



Benefits of the Urban Forest and Caring for Urban Trees



Image Source: DiGiacomo Group

Presented by:

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Topics



- I. Tree Benefits
- II. New Trees (selecting and installing)
- III. Care for Existing Trees (pruning for resiliency)



Image Source: City of Doral





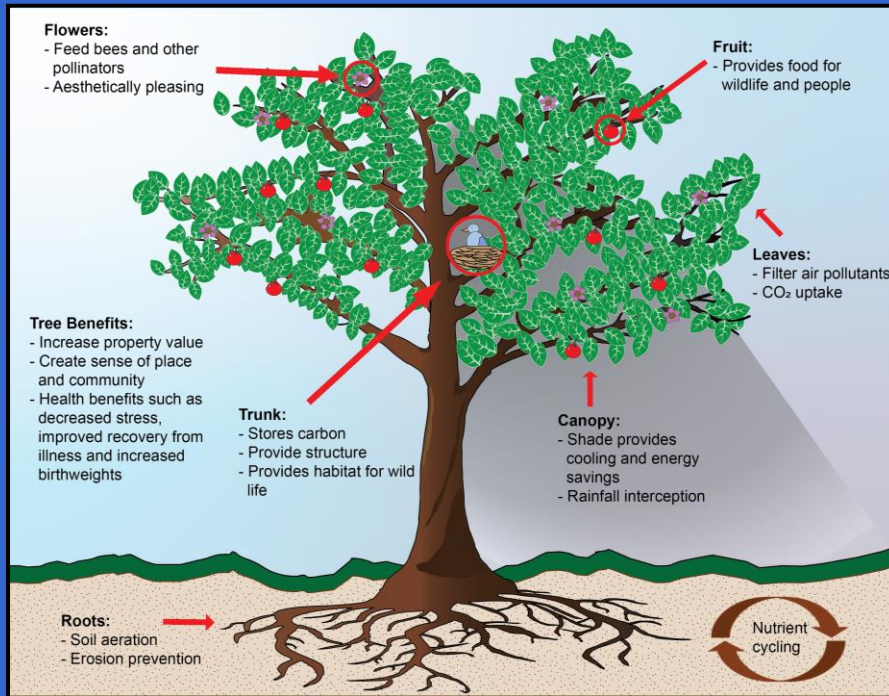
I. Tree Benefits



- Human Health
- Ecosystem Services and Financial Benefits



Image Source: University of Oxford



Source – E Sciences Custom Graphics (Jen Savaro)



Image Source: ResearchGate





I. Tree Benefits – Human Health



Produce Oxygen

Reduce Urban Crime

Enhance Learning and Social Skills in Children

Clean the air
(reduced asthma rates)

Provide Cooling through Shade and Evapotranspiration

**Decrease Mental Stress/
Boost Mood**

Muffle Urban Noise

Help Reduce Skin Cancer

Foster Sense of Community

Tree-Lined Streets Encourage Careful Driving

Provide Healthy Foods

**Reduce Heat Stroke/
Heat Exhaustion**

**Encourage Walking,
Recreation**

Promote Healing
(patients with views of trees heal faster)

Image Source: Wikimedia Commons





I. Tree Benefits – Ecosystem Services and Financial Benefits



\$ - Combat Urban Heat Island Affect Climate Change Impacts

- shade
- evapotranspiration
- CO2 uptake (source of problem)

\$ - Increased Property Values (up to 15%)

\$ - Pollutant Removal

- nitrogen compounds
- sulphur compounds
- particulate matter

\$ - Increased Business Traffic

\$ - Stormwater Management

- rainwater capture
- nutrient uptake
- reduced erosion

\$ - Root Systems Improve Soil

- nutrient cycling
- water infiltration
- soil aeration

\$ - Create Economic Opportunities

- fruit sales from local orchards
- increased jobs in landscape/tree care
- vocational training for youth interested in green industry

\$ - Aquifer Recharge (maintains water supply)

\$ - Building Energy Savings

- shade
- temperature control
- increased roof lifespan

Provide Wildlife Habitat

Image Source: Blanca Commercial Real Estate





I. Tree Benefits – Summary

- Trees provide many vital benefits
- Tree benefits improve with age
- Need to properly install and care for trees to maximize lifespans



Image Source: City of Doral





II. New Trees (selecting - installing)



- Species Selection
- Quality of Material
- Tree Size, Location
- Installation Guidelines



Image Source: Treeworld Wholesale



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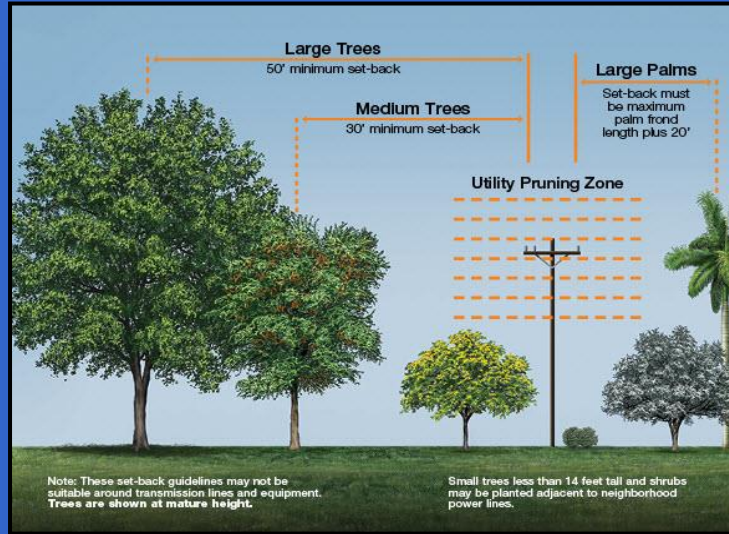


