

City of Bend Right-of-Way (ROW) Development Guide



CITY OF BEND

This guide provides information for understanding street tree, landscaping, and irrigation standards and code requirements for the public right-of-way (ROW). The requirements outlined in this guide are in reference to BDC 3.2.400 and City of Bend Standard and Specifications Part II Chapter 12. This guide is complementary to these resources and intended to supplement them.

For more information:

Water Services - Water Conservation Program

Email: conservation@bendoregon.gov

Phone: 541-317-3000 ext. 2

What are the City of Bend's Street tree and Landscaping requirements?

On June 20th, 2024, the City of Bend adopted updated standards and code language pertaining to street trees, landscaping, and irrigation in the public right-of-way (ROW). The resulting ordinance, NS-2503, aims to promote healthy street-trees, low-water use landscapes and high-efficiency irrigation systems.

Street Trees

- [Standards and Specifications Part II Ch.12 Landscape and Irrigation Systems](#) – outlines tree spacing, setbacks, quantity requirement, etc...
- [Standards and Specifications Part VI Appendix D](#) – City of Bend Approved Tree List

Landscape and Irrigation

- [Appendix F – City of Bend Pre-Approved ROW landscape plans](#)
- [BDC 3.2.400 Street Trees and Planter Strip Landscaping](#)
- [Standards and Specifications Part II Ch.12 Landscape and Irrigation Systems](#)
- [Appendix E – City of Bend Approved plant list](#)

When does the code apply?

All new developments requiring Site Plan Review in compliance with BDC 4.2, Minimum Development standards Review, Site Plan Review and Design review.

- New buildings with development of the ROW
- Existing buildings with construction in the ROW or sidewalk required
- A sidewalk extension required (within 600 feet)
- Anytime a street tree is required per development

Are there any exempt developments?

- Certain types of middle housing development under Minimum Development Standards (MDS) where a street tree is not required, are not subject to the code sections listed in this document.
- A land division application submitted prior to November 1, 2024.
- Subdivisions with land use approval between the dates of June 20, 2021, and October 31, 2024, are exempt from the new landscaping standards for three years from the date the decision became final.

Reference language BDC 1.1.500 - "Construction within an approved subdivision shall be subject to the land use laws that were in effect on the date of the subdivision application and shall not be subject to subsequently adopted land use laws. This exemption from subsequently adopted local land use laws shall terminate three years from the date of the local land use decision becomes final."

Do I need to submit a landscape and irrigation plan?

As per BDC4.2.300(A)(7) a landscape plan must be submitted for developments requiring Minimum Development Standards Review, Site Plan Review, and Design Review. Pre-approved right of way landscape templates are available for use.

How do I meet the requirements for a successful project?

BUILDING PERMIT SUBMISSION

1. Submit Site Plan
 - Include ROW planter strip dimensions (planter width, planter length, utility clearance areas)
 - Note the proposed street tree size class and proposed street tree locations (for tree selection and spacing, see *Street Tree Selection and Planting* below)

2. Submit a completed and signed Pre-approved ROW design template, *OR* submit a custom landscape plan for the ROW planter strip depicting:
 - Drought tolerant plant material, see approved list. No turfgrass species of any kind permitted in the ROW.
 - Street trees on separate zones with Rainbird Root-Watering-System (RWS) or similar equipment type
 - For planter strip <8 feet, drip irrigation only
 - For planter strip <8 feet, high-efficiency overhead nozzles permitted
 - Overhead irrigation must be inset 12 inches from any hardscape (curb, sidewalk, etc.)
 - WaterSense labeled smart irrigation controller with any required sensors/modules to enable smart technology.

FINAL INSPECTION TO SATISFY ROW CONDITION

- Upload photos of street trees, irrigation, and plant material in the ROW planter strip when calling for final inspection.
 - Photos must be clean images of required components/features.
 - **Examples of appropriate photos are included in the *How to Pass Final Inspection* section.**
- If code adherence cannot be determined by the photos, an onsite inspection will be triggered.

Street Tree Selection and Planting

Approved street trees are separated into size classes based on the width of the ROW planter strip. The number of street trees required is determined by the spacing requirement of the size class and the available planting area within the ROW planting strip.

Select a Size Class

Permitted tree species are separated into various size classes based on the width of the planter strip. The selected size class can be smaller than the recommended class based on the ROW planter width, however class one trees may only be planted if power lines are present. Additionally, along collector and arterial streets, street trees must reach a mature height of at least 50 feet.

See the City of Bend Standards and Specifications Part VI Appendix D for the City of Bend Approved Street Tree List.

Determine Spacing Requirements

Tree-to-tree spacing depends on the class of street tree and is listed in the City of Bend Approved Street Tree List.

Where are trees prohibited?

Clear vision areas, intersection sign triangles, sight distance areas, city water or sewer easements, public and utility easements, and planter strips less than 4 feet wide.

Where the planter strip is less than 4 feet wide, the street trees may be planted within 5 feet from the back of the sidewalk.

