



CLIMATE-FRIENDLY AND EQUITABLE COMMUNITIES WALKABLE DESIGN STANDARDS GUIDEBOOK



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Acknowledgements



Lead Project Staff:

Cody Meyers, Project Manager, Land Use and Transportation Planner

Bill Hostrom, Transportation and Growth Management Coordinator

Kevin Young, Senior Urban Planner

Alex Joyce, Cascadia Partners

Jamin Kimmel, Cascadia Partners

Pauline Ruegg, Cascadia Partners

Tara Sorrells, Cascadia Partners

DLCD Supporting Staff:

Evan Manvel, Climate Mitigation Planner

Kelly Reid, Portland Metropolitan Area Regional Representative

Ryan Marquardt, Transportation and Land Use Planner

Nicole Cross, Land Use and Transportation Planner

Technical Advisory Committee:

Anne Catlin, City of Albany

Carla Paladino, City of Medford

Eunice Kim, City of Salem

Steve Koper, City of Tualatin

Rian Amiton, City of Corvallis

Phil Nameny, City of Portland

Derek Severson, City of Ashland

Brian Martin, City of Beaverton

Chelsea Hartman, City of Springfield

Schuyler Warren, City of Tigard

Paige West, Rogue Valley Transit District

Jacob Callister, Lane Council of Governments

Megan Winner, City of Coburg

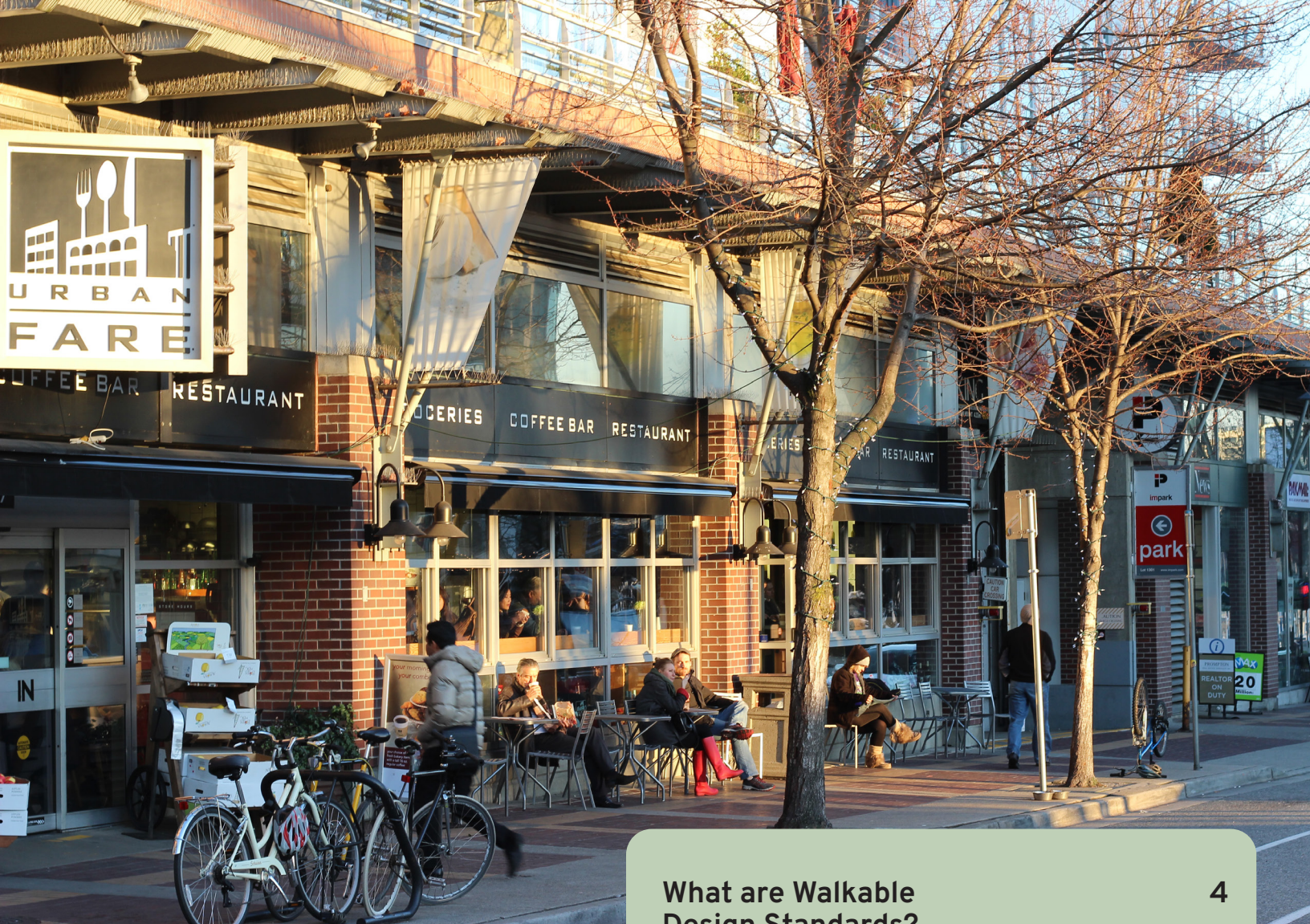


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What are Walkable Design Standards?

WALKABLE LAND USE STANDARDS

Cities – their form and function—are one of the most significant opportunity areas for achieving climate goals. The Climate-Friendly and Equitable Communities (CFEC) program is a coordinated set of planning initiatives and requirements designed to accelerate the creation of more sustainable and equitable communities. Critical to these efforts is advancing walkable design statewide.

Many cities have taken the first steps required by the CFEC program and have designated infill growth areas known as climate-friendly-areas (CFAs). The requirements in OAR 660-012-0330 (rule 0330) are intended to strengthen walkability in those areas and for the rest of the city – specifically the main streets and neighborhoods surrounding CFAs that will support these growing centers of activity. True climate friendliness requires improving the walkability of the entire city, not just creating islands of walkability within each CFA.

The Walkable Design Standards Guidebook is a resource to help local communities across Oregon implement more walkable development and site design standards. As used in this Guidebook walking is an inclusive term that includes all forms of mobility devices, including using a wheelchair, cane, walker, or other mobility device that allows people to travel at human speed.

This Guidebook provides local jurisdictions with a recommended process for evaluating walkability in their zoning code and guidance on standards and approaches in a variety of contexts. Contained within this Guidebook are a series of tools and resources to help planners better understand the goals of CFEC and think critically about existing land use regulations. These tools are a valuable resource both for cities required to update land use regulations to meet rule 0330 and those not subject to that rule. When adopted, walkable design standards will advance a healthier, more equitable, less resource-intensive development pattern.

GOALS OF CLIMATE-FRIENDLY AND EQUITABLE COMMUNITIES PROGRAM

- Compact, pedestrian-friendly, mixed-use development patterns
- Comfortable, direct, and convenient access for people walking, biking, and riding transit
- Neighborhoods that are comfortable for families (people young and old), inclusive, sociable, and healthy
- Engaging, vibrant, mixed-use districts with an active street life

GOALS OF THIS GUIDEBOOK

- Provide resources and guidance to update land use regulations for jurisdictions required to comply with OAR 660-012-0330
- Clarify the process and steps for compliance

HOW IS WALKABLE DESIGN DEFINED?

Walkable land uses are pedestrian oriented, connected, and compact. The presence of these characteristics enhance climate and equity goals. Land use regulations related to these topics are the primary focus of OAR 660-012-0330. The resources in this Guidebook are organized into these three priority topic areas.

1

PEDESTRIAN ORIENTATION

A pedestrian oriented environment prioritizes the experience and safety of those on foot by creating an engaging, accessible, and walkable public space. This outcome includes elements such as building entrances facing the street, ground floor windows, and features that encourage foot traffic such as sidewalks and benches. Design that focuses on pedestrians reduces dependence on driving, which in turn lowers transportation pollution and promotes more active lifestyles. Pedestrian-oriented design supports diverse housing options close to essential services, making it easier for people of all income levels to live without depending on driving for every trip, thereby improving access to jobs, education, and healthcare.

2

CONNECTIVITY AND ACCESS

Connectivity and access focus on integrating multiple transportation modes to enhance the ease with which people can move from one place to another. This includes well-connected street networks, pedestrian paths, bike lanes, and public transit options. Better connectivity reduces travel times and encourages walking, bicycling, and transit use. As travel distances shrink and more useful travel options become available, emissions from personal vehicles decline, contributing to lower overall greenhouse gas emissions. Improved connectivity means households of all incomes have better access to opportunities and supports the development of affordable housing near transit hubs. By making transit a viable option for more people, connected communities can significantly reduce the environmental impact of daily commutes.

3

COMPACT DEVELOPMENT

Compact development refers to the efficient use of land by concentrating development and involves higher-density housing, mixed-use development, and the preservation of open space. Compact development reduces distances between homes, workplaces, shops, and services, and lessens the need for long car trips. Compact development supports more affordable housing options by making better use of available land, which can help reduce housing costs. Compact development also makes more efficient use of land and infrastructure, preserving natural landscapes that help sequester carbon and maintain biodiversity. By reducing land consumption, compact communities can support more sustainable lifestyles that contribute to climate resilience.

SUMMARY OF WALKABLE DESIGN STANDARDS

Below is a summary of the standards provided for the three priority topics that together support compact, walkable, pedestrian-friendly communities.



PEDESTRIAN-ORIENTED DEVELOPMENT

Building Orientation and Frontage Design. How to place and design buildings to provide context-appropriate transitions between the building and the public realm.

Ground Floor Design for Nonresidential and Mixed-Use Buildings. How to design the ground floor of nonresidential and mixed-use buildings to engage with the public realm.

Ground Floor Design for Residential Buildings. How to design the ground floor of residential buildings to engage with the public realm.

Driveways and Garages. How to minimize the visual impacts of garages, driveways, and parking areas to support a pedestrian-oriented and sociable street environment.

Drive-Through Facilities. How to design drive-through facilities that support pedestrian-oriented site design and limit the negative impact of facilities oriented to vehicles.



CONNECTIVITY AND ACCESS

Street Connectivity, Blocks, and Accessways. How to facilitate safe, convenient, and efficient movement of people that are walking, biking, using transit, or driving.

Pedestrian and Bicycle Circulation. How to provide connections that minimize out-of-direction travel between buildings and existing public rights-of-way, pedestrian/bicycle accessways, and other on-site pedestrian facilities.

Transit Facilities. How to orient developments and sites to transit corridors to make it easier and more comfortable to access and use transit.

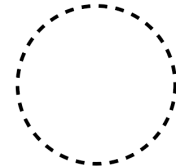







COMPACT DEVELOPMENT

Building Types. How to calibrate zoning standards based on desired built outcomes and compact building types.

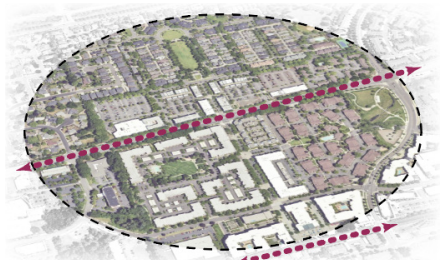
WHAT DOES A WALKABLE COMMUNITY LOOK LIKE?