Image Source: FPL

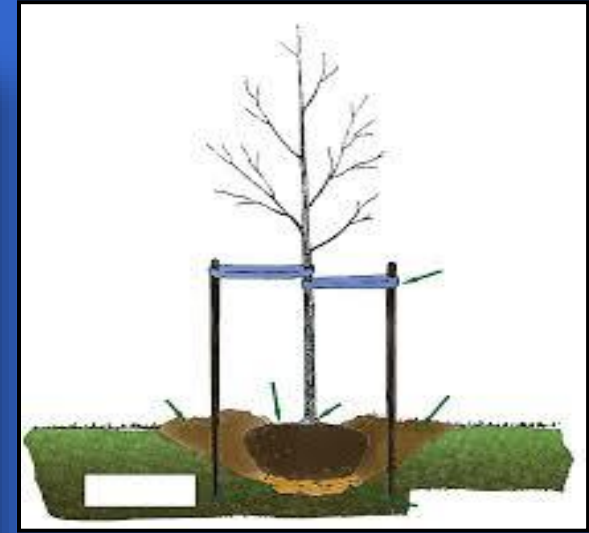


Image Source: TreesAreGood



II. New Trees – Species Selection



- Native vs. Non-Native
- Wind, Drought Tolerance
- Hardwoods vs. Palms

Dahoon holly



Image Source: Pinetrest

Brazilian pepper



Image Source: naplesnews.com

Gumbo limbo



Image Source: commons.Wikimedia.org

Pink tabebuia



Image Source: south-florida-plant-guide

Live oak



Image Source: ar.pinetrest.com

Christmas palm



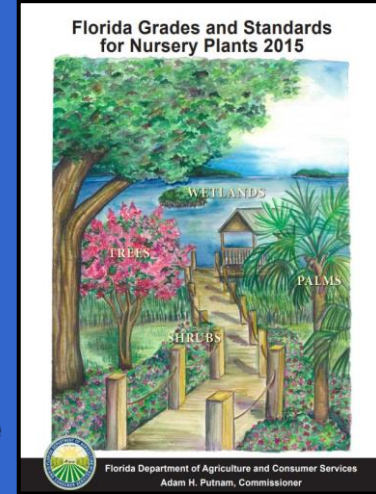
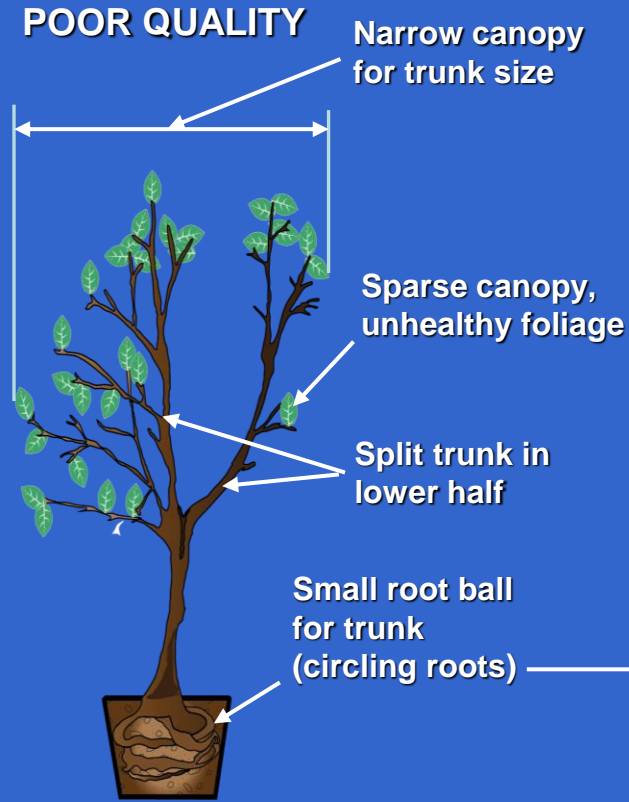
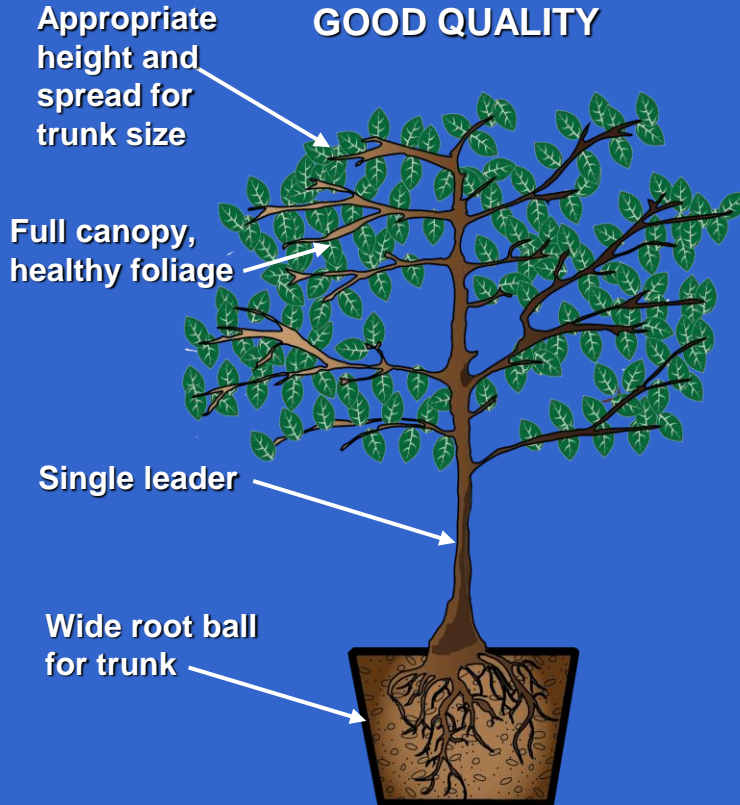
Image Source: technupower.com



II. New Trees – Quality of Material



- FL Grades and Standards (FDACS)



Source – E Sciences Custom Graphics (Jen Savaro)

“Grades and Standards” document provides guidance to select quality trees

Image Source UF-IFAS





II. New Trees – Tree Size, Location



- Evaluate Planting Location
 - Clearance from structure
 - Space for canopy, roots
 - Avoid overhead utilities
 - Avoid belowground utilities
 - “Right Tree, Right Place”



