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# Chapter 21A.26 <sup>1</sup>

## 21A.26.01: TREE PROTECTION

### **Background/Commentary:**

Trees are a major element of every community, and Salt Lake City is no exception. The first settlers and leaders of Salt Lake City recognized the importance of trees and the potential to “green the desert” to make a more hospitable place to live. Trees contribute to a sense of nature in our urban areas, to the beauty and structure of our streets, to the quality of our parks, and the enhancement of our residential and commercial landscapes. Salt Lake City’s urban forest provides many environmental benefits to the community. Aside from the obvious aesthetic benefits, trees within the urban forest improve our air, protect our water, save energy, and improve economic sustainability. It is well-documented that trees provide key environmental benefits that increase community sustainability such as:

- Absorb greenhouse gases. The U.S. Department of Energy finds a 30-year old hardwood tree can sequester the equivalent of 136 pounds of carbon dioxide annually.
- Reduce the amount of energy used and costs associated with indoor cooling and heating by 30-40%,
- Reduce ground-level ozone concentrations by reducing air temperatures biologically,
- Provide buffers that can reduce highway noise by 50%,
- Reduce topsoil erosion, slow down water runoff, and act as pollution filters, and
- Shade lawns that can reduce the demand on irrigation water requirements by 20%

These proposed regulations are to supplement the provisions of the Salt Lake City Urban Forestry Ordinance, Ordinance No. 75 of 1988, which address public trees and the impact that development on private land may have on public trees. While tree protection measures are in place to protect trees in public places and on publicly-owned lands, Salt Lake City’s regulatory framework is not strong in protecting trees on private property. For example, the site development ordinance (Section 18.28.30A5a) suggests that subdivisions be designed to preserve the greatest amount of on-site vegetation and trees with a trunk diameter of four or more inches. While a good goal, there are no specific standards to determine which trees and how many must be preserved or not. The zoning ordinance, on the other hand, does require the preservation of trees along stream corridors through the Riparian Overlay District provisions. However, these provisions are limited to only certain lands in the city. We feel that Salt Lake City should move in a similar direction of the Riparian Corridor provisions in protecting trees on private property when development is proposed.

We are proposing to add a new section to the Salt Lake City Zoning Code specifically addressing the protection of specimen trees on private property. Specimen trees are those trees that in general add to the quality of life of the Salt Lake City community and the environment by virtue of their size, quality, and species. For the purposes of implementing protection standards, the more specific definition of a specimen tree is:

“A structurally sound mature tree, native or introduced, that is characteristic of the species; with space and essential requirements for its growth both above and below ground compatible with existing and proposed site conditions; whose future vitality can be reasonably expected and maintained with proper protection and regularly scheduled care; whose contributions to carbon sequestration, shade footprint, soil permeability, and aesthetics is high; and whose absence from the landscape would significantly alter the site’s appearance, character, or history.

The approach we have taken in this section is to protect defined specimen trees on private property with the requirements and standards coming into play at the time someone is proposing development. The review for

<sup>1</sup> The numbering system follows the general format of the city’s current zoning code. The various sections of this draft code will be placed in appropriate sections of the existing regulations. A specific section number will be assigned after discussions with staff.

*such protection would occur at the time of application of a building permit, site development permit, subdivision and other relevant development applications. The provisions also include options for protection of trees or mitigation if it is impracticable or undesirable to keep a tree on site.*

*Many municipalities across the United States have enacted regulations to protect trees. For example, this approach is used in Laramie, Wyoming, Aspen, Colorado, and Cary, North Carolina.*

## **A. PURPOSE STATEMENT**

The purpose of these tree protection provisions is to recognize and protect the valuable asset embodied in the trees that exist on private lands within the city and ensure that the existing trees of Salt Lake City continue to provide benefit to its citizens. Essential to effective tree protection is the understanding of tree growth requirements having to do with space, water, and soil quality needs, among other qualities. Good, early planning, site design, and construction management practices are key to allowing trees to prosper. Preconstruction planning and mitigation of potential impacts that development may have on trees is necessary and one of the purposes of this section.

Numerous community and personal benefits arise from the presence of trees in urbanized areas - both on residential and non-residential lands- and it is the intent of this section through the protection of the trees to:

1. Enhance the quality of life in the city and protect public health and safety;
2. Preserve and enhance the visual and aesthetic qualities of the city;
3. Enhance public and private property for greater enjoyment and usability due to the shade, cooling, and the aesthetic beauty afforded by trees;
4. Protect and improve the real estate values of the city;
5. Preserve and enhance air and water quality;
6. Reduce noise, glare, dust, and heat, and moderate climate, including urban heat island effect;
7. Increase slope stability, and control erosion and sediment run-off into streams and waterways;
8. Protect the natural habitat and ecosystems of the city;
9. Conserve energy by reducing heating and cooling costs; and
10. Preserve the function of mature trees to absorb greenhouse gases such as carbon dioxide.

