Code/Ordinance Review - Preliminary Comments

For the preliminary comments I am providing, I am simply looking at technical arboriculture and forestry language, definitions, current best management practices & standards, etc. to make sure things are current and relevant. I sometimes use words like "should" but this entire document is simply suggestions and my opinion.

Chapter 410: Tree Preservation and Restoration Requirements

Definitions

- Technically, **caliper** and **dbh** are two different means of measurement. Caliper is a measurement of B&B trees in the nursery (taken at 6" for trees 6" and smaller, and taken at 12" for trees greater than 6"). DBH is measured at 4.5' above ground level (different means of measuring when there are multiple stems, codominant stems, bulges, etc.). I would separate each term into their own definition and update other definitions accordingly to ensure the right word is used (i.e. the **Grove** definition uses "caliper" when "dbh" should be used).
- **Critical Root Zone** - outdated definition. Consider updating according to ISA Best Management Practices - "*area of soil around a tree where the minimum amount of roots considered critical to the structural stability or health of the tree are located*".

Tree Manual

Definitions

- **Caliper** and **dbh** should be separate terms - caliper used when discussing new planting and dbh used when discussing standing trees.
- **Grand Tree** - this needs to be overhauled. We need to differentiate between forest trees and urban/residential/commercial trees. The evergreen minimum of 20" dbh is rather large, the small tree minimum of 12" dbh is way too large. I like the 24" dbh minimum for hardwoods in an urban setting but not necessarily for a forested setting. All other criteria in the definition should be removed and replaced, in my opinion - life expectancy is subjective, a solid truck with no extensive decay should not be considered, and the dead limbs item needs to be specified (there are always dead limbs in the lower canopies of forest trees). A professional arborist should be able to classify a *Grand Tree* by simply knowing a diameter minimum and assessing the tree's condition (likely *Fair* or better). A large hardwood could have dead limbs and decay in the stem and still be a *Grand Tree*... This will need to be thought of in further detail but for the sake of time, these are my thoughts for now.
- **Grand Tree Stands** - This definition will need to be discussed. Similar to **Grand Trees**, there is a lot of ambiguity and open-ended interpretation here. The first criteria for "exceptional" quality is *a relatively mature even-aged stand* - a mature even-aged stand is not a desirable feature of a

forest in regards to sustainability. As a forester, I think of a *Grand Tree Stand* being one that is uneven-aged (3 to 4 age classes), a native species composition of valuable hardwoods (whether the value is from timber, hunting (recreation), aesthetics, etc.), few invasives, a fully stocked stand according to a hardwood stocking chart (which would be determined by carrying out the 10BAF survey), and evidence of past management (if needed). We may also want to consider differentiating forest grand tree stands and those that may be located on smaller, residential properties. A tree's diameter size of 24" or greater dbh in a forest should not be the deciding factor of a *Grand Tree* - a 20" white oak with a nice log(s) and low competition is a *Grand Tree* in my opinion. A woodland patch on a residential property - I'd be more inclined in using diameter size as a deciding factor when categorizing a *Grand Tree*. This can be discussed quite a bit...

- The definition page is not complete (i.e. DBH reads "see caliper" but there is no definition for caliper). It says to refer to the code for other definitions.

<u>Tree Canopy Requirements</u>

- Point 2 - "*the value of trees removed will be determined based on the International Society of Arboriculture's tree valuation formula*". The cost or value of trees removed should be determined by the arborist during the TPP data collection and recorded on the data table - the cost or value should be determined by the *Guide for Plant Appraisal, 10th Edition,* by the *Council of Tree & Landscape Appraisers* (which is published by the ISA). I would specifically spell out the "10th Edition" and update accordingly if a new edition is released (which it will not be for a long time). Having a dollar amount for the trees to be protected on the TPP will help spell out the amount of "additional bond" as is outlined in *Chapter 10, Section 410.070 Restoration of Trees - Bond.* Other cities require appraisals of each tree for bonding and the large dollar amounts that are spelled out on the TPPs will make the developers think twice about diverting from the plan.

