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Section 1. How to Use this Document

1.1 Purpose

The North Shore subarea consists of approximately 990 acres of land north of Lacamas Lake in Camas (**see Figure 1**). During the planning process for the subarea plan, the community expressed a desire for the North Shore to become a unique and special part of Camas that is complementary to the surrounding natural environment.

The North Shore Design Manual builds on the vision statement and design guidelines identified in the adopted subarea plan. The design guidelines have been refined where needed to provide additional details and to provide clear and objective standards for property owners and developers. These guidelines supplement the requirements included in the Camas Municipal Code (CMC) and are not intended to replace any requirements included in the code.

This document is intended to encourage high-quality design that creates a sense of place in the North Shore consistent with the community's vision. This document uses the words "should" and "encourage" to identify recommended guidelines, while the word "shall" indicates required principles for development.



Figure 1 North Shore Subarea Boundary

North Shore Vision

The North Shore is a unique and beautiful place that is valued by the Camas community. Historically, the area has included agricultural uses and single-family residences on large, rural acreages. As the area is redeveloped, consistent with the adopted North Shore Subarea Plan, it is important to balance development with the protection of the area's environmental resources and rural character.

After extensive community outreach, in September 2020, the City Council adopted the following [vision statement](#) for the North Shore.

- 1. Preserve the North Shore's natural beauty and environmental health.
- 2. Plan a network of green spaces and recreational opportunities.
- 3. Cluster uses for a walkable community.
- 4. Provide a variety of housing options.
- 5. Locate industrial parks and commercial centers to the north.
- 6. Favor local-serving businesses.
- 7. Plan for needed schools and infrastructure.
- 8. Strive to maintain Camas' small town feel.

Development Character – Pacific Northwest Style and Sustainability

Through the subarea planning process, the community provided input on the development character and architectural styles that would be consistent with the North Shore Vision. A Pacific Northwest building style was identified as the most appropriate style for future development in the North Shore. That style includes materials that are native to the Pacific Northwest and/or architectural features that are traditionally seen in historic buildings throughout the Pacific Northwest.

- Extended overhangs
- Exterior materials include a mix of, stone, concrete, wood siding, and/or stucco
- Buildings should avoid metal and stucco siding as the primary public-facing exterior
- Low-slope roof forms
- Balanced horizontal and vertical lines
- Neutral color palette complementing the natural environment

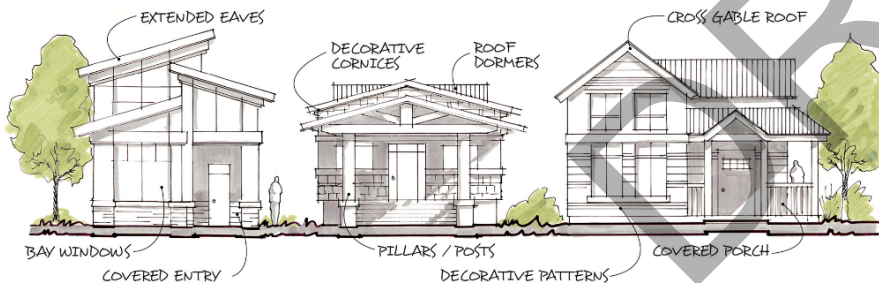


Figure 2 Elements of the Pacific Northwest Style

Many of the vision statement elements and public comments received during the subarea planning process highlighted the desire to protect the natural beauty of the North Shore and to incorporate forward-thinking sustainable practices in new construction. Sustainability guidelines and principles are identified in Section 4.

1.2 The Design Approval Process

All new development and redevelopment in the subarea are subject to the City’s design review process prior to building permit issuance (see Figure 3). This manual is intended to supplement the development standards in the CMC and all development must be compliant with the CMC. If the requirements of this manual conflict with other regulations, the Director shall interpret which document applies. Project proponents should contact the City of Camas for all required approval processes.

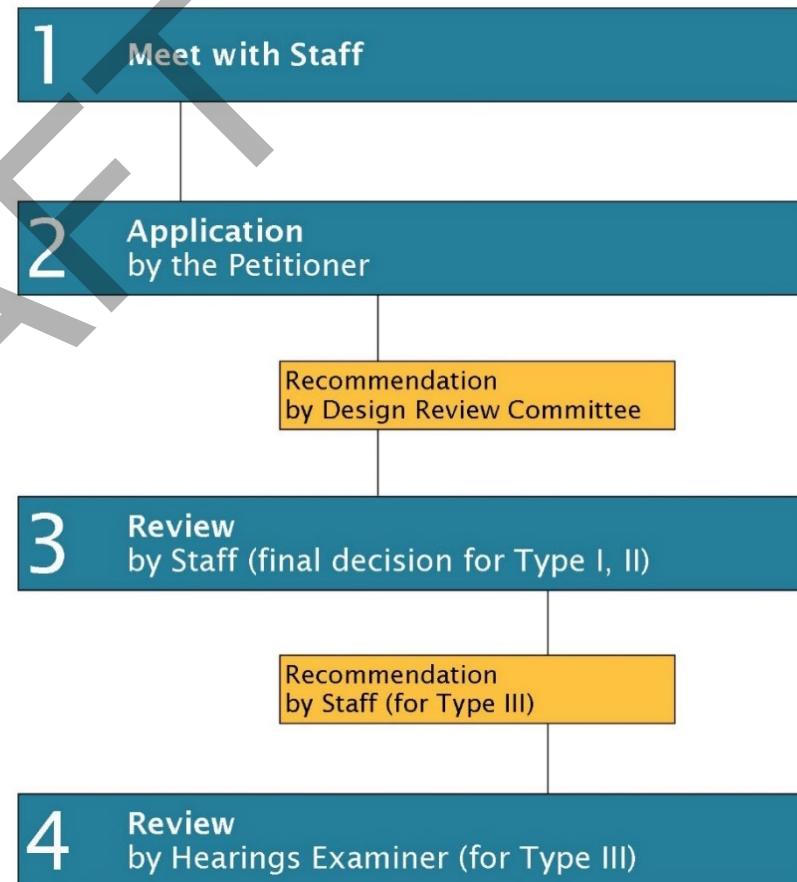


Figure 3 North Shore Design Review Process

1.3 Land Use District Map

Figure 4 identifies the six land use districts established by the North Shore subarea plan. Please review the Camas Zoning Map to confirm the zoning designation of a property, as zoning changes may occur over time.

North Shore Land Use Districts

Mixed Employment (ME-NS)

Uses include a wide variety of employment uses, including retail, office space, warehouse, and manufacturing.

North Shore Mixed Use (MX-NS)

Uses include a wide range of commercial and residential uses, including book stores, bakeries, cafes, live-work units, florists, and medical offices.

North Shore Commercial (C-NS)

Uses include a wide range of commercial uses, including banks, restaurants, fitness centers, and neighborhood grocery stores.

Higher Density Residential (HD-NS)

Uses include apartments and other multi-unit residential buildings, including rowhouses and cottage-style housing developments.

Lower Density Residential (LD-NS)

Uses include detached and attached single-family residential development, including rowhouses and cottage-style housing developments.

Park / Open Space (NS-P/OS)

Parks and open space uses could include public plazas, pocket parks, and public gathering spaces within streetscapes.



Figure 4 Land Use Districts

*Additional uses are described in Chapter 18.07 of the City of Camas Zoning Code.

Section 2. Land Use and Development Standards

2.1 North Shore Lower Density Residential (LD-NS)

Intent and Character

The North Shore – Lower Density (LD-NS) district is intended for low density residential developments, including the following types of housing.

