33.248 Landscaping and Screening

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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;
- Reduce stormwater runoff pollution, temperature, and rate and volume of flow;
- 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 non-invasive vegetation;
- Aid in energy conservation by providing shade from the sun and shelter from the wind;
- Restore natural communities and provide habitat through removal of nuisance plants and 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, preparation of the landscape or mitigation area, and timing of installation. Specific requirements for mitigation plantings are in 33.248.090.

The Portland Tree and Landscaping Manual contains additional information about ways to meet the regulations of this chapter. The *Portland Plant List* includes information about native plants, non-native, non-nuisance plants, and nuisance plants.

33.248.020 Landscaping and Screening Standards

Subsections A. through 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and screening required by this Title must comply with all of the provisions of this chapter, unless specifically superseded. 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). Trees preserved or planted to meet the requirements of Chapter 11.50, Trees in Development Situations count toward the landscaping and screening standards of this Title.

A. L1, general landscaping.

1. Intent. The L1 standard is a landscape treatment for open areas. It is intended to be applied in situations where distance is used as the principal means of separating uses or development, and landscaping is required to enhance the area in-between. While primarily consisting of ground cover plants, it also includes a mixture of trees, high shrubs, and low shrubs.

2. Required materials. The L1 standard has two different requirements for trees and shrubs. Ground cover plants must fully cover the remainder of the landscaped area.

   a. Where the area to be landscaped is less than 30 feet deep, the standard is one large tree per 30 linear feet, one medium tree per 22 linear feet, or one small tree per 15 linear feet. Trees of different sizes may be combined to meet the standard. Trees may be grouped.

   b. Where the area is 30 feet deep or greater, the requirement is either two high shrubs or three low shrubs per 400 square feet of landscaped area in addition to the trees required in 2.a, above. The shrubs and trees may be grouped.

B. L2, low screen.

1. Intent. The L2 standard is a landscape treatment which uses a combination of distance and low level screening to separate uses or development. The standard is applied where a low level of screening is adequate to soften the impact of the use or development, or where visibility between areas is more important than a total visual screen. It is usually applied along street lot lines.

2. Required materials. The L2 standard requires enough low shrubs to form a continuous screen 3 feet high. The shrubs must be evergreen. In addition, one large tree is required per 30 linear feet of landscaped area, one medium tree per 22 linear feet of landscaped area, or one small tree per 15 linear feet of landscaped area. Trees of different sizes may be combined to meet the standard. Ground cover plants must fully cover the remainder of the landscaped area. A 3-foot-high masonry wall or a berm may be substituted for the shrubs, but the trees and ground cover plants are still required. When applied along street lot lines, any required or nonrequired screen, wall, or fence is to be placed along the interior side of the landscaped area.

C. L3, high screen.

1. Intent. The L3 standard is a landscape treatment which uses screening to provide the physical and visual separation between uses or development. It is used in those instances where visual separation is required.

2. Required materials. The L3 standard requires enough high shrubs to form a screen 6 feet high. The shrubs must be evergreen. In addition, one large tree is required per 30 linear feet of landscaped area, one medium tree per 22 linear feet of landscaped area, or one small tree per 15 linear feet of landscaped area. Trees of different sizes may be combined to meet the standard. Ground cover plants must fully cover the remainder of the landscaped area. A 6-foot-high masonry wall may be substituted for the shrubs, but the trees and ground cover plants are still required. When applied along street lot lines, any required or nonrequired screen, wall, or fence is to be placed along the interior side of the landscaped area.

D. L4, high wall.

1. Intent. The L4 standard is intended to be used in special instances where extensive screening of both visual and noise impacts is needed to protect abutting sensitive uses in areas and where there is little space for separation.

2. Required materials. The L4 standard requires a 6 foot high masonry wall along the interior side of the landscaped area. One large tree is required per 30 linear feet of wall, one medium tree per 22 linear feet of wall, or one small tree per 15 linear feet of wall. Trees of different sizes may be combined to meet the standard. In addition, four high shrubs are required per 30 linear feet of wall. Ground cover plants must fully cover the remainder of the landscaped area.

E. L5, high berm.

1. Intent. The L5 standard is intended to be used in special instances where extensive screening of both visual and noise impacts is needed to protect abutting sensitive uses, and where it is desirable and practical to separate a use by distance as well as sight-obscuring materials.

2. Required materials. The L5 standard requires a berm between 4 and 6 feet high. If the berm is less than 6 feet high, low shrubs that meet the L2 standard must be planted on top of the berm to assure that the overall screen height is 6 feet. In addition, one large tree is required per 30 linear feet of berm, one medium tree per 22 linear feet of berm, or one small tree per 15 linear feet of berm. Trees of different sizes may be combined to meet the standard. Ground cover plants must fully cover the remainder of the landscaped area.