-  1/4 Mile Walk Radius
-  Multi-Modal Connections
-  Connected Street Grid
-  Compact Development
-  Parking Oriented Behind Buildings
-  Public Transportation

*Compact Development
promotes efficient land use*

*Parking Behind Buildings
reinforces active, engaging streets*



*Multi-Modal Connections
provide equitable, safe access*

*A Connected Grid
presents choices and improves access*

*Transit
reduces pollution and advances equity*



THREE SCALES OF WALKABILITY

Walkable design standards influence development patterns at different scales. Some standards, like street connectivity, influence the district or neighborhood scale. Other standards, like access and driveway spacing, influence blocks. Finally, other standards, like building orientation, influence individual lots and their buildings. These three scales - **the district, the block, and the lot** - are helpful to keep in mind when considering which standards are relevant to walkable communities. The standards that influence walkability can be in different parts of your code depending on the scale at which they are relevant. Pedestrian orientation, connectivity, and compact development come together at all three scales to create more climate friendly outcomes.

Communities that are more compact, walkable, and connected offer many benefits:

- reduced greenhouse gas pollution
- cleaner air
- better health outcomes
- more equitable access
- increased quality housing supply
- more transportation choices

Chapter 1: CFEC Overview

WHAT IS CFEC?

The Climate-Friendly and Equitable Communities (CFEC) program, launched in 2020, aims to meet legislative climate policy and goals, provide more transportation and housing options, and promote more equitable land use planning outcomes. Oregon set a policy and goal in law to lower greenhouse emissions by 75% by 2050. CFEC actions are a key element of Oregon's Statewide Transportation Strategy. By strengthening Oregon's transportation and housing planning in regions with populations over 50,000, the state is targeting changes in transportation and land use planning to further reduce climate pollution.

Transportation-related climate pollution has increased; today it accounts for roughly 38% of the state's climate pollution. Reducing driving is one of the most important ways to reduce pollution. By bringing land uses closer together, increasing the walkability of the built environment, and mixing land uses, communities can reduce the number

and length of driving trips and have a meaningful impact on climate goals. If current land use patterns and vehicle use trends continue, Oregon will fall short of its 2050 climate goals.

In response, the Department of Land Conservation and Development (DLCD) drafted updates to transportation and land use planning rules. The Land Conservation and Development Commission adopted the updated Oregon Administrative Rules (OARs) related to the CFEC program were adopted by the on July 21, 2022.

Oregon's land use planning system is a partnership between the state and local governments. The updated rules guide how local governments conduct land use and transportation planning to meet the state's climate and equity objectives. The updated rules underscore the commitment to increasing equity in land use and transportation planning decisions while increasing housing choices, employment options, and creating more equitable outcomes for all Oregonians.



Climate-Friendly and Equitable Communities prioritize use of facilities for all ages and ability.

CFEC LAND USE

The rules related to land use planning can be broken down into major task groups that advance the state’s transportation and land use planning goals

1

CLIMATE-FRIENDLY-AREAS

Designate areas that allow for dense, urban mixed-use centers with jobs, homes, and services and high-quality pedestrian, bicycle and transit infrastructure. Support with comprehensive plan, zoning map, and code changes to implement (OAR 660-012-0310 through 0320).

2

PARKING REFORM

Reduce required parking near frequent transit and for certain development types. Reform how parking is regulated to reduce impact of parking on climate, housing, and equity outcomes (OAR 660-012-0400 through 0660-012-0450).

3

LAND USE REGULATIONS

Implement land use regulations and bicycle parking requirements in commercial and residential zones to support walkable, climate-friendly communities (OAR 660-012-0330).

The Land Conservation and Development Commission adopted a set of updates to the OARs on July 21, 2022. The OARs instruct regions with populations over 50,000 people (Albany, Bend, Corvallis, Eugene/Springfield, Grants Pass, Medford/Ashland, Portland Metro, and Salem/Keizer) to implement land use and transportation planning that supports compact, pedestrian-friendly, mixed-use land use development patterns in urban areas. Areas outside of these designated areas are not impacted. The rules require cities and counties to update their land use regulations to meet updated requirements provided in OAR 660-012-0330

Within the OARs related to CFEC there are numerous rules related to:

- Meeting climate policy and goals
- Increasing housing and employment options
- Fostering vibrant downtowns and centers
- Improving transportation options
- Promoting equitable outcomes

There are also portions of the OARs that address key aspects of transportation planning (660-012-0315 and 660-012-0320). Local governments will prioritize system performance measures that achieve community livability goals; prioritize investments in transit, biking, biking and walking; let parking be determined by market demand; and plan for needed electric vehicle charging infrastructure. To learn more about the other elements of the CFEC program and relevant tools, visit the [DLCD CFEC website](#).

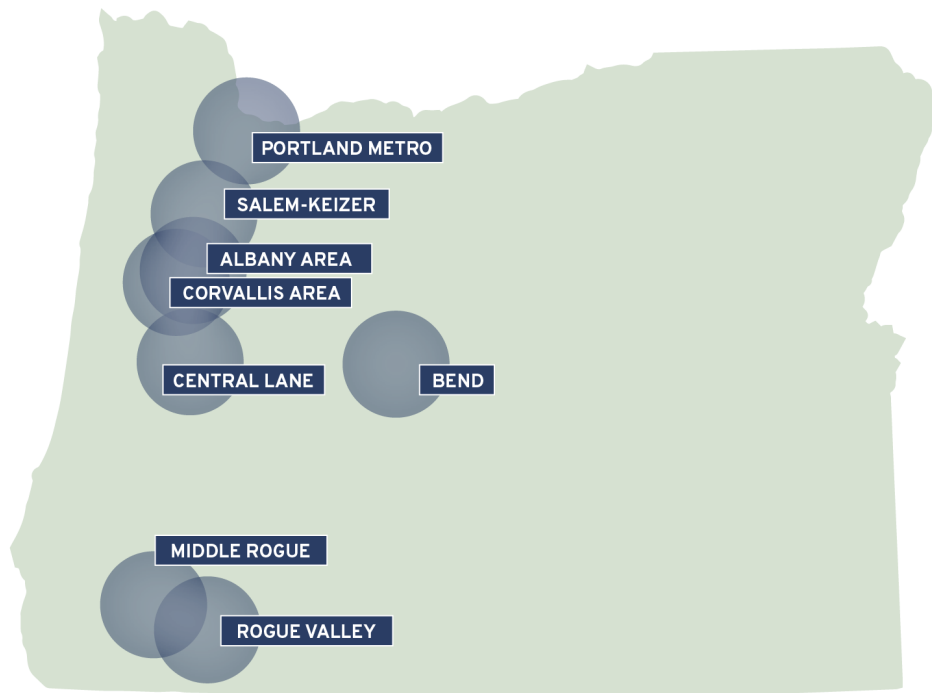
WHERE DOES RULE 0330 APPLY?

Land use regulations required by OAR 660-12-0330 apply to the entire area of a jurisdiction within the urban growth boundary. This includes all commercial and residential zone districts. Cities are not required to update site design regulations in zones with a predominantly industrial or rural character OAR 660-012-0330 (4)(h).

Walkable design standards apply both within and outside of climate-friendly areas (CFAs). There will be some overlap between land use regulations changes related to OAR 660-012-0330 and those related to land use requirements in CFAs as required by 660-012-0320. The intent is that CFEC standards cover additional areas that are designated as CFAs, for example a highway commercial zone or small area of neighborhood commercial and/or downtowns or corridors that are not designated as CFAs.

Adopted or amended land use regulations will apply to new development and not impact existing development, therefore, the impact of these changes will be incremental over time.

The focus of OAR 660-12-0330, and this Guidebook, are land use regulations related to the private lot. While regulations governing the public realm are highly consequential for outcomes, this Guidebook does not include guidance on regulations related to the public realm, e.g. the right-of-way. For walkable design to be successful, cities will need to collaborate with other agencies and transit authorities to advance shared vision and common policies advancing walkable design.



The CFEC program applies to regions with populations over 50,000 people.



HOUSING



TRANSPORTATION



EQUITY

HOW DOES CFEC SUPPORT OREGON'S OTHER PLANNING GOALS?

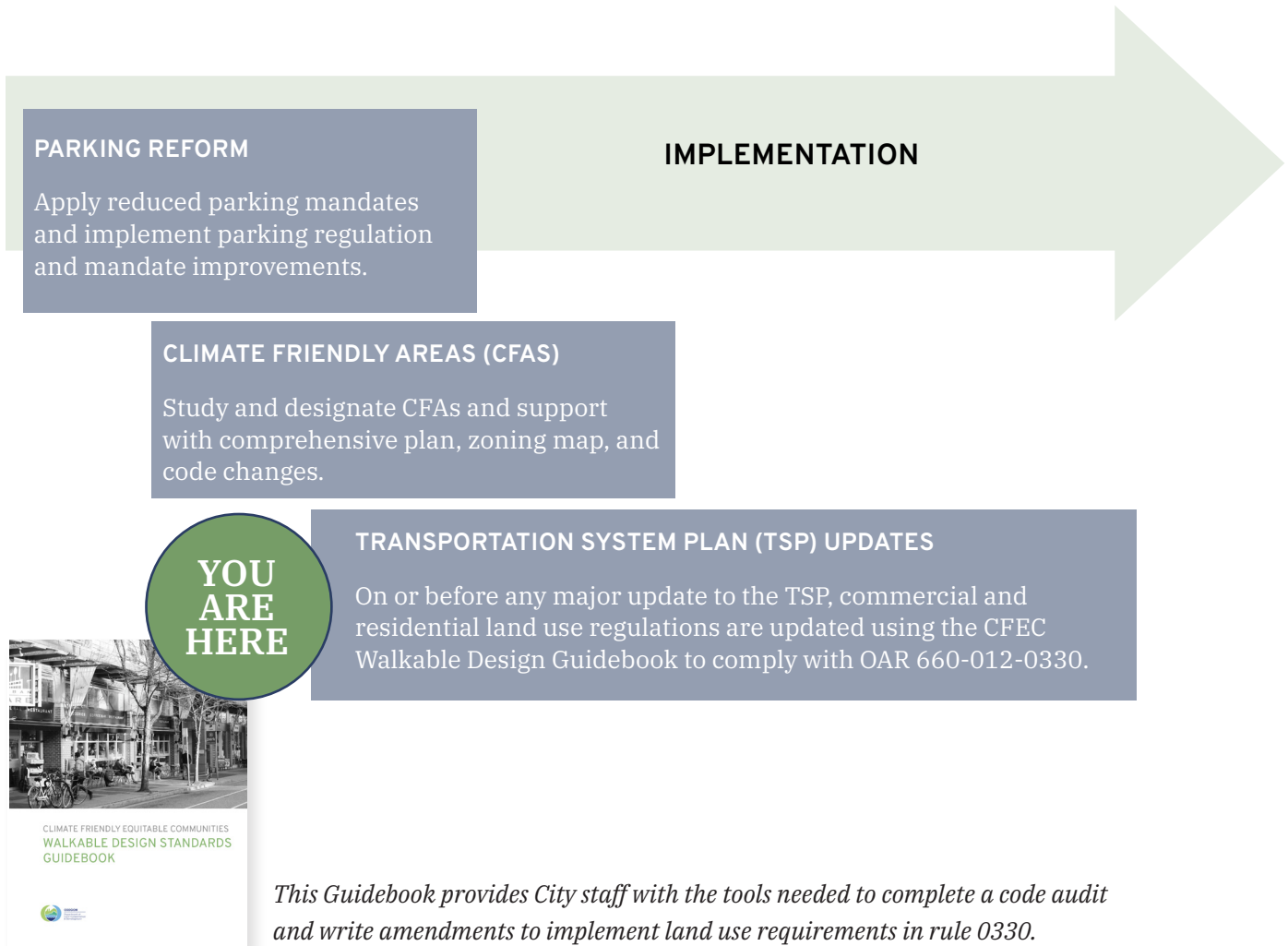
By updating local land use regulations, cities can advance key climate objectives, while also advancing. Progress toward **housing, transportation, and equity** goals will also be advanced. Changes in zoning enable development of more housing units, expand transportation options, and increase access to services and community amenities. These outcomes improve greater housing and transportation options for all residents. Improved standards reduce barriers to development in walkable, mixed-use areas, where essential services and amenities are more accessible. Focusing housing development in these areas promotes equitable access to opportunities by lowering transportation costs and providing diverse housing choices. Residents benefit from living closer to employment centers, schools, and community resources, enhancing both quality of life and economic mobility. Easy access to these essential community elements will also reduce household spending on transportation and support growing transit use. By prioritizing walkable, amenity-rich areas, these outcomes support inclusive growth and sustainable communities, advancing broader goals of equity, affordability, and accessibility in housing.