- Detached single-family homes
- Duplexes
- Cottage cluster developments
- Accessory dwelling units (ADUs)

A complete list of uses allowed in the LD-NS district can be found in CMC 18.07.040. Developments in this zone should support transitions from existing uses to more dense zones.

Design Standards and Guidelines

The following sections describe the standards and guidelines that should be followed for all new development and redevelopment in the LD-NS district.



Lower Density Residential Area (Source: © alenamozhjer / Adobe Stock)



Figure 5 Cottage Cluster Development

Dimensional Standards

The tables below identify the dimensional standards applicable to the LD-NS district. All standards should be confirmed in CMC 18.09. Parking requirements are determined by CMC 18.11

Table 1. Dimensions and Standards for Standard Lots in LD-NS

Item	Standard
Density range (min-max dwelling units/acre)	4-5.8
Average lot area (square feet)	7,500
Minimum lot size (square feet)	5,400
Maximum lot size (square feet)	12,000
Minimum lot width	40
Minimum lot depth	90
Average building lot coverage	45%
Average lot area (square feet)	7,500
Maximum building height (feet)	35
Setbacks, Street loaded (feet):	
Front yard	10-25
Side yard	5 / 10 if flanking a street and corner lot rear yard
Rear yard	10-20
Setbacks, Alley loaded (feet):	
Front yard	10
Side yard	5
Rear yard	10-20
Maximum building height (feet)	35

Table 2. Dimensions and Standards for Cottage Cluster Developments
Cottage-style dwellings are permitted in the LD-NS, HD-NS, and MX-NS districts.

Item	Standard
Developable acreage	Up to 25% of project site
Minimum lot size (square feet)	2,400
Minimum lot width	30
Minimum lot depth	50
Average building lot coverage	Minimum of 200 sf of useable yard adjacent to each dwelling unit
Maximum building height (feet)	25
Setbacks (feet):	
Front yard/at garage front	0/20
Side yard	0 / 10 if abutting LD-NS or other R-zone
Side yard, flanking street	10
Rear yard	0 / 10 if abutting LD-NS or other R-zone

Land Use and Development Standards

Site Development Guidelines

The following guidelines apply to all development in the LD-NS district.

- Lot sizes should be varied to avoid “cookie cutter” and predictable suburban development patterns, and to better reflect the natural geography.
- Porches should be located on the street-facing façade and can be linear or wrapping.
- Attached garages are encouraged over detached garages. If detached, the garage should be located behind the primary structure.
- ADUs are encouraged to support housing variety. ADUs should be designed to complement the primary residence.
- The form and layout of buildings should be oriented to retain or integrate with the existing topography, natural habitat, and respond to climatic or solar conditions.
- Developments should integrate appropriate sustainable design features, such as passive building design, green roofs, permeable surfaces, stormwater management, and naturescaping (see Section 4).

Site Development Principles

The following principles apply to all development in the LD-NS district.

- Residential development shall provide roof variation and detail through the use of dormers and other design elements of the Pacific Northwest style as described in Section 2.
- A pedestrian pathway shall be provided from the main entrance of the dwelling to the sidewalk.
- All garages shall include similar architectural features as the primary structure (e.g., windows, siding) to blend in with the residence.
- Fences shall not block views to or from the street.



Attached garage with matching trim and windows (Source: © bmak / Adobe Stock)



ADU in the Pacific Northwest style (Source: © Joshua / Adobe Stock)



(Source: © bmak / Adobe Stock)



(Source: © Mark Herreid / Adobe Stock)

Porch and dormer windows

2.2 North Shore Higher Density Residential (HD-NS)

Intent and Character

The North Shore – Higher Density (HD-NS) district is intended for high density residential developments. Developments in this zone should provide for a variety of housing options with a minimum density of 10 dwellings per acre. Housing types permitted in this district include multifamily buildings, rowhouses, triplexes and fourplexes, and cottage clusters.

Design Standards and Guidelines

The following sections describe the standards and guidelines that should be followed for all new development and redevelopment in the HD-NS district.



Figure 6 Rowhouse Development



Figure 7 Multifamily Building Development

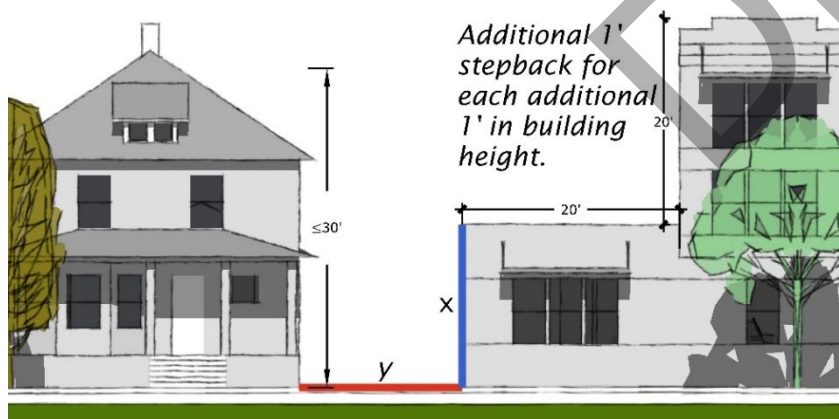
Land Use and Development Standards

Dimensional Standards

The tables below identify the dimensional standards applicable to the HD-NS district. All standards should be confirmed in CMC 18.09. Parking requirements are determined by CMC 18.11

Table 3. Dimensions and Standards for Standard Lots in HD-NS

Item	Standard
Density range (min-max dwelling units/acre)	10 - 18
Minimum lot size (square feet)	1,800
Maximum gross floor area	No maximum
Minimum lot width	20
Minimum lot depth	60
Average building lot coverage	65%
Maximum building height (feet)	50
Setbacks (feet):	
Front yard/at garage front	10/20
Side yard	3
Side yard, flanking street	15
Rear yard	10



If $y \leq 20'$, x must be $\leq y$.

Figure 8 Stepped Transition Diagram

*Table 4. Dimensions and Standards for Cottage Style Dwellings
Cottage style dwellings are permitted in the LD-NS, HD-NS, and MX-NS districts)*

Item	Standard
Developable acreage	Up to 25% of project site
Minimum lot size (square feet)	2,400
Minimum lot width	30
Minimum lot depth	50
Average building lot coverage	Minimum of 200 sf of useable yard adjacent to each dwelling unit.
Maximum building height (feet)	25
Setbacks	
Front yard/at garage front	0/20
Side yard	0 / 10 if abutting LD-NS or other R-zone
Side yard, flanking street	10
Rear yard	0 / 10 if abutting LD-NS or other R-zone

As shown on Figure 8, a stepped-transition in building height and mass shall be used to move from higher density to lower density and from a more intense mix-of-uses to single uses to provide compatible scale and privacy between developments (see CMC 18.19.050).

Site Development Guidelines

The following guidelines apply to all development in the HD-NS district.

- Residential units should be organized around common green spaces that incorporate stormwater draining, seating areas, play spaces, and internal pathways.
- The visibility of off-street surface parking should be minimized by integrating structured and tuck-under parking in buildings or locating surface parking behind buildings.
- Stoops and porches are encouraged for ground-level units. Porches are also encouraged for upper units to provide visual interest.
- Publicly dedicated parks and green or open-space within the HD-NS district should follow the design guidelines described in Section 2.6.

Site Development Principles

The following principles apply to all development in the HD-NS district.

- All off-street surface parking areas shall be screened with landscaping. See CMC 18.13.060 for specific requirements for parking lot landscaping.
- Principal pedestrian entries shall be located along a public street or public common space.
- A stepped-transition shall be used in building height and mass to move from higher density to lower density.
- Weather protection shall be provided along public-facing facades and building entries.
- Dark-sky friendly lighting shall be used for outdoor areas.
- Appropriate sustainable design features shall be integrated where feasible, such as passive building design, green roofs, permeable surfaces, stormwater management, and naturescaping (see Section 4).