F. F1, partially sight-obscuring fence.

1. Intent. The F1 fence standard provides a tall, but not totally blocked visual separation. The standard is applied where a low level of screening is adequate to soften the impact of the use or development, or where visibility between areas is more important than a total visual screen. It is applied in instances where landscaping is not necessary and where nonresidential uses are involved.

2. Required materials. Fences must be 6 feet high and at least 50 percent sight-obscuring. Fences may be made of wood, metal, bricks, masonry or other permanent materials. See Figure 248-1.

G. F2, fully sight-obscuring fence.

1. Intent. The F2 fence standard provides a tall and complete visual separation, and is intended to be used in special instances where complete screening is needed to protect abutting uses, and landscaping is not practical. It is usually applied in nonresidential situations.

2. Required materials. Fences must be 6 feet high and 100 percent sight-obscuring. Fences may be made of wood, metal, bricks, masonry or other permanent materials. See Figure 248-2.

Figure 248-1
F1 – Partially Sight-Obscuring

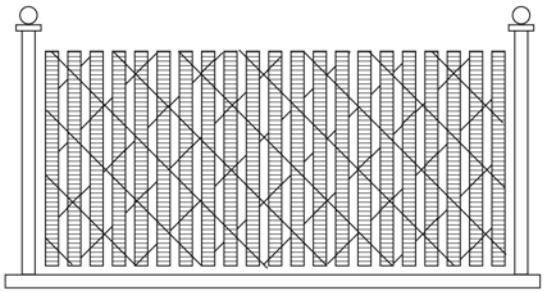
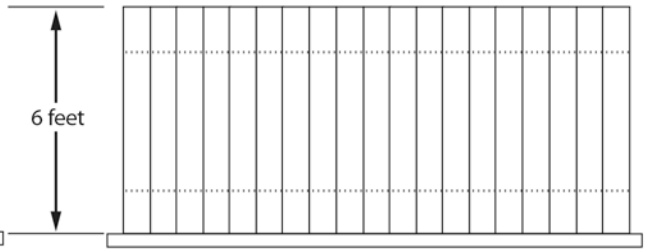


Figure 248-2
F2 – Totally Sight-Obscuring



H. P1, parking lot interior landscaping.

1. Intent. The P1 standard is a landscape treatment which uses a combination of trees, shrubs, and ground cover to provide shade, stormwater management, aesthetic benefits, and screening to soften the impacts of large expanses of pavement and vehicle movement. It is applied to landscaped areas within parking lots and associated vehicle areas.

2. Required materials.

   a. Trees. The P1 standard requires one large tree per 4 parking spaces, one medium tree per 3 parking spaces, or one small tree per 2 parking spaces. At least 20 percent of trees must be evergreen. Trees of different sizes may be combined to meet the standard.

   b. Shrubs. The P1 standard requires 1.5 shrubs per space. For spaces where the front two feet of parking spaces have been landscaped instead of paved, the P1 standard requires one shrub per space. Shrubs may be evergreen or deciduous.

   c. Ground cover plants. The P1 standard requires that the remainder of the area must be planted in ground cover plants. The plants must be spaced to cover the area within 3 years. Mulch does not count as ground cover.

33.248.030 Plant Materials

A. Ground cover.

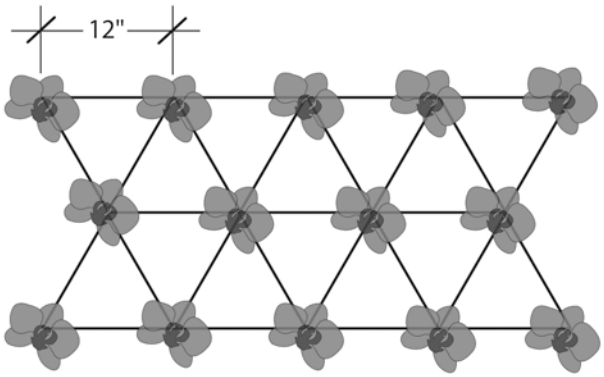
1. Ground cover required. All of the landscaped area that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses. Mulch (as

a ground cover) must be confined to areas underneath plants and is not a substitute for ground cover plants.

2. Size and spacing. Ground cover plants other than grasses must be at least the four-inch pot size. Area planted in ground cover plants other than grass seed or sod must be planted in triangular spacing (see Figure 248-3) at distances appropriate for the plant species. Ground cover plants must be planted at a density that will cover the entire area within three years.

