnel under them.

Power-driven soil augers are often used for this purpose. Tunneling under the trees has been shown to minimize root kill. Tunneling should be offset to one side of the trunk to prevent damage to the main tap roots.

TREE PROTECTION TYPICAL DETAILS

DRAWING NO. **TD-16**

SHEET NO. 6 OF 7

REVISION DATE:

10/17

**TRANSPORTATION
TECHNICAL
MANUAL**



**Hillsborough
County Florida**