

## Chapter 4: Design and Development

### What is this chapter about?

The goals and policies in this chapter convey the City's intent to:

- Encourage building and site design that promotes human and environmental health and safety and responds to local context.
- Promote strong links between building and site design, streets and the public realm.
- Guide historic and cultural resource and scenic view preservation.
- Encourage the integration of nature into the built environment.
- Reduce carbon emissions and promote energy and resource efficient neighborhoods and buildings.

### Why is this important?

Development and design shapes how Portland looks and functions. Past development, in combination with the natural landscape, has shaped how the city is experienced. Future development, and the treatment of built and natural heritage, has the potential to create a better, healthier, more efficient and more pleasant Portland. New development and redevelopment can promote vibrant, accessible urban places for people of all ages, abilities and backgrounds, while also enhancing natural resources, protecting health and safety and promoting resilience.

As a growing city, Portland faces design and development challenges, as well as opportunities. The policies in this chapter encourage development that respects context, preserves historic and cultural resources, reduces carbon emissions, improves resource efficiency, minimizes risk from natural hazards, limits impacts to wildlife and natural systems, and integrates nature into the urban environment.

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## Goals

### **Goal 4.A: Context-sensitive design and development**

New development is designed to respond to and enhance the distinctive physical, historic, and cultural qualities of its location, while accommodating growth and change.

### **Goal 4.B: Historic and cultural resources**

Historic and cultural resources are integral parts of an urban environment that continues to evolve and are preserved when possible.

### **Goal 4.C: Human and environmental health**

Neighborhoods and development are designed and built to enhance human and environmental health. They are designed and built to protect safety and livability, support local access to healthy food, limit negative impacts on water and air quality, reduce carbon emissions, encourage active and sustainable design, and integrate nature and the built environment.

### **Goal 4.D: Urban resilience**

Buildings, streets, and open spaces are designed to ensure long-term resilience. They are designed to adjust to changing demographics, climate, and economy, and withstand and recover from natural disasters.

## Policies

### **General development principles**

The design of buildings and other development can affect the safety, health, and quality of life of building users, neighbors and the environment. The following policies guide building and site design to promote accessible and attractive public environments. They also encourage site and building designs that contribute to a welcoming and attractive public realm and respond to current and historical contexts.

**Policy 4.1**      **Pattern areas.** Encourage building and site designs that respect the unique built natural, historic, and cultural characteristics of Portland’s five pattern areas, described in the Urban Form chapter.

**Policy 4.2**      **Community identity.** Encourage the development of character-giving design features that are responsive to place and the cultures of communities.

**Policy 4.3**      **Site and context.** Encourage development that responds to and enhances the positive qualities of site and context—the block, the public realm, and natural features.

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- Policy 4.4**     **Pedestrian-oriented design.** Enhance the pedestrian experience throughout Portland, through public and private development that creates accessible and attractive places for all those who walk and/or use wheelchairs or other mobility devices.
- Policy 4.5**     **Transitional urbanism.** Encourage temporary activities and structures in areas that are transitioning to being more urban, to promote job creation, entrepreneurship, active streets, and human interaction.
- Policy 4.6**     **Design for active living.** Encourage development and building and site design that promotes active living.
- Policy 4.7**     **Access to light and air.** Provide for public access to light and air by managing and shaping the height, and mass of buildings, while accommodating urban scale development.
- Policy 4.8**     **Privacy and solar access.** Encourage building and site designs that limit reductions in privacy and solar access for residents and neighbors, while accommodating urban scale development.
- Policy 4.9**     **Crime-preventive design.** Encourage building and site design approaches that help prevent crime.
- Policy 4.10**    **Fire prevention and life safety.** Encourage building and site design that improves fire prevention and life safety.
- Policy 4.11**    **Alleys.** Encourage the continued use of alleys for parking access and expand their use as the location of accessory dwelling units and as multi-purpose community space.

### Residential areas

There will be development and change, even in relatively stable lower density residential areas. These policies encourage designs and development that continue the existing development pattern. They also address design and development in lower density residential areas (see Glossary) outside of centers and corridors.

- Policy 4.12**    **Adaptable neighborhoods.** Encourage more housing choices to accommodate a wider diversity of family sizes, incomes, and ages. Allow adaptive reuse of existing buildings and the creation of accessory dwelling units to serve the changing needs of a household over time.

- Policy 4.13** **Scale and patterns.** Encourage design and development that complements the general scale, character, and natural landscape features of neighborhoods. Consider building forms, scale, street frontage relationships, setbacks, open space patterns, and landscaping. Allow a range of architectural styles and expression, and respect existing entitlements.
- Policy 4.14** **Resource efficient and healthy residential design and development.** Support resource efficient and healthy residential design and development (see those policies below).