Apartments oriented around a common space (Source: © Kit Leong / Adobe Stock)



Stoops, porches, and balconies provide visual interest (Source: © Elenathewise / Adobe Stock)



Permeable surfaces should be used in the overall stormwater management plan for developments (Source: © Michal / Adobe Stock)

Land Use and Development Standards

2.3 North Shore Commercial (C-NS)

Intent and Character

The North Shore Commercial (C-NS) district is intended to allow for a range of commercial activities providing goods and services in the subarea. Public-facing commercial buildings should add to the pedestrian-level environment by including ground-level windows and entrances.

Design Standards and Guidelines

The following sections describe the standards and guidelines that should be followed for all new development and redevelopment in the C-NS district.

Dimensional Standards

The tables below identify the dimensional standards applicable to the C-NS district. All standards should be confirmed in CMC 18.09. Parking requirements are determined by CMC 18.11

Table 5. Dimensions and Standards in C-NS

Item	Standard
Minimum lot size (square feet)	None
Minimum lot width	None
Minimum lot depth	None
Maximum building lot coverage	None
Maximum building height (feet)	100
Minimum usable open space ¹	5% of net acreage
Setbacks (feet):	
Front yard	15
Side yard	None
Rear yard	None

1. "Usable Open Space" means areas planned and improved to provide opportunities for active recreation, passive relaxation, or community interaction, and that are accessible to the public or to residents, employees, or customers in common. Examples include plazas, courtyards, private parks, sport fields and courts, and viewpoints overlooking natural resource areas. Usable Open Space does not include public parks unless the parks were approved as Usable Open Space and conveyed to the City (CMC 18.03).



Commercial Street in Boulder, CO (Source: © Jen Lobo / Adobe Stock)

Site Development Guidelines

The following guidelines apply to all new development and redevelopment in the C-NS district.

- Encourage small, local businesses, such as restaurants, cafes, and grocers that serve North Shore residents and businesses, while complementing downtown Camas.
- Buildings should be oriented to enhance the natural topography.
- All new developments should provide multimodal connections throughout the development, as well as to adjacent developments.
- The visibility of off-street surface parking should be minimized by locating parking in buildings or locating surface parking behind buildings.
- Public plazas are encouraged in the C-NS district and should incorporate similar design features to the established central plaza to add to the sense of place. See Section 2.4, MX-NS district for a description of the design features recommended for the central plaza.
- Sustainable design features are encouraged, such as passive building design, green roofs, permeable surfaces, stormwater management, and naturscaping (see Section 4).

Site Development Principles

The following principles apply to all development in the C-NS district.

- Commercial buildings shall include multiple points of entry and ground-floor windows to facilities access, visual interests, and promote safety.
- Public-facing facades shall provide weather protection through deep overhangs, which are allowed within the front yard setback.
- Developments shall avoid large blank wall surfaces.
- Outdoor storage, loading, and equipment areas shall be located and designed to blend in with the surroundings.
- Setbacks and landscaping shall include multimodal amenities where possible, such as bike racks and benches.
- Parking areas available to the general public shall be clearly identified and connected to the building entry and/or sidewalk with a pedestrian path.



Parking lots are located behind commercial buildings along the Hood River waterfront (Source: 403 Portway Ave, Hood River, OR; digital image, "Street View," GoogleMaps (45°42'52.92" N 121°30'50.66" W: accessed 5/8/2023).



Weather protection and landscaped bollards support a pedestrian friendly streetscape (Source: @ SeanVavonePhoto / Adobe Stock)



Seating, landscaping, and public art add visual interest (Source: @ Schrodington, LLC / Adobe Stock)

Land Use and Development Standards

2.4 North Shore Mixed Use (MX-NS)

Intent and Character

The North Shore Mixed Use (MX-NS) district is intended to provide for a wide range of commercial and residential uses. Compact development is encouraged to support transit and pedestrian travel. Developments in this zone should create spaces for community gathering, waiting, discussion, and outdoor commercial activities. Cottage-style and rowhouse developments are allowed residential uses within the MX-NS zone and are to follow the design standards and guidelines described in Sections 2.1 and 2.2.

Design Standards and Guidelines

The following sections describe the standards and guidelines that should be followed for all new development and redevelopment in the MX-NS district.

Dimensional Standards

The tables below identify the dimensional standards applicable to the MX-NS district. All standards should be confirmed in CMC 18.09. Parking requirements are determined by CMC 18.11

Table 6. Dimensions and Standards in MX-NS

Item	Standard
Density range (min-max dwelling units/acre)	24
Minimum lot size (square feet)	1,800
Maximum gross floor area	None
Minimum lot width	None
Minimum lot depth	None
Average building lot coverage	65%
Maximum building height (feet) ¹	100
Minimum Useable Open Space	100 sf / dwelling unit
Setbacks (feet):	
Front yard (maximum setback at front building line)	10
Side yard	10
Rear yard/alley-loaded	10/20

- Bird-friendly windows and window treatments are encouraged, in particular, next to open spaces and wildlife habitat.*



The general location of the Central Plaza is shown above.

Site Development Guidelines

The following guidelines apply to all new development in the MX-NS district.

- Shared parking is encouraged between adjacent or vertically mixed uses.
- All new developments should provide multimodal connections throughout the development, as well as to adjacent developments.
- Parking areas available to the general public should be clearly identified.
- Sustainable design features are encouraged, such as passive building design, green roofs, permeable surfaces, stormwater management, and naturescaping (see Section 4).

Site Development Principles

The following principles apply to all new development in the MX-NS district.

- Landscaped setbacks and entry-points shall incorporate aspects from landscaping of nearby residential developments.
- For ground-floor residential spaces in this zone, landscaping shall provide adequate privacy from the public view.
- Wayfinding and interpretative signage shall be provided to direct people to historic, cultural, and natural resources throughout the area.
- Ground-floor commercial space shall include pedestrian amenities fronting the right-of-way. This may include adequate down-facing lighting, public seating or resting facilities, bicycle racks, small-scale landscaping consistent with the natural environment, and signage consistent with this design manual.
- Mixed-use developments that front the central plaza shall include ground-floor retail/commercial space to encourage pedestrian-level activity.

Central Plaza

A public central plaza shall be developed within the MX-NS zone to serve as a gateway from the recreational areas of the Legacy Lands to the commercial core of the subarea. The location of the central plaza will be determined in coordination with the City. The following standards and guidelines apply to the central plaza.

- The central plaza shall be a minimum of 1 acre and open to the general public.

- If the central plaza is bisected by a street, provisions shall be made for turning the street into a “festival street,” which allows for closing the street to vehicular traffic to facilitate events.
- The central plaza should allow for a variety of activities, including passive recreation and leisure, public art features and outdoor events.
- The central plaza shall be landscaped consistent with the landscaping requirements included in Section 4.
- Signage shall be used throughout the central plaza to direct people to the established pedestrian crossings to the Legacy Lands and recreational opportunities. Signage design shall be consistent with the guidelines included in Section 3.1.



The Northwest Crossing mixed use development in Bend, OR (Source: 2021, Grove NWX-Birdseye View, hackerarchitects.com)



Figure 9 Conceptual festival street in the North Shore

Land Use and Development Standards

2.5 North Shore Mixed Employment (ME-NS)

Intent and Character

The North Shore Mixed Use (ME-NS) district is intended to provide for a wide range of employment uses, including:

- Retail
- Office space
- Warehouses
- Manufacturing
- Other employment uses

See CMC 18.07.030 for a complete list of allowed uses in the ME-NS zone.

