

Tree Preservation and Planting

City Council Adopted Report and Recommendation



**City of Portland
Bureau of Planning**



July 1999

Portland City Council

Vera Katz, Mayor
Jim Francesconi, Commissioner
Charlie Hales, Commissioner
Dan Saltzman, Commissioner
Erik Sten, Commissioner

Portland Planning Commission

Steve Abel, President
Richard Michaelson, Vice President
Sarah ffitch
Amanda Fritz
Rick Holt
Marcy McInelly
Steven Naito
Paul Schuback
Ruth Scott

For more information, contact:
Susan Hartnett, Project Manager, 823-7984 or
Chris Scarzello, City Planner, 823-7716
City and Neighborhood Planning
Portland Bureau of Planning
1120 SW Fifth Avenue, Room 1002
Portland, Oregon 97204-1966
Fax: 823-5884

The Bureau of Planning is committed to providing equal access to information and hearings. Call 823-7700 in advance to arrange accommodation. (TTY 823-6868).

Tree Preservation and Planting

City Council Revised Report and Recommendation

**City of Portland
Bureau of Planning**

ACKNOWLEDGEMENTS

Portland Bureau of Planning

Charlie Hales, Commissioner-in-Charge
David C. Knowles, Planning Director
Deborah Stein, Principal Planner, City and Neighborhood Planning
Susan Hartnett, Project Manager
Chris Scarzello, City Planner
Jill Grenda, City Planner
Karen Howard, Associate Planner
Sterling Bennett, Permit Center Supervisor
Donah Baribeau, Clerical Specialist
Jay Sugnet, Community Service Aide
Jessica Caldwell, Community Service Aide

Project Advisory Working Group

Citizens

Brigid Flanigan
Anthony Boutard
Terrill Collier

Bureau of Planning

Bob Clay, Chief Planner
Michael Harrison, Chief Planner
Miriam Hecht, Chief Planner

Bureau of Buildings

Kermit Robinson, Code Development Specialist

Portland Parks and Recreation, Urban Forestry Division

Brian McNerney, Urban Forestry Manager

Table of Contents

Summary	1
Background	2
Planning Commission Recommendation	5
Recommended Code Changes	9
33.110 Single-dwelling Zones.....	11
33.120 Multi-dwelling Zones.....	15
33.130 Commercial Zones.....	19
33.248 Landscaping and Screening.....	23
33.930 Measurements.....	37
Appendix A Existing Landscape Requirements	A1
Appendix B Proposed Tree and Landscape Requirements	B1
Appendix C Issues Report	C1

Summary

The Planning Commission received citizen testimony during the Southwest Community Plan process that trees are being removed when development occurs and are not being replaced. These citizens raised concerns about the loss of Portland's urban forest. After examining the issue, Bureau of Planning staff found that removal of the urban forest is occurring throughout Portland and, that existing regulations for planting trees and landscaping are not being enforced. These issues were also discussed in the 1995 Urban Forestry Management Plan, which was adopted by City Council resolution.

Trees are protected through zoning regulations in several plan districts and in environmental zones, but these areas comprise less than 4 percent of vacant buildable private property in the city. Trees are required to be planted as part of a landscaping regulation that applies in some of the multi-dwelling, commercial, and industrial zones, but there is little incentive to preserve existing trees. The *Zoning Code* does not require any tree preservation or planting in single-dwelling zones.

The Planning Commission recommends that City Council adopt the following changes to the *Zoning Code*:

- ☞ Add a new tree requirement that can be met through preservation of existing trees, planting new trees, or by paying into a Tree fund and is required for:
 - new residential development in single-dwelling zones;
 - new houses, attached houses, duplexes, and manufactured homes in multi-dwelling zones; and
 - new houses, attached houses, duplexes, and manufactured homes in commercial zones.
- ☞ Change existing minimum tree size requirements in residential, commercial, and industrial zones to match the street tree size requirement that is established by the Urban Forester.

Additionally, the Planning Commission recommends that City Council approve funding for implementation and enforcement of street tree requirements in all zones.

Related amendments to Title 20, Parks and Recreation:

The Bureau of Parks and Recreation, Urban Forestry Division, will recommend that City Council:

- ☞ Amend Title 20 to require street trees when new residential development and new lots on public streets are approved.

Background

Laying the Foundation

Since the early 1990's, Portland has sustained an unparalleled period of growth and development, mainly in the housing sector. In 1997 the city issued a record number of permits for new residential construction. The increased rate of development in Portland raises issues surrounding the future of Portland's urban forest - new residential development consumes the largest amount of land within the city. There are no *Zoning Code* requirements, except within a very small percentage of special environmental zones, to protect or replace trees on private property when development occurs.

In 1995 the City of Portland adopted by resolution the *Urban Forestry Management Plan* (UFMP). This document was prepared with the assistance of a Technical Advisory Committee which included the Urban Forestry Commission, the Friends of Trees, and citizens. The UFMP articulates a broad city policy rationale concerning urban forestry practices, and recommends a number of actions the city must take to ensure the health and sustainability of our trees. Among these is a review of the city land use regulations and standards as they relate to urban forestry preservation. This project responds to one of the specific management plan recommendations.

In 1996 and 1997 during hearings on the Southwest Community Plan, citizens testified to the Planning Commission that forest canopy has been removed as a result of development without safeguards for replacement. The Planning Commission asked the Bureau of Planning to examine the issue and make a proposal. Bureau of Planning staff compiled land division information from 1995 through 1997 and conducted a city-wide windshield survey of residential development in subdivisions and on "infill" lots to determine the level of tree retention, planting, or replacement planting. The majority of developments surveyed contained virtually no trees that would contribute to the urban forest. The few trees that were planted tended to be small ornamentals. Additionally, there was a noticeable lack of street trees in the areas surveyed.

During the fall of 1997 and winter/spring of 1998, Bureau of Planning staff formed a working group comprised of citizens and city personnel, who developed a proposal that was presented to the Planning Commission in May 1998. The proposal reflected city and regional concerns about appropriate density and over-restriction of buildable lands, the benefits of existing regulations for landscaping, the desire to assure ease of implementation, and the limitations of the city's current level of inspection and enforcement. The group also participated in the Planning Commission work session on the proposal and helped craft modifications based on the public testimony from the May hearing. The Planning Commission approved the proposed concept in June 1998 and directed Bureau of Planning staff to move forward with the code language work. The Planning Commission also requested that the Urban Forester make changes to Title 20 to assure implementation of all street tree requirements and to create requirements for street trees in those circumstances where there are no current regulations.

The proposed code language was reviewed by the Planning Commission in a public hearing on March 23rd, 1999, and was approved with amendments.

On June 9th, the City Council reviewed the Planning Commission recommendation and the proposed Title 20 changes in a public hearing. In general, testimony was favorable and few amendments were proposed. On June 24th, the City Council continued the hearing to review the proposed amendments and to review some substantial changes to the Title 20 proposal. A vote to approve the amendments was passed. On July 1st, the Council voted to approve the Tree Preservation and Planting Report and the Title 20 changes.

Detailing a Solution

Since the majority of land area in the city is dedicated to residential use, the greatest benefit to the urban forest canopy can occur through preservation and planting requirements on these lots. While some areas (special plan districts and environmental zones) of the city's urban forest are regulated and managed, its composition and health in residential areas ultimately depends on the actions of residential property owners.

A tree preservation and planting standard that encourages tree retention will minimize the impact of tree loss during development and ensure a sustained tree canopy in Portland. A standard for planting will improve the likelihood that tree canopy can be restored in areas like much of east Portland, where trees were logged and the land was cleared for homesteading and agriculture decades ago.

The city is faced with increasing state and federal requirements to clean up and improve water quality in our rivers, streams, lakes, and wetlands. Measures that address water quality issues at their source are generally deemed more cost-effective than piping the polluted water to a treatment plant. Trees and other vegetation can help by acting as natural filters to absorb polluted water. Forest Service studies show that mature trees can capture as much as 35 percent of the annual rainfall by absorption. It has been estimated that a tree with a 50-year life span provides nearly \$60,000 of environmental benefit over its lifetime. According to the UFMP, a conservative estimate of Portland's street trees alone values them at \$65 million and the whole of Portland's urban forest at more than two billion dollars.

The benefits of trees in general and the urban forest specifically are discussed in Chapter One of the UFMP and are summarized below.

Environmental and Energy Benefits

Air Pollution Reduction: The urban forest removes particulate and gaseous pollution from the air. Particulates are caught by leaves, needles, and branches; gases are removed by absorption and stored in the leaves and needles of woody vegetation.

Water Quality Improvements: Trees intercept and absorb surface runoff and pollutants before it reaches the treatment facility, especially along streets, highways and parking lots. The pollutants remain trapped in the tree, and clean water is transpired into the atmosphere.

Erosion Control: Trees help stabilize steep slopes and reduce erosion into urban waterways. Trees help slow the force of water movement across impervious surfaces.

Energy Efficiency: Trees can reduce heat loss from buildings in winter by providing a barrier against wind, and provide shade to promote cooling in summer.

Glare and Reflection Reduction: Trees reduce glare from buildings, walkways, roads, parking lots, and glass.

Sound Control: Leaves, twigs, and branches absorb, deflect, and reflect sound energy, eliminating higher frequencies and other unwanted sounds.

Wildlife Habitat: The urban forest provides habitat for many species of birds, mammals, insects, reptiles, and amphibians that enrich urban life. Along rivers and streams, trees provide shade for fish and keeps water temperatures cool.

Economic Benefits

A number of studies have shown that the urban forest has measurable economic benefits. These include enhanced property resale values, annual savings in heating and cooling costs, erosion and stormwater control, air pollution reduction, and appreciation (in dollar value) of a tree as it grows over time. A general guideline is that a typical tree in good condition is worth \$100 per inch of trunk diameter.

Social and Psychological Benefits

The UFMP cites research that shows the urban forest has a clear role to play in reducing stress-related impacts on health. Similarly, the urban forest provides a positive aesthetic element in color, variety, texture, and shape that promotes positive emotional states.

Human comfort: The urban forest improves human comfort by controlling or improving solar radiation, air movement, air temperature, humidity and precipitation.

Buffering: The urban forest and trees also help define our streets, our urban form, and important urban places. Trees buffer heavily used transportation corridors from adjacent residential and commercial areas, and buffer heavy industrial uses from residential and commercial neighborhoods.

Planning Commission Recommendations

After considering city goals for the various zones and their characteristics, the Planning Commission proposes a tree requirement for new houses, attached houses, duplexes, and manufactured homes in specified residential and commercial zones. The Planning Commission also proposes an increase in the minimum tree size required for commercial zone landscaping. The intent of these standards is to support a minimum amount of tree canopy and to match the tree sizes required by Urban Forestry for street trees.

