



To: Ken Roberts, City of Lake Elmo Planning Director
From: Lucius Jonett, Wenck Landscape Architect
Date: September 2, 2020
Subject: City of Lake Elmo Landscape Inspection Workshop Memo

1. City Landscape Plan Review and Approval

a. Tree Preservation (City Ordinance)

- i. Removal of up to 30% of existing, significant, tree caliper inches allowed for existing trees onsite in each category: common, coniferous, and hardwood.
 - Hardwood deciduous trees are Birch, Cherry, Hickory, Ironwood, Hard Maples, Oak and Walnut
 - Common trees are Ash, Aspen, Basswood, Catalpa, Elm, Hackberry, Locust, Poplar, Silver Maple, Willow, and any other tree not defined as a hardwood deciduous tree or a coniferous/evergreen tree.
 - ii. Significant trees are designated as:
 - Over 6" DBH (diameter at breast height, approx. 4.5 feet from the base of the trunk) for hardwood deciduous trees
 - Over 19' in height or 8" DBH for coniferous/evergreen trees
 - Over 12" DBH for common trees
 - iii. Removals over the 30% allowance in each category are to be replaced at a rate of:
 - One-fourth (1/4) the diameter inches of common tree species removed.
 - One-half (1/2) the diameter inches of coniferous/evergreen tree species removed.
 - One-half (1/2) the diameter inches of hardwood tree species removed.
 - iv. Wenck review template includes an Excel sheet with all these calculations.
- b. Landscape Plan Requirements to be reviewed and Approved (City Ordinance):
- i. Landscape review only applies to what is required in City ordinance; does not apply to private landscaping, foundation plantings, or irrigation systems. Establishment of stormwater feature vegetation, monitoring stormwater feature function, monitoring erosion control, etc. is not currently defined as part of landscape inspection. Wenck has been including these items in inspections if there are particular concerns raised by staff. City to continue to provide direction on additional inspection items and concerns on a case-by-case determination.
 - ii. Minimum tree requirements:
 - A minimum one (1) tree is proposed for every fifty (50) feet of new street frontage.

- A minimum of five (5) trees are proposed to be planted for every one (1) acre of land that is developed or disturbed by development activity
 - a. For Residential development – replacement trees from tree removals are in addition to landscape required tree counts above.
 - b. For commercial or mixed-use development - replacement trees from tree removals can be included toward landscape required tree counts.
 - At least 25% of the required number of trees shall be deciduous shade trees
 - At least 25% of the required number of trees shall be coniferous trees
 - Up to 15% of the required number of trees may be ornamental tree
 - Wenck review template includes an Excel sheet with a summary of these calculations.
 - Does not include future trees by builders, landowners, or others. Must be included and shown on the approved preliminary plat.
- iii. Landscape Plan Requirements
- Prepared and signed by a landscape architect licensed in the state of Minnesota.
 - All required setbacks not occupied by buildings, parking, paths, or plazas are/need to be landscaped with turf grass, native grass, trees, shrubs, vines, perennial flowering plants
 - New plant material meets minimum size requirements
 - City standard details and notes are required to be included on the plans before the plans will be approved. Available on City website for applicants and contractors to view.
 - Utilities, pavements, property lines, easement lines and grading plan are all shown so we can review for tree placement conflicts.
- iv. Landscape Layout Requirements
- Boulevard Width..... 16-feet (15-feet at cul-de-sacs)
 - Sidewalk width..... 6-feet
 - Topsoil Minimum Depth..... 6-inch
 - Turf Treatment..... Lawn Sod
 - Tree Location without Sidewalk or Trail..... 8-feet back of curb
 - Tree Location with Sidewalk or Trail..... 5-feet back of curb
 - Tree Spacing..... Not Specified in City Ordinance
 - Street Light Location..... 5-feet back of curb
 - No tree conflicts (placed in, on, or too close) to driveways, pavement edges, utilities, easements, and drainage swales
 - a. Code currently reads that trees **should** be 10 feet away from any utilities and driveway or pavement edges. We would like to see this verbiage adjusted to say "**must**" to ensure that all tree plantings will not interfere with infrastructure as they mature.
- v. Interior Parking Lot Landscaping Requirements
- At least 5% of the area of interior parking lots with more than 30 parking spaces is devoted to landscape planting areas.
 - Wenck interprets the intent of this ordinance to help shade and break-up large expanses of parking with some sort of vegetation.