Design Standards and Guidelines

The following sections describe the standards and guidelines that should be followed for all new development and redevelopment in the ME-NS district.



Dimensional Standards

The tables below identify the dimensional standards applicable to the ME-NS district. All standards should be confirmed in CMC 18.09. Parking requirements are determined by CMC 18.11

Table 7. Dimensions and Standards in ME-NS

Item	Standard
Minimum lot size (square feet)	None
Minimum lot width	None
Minimum lot depth	None
Average building lot coverage	None
Maximum building height (feet) ¹	100
Minimum Useable Open Space ²	5% of net acreage
Front yard	None
Side yard	None
Rear yard	None

1. Bird-friendly windows and window treatments are encouraged, in particular, next to open spaces and wildlife habitat.
2. "Usable Open Space" means areas planned and improved to provide opportunities for active recreation, passive relaxation, or community interaction, and that are accessible to the public or to residents, employees, or customers in common. Examples include plazas, courtyards, private parks, sport fields and courts, and viewpoints overlooking natural resource areas. Usable Open Space does not include public parks unless the parks were approved as Usable Open Space and conveyed to the City (CMC 18.03).

Site Development Guidelines

The following guidelines apply to all new development and redevelopment in the ME-NS district.

- Building elevations facing the public right-of-way should have the appearance of distinct design quality that reflects the Pacific Northwest style, as described in Section 1.1.
- Buildings should be oriented to enhance the natural topography.
- Green roof technologies are encouraged to collect, store, and discharge stormwater from building roofs by use of sloping roofs, gutters, downspouts, and cisterns.
- Integrate appropriate sustainable design features where feasible, such as passive building design, green roofs, permeable surfaces, stormwater management, and naturescaping (see Section 4).

Site Development Principles

The following principles apply to all development and redevelopment in the ME-NS district.

- Building facades shall incorporate ground-floor windows and entries where possible to establish visual breaks.
- Primary building entryways shall be visible to and accessible from the public right-of-way.
- Buildings shall locate and screen rooftop mechanical systems away from view of the public right-of-way.
- For warehouses, office spaces shall be located towards the front of the building closest to the public right-of-way.
- The visibility of off-street surface parking shall be minimized by locating parking in buildings or locating surface parking behind buildings.
- Developments shall avoid large blank wall surfaces that face public rights-of-way.
- Outdoor storage, loading, and equipment areas shall be located and designed to blend in with the surroundings.



At the LEED Silver Halyard Building in Hood River, OR, rooftop equipment is screened from the street, parking is located behind the building, and a stormwater cistern collects runoff. (Source: Halyard Building 2, robcon.com)



The LEED Silver In-situ Building in Bingen, OR, reflects the Pacific Northwest style, including wood siding and drought tolerant landscaping. (Source: lewisbuilds.com/projects/insitu)

2.6 Parks and Open Space

Intent and Character

A key feature of the North Shore is the Legacy Lands, which are over 240 acres of protected open space along the north shore of Lacamas Lake.

The intent of the subarea is to locate trails and open spaces throughout the area, as well as on the edge of the subarea to create buffers for wildlife and to provide recreation opportunities. Design guidelines for parks and open space should be applied to all developments that incorporate parks and open space uses, regardless of the zone of the development. Parks and open space uses could include public plazas, pocket parks, sustainable stormwater management, HOA/private parks with future development agreements, public easements, and streetscapes, including public gathering spaces.

Site Design Principles

The following principles apply to parks and open space.

- Private developments with future development agreements shall collaborate with the Parks and Recreation Department to ensure the design is consistent with Parks and Recreation standards. Any City-owned parks or developments involving parks/open space land dedications must comply with the City’s parks and open space standards included in the [Camas Parks, Recreation, and Open Space Plan](#).
- Native soils, existing tree canopy, and topography shall be preserved to the greatest extent possible where feasible as determined by project engineers.
- Parks and open space shall incorporate landscaping consistent with Section 4 to reflect the natural character of the subarea.
- All public and regional trails throughout the subarea shall be constructed according to City specifications and refer to the design standards for trails in Appendix G of the [Camas Parks, Recreation, and Open Space Plan](#).
- Path or bollard lighting shall be used along trails as appropriate and shall have low visual impacts to minimize interference with the natural environment while still providing safe use.



Tanner Springs Park in Portland, OR, highlights stormwater and wetland features to evoke the site’s history (Source: © ansyvan / Adobe Stock)



Compass Park in Bend, OR includes native landscaping and large shelters for group gatherings (Source: bendparksandrec.org)

Section 3. Streetscapes and Rights-of-Way

Streetscapes refer to the elements within the public realm, typically within a right-of-way. Elements of the streetscape, such as streetlights, landscaping, benches, litter bins, etc., help set the tone of the public space. These guidelines are intended to provide a consistent theme and identity for streetscapes that reflect the natural surroundings and a small-town feel.

3.1 Design Guidelines

Street Lighting

Land use districts within the North Shore should employ lighting to set the tone for each distinct area. Not every district will use the same lighting type, but lighting elements in each district should match the general style and theme of the North Shore.

The following guidelines reflect the desired traditional “main street” lamppost form (e.g., four-sided, tapered profile) but with modern dark-sky features, including hooded luminaires directed downward to minimize shedding and light pollution.

- Lighting in the curb zone should be at the pedestrian scale, with place-identifying banners.
- Path and bollard lighting should use a traditional form and blend with natural surroundings.
- Streetlights should use a traditional form and include dark-sky features (downlighting and shielding)

Street Furniture

- Seating should be provided in public spaces (within mixed-use, commercial, and open spaces) to create passive recreation opportunities to pause or spend time.
- Planters should be used to provide transition from streetscapes to public plazas and establish a sense of place.
- To promote alternative transportation, proposed bicycle lanes, shared use paths, and trails should be supplemented with access to bicycle parking to allow for safe and easy transition from transit to interaction with commercial activities.

- Bike facilities shall be visually appealing and enhance the streetscape.
- Bike infrastructure, such as covered bike-parking, repair stations, and docked bike share, is encouraged near hubs in open space and commercial and mixed use areas.

Signage

- Consistent signage shall be used within the North Shore to establish a sense of place, signaling to visitors they are in a distinct, unique location.
- Materials should reflect and highlight the natural surroundings and promote a traditional “main street” composition.
- Non-street signs should be constructed of natural materials, such as wood and metal, to reflect the natural surroundings.
- Wayfinding and interpretive signage should be provided that directs people to historic, cultural, and natural resources throughout the area.
- Commercial blade or wall signs should be used to provide place identification at a pedestrian scale within the streetscape.

Street Landscaping

- Landscaped areas in streetscapes should be designed to reflect the natural character and ecology of the Pacific Northwest and use drought-tolerant native species that increase biodiversity. See Section 4 for additional details related to landscaping.

Tree Grates

- Custom tree and storm grates should be used to establish place identity and connect with natural surroundings.



Landscaped planters interspersed with benches along a public walkway (source: LandscapeForms)



Unique and consistent bike racks (source: LandscapeForms)



Street and path lighting elements that have a consistent traditional form and dark-sky features (source: LandscapeForms)



Custom tree grates and bike racks provide a unique identity (Source: Iron Age Designs)



Signage sets the tone for a "main street" feel (Source: Custom Logo Signs)

3.2 Rights-of-Way

Rights-of-way refer to the components and dimensions of public streets, such as sidewalks, curb zones, bicycle facilities, and drive lanes. Each right-of-way standard in this manual is set as a minimum required standard, where creativity and expansion beyond the standard is encouraged to establish North Shore as a unique setting within Camas. Components, such as bulb-outs and midblock crossings, shall be incorporated to promote safe pedestrian activity, designed according to Camas Engineering Design Standards Manual. Street trees are to follow the Landscape Standards of the Camas Engineering Design Standards Manual and Section 3.3, *Street Trees* below.