Recommended Elements of the Tree Preservation and Planting Concept

The following proposed standards for new development are required when a building permit application is submitted. These standards are met by either preserving existing trees on-site, planting new trees on-site, or paying a per-inch fee into a tree fund administered by the Bureau of Parks and Recreation.

1. Require new housing in single-dwelling zones to preserve or plant 2 inches of tree per 1,000 square feet of site area.

This requirement will ensure that all new housing in the single-dwelling zones have a minimum amount of tree canopy.

For example, a 5,000 square foot lot proposed to be developed with a manufactured home would be required to preserve or plant 10 inches of tree. A 7,000 square foot corner lot proposed to be developed with a duplex would be required to preserve or plant 14 inches of tree. There is one exception to this standard for small lots – see item 3 below.

2. Require new houses, attached houses, duplexes, or manufactured homes that are developed in the multi-dwelling and commercial zones to preserve or plant 2 inches of tree per 1,000 square feet of site area.

The multi-dwelling and commercial zones already require a certain percentage of the site area to be landscaped. Trees are included within the landscape standards, however, the amount of required landscaping varies from 15 percent to 30 percent depending upon the zone. The new tree requirement is applied in addition to the landscape requirement (with trees counting toward both requirements), so a more uniform tree preservation/planting pattern will occur. In zones that allow 100 percent building coverage, trees are not required when 90 percent building coverage is developed (see item 8). This provision allows higher density development to occur but requires trees when possible. There is an exception to the standard for development on smaller lots – see item 3 below.

3. Require residential and commercial zone sites that are 3,000 square feet in size or smaller to plant a minimum of 3 inches of tree per site.

This provision applies to small lots in residential and commercial zones and will ensure that even small lots have at least some tree canopy.

4. Create a Tree Fund

If site characteristics or construction preferences do not support existing or new trees, the requirement can be satisfied by payment of a fee into a tree fund.

The fee will be established by the City Forester based on current market prices for materials, labor, and maintenance. The Planning Commission recommends an initial fee of \$150 per inch. For example, if the developer chooses not to preserve or replace the required trees on a lot that is 3,000 square feet in area, the fee will be \$450 (3" x \$150 = \$450). If no trees are replaced on a 5,000 square foot lot, the fee will be \$1,500 (2" x 5 = 10 x \$150 = \$1,500).

5. Change the minimum tree size requirements in Title 33 to match street tree size minimums established by the Urban Forester.

A. For required landscaping in commercial and industrial zones change the minimum tree diameter requirement from 1.75 inches diameter measured 4½ feet above the ground to 3 inches measured at the root ball or base of the tree trunk to coincide with the street tree standard (as established by the City Forester).

The City's Urban Forester supports this change because larger trees match the scale of commercial and industrial sites better than smaller trees, and they tend to have a higher survival rate because the root structure is more established. Also, the canopy starts higher on large trees so there is better clearance for trucks, pedestrians, and signs.

B. For required landscaping in residential zones, change the minimum tree diameter requirement from 1.75 inches diameter measured 4½ feet above the ground to 1.5 inches measured at the root ball or base of the tree trunk.

This smaller requirement provides flexibility in the selection of particular tree species and stock. Several Oregon natives are more readily found in these smaller sizes. Smaller trees also adapt better to soil, light and other conditions of residential zones and can expect to perform better.

6. Existing trees that are preserved to meet the requirement must be in good condition and protected from the adverse effects of construction.

A. When existing trees are preserved to satisfy the requirement, a tree preservation plan must be submitted by the applicant or owner showing the location and the diameter measured 4½ feet above the ground for each tree. The tree preservation plan does not need to be certified by an arborist or other professional. However, by submitting a tree preservation plan the applicant is certifying that the trees are in healthy condition. When existing trees are preserved to meet the requirement, building plans or site plans must show that the proposed development can meet the following:

- New buildings will not be placed within the root protection zone of the trees;

- No grade change within the root protection zone will occur during or after the construction;
- Prior to demolition, grading or construction, a construction fence will be placed around each tree at the outer edge of the root protection zone;
- No additional impervious surfaces may be developed within the root protection zone; and
- No construction activities are permitted within the root protection zone, including staging and storage of materials and equipment, or vehicle maneuvering.

B. Exceptions to the construction requirements listed above are allowed with the submittal of an alternative tree preservation plan by either a certified arborist or landscape architect showing alternative means for each tree to be preserved.

7. Add new measurements to the zoning code.

Add a measurement for root protection zone and for caliper inches to the *Zoning Code*. Root protection zone needs to be defined because the term is used repeatedly when a tree preservation plan is required. The caliper inch measurement is necessary because the new tree requirement introduces the nursery standard for measuring tree stock. The landscape industry measures trees to be planted in caliper inches as the tree trunk diameter at the base of the tree above the root ball. This differs from measuring the tree 4½ feet above the ground for larger trees already in the ground.

8. Development that is exempt from the standard.

Zones that allow 100 percent building coverage are exempt when development is proposed that meets 90 percent building coverage. The zones that allow 100 percent building coverage are CX, CS, CM, and RX.

9. Prohibition on Adjustments

Base zone standards are typically adjustable unless expressly prohibited. Given the number of plan checks and land use reviews for residential permits in which the tree standards will apply and the options for preservation of existing trees, or to pay into a tree fund, the Planning Commission has proposed that adjustments to the tree requirements be prohibited.

Additional Issues

The Planning Commission reviewed the impacts of the new tree ordinance on other issues and recommends the following actions:

Inspection and Enforcement

A. The Office of Planning and Development Review will follow current procedures for inspecting and enforcing landscaping requirements when inspecting and enforcing these new regulations.

B. Violations of the new requirements will be handled using existing procedures followed by the building code hearings officer.

Housing Cost Impact

The Bureau of Planning and the Planning Commission assessed the impact of this regulation on development costs and considered the balance between housing affordability and other public policy objectives such as environmental protection and neighborhood livability. It was determined that the new regulation will not be an undue burden on development and that public benefits outweigh any negative effects.

Impact on Development Capacity of Buildable Land

Title 1, Section 5. C. 4 of the *Urban Growth Management Functional Plan* requires that we determine the effect of the tree preservation ordinance on the capacity of land to develop at zoned density. We find that these recommended actions will not have any negative effect on the capacity of land to be developed at zoned density because developers have the option to either preserve existing trees to count toward the requirement, to plant new trees, or avoid tree planting entirely by paying into a tree fund.

Additional issues raised in public testimony or by the working group are contained in Appendix C, and come directly from the *Planning Commission Recommended Action: Tree Preservation and Planting Concept* document that was published in July 1998 following the final Planning Commission work session.

Recommended Code Amendments to Title 33, Planning and Zoning

How to read this section.

This section details the recommended changes to portions of the *Zoning Code*. Odd-numbered pages show *Zoning Code* language with recommended changes. Language added to the *Zoning Code* is underlined (example). Language deleted is shown in strikethrough. (~~example~~)

Even-numbered pages contain staff commentary on the recommended changes.

Commentary

Amend Chapter 33.110 Table of Contents to show the new section.

**AMENDMENTS TO CHAPTER 33.110
SINGLE-DWELLING ZONES**

Sections:

General

- 33.110.010 Purpose
- 33.110.020 List of the Single-Dwelling Zones
- 33.110.030 Other Zoning Regulations

Use Regulations

- 33.110.100 Primary Uses
- 33.110.110 Accessory Uses
- 33.110.120 Nuisance-Related Impacts

Development Standards

- 33.110.200 Housing Types Allowed
- 33.110.205 Density
- 33.110.210 Lot Size
- 33.110.215 Height
- 33.110.220 Setbacks
- 33.110.225 Building Coverage
- 33.110.235 Required Outdoor Areas in R5 and R2.5 Zones
- 33.110.240 Alternative Development Options
- 33.110.245 Institutional Development Standards
- 33.110.250 Detached Accessory Structures
- 33.110.255 Fences
- 33.110.260 Demolitions
- 33.110.265 Excavations and Fills
- 33.110.270 Nonconforming Development
- 33.110.275 Parking and Loading
- 33.110.280 Signs
- 33.110.282 Trees
- 33.110.285 Street Trees

Commentary

33.110.282 Trees.

A. There are currently no landscape or tree regulations in the single-dwelling zones, and portions of the urban forest are being removed to make way for houses in the single-dwelling zones. The preservation and maintenance of the urban forest is a critical element in maintaining Portland's quality of life; trees clean the air, provide shade and wind protection, reduce stormwater runoff, and provide aesthetic and economic value to property owners. This regulation will help preserve and enhance Portland's urban forest by requiring trees when new residential structures are built.

Trees that are preserved or planted to meet this requirement can also be used to meet any other City requirement for trees on private property. For example, the Bureau of Environmental Services allows tree preservation or planting to mitigate for newly created impervious surface area. Trees provided for new residential development can meet both zoning and stormwater requirements.

B. This regulation requires 2 inches of tree per 1,000 square feet of site area. On lots that are 3,000 square feet in area or smaller, the minimum requirement is 3 inches per lot as described in the T1 standards (see page 25).

The developer may choose to meet this requirement by:

- preserving existing trees on the site;
- planting trees on the site; or
- paying into a tree fund.

Any one option, or a combination of options can be used to meet the requirement, but adjustments to the regulation are prohibited (see page 25).

**AMENDMENTS TO CHAPTER 33.110,
SINGLE-DWELLING ZONES**

33.110.282 Trees

- A. Purpose.** The purpose of the tree standard is to maintain and add to Portland's tree canopy and to enhance the overall appearance of single-dwelling development. Trees are an integral aspect of the Portland landscape and add to the livability of Portland. They provide aesthetic and economic value to property owners and the community at large. Trees help to:
- reduce stormwater run-off by intercepting and transpiring precipitation;
 - help to reduce summer temperatures by providing shade;
 - buffer noise;
 - stabilize slopes;
 - provide oxygen;
 - clean the air; and
 - provide wind protection in winter.
- B. Minimum tree standard.** New development must meet the T1 standard of Chapter 33.248, Landscaping and Screening. Adjustments to this standard are prohibited.

Commentary

Amend Chapter 33.120 Table of Contents to add a new section that requires the T1 standard for houses, attached houses, duplexes, and manufactured homes.