Image Source: Laidback Gardener

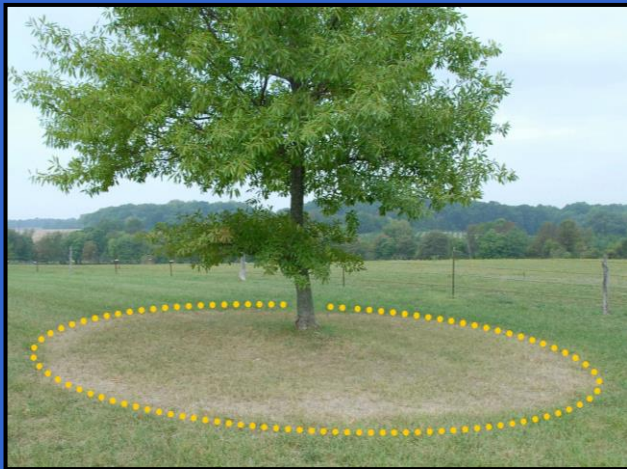


Image Source: The Natural History Log



Image Source: gibneyCE.com



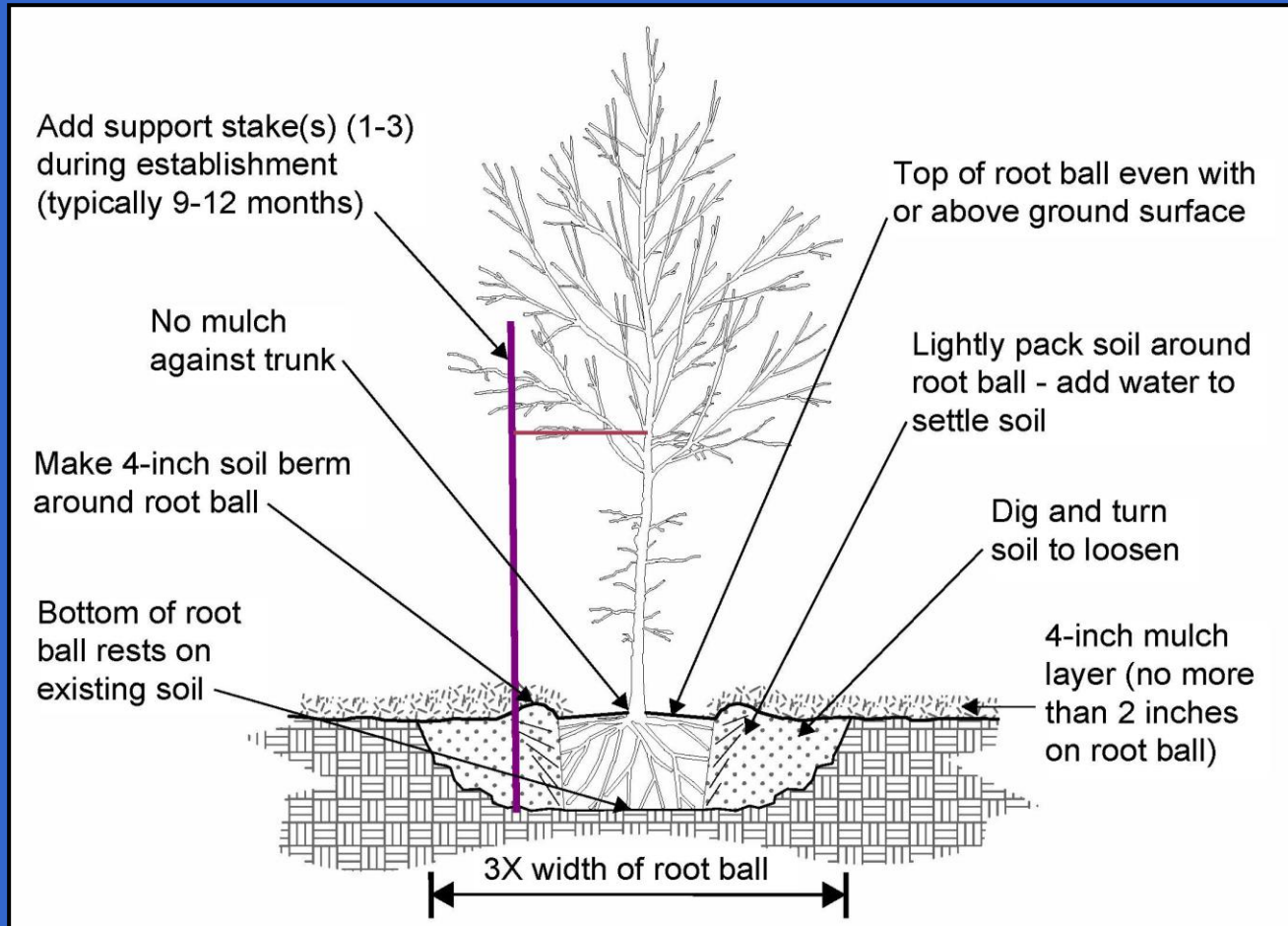
Image Source: FUFC





II. New Trees – Installation

• Initial Installation



Base Image Source: UF-IFAS (modified text)