Local Streets

Local streets are designated for residential areas with a speed limit of 25 miles per hour. The figure below identifies some of the key elements of local street rights-of way. Street dimensions are represented as minimum requirements and will be subject to review by the City engineer.

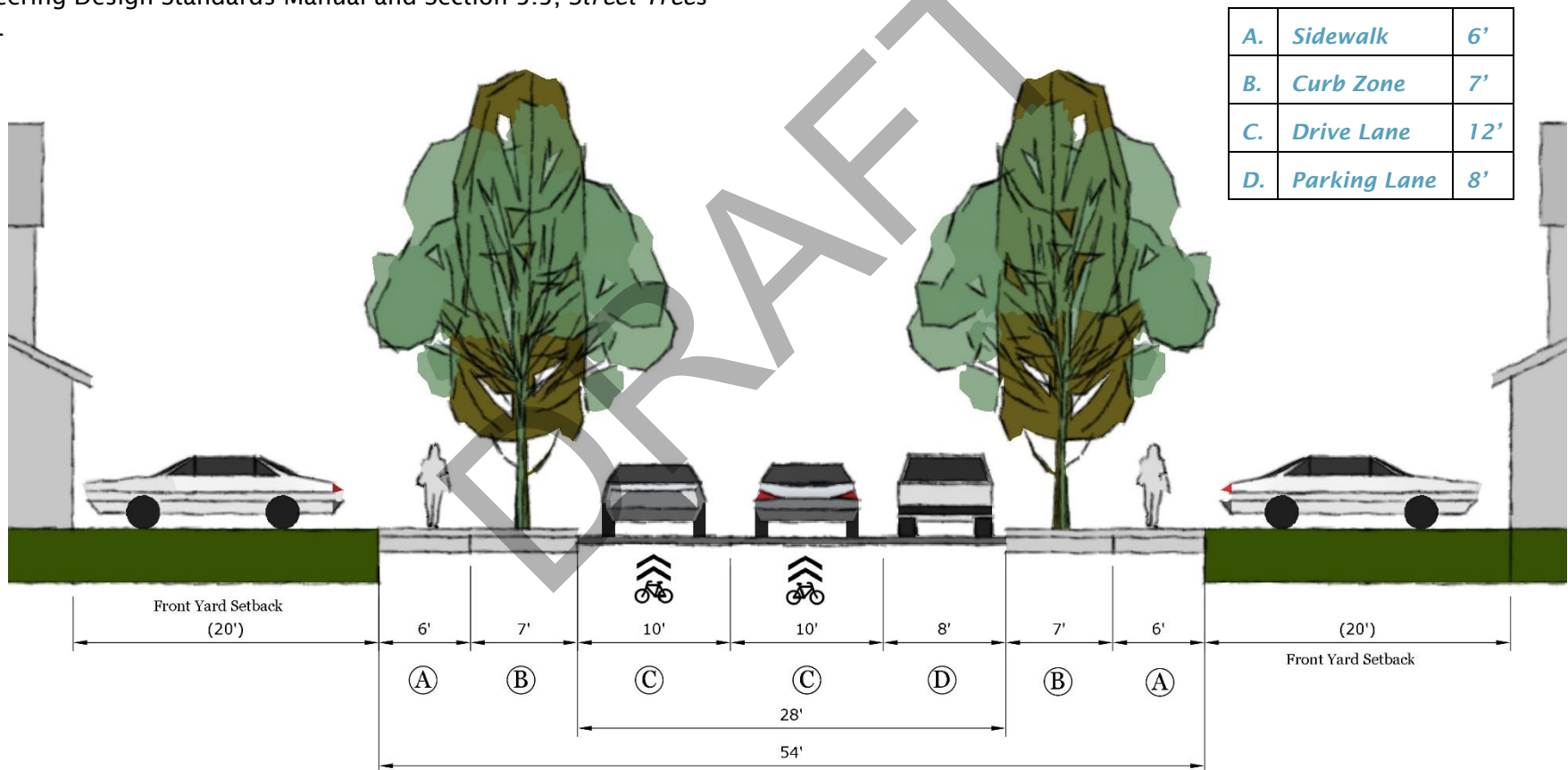


Figure 10 Local Street Right-of-Way (54' ROW min.)

Collector Streets

Collectors are the main connectors between local streets and arterials. The figure below identifies some of the key elements of collector street rights-of-way. Street dimensions are represented as minimum requirements and will be subject to review by the City engineer. Cross section details are subject to change, including the need for on-street parking in commercial nodes. Right-of-way elements should be modified to allow median turn lanes at intersections.