**AMENDMENTS TO CHAPTER 33.120
MULTI-DWELLING ZONES**

Sections:

General

- 33.120.010 Purpose
- 33.120.020 List of the Multi-dwelling Zones
- 33.120.030 Characteristics of the Zones
- 33.120.040 Other Zoning Regulations

Use Regulations

- 33.120.100 Primary Uses
- 33.120.110 Accessory Uses
- 33.120.120 Nuisance-Related Impacts

Development Standards

- 33.120.200 Housing Types Allowed
- 33.120.205 Density
- 33.120.210 Lot Size
- 33.120.215 Height
- 33.120.220 Setbacks
- 33.120.225 Building Coverage
- 33.120.230 Building Length
- 33.120.235 Landscaped Areas
- 33.120.237 Trees
- 33.120.240 Required Outdoor Areas
- 33.120.245 Window Requirements
- 33.120.250 Screening
- 33.120.255 Pedestrian Standards
- 33.120.260 Recycling Areas
- 33.120.265 Amenity Bonuses
- 33.120.270 Alternative Development Options
- 33.120.275 Development Standards for Institutions
- 33.120.277 Development Standards for Institutional Campuses in the IR Zone
- 33.120.280 Detached Accessory Structures
- 33.120.285 Fences
- 33.120.290 Demolitions
- 33.120.295 Excavations and Fills
- 33.120.300 Nonconforming Development
- 33.120.305 Parking and Loading
- 33.120.310 Signs
- 33.120.315 Street Trees

Commentary

33.120.237 Trees

A. The preservation and maintenance of the urban forest is a critical element in maintaining Portland's quality of life; trees clean the air, provide shade and wind protection, reduce stormwater runoff, and provide aesthetic and economic value to property owners. This regulation will help preserve and enhance Portland's urban forest by requiring trees when new residential structures are built.

Trees that are preserved or planted to meet this requirement can also be used to meet any other City requirement for trees on private property. For example, the Bureau of Environmental Services allows tree preservation or planting to mitigate for newly created impervious surface area. Trees provided for new residential development can meet both zoning and stormwater requirements.

B. The current landscaping requirements in multi-dwelling zones apply to all housing types; when single-dwelling housing is developed (houses, attached houses, manufactured homes, and duplexes), the landscaping requirements usually result in fewer trees than if the site were developed with multi-dwelling structures. With the addition of the T1 standard, a higher percentage of tree preservation or planting will be achieved for these housing types (see page 25).

**AMENDMENTS TO CHAPTER 33.120,
MULTI-DWELLING ZONES**

33.120.237 Trees

A. Purpose. The purpose of the tree standard is to maintain and add to Portland's tree canopy and enhance the overall appearance of single-dwelling development in multi-dwelling zones. Trees are an integral aspect of the Portland landscape and add to the livability of Portland. They provide aesthetic and economic value to property owners and the community at large.

Trees help to:

- reduce stormwater run-off by intercepting and transpiring precipitation;
- help to reduce summer temperatures by providing shade;
- buffer noise;
- stabilize slopes;
- provide oxygen;
- clean the air; and
- provide wind protection in winter.

B. Minimum tree standard. New development must meet the T1 standard of Chapter 33.248, Landscaping and Screening. Multi-dwelling structures are exempt from this standard. Adjustments to this standard are prohibited. Trees provided to meet the requirements of Section 33.120.235, Landscaped Areas, may apply toward meeting this requirement.

Commentary

Amend Chapter 33.130 Table of Contents as noted to add a new section that requires the T1 standard for houses, attached houses, duplexes, and manufactured homes.

**AMENDMENTS TO CHAPTER 33.130
COMMERCIAL ZONES**

Sections:

General

- 33.130.010 Purpose
- 33.130.020 List of the Commercial Zones
- 33.130.030 Characteristics of the Zones
- 33.130.040 Other Zoning Regulations

Use Regulations

- 33.130.100 Primary Uses
- 33.130.110 Accessory Uses
- 33.130.120 Hazardous Substances
- 33.130.130 Nuisance-Related Impacts

Development Standards

- 33.130.200 Lot Size
- 33.130.205 Floor Area Ratio
- 33.130.210 Height
- 33.130.215 Setbacks
- 33.130.220 Building Coverage
- 33.130.225 Landscaped Areas
- 33.130.227 Trees
- 33.130.230 Ground Floor Windows
- 33.130.235 Screening
- 33.130.240 Pedestrian Standards
- 33.130.242 Transit Street Main Entrance
- 33.130.245 Exterior Display, Storage, and Work Activities
- 33.130.250 General Requirements for Residential and Mixed-Use Developments
- 33.130.253 Additional Requirements in the CM Zone
- 33.130.255 Trucks and Equipment
- 33.130.260 Drive-Through Facilities
- 33.130.265 Detached Accessory Structures
- 33.130.270 Fences
- 33.130.275 Demolitions
- 33.130.280 Excavations and Fills
- 33.130.285 Nonconforming Development
- 33.130.290 Parking and Loading
- 33.130.295 Signs
- 33.130.300 Street Trees
- 33.130.305 Superblock Requirements

Commentary

33.130.227 Trees

A. The preservation and maintenance of the urban forest is a critical element in maintaining Portland's quality of life; trees clean the air, provide shade and wind protection, reduce stormwater runoff, and provide aesthetic and economic value to property owners. This regulation will help preserve and enhance Portland's urban forest by requiring trees when new residential structures are built.

Trees that are preserved or planted to meet this requirement can also be used to meet any other City requirement for trees on private property. For example, the Bureau of Environmental Services allows tree preservation or planting to mitigate for newly created impervious surface area. Trees provided for new residential development can meet both zoning and stormwater requirements.

B. Currently, 15 percent of a site in a C zone must be landscaped. (The CS, CM, and CX zones allow 100 percent building coverage and have no landscape requirements.) The Planning Commission discussed tree requirements in "high density" zones such as the CS, CM, and CX zones. They did not want to restrict the possibility of high density residential development by imposing a tree requirement. They decided that all single-family development should be required to follow similar tree standards, but where the development will cover at least 90 percent of the site - i.e, where the density will be higher - no trees should be required.

When single-dwelling housing is developed in the commercial zones (houses, attached houses, manufactured homes, and duplexes), the landscaping requirements usually results in fewer trees than if the site were developed with commercial structures. With the addition of the T1 standard, a higher percentage of tree preservation or planting will be achieved (see page 25).

**AMENDMENTS TO CHAPTER 33.130
COMMERCIAL ZONES**

33.130.227 Trees

A. Purpose. The purpose of the tree standard is to maintain and add to Portland's tree canopy and to enhance the overall appearance of single-dwelling development in commercial zones. Trees are an integral aspect of the Portland landscape and add to the livability of Portland. They provide aesthetic and economic value to property owners and the community at large. Trees help to:

- reduce stormwater run-off by intercepting and transpiring precipitation;
- help to reduce summer temperatures by providing shade;
- buffer noise;
- stabilize slopes;
- provide oxygen,
- clean the air; and
- provide wind protection in winter.

B. Minimum tree standard. New residential development must meet the T1 standard of Chapter 33.248, Landscaping and Screening. Multi-dwelling structures are exempt from this standard. Adjustments to this standard are prohibited. Trees provided to meet the requirements of Section 33.120.225, Landscaped Areas, may apply toward meeting this requirement.

C. Exception to minimum tree standard. Residential development is exempt from this standard when buildings cover 90 percent or more of the site.

Commentary

Amend Chapter 33.248 Table of Contents as shown.

33.248.010 Purpose

The primary intent of this new regulation is to preserve and enhance Portland's urban forest, through preserving existing trees or planting new ones. This additional purpose has been added to the top of the list of the landscape chapter purpose statement to emphasize its importance in the development of the community.

**AMENDMENTS TO CHAPTER 33.248
LANDSCAPING AND SCREENING**

Sections:

- 33.248.010 Purpose
- 33.248.020 Landscaping and Screening Standards
- 33.248.030 Plant Materials
- 33.248.040 Installation and Maintenance
- 33.248.050 Landscaped Areas on Corner Lots
- 33.248.060 Landscape Plans
- 33.248.065 Tree Preservation Plans
- 33.248.068 Tree Protection Requirements
- 33.248.070 Completion of Landscaping
- 33.248.080 Street Trees
- 33.248.090 Mitigation and Restoration Plantings

33.248.010 Purpose

The City recognizes the aesthetic, ecological, and economic value of landscaping and requires its use to:

- Preserve and enhance Portland's urban forest;
- Promote the reestablishment of vegetation in urban areas for aesthetic, health, and urban wildlife reasons;
- Establish and enhance a pleasant visual character which recognizes aesthetics and safety issues;
- Promote compatibility between land uses by reducing the visual, noise, and lighting impacts of specific development on users of the site and abutting uses;
- Unify development, and enhance and define public and private spaces;
- Promote the retention and use of existing vegetation;
- Aid in energy conservation by providing shade from the sun and shelter from the wind;
- Restore natural communities through re-establishment of native plants; and
- Mitigate for loss of natural resource values.

This chapter consists of a set of landscaping and screening standards and regulations for use throughout the City. The regulations address materials, placement, layout, and timing of installation. Specific requirements for mitigation plantings are in 33.248.090.

Commentary

33.248.020 Landscaping and Screening Standards

A - G. No change.

H. T1, Residential Trees.

1. The intent of this new standard is to minimize the impacts of tree loss during development by encouraging tree preservation to ensure a sustained tree canopy in Portland. Planting or paying into a Tree Fund may be done as a substitute to preservation. Adjustments are prohibited because there are a number of alternatives available.

The new T1 standard was developed by a working group composed of representatives of the Planning Bureau, the Department of Urban Forestry, the Urban Forestry Commission, the Planning Commission, and citizens. It represents a compromise in tree size and quantity requirements.

2. There are 3 ways to meet the standard, and any combination of the options is allowed. Other landscape requirements, when required in conjunction with T1, are adjustable but trees must still be provided in one of 3 ways:

a. Preserve existing trees. A tree preservation plan is submitted with building plans. . Trees on adjacent properties are allowed to count when they are within 5 feet of the property line because the roots invariably grow into the developing lot and can receive life-threatening damage during construction. This allowance is provided as a way to alleviate the destruction of healthy neighboring trees; this level of protection is not extended to trees in the public right-of-way.

b. Plant new trees. This option covers situations where existing trees will be damaged or removed with the proposed development or there are no existing trees.

33.248.020 Landscaping and Screening Standards

(Amended by Ord. No. 165594, effective 7/8/92.)

Subsections A. through G. H. state the different levels of landscaping and screening standards to be applied throughout the City. The locations where the landscaping or screening is required and the depth of the landscaping or screening are stated in various places throughout the code. **All** landscaping and screening required by this Title must comply with all of the provisions of this chapter, unless specifically superceded. The landscaping standards are generally in a hierarchical order. The landscaping standards are minimums; higher standards can be substituted as long as all fence or vegetation height limitations are met. Crime prevention and safety should be remembered when exceeding the landscaping standards (height and amount of vegetation may be an issue).