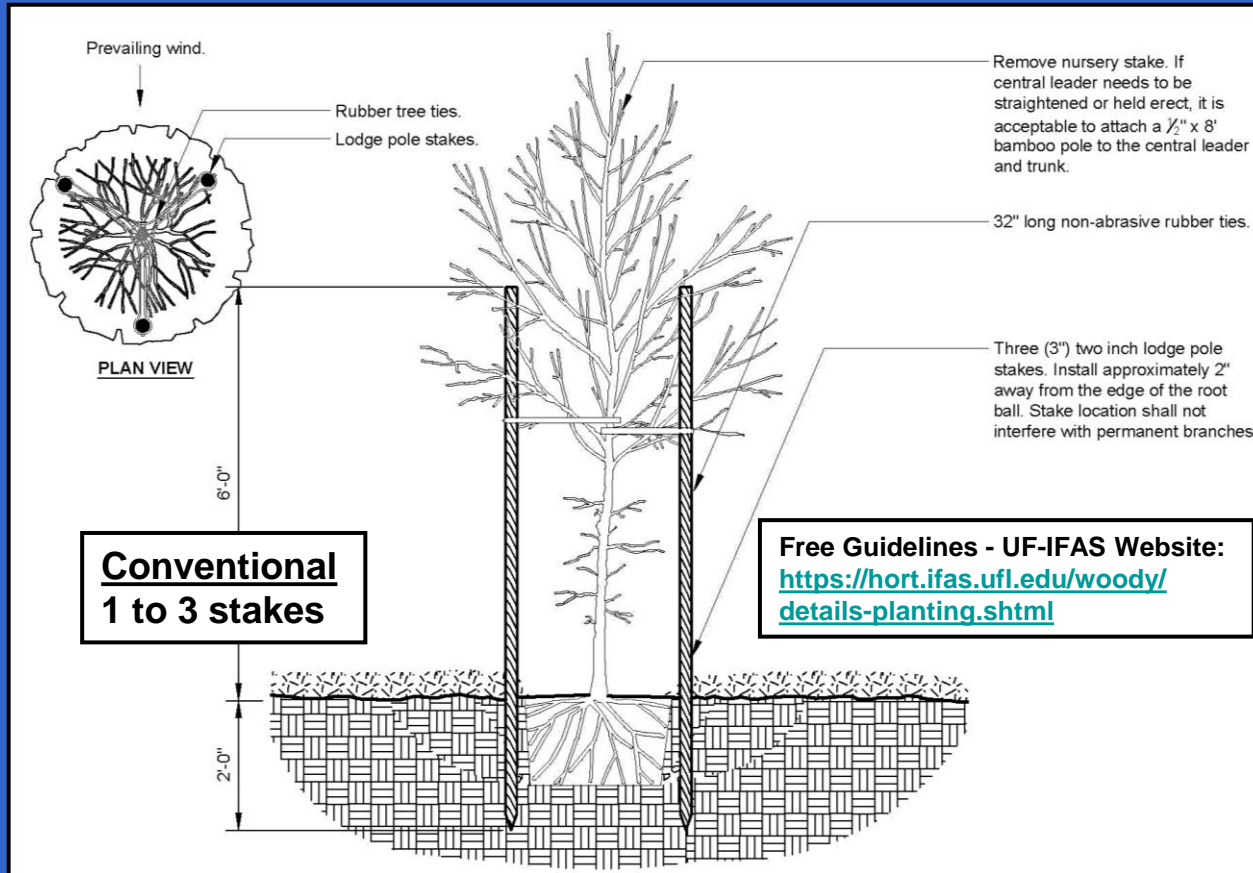




II. New Trees – Installation



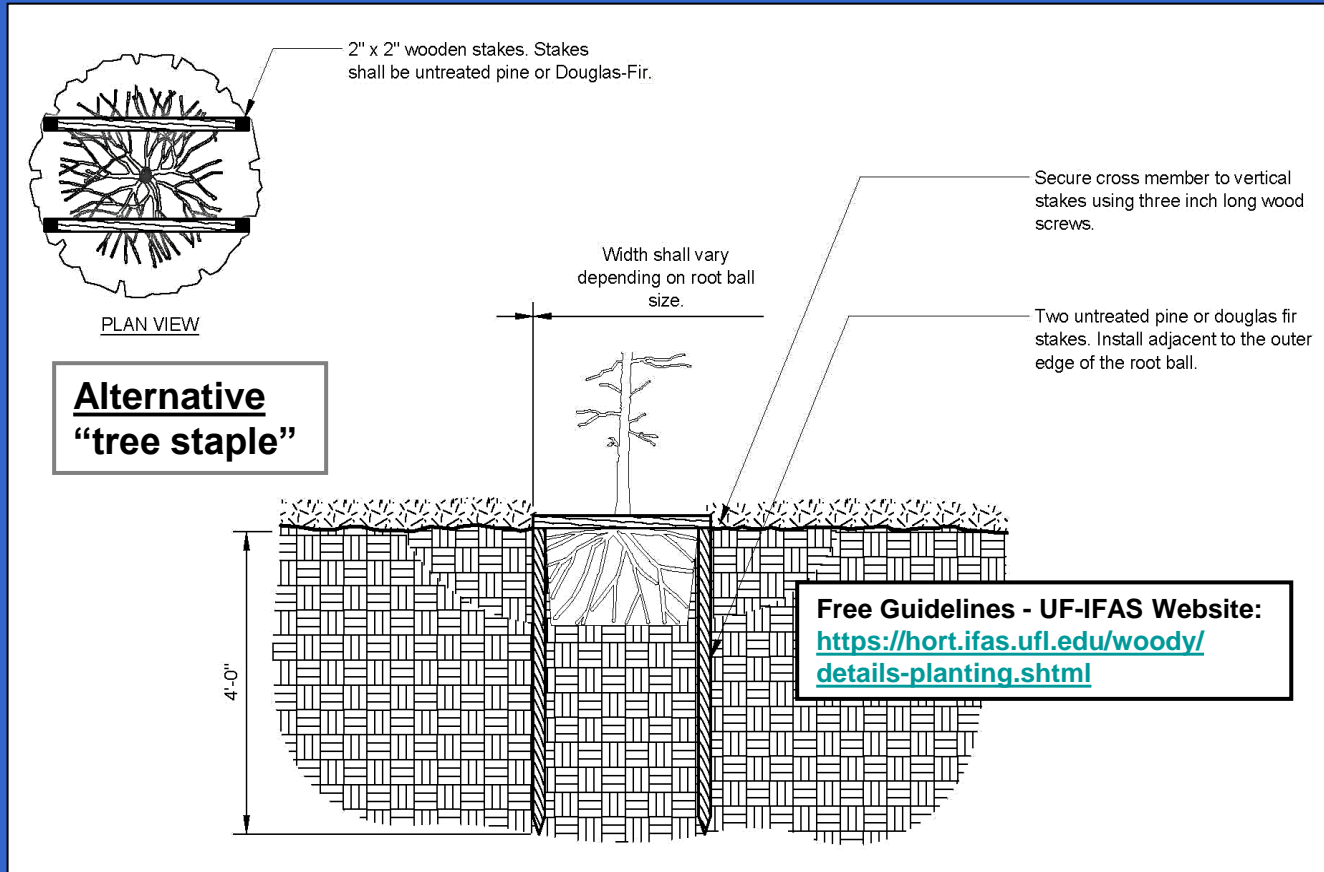
- **Tree Support**
 - **Staking – up to one year**





II. New Trees – Installation

- **Tree Support**
 - Staking – up to one year





II. New Trees – Installation



- **Watering**
 - Most vital ingredient to success!

Size of Tree	Watering for Vitality
< 2-inch trunk diameter	Daily for two weeks Every other day for two months Weekly until established
2 - 4-inch trunk diameter	Daily for one month Every other day for three months Weekly until established
> 4-inch trunk diameter	Daily for six weeks Every other day for five months Weekly until established
Table notes: <ol style="list-style-type: none">1. Apply two to three gallons per inch trunk diameter to the root ball surface.2. Establishment takes three months per inch trunk caliper.	