A.	Sidewalk	6'
B.	Curb Zone	6'
C.	Bike Lane	5'

D.	Buffer Striping	2'
E.	Drive Lane	10'
F.	Center Curb Zone	2'

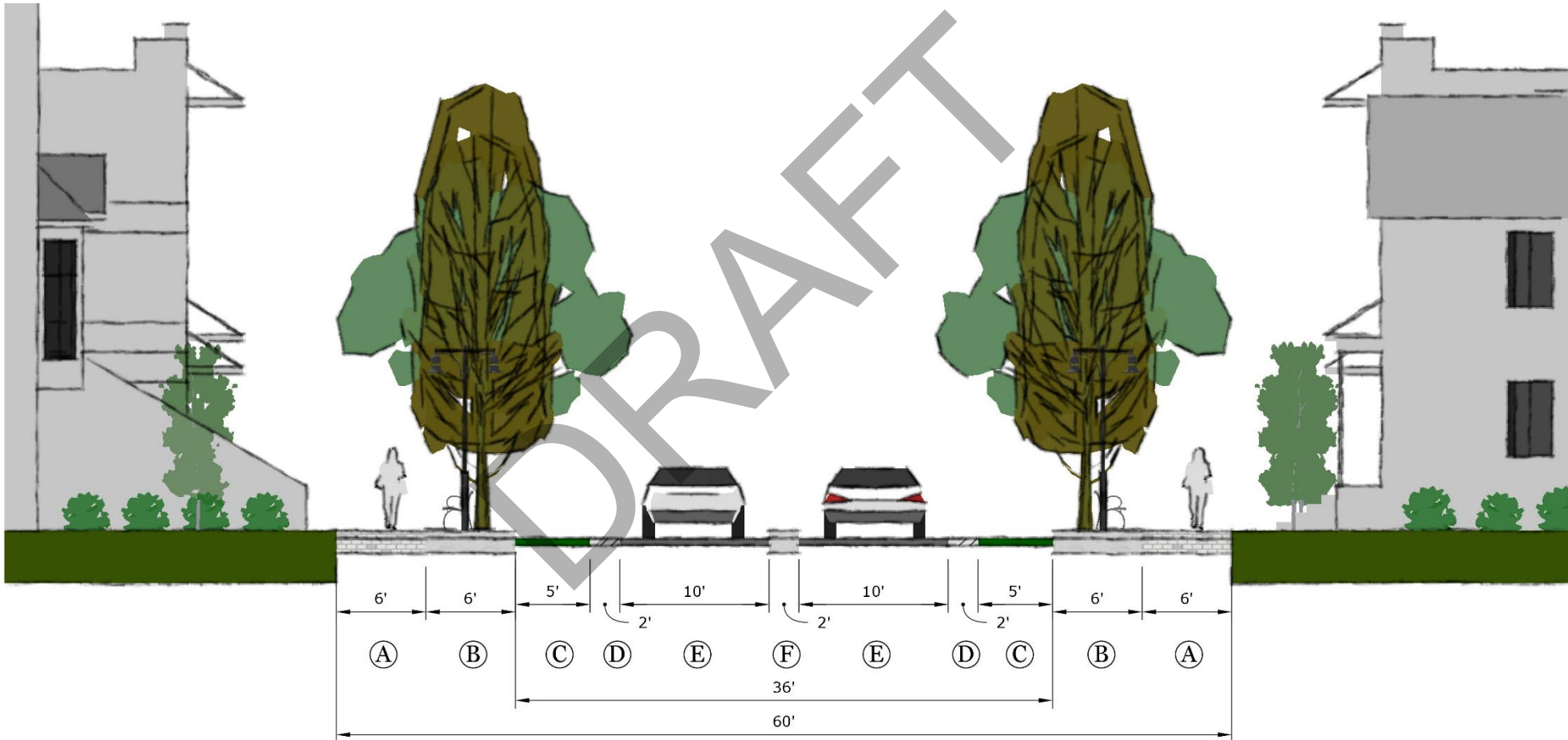


Figure 11 Collector Street Right-of-Way (60' ROW min.)

Streetscapes and Rights-of-Way

Ridgeline Road

The ridgeline road is a planned arterial road (currently unnamed) that winds along the border of the Legacy Lands. The figure below identifies some of the key elements of the rights-of way. Street dimensions are represented as minimum requirements and will be subject to review by the City engineer. Enhanced crosswalks are required at intersections and designated midblock locations in commercial nodes.

*Parking lanes and curb zones near enhanced midblock crossings should be modified to allow angled parking spaces.

A.	Sidewalk	6'
B.	Curb Zone	5'
C.	Drive Lane	10'

D.	*Parking Lane	8'
E.	*Curb Zone	9'
F.	Shared Use Path	12'

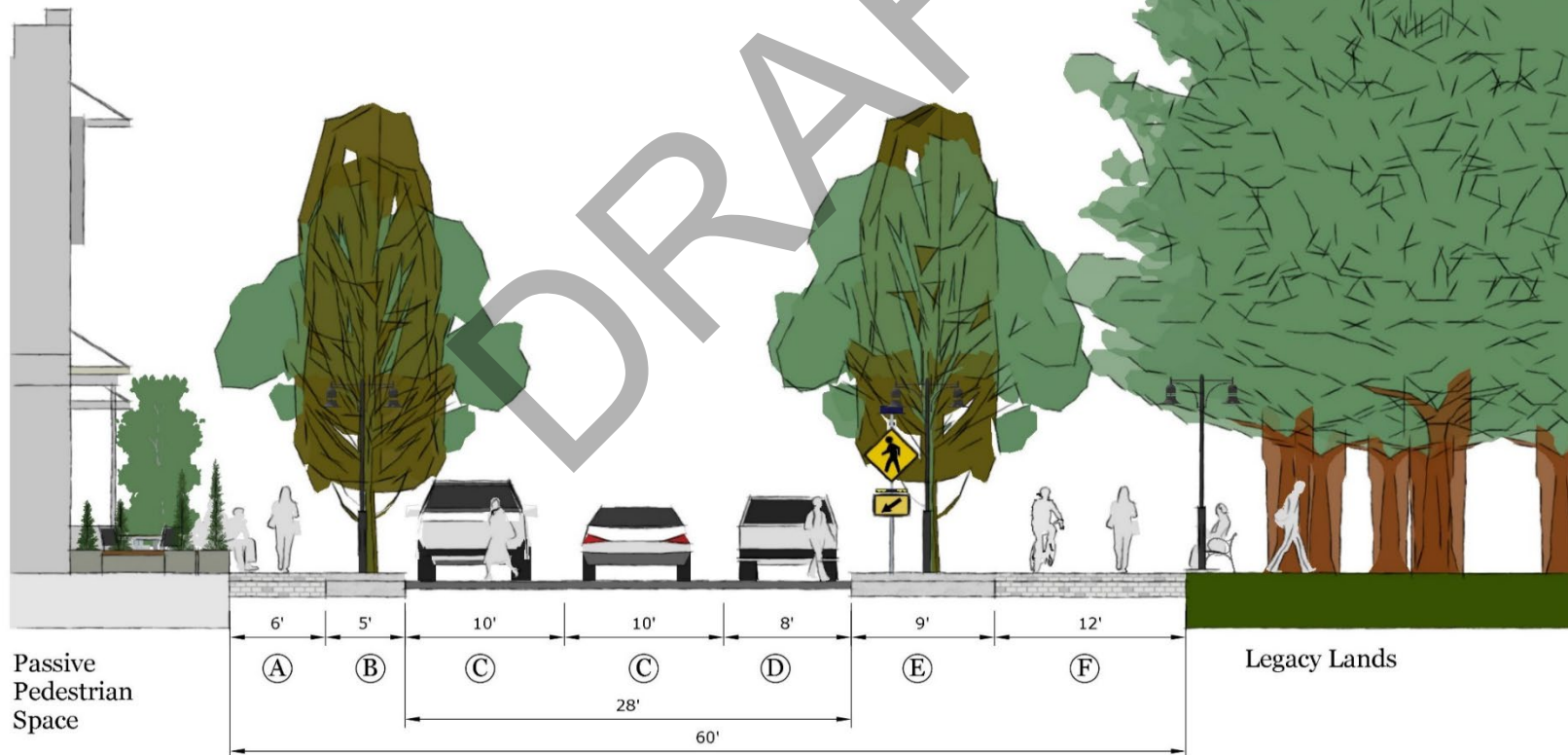
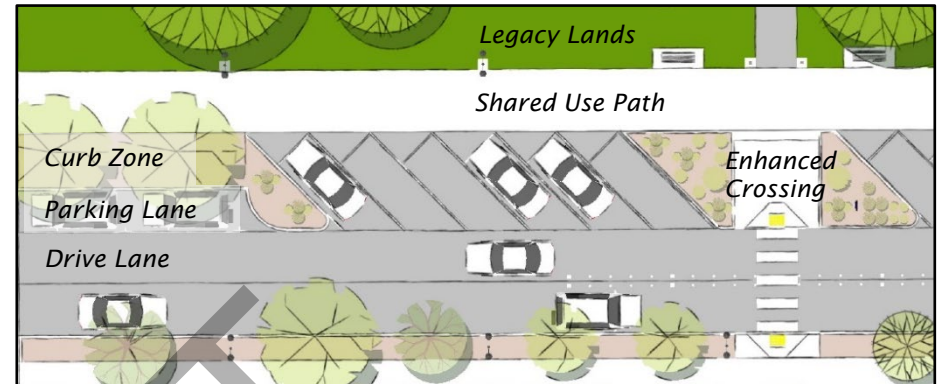


Figure 12 Ridgeline Road Right-of-Way (60' ROW min.)

North Shore Boulevard

The North Shore Boulevard is an arterial road that serves as the main thoroughfare through the downtown center of North Shore and may include roundabouts at key intersections as designated by the City. The figure below identifies some of the key elements of the rights-of-way. Street dimensions are represented as minimum requirements and will be subject to review by the City engineer. Enhanced crosswalks are required in commercial nodes, subject to review by the City engineer.