A. through G. [No change]

H. T1, Trees.

1. Intent. The T1 standard is a tree requirement for new residential development. It encourages the retention of trees, minimizes the impact of tree loss during development, and ensures a sustained tree canopy in Portland.
2. Tree requirement. This requirement may be met using any of the three options below. The applicant may choose to meet one or more of these options. Adjustments to this Subsection are prohibited. The options are:
 - a. Tree preservation. At least 2 inches of existing tree per 1,000 square feet of site area must be preserved. On lots that are 3,000 square feet or smaller, at least 3 inches of existing tree must be preserved per lot. This standard may be met using trees on the lot and within 5 feet of the edges of the lot. Trees within public and private rights-of-way may not be used to meet this standard. When this option is used, a tree preservation plan is required.
 - b. Tree planting. At least 2 inches of tree per 1,000 square feet of site area must be planted. On lots that are 3,000 square feet or smaller, at least 3 inches of tree must be planted per lot.

Commentary

c. Pay a per-inch fee. This option can be used in those situations where site characteristics or construction preferences do not support the T1 standard. The fee is due when the building permit is issued. The Office of Planning and Development will collect the fee, and the Bureau of Parks and Recreation will administer the fund. The fee is \$150 per inch at this point in time, and will change as market costs change.

- (1) Fund use and administration. Planting trees on private property will be done only with property owner permission, and will occur only when there is no public or right-of-way property on which to plant the trees. The funds will be used in the same watershed as the contributing site in order to retain the beneficial effects of tree planting within that watershed.

c. Tree Fund. This option may be used where site characteristics or construction preferences do not support the preservation or planting options.

(1) Fund use and administration. The Tree Fund fee is collected by the Office of Planning and Development Review and is administered by the Urban Forestry Division of the Bureau of Parks and Recreation. The funds collected will be used to plant trees on public or private property in the same watershed as the site.

(2) Calculation of required fund contributions. Applicants must contribute the cost to purchase and plant trees, as set out in (3), below. The cost to purchase and plant trees will be adjusted annually as determined by the Urban Forester based on current market prices per inch for materials, labor, and maintenance.

(3) Required fund contribution. The applicant must contribute the following to the Tree Fund before a building permit will be issued:

- For lots with 3,000 square feet or more of area, the cost to purchase and plant at least 2 inches of tree per 1,000 square feet of site area; or
- For lots with less than 3,000 square feet of area, the cost to purchase and plant at least 3 inches of tree per lot.

Commentary

33.248.030 Plant Materials

A. no change

B. The current measurement standard for trees (5 feet above the ground) is an imprecise measurement standard for purchased deciduous trees. Nurseries sell trees by caliper inch, a measurement taken 6 inches above the root ball on the tree trunk. Established trees, already planted in the ground, are measured 4 $\frac{1}{2}$ feet above the ground*. The *Zoning Code* currently makes no measurement distinction between existing in-the-ground trees and new trees to be purchased and planted. The new regulation retains the current method for measuring existing trees, and adds a new way to measure purchased trees. NOTE THAT REFERENCE TO CALIPER IS NOT MADE IN THE CODE LANGUAGE. The distinction is in the language: "existing trees" or "planted trees", and details are in the Measurements Chapter.

The new deciduous tree requirement for single-dwelling residential development reduces the minimum size of the purchased tree to be planted. The current standard is 1 $\frac{3}{4}$ inches measured 5 feet above the ground. The new minimum standard is 1.5 inches; evergreen tree size remains the same. The minimum size for new deciduous trees to be planted was reduced for several reasons:

- smaller trees have a greater chance of surviving in a residential setting;
- small trees can be planted any time of year, not just during the "planting season", with a high survival rate; and
- a 1.5 caliper inch tree is a common size at nurseries and most natives can be found at that size.

The minimum size for deciduous trees planted to meet a landscape requirement in commercial, employment, and industrial zones is increasing to 3 inches. This increase will provide trees that:

- more closely match the street tree size required by the Urban Forester;
- match the scale of development;
- it is important that residential landscape standards be completed when the building permit is finalized because there is no "temporary certificate of occupancy" available to residential projects; and
- will survive the intensity of ground disturbance that occurs in these zones.

Additionally, larger trees are taller and the higher canopy will be out of the range of trucks, pedestrians, and signs.

*The current method for measuring trees 5 feet above the ground will change to measuring trees 4 $\frac{1}{2}$ feet above the ground, in keeping with urban forestry standards.

33.248.030 Plant Materials

A. [No change.]

B. Trees. Trees may be deciduous or evergreen. Deciduous trees at the time of planting must be fully branched. ~~have a minimum diameter of 1 3/4 inches, measured 5 feet above the ground, and have a minimum height of 8 feet.~~ Trees planted in residential zones must be a minimum of 1.5 inches in diameter. Trees planted in all other zones must be a minimum of 3 inches in diameter. Evergreen trees at the time of planting must be fully branched and a minimum of 6 feet in height. These minimum requirements do not apply to trees used for mitigation, remediation, or restoration.

Commentary

C.1. The primary intent behind the new regulation is to preserve existing tree canopy; therefore the credit for existing tree canopy is key in this effort.

The current method for calculating tree credit requires a fairly large tree - 12 inches in diameter. By reducing the size of the tree that may be eligible for the credit to 3 inches in diameter, we are making the tree credit more appealing, easier to use, and hopefully more cost effective for the developer. Additionally, the incentive to preserve larger trees by giving triple credit allowance for trees 12 diameter inches or greater is retained.

C.2. There are a number of tree-like shrubs that landscapers often use to meet the tree requirement, and they do not provide the same level of canopy that trees do. Although some of these shrubs *are* listed as shrubs in the Portland Plant list, they often show up on site plans as required trees. An explicit statement that clearly states these shrubs do not count as trees will help with the implementation for canopy preservation and enhancement.

C. Plant material choices.

1. Existing vegetation. Existing landscaping or natural vegetation may be used to meet the standards, if protected and maintained during the construction phase of the development as specified in Section 33.248.065, and if the ~~materials~~ plants are not listed as prohibited on the Portland Plant List. When ~~the an existing trees-are~~ is at least 3 to 12 inches in diameter, measured 5 feet above the ground, each 1 inch diameter counts as 1 inch ~~triple~~ toward meeting the tree requirements of a landscaping or tree standard. When an existing tree is more than 12 inches in diameter each 1 inch counts as 3 inches toward meeting the tree requirement of a landscaping or tree standard.
2. Selection of materials. Landscape materials should be selected and sited to produce a hardy and drought-resistant landscape area. Selection should include consideration of soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Arborescent shrubs from the Portland Plant List may not be used to meet the tree requirement.
3. Prohibited materials. Plants listed as prohibited in the Portland Plant List are prohibited in required landscaped areas. Prohibited plants include plants identified by the Planning Director or the City Forester as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, etc.

Commentary

33.248.065 Tree Preservation Plans

The Tree Preservation plan is a new requirement and builds on the existing landscape plan requirement. A higher level of detail for tree information and protection is requested because existing trees are most vulnerable to damage in the one area that is not visible - the roots. When tree roots are damaged, the results are often not apparent for years. For this reason, detailed protection measures must be applied and followed when the tree preservation option is chosen.

Alternative tree preservation plans. For development that can not meet the requirements of Section 33.248.068, Tree Protection Requirements, an alternative tree preservation plan developed by a certified landscape architect or arborist may be proposed that shows how the tree and tree roots will be protected. We recognize that tree roots vary in size and cover, and if an arborist can design an alternative plan that still ensures the health of the tree, then we will accept the alternative.

The working group and Planning Commission wanted to create a balance between making it easy and economical for developers to preserve trees, and still ensure that the tree would live through the construction activity. There is no point in allowing a developer to meet the standard with existing trees, if adequate protection of the tree and its roots is not provided. In monitoring the effect of this standard, we will closely watch the options that are used by developers.

33.248.065 Tree Preservation Plans

A. When a tree preservation plan is required. A tree preservation plan must be submitted and approved when existing trees are used to meet a landscape or tree standard.

B. Elements of a tree preservation plan. A tree preservation plan includes both a site plan and a written statement. All of the following elements must be included:

1. A written statement that the trees to be preserved are healthy; and
2. A site plan that is drawn to scale and shows:
 - a. All trees to be preserved on the site, their species and diameter;
 - b. The location of water, sewer, and other utility easements;
 - c. The location of dry wells and soakage trenches; and
 - d. How the requirements of Section 33.248.068, Tree Protection Requirements, are met.

C. Alternative tree preservation plans. If the requirements of Section 33.248.068, below, cannot be met, an alternative tree preservation plan may be submitted by a certified arborist or landscape architect. The alternative tree preservation plan must show alternative means for tree protection and preservation, and include a statement by the arborist or architect that the plan provides the same level of protection as the requirements of Section 33.248.068.

Commentary

33.248.068 Tree Protection Requirements

These requirements ensure the protection of most of the root zone during and after construction. They apply only if a developer chooses the tree preservation option.

Although none of these requirements are adjustable, we provide part of the flexibility of an adjustment with the alternative tree preservation plan as described in 33.248.065.C.

33.248.068 Tree Protection Requirements

A. Where these requirements apply. These requirements apply to all trees shown on a tree preservation plan.

B. Construction fencing. A construction fence must be placed around each tree at the edge of the root protection zone. The fence must be placed before construction starts and remain in place until construction is complete. The fence must meet one of the following:

1. The fence must be 6 foot high orange plastic and be secured to the ground with 8-foot metal posts, or
2. The fence must be 6 foot high steel on concrete blocks.

C. Development limitations. Within the root protection zone of each tree, the following development is not allowed:

1. New buildings;
2. Grade change or cut and fill during or after construction;
3. New impervious surfaces;
4. Utility or drainage field placement;
5. Staging or storage of materials and equipment during construction; and
6. Vehicle maneuvering areas during construction.

Commentary

33.930 Measurements

33.930.130. Measuring Tree Diameter

Change the way existing trees are measured to match the industry standard which uses diameter measured at 4 $\frac{1}{2}$ above the ground, and add the measurement standard for new trees which is caliper inch.

33.930.140. Determining the Root Protection Zone.

Tree roots are very susceptible to damage during construction - they can be severed, compacted, or suffocated, resulting in the death of the tree several years after construction has ended. If a tree is going to be protected during construction, protecting the roots is critical.

However, it is difficult to create a standardized measurement or definition of the root zone because tree roots vary in size, coverage, and reach due to species, soil type, and topographical differences. The methodology that provides very accurate measurement requires higher math skills, and the simplest technique of following the drip line is very inadequate for most coniferous trees.