The core of this work aims to both reduce climate pollution and increase equity by reducing driving, improving transportation choices, and creating communities where daily needs can be met by walking, biking, remote access, or taking transit.

HOW TO MEET WALKABLE DESIGN STANDARDS

To help communities to implement these requirements, DLCD developed the CFEC Walkable Design Standards Guidebook. **This Guidebook focuses on the site design requirements portion of the CFEC program related to land use regulations**, which is implemented through Oregon Administrative Rule 660-012-0330. This Guidebook can assist in the interpretation of an administrative rule but does not itself have the force of rule. This document includes recommendations that may go beyond the minimum necessary to comply with the rule.

Contained within this Guidebook are standards that comply with portions of rule 0330. The Guidebook also includes recommendations related to rule 660-012-0405(4)(c) for improved pedestrian connections through large parking lots. Not addressed in this Guidebook are how to meet OAR 660-012-0330(7) Low-Car Districts and OAR 660-012-0330(8) related to transportation facilities, corridors, and sites. For the full text of rule 0330 see Appendix 1.



WHEN DO YOU NEED TO COMPLY?

Jurisdictions must adopt walkable land use regulations (consistent with OAR 660-12-0330) with or before a major update to their Transportation System Plans (TSP). The objective of this timing is to coordinate land use and transportation planning efforts. This Guidebook is a resource for jurisdictions to audit and/or update their regulations. The resources within the Guidebook will help planners review their code to determine relevant sections, determine whether or not they are in compliance with CFEC goals, and provide insights and tools for how to update them.

At a minimum, when updating a TSP, jurisdictions must conduct a critical thinking exercise to evaluate all commercial, residential, and mixed-use zones within their urban growth boundary (UGB) and demonstrate how current regulations support OAR intent or will be amended to do so. There is flexibility for how communities meet CFEC OAR requirements and support from DLCDC to make updates to come into compliance:

- **Timeline:** Cities and counties can propose alternative dates to meet the updated requirements.
- **Support options:** Jurisdictions can either receive support from consultants or manage compliance internally.
- **Local values:** Jurisdictions can implement the requirement to best suit their local values. Rules such as 0330 are outcome oriented, providing for flexibility in local implementation.

A FLEXIBLE PROCESS

The land use requirements in the rules are designed to be flexible, allowing city staff to adapt to local conditions and make context-specific amendments. Rule 0330 applies broadly across multiple priority topic standards in this Guidebook, and there is no direct crosswalk between each rule section and each design standard, as some standards apply to multiple sections of the rule.

GETTING STARTED

The recommended pathway to compliance is laid out in the figure on Page 16. The process involves the following steps:

- **Step 1: Gather** – Collect all Municipal Code sections which the CFEC rules are applicable to.
- **Step 2: Flag** – Use the summary table on Page 15 to identify the standards within these code sections that address each of the sections within rule 0330.
- **Step 3: Assess** – Perform a code audit to determine if existing standards and approaches align with the intent detailed under the priority topics (Pedestrian Orientation, Connectivity and Access, Compact Development) found in this Guidebook in Chapters 2, 3, and 4.
- **Step 4: Consider** – Compare existing standards and approaches to the Model Code and Compact Building Types. Consider possible modifications to existing standards that better support walkable design outcomes.
- **Step 5: Solicit** – Seek input from impacted stakeholders and conduct an equity analysis of proposed code and plan amendments.
- **Step 6: Prepare** – Draft final amendments, including findings demonstrating how the city is meeting the intent of the standards in rule 0330.

HOW WILL THE MODEL CODE ADDRESS RULE REQUIREMENTS?

See below for a reference detailing which standards covered in the Guidebook address OAR 600-012-0330.

| OAR Section | Related Guidebook Standards |
|---|---|
| 660-012-0330(3) Cities and counties shall have land use regulations that provide for pedestrian-friendly and connected neighborhoods. | |
| 660-012-0330(3)(a) | 3.1 Street Connectivity, Blocks, and Accessways 3.2 Pedestrian and Bicycle Circulation |
| 660-012-0330(3)(b) | |
| 660-012-0330(3)(c) | |
| 660-012-0330(3)(d) | |
| 660-012-0330(4) Cities and counties shall have land use regulations in commercial and mixed-use districts that provide for a compact development pattern, easy ability to walk or use mobility devices, and allow direct access on the pedestrian, bicycle, and public transportation networks. | |
| 660-012-0330(4)(a) | 2.1 Building Orientation and Frontage Design |
| 660-012-0330(4)(b) | 2.3 Ground Floor Design (Residential) |
| 660-012-0330(4)(c) | |
| 660-012-0330(4)(d) | 2.4 Driveways and Garages |
| 660-012-0330(4)(e) | 3.1 Street Connectivity, Blocks, and Accessways |
| 660-012-0330(4)(f) | 3.2 Pedestrian and Bicycle Circulation |
| 660-012-0330(4)(g) | |
| 660-012-0330(4)(h) | Chapter 3. Compact Development |
| 660-012-0330(6) Cities and counties shall have land use regulations that ensure auto-oriented land uses are compatible with a community where it is easy to walk or use a mobility device. Auto-oriented land uses include uses related to the operation, sale, maintenance, or fueling of motor vehicles, and uses where the use of a motor vehicle is accessory to the primary use, including drive-through uses. | |
| 660-012-0330(6)(a) | 2.5 Drive Through Standards |
| 660-012-0330(6)(b) | 3.2 Pedestrian and Bicycle Circulation |
| 660-012-0405(4)(c) Developments must provide pedestrian connections throughout the parking lot. | |
| 660-012-0405(4)(c) | 3.2 Pedestrian and Bicycle Circulation |

BEST PRACTICES

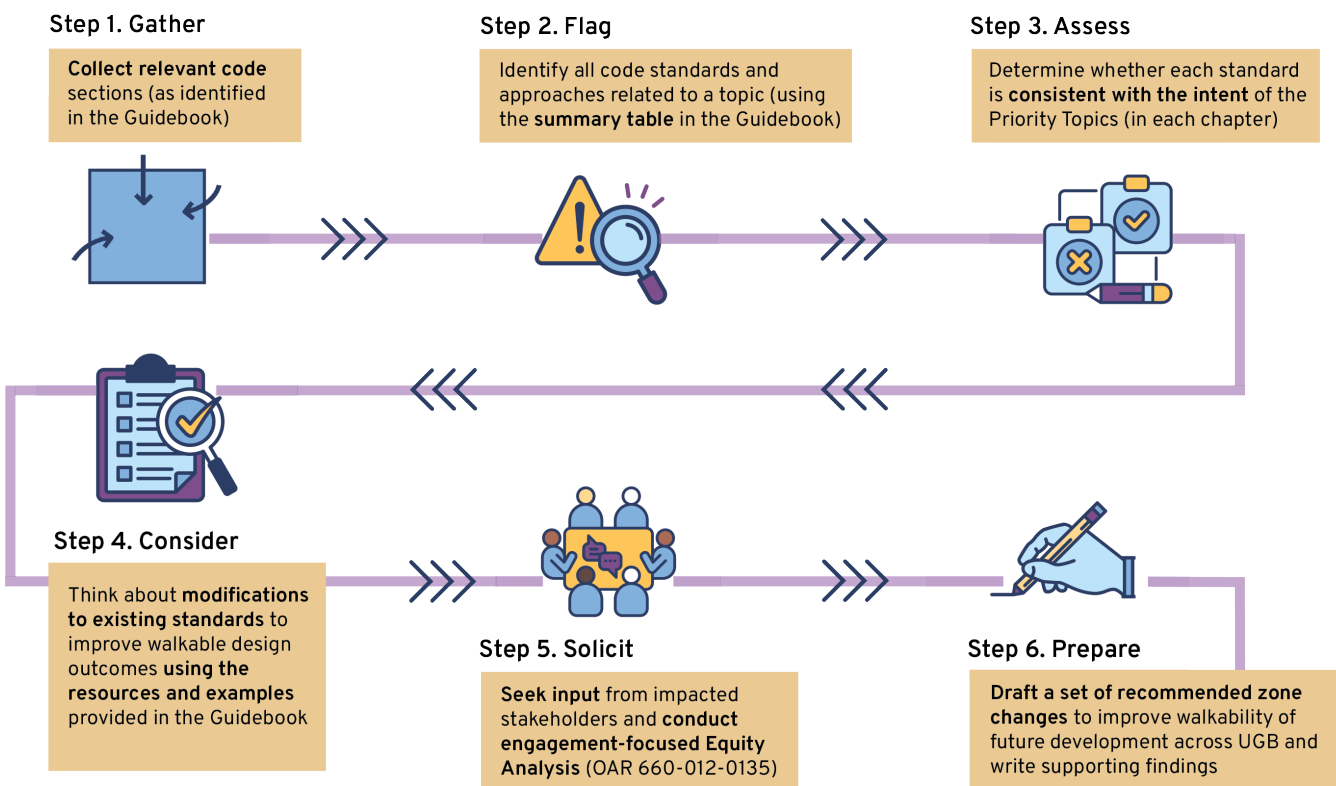
When using the process and resources laid out in the Guidebook, cities should consider the following best practices. These are helpful to consider whether conducting the audit, outreach, or preparing amendments in-house or when putting together a scope and managing a process to be run by consultants.