   To use a ground cover plant not listed in the Portland Tree and Landscaping Manual, the applicant must provide the Bureau of Development Services with an objective source of information about the plant's requirements for spacing. Applicants are encouraged to provide information about the plant's watering needs, sun or shade preference, and climate zone hardiness. This information can come from published sources, Internet sources, or nursery information, for example, cut sheets.

Figure 248-3
Example of Ground Cover Planting on Twelve-Inch Centers



B. Shrubs. All shrubs must be of sufficient size and number to meet the required standards within 3 years of planting. Shrubs must be at least the one-gallon container size at planting.

C. Trees.

1. Planting size. Trees may be broadleaf or conifers and must meet the following:

   a. Broadleaf trees at the time of planting must be fully branched and must be a minimum of 1.5 caliper inches.

   b. Conifer trees at the time of planting must be fully branched and a minimum of 5 feet in height.

   c. Specific planting size requirements related to the mitigation, remediation, or restoration of landscaped areas in overlay zones and plan districts supersede the minimums of this paragraph. These minimum requirements do not apply to trees approved through an Environmental Review, or Pleasant Valley Resource Review to be used for mitigation, remediation, or restoration.

2. Size category.

   a. Trees are categorized as small, medium, or large using the formulas in C.2.c. The Portland Tree and Landscaping Manual's suggested plant lists include the size categories recognized by BDS for many trees.

   b. To determine the size category of a tree not listed in the Portland Tree and Landscaping Manual, the applicant must provide BDS with an objective source of information about the tree's mature height, crown spread, and growth rate. This information can come from published sources, Internet sources, or nursery information such as cut sheets. BDS will assign the tree to one of the size categories using the formulas in C.2.c, and will periodically update the suggested tree list to include newly categorized trees.

   c. The size of a tree is calculated according to the following formulas, which incorporate the estimated height and crown spread of a mature specimen and on the species' growth rate:

      (1) Small trees have a canopy factor of less than 40, medium trees have a canopy factor from 40 to 90, and large trees have a canopy factor greater than 90;

      (2) Mature height of tree x Mature canopy spread x Growth rate factor x 0.01 = Canopy factor;

      (3) The growth rate factor is 3 for fast-growing trees, 2 for medium-growing trees, and 1 for slow-growing trees.

3. Existing trees may be used to meet the standards of this chapter, as described in Paragraph D.1. Existing trees must be protected as specified in Title 11, Trees. See Chapter 11.60, Technical Specifications.

D. Plant material choices and preparation.

1. Existing vegetation. Existing vegetation except those plants listed on the Nuisance Plants List may be used to meet the standards, if protected and maintained during the construction phase of the development. Existing trees are counted as follows:

   a. Each tree at least 1.5 inches and less than 6 inches in diameter counts as one small tree;

   b. Each tree 6 or more inches in diameter counts as 1 medium tree for each full 6 inch increment. For example, a 19-inch tree would count as three medium trees, while an 11-inch tree would count as one medium tree;

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. Plant diversity.

   a. Trees. If there are more than 8 required trees, no more than 40 percent of them can be of one species. If there are more than 24 required trees, no more than 24 percent of them can be of one species. This standard applies only to trees being planted to meet the regulations of this Title, not to existing trees.

   b. Shrubs. If there are more than 25 required shrubs, no more than 75 percent of them can be of one species.

   c. Plants may be selected from the Portland Tree and Landscaping Manual's suggested plant lists or other sources.

4. Nuisance plants. Plants listed on the Nuisance Plants List are prohibited from being planted in City-required landscaped areas.

5. Landscaped area preparation. All new required landscaped areas must be cleared of groundcovers and shrubs on the Nuisance Plants List. All plants on the Nuisance Plant List must be removed from the lower 6 feet of the trees to be preserved in the landscaped area. Trees listed on the Nuisance Plants List are not required to be removed.

E. **Exceeding standards.** Landscaping materials that exceed the standards may be substituted for the minimums so long as all fence or vegetation height limitations are met, including the vision clearance standards of Title 16, Vehicles and Traffic.

F. **Complying with the standards.** It is the applicant's responsibility to show that the landscaping materials proposed will comply with the regulations of this chapter.

33.248.040 Installation and Maintenance

A. **Installation.** All required landscaping must be in-ground, except when in raised planters that are used to meet minimum Bureau of Environmental Services stormwater management requirements. Plant materials must be installed to current nursery industry standards. Plant materials must be properly supported to ensure survival. Support devices such as guy wires or stakes must not interfere with vehicular or pedestrian movement.

B. **Maintenance.** Maintenance of landscaped areas is the ongoing responsibility of the property owner. Required landscaping must be continuously maintained in a healthy manner. Plants that die must be replaced in kind. A fine may be levied if the landscaping has not been maintained, and new plants required to be planted.