Source: Florida Grades and Standards for Nursery Plants (2015)



Image Source: Gardeners.com



Image Source: Video Blocks

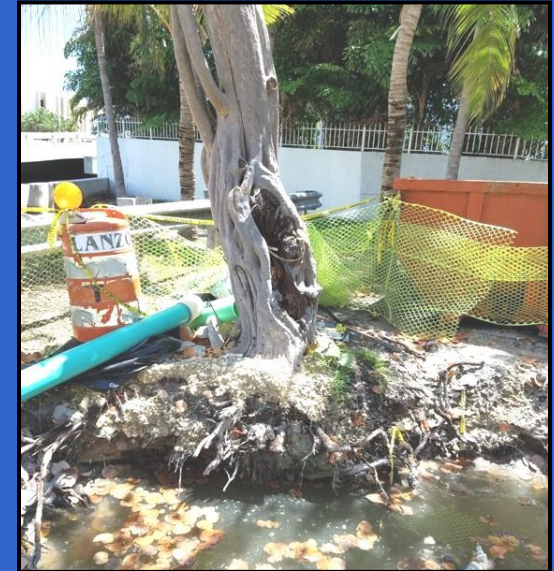




III. Care for Existing Trees



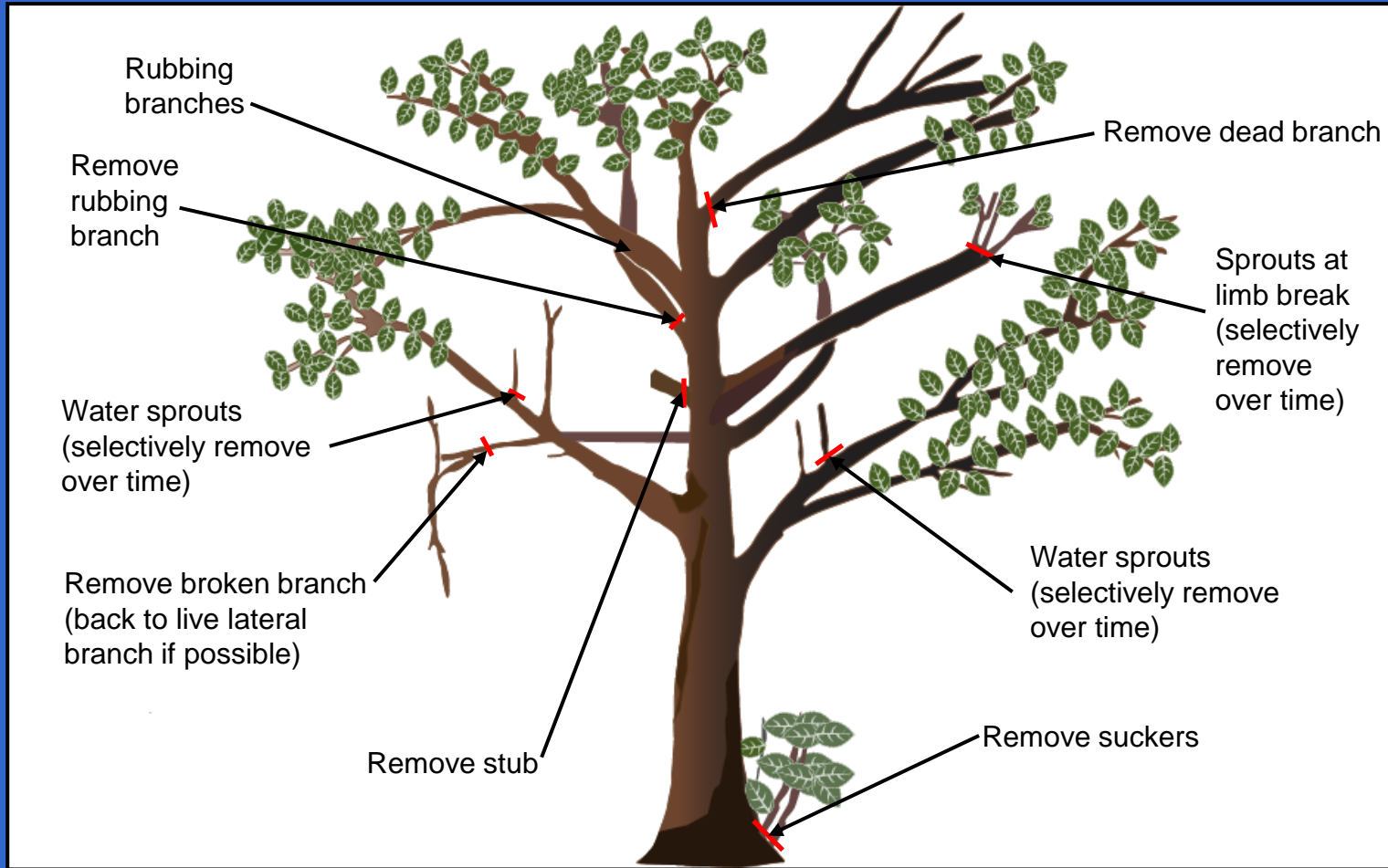
- **Remove Dead or Hazardous Trees**
 - Extended defoliation (not seasonal)
 - Major canopy loss (limb loss)
 - Major trunk damage with decay
 - Major root damage (close to tree)
 - If unsure, consult an ISA Arborist