As part of Steps 1 and 2 (Gather and Flag), planning staff should collect all existing relevant standards across multiple areas of the code. This may include portions of code that are typically not found in land use zoning regulations but in public works or engineering design standards. This may also include related sections of the Comprehensive Plan, Climate-Friendly-Area plans, Transportation System Plans, specific area plans, engineering and public works design standards, and transit agency design guidelines. Part of the challenge is compiling all these related standards and policies to allow for a comparison of existing standards to recommended approaches and standards.

Specific land use zones are not identified in the Guidebook. Instead district types are used as proxy for land use zones. When compiling relevant standards, if you need help to clarify which zones are most important to assess, review the explanation of district types and how to use them found on Page 19.

As part of Steps 3 and 4 (Assess and Consider), planning staff should make use of the Guidebook tools to evaluate how well current standards and approaches are meeting the objectives of rule 0330. As an initial step, relevant standards should be carefully reviewed to determine if they are consistent with the intent statements of both the priority topics and for each design standard in the Model Code. If an existing standard is consistent with this intent, staff may still evaluate opportunities to improve it to better support walkable design outcomes.

To inform this assessment, cities should convene a broader group of city planning staff who administer the code, including representatives across relevant



city bureaus or departments, to facilitate a discussion about existing requirements of the code that are barriers to compact, pedestrian-oriented, walkable places.

It is critical to undertake this analysis with input from a variety of disciplines to build support for code updates that cut across various agency purviews. For example, a city cannot determine if it will be possible to require alleys without identifying any concerns that may arise from the fire marshal. Likewise when evaluating driveway spacing standards, input should be sought from city engineers.

This cross-discipline coordination should be included in the initial stages of analysis and discussion. This approach will facilitate collaboration across different land use and transportation departments. To advance walkable design standards and to implement land use requirements in rule 0330 it will take coordination and working in tandem.

After identifying and assessing relevant barriers and gaps within the existing code, planners should use several important tools presented in the Guidebook to develop concepts for potential modifications to existing standards or adoption of new standards. These include:

- Compare existing city zoning standards to Model Code language. This comparison should include the applicability of standards (both in terms of thresholds and in terms of applicability to certain use types), the exceptions and discretionary review option, key definitions, and individual design standards contained within each set of Model Code standards.
- Review key considerations in the Guidebook to determine potential modifications to the Model Code standards that may be important given local conditions and specific context(s), e.g.,



EQUITY IN OUTREACH TIPS FOR SUCCESS

As part of the Walkable Design Standards implementation process, communities need to think through how to underscore equity both in terms of their analysis of land use regulations but also in working with impacted communities. When conducting community engagement, keep in mind the following tips.

- **Prioritize Accessibility and Inclusivity:** Ensure all materials and events are accessible to everyone, including people with disabilities. This can include offering translations, accessible venues, and alternative formats like Braille or large print. This also means translating the complexities of zoning code for a general audience. The planner's role is to translate the desired outcomes of the community into regulations that will help achieve this outcome.
- **Build Long-Term Relationships:** Engage with community members beyond one-time events. Appoint trusted community liaisons, offer staff time to volunteer at culturally significant events, and foster partnerships with local organizations. This helps build trust and encourages sustained participation.
- **Offer Multiple Ways to Engage:** Use a variety of engagement methods, from interactive in-person activities to virtual platforms. Options like tabling at community events, online surveys, or focus groups can help reach a wider audience. Tailor activities to different learning styles and cultural preferences for deeper, more meaningful engagement.
- **Compensate Participants:** Acknowledge the time and expertise of community members by providing compensation. This can be through stipends for event participation, transportation, or honoraria for guest speakers and community leaders. Compensation shows respect and encourages diverse participation.
- **Ensure Continuous Feedback Loops:** Make engagement a two-way street by regularly seeking feedback and sharing how input influences decisions. Ongoing updates and transparent reporting build accountability and demonstrate that community voices are valued throughout the process.

additional design standard elements to add, not include, make optional, and/or variations in the numerical values.

- Consider the best practices included in the Guidebook and debate the potential for new approaches as relevant.
- Explore compact building types to determine if any are desired in key zones. If so, compare and contrast the desired building characteristics against existing development standards in those zones to assess what changes would be needed to permit these desired outcomes.

Key to concluding Step 4 (Consider) is to continue to engage across various city departments to resolve potentially conflicting viewpoints and document a clear record of input and resolution.

When considering Step 5 (Solicit), planning staff should consider how to clearly and simply distill the key objectives of the 0330 rule and communicate code changes in terms of tangible, physical changes to the city environment. Staff can use the design principles, images, and intent as laid out in the Guidebook to communicate what walkable design looks and feels like, rather than presenting more abstract concepts of reductions in greenhouse gas emissions and shifts in travel mode. Language and graphics from the guidebook can be used to communicate the land use requirements in rule 0330 and the intent of code changes into clear language and graphics. Also important is to avoid any engagement fatigue. Staff should coordinate outreach with other related planning processes, including updates to the TSP or on-going CFA work or other related code updates. See additional tips for success in the sidebar Equity in Outreach.

As part of Steps 5 and 6 (Solicit and Prepare), staff should work closely with the Planning Commission and City Council to reconcile what is feasible to pursue in terms of land use code updates identified for consideration during Step 4. Given the latitude to adopt a broad range of standards that meet 0330 rule requirements within the existing structure of local codes and land use districts, progress will look different within each community. The important

part of the process is building support and working collaboratively to incrementally advancing climate, transportation, and housing goals.

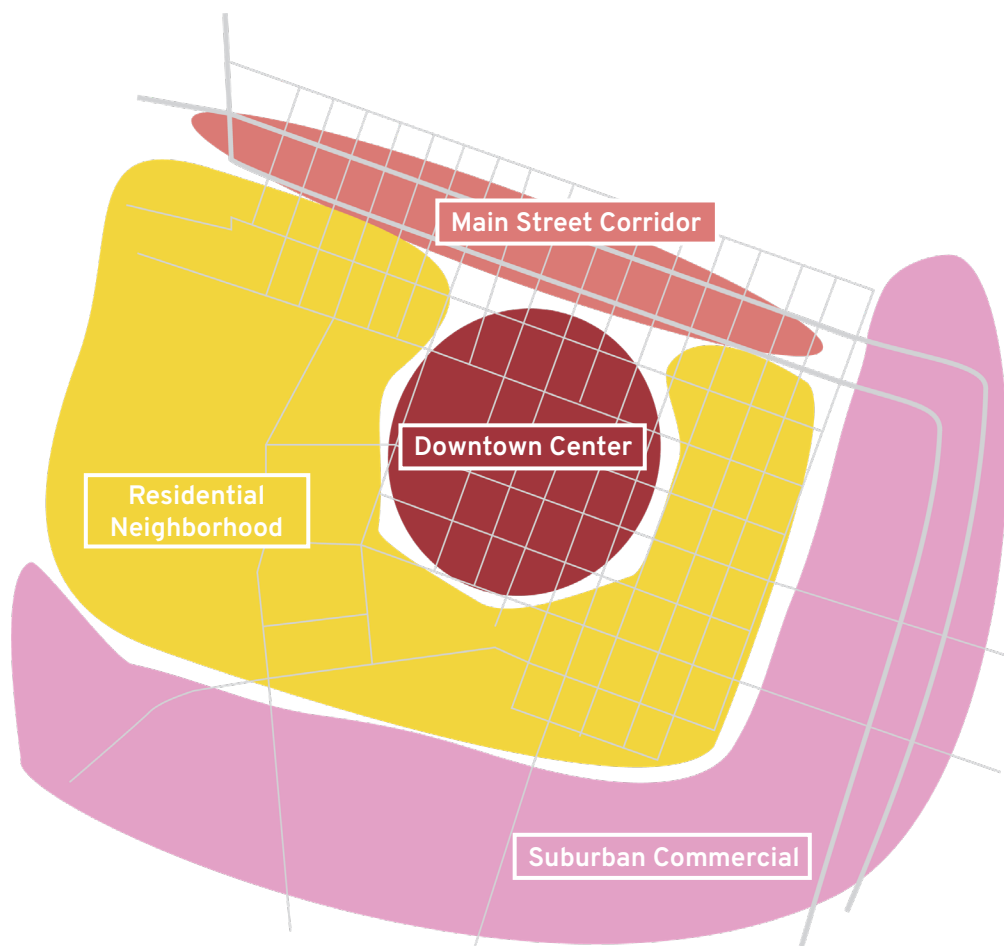
WHAT DOES SUCCESS LOOK LIKE?

Cities have broad latitude to adopt standards as they meet the existing structure of local codes and land use districts and their intent. The code update process is an opportunity for jurisdictions to continue making progress toward larger goals related to the climate, transportation, housing, and equity. How this is implemented will vary across cities, but these efforts will advance Oregon's goals related to compact, walkable places. Compliance ultimately will be determined by the findings, which justify the proposed amendments or existing standards as compliant.

The requirements in rule 0330 allow local governments to decide how exactly to calibrate their development and site design standards to achieve walkability. Given the wide range of contexts that exist from city to city and even within each city, there are not one size fits all answers to how to achieve walkable outcomes.

This Guidebook is intended as a resource rather than a prescribed set of approaches.

For each of the code topic areas discussed, the Guidebook provides ideas, inspiration, examples, and model code language. The next step is for local communities to do the work evaluating their existing standards to identify where modifications may be necessary to achieve more walkable outcomes using this Guidebook as a helpful resource.



OAR 660-012-0330 land use regulation updates will need to be applied across the different districts and land use zones of jurisdictions. There will be variation in the standards across zones based on their intended urban form and pedestrian-orientation.

WHAT ARE DISTRICT TYPES?

District types represent various kinds of physical settings within a city or region that have distinct characteristics, functions, and challenges. District types are often categorized based on their land use but also have distinct built forms, densities, etc. Because the guidance in the Walkable Design Standards is for a wide range of places across cities statewide with varying degrees of these characteristics, using district types can help a planner to narrow in on standards that can be applied appropriately in different districts.

The district types included in this Guidebook were identified by looking at the form of buildings, the scale of blocks, land use, lot size, and transit access in applicable Oregon cities. The four district types that are significant for achieving CFEC goals are:

- Suburban Commercial
- Neighborhood Residential
- Main Street Corridor
- Downtown Center

HOW TO USE DISTRICT TYPES?

This Guidebook provides guidance based on several common district found in cities across Oregon. Rule 0330 applies to nearly all zones within the urban growth boundaries of the eight metropolitan areas of the state. Together, these communities have dozens of different zone districts. District types are used as a proxy for the many different zoning districts. The district types are broad enough to be applicable to both small and large cities. For instance, a Main Street district type might represent a downtown scale in a small community or a neighborhood commercial street in a larger community. There may be some zones in your jurisdiction that do not have every characteristic nor may require every standard from a particular district type, but the district types serve as a way to find standards that align with the intents of your zoning districts.

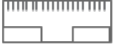





















































Zone districts have intent statements that describe the types of places that they intend to create. Users of this Guidebook can cross reference the intent of their zone districts with the district type-specific resources in this Guidebook to assess walkability. In this way, the specific standards in a zone can be calibrated to respond to the different conditions, use mixes, and intensities found in different parts of each community.

