

Visual Tree Assessment

Biological

Reduced Primary Growth

- Twigs

Decline Symptoms

- Thin Crown
- Small Foliage
- Chlorotic Foliage
- Branch Dieback

Secondary Pests

- Insects
- Diseases

Poor Wound Closure

Old Branches Subsiding

Sap Rot Decay Fungi

Mechanical

Breakage

Butt Rott

- Decay Indicators

Trunk Defects

- Decay Indicators
- Cracks
- Adaptive Growth

Scaffold-Trunk Attachment

- V-shaped Crotches
- Included Bark
- Decay
- Partial Failure

Scaffold Branches

- Decay Indicators
- Poor Architecture
- Species-related Defects
- Crotch Angles

Branches

- Decay Indicators
- Lions Tailing
- Poor Form
- Crotch Angles

Windthrow

Root Plate Defects

- Previous Site Failures
- Partial Failures
- Species Site Incompatibilities
- Root Cutting

Buttress Root Defects

- Root Cutting
- Decay Indicators
- Root Rot – Previous Failures
- Fill or Grade Changes
- Trenching
- Partial Failure

Exposure

- Large Sail
- Long Lever Arm
- High Exposure
- New Exposure

If Cause for Concern: Detailed Physical Inspection

Load Assessment Flow Chart

Assess Potential Force

- Wind, Snow, Ice
- Surface Area of Crown or Crown Section
- Center of Mass and Length of Lever Arm

Assess Exposure

- Surrounding Vegetation and other Obstructions
- Direction of Prevailing Winds
- Presence of Recently Altered Exposure

Assess Potential for Mass Damping

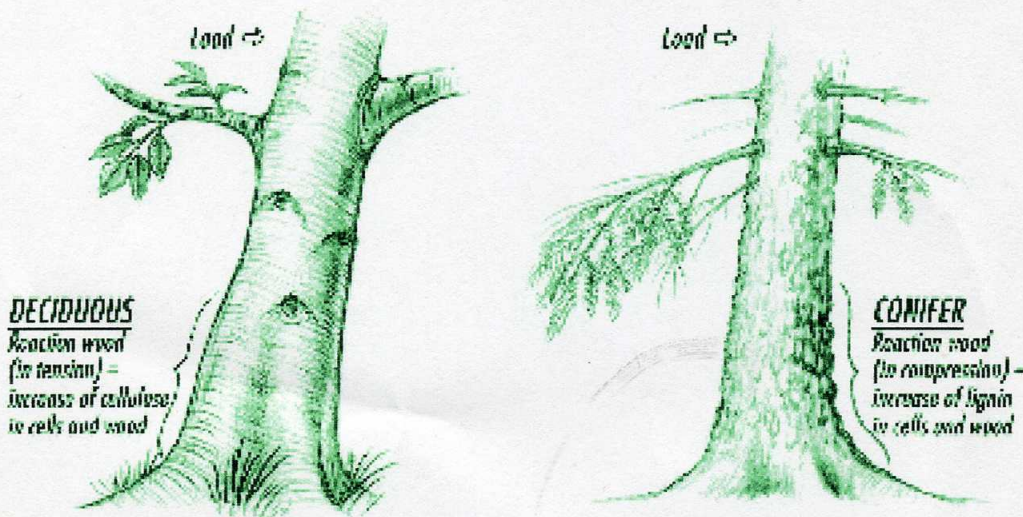
- Tree or Limb Form (Excurrent v. Decurrent)
- Presence/Length of Lateral Branches

Determine Where Load will be Applied

- Stem Cross-sectional Area where Force will be Concentrated
- Presence of Stress Notches
- Root Plate or Root Defects

Determine Strength of Materials

- Wood Strength of Species
- Presence of Decay or other Defects



Deciduous trees react to load or loss of wood strength due to decay by adaptive growth on the tension side of the load by adding more cellulose to wood. Coniferous trees do the opposite and react on the compression side of the load by adding more lignin to wood.