The recommended method is a compromise developed by an arborist on the working group that more accurately protects the root zone of all trees and is simple to follow and administer.

**AMENDMENTS TO CHAPTER 33.930
MEASUREMENTS**

33.930.130 Measuring Tree Diameter

Tree diameter is measured in two ways:

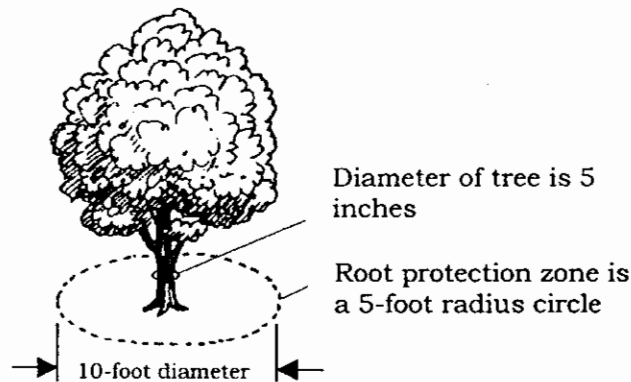
A. Existing Trees. Existing trees are measured at a height of $5\ 4\ \frac{1}{2}$ feet above the ground. Trees on slopes are measured from the ground level on the lower side of the tree. If the tree splits into multiple trunks below $5\ 4\ \frac{1}{2}$ feet, the trunk is measured at its most narrow point below the split.

B. New Trees. New trees are measured in caliper inch, which is the diameter of the trunk 6 inches above the ground.

33.930.140 Measuring the Root Protection Zone

The root protection zone is a circular area around a tree that is based on the diameter of the tree. Each 1 inch diameter of tree equals 1 foot radius for the root protection zone.

Figure 130-18.
Measuring the Root Protection Zone



Appendix A

Existing Base-zone Landscape Requirements

as found in the Landscape Requirements for new development or alterations that exceed \$25,000.

Development Type	Zones															Industrial & Employment						
	Single Dwell. RF - R2.5	Multi-Dwelling					Commercial					EG1, EG2, IG2	EG1, IG1, EX, IH									
		R3	R2	R1	RH	RX	CN	CO	CG	CM	CS			CX								
House or duplex	none	35% of site area	30% of site area	20% of site area	15% of site area	none	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	none	none	by CU	by CU				
Attached Houses	none	35% of site area	30% of site area	20% of site area	15% of site area	none	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	none	none	by CU			
Manufactured Home	NA	35% of site area	30% of site area	20% of site area	15% of site area	none	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	none	none	by CU	by CU		
Commercial	NA	NA	NA	NA	NA	none	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15% of site area	15%* of site area	15%* of site area	none	none		
Industrial & Employment	NA	NA	NA	NA	NA	NA	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15%* of site area	15% of site area	15% of site area	none	none

* 15% landscaping required when use is allowed by right or through a conditional use review.

LANDSCAPING. The basic landscaping requirement (L1) has two different requirements for trees and shrubs. Where the area to be landscaped is less than 30 feet deep, the standard is **one tree per 30 linear feet**. Where the area is 30 feet deep or greater, the requirement is one tree per 800 square feet and either two high shrubs or three low shrubs per 400 square feet of landscaped area. The shrubs and trees may be grouped. Ground cover plants must fully cover the remainder of the landscaped area.

Trees. Trees may be deciduous or evergreen. Deciduous trees at the time of planting must be fully branched, have a minimum diameter of 1 3/4 inches, measured 5 feet above the ground, and have a minimum height of 8 feet. Evergreen trees at the time of planting must be fully branched and a minimum of 6 feet in height.

Existing vegetation. Existing landscaping or natural vegetation may be used to meet the standards, if protected and maintained during the construction phase of the development and if the materials are not listed as prohibited on the Portland Plant List. When the existing trees are at least 12 inches in diameter, measured 5 feet above the ground, they may count triple towards meeting the tree requirements of a landscaping standard.

Appendix B

Proposed Base-zone Landscape Requirements

required in addition to Landscape Standards described in Appendix A

Development Type	Zones														
	Single-Dwell. RF - R2.5	Multi-Dwelling						Commercial						Industrial & Employment	
		R3	R2	R1	RH	RX	CN	CO	CG	CM	CS	CX	EG1, EG2, IG2	EG1, IG1, EX, IH	
House or Duplex	T1	T1 +35% of site area	T1 +30% of site area	T1 +20% of site area	T1 +15% of site area	none	T1 +15% of site area	T1 +15% of site area	T1 +15% of site area	T1	T1	by CU	by CU		
Attached Houses	T1	T1 +35% of site area	T1 +30% of site area	T1 +20% of site area	T1 +15% of site area	none	T1 +15% of site area	T1 +15% of site area	T1 +15% of site area	T1	T1	by CU	by CU		
Manufactured Home	T1	T1 +35% of site area	T1 +30% of site area	T1 +20% of site area	T1 +15% of site area	none	T1 +15% of site area	T1 +15% of site area	T1 +15% of site area	T1	T1	by CU	by CU		
Commercial	NA	NA	NA	NA	NA	none	15% of site area	15% of site area	15% of site area	none	none	15%* of site area	none		
Industrial & Employment	NA	NA	NA	NA	NA	NA	15%* of site area	15%* of site area	15%* of site area	none	none	15% of site area	none		

* 15% landscaping required when use is allowed by right or through a conditional use review.

Tree Residential Trees

The T1 standard is a tree requirement for new residential development. It is applied in all zones where residential uses are allowed, to preserve and enhance tree canopy. The standard provides 3 ways to meet the requirement: preservation of existing trees, planting new trees, or, paying into a tree fund. Any combination of the 3 options is allowed. Adjustments to this requirement are prohibited; when adjustments to other landscaping standards are sought, one of the tree options from this section must be used.

Required materials. The T1 standard requires a minimum of 2 inches of tree per 1000 square feet of site area. On lots that are smaller than 3,000 square feet, the minimum requirement is 3 inches of tree per site.

APPENDIX C

Tree Preservation and Planting Concept Issues Report

Summary of Issues, Staff Recommendations, and Planning
Commission Recommended Action

From Public Testimony at the May 26, 1998
Planning Commission Hearing

City of Portland
Bureau of Planning
Portland, Oregon



July 1998

Table of Contents

(The following is a list of issues presented in order of testimony.)

Issue No.	Issue	Page
1	Change in caliper inch requirement between lot sizes	1
2	Application of tree policy to high density zones	2
3	Purpose behind tree policy and canopy replacement	3
4	Tree policy in commercial zones	5
5	Tree buffers around properties and trees on lot lines	6
6	Tree fund issues	7
7	Street tree requirements and the proposed policy	8
8	Inspections during non tree planting seasons	9
9	Variations on the minimum caliper inch standard	10
10	Definition of a tree	11
11	Emphasizing retention rather than replacement	12
12	Flexibility to allow sun and shade on properties	13
13	Need for an impact analysis of the proposal	14
14	Tree surveys	15
15	Ecoroofs and other mitigation for storm water	16
16	Parking lot trees	17
17	Tree maintenance plans	18
18	Inspection and enforcement	19
19	More information from Urban Forestry Commission	19
20	Homebuilders' concerns	20

Issues Raised in Verbal or Written Testimony to Planning Commission Regarding the Tree Replacement Concept Proposal

Following is a report of the issues raised at the Planning Commission hearing on May 26, 1998. The Planning Commission accepted written and verbal testimony regarding the proposed *Tree Replacement Concept*. This report outlines the issues that were raised, provides discussion on the issues and offers staff recommendations for action regarding each issue. The Planning Commission's Recommended Action has subsequently been added to the original report for each issue to capture and reflect their recommended action which are now also reflected in the report itself.

Issue 1: Change in caliper inch requirement between lot sizes

The caliper inch requirement changes from three inches on a 2,500 square foot residential lot to six inches on a 3,000 square foot lot. What is the reasoning behind the sharp increase in caliper inch requirements?

Interested Persons:

Rick Michaelson

Discussion:

The proposal was intended to recognize the limited flexibility available on smaller lots. Lots greater than 2,500 sq. ft. were considered to have the flexibility to plant two or more trees. The caliper inch requirement increases sharply because staff initially believed lots between 2,500 and 4,000 sq. ft. were few in number. Upon further review, staff finds that that there are more lots in the 2,500-3,000 sq. ft size created in PUDs or exist as substandard lots. Staff recommends a modification accordingly. The issue of shading is considered under Issue #12. In general, the variety of trees species and sizes together with the tree fund option, creates enough flexibility to adapt to site conditions such that shading should be the exception and not the rule.

Recommendation:

Staff recommends changing the proposed standard from three caliper inches for lots 2,500 sq. ft. or less to 3,000 sq. ft. or less. (Lots above 3,000 sq. ft. are proposed to have two caliper inches per 1,000 sq. ft.)

Planning Commission Action:

Approve staff recommendation. Change the lot size threshold for the application of the caliper inch minimum for three inches from 2,500 square feet to 3,000 square feet.

Issue 2: Application of tree policy to high density zones

Staff has recommended to exempt from the proposed tree replacement requirement, high density zones where close to full lot coverage is allowed. What if the developer chooses to build at less than the maximum density allowed? Is there an option to initiate the tree requirement in those cases?

Interested Persons:

Rick Michaelson
Amanda Fritz
Anthony Boutard
Charlotte Uris

Discussion:

Staff recommended excluding high density and high intensity zones because of the expectation that development would be built at near full lot coverage. Further, we wanted to encourage and retain this feature for meeting a variety of other city and regional growth management purposes. A tree requirement in these higher density zones would hinder regional density goals. A developer who decides to build at less than full lot coverage in higher density residential zones is already subject to tree planting requirements as part of their required landscaping.

Although less dense development in higher density zones may use a proportionately larger part of the site for parking, the *Zoning Code* requires higher levels of landscaping for side yard, parking, as well as street trees. In other words, where less than the maximum lot coverage occurs, the 15 percent required landscaped area proportionately

increases the non-built site area. The multidwelling chapter, 33.120.235, requires landscaping to at least the L1 standard, where one tree must be planted every 30 feet. Any surface parking requires interior and perimeter landscaping that includes trees. Planning staff now makes recommendations for the appropriate type of trees to be used in parking lot landscaping. In addition, surface parking lots are subject to the proposed increase in tree planting requirements in commercial and industrial new development. Attempting to implement a different standard and a partial tree requirement based on the percentage of lot coverage would create a level of complexity that does not meet the objective of keeping the code manageable and easy to administer for permit center staff. Lot coverage is seldom at the maximum, and thus would require a separate calculation. The current method of applying the 15 percent landscaping requirement to the site area is adequate and preferable. (See issue #4).