How far should trees be spaced from existing and planned infrastructure?

- Stop signs: 35 feet – 50 feet per MUTCD 11th edition
- Streetlights: 25 feet
- Non-street light utility poles: 5 feet
- Property lines: 2 feet
- Fire hydrants: 10 feet
- Water meters or sampling manholes: 5 feet
- Driveways or alleys: 5 feet
- Traffic signs: 20 feet
- Bus benches and shelters: 5 feet

Calculate Number of Street Trees Required

The required number of street trees is calculated with the following formula:

$$\text{Number of Street Trees Required} = \frac{\text{ROW Length} - (\text{Hardscape} + \text{Clearance Area})}{\text{Tree Spacing}}$$

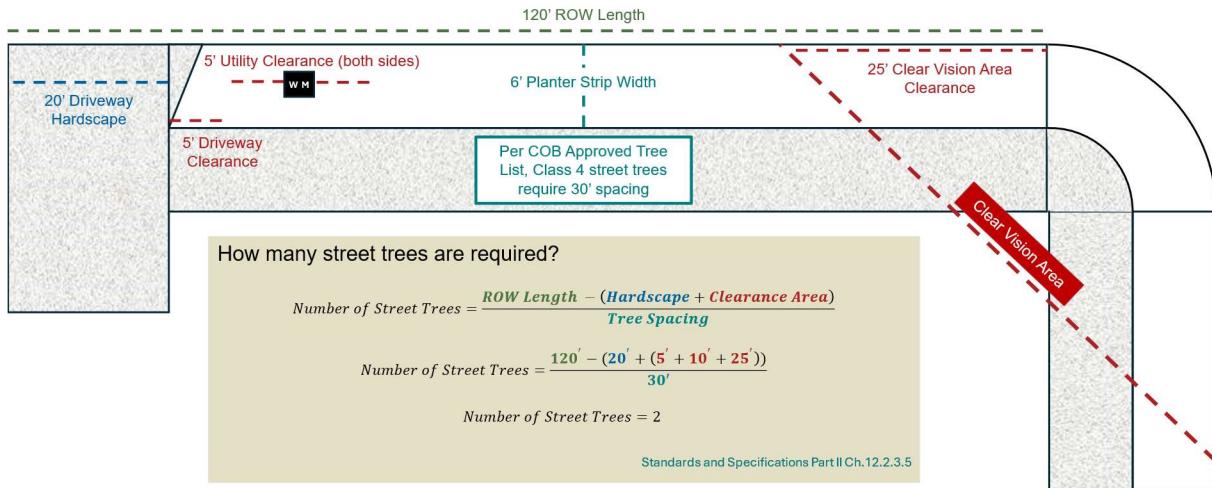
ROW Length – the entire length of the right-of-way

Hardscape(s) – sum the length of all hardscapes, such as driveways

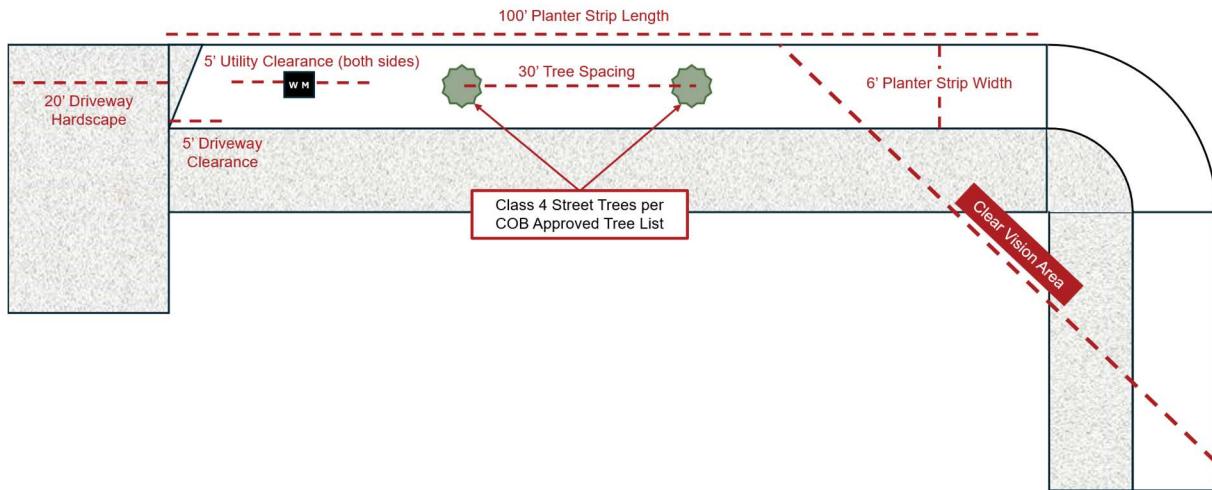
Clearance Area(s) – sum of the length of all identified spacing requirements (listed in the spacing section above). Multiply spacing requirement by two when clearance on both sides of the asset is required. In instances where two spacing requirements overlap, the greater distance shall be considered.