III. Care for Existing Trees

• Hazard Removal, Storm Restoration



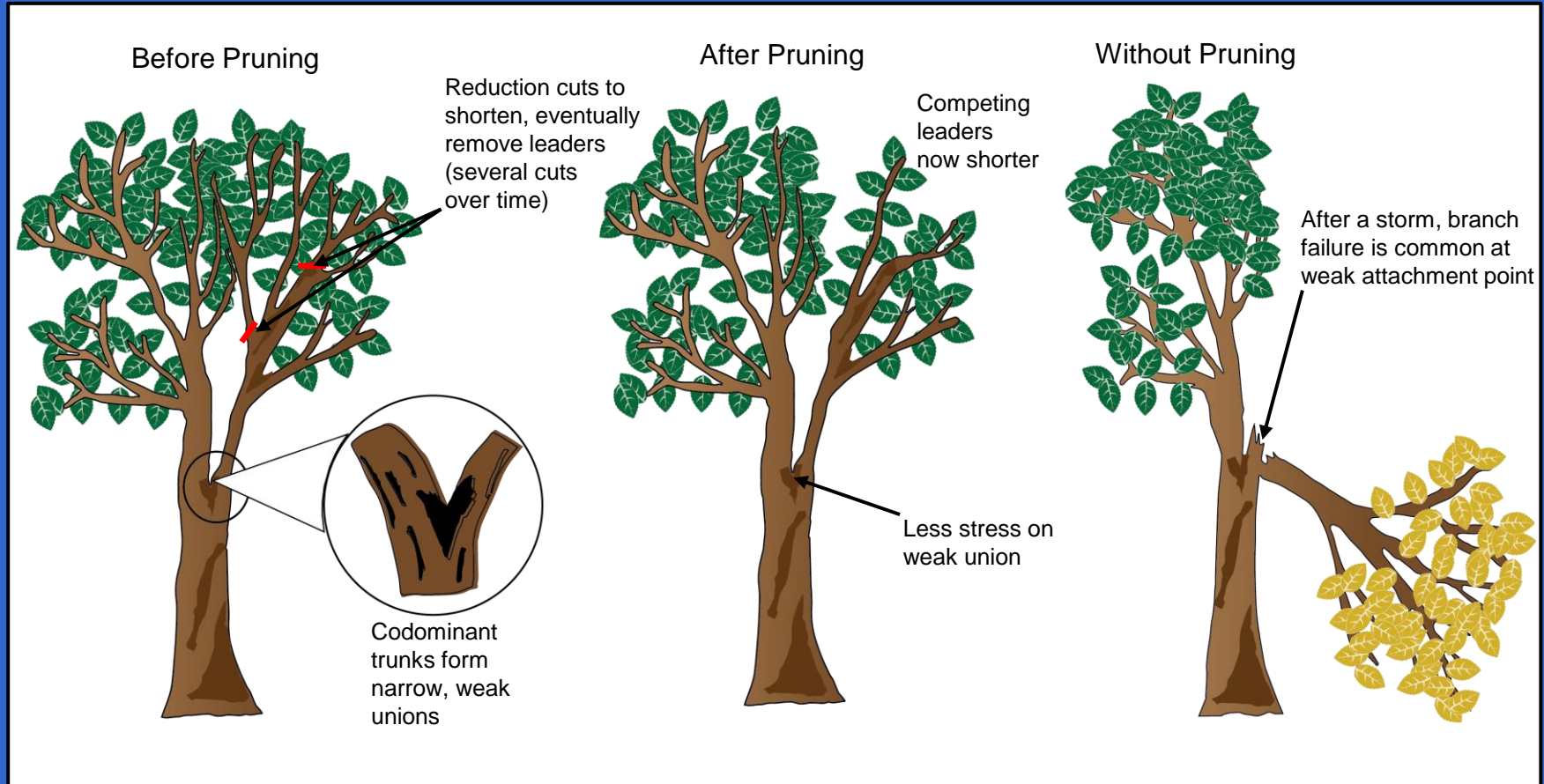
Source – E Sciences Custom Graphics (Jen Savaro)





III. Care for Existing Trees

• Structural Pruning – Codominant Leaders



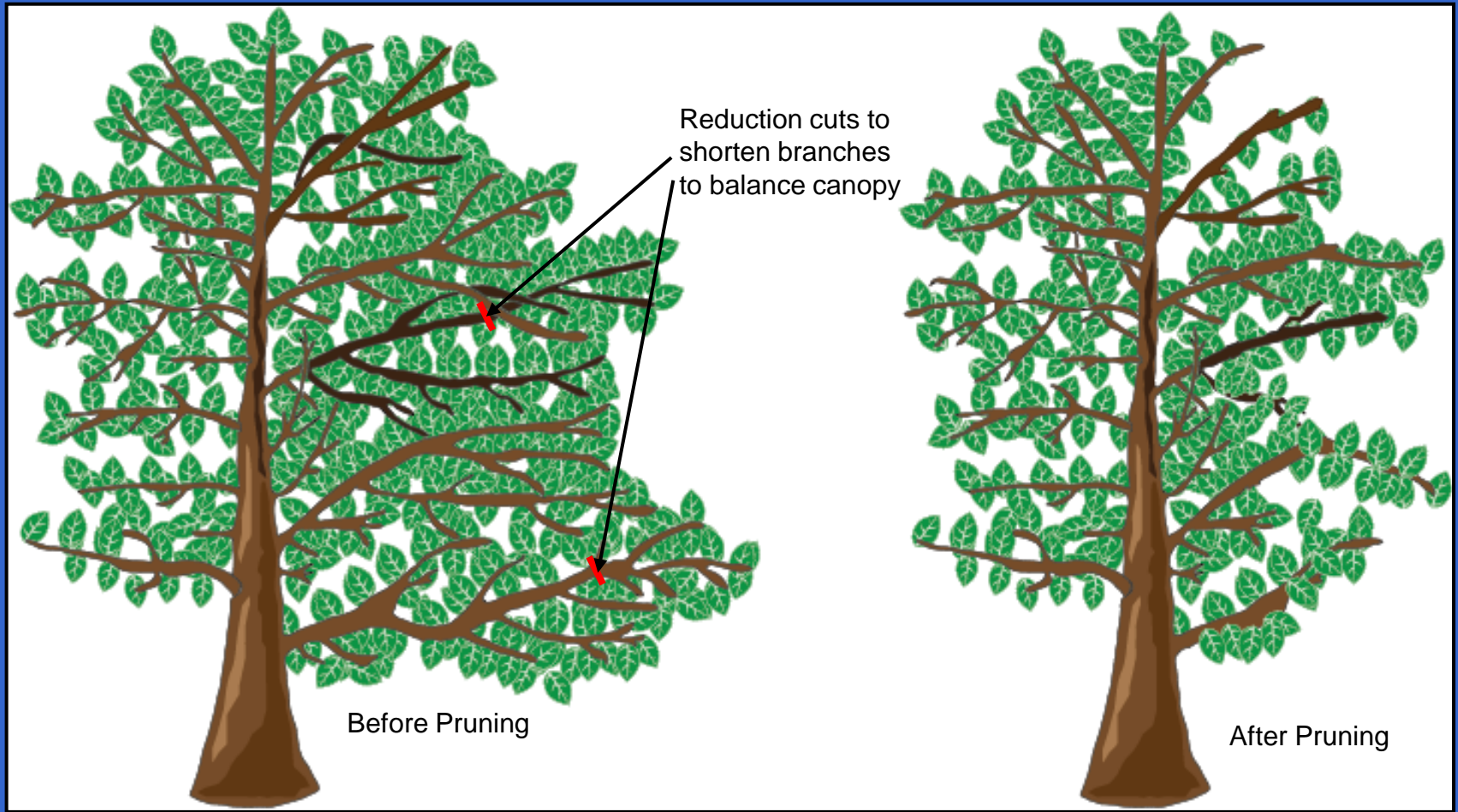
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III. Care for Existing Trees