Recommendation:

Retain the proposed recommendation to exclude higher density zones allowing 85-100 percent lot coverage. Rely on the required landscaping requirements in 33.120.235.

(See Issue #4 recommendation.)

Planning Commission Action:

Approve the staff recommendation. Retain the current landscaping requirements in high density zones.

Issue 3: Purpose behind tree policy and canopy replacement

What is the intention or expectation behind the tree replacement policy? Is it to increase the urban forest canopy? If so, will this policy actually increase canopy while maintaining flexibility for private property owners? For example, do columnar and small trees significantly increase canopy coverage? Can we define urban tree or forest canopy?

Interested Persons:

Rick Michaelson

Joe Porascky

Steve Naito

Discussion:

The goal of the proposal was twofold: first, to preserve the current level of tree canopy while recognizing that as new development occurs, there was an opportunity to add to and enhance the tree canopy over time. That this proposal can achieve these goals is borne out by findings showing that most new residential development is not significantly contributing to canopy now. In combination with the Title 34 rewrite project and proposed tree retention approval criteria, both proposals can significantly contribute to retaining and enhancing tree canopy as new development occurs. As the *Urban Forestry Management Plan* points out, canopy alone is not the only benefit to be achieved in tree planting. A second goal was to attain the many environmental, energy, social and economic benefits that trees and tree canopy provide.

The proposal intended that a wide variety of tree types and species would contribute to the canopy where little or no planting is now occurring. A second purpose was to provide incentives to preserve existing trees by having their caliper inch size count toward the requirement. Preserving existing trees makes it easier to meet the requirement. Even columnar trees add to the canopy.

The term "urban forest canopy" is a phrase used to define Portland's urban trees in total. It is used extensively in Portland's *Urban Forestry Management Plan*. It is not meant to convey the canopy of the traditional forest. It is a term that is synonymous with the term, "urban forestry," which is defined in the *Zoning Code*, Title 20, Parks and Recreation, as follows:

N. Urban Forestry has as its objective the cultivation and management of trees and related plants for their present and potential contribution to the physiological, sociological, and economic well-being of urban society. Inherent in this function is a comprehensive program designed to educate the urban populace on the role of trees and related plants in the urban environment. In its broadest sense, urban forestry is one essential component of a multimanageial system that includes watersheds within the City, wildlife habitats, outdoor recreation opportunities, landscape design, recycling of municipal vegetative wastes and tree care in general.

To those who specialize in this field, it is accepted industry terminology used nationally. In this context, it is meant to apply to the Portland area rather than an individual neighborhood, development, or lot. The qualifier in this phrase is the word "urban." As one testifier (Boutard) explained, an urban forest may be defined as a city having 10 percent or more tree canopy as defined by the U.S. Forest Service. The operating assumption in the management plan is that Portland fits this definition.

The tree replacement concept is expected to add or maintain some level of tree canopy coverage in areas that either had no trees prior to development or they were removed. While the ideal is large spreading tree canopy, the reality for private property is to achieve some tree canopy first, even if it means sacrificing the ideal. The policy is intended to provide some assurance that trees will be planted on residential lots when trees are cleared for development or no trees have existed for many years or even decades. The assumption is that the net tree canopy will be increased because the current rate of land divisions are clearly removing canopy or not replacing it. Spreading trees is the best option for increasing tree canopy; however, because this policy would apply to private property, the flexibility and options allowed private property owners is essential. Staff defers to the authors of the *Urban Forestry Management Plan* who recognized the need for tolerance both on private property and in urban areas in general.

Columnar and small trees will provide similar, although less, environmental benefits. A small tree or columnar is better than no tree, and depending on the available growth envelop, may be appropriate. Rather than seeking optimum canopy coverage, this proposal is also intended to provide a flexible and practical solution to tree retention or replacement during development. The benefits of larger spreading trees where the growth envelop can accommodate such a tree depends on a number of variables. It is also a matter of education. The working group opted not to apply prescriptive standards on private property and in so doing also make it easier to administer over the permit counter. Further adding definitions or standards to prescribe certain tree species would add a level of complexity to the code that in this instance was felt to be unacceptable.

Recommendation:

Retain the use of the term "urban forest canopy" in the report. Recognize that it is term used in the *Urban Forestry Management Plan*, and nationally by practitioners. Amend the report to explain how the term is meant to apply in the proposal recognizing that the term is meant to mean different things depending on how it is applied in an urban setting. While the term is probably meant to apply in those situations that are more ideal for large canopy spreading species, it does not exclude nonspreading varieties.

Planning Commission Action:

Approve staff recommendation.

Issue 4: Tree policy in commercial zones

A. Can the tree replacement requirement be applied when residential housing such as row-housing is built in commercial zones? Could the requirement be tied to the permit for the use or construction type rather than the zone to accommodate this issue?

B. Could commercial and other areas be required to pay money into the tree fund as part of this requirement?

Interested Persons:

Amanda Fritz
Marcy McInelly
Rick Michaelson
Michael Roach
Anthony Boutard
Charlotte Uris

Discussion:

This issue is similar to Issue #2 regarding lot coverage in higher density zones. Because of the inherent conflict in current landscaping and tree planting requirements in commercial zones, an entirely new landscaping chapter would need to be written. The proposed standards propose to use the base zone to define when the standards would apply is more practical and keeps code administration more manageable. Applying this standard to other zones increases the level of complexity. Staff generally agrees with the application of the proposed standards to residential uses in commercial or other mixed zones since it was the intent to have the standards apply to residential uses below an R1 level of density. However, using the proposed caliper inch standard to commercial zoned sites creates a conflict with the required 15 percent landscaping requirements (including trees). The result would be to create a much higher standard and unfair burden on commercial sites. Commercial zones already have required L1 landscaping standards and essentially accomplish the same objective. (See Issue #2 discussion.)

B. The tree fund was intended as an alternative. The tree fund was not intended as a tax. Requiring commercial areas to pay into a fund where there is no minimum tree planting requirement, other than landscaping, raises a concern over establishing a rational nexus for areas whose purpose is to achieve other desired land use objectives.

Recommendation:

Retain the proposed standards. Rely on required landscaping requirements to achieve the appropriate level of tree planting on commercial sites.

Planning Commission Action:

Approve staff recommendation with one exception. For attached housing (row houses) in commercial zones with no required landscaping, require the caliper inch tree standard to apply (i.e., CS and CM). This would be a deviation from applying the caliper inch standard by uses (zone by zone) rather than building type.

The purpose of this change is to recognize that regardless of zone that this housing type should also be subject to the requirement.

Issue 5: Trees as buffers and on lot lines

Can we require developers to protect trees on lot lines of developments? Should a buffer of trees be required in subdivisions and other large developments? Can this be done as part of the Title 34 code rewrite project?

Interested Persons:

Amanda Fritz
Rick Holt

Discussion:

This proposal addresses standards for permits issued on a lot-by-lot basis and cannot regulate owners of trees on adjoining lots. The Title 34 code rewrite project will address trees on lots prior to subdividing by proposing criteria for the retention and preservation of certain trees and tree stands. Presently, where an applicant for a land division is required to submit a tree preservation plan, the conditions of approval that specify trees to be preserved already contain development standards for proper tree protection. Title 34 is also the vehicle to address using trees as buffers in land divisions or larger developments. The tree replacement concept should be viewed in conjunction with the Title 34 Code Rewrite Project. The city also preserves trees on undeveloped sites through a tree cutting ordinance for sites of two acres or more. Case law regarding trees which overhang a neighboring property generally permits adjoining property owners to prune to the property line.

Recommendation:

Rely on the approval criteria being developed in the Title 34 rewrite project to preserve and protect trees and tree stands and provide buffers prior to approving a land division or subdivision.

Planning Commission Action:

Approve staff recommendation.

Issue 6: The tree fund

A. How will the tree fund be designed? Where will the money be spent?

B. Does the fund make it too easy for developers to ignore tree planting options?

Interested Persons:

Brian McNerney
Anthony Boutard
Charlotte Uris
Rick Michaelson

Discussion:

The design and use of the tree fund is ultimately the responsibility of the Parks Bureau's Urban Forestry Manager with the advice and consultation of the Urban Forestry Commission. The desires of the expert citizen members of the working group should be consulted for their ideas.

The Urban Forestry Manager indicated in testimony that he expected the fund to be used in ways that benefit those property owners who contribute to the fund whether it be additional street trees or a planting program for individual property owners. The Urban Forestry Manager will likely look to how to use the fund to mitigate in the area for which the fund resources are collected. Beyond this there may be "high need" or tree deficient neighborhoods or low income target areas. There may also be certain key streams or the Willamette River drainage system targeted for restoration as a result of the recent steel head Endangered Specie Act designation. It may be appropriate to use a voucher

program to select a tree at a nursery. The Urban Forestry Manager will need to work in cooperation with the City Attorney's office to develop findings and ensure that the tree fund meets a reasonable nexus test.

The \$150 per caliper inch charge for not meeting the tree planting requirement was set at a level that would encourage tree preservation and replacement. The proposed dollar amount was set by a working group that included the city's Urban Forestry Manager, an arborist, a forester, and a developer.

Recommendation:

A. Staff recommends that the Urban Forestry Manager develop a proposed tree replacement fund in cooperation with the City Attorney's office and other stakeholders including the Urban Forestry Commission. Staff recommends that such a proposal be developed before this proposal is heard by City Council.

Staff further recommends that before such tree fund proposal is recommended to City Council that the Planning Commission review it and make its recommendation to City Council. Staff should continue to work closely with the Parks Bureau, Urban Forestry Division, to refine these ideas and have a proposal by the time of the City Council hearing.

B. The per caliper inch charge should be retained as proposed and monitored after adoption. If, after implementation, it is determined to be too little or too large, it can be amended accordingly.

Planning Commission Action:

Approve staff recommendation.

Issue 7: Street trees

A. Are street trees assumed to be planted in addition to the tree replacement requirement? Could street trees help meet the requirement? Is this policy proposed in order to replace failed street tree requirements?

B. Staff needs to outline existing street tree requirements and how the tree replacement concept fits with existing policy. What about infill residential units that are approved under Title 33? Can they also be subject to street tree requirements?

Interested Persons:

Rick Holt
Rick Michaelson
Marcy McInelly

Discussion:

A. Street trees are regulated under Title 20 which is implemented and enforced by Parks and Recreation, Urban Forestry Manager. Street trees are required for all permits for construction over \$25,000 and in new subdivisions. This proposal assumed street trees will be planted as required by Title 20. The scope of this proposal was to citizen concerns and address trees on private property; not trees in the public right-of-way. The concerns raised by citizens and citizen experts testifying during the *Southwest Community Plan* hearings were concerned about the lack of tree preservation, replacement and planting of trees on private property. This proposal considered street trees to be a given as required now by Title 20. The suggestion that the policy is not working is a matter of implementation and enforcement. The Planning Bureau is working on another related proposal (Base Zone Design Regulations) that would amend Title 20 and extend street tree requirements to single dwelling development or infill development not now required. .