### **Design and development of centers and corridors**

Centers and corridors are places where large numbers of people live, work, and visit. Careful attention to the design of centers and corridors is necessary to ensure that they become places where people want to live and gather, and where getting around by walking, biking, or wheelchair is an attractive choice. These policies also encourage the development of centers as places that reflect the character and cultures of the surrounding neighborhoods.

- Policy 4.15** **Walkable scale.** Focus services and higher-density housing in the core of centers to support a critical mass of demand for commercial services and more walkable access for customers.
- Policy 4.16** **Street environment.** Encourage development in centers and corridors to include amenities that create a pedestrian-oriented environment and provide places for people to sit, spend time, and gather.
- Policy 4.17** **Street orientation.** Promote building and site designs that enhance the pedestrian experience in centers and corridors, with windows, entrances, pathways, and other features that provide connections to the street environment.
- Policy 4.18** **Relationship between building height and street size.** Encourage development in centers and corridors that is responsive to street space width, allowing taller buildings on wider streets.
- Policy 4.19** **Design for pedestrian and bicycle access.** Provide accessible sidewalks, high-quality bicycle access, and frequent street connections and crossings in centers and corridors.
- Policy 4.20** **Residential uses on busy streets.** Improve the livability of places and streets with high motor vehicle volumes. Encourage landscaped front setbacks, street trees, and other design approaches to buffer residents from street traffic.

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- Policy 4.21**    **Natural features and green infrastructure in centers and corridors.** Integrate natural and green infrastructure, such as street trees, green spaces, ecoroofs, gardens, and vegetated stormwater management systems, into centers and corridors.
- Policy 4.22**    **Active gathering places.** Locate public squares, plazas, and other gathering places in centers and corridors to provide places for community activity and social connections. Encourage location of businesses and services adjacent to these spaces that relate to and promote the use of the space.
- Policy 4.23**    **Protect defining features.** Protect and enhance defining places and features of centers and corridors, including landmarks, natural features, and historic and cultural resources.
- Policy 4.24**    **Historic buildings in centers and corridors.** Protect, restore, and improve historic buildings in centers and corridors on adopted inventories.
- Policy 4.25**    **Public art.** Encourage new development and public places to include design elements and public art that contribute to the distinct identities of centers and corridors, and that highlight the history and diverse cultures of neighborhoods.

### Transitions and offsite impacts

These policies address transitions between areas of differing types of activity and scale of development, such as where centers and corridors interface with adjacent lower-intensity residential zones. These policies also address the consideration and mitigation of offsite impacts from development.

- Policy 4.26**    **Scale transitions.** Create transitions in building scale in locations where higher-density and intensity development is adjacent to smaller scale single-dwelling zoning. Ensure that new high-density and large-scale infill development adjacent to single dwelling zones incorporates design elements that soften transitions in scale and strive to protect light and privacy for adjacent residents.
- Policy 4.27**    **Land use transitions.** Improve the interface between non-residential activities and residential areas, in areas where commercial or employment areas are adjacent to residential zoned land.
- Policy 4.28**    **Offsite impacts.** Use land use and other regulations to limit and mitigate impacts, such as odor, noise, glare, air pollutants, and vibration that the use or development of a site may have on adjacent residential or institutional uses, and on significant fish and wildlife habitat areas. Pay particular attention to limiting and mitigating impacts to under-served and under-represented communities.

**4.28.a. Auto-oriented uses and exterior displays.** Minimize the impacts of auto-oriented uses, vehicle areas, drive-through areas, signage, and exterior display and storage areas on adjacent residential areas.

**4.28.b. Minimizing industrial impacts.** Protect non-industrial zoned parcels from the adverse impacts of activities on industrial zoned parcels.

**4.28.c. Industrial edge.** Buffer between industrial sanctuaries and adjacent residential or mixed use areas to protect both the viability of long-term industrial operations and the livability of adjacent areas.

**4.28.d. Air quality impacts.** Encourage building and landscape design and land use patterns that limit and/or mitigate negative air quality and noise impacts to building users and residents, particularly in areas near freeways, high traffic streets, and other sources of air pollution.

**4.28.e. Light pollution.** Encourage lighting design and practices that reduce the negative impacts of light pollution, including sky glow, glare, energy waste, impacts to public safety, disruption of ecosystems, and hazards to wildlife.

**4.28.f. Airport noise.** Require compatible land use designations and development within the noise-affected area of Portland International Airport, while providing public notice of the level of aircraft noise and mitigating the potential impact of noise within the area.

**4.28.g. Telecommunication facility impacts.** Mitigate the visual impact of telecommunications and broadcast facilities near residential areas through physical design solutions.