- Structural Pruning – Lopsided Canopy



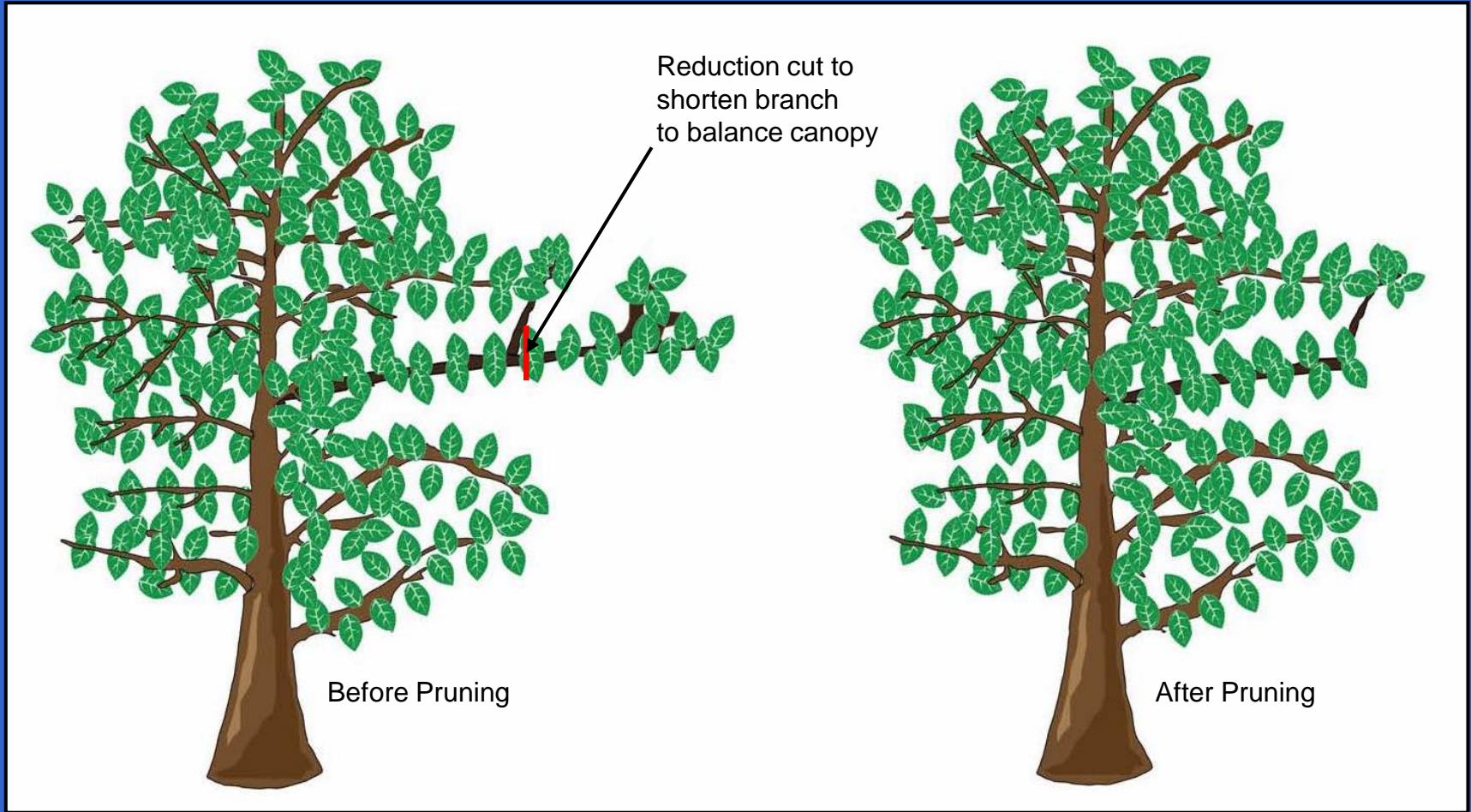
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III. Care for Existing Trees

- Structural Pruning – Overextended Limb



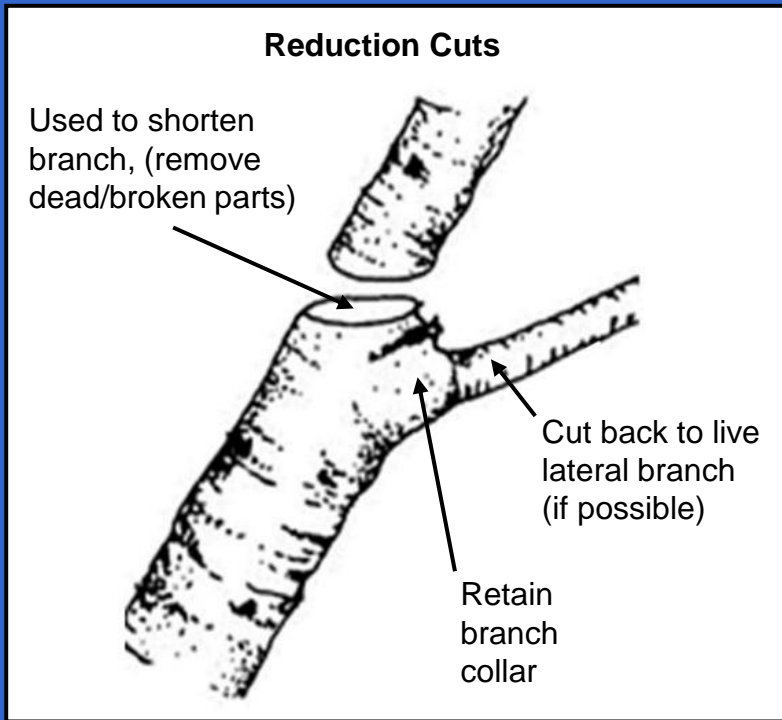
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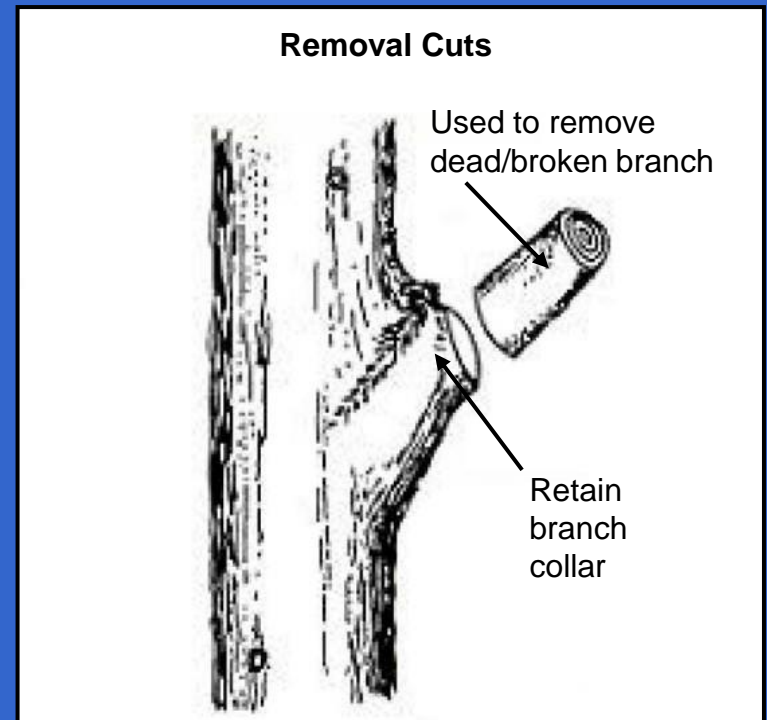