To use district types as a framework for applying rule 0330 to your jurisdiction:

- Review the overview of district types;
- Pick one that is representative of the zone or district type in your jurisdiction for which you are amending the code;
- Review the Table of Relevant Standards (page 16) and the Table of Standards by District Types (page 21) to identify the relevant set of standards to consider; and
- Read the guidance for each standard contained in Chapters 2 and 3 of the Guidebook. Review the Walkable Design Standards and take a closer look at the tips and tricks to understand how to apply the standard to a specific context.

TABLE OF STANDARDS BY DISTRICT TYPE




The table below will help planners understand which standards are relevant to flag when reviewing their code. It serves as a reference for the types of standards and the types of zones that may be relevant for assessment with the Walkable Design Standards.

| Standards | | District Types | | | | | |
|-----------|---|--|---|--|---|--|--|
| | |  Suburban Commercial |  Neighborhood Residential |  Main Street |  Downtown / Center / CFA |  Industrial* |  Agricultural* |
| 1.1 | Building Orientation and Frontage Design |  |  |  |  |  |  |
| 1.2 | Ground Floor Design for Non-Residential/Mixed-Use |  |  |  |  |  |  |
| 1.3 | Ground Floor Design for Residential |  |  |  |  |  |  |
| 1.4 | Driveways and Garages |  |  |  |  |  |  |
| 1.5 | Drive-Throughs |  |  |  |  |  |  |
| 2.1 | Street Connectivity, Blocks, and Accessways |  |  |  |  |  |  |
| 2.2 | Pedestrian and Bicycle Circulation |  |  |  |  |  |  |
| 2.3 | Transit Facilities |  |  |  |  |  |  |

* OAR 660-012-0330 (4) (h)

“These site design land use regulations need not apply to districts with a predominantly industrial or agricultural character.”

Legend

-  Applies (all uses)
-  Applies (most uses)
-  Not Applicable

Suburban Commercial

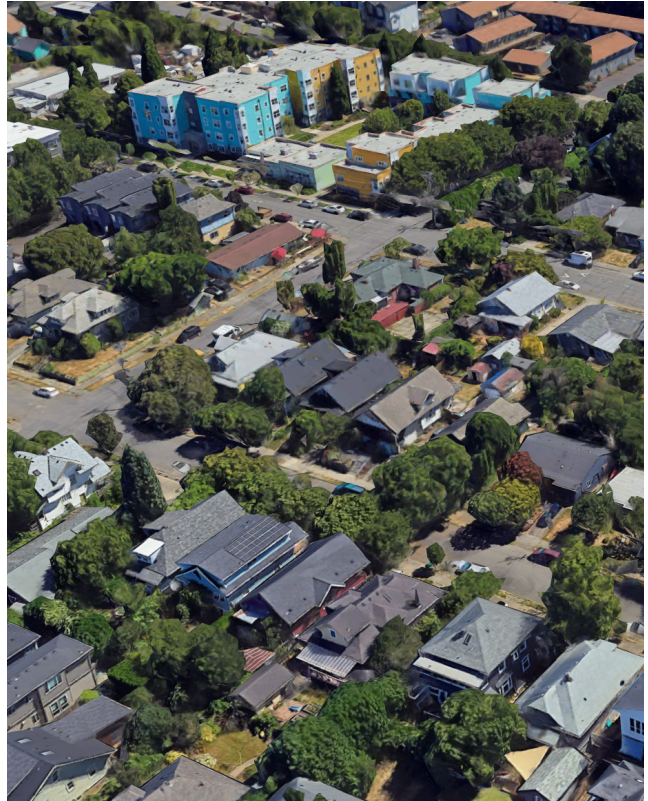
LOW TO MEDIUM INTENSITY AREAS WITH
LARGE LOTS AND SINGLE USES



- Large blocks (800 - 1,200 feet in length)
- Large lot sizes often with lot size being the same as block size
- Commonly lack connected grid of blocks and/or may include dead-end streets
- Typically along highways, arterials, and collectors
- Primarily commercial uses with little to no mixed-use
- Residential only in multi-unit buildings served by surface parking
- Detached buildings
- Building height 1 to 2 stories
- Limited transit service or access to pedestrian/bicycle facilities, incomplete sidewalk connections

Neighborhood Residential

PRIMARILY RESIDENTIAL WITH A RANGE
OF INTENSITIES AND SMALLER LOTS



- Variety of block sizes (200 - 600 feet in length)
- Range of lot sizes ranging from 25 to 75 feet in width
- Combination of connected grid pattern of streets and cul-de-sacs
- Primarily residential uses with a mix of housing types including middle housing
- May include small pockets of commercial and mixed-use
- Mostly detached buildings, some attached
- Building heights 1 to 3 stories
- Limited transit supportiveness; access to bus and/or light rail lines, some bike lanes/paths, range of complete sidewalk network

Main Street Corridor

MEDIUM TO HIGH INTENSITY TRANSIT-FRIENDLY AREAS WITH A MIX OF USES



- Walkable block sizes (200 - 300 feet in length)
- Range of lot sizes, some half block to whole block development
- Grid of regularly spaced streets
- Mix of uses including ground floor commercial and upper story residential uses
- May include mix of uses and intensities on a single block and transition to adjacent lower density residential use
- Mostly attached buildings, some detached
- Building height 2 to 6 stories, older single story buildings
- Transit supportive, bicycle infrastructure available, connected sidewalks/pedestrian and transit amenities

Downtown Center

HIGH INTENSITY AREAS WITH A MIX OF USES (CFAS)



- Walkable block sizes (200 - 400 feet in length)
- Range of lot sizes, frequent half block to whole block development
- Grid of regularly spaced streets
- Mix of uses including ground floor commercial and upper story residential uses
- Primarily attached buildings
- Building height 4+ stories
- Very well served by transit
- Highly transit supportive, light-rail and/or street car, bus lines, bicycle infrastructure available, connected sidewalks/pedestrian and transit amenities

HOW TO USE THE GUIDEBOOK

The Walkable Design Standards Guidebook is a resource to support a critical thinking exercise by local communities. It is flexibly designed to support planners exploring a wide range of topics and different zones across the entire city.

Tools within the Guidebook include:

- Identification of priority topics and relevant standards to evaluate
- Model code language for relevant design standards
- Guidance on key considerations for jurisdictions including where to adopt standards, how to go further, and relevant exceptions
- Concepts for different approaches and best practices for compact, walkable, urban development

ORGANIZATION OF CHAPTERS

The Guidebook provides three chapters of guidance for priority topics related to walkable design standards. These topics are further detailed in the following pages. Each chapter addresses key standards identified as essential to the objectives of the updated rules. Chapters provide resources to planners seeking to assess and update local land use regulations to meet rule 0330. An overview of the CFEC program and the compliance process is provided in the Introduction.

Each chapter includes the following sections:

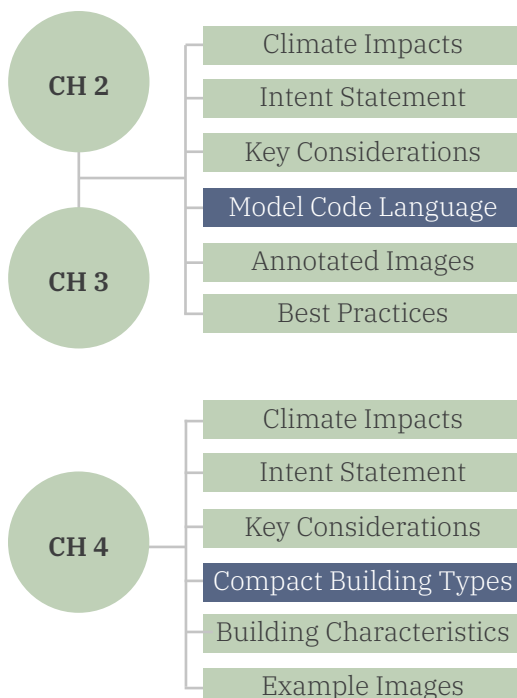
- **Introduction:** An overview of the importance of the topic and how it relates to achieving more compact, walkable, climate-friendly outcomes. This includes qualitative discussion of the intent and principles related to the objectives of the updated rules and what is achieved by regulating the topic.
- **Guidance:** Insights on key aspects to consider when preparing related standards including issues of applicability and how and when to scale a standard up or down and why.
- **Best Practices:** Focused case studies of different locally and nationally used approaches that represent a new and different way than current commonly used practices to achieve walkable, compact outcomes for planners to consider.

Chapters 2 and Chapters 3 include:

- **Model Code Standards:** Recommended standards including clear and objective language and a range of dimensional standards and supporting diagrams and annotated images provide guidance on how to meet the intent of OAR 660-012-0330.

Chapter 4 includes:

- **Compact Development Building Types:** Models of building types that represent how the market has provided compact forms in walkable areas across the state including a range of physical built outcomes as a benchmark to compare to a jurisdiction's existing development standards.



HOW TO USE THE MODEL CODE?

Given the wide range of zone district types and existing conditions across the cities, the Model Code is provided as a reference tool for jurisdictions as they seek to meet the provisions of rule 0330. The Model Code provides users with a clear benchmark for how to address the essential elements necessary to comply with rule 0330. It is not required that communities adopt all parts of the Model Code, rather the Model Code is a measuring stick against which planners can compare their existing code standards.

Some key information about the Model Code:

- The Model Code matches the structure and format of the TGM Model Code for Small Cities.
- Definitions are included for certain terms but not for terms commonly found in zoning codes so as not to contradict existing city regulations.
- Numeric values are captured as a range in brackets that can be adjusted up or down. Jurisdictions should consider values within this range and adjust as is necessary to match local goals and context. Some discussion of these values is included in key considerations for planners' review.
- Also captured in brackets are references that will need to be made to other existing code sections. Jurisdictions should fill in the appropriate references and terms within the brackets to ensure any amendments are comprehensive across the whole code and include references.
- All standards for residential uses must be clear and objective ((ORS) 197.307(4)). Every attempt was made to write standards applying to non-residential uses as clear and objective for ease of use by reviewers and applicants.

GUIDE TO NAVIGATING MODEL CODE STANDARDS

Below is an explanation of how to navigate the CFEC Walkable Design Standards in Chapters 2 and 3 of the Guidebook. Each standard contains several key sources of information for jurisdictions to consider as they examine their existing land use regulations. Model Code language is provided as an example of one pathway to comply with rule 0330. The Model Code language does not represent the only way to meet the intent of rule 0330 but,

rather, a benchmark for the types of standards to consider. Planners will need to determine which standards to adopt, how to tailor them to their local context, the specific numerical values that best fit their community, and relevant zones to apply the standards to based on the critical thinking process outlined in Chapter 1 of this Guidebook. See the annotations below for an orientation on how to use the guidebook content.

This number indicates the Design Standard Priority Topic and Specific Standard. See summary of all priority topic standards on page 6.

This is the title of the standard.

Intent statements capture the key objective for a standard and how it relates to updated rules for climate-friendly and equitable communities.

Photographs capture built outcomes that do or do not achieve key objectives. Annotation helps the viewer understand key dimensions or details.

2.1 Building Orientation + Frontage Design

CLIMATE BENEFITS

Encourages walking, biking, and transit use, lowering greenhouse gas emissions from personal vehicles

Improves air quality and health outcomes by decreasing emissions



DO Establish a higher percentage of frontage along key corridors to promote a highly walkable pedestrian environment.