### Scenic resources

Portland's signature views of Mount Hood and other mountain peaks, bridges, and rivers are important to the city's identity. They strengthen connections to the regional landscape. These policies encourage the recognition, enhancement and protection of public views and significant scenic resources, as designated in the Scenic Resources Inventory.

**Policy 4.29 Significant places.** Enhance and celebrate significant places throughout Portland with symbolic features or iconic structures that reinforce local identity, histories, and cultures and contribute to way-finding throughout the city. Consider these especially at:

- High-visibility intersections
- Attractions
- Bridges
- Rivers
- Viewpoints and view corridor locations
- Historically or culturally significant places
- Neighborhood boundaries and transitions

**Policy 4.30 Scenic resource protection.** Protect designated significant scenic resources, including public views and scenic sites and corridors; and update or reconfirm the inventory of significant views, sites, and corridors in the future.

**Policy 4.31 Vegetation management.** Provide allowances for the pruning and cutting of trees and shrubs to maintain or enhance designated public views.

**Policy 4.32 Utility lines.** Maintain designated scenic views, sites, and corridors by encouraging the placement of utility lines underground.

**Policy 4.33 Regulatory guidance.** Avoid adverse impacts to scenic resources as part of land use reviews, where practicable.

**Policy 4.34 New public views.** Encourage new public and private development to contribute to creating new public views of Portland's rivers, bridges, the surrounding mountains, hills and buttes, the Central City skyline, and other landmark features.

**Policy 4.35 Street views.** Maintain public views of prominent landmarks and buildings that serve as visual focal points within streets or that terminate views at the end of streets.

## Historic and cultural resources

Portland has several hundred designated historic landmarks and historic and conservation districts. These special places help create a sense of place, contribute to neighborhood character, and recognize past history and events. More than half of Portland's buildings are over 50 years old, creating a vast pool of potentially significant properties. These policies support the protection of all resources of statewide significance and encourage preservation of historic and culturally significant resources.

- Policy 4.36** **Historic and cultural resource protection.** Encourage the protection and restoration of high-quality historic buildings and places that contribute to the distinctive character and history of Portland's evolving urban environment, where feasible.
- Policy 4.37** **Continuity with established patterns.** Encourage development that fills in vacant and underutilized gaps within the established urban fabric, while preserving and complementing historic resources.
- Policy 4.38** **Demolition.** Protect significant historic structures from demolition until opportunities can be provided for public comment, pursuit of alternatives to demolition, or actions that mitigate for the loss.
- Policy 4.39** **City-owned historic resources.** Keep City-owned historic resources in a state of good repair.
- Policy 4.40** **Historic Resources Inventory.** Survey and inventory historic resources as part of future planning projects, with a focus on areas of anticipated growth and change.
- Policy 4.41** **Preservation equity.** Expand historic preservation inventories, regulations, and programs to encourage historic preservation in areas that are under-represented by current historic preservation efforts.
- Policy 4.42** **Cultural diversity.** Work with Portland's diverse communities to identify and preserve places of historic and cultural significance.
- Policy 4.43** **Cultural heritage.** Encourage the protection and enhancement of cultural heritage structures and sites as valuable and important public assets.
- Policy 4.44** **Community structures.** Encourage the adaptive reuse of historic community structures, such as meeting halls and places of worship, for arts, cultural, and community uses that continue their role as anchors for community and culture.
- Policy 4.45** **Archaeological resources.** Protect and preserve archaeological resources in place, especially those sites and objects associated with American Indian cultures.

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### Public art

Public art and cultural amenities enrich people's lives. They offer educational experiences, enliven public spaces, and foster creativity. This helps build a sense of community and identity for an area. These policies support including public art in development.

**Policy 4.46 Public art and development.** Create incentives for public art as part of public and private development projects.

### Resource-efficient design and development

These policies support resource efficient design and development, from the location of development to the types of building materials. They apply to new development as well as the continued and adaptive reuse of existing buildings.

**Policy 4.47 Rehabilitation and adaptive reuse.** Encourage rehabilitation and adaptive reuse of buildings, especially those of historic or cultural significance, to conserve natural resources, reduce waste, and demonstrate stewardship of the built environment.

**Policy 4.48 Prioritize reuse.** Encourage maintenance, rehabilitation, and/or relocation of viable buildings over demolition and new construction.

**Policy 4.49 Seismic and energy retrofits.** Promote seismic and energy efficiency retrofits of historic buildings and other existing structures to reduce carbon emissions, save money, and improve public safety.

**Policy 4.50 Life cycle efficiency.** Encourage use of technologies, techniques, and materials in building design, construction, and removal that result in the least environmental impact over the life cycle of the structure.