A.	Sidewalk	8'
B.	Curb Zone	5'
C.	Bike Lane	5'

D.	Buffer Striping	2'
E.	Parking Lane*	8'
F.	Drive Lane	11'
G.	Center Curb Zone / Pedestrian Refuge Island	10'

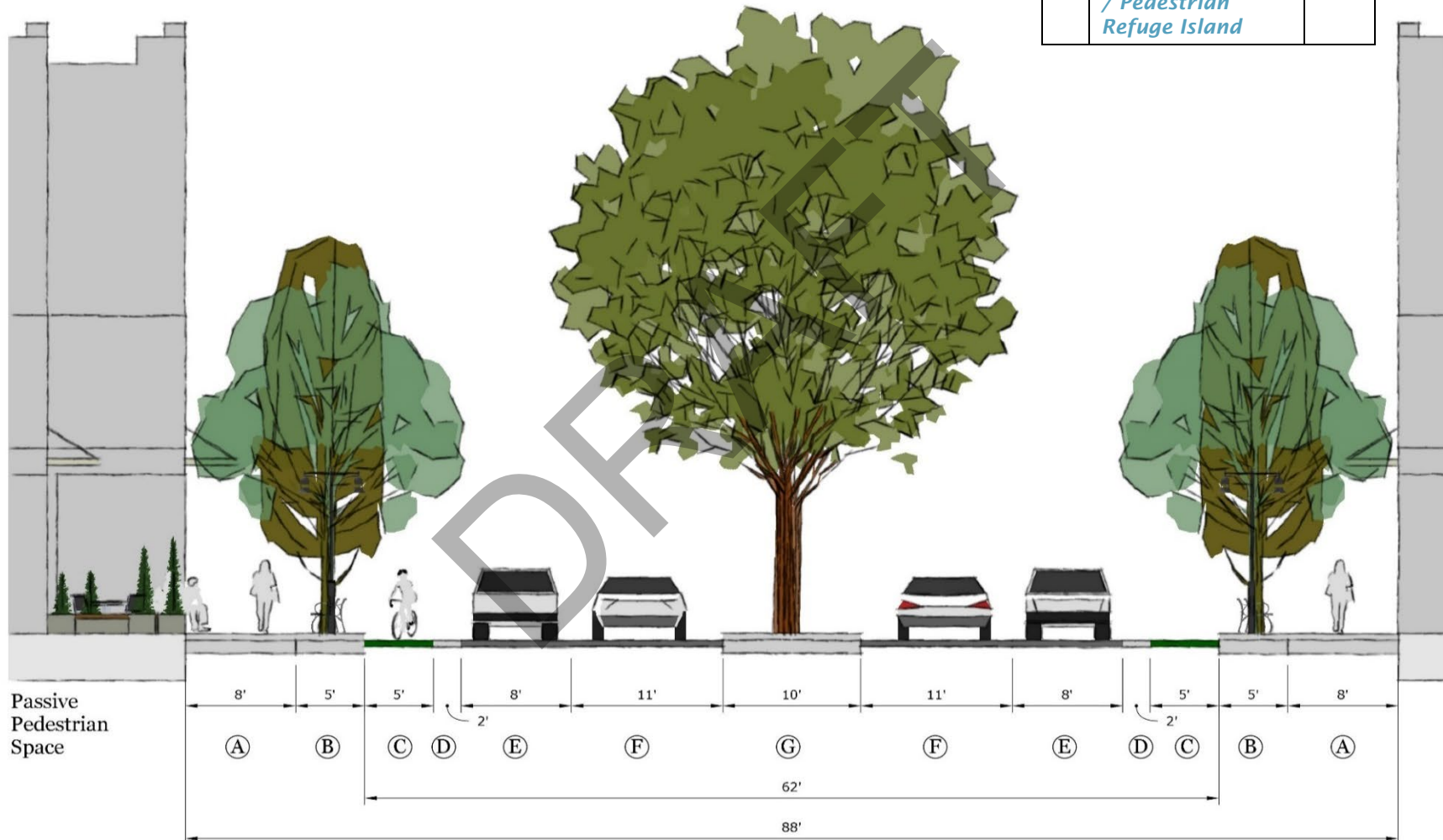


Figure 14 North Shore Boulevard Right-of-Way (88' ROW min.)

*On-street parking lanes are required in commercial nodes only. Arterials outside of commercial nodes will not allow on-street parking.

Enhanced Pedestrian Crossings

Enhanced crossings provide additional pedestrian safety and elevate the design elements of the streetscape. Developers shall work closely with the City engineer to locate and design these elements.

Bulb Outs, Refuge Islands, and Midblock Crossings

- Bulb outs should be used at intersections and midblock pedestrian crossings to shorten distances and preserve a protective visibility range by removing parking spaces where cars may otherwise obscure the view of the sidewalk.
- Where feasible, midblock crossings should be paired with bulb outs and refuge islands to shorten crossing distances across drive lanes.
- Raised crosswalks should be used to create a ramped speed table that allows pedestrians to cross at grade with the sidewalk. This design combines the effect of speed reduction with increased pedestrian visibility and accessibility.
- Midblock crossings shall be installed within blocks longer than 600 feet, or as designated by the City engineer.
- Pedestrian refuge islands shall be installed with midblock crossings and intersections of arterial streets.

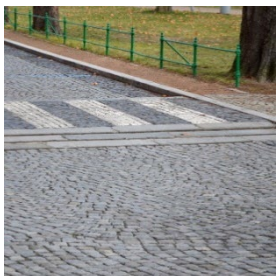


Figure 15. Enhanced crossing elements

Rectangular Rapid Flashing Beacons (RRFBs)

- When enhanced pedestrian crossings are required by the City engineer, RRFBs shall be used in combination with other features. RRFBs alert drivers only when pedestrians are present to preempt becoming accustomed to and selectively ignoring a continuous signal overtime.
- RRFB crosswalk signs shall be reinforced by on-grade reflectors and beacons.

A.	<i>Vegetated Bulb Out</i>
B.	<i>Midblock Crossing</i>
C.	<i>Rectangular Rapid Flashing Beacons (RRFBs)</i>
D.	<i>RRFB On-grade Reflectors/Beacons</i>



Raised Crosswalk
(Source: @ Michal / Adobe Stock)



RRFB (Source: @ MicahaelVi / Adobe Stock)



Vegetated Bulb Out (Source: portlandoregon.gov, BES)



Pedestrian Refuge Island: (Source: @ Media Castle / Adobe Stock)

3.3 Street Trees

- Trees selected for use as street trees shall be long-lived species possessing qualities suitable for an urban streetscape, including branching characteristics, rooting characteristics, disease resistance, and non-fruiting. Street trees shall be selected from the Camas Design Standard Manual.
- Street trees shall be a minimum of 2-inch caliper, fully branched, and staked at the time of planting.
- Street trees shall be maintained to provide 8 feet of clearance area under the canopy at the sidewalk and 10 feet of clearance at the street.
- Street trees shall be planted on all street frontages at minimum 30-foot on-center spacing, as measured along abutting curb.
- Street trees shall be placed a minimum of 2-1/2 feet from the back of the curb as measured from the center of the tree, unless otherwise specified by the City.
- Street tree planters shall be covered with Americans with Disabilities Act (ADA) accessible tree grates that are a minimum of 6 feet by 6 feet. Street tree placement shall not impede pedestrian access and shall allow for a minimum 6-foot path of travel (the ADA accessible tree grates may be placed within the path of travel to meet these specifications).