III. Care for Existing Trees

- Proper Pruning Cuts
 - Reduction cut – shorten back to lateral branch
 - Removal cut – cut back to trunk
 - No flush cuts – always retain branch collar



Base Image Source: UF-IFAS (modified text)



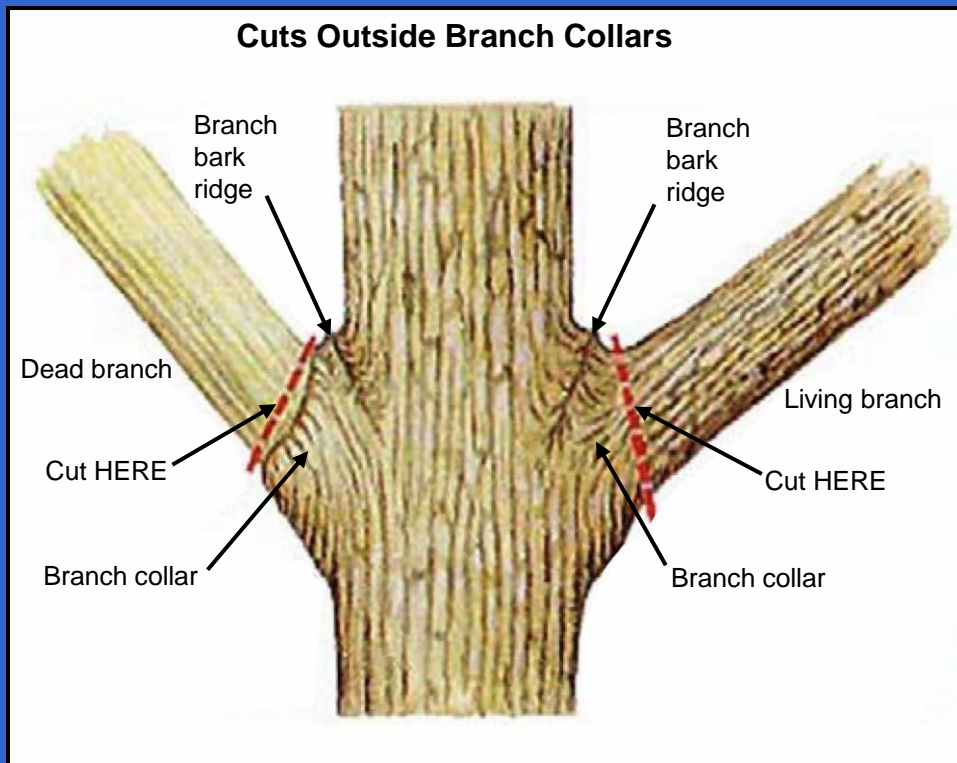
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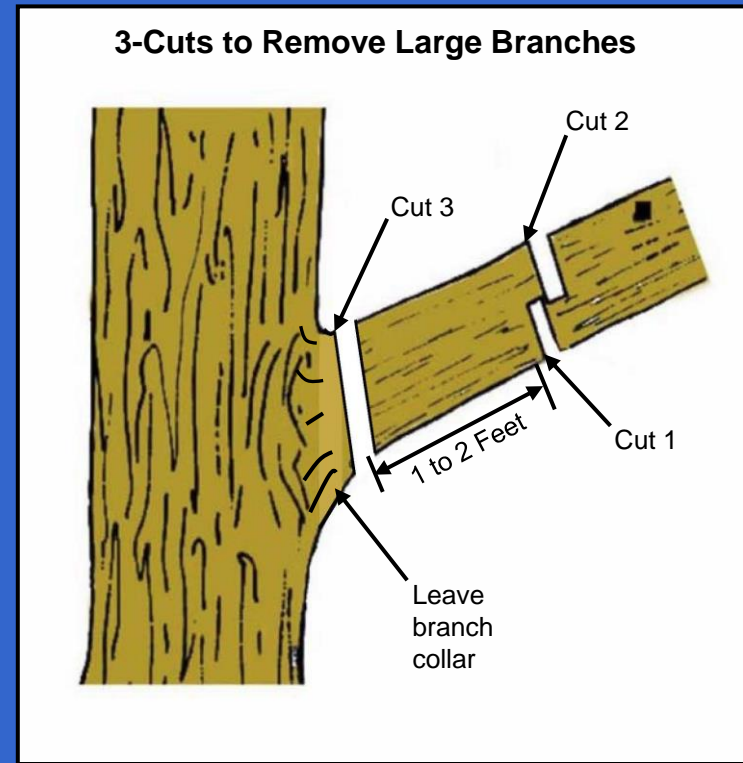


III. Care for Existing Trees

- Proper Pruning Cuts
 - Close up of branch collars
 - Use 3-cuts to remove branches 4" or larger



Base Image Source: Texas A&M Agrilife (modified text)



Base Image Source: PlantsGalore.com (modified text)





III. Care for Existing Trees

- Options for Tree Pruning
 - Performed by ISA Certified Arborist
 - Performed by non-arborist with proper guidance
 - All work should be done properly, safely



Image Source: Affordable Tree Service



Image Source: acerlandscapeservices.com