<u>Construction Standards for Field Practice</u>

- Point 4 - Root Pruning. This section mentions recommended equipment for root pruning. Add "AirSpade" or other air tools as recommended equipment.
- Point 5 - Tunneling. Remove the Arbor Day reference and add ISA Best Management Practices, Managing Trees During Construction (latest edition). We can update the table based on this literature (which is still very similar).
- Where needed, let's add ISA BMPs, "Managing Trees During Construction" and "Root Management" and ANSI A300 "Part 5: Management of Trees and Shrubs During Site Planning, Site Development, and Construction" and "Part 8: Root Management". We can discuss these later in greater detail.

<u>Tree Stand Delineation</u>

- I think *Process 1* is spelled out great. Who reviews this when submitted? Are the TSDs that come in actually contain all of this information required in the Manual?

- *Process 2* - to be used on land 5 acres or less. This needs to be discussed and updated. I think mapping all trees 12" dbh and greater is unnecessary and would be very time consuming - a TSD is general so inventorying all trees 12" and greater is above and beyond the scope of a TSD.
    - Step 2 - Rating Chart - needs to be updated per current tree inventory standards and best management practices.

Final Tree Preservation Plan Checklist

- Point 4 - Consider 8" dbh trees as the minimum. 8" for some species is large and retaining those trees (specifically labeling their CRZs on the site plan) is very beneficial to new development.
- Point 8 - Consider titling it "Post-Construction Maintenance Schedule". This would include pruning, mulching, soil amendments/improvements, plant health care regimen, etc.)
- "Aeration Systems" are mentioned a couple of times. There is no research to defend aeration systems. Installing backfill on top of CRZs of preserved trees should be discouraged. The arborist and developer can work this out.
- Graphics - pages 18 & 19 - these can likely be updated. We would have to find something we can have permission to use (likely through the ISA).

Landscape Plans

- *Checklist for Final Landscape Plans, point 3b - update to ISA BMP Tree Planting* and *ANSI A300 Part 6: Transplanting*.
- *Checklist for Final Landscape Plans, point 3g* - "plant" is misspelled.
- *Checklist for Final Landscape Plans, point 3h* - ANSI Z60.1
- *Checklist for Final Landscape Plans, point 3j* - is a soil sample really a necessary requirement?
- Let's discuss required tree sizes (page 22)
- Updates graphics, page 23-26

Landscape Applications

- Street Trees - consideration should also be given to tree lawn widths (i.e. oaks should not be planted in a 2' tree lawn - sidewalk/root conflicts down the road). Update industry guidelines to reflect BMPs and ANSI (this is a recurring theme everywhere in the document).

Required Bonds

- Update to reflect the *Guide to Plant Appraisal, 10th Ed.* Consider tree appraisals as a requirement for TPPs (and that is part of the tree bond).

Appendix B, Appendix C, and Undesirable Trees for Street Use - these lists need to be updated.

General Comments

Replacing *Grand Trees* - My opinion - I don't think a 1:1 replacement of a Grand Tree removal on a heavily wooded property is appropriate. A few large trees removed in a wooded area would practically be negligible and replacing the trees per the current code is very expensive (and there is no maximum cap on money spent). Appraising removed trees in a woodland would result in a less amount than requiring replacement of B&B trees at 1:1. I'd consider a canopy coverage threshold - if removals reduce the canopy coverage below the threshold, then fines are incurred OR if a Grand Tree is removed with *X* amount of canopy coverage area, a new planting(s) is installed and the ultimate tree canopy (as defined in the Manual) applies. We can discuss this further...

Some municipalities require TPPs on private property when a demolition and/or rebuild, remodel takes place. It looks like the City currently does not have many restrictions on private property. It looks like a TPP is only required when grading takes place? I'm not sure about this...

I would outlaw topping on private property when adjacent property owners can see the damage - perhaps this is a question for the City Attorney.