## **B. APPLICABILITY**

### **1. General**

The standards in this section shall apply to new development in the city unless exempted in accordance with Section C, Exemptions. The standards in this section shall apply at the time of a development application for “development” as defined in the zoning ordinance.

### **2. Other Regulations**

Ordinance No. 75 of 1988, the Salt Lake City Urban Forestry Ordinance, addressing the protection of trees located on public property owned by the city and in rights of way, shall remain in effect.

## **C. EXEMPTIONS**

The following specimen tree removal activities are exempt from the standards of this section upon confirmation and approval by the Urban Forester:

1. The removal of dead, damaged, or naturally fallen trees, or in cases of community emergency;

2. When in conjunction with the construction of a single- or two-family residence not part of a proposed new subdivision;
3. The removal of trees on an existing legal lot when not associated with new development;
4. The removal of trees in such a condition that they pose a threat to structures or natural features on the site, on adjoining properties, or in the public right of way;
5. The removal of diseased trees posing a threat to adjacent trees;
6. The selective and limited removal of trees necessary to obtain clear visibility at driveways or intersections;
7. The removal of trees associated with development at the Salt Lake City Airport only as necessary to provide safe operations;
8. The removal of trees when required by the Urban Forester for the purposes of conflict with utilities or streets.

## **D. DEFINITIONS**

1. "Caliper" shall mean the dimension of the diameter of a tree trunk measured at a distance of 4' 6" from the ground.
2. "Maximum extent practicable" shall mean no feasible or practical alternative exists, as determined by the Urban Forester, and all possible efforts to comply with the standards or regulations and minimize potential harmful or adverse impacts have been undertaken by the applicant. Economic considerations may be taken into account but shall not be the overriding factor in determining "maximum extent practicable."
3. "Specimen tree" shall mean a structurally sound mature tree, native or introduced, that is characteristic of the species; with space and essential requirements for its growth both above and below ground compatible with existing and proposed site conditions; whose future vitality can be reasonably expected and maintained with proper protection and regularly scheduled care; whose contributions to carbon sequestration, shade footprint, soil permeability, and aesthetics is high; and whose absence from the landscape would significantly alter the site's appearance, character or history. See Tree Protection Appendix A for listing of species, sizes, and conditions that are likely specimen trees.
4. "Tree protection area" is the area of a development site that includes the area located within the drip line of specimen trees and also includes the area that supports tree health requirements and interactions as determined by the Urban Forester.

## **E. STANDARDS**

### **1. Preservation of Specimen Trees**

Specimen trees shall be preserved to the maximum extent practicable as determined by the Zoning Administrator in consultation with the Urban Forester, unless exempted pursuant to Section C, *Exemptions*. In determining if preservation is impracticable, the city shall consider the following criteria, including but not limited to:

**a.** Whether an alternative location or configuration of the development including elements such as parking or structures on the site would be feasible to accomplish tree preservation, without negatively impacting adjacent properties

**b.** Whether preservation of the specimen tree would render all permitted development on the property infeasible, or

**c.** If development of the property will provide significant community benefits that outweigh tree preservation.

## **2. Cutting, Removal , or Harm Prohibited**

Specimen trees shall not be cut, removed, pushed over, killed, or otherwise harmed unless approved to Section E.1, above.

### **a. Paving, Fill, Excavation, or Soil Compaction Prohibited**

The tree protection area of any protected specimen tree shall not be subjected to paving, filling, excavation, or soil compaction.

## **3. Mitigation**

Where the city determines it is not practicable to preserve a specimen tree on the development site, the following mitigation provisions shall apply.

### **a. Replacement Tree Required**

Two caliper inches of replacement trees shall be provided for each caliper of specimen tree removed (For example, if a 24" caliper specimen tree is removed, it must be replaced with at least 24 trees of a minimum 2" caliper or eight trees with a 6" caliper). Each replacement tree shall be a minimum of two caliper inches, and shall either be replanted prior to certificate of occupancy or within a conditional timeframe as approved by the Zoning Administrator in consultation with the Urban Forester. Replacement trees shall not be used to meet any other landscape requirements, but be in addition to such requirements.