INTENT

To create a pedestrian-friendly streetscape that encourages walking as an alternative to driving by requiring buildings be oriented to the front of lots facing the street instead of vehicle circulation or parking areas. The siting of buildings and entrances along the front lot line promotes a sense of enclosure and a more comfortable walking environment that is welcoming and more visually interesting. More engaging and attractive streets encourage pedestrian and other forms of non-automotive transportation.

KEY CONSIDERATIONS

- Jurisdictions may want to consider allowing exceptions to the maximum setback upwards of 12 - 15 feet if they want to encourage a wider public realm and generous sidewalk that supports outdoor cafes, seating, etc.
- While it may be more complicated to administer, jurisdictions may want to consider using an averaging approach along corridors with historic development patterns. A setback can be required that is an average of the front yard setbacks on the block, or even a series of blocks. This approach may address concerns about the compatibility of new construction with existing built historic patterns.
- This maximum setback standard when applied to larger lots with large retail buildings allows for deeper street setbacks for some buildings while still requiring that some buildings be placed close to the street.
- Consider either allowing no parking in front of a use and keeping smaller front setback values or increasing the front setback to 20 feet to allow a car to park in front of the building without hanging over the sidewalk.

30

Climate benefits that may result from adopting this standard and future development and redevelopment that is compliant.

Additional thoughts are provided to help planners think through the ins and outs of where and how to apply a standard.

2.1 Building Orientation + Frontage Design

MODEL CODE LANGUAGE

Maximum Setback. The standards apply to nonresidential and mixed-use developments and all residential developments except accessory dwelling units. The required maximum setback standard is stated in Table 2-1. At least [50-75%] of the length of the ground-level, street-facing façade must meet the maximum setback standard of the zone district.

- Applying the standard.
 - Projections such as eaves, chimneys, bay windows, overhangs, cornices, awnings, canopies, porches, decks, pergolas, and similar architectural features on the façade do not count toward meeting the maximum setback standard.
 - Where there is more than one building on the site, the standards apply to the combined ground level, street-facing façades of all the buildings.
 - Where an existing building is being altered, the standards apply to the ground level, street-facing façade of the entire building. Expansions or additions to buildings in zones subject to the maximum setback standard must not increase the length of street-facing façade that does not conform to the standard and must reduce the area dedicated to parking and vehicular circulation between the building and the street.
- Where the site is adjacent to two or more streets, these standards must be met on the frontage of the street with the [higher transit classification]. If both streets have the same classification, the applicant may choose on which street to meet the standard.

Table 2-1. Maximum Setback Standards

| Use Category | Neighborhood | Suburban Commercial | Main Street | Community Center | Community Center |
|---|--------------|---------------------|-------------|------------------|------------------|
| Residential Developments | [0-30] | [0-15] | [0-10] | [0-10] | [0-10] |
| Nonresidential and Mixed-Use Developments | [5-15] | [5-10] | [0-10] | [0-10] | [0-10] |



DON'T Allowing a higher front setback (10 feet or greater) for residential uses that do not have vehicle areas in the front façade is not compatible in placetypes promoting the highest level of pedestrian activity. Buildings with a setback greater than 10 feet tend to lose the relationship between the sidewalk and the building.



DO Allowing a higher maximum setback can encourage a more generous public realm along key corridors and also support sidewalk cafes and focused areas of higher pedestrian activity.

31

Model code language presents an example of one way jurisdictions could meet the provisions of rule 0330. Numerical ranges are highlighted and offered as a choice point for planners.

GUIDE TO NAVIGATING COMPACT DEVELOPMENT BUILDING TYPES

Below is an explanation of how to navigate the Compact Development Building Types in Chapter 4 of the Guidebook. Each building type contains key information for jurisdictions to consider as they evaluate their existing development standards in relation to CFEC objectives. A summary of each building type is provided, detailing the key characteristics of the building type including uses, dimensions, and construction types. To further illustrate the look, feel, and form of each

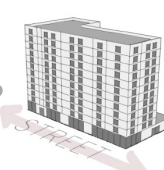
building type, 3D models and images are also provided. Each building type also includes a building characteristics table that outlines site characteristics and ranges of values capturing how the market delivers this building type. This table will help planners assess whether the compact building type align with current zoning standards or if adjustments are needed to better accommodate desired forms of compact development.

3D massing model visualizes the dimensions of the building and lot and aspects including lot coverage, setbacks, location of parking, etc.

A summary captures an overview of the key characteristics of this building type including uses, building and lot dimensions, and construction type

This is the name of the building type

3.1 Major Center




SUMMARY
Residential above commercial buildings that are often located in downtown or mixed-use center zones. These are high-rise buildings constructed with concrete, steel, and/or mass timber. These buildings are primarily found along prominent streets well-served by transit near the city center.

- Height: 8 - 12 stories
- Lot Coverage: high
- Uses: Mixed use - residential and commercial
- Construction: concrete, steel, and/or mass timber

BUILT OUTCOMES
Zoning standards would need to fall within the following ranges to allow this building type.

| | |
|--------------------------------|---|
| Average Lot Size (square feet) | 20,000 |
| Unit Count | 100 - 150 |
| FAR | 6 - 8 |
| Density (dwelling units/acre) | 280 - 320 |
| Setbacks | 0 - 3 (front) 0 - 3 (side) 0 - 3 (rear) |
| Landscaping (percent of lot) | 0 - 5 |
| Lot Coverage (percent of lot) | 95 - 100 |
| Height (stories) | 10 - 12 |
| Groundfloor Height (feet) | 14.5 - 16.5 |
| Parking Ratio (per unit) | 0 - 0.20 |



GROUND FLOOR
RETAIL/PARKING

BUILDING

STREET

2

3

Plan view visualizes the building type as seen from above to visualize how the building sits on the lot.

A range of values are provided that capture how the market delivers this building type if they were only limited by the building code and not the zoning development standards. These are a useful benchmark to compare existing standards to so a jurisdiction can see if they could or could not permit this desired building type.

Photographs capture built outcomes to help users understand the scale and character of the building type.

Chapter 2.

Pedestrian-Oriented Development

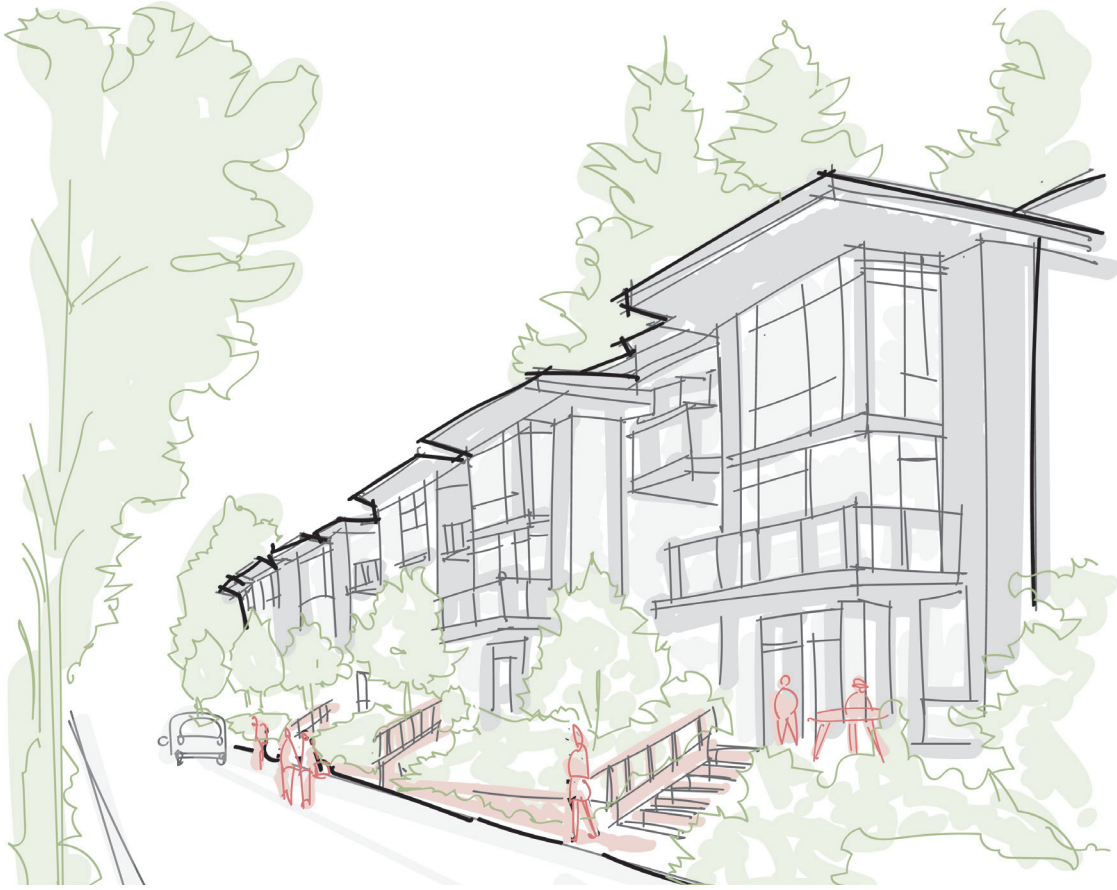


Sites and buildings are organized to frame welcoming, comfortable, safe and attractive spaces that promote sociability and encourage people to walk.

WHY PEDESTRIAN ORIENTATION MATTERS

A pedestrian-oriented built environment prioritizes the experience and safety of those on foot by creating an engaging, accessible, and walkable public space. Design that focuses on pedestrians reduces dependence on driving, which in turn lowers greenhouse gas emissions and promotes more active lifestyles. Pedestrian-oriented design supports diverse housing options close to essential services, making it easier for people of all income levels to live without depending on driving long distances for all trips, thereby improving access to jobs, education, and healthcare.

The placement of buildings, building features, and uses promote an engaging and vibrant environment. Site design prioritizes comfort, ease of use, and accessibility. Individual buildings are oriented toward the street and engage people walking and rolling by through human-scale design details including building entries, storefront windows, open spaces, and stoop, porches, or other semi-public spaces. Buildings and public spaces foster a dynamic street life that supports economic vitality and enlivens mixed-use districts.



PEDESTRIAN-ORIENTED DESIGN PRINCIPLES

Prioritize People Over Cars

Buildings, sites, and streets should prioritize use and access by people rather than cars.

Vibrant Streets as Public Spaces

Streets are an important part of the public space of the city and are designed to provide a stage for the vibrant life of communities.

Human-Scale Design

Human-scale design details regularly spaced along a lot, building, and block, add to the vibrancy of a neighborhood, encouraging and inviting walking and rolling.

Activated and Engaging Buildings

Activated spaces within buildings have entries and windows allowing for interaction and intrigue between the buildings and the street, so that what happens inside the building spills out and enlivens the public space.

Streets as Public and Private Spaces

Engaging private spaces in front of buildings connect and demarcate the public and private realms, adding benefit to the public experience while preserving a sense of privacy for the residents.