Tree Spacing – spacing requirement from the City of Bend Approved Tree List, based on selected size class

When a fractional number of trees results, the number of trees must be rounded to the nearest whole number. Spacing variances will be granted to accommodate for the quantity requirement.



Show the Street Trees on the Site Plan



What street tree information should be included in the site plan?

- Street tree location(s)
- Size class and/or species of street tree(s)

- Planter strip length and width dimensions
- Hardscape dimensions
- Clearance area(s)
- Clear vision area(s)

Landscape and Irrigation Plans

When determining landscaping and irrigation for the ROW planter strip, the applicant has two options:

1) Select a City of Bend Pre-Approved Template

The City of Bend offers Pre-Approved Templates to help applicants easily meet new landscape and irrigation requirements. There are two main designs: Narrow Planting Strip Templates (for ROW planter strips less than 8 feet wide) and Wide Planting Strip Templates (for ROW planter strips greater than 8 feet wide). The key difference is the type of irrigation used, with drip irrigation mandated for narrow strips and overhead irrigation permitted in wider strips.

Applicants select the appropriate template based on the ROW planter strip width and can choose from three different planting palettes of varying water needs: Very Low Water Use, Low Water Use, and Moderate Water Use.

Finally, applicants must sign the agreement on the cover page of the templates. This agreement acts as an acknowledgement that the applicant understands the ROW landscaping and irrigation requirements and that the final design will meet these requirements.

See the City of Bend Standards and Specifications Part VI Appendix D for the City of Bend Approved Street Tree List.

2) Create Custom Landscape and Irrigation Plans

Applicants are welcome to submit landscape, and irrigation plans of their own. Ensure landscape and irrigation plans meet the following requirements:

Planting Requirements

- Turf grass is prohibited in the ROW planter strip
- Plants must be chosen from the City of Bend Approved Plant List OR can be low to moderate water use plants from the "Water-wise Gardening in Central Oregon" guide

Irrigation Requirements

- Planter strips less than 8 feet wide must use drip irrigation or pressure compensating bubblers inset 12 inches from hardscape, curb, or sidewalk
- Planter strips greater than 8 feet wide may use overhead irrigation with

- Street tree class must be selected from the City of Bend Approved Tree List and satisfy ROW planter strip width requirements
- Quantity of street trees is correct; quantity is determined by the ROW length less hardscapes and clearance areas, divided by the required tree-to-tree spacing
- Street trees must be planted and spaced according to their size class and identified clearance areas
- Planter strips must have a minimum of 10 plants per 100 square feet of planter area and an expected coverage of 50 percent within 5 years of planting
- Ornamental grasses must not make up more than 25 percent of the plants in the planter strip
- Finished landscapes must include organic shredded bark or rock mulch to a depth of three inches
- Weed barriers or impermeable plastic are prohibited
- high-efficiency nozzles (precipitation rate <1 inch/hour)
- Where permitted, overhead irrigation must be inset at least 12 inches from an abutting hardscape, curb, or sidewalk
- Irrigation systems shall not mix sprinkler types on the same zone
- Trees, shrubs, and groundcovers must be on separate irrigation zones
- Trees must be irrigated via a root watering system (RWS)
- Irrigation controller must be an EPA WaterSense approved smart controller w/ necessary sensor or modules to operate in smart mode

In addition to the requirements listed above, please review BDC 3.2.400 and Standards and Specifications Part II Ch.12 to ensure plan completeness.

How to Pass Final Inspection

A final inspection is required to verify that the installed landscaping, irrigation, and street trees in the ROW planter strip satisfy code requirements. A satisfactory inspection will resolve the *Street Trees and Planter Strip Landscaping* condition on the building permit. Prior to issuance of the certificate of occupancy, this condition must be resolved. The majority of inspections can be resolved by uploading the required photos as detailed below. However, if the photos do not provide sufficient detail, a no-fee on-site inspection will be conducted.

Request an Inspection in the Online Permit Center Portal

When ready, request an inspection in the City of Bend Online Permit Center Portal:

<https://cityview.ci.bend.or.us/Portal/>

Upload Photos to the Online Permit Center Portal

To pass the inspection, upload photos of the ROW planter strip landscaping, irrigation, and street trees to the Permit Center Portal under the *Street Trees and Planter Strip Landscaping* condition. Upload photos of the following:

How to Submit Photos to Pass Inspection

1 Photo of landscape and street trees must:

- Identify tree species
- Show plant species and planting density

2a Photo of irrigation

- Photo of inside of ROW valve box showing both valves 1-St. Trees and 1-landscape plantings (valve, filter and reg)

2b Photo of overhead irrigation:

- Sprinkler body with PRS print
- Identifiable H.E. nozzle
- Show 12 inch inset from curb or sidewalk edge

3 Photo of RWS Root Watering System for St. Trees

4 Photo of water sense approved irrigation controller with smart module or sensor installed