So, we look for planted parking lot islands and plantings around the perimeter of the parking lots.

vi. Perimeter Parking Lot Landscaping Requirements

- A landscaped frontage strip at least five (5) feet wide shall be provided between parking areas and public streets, sidewalks, or paths. If a parking area contains over one hundred (100) spaces, the frontage strip shall be increased to eight (8) feet in width.
 - a. Within the frontage strip, screening shall consist of either a masonry wall, fence, berm, or hedge or combination that forms a screen a minimum of three and one-half (3.5) and a maximum of four (4) feet in height, and not less than fifty percent (50%) opaque on a year-round basis.
 - b. Trees shall be planted at a minimum of one deciduous tree per fifty (50) linear feet within the frontage strip.
- Alongside and rear property lines abutting residential properties or districts, screening shall be provided, consisting of either a masonry wall, fence or berm in combination with landscape material that forms a screen a minimum of four (4) feet in height, a maximum of six (6) feet in height, and not less than ninety percent (90%) opaque on a year-round basis. Landscape material shall include trees, planted at a minimum of one deciduous or coniferous tree per forty (40) linear feet along the property line.

vii. Screening Requirements

- Where screening is required in the City Code between uses or districts, it shall consist of either a masonry wall or fence in combination with landscape material that forms a screen at least six (6) feet in height, and not less than ninety percent (90%) opaque on a year-round basis. Landscape material shall include trees, planted at a minimum of one deciduous or coniferous tree per forty (40) linear feet along the property line. Additional landscape material such as shade trees or trellises may be required to partially screen views from above.

viii. Special Landscape Considerations

- Village Parkway Collector
 - a. Boulevard Width..... See typical sections, based on location
 - b. East side Bituminous Trail 8-feet (See typical sections, based on location)
 - c. West side Concrete Sidewalk 6-feet (See typical sections, based on location)
 - d. Topsoil Minimum..... 6-inch
 - e. Turf Treatment..... Salt Tolerant Sod (MN DOT 3878 C)
 - f. Tree Location without Sidewalk or Trail..... 7-feet back of curb
 - g. Tree Location with Sidewalk or Trail..... 6-feet back of curb
 - h. Tree Spacing..... Every 75' on Both Sides
 - i. Street Light Location..... 5-feet back of curb
 - j. Street Light Type/Pole 25 ft. black aluminum pole @ each intersection [Xcel Energy - 'Evans' Lamp]
 - k. Ornamental Pedestrian Scale Street Lights 15 ft. black aluminum poles @ 125 ft. spacing, alternating side of street [Xcel Energy - 'Acorn' Lamp]

- 5th Street
 - a. Boulevard Width..... See typical sections, based on location
 - b. North side Bituminous Trail..... 10-feet
 - c. South side Concrete Sidewalk..... 6-feet
 - d. Topsoil Minimum..... 6-inch
 - e. Turf Treatment..... Salt Tolerant Sod (MN DOT 3878 C)
 - Turf sod to be located from back of curb to 5 feet behind trail or sidewalk. Prairie sod may be used for remaining R/W
 - f. Tree Location..... 7-feet back of curb
 - g. Tree Spacing..... Every 40' on Both Sides
 - h. Boulevard trees to be Oak, Maple, or Elm, minimum 4-inch caliper.
 - i. Street Light Location at intersections and every 250 feet apart on alternating sides of the street
 - j. Street Light Type/Pole 30 ft. black aluminum pole @ each intersection [Xcel Energy - 'Evans' Lamp]
 - k. White post and rail fencing is encouraged along 5th Street at major intersections.
 - l. Center landscape median. Center median lined with 2-foot-wide concrete ribbon curb. Landscape area to be planted according to the 5th Street Center Median Planting Plan.
 - m. Irrigation system to be installed within the public right of way to be owned and operated by the City after completion and acceptance of the 2-year landscape warranty.
 - Spray Irrigation required for boulevard areas.
 - Drip irrigation required for center landscaped medians.

2. Landscape Warranty (City Ordinance)

- a. The only mention of warranty in the current ordinance:
 - i. Warranty Requirement. Any replacement tree which is not alive or healthy, as determined by the City, or which subsequently dies due to construction activity within two (2) years after the date of project closure shall be removed by the applicant and replaced with a new healthy tree meeting the same minimum size requirement within eight (8) months of removal.
- b. Wenck developed a Landscape Inspection Standard to further define the warrant requirement as:
 - i. During City landscape inspections, any required landscape material which is not installed per City details, alive, or healthy, as determined by the City, or which subsequently dies within two (2) years after the date of initial acceptance, shall be removed by the applicant and replaced with a new healthy plant meeting the same minimum size requirement within six (6) months of removal.