Replacement trees shall be planted on the lot or site where the specimen tree was removed except where the Zoning Administrator in consultation with the Urban Forester finds the following:

- (1) The site does not provide for adequate landscape surface area to accommodate the total number of replacement trees; or
- (2) That due to unique soil types, topography, or unusual characteristics of the site, the likelihood of successful tree growth is diminished.

In such cases, the applicant shall mitigate for the loss of the specimen tree in the form of payment to the city's tree fund as provided below.

### **b. Cash In-Lieu Payment /Tree Fund Contribution**

Applicants who are permitted to remove a specimen tree but not plant a replacement tree on site shall make a cash in-lieu payment into the city's tree fund.

### **c. Modification by Zoning Administrator**

The Zoning Administrator may modify any dimensional standard such as setbacks and height limits by up to 20% if such modification will result in preservation of a specimen tree.

### **d. Landscape Credit Provided**

Any development that preserves a specimen tree shall be granted credit towards any required landscaping tree planting requirements pursuant to Chapter 21A.48 of the Zoning Ordinance, the Subdivision Code, and Site Development Ordinance on a 2:1 basis (2 inches of caliper credit for every inch of caliper preserved).

## **F. SPECIMEN TREE PROTECTION DURING CONSTRUCTION**

### **1. Owner's Responsibility**

During construction, the applicant shall be responsible for the ongoing health of specimen trees located on the site. This includes basic tree maintenance and watering throughout the term of construction. The owner shall also ensure the erection of barriers necessary to protect any existing or installed specimen tree from damage during and after construction.<sup>2</sup>

### **2. Tree Protection Fencing**

#### **a. When Required**

Specimen trees shall be fenced in accordance with this subsection before any grading, excavating, or other land-disturbing activity begins on a construction site. Fencing shall protect the tree from excavation, fill, compaction, or other impacts that would threaten tree health. No construction, grading, equipment or material storage, or any other activity shall be allowed within the fenced area except in accordance with the standards in subsection 3, below, Encroachments into Tree Protection Areas and Root Zones. Fencing shall be maintained until the land disturbance activities are complete.

The tree protection fencing shall be clearly shown on the required development applications such as a site plan, building permit, or grading permit application.

#### **b. Location**

Fencing shall extend at least one foot in distance from the edge of the drip line of a specimen tree or group of specimen trees.

#### **c. Type of Fencing**

The developer shall erect a plastic mesh or chain link fence a minimum of four feet in height at the drip line around each specimen tree or group of specimen trees. Such fencing shall be secured to withstand construction activity and weather on the site and maintained in a functional condition.

#### **d. Inspection**

All tree protection measures shall be inspected and approved by the Urban Forester prior to the commencement of any land disturbing activities.

### **3. Encroachments Into Tree Protection Areas and Root Zones**

Encroachments into a tree protection area or within the root zones of trees protected in accordance with this subsection shall occur only in rare instances. If such encroachment is anticipated, the following preventative measures shall be employed prior to the action:

#### **a. Arborist Report**

Written verification is prepared by a certified arborist of the tree's condition before and after encroachment, including preventative measures that shall be employed prior to, during, and after the encroachment to insure the viability of the tree.

#### **b. Soil Compaction**

Where compaction might occur due to planned, temporary traffic through or materials placed within the protection area, the area shall first be mulched with a minimum four-inch layer of wood chips or a six-inch layer of pine straw. Plywood sheet or metal plate coverage of the impacted area may be accepted by the Urban Forester when high moisture conditions warrant. Equipment or materials storage shall not be allowed within the tree protection zone.

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<sup>2</sup> Applicants whose development are adjacent to public rights of way and publicly owned trees should refer to the "Tree Protection Guidelines for Construction Sites" provided by the Urban Forestry Division.

**C. Construction Debris/Effluent**

In no instance shall any debris or effluent associated with the construction process, including equipment or vehicle washing, concrete mixing, pouring, or rinsing processes, drain onto lands within tree protection areas.

**G. MAINTENANCE**

Any new trees used to replace specimen trees shall be maintained in a healthy condition and cared for pursuant to the standards of the City Forester contained in Appendix B. If in the opinion of the city, replacement trees show signs of decline or mortality within the first two years of planting, they shall be replaced by the applicant.

**H. REMOVAL PRIOR TO DEVELOPMENT**

If a specimen tree is removed from a site within two years prior to any development application on the site by the applicant or someone associated with the applicant, the applicant shall mitigate for such removal on a 3:1 caliper basis pursuant to the provisions of Section E.3 above.

**I. ENFORCEMENT**

These tree protection provisions shall be subject to the zoning and development enforcement codes as adopted by the city.