**Policy 4.51 Materials and practices.** Encourage use of natural, resource-efficient, recycled, recycled content, and non-toxic building materials and energy-efficient building practices.

**Policy 4.52 Water use efficiency.** Encourage site and building designs that make efficient use of water and manage stormwater as a resource.

**Policy 4.53 Optimizing benefits.** Provide mechanisms to evaluate and optimize the range of benefits from solar and renewable resources, tree canopy, ecoroofs, and building design.

**Policy 4.54 Energy efficiency.** Encourage and promote energy efficiency significantly beyond the Statewide Building Code and the use of solar and other renewable resources in individual buildings and at a district scale.

- Policy 4.55 District energy systems.** Encourage and remove barriers to the development and expansion of low-carbon heating and cooling systems that serve multiple buildings or a broader district.
- Policy 4.56 Ecodistricts.** Encourage the creation of ecodistricts where multiple partners work together to achieve sustainability and resource efficiency goals at a district scale.
- Policy 4.57 Energy-producing development.** Encourage and promote development that uses renewable resources, such as solar, wind, and water to generate power on-site and to contribute to the energy grid.

*Goals and policies related to energy infrastructure can be found in Chapter 8: Public Facilities and Services.*

## **Designing with nature**

Incorporating natural features and functions into development yields tangible social, environmental and economic benefits. It improves human and watershed health. How this integration looks and functions depends on local conditions and characteristics. Regardless, designing with nature provides or enhances ecosystem services, such as stormwater management, cooling of air and water, reduction of landslide and flooding risks, protection or improvement of fish and wildlife habitat, and the ability of Portlanders to enjoy nature in their daily lives. These policies encourage development and design that enhances the identity and beauty of Portland’s neighborhoods, while improving environmental health and preparing for the effects of climate change. Additional goals and policies about the integration of nature into the built environment are found in Chapter 7.

- Policy 4.58 Design with nature.** Encourage design and site development practices that enhance and avoid the degradation of watershed health and ecosystem services.
- Policy 4.59 Flexible development options.** Encourage flexibility in the division of land, the siting and design of buildings, and other improvements to reduce the impact of development on environmentally sensitive areas.

## **Hazard-resilient design**

Portland has varied topography, with hills, buttes, abundant trees, and vegetation. It is also located at the confluence of two major river systems. As a result, there are periodic floods, wildfires, and landslides. The city is also in a seismically active region, at risk of earthquakes from local faults and the Cascadia Subduction Zone in the Pacific Ocean. These policies direct development away from hazard-prone areas, seek to reduce hazard risks and impacts, and improve resilience to disasters and climate change.

- Policy 4.60 Evaluating hazards.** Evaluate slope and soil characteristics, including liquefaction potential, landslide hazards, and other geologic hazards.

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- Policy 4.61**    **Reducing natural hazards and climate change risks and impacts.** Limit development in or near areas prone to natural hazards where practicable, using the most current hazard and climate change-related information and maps.
- Policy 4.62**    **Disaster recovery.** Encourage development approaches that will enhance the ability of people, wildlife, natural systems, and property to withstand and recover from a natural disaster or other major disturbance.
- Policy 4.63**    **Urban heat islands.** Encourage development, building, and infrastructure design that reduces urban heat island effects.
- Policy 4.64**    **Planning and disaster recovery.** Facilitate effective disaster recovery by providing recommended updates to land use designations and development codes, as warranted, in preparation for natural disasters.

### Healthy Food

Access to healthy food is important for many reasons. A nourishing diet is critical to maintaining good health and avoiding chronic disease later in life. This leads to better long term public health outcomes and lower healthcare costs. Food behaviors are shaped at an early age. Children who are exposed to healthy foods are more likely to develop healthful food behaviors than those who are not.

In spite of these benefits, many Portlanders do not have good access to healthy food. These policies promote a range of approaches for improving access to healthy food through buying and growing. The policies help meet the Portland Plan goal for 90 percent of Portlanders to live within a half-mile of a store or market that sells healthy food.

- Policy 4.65**    **Grocery stores in centers.** Facilitate the development of grocery stores and neighborhood-based markets offering fresh produce in centers.
- Policy 4.66**    **Neighborhood food access.** Encourage small, neighborhood-based retail food opportunities, such as corner markets, food co-ops, food buying clubs, and community-supported agriculture pickup/drop off sites, to fill in service gaps in food access across the city.
- Policy 4.67**    **Growing food.** Increase opportunities to grow food for personal consumption, donation, sales, and educational purposes.
- Policy 4.68**    **Access to community gardens.** Ensure that community gardens are allowed in areas close to or accessible via transit to people living centers and other high-density areas where residents have few opportunities to grow food in yards.