2.1 Building Orientation + Frontage Design

CLIMATE BENEFITS

Encourages walking, biking, and transit use, lowering greenhouse gas emissions from driving

Improves air quality and health outcomes

INTENT

To create a pedestrian-friendly streetscape that encourages walking by requiring buildings to be oriented to the front of lots facing the street instead of vehicle circulation or parking areas. The siting of buildings and entrances along the front lot line promotes a sense of enclosure and a more comfortable walking environment that is welcoming and more visually interesting. More engaging and attractive streets encourage walking, biking, and riding transit.

KEY CONSIDERATIONS

- Jurisdictions may want to consider allowing exceptions to the maximum setback upwards of 12 - 15 feet if they want to encourage a wider public realm and generous sidewalk that supports outdoor cafes, seating, and adequately size transit facilities.
- While it may be more complicated to administer, jurisdictions may want to consider using an averaging approach along corridors with historic development patterns. A setback can be required that is an average of the front yard setbacks on the block, or even a series of blocks. This approach may address concerns about the compatibility of new construction with existing built historic patterns.
- This maximum setback standard when applied to larger lots with large retail buildings allows for deeper street setbacks for some buildings while still requiring that some buildings be placed close to the street.
- Consider either allowing no parking in front of a use and keeping smaller front setback values or increasing the front setback to 20 feet to allow a car to park in front of the building without hanging over the sidewalk.



DO

Establish a higher percentage of frontage along key corridors to promote a highly walkable pedestrian environment.

2.1 Building Orientation + Frontage Design

Model Code Language

Maximum Setback. The standards apply to nonresidential and mixed-use developments and all residential developments except accessory dwelling units. Unless otherwise specified, the maximum a building can be set back from a street lot line is indicated in Table 2-1. At least [50-75%] of the length of the ground-level, street-facing façade must meet the maximum setback standard of the zone district.

1. Applying the standard.
 - a. Projections such as eaves, chimneys, bay windows, overhangs, cornices, awnings, canopies, porches, decks, pergolas, and similar architectural features on the façade do not count toward meeting the maximum setback standard.
 - b. Where there is more than one building on the site, the standards apply to the combined ground level, street-facing façades of all the buildings.
 - c. Where an existing building is being altered, the standards apply to the ground level, street-facing façade of the entire building. Expansions or additions to buildings in zones subject to the maximum setback standard must not increase the length of street-facing façade that does not conform to the standard and must reduce the area dedicated to parking and vehicular circulation between the building and the street.
2. Where the site is adjacent to two or more streets, these standards must be met on the frontage of the street with the [higher transit classification]. If both streets have the same classification, the applicant may choose on which street to meet the standard.

Table 2-1: Maximum Setback Standards

| Use Category | Neighborhood | Suburban Commercial | Main Street | Corridor /CFA | Downtown/ Center |
|---|--------------|---------------------|-------------|---------------|------------------|
| Residential Developments | [10-20]' | [10-15]' | [5-10]' | [5-10]' | [5-10]' |
| Nonresidential and Mixed-Use Developments | [5-10]' | [5-10]' | [0-5]' | [0-5]' | [0-5]' |



DON'T

Do not allow a higher front setback (10 feet or greater) for residential uses that do not have vehicle areas in the front façade. Buildings with a setback greater than 10 feet tend to lose the relationship between the sidewalk and the building.



DO

Consider allowing a higher maximum setback to encourage a more generous public realm along key corridors and also support sidewalk cafes, transit amenities, and focused areas of higher pedestrian activity.

**DON'T**

Do not allow areas of vehicle parking and circulation between the building and the sidewalk. This promotes an unsafe and unenjoyable pedestrian experience.

**DO**

Require any parking and vehicle circulation to be located behind, or to the side, of buildings to emphasize a cohesive, safe, and enjoyable walking experience.

2.1 Building Orientation + Frontage Design

Model Code Language

Frontage Design. The standards apply to nonresidential and mixed-use developments and all residential developments except single-unit dwellings, accessory dwelling units, middle housing dwellings, manufactured dwellings, and residential care homes.

1. Standards for all sites.
 - a. No area between the portion of a building that meets the maximum setback standard and the street lot line can be used for vehicle parking or circulation. Vehicle access is allowed through the setback area if it accesses a parking area or structured parking that does not conflict with the maximum setback or frontage design standards.
 - b. Vehicle parking and circulation areas within [20 feet] of the street lot line must be limited to no more than [50 percent] of the length of the street lot line.
 - c. Any areas within [20 feet] of the street lot line that are not occupied by a building or vehicle area must be landscaped to the [local planting standard] or hardscaped for pedestrian use.
2. Additional standards for sites [adjacent to transit street or in a Main Street, Corridor/CFA, or Downtown district].
 - a. No area between the building and the street lot line may be used for vehicle parking or circulation.
 - b. Any area between the portion of a building that does not meet the maximum setback and the street lot line must include at least one pedestrian amenity space. The pedestrian amenity space must meet the following standards:
 - i. The space must abut the sidewalk of a public street and must be hardscaped for pedestrian use.
 - ii. The minimum area of the space must be [5%] of the overall site area with a minimum dimension of [10-15 feet].

2.1 Building Orientation + Frontage Design

Model Code Language

- iii. The space must include benches or seating that provide at least [5-10] linear feet of seats. The seating surface must be at least 15 inches deep and between 16 and 24 inches above the grade upon which the seating or bench sits.
 - iv. A minimum of [10-20%] of the pedestrian amenity space must be landscaped.
 - v. A minimum of one tree is required for each [500] square feet of pedestrian space.
3. All other areas between the building and the street lot line not in the pedestrian amenity space must be landscaped. Landscaping must meet the standards [local minimum planting requirements].
 4. Screening of surface parking areas. Surface parking must be screened from view of the street at a minimum as follows:
 - a. Evergreen shrubs that will grow to a minimum height of 30 inches within two years and form continuous screening. Areas within the vision clearance triangle must include plantings that do not exceed 3 feet; and
 - b. One tree for every 30 linear feet; and
 - c. Evergreen ground cover must cover the remaining landscape area.
 - d. A minimum 30 inch tall architecturally treated wall may be substituted for evergreen shrubs.
 5. Sites with multiple street frontages. Where the site is adjacent to two or more streets, these standards must be met on the frontage of the street with the [higher transit classification]. If both streets have the same classification, the applicant may choose on which street to meet the standard.



DO

To ensure that spaces in front of buildings that meet the maximum setback contribute to the public realm, provide a menu of clear and objective design treatments and minimum dimensions for these spaces.



DO

Require parking that is adjacent to the sidewalk to be shielded with landscaping or architectural treatments that contribute to an engaging and comfortable pedestrian environment.

In strong markets, active ground floor uses enliven the public realm and create dynamic districts.....



but if the market for retail is not as strong, ground floor spaces can sit empty, detracting from the pedestrian environment



A CLOSER LOOK | SHOULD ACTIVE USES BE REQUIRED?

While design standards address the size, scale, and key elements of building frontages, jurisdictions should also consider the permitted uses. Frequently cities will require active ground floor uses, which may or may not be supported in the short term by the local market. Other strategies to consider include:

- **Residential.** Cities often disallow ground floor residential uses along corridors as they are not perceived as being “active” in use. However if cities adopt design standards for residential uses that require entries for ground floor units (and do not permit driveway access) and/or require that the more active spaces within multi-unit buildings be located along the primary frontage, residential uses may be both market viable and positively contribute to the pedestrian environment.
- **Targeted Activity Areas.** Cities should at a minimum consider a more limited geographic area where active ground floor uses are required. This is preferable to vacant ground floor retail spaces.
- **Flexible Requirements.** Requirements for active uses on the ground floor can also be flexible. Establishing minimum ground floor heights and requiring spaces be built to a commercial standard ensures “retail ready” spaces that can be used for other uses until the market is more supportive. These types of requirements do add cost to development however.
- **Code Users.** Developers, builders, and architects point out that meeting ground floor commercial requirements can be very challenging and support regulations that provide flexibility both in terms of the location and size, e.g., depth, height, etc. of required commercial spaces.
- **Incentives.** The requirement for ground floor commercial uses can also be offset by offering density bonuses. For this to be effective, development standards need to be set to allow for the potential offering of additional density, height, etc.

2.1 Building Orientation + Frontage Design

Model Code Language

Building Entrances. The following standards apply to nonresidential and mixed-use developments and all residential developments except accessory dwelling units.

Applying the Standard.

1. Single-unit-dwellings, manufactured dwellings, and residential care homes. At least one main entrance for each building must meet the standards.
2. Middle housing dwelling.
 - a. At least one main entrance for each duplex, triplex, or quadplex building must meet the standard.
 - b. At least one main entrance for each townhouse must meet the standard.
 - c. The standard does not apply to cottage cluster housing. Cottage cluster housing must meet [local cottage cluster design standards].
3. Multi-unit dwelling.
 - a. At least one main entrance for each building must meet the standards.
 - b. A minimum of [25-50%] of dwelling units on the ground floor of must have at least one main entrance that meets the standards.
4. Nonresidential or mixed-use building. At least one main entrance must meet the standards. For buildings with multiple tenant spaces or multiple entrances, only one entrance must meet the standard.
5. Sites with multiple street frontages. Where the site is adjacent to two or more streets, the standards must be met on the frontage of the street with the [higher transit classification].



DO

Require main entrances to face the street to encourage sociable development patterns and add to an interesting and engaging pedestrian environment.



DO

Middle housing building types such as duplexes, triplexes, and quadplexes only need to meet the entrance standard with one main entrance.

2.1 Building Orientation + Frontage Design

Model Code Language

6. Entry orientation. All buildings within 40 feet of a street lot line must have at least one main entrance that meets one of the following standards:
 - a. The entrance must be within 8 feet of the longest street-facing façade of the building and must either face the street; be at an angle of up to 45 degrees from the street; or open onto a covered porch that must be at least 25 square feet in area.
 - b. The entrance must face a courtyard that abuts the street and must be no less than 15 feet in width.
7. Entry orientation on [higher transit classification] streets. In addition to the general entry orientation standards, nonresidential and mixed-use buildings and multi-dwelling buildings adjacent to [higher transit classification] streets must have at least one main entrance that is within [25] feet of the [higher transit classification] street.

KEY CONSIDERATIONS

- Even if a jurisdiction defines “Main Entrance” and adopts associated standards, there likely will still be businesses that prioritize entries facing parking lots. This, however, is an enforcement issue that requires coordination with other city departments.
- If a city is interested in going further in requiring design elements that more clearly define a “main entrance,” they may consider incorporating a clear and objective menu of options including the use of canopies, porticos, wall recesses or projections, arches or columns, decorative moldings or trims, covered patio or plaza space, architectural details, or lighting, and/or landscaping planters or seating. Applicants would be required to provide a certain minimum number of these elements for a main entrance.
- Rather than allowing it as an option, jurisdictions could require buildings located on a corner lot to provide a main entrance at a 45-degree angle. A corner entry is oriented to multiple streets. These types of entries can create a dynamic gathering space where different pathways intersect.



DO

Require ground floor units to have individual entries fronting the public realm to add to the urban life of cities. When concerns exist about privacy, this requirement may not be applied, especially along busier corridors.