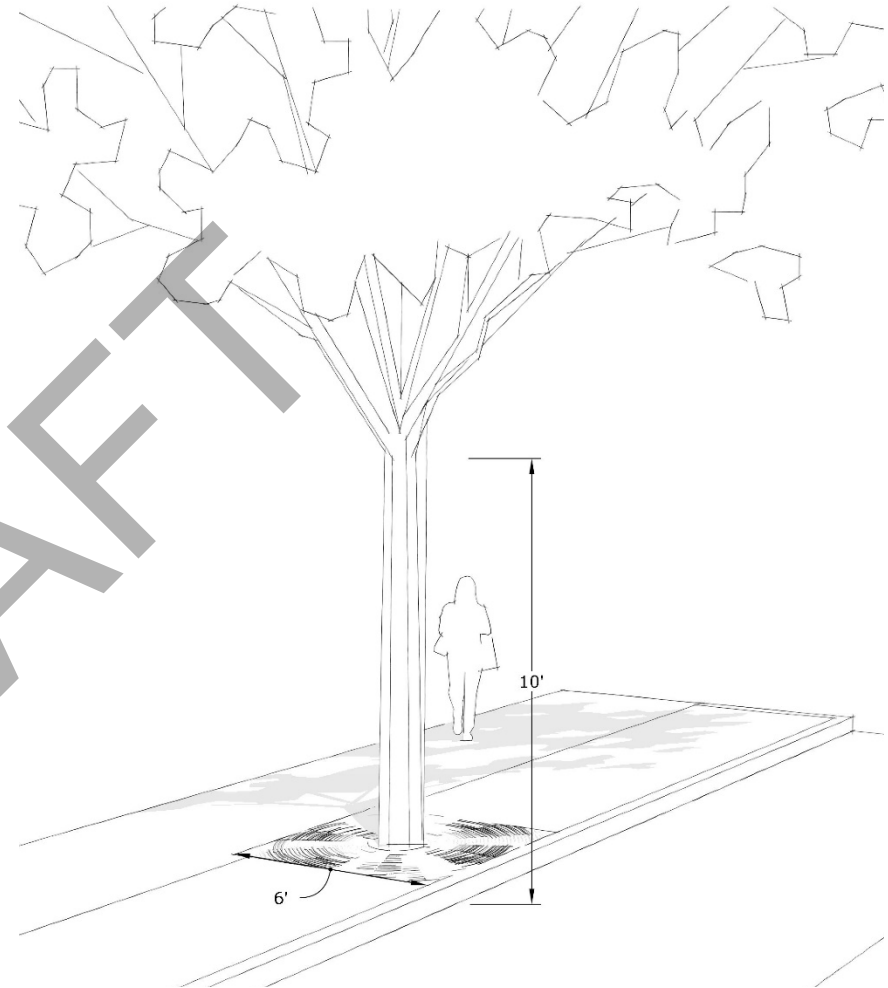


Figure 16. Street tree curb zone dimensions

Section 4. Sustainability

The following sustainable elements are encouraged for all new development in the North Shore.

4.1 Sustainable Sites

- The form and layout of buildings should be oriented to retain or integrate with the existing topography, natural habitat, and respond to climatic or solar conditions.
- The amount of impervious surfaces around buildings, such as driveways, should be reduced by using permeable pavers or other pervious design elements where soil conditions permit.
- Waterways should be “daylighted,” or restored to a more natural state, as part of stormwater management.
- Native soils, existing tree canopy, and topography should be preserved to the greatest extent possible.

4.2 Sustainable Buildings

- Sustainable features, such as solar panels and rain gardens, can be visually prominent.
- Bird-friendly windows and window treatments are encouraged, in particular next to open spaces and wildlife habitat.

4.3 Sustainable Streets

- Landscaped areas should use drought tolerant, native species that use stormwater runoff.
- Sidewalk strips should provide pollinator habitat to create “pollinator pathways” throughout the North Shore.
- Where soil conditions permit, green stormwater management facilities should be incorporated, including raingardens.
- Encourage the preservation and enhancement of wildlife corridors across public rights-of-way through wildlife crossings (under and overpasses designed for wildlife).



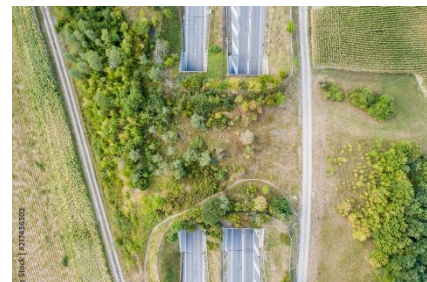
Driveways using permeable pavers (Source: © Francesco Scatena/ Adobe Stock)



Solar panels on a green roof (Source: © René Notenbomer/ Adobe Stock)



Pollinator habitat in a sidewalk strip (Source: © Sinuswelle/ Adobe Stock)



Wildlife crossing (Source: © Mario / Adobe Stock)

4.4 Sustainable Landscaping

Tree Protection and Replacement

Tree protection and replacement requirements for the North Shore are identified in CMC 18.13. The list below identifies some native and/or coniferous species that are appropriate for the North Shore.

Naturescaping

“Naturescaping” is a common approach to landscaping in the Pacific Northwest, and refers to landscaping that mimics nature and limits the need for human intervention (e.g., pesticides and irrigation). Naturescaping methods, such as those listed below, are encouraged in the North Shore.

- Limit traditional turf lawns, which require irrigation and provide limited habitat. Alternatives include clover lawns, native grasses, and “no mow” lawns.
- Use plant species that are native to the region (see the list below), which are acclimated to local climate conditions and provide habitat for local wildlife.
- Limit the use of pesticides, which have negative effects on pollinators, as well as water quality.
- Reduce water use by planting native species and using drip irrigation systems.
- Install raingardens to capture stormwater runoff and create habitat for pollinators and birds.

The following element is required in the North Shore:

- Invasive species, such as English ivy and Himalayan blackberry, are not permitted, and shall be removed where existing.

Native Plant List

The following list identifies some of the many plants that are native to Camas. Additional native species can be found through the Clark Conservation District, Washington Native Plant Society, East Multnomah Soil and Water Conservation District, or a similar organization.

Trees

- Oregon white oak (*Quercus garryana*)
- Douglas fir (*Pseudotsuga menzies*)
- Incense cedar (*Calocedrus decurrens*)
- W.V. Ponderosa pine (*Pinus ponderosa*)

- White alder (*Alnus rhombifolia*)
- Vine maple (*Acer circinatum*)

Shrubs

- Pacific ninebark (*Physocarpus capitatus*)
- Blue elderberry (*Sambucus cerulea*)
- Baldhip rose (*Rosa gymnocarpa*)
- Salmonberry (*Rubus spectabilis*)
- Evergreen huckleberry (*Vaccinium ovatum*)
- Red flowering currant (*Ribes sanguineum*)
- Salal (*Gaultheria shallon*)
- Snowberry (*Symphoricarpos albus*)
- Douglas spirea (*Spiraea douglasii*)
- Golden currant (*Ribes aureum*)

Groundcovers

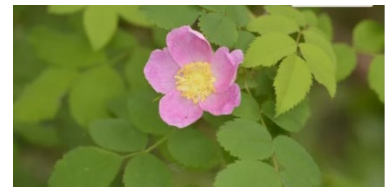
- Common camas (*C. quamash* *Asparagaceae*)
- Kinnikinnick (*Arctostaphylos uva-ursi*)
- Lady fern (*Athyrium filix-femina*)
- False lily-of-the-valley (*Maianthemum dilatatum*)
- Slough sedge (*Carex obnupta*)
- Woodland strawberry (*Fragaria vesca*)
- Yellow wood violet (*Viola glabella*)
- Wild ginger (*Asarum caudatum*)
- Mockorange (*Philadelphus lewisii*)



Oregon white oak (Source: © SteenoWac/ Adobe Stock)



Salmonberry (Source: © Turk / Adobe Stock)



Baldhip rose (Source: © Birdmanclark / Adobe Stock)



Common Camas (Source: © Alexandra / Adobe Stock)