B. Street tree requirements are one piece of the city's tree protection measures. Tree planting and replacement on residential lots has become an issue as development increases in Portland as trees are not being planted on residential lots. The Planning Bureau had proposed using another related project (Base Zone Design Regulations) to extend street tree requirements to single dwelling development. While street trees and trees on private property serve a number of similar objectives, street trees serve a number of objectives beyond adding to the urban forest canopy. Among these objectives are that street trees provide relief for pedestrians and motorists along the sidewalks and parking strip, define the public space and development and provide many visual and aesthetic benefits.

Recommendation:

A. Retain the proposed standards on private property distinct from the city's requirements for street trees. Tree preservation, planting, and replacement on private property was the scope of this proposal because it had been identified by citizens as a major concern and was the directive from the Planning Commission to study. A recent staff survey of newer developments confirms citizen concerns. Highlight for City Council a

Planning Commission recommendation to enforce current street tree code requirements and to require street trees for infill projects.

B. Rely on the Base Zone Design Regulations Project to amend the code to require street trees for infill development.

Planning Commission Action:

A. Correct the apparent deficiencies in the inspection and enforcement for required street tree planting in subdivisions currently contained in Title 20, Parks and Recreation. Staff shall consider moving this requirement to Title 33 to assure that the authority for enforcement occurs through the Bureau of Buildings. (A number of inter-bureau issues need to be resolved to assure that this requirement can be implemented with the agreement of all affected Bureaus). Subdivisions involve the creation of more than three lots.

B. Amend Title 33 to add a new requirement that all permits for residential infill housing are required to meet the street tree requirement. This requirement would apply to permits for one, two or three units on existing lots or through partitioning. Amend the zoning code as a part of the entire package of tree preservation and planting changes and not wait until the Base Zone Design Regulations Project.

Issue 8: Inspections during non tree planting season

How can the Bureau of Buildings address inspections of housing completed when it is not appropriate to plant trees because of the season? Can temporary occupancy permits be issued?

Interested Persons:

Kermit Robinson
Rick Michaelson

Discussion:

This is an issue for the Bureau of Buildings inspection and enforcement. The Bureau of Buildings does not have, by definition, a certificate of occupancy for single dwellings. This tool would need to be added in order to provide the mechanism to allow deferred planting. However, further discussion of this issue by the urban forestry manager revealed that tree planting of the type and scale proposed can be accomplished year-round. Under Title 33.248.070, Installation and Maintenance, the

current *Zoning Code* allows for landscaping installation to be deferred no more than six months.

Recommendation:

Request the Bureau of Buildings to amend their code to allow for a certificate of occupancy or other tool for single dwellings to accomplish the deferred planting goal. Include this request in a section on other recommendations to City Council.

Later discussion during the Planning Commission's work session revealed that current requirements are adequate. On the advice of the Urban Forestry Manager the Commission was convinced that tree planting could occur on a year-round basis.

Planning Commission Action:

Accept the Urban Forestry Manager's advice and recommendation not to implement a new inspection process for allowing deferred planting.

Issue 9: Variations on the minimum caliper inch standard

A. Minimum caliper inch standards limit the type of tree planted and increase cost to property owner. Could the minimum caliper inch be lowered to one inch for residential projects and still ensure a good survival rate of trees?

B. Should there also be a minimum distance requirement for spacing between trees?

Interested Persons:

Amanda Fritz
Anthony Boutard
Joe Porascky
Sarah ffitc

Discussion:

A. In the professional opinion of the Urban Forestry Manager, it is better to have trees planted at the two caliper inch minimum in residential areas rather than reducing it to one inch as suggested. Since the city will be unable to effectively police every individual maintenance and care,

a hardier tree is a better trade-off than increasing the availability of several more species. The relatively few number of native species trees only available below the two inch proposed standard does not warrant change. Smaller trees are not prohibited. If a developer or homeowner desires the smaller species they can still plant them or they can pay for the balance. The tree fund was intended to satisfy potential variations and do so in lieu of using the adjustments process – another land use review .

B. The members of the working group preferred flexibility on this issue over additional prescribed standards. There are too many variables to expect to realistically prescribe one standard for tree spacing for tree planting. Spacing is dependent on tree type and relationship to other existing trees and structures.

Recommendation:

- A. Retain the two caliper inch proposed standard for residential areas.
- B. Do not prescribe a minimum tree spacing requirement.

Planning Commission Action:

- A. Reduce the minimum caliper inch size for planting new trees in residential zones from the proposed 2.0 to 1.5 inches.

This is intended to allow property owners greater flexibility in selecting tree specie types, especially natives, and recognize that many species can only be found as nursery stock, and that adaptability and survival is improved with planting early in their life cycle when they are small in diameter.

- B. Accept staff recommendation.

Issue 10: Definition of a tree

A. Should the tree replacement policy include a definition of tree in order to differentiate between trees and shrubs?

B. Could the bureau implement a height requirement after 15 years in order to allow for a variety of trees but not allow for ornamentals and shrubs? Obnoxious species such as Cottonwood and Alders should not be counted towards tree standard.

Interested Persons:

Amanda Fritz
Anthony Boutard
Jeanine Jones

Discussion:

A. This issue raises the question of whether the code can reasonably set a standard for specie type or tree size. It also raises the issue of how far to go with prescriptive standards that are non-discretionary, clear and objective, and can be administered over the counter. The Planning Bureau staff uses a recognized reference document, the *Western Garden Book*. The working group did not see a need to define trees, opting instead for flexibility for developers and homeowners. Planning staff relied on the expert and professional judgment of the Urban Forestry Manager as to the appropriateness of such a definition. Planning staff and the Forestry Manager concluded that unless there was a compelling reason to limit tree type or specie, adding a specific definition was not necessary at this time. The *Zoning Code* uses a Prohibited Plant List for environmental zones only.

B. The proposal intended that a wide variety of trees can achieve the project goals. Planning staff found no evidence that undesired species such as cotton wood or alder are being planted by applicants for new development. Requiring a standard that specifies that only trees be planted that can attain a certain height after so many years or at maturity would require a specific list to be used over the counter and in the field and a level of knowledge among inspectors in the field beyond the scope of their training.

Recommendation:

A. Rely on the expert opinion of the Urban Forestry Manager. Do not attempt to define tree, recognizing that the minimum caliper inch size requirement will to a degree influence the type of tree to be planted.

B. Retain the current proposed standards.

Planning Commission Action:

- A. Accept staff recommendation.
 - B. Accept staff recommendation.
-

Issue 11: Tree replacement versus retention

A. The tree replacement concept is too focused on replacement and should emphasize tree retention.

B. Could the proposal name be changed to the *Tree Preservation and Planting Concept*?

Interested Persons:

Leann McCall
Allen Shearin
Charlotte Uris

Discussion:

A. The proposal was set up to create an incentive for preservation while not adding to the complexity of the building permit application process. By making it easy for existing trees to count toward the proposed standard, a strong incentive toward preservation exists. The Title 34 rewrite project presents an opportunity to do much more to preserve trees because it will apply approval criteria to existing trees prior to the creation of a land division and prior to any grading or tree removal. The proposal acknowledges the larger role for Title 34 to play in preservation of tree stands, and heritage trees and specimen trees. (See Appendix F, Excerpt from Land Division Code Rewrite Project: Tree Preservation Criteria.) In addition, the city has many other means used to preserve trees in high priority areas. This is one reason the city is as forested as it is. The city has an extensive system of environmental conservation and protection overlay zones with special regulations to preserve, protect, and mitigate for any tree loss. Trees are also protected in city parks and along the Willamette River Greenway.

B. The concept proposal name emphasizes the main element of the requirements, namely "replacement." Staff felt that preservation will be accomplished more through the Title 34 rewrite project and was concerned that citizens would have unrealistic expectations for the scope of this project. Staff struggled with finding the appropriate project title and acknowledges it may not completely describe all facets to this proposal. It could be renamed *Tree Preservation and Planting Concept*.

Recommendation:

A. Retain the proposal's current system for balancing tree preservation with planting and replacement.

B. Change the name to *Tree Preservation and Planting Concept*.

Planning Commission Action:

- A. Accept staff recommendation.
 - B. Accept staff recommendation.
-

Issue 12: Shading on small lots

Will rowhouses and other dense forms of housing development on small residential lots be completely shaded under this requirement? Can the policy allow enough flexibility to allow properties to get sunlight and shade?

Interested Persons:

Rick Michaelson
Rick Holt
Leann McCall

Discussion:

First, the working group's analysis showed that mature trees could be maintained on the site of a rowhouse at either 2,000 or 2,500 sq. ft. Second, by not dictating the size or specie of tree permitted to be planted the proposal allows flexibility by allowing smaller varieties and columnar trees. Third, the tree fund allows the option to buy out of the requirement. The working group members analyzed several lot size configurations and concluded that the size and number could work in the vast majority of instances. Generally, there should be enough room for a developer or owner to plant in either the front or rear yard. However, it is acknowledged that the standard in combination with the larger mature spreading canopy of street trees there may not be much sunlight which enters the lot. By increasing the lot size from 2,000 to 3,000 sq. ft. for the three inch caliper on small lots, additional lots will be provided the lower planting requirement.

Recommendation:

Retain the minimum caliper inch standard for the smaller lots at the revised 3,000 sq. ft. lot size threshold.

Planning Commission Action:

Accept the staff recommendation.

Issue 13: Need for an impact analysis of the proposal

Can an impact analysis be done for this proposal to show if it will actually result in a net loss of trees?

Interested Persons:

Lynne Herman-Walker

Discussion:

Without a specialized and exhaustive study, inventory and analysis, it is virtually impossible to determine with certainty the impact on canopy as new development occurs against the proposed standards. Clearly, by putting the regulations into effect, the city stands a far greater opportunity to preserve, add to, and enhance canopy than if no requirement is put into effect. The Planning staff's analysis showing the amount of development over the past three years, its location and the lack of planting as evidenced by visual survey and slides presented, clearly shows the opportunities to greatly improve tree planting over time.

Recommendation:

Rely on the Urban Forestry Division and other friends of trees groups to periodically review the status of the city's tree inventory. Use the updates of the *Urban Forestry Management Plan* to provide this monitoring and recommendation from staff to the Urban Forestry Commission and City Council.

Planning Commission Action:

Accept staff recommendation.