DON'T

If multi-unit buildings are not required to have individual entries, privacy concerns are not addressed and buildings do little to activate the street or improve the pedestrian orientation of a building.

2.1 Building Orientation + Frontage Design

Model Code Language

8. Unlocked during business hours. Each main entrance to a nonresidential and mixed-use building that meets the standard must be unlocked during regular business hours.
9. Walkways. At least one main entrance and all dwelling unit entrances on the ground floor must be connected to the street by walkways, as required by Pedestrian and Bicycle Circulation Standards (Section 3.2).



DO

Require buildings on higher transit classification streets to have one entrance that is within 25 feet of the street with transit to support walking, bicycling, and transit.

KEY CONSIDERATIONS

- Key to activating the sidewalk and creating a fine-grained built environment is to have individual entries for residential units connected to the public right-of-way. Ground floor retail is not the only means to activate a street and great human-scale details.
- Individual entries may pose privacy concerns. If applying standards to residential units along busy streets with minimal set-backs, consider requiring units to meet the ground-floor entry requirements of up to 50% of units being accessed directly from the sidewalk, but allow for inset spaces that meet a minimum depth of at least 3 feet.
- Grade changes and screening or landscaping can also effectively address privacy concerns.
- Another option is consider only requiring entries to units on specific corridors where there is a desire to concentrate pedestrian activity.



DON'T

Require buildings located on corner lots to provide entries oriented to the corner, to strengthen pedestrian-oriented environments.

Best Practice:

FORM-BASED APPROACH TO FRONTAGE



Requiring a certain amount of street wall and active ground floor uses does not guarantee a lively or adequately sized public realm and can be difficult to achieve.

Instead allow a range of creative designs that create welcoming, comfortable, safe, and attractive spaces on the ground-floor level.



A CLOSER LOOK

When considering downtowns, corridors, or other designated districts focused on promoting compact development and pedestrian friendly streetscapes, consider a form-based approach. The intent of these requirements is to promote a continuous street wall and limit gaps in pedestrian interest along key corridors. **A form-based frontage standard focuses required building frontages along key designated corridors as identified in a street typology or regulating plan.**

- Use a form-based code element that links site frontage and active use standards to specific street typologies.
- These street types do not replace or supersede the functional classifications described in the TSP; they are a classification tool to regulate primary frontages, parking location, required uses, etc.
- Streets with the highest priority for pedestrian activity are identified on the street typology map. Development on these highest priority streets should provide the largest percentage of building frontage (closer to 100% as opposed to 75% - 50% on lower designated streets) between a minimum and maximum setback.
- Buildings may be set back beyond maximum setbacks to accommodate plazas, outdoor dining, entry forecourts, etc. provided that clear and objective standards are met.
- Active use requirements can also be focused on these higher priority streets, emphasizing uses that are customer-serving with people coming and going.
- **Dig Deeper:** The City of Beaverton applies this approach in its designated [Downtown Design District](#).

Best Practice:

MORE FLEXIBLE APPROACH TO FRONTAGE



Add flexibility to support buildings that frame public spaces and create engaging points of interaction along the ground floor.



A CLOSER LOOK

Another challenge jurisdictions may face is a market that is not strong enough to meet frontage requirements. For example, along a more auto-oriented corridor that is redeveloping over time, a frontage standard can be a hurdle for new development. **When seeking to promote a concentration of retail and commercial destinations, consider targeting a more defined storefront district and permit flexibility in meeting frontage standards.**

- Rather than set frontage standards as a blanket approach across commercial zones, define a more focused storefront area to promote pedestrian-oriented development.
- New projects within this designated storefront district are then required to include nonresidential uses to activate ground floors, e.g., residential uses are only permitted when part of a mixed-use project.
- While 50% of the ground floor may be required to be commercial uses, additional flexibility is defined for the types and configuration of uses that can meet this requirement. For example, a food cart or micro-retail pod adjacent to the building can be used to meet the 50% requirement even if not within the building footprint.
- Despite concerns about empty spaces, the potential to activate a space sooner and at lower cost outweighs this fear. Vacant retail spaces lining sidewalks detract from a jurisdiction's goals.
- Flexibility in frontage requirements can be supported with elevated design standards that ensure key locations go over and above in their design of pedestrian-focused design elements along the frontage.
- **Dig Deeper:** The City of Fairview has adopted a [Town Center Commercial District](#) with flexible frontage requirements and a system of design standards with base requirements and additional points-based elements.

2.2 Ground Floor Design of Nonresidential and Mixed-Use Buildings

CLIMATE BENEFITS

Encourages walking, biking, and transit use, lowering greenhouse gas emissions from driving

Facilitates energy-efficiency by maximizing daylighting, reducing the need for artificial lighting

Weather protection shelters people from adverse weather and improves energy efficiency of buildings



DO

Adopt transparency requirements to promote a sense of interaction between the interior of buildings and the public realm.

INTENT

To promote a comfortable and interesting public realm that supports walking. The ground floor is where people interact and experience a building. Ground floor design that promotes an active and transparent interface between the interior uses and the street supports an engaging, human-scale experience and connects the building to the streetlife of the city. Building elements that improve the comfort of pedestrians in a range of weather conditions – from shade in the summer to cover from rain in the winter – encourage people to use alternative forms of transportation.

KEY CONSIDERATIONS

- Transparency requirements create an interface between the interior and exterior of buildings, which is engaging for pedestrians and provides a sense of safety for pedestrians as they move along longer street-walls. Any percentage requirement between 50 - 75% promotes this goal, as do limitations on maximum building length.
- Be aware that a higher transparency requirement, 75% and above, will increase project costs, but may be desired along certain corridors targeted for higher levels of pedestrian activity.
- Some jurisdictions may consider requiring a transparency percentage for upper story windows as well. This standard can add to the complexity and overall costs of a project, however. If not having a blank expanse on upper stories is a concern, standards that address the orientation and rhythm of windows may be more important.

2.2 Ground Floor Design (Nonresidential/Mixed-Use Buildings)

Model Code Language

Transparency. The standards apply to nonresidential uses on the ground floor of nonresidential or mixed-use buildings. The standards apply to ground level, street-facing façades that are within 20 feet of a street lot line or pedestrian amenity space. A minimum of [50-75%] of the area of the ground-level, street-facing façade between 2 and 8 feet above sidewalk grade must be transparent. The following standards must be met for an area to be considered transparent.

1. Windows and/or clear glass within doors may be used to meet this standard. Window area is the aggregate area of the glass within each window, including any interior grids, mullions, or transoms.
2. Required windows must be clear glass and not mirrored, frosted, reflective, or treated in such a way to block visibility into the building.
3. Windows into storage areas, vehicle parking areas, mechanical and utility areas, and garbage and recycling areas do not qualify.

KEY CONSIDERATIONS

- Be aware there may be cultural sensitivities around transparency requirements. For example, some spaces may be designated for use by women and privacy is desirable; or some groceries may want to use window space for advertisements.
- While these are primarily issues of compliance, if this is of concern in your jurisdiction, you may want to consider allowing exceptions (to be reviewed with any change in use) or allowing glazing that allows light transmission while preserving privacy but no higher than 42 inches from the sidewalk.
- If a city is looking for a more objective measurement, Visible Transmittance can be used to measure any blocking of visibility into the building.



DON'T

Do not allow long expanses of blank walls on ground level, street-facing façades as they significantly detract from the quality of the pedestrian environment and can negatively affect the sense of safety.



DO

Allow for exceptions for certain uses that require more privacy that allow limited transparency but only up to 42 inches in height from the sidewalk. Transparency standards should take into account grade changes.

**DO**

Require weather protection to extend out a minimum depth to provide comfortable coverage that can accommodate higher amounts of foot traffic, e.g., two pedestrians passing one another.

2.2 Ground Floor Design (Nonresidential/Mixed-Use Buildings)

Model Code Language

Weather Protection. Weather protection (e.g., permanent awnings, canopies, overhangs, or architectural features providing protection from the rain or shade during periods of hot weather) must be provided along [50-75%] of the length of the ground level façade that is within [5] feet of a public right-of-way or the hardscaped area within a pedestrian amenity space.

1. The weather protection must project out at least [4 feet] from the adjoining wall.
2. The height of the weather protection must be between [9 feet and 15 feet] above the grade underneath it.

KEY CONSIDERATIONS

- Weather protection should be required to be designed so that it can accommodate blade signs.
- Given that weather protection extends out over the public right of way, coordination will often be necessary between building owners and occupants and public works staff or utility providers. Consider the benefits of offering an encroachment permit to allow overhangs into the public right-of-way.
- Cities should reserve the right to reduce weather protection standards where existing right-of-way dimensions, easements, or other building code requirements preclude them.

**DO**

Account for blade signs and the extension of weather protection over the public right-of-way in weather protection requirements.

2.3 Ground Floor Design of Residential Buildings

CLIMATE BENEFITS

Encourages walking, biking, and transit use, lowering greenhouse gas emissions from driving

Facilitates energy-efficiency by maximizing daylighting, reducing the need for artificial lighting

Increases area for landscaping and contributes to tree canopy and carbon sequestration

Increases urban biodiversity

INTENT

To encourage walking and sociable development patterns by promoting an interesting and engaging and human-scale sidewalk experience while preserving the privacy of residents. Individual entries and resident spaces are oriented and visually connected to the public realm. Spaces such as porches, stoops, and other semi-public spaces support social interaction and provide a transition from public to private spaces. Design standards are focused both on the experience of someone passing by and someone living within the space.



**DO**

Transparency requirements provide windows and doors for residential uses that are “eyes on the street.” Transparency requirements for residential uses must balance privacy needs with the comfort and experience of pedestrians.

2.3 Ground Floor Design (Residential Buildings)

Model Code Language

Transparency. The standards apply to residential uses on the ground floor of a mixed-use building and all residential buildings except accessory dwelling units and manufactured dwellings. The following standards apply to the wall area of the ground-level of any street-facing façades that are within 20 feet of a street lot line or a pedestrian amenity space. A minimum of [15-25%] of the area of the ground-level, street-facing façade between 2 and 8 feet above sidewalk grade must be transparent. The following standards must be met for an area to be considered transparent.

1. Windows and/or clear glass within doors may be used to meet this standard. Window area is the aggregate area of the glass within each window, including any interior grids, mullions, or transoms.
2. Required windows must be clear glass and not mirrored, frosted, reflective, or treated in such a way to block visibility into the building.
3. Windows into storage areas, mechanical and utility areas, and garbage and recycling areas do not qualify. Windows into garages do qualify.

KEY CONSIDERATIONS

- Be aware that higher percentage transparency requirements (above 30%), increase not only project costs but also the difficulty of designing a compliant building. Upper story transparency requirements or additional types of requirements related to the orientation of windows, rhythm, etc. also pose challenges to projects and may not result in improved designs. Think carefully about how far to go in requiring transparency for residential projects.
- Consider allowing windows in garage doors to count toward transparency calculations. They improve the ground floor experience of pedestrians without offering the same types of privacy concerns that ground floor windows into habitable space can create.

**DO**

Consider requirements for grade changes and screening or landscaping to address privacy concerns stemming from transparency requirements.

2.3 Ground Floor Design (Residential Buildings)