3. Inspection Process & Checklist (No City Ordinance)

- a. There are many development plans and inspections that were done before Wenck assumed the role of municipal landscape architect. We are getting close to closing those out so that moving forward we have been involved in the entire review, approval, and inspection process to minimize lost communications during transitions.
- b. Wenck developed a Landscape Inspection Standard to define a process, the number of visits, and schedule of when inspections can occur to fulfill a development's 2-year landscape warranty period.
 - i. The City will only complete an initial inspection **after** all landscape material has been installed per development or development phase. Developments have tried to install trees before building construction starts and we have seen trees get damaged or run over by the construction activity.
 - ii. Inspection #1 – Initial Landscape Inspection and Acceptance
 - The initial inspection will ensure that the approved landscape plans have been followed, the required amount of landscape materials have been provided, and the landscape materials are installed correctly and in a reasonable state of health.
 - Note: the warranty period will not begin until all landscape material is installed, and the City has completed an inspection and issued initial acceptance.
 - Any punchlist items (tree replacements, relocations, pruning, etc.) must be completed before the City will issue initial acceptance, start the 2-year landscape warranty, and reduce the development landscape escrow.
 - iii. Inspection #2 – Year 1
 - An additional landscape inspection will be completed 1 year after initial acceptance and the start of the warranty period to confirm growth, confirm any corrective actions from previous inspections have been completed, and to note additional corrections or replacements as required.
 - iv. Inspection #3 – Year 2 (Final Inspection)
 - As a condition for completing the 2-year warranty and final reduction of the landscape escrow, the City will conduct a final inspection 2 years after initial acceptance and may require the Contractor to bring the work into compliance.
 - Upon final acceptance, the Contractor will not be required to provide any further care for the plantings. Final acceptance will be made upon completion of the 2-year warranty resulting from and a final inspection of the completed Project.
 - v. Often there are more inspections to follow-up on any replacements and punchlist items identified in the routine inspections.
- c. Inspections are conducted with a balance of quantity, speed, and precision to be cost effective.
- d. Not onsite observation or inspection for installation of the trees which is industry standard. It would be time consuming to schedule and inspect and would be costly. Should be the responsibility of the Designer, Developer and Contractor to install landscape according to the approved plan.
- e. Testament to acceptable installation is plant survival during the two-year warranty. Many plants are in the ground longer than 2 years, since City standard is to inspect, accept and start the 2-year warranty only after all construction is complete for the development or phase.

- f. Landscape review and inspection only applies to what is required in City ordinance; trees, ground plane, sod/seed mix establishment, utility and driveway conflicts, appropriate grading for planting. Does not apply to private landscaping, foundation plantings, stormwater treatment (rain gardens from Inwood), erosion control (stabilizing big pile of dirt from Inwood). But we are the final inspection on development and are usually the catch-all of any issues by staff and residents.
- g. Major Inspection Focus:
 - i. Provided and located as shown on the approved plan entered into our online webmap.
 - ii. Review for spacing and conflicts with pavement and utilities.
 - iii. Evaluate tree health.
 - Accepted, Dead, Dying, Hazard, Missing, Needs Pruned, Under Sized, Watch, Wounded, Other
 - iv. Evaluate for obvious conflict with required landscape details & standards and make a judgement call if it is detrimental to tree survival. For example, planted too low is much worse than being planted high.
- h. Ultimately a judgement call on what is alive, suffering transplant shock and is truly dying. Striving for balance between only accepting "perfect" trees and giving some trees a chance to survive. Depending on demand, large caliper 2 1/2" B&B trees can become limited by the end of a growing season.
 - i. Transplanted, balled and burlapped, trees typically retain only 10-20% of their root system. The larger the caliper of tree, the more roots are lost in transplanting.
 - ii. A newly planted tree typically needs one year for each inch in diameter of the trunk to regain a normal root system.
<https://www.state.sc.us/forest/urbsurv.htm>
 - iii. Signs of transplant shock include leaf rolling, wilting, scorching, browning leaves, or early onset of fall colors.
 - iv. Snap test branches to see if enough of the tree is still trying to grow.
 - If tissue under the bark is green and the twig is flexible, the branch/tree is still trying to grow.
 - If the tissue is brown and the twig snaps when bent, the branch is dead.
 - If more than 50% of the leaves and branches are dead, we require a replacement.
 - If more than 50% of the leaves and branches are alive, we require pruning out the dead, dying, broken, and poorly formed branches. Too much pruning of a transplanted tree, too soon, can cause additional shock and make the tree vulnerable to pests and disease. Some branches may appear to be "out of place" after pruning but benefit growth by providing energy to living branches. After the tree has become fully established, additional pruning for shape may be completed.

4. Inspection Schedule

- a. Landscape inspections will occur May 15 through September 15 when leaves are on the trees and their health can be more easily assessed. The start and end dates for inspections may be adjusted by the City based on weather conditions. Any inspection scheduled after September 15, may be deferred to the following Spring (after May 15) so the City can evaluate the health of trees.

Ken Roberts
Planning Director
City of Lake Elmo
September 2, 2020



- b. The inspection schedule does not apply to the seasons of planting. Contractors shall follow industry standard seasons for initial and any replacement plantings.
- 5. Landscape Ordinance Considerations
 - a. The City adopted a tree trimming policy in 2019, please see attached information.
 - b. No current City budget for tree replacement. If a tree dies in public Right of Way, it is removed, any depression filled with soil and then the soil is seeded by City staff.

Sincerely,

A handwritten signature in black ink that reads 'Lucius Jonett'.

Lucius Jonett, PLA (MN)
Wenck Associates, Inc.
City of Lake Elmo Municipal Landscape Architect