Issue 14: Tree survey

- A. Tree surveys are required for tree preservation but not for tree clearing. Does this place an onerous requirement on those who wish to preserve trees?
- B. Is the requirement to fence the drip line enough to preserve trees?
- C. Do tree surveys need to be completed by a certified arborist?

Interested Persons:

Lynne Herman-Walker
Joe Porascky
Allen Shearin

Discussion:

A. Tree clearing is addressed through city code and enforcement. Tree clearing is a matter regulated under the recent enactment of Title 20, Tree Clearing Ordinance. The tree survey required under this proposal has a different purpose. It is intended to identify and record on the site plan those trees being used to satisfy some or all of the per lot caliper inch standard. This can be done by the applicant or homeowner and is a relatively simple and inexpensive activity.

B. Yes. Among the working group experts, an arborist, a forester, and the City Forester, the drip line was deemed to be adequate under the terms of the ordinance. It was also felt to be the most acceptable, most certain means of determining the location of the boundary for purposes of inspection and enforcement by inspectors in the field.

C. A tree survey does not need to be completed by a certified arborist. The working group did conclude that a tree preservation plan be done by a certified arborist. The working group members reviewed this and concluded that the survey could be performed by an applicant. They also concluded that this would be too onerous a requirement and could discourage tree preservation.

Recommendation:

A. Retain the requirement for a tree survey. Do not add a requirement for the survey to include clearing as this is an element of the Tree Clearing Ordinance and the Title 34 Land Division Code.

B. Retain the drip line as the development standard for protecting the preserved tree from undesirable encroachment.

- C. Retain the requirement that the tree survey can be done by the applicant.

Planning Commission Action:

- A. Accept staff recommendation.
 - B. Accept staff recommendation. (Consider alternative method for defining disturbance area described in written testimony from the Urban Forestry Commission at the hearing phase of the ordinance.)
 - C. Accept staff recommendation.
-

Issue 15: Ecoroofs and other mitigation for stormwater

Could ecoroofs, roof top gardens and other types of on-site mitigation for stormwater be included in this proposal? Could the policy give incentives for ecoroofs or allow for ecoroofs in replacement of trees when no tree planting space is available?

Interested Persons:

Amanda Fritz
March McInelly
Lynne Herman-Walker
Jay Mower
Gail Curtis

Discussion:

Generally this is a good idea and is an interesting concept. The working group felt that this approach was beyond the scope of its charge. While some aspects of the benefits of trees and ecoroofs are similar, there are many other goals and benefits that the tree proposal is trying to accomplish. The benefits of ecoroofs are more central to benefits to stormwater run-off and water quality. Staff felt this idea was too complex at this time to integrate into this proposal without requiring a lot more study.

Recommendation:

Consider how ecoroofs can be encouraged by other means. Refer to the Bureau of Environmental Services.

Planning Commission Action:

Accept staff recommendation.

Issue 16: Parking lot trees

Standards for trees in parking lots need to be improved. Too many parking lots have columnar trees where spreading trees would be more beneficial to the environment.

Interested Persons:

Joe Porascky
Jay Mower

Discussion:

The working group addressed this issue by proposing to significantly increase the size requirement for trees in required landscaping areas to be consistent with the street tree requirement – from a minimum of 1.75 inches DBH now to 3.5 caliper inches. The *Zoning Code* requires both interior and exterior (perimeter) landscaping. Planning staff makes recommendations to applicants now about the appropriate size and tree specie as appropriate. Planning staff feel that requiring a tree plant list for parking lot landscaping requires more study. At this time it would slow down the implementation of this proposal. It would also add a level of complexity to the code. Planning staff prefers that if a list is developed that it be applied outside the code since lists are frequently changed or modified. This issue should be referred to the Urban Forestry Division as any specie-specific tree list and requirement should be based on their recommendation. The Base Zone Design Regulations Project will consider and make recommendations on improvements to the street tree planting requirements.

Recommendation:

Do not attempt to implement a new specie-specific tree list for parking lots at this time. Consider a specie-specific tree list during the code language adoption phase.

Planning Commission Action:

Accept staff recommendation.

Issue 17: Tree maintenance plans

Trees need to be monitored for survival after planting. After care maintenance plans should be required for at least three years after planting to ensure survival of trees.

Interested Persons:

Joe Porascky

Discussion:

This is a good idea; however, it is beyond the resource capability of the Planning staff or Planning Commission to authorize inspection and enforcement and any additional standards may not be appropriate for the *Zoning Code*. This is a level of specificity for individual house permits on private property would be difficult to enforce. The *Zoning Code* has a requirement now that says that applicants/owners must maintain landscaping including trees in good condition (33.248.04). Given the numbers of residential permits issued in the city, additional after-care maintenance requirements may be too great a burden to expect building inspectors to gain access to monitor on private property. This should be referred to the Bureau of Buildings for further comment. The Bureau of Buildings will need to prepare a budget impact analysis before any ordinance is adopted. The Blueprint 2000 reorganization of the development review process has some recommendations for improved inspection and enforcement where this idea can be referred for consideration.

Recommendation:

Include a recommendation from the Planning Commission to City Council under an "other recommendations section" to consider additional funding for increasing the number of inspectors and the training needed to identify landscape materials, including trees on the site and check to see whether landscape plans were followed.

Planning Commission Action:

Accept staff report.

Issue 18: Inspection and enforcement

Enforcement is a big issue. Funding should be provided for hiring and training more code inspectors. Implementation of the code should be surveyed for success. Planning Commission may want to request funding from City Council for implementation of the tree replacement policy. The policy should have "teeth" to assist in enforcement.

Interested Persons:

Amanda Fritz
Joe Porascky
Allen Shearin
Charlotte Uris
Jim Worthington
Jay Mower
Lynne Herman-Walker

Discussion:

See Discussion in Issue #17 above.

Recommendation:

Include a recommendation to City Council about the need for additional manpower and training for inspection and enforcement through the Bureau of Buildings.

Planning Commission Action:

Accept staff recommendation.

Issue 19: Information from Urban Forestry Commission

The Urban Forestry Commission offered to give the Planning Bureau more information regarding several issues raised during the hearing, including a standard to replace the "drip line" requirement. The bureau should seek out this information.

Interested Persons:

Steve Abel
Joe Porascky

Discussion:

Staff contacted the Commission Chair and the Urban Forestry Manager to obtain more information on development standards, particularly as it relates to a different definition from “drip line” as a means to protect preserved trees. At the time of the report no additional information had been received.

Recommendation:

Retain proposed development standards to protect preserved trees that count toward the caliper inch standard. Consider additional changes after proposed code language is prepared and presented.

The Urban Forestry Commission proposed an alternative to the “drip line” method for defining ground disturbing activity in a letter written to the Commission after the Commission’s work session and action. Proposed changes to the “drip line” method can be heard and considered during hearings on the proposed ordinance.

Planning Commission Action:

Accept staff recommendation.

Issue 20: Homebuilders’ Concerns

- A.** Is the tree replacement concept justified? There are no facts to support the need for a tree replacement policy. Builders already plant trees because it makes good business sense.
- B.** The tree replacement concept will create unnecessary added costs for developers.
- C.** Homeowners often remove trees after a sale or as a condition of a sale. Property owners need to be educated and given incentives to preserve and plant trees.
- D.** The caliper inch standard should be used for both existing and replacement trees rather than using diameter at breast height for existing trees.
- E.** The proposed tree protection standards will add unnecessary costs and delays to development. The homebuilders suggest using a bonding requirement or other such measure that would eliminate an atmosphere where builders feel they are continually being watched by planning

officials. They support the option of having a landscape architect approve tree preservation plans.

F. The \$150 per required caliper inch for the tree planting fund is too much because it is higher than the actual amount the city would have to pay to plant a tree.

G. The homebuilders urge Planning Commission and the Planning Bureau to consider this policy in light of cumulative added costs to development from the results of recent fee increases and other proposed city policies.

Interested Persons:

Kelly Ross, Homebuilders Association of Greater Metropolitan Portland

Discussion:

A. The concept report provides data, analysis and photos about the need and justification for this proposal. Staff conducted on-site surveys of a representative sample of several subdivisions developed over the past three years. Staff found a dramatic lack of tree planting had occurred during a period of record growth and development. Staff found that developers were not planting new trees contrary to the assertions of the home builders. Staff has also found that there are instances where subdivisions have been required to have a tree preservation plans as a condition of approval and that such plans are ignored. Further, citizen testimony during the Planning Commission hearing of the *Southwest Community Plan* and the concept report offers additional documentation.

B. Added cost will occur when new trees are required. When trees are preserved there may be no additional cost incurred. There is no evidence that the tree planting or preservation requirements to the minimum level called for under the proposal will add costs that have a significant impact on the cost of owning or renting a home. Additionally, as the homebuilders acknowledge, it is generally considered good marketing and a good economic benefit to include tree planting as element of any well-landscaped new home.

C. The staff experience is that, in general, trees are not being removed because trees are not being planted in the first place. Under this proposal the developer would have some obligation to disclose the requirement to the prospective buyer. The city's *Urban Forestry Management Plan* offers guidance and program implementation

opportunities to educate homeowners about tree planting. Tree removal would be subject to inspection and violation under city code.

D. The concept report explains that DBH is the appropriate standard to use for measuring existing trees to be preserved. The use of caliper inches is standard industry practice. Caliper inch is the best standard for measuring newly planted trees because this is the standard used by nurseries where trees are typically purchased.

E. The concept report explains the principles and objectives that guided the formation of the proposed standards. Among these is the intent to create clear and objective, nonvague and discretionary standards that can be administered over the counter. The working group adhered to this approach and in so doing created a set of standards that do not cause unnecessary delay. A bonding requirement for this proposal is unnecessary and would only in itself create added cost and delay. The tree fund is the equivalent of a bonding requirement because it provides total relief from the requirement. Planning staff supports the suggestion that landscape architects also be able to approve a tree preservation plan.

F. The tree fund charge is a disincentive to avoid the preservation of easily saved trees based on the expertise of an arborist and two foresters familiar with cost and industry practice for purchase and planting.

G. A budget impact analysis is required for any new regulation. Staff has identified that not only are housing costs considered, but also the Metro required buildable lands impact analysis. The budget impact analysis is a requirement at the time the proposal is developed into code language. Before any fee increases are approved, an impact analysis must be done and must consider principles of the cost of service study.

Recommendation:

A. No change.

B. No change.

C. No change.

D. No change.

E. No change. Except include landscape architects with arborists as qualified to provide and certify a tree preservation plan.

July 1998

F. No change.

G. No change. Evaluate cost and fee increase budget impacts for the proposed code language.

Planning Commission Action:

Accept staff recommendation on items A. through G.