C. **Irrigation.** The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All landscaped areas must provide an irrigation system, as stated in option 1, 2, or 3.

1. Option 1. A permanent built-in irrigation system with an automatic controller.

2. Option 2. An irrigation system designed and certified by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established. The system does not have to be permanent if the plants chosen can survive adequately on their own once established.

3. Option 3. Irrigation by hand. If the applicant chooses this option, an inspection will be required one year after final inspection to ensure that the landscaping has become established. An inspection fee, paid at the time of permit application, will be required.

D. **Protection.** All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas.

E. **Topping prohibited.** Topping is an extreme form of crown reduction. Topping of trees that are required by this Title is prohibited; required trees must be allowed to grow in their natural form. Topping is regulated as a tree removal by this Title and Title 11, Trees.

33.248.050 Landscaped Areas on Corner Lots

All landscaped areas on corner lots must meet the vision clearance standards of Section 16.70.800 of Title 16, Vehicles and Traffic. If high shrubs or other sight-obscuring screening is required by this Title, low screening must be substituted within vision clearance areas.

33.248.060 Landscape and Tree Plans

A. **Landscape plans.** Landscape plans must be submitted showing all landscaped areas. Plans must be drawn to scale and show type, size, number, and placement of materials. Materials must be identified with both their scientific and common names. Any required irrigation system must also be shown.

B. **Tree plans.** A tree plan may be required to comply with Chapter 11.50, Trees in Development Situations.

C. **Tree protection.** Where existing trees are used to meet the landscape standards or tree preservation requirements of this Title, tree protection meeting the requirements of Chapter 11.60, Technical Specifications must be shown on the landscape or tree plan.

33.248.070 Completion of Landscaping

The installation of any required landscaping may be deferred during the summer or winter months to the next planting season, but never for more than 6 months. All required landscaping must be installed prior to final inspection.

33.248.080 Street Trees

Street trees are not subject to the regulations of this chapter and are not counted toward any landscaping required by this chapter. See Title 11, Trees, for street tree requirements.

33.248.090 Mitigation and Restoration Plantings

Plantings intended to mitigate for the loss of natural resource values are subject to the following requirements. Where these requirements conflict with other requirements of this chapter, these requirements take precedence.

A. **Plant Source.** Plant materials must be native and selected from the *Portland Plant List*. They must be non-clonal in origin, seed source must be as local as possible, and plants must be nursery propagated unless transplanted from on-site areas approved for disturbance. These requirements must be included in the Mitigation Plan specifications.

B. **Plant Materials.** The Mitigation Plan must specify that plant materials are to be used for restoration purposes. Generally, this means that standard nursery practices for growing landscape plants, such as use of pesticides, fungicides or fertilizers, and the staking of trees must not be employed.

C. **Nuisance Plants.** Plants listed on the Nuisance Plants List are prohibited from being planted in mitigation areas, and may not be counted as existing vegetation.

D. **Landscaped Area Preparation.** All new required mitigation areas must be cleared or groundcovers and shrubs listed on the Nuisance Plants List. If the site is within the Environmental Overlay Zone, the Pleasant Valley Natural Resources Overlay Zone, and the River Natural and River Water Quality Overlay Zones in the Greenway Overlay Zone, then trees listed on the Nuisance Plants List must be removed from the required mitigation area.

E. **Installation.** Plant materials must be supported only when necessary due to extreme winds at the planting site. Where support is necessary, stakes, guy wires or other measures must be removed as soon as the plant can support itself.

F. **Irrigation.** The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. New plantings must be manually watered regularly during the first growing season. During later seasons, watering must be done as needed to ensure survival of the plants.

G. **Monitoring and Reporting.** Monitoring of landscape areas is the ongoing responsibility of the property owner. Plants that die must be replaced in kind. Written proof that all specifications of this section have been met must be provided one year after the planting is completed. The property owner must provide this documentation to BDS.

(Amended by: Ord. No. 165594, effective 7/8/92; Ord No. 166572, effective 6/25/93; Ord. No. 173533, effective 8/2/99; Ord. No. 174263, effective 4/15/00; Ord. Nos. 175341 and 175358, effective 3/16/01; Ord. No. 175837, effective 9/7/01; Ord. No. 176469, effective 7/1/02; Ord. No. 177701, effective 8/30/03; Ord. No. 178657, effective 9/3/04; Ord. No. 179316, effective 7/8/05; Ord. No. 179980, effective 4/22/06; Ord. No. 181357, effective 11/9/07; Ord. No. 182429, effective 1/16/09; Ord. No. 183534, effective 7/1/10; Ord. No. 184524, effective 7/1/11; Ord. No. 186053, effective 1/1/15.)