

Madison Parks Commission Meeting

Roald Gundersen, AIA, Founder



Start Seeing Trees





Driftless Forest
134 acres of sustainable managed forest



Round Timbers are Renewable

Forest cullings make use of an abundant resource ...

... which is replenished in 20-30 years as opposed to 40-80 years for conventionally harvested timber.

Create jobs and income from forests

Use waste from managed forests

Create an extra crop to which adds value to forests

Restore forest health

Tree Peeling Process

USDA Forest Products Lab: Testing Strength of “Y” Branches

SPECIMEN:

S - 4

MINIMUM ELLIPTICAL AXIS

| | | | |
|----|--|---|-------|
| A) | TRUNK | : | 7.95 |
| B) | SMALL BRANCH | : | 4.45 |
| C) | LARGE BRANCH | : | 4.81 |
| D) | SLENDerness RATIO (TOTAL LENGTH OVER A) | : | 12.08 |

DIST. BETWEEN BRANCHES

| | | | |
|----|--|---|-------|
| E) | TOTAL | : | 28.82 |
| F) | SMALL BRANCH (DISTANCE TO NEUTRAL AXIS) | : | 16.87 |
| G) | LARGE BRANCH (DISTANCE TO NEUTRAL AXIS) | : | 11.85 |
| H) | BRANCH ANGLE | : | 30° |
| I) | OUT OF PLANE GLOBAL SPHERICAL RADIUS | : | |
| | DISTANCE OF HIGHEST POINT FROM STEM END | : | N/A |
| | HEIGHT OF HIGHEST POINT FROM FLOOR | : | N/A |

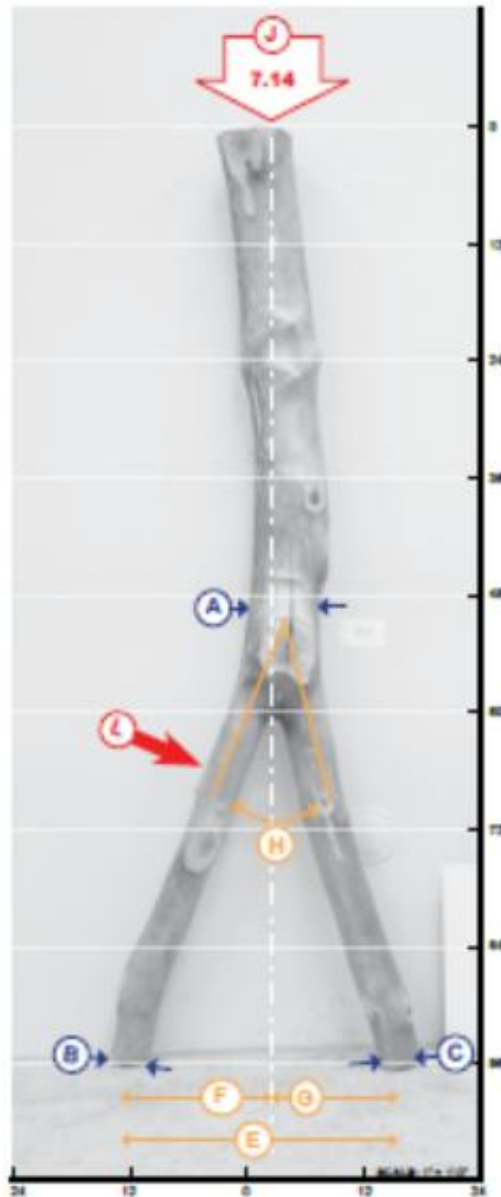
FAILURE CAPACITY

| | | | |
|----|---|---|-------|
| J) | LOAD (kips) | : | 7.14 |
| L) | FAILURE LOCATION (DIST. FROM STEM END) | : | 65 |
| M) | DEFORMATION | : | 1.14 |
| | TIME (seconds) | : | 137.3 |

