Managing Mature Trees

- West Davis Street in Burlington is lined with willow oak trees planted ~80 years ago.
- One tree fell over in a storm, so the City looked at management options.
- 3 trees were removed, and 35 were reduced by specified pruning methods.
- 3 years later, 34 of those trees are doing well. No pruning is needed in the near future.

- Pruning retained much of the trees' volume and benefits.

Typical curb-tree interaction

The flare spreads over the curb, and replaces it.

Tire damage is scarred over; compartmentalized

New root growth replaces the old.

Root damage during concrete replacement is detrimental to tree health and structure. Alternative solutions avoid this damage.

Any damage should be viewed in context of the entire flare. Trees can tolerate the loss of some structural integrity, more when the load is reduced.

Small cuts at the periphery leave a more symmetrical and stable asset.

Structure at the base was weakened, so a heavier reduction was specified.

Cuts >10 cm are too large and too much is removed. The tree's natural form gives way to heavy sprouting. Over time, the tree recovers.

3 years after removal of 10%-15% of the crown, 10’-15’. This looks like a sustainable solution.

Buttress roots spread on both sides of the damaged area, compensating for loss of strength.

- Small cuts on the outside stimulates new growth on the inside.
- Reduction pruning causes trees to ‘grow downward’.

Limbs sprawling over road were reduced to restore symmetry and stability. The tree's response over 3 years, generating interior growth, indicates it will not need more reduction in the foreseeable future.

- The flare gets broader, adding stability.
- If the roots are not damaged by work on curbs and sidewalks, support is retained.
- If the load in the crown is reduced, the tree's useful life is extended indefinitely.

- A typical tree on this street: 90 feet tall and 90 years old, with a potential 90 or more left to go.
- Lower branches are retained. The trunk gets thicker, and the center of gravity is lowered by new interior growth.

- The cathedral-like quality of the tree canopy is retained when sprawl is managed.

- 3 years after the top was reduced 10’-15’, the natural form is restored.
- The base of the tree was not weakened.
- Limbs over the road were left to connect with the tree across the street.
- Continuous canopy is the goal.

- “Elephant Ear” bulges indicate a codominant fork with included bark.
- Pruning lessens strain on this fork and resists splitting.
- Cabling is another option.

Parallel branches weaken structure. Pruning mitigates this weakness.

Reduction cuts are visible in the top of the tree. New growth is visible in the interior.

- Trees naturally spread into open areas over roads and houses.
- Routine pruning limits sprawl and risk of failure.
- Long-term clearance is gained by a small input of resources.

Mature Tree Management by Specified Reduction Pruning:

- Causes no loss to property values, or disruption to neighborhoods
- Costs far less than tree removal, and does not rely on unreliable replacement trees
- Retains all of the benefits of the mature tree canopy over the community