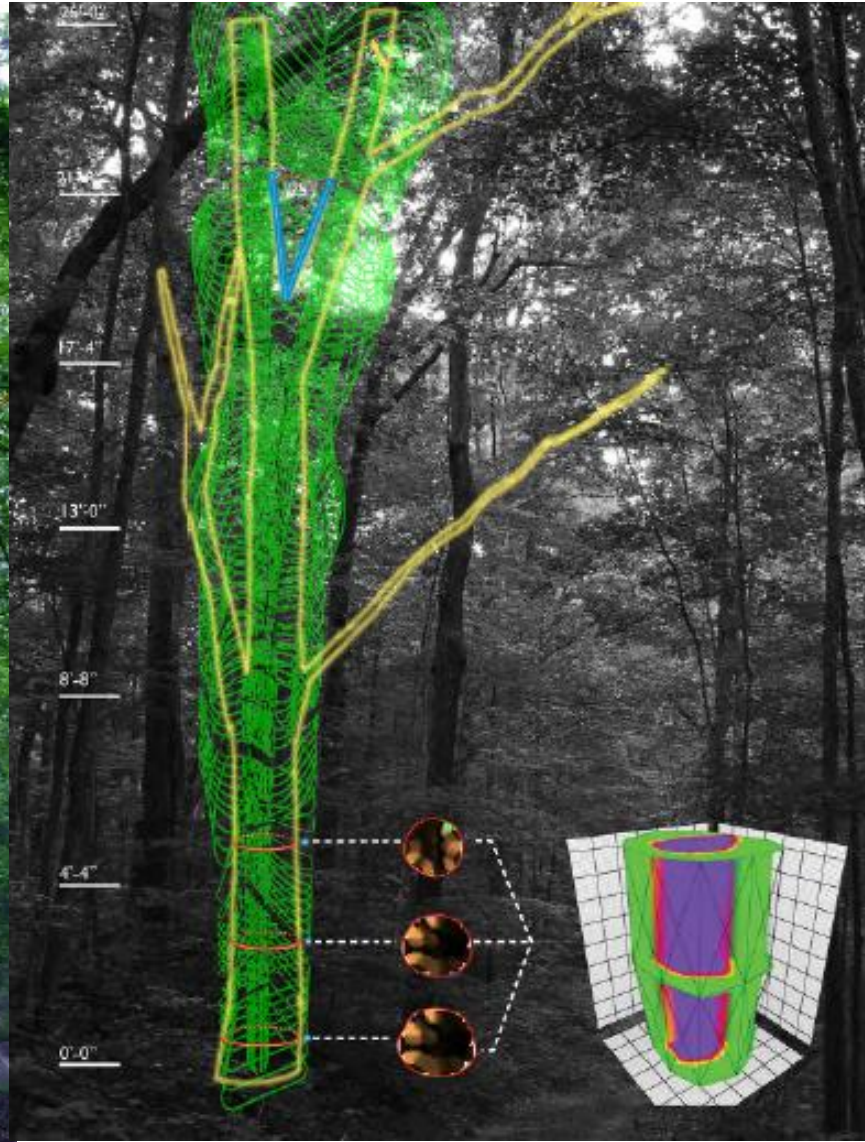
FAILURE TYPE : **OPB,N**

| | | |
|------|---|------------------------------------|
| OPB | = | Out of Plane Bending Failure |
| OPLB | = | Out of Plane Leg Bending Failure |
| K | = | Knit at Failure Location |
| CB | = | Failure in Compression and Bending |
| S | = | Small (Larger) Branch Failure |
| L | = | Large (Smaller) Branch Failure |
| T | = | Trunk Failure |
| B | = | Buckling Failure |
| BR | = | Twisted Branch Failure |

(ALL UNITS INCHES UNLESS OTHERWISE NOTED)



Digitally Engineering the Tree: Canopy Database



Action-to-date with City

- February 2014-Meeting with Charlie Romines (Parks Operations Manager)
 - Re: opportunities to use urban ash
- June 2014-Meeting with Charlie Romines
 - Re: Potential of partnering with city on urban ash project
- July-Sept. 2014-Site Survey of Warner, Odana Hills Golf Course, Yahara Hills Golf Course, and Tenney Park
- July-Sept. 2014-Emails/Calls with Dean Kahl (Forestry Operations Supervisor), Tom Skaife (Interim Parks Operations Manager), and Marla Eddy (City Forester)
- October 2014-Meeting with two Certified Arborist Contractors for City of Madison (Stephenson Tree Care and Hooper Corp.)
- December 2014-Meeting with Charlie Romines
 - Re: using urban ash in Galaxie Development



Tenney Park: 14 Ash Trees





Festival Foods in Galaxie
140 Tons of carbon stored
200-300 Tons of carbon offset from using steel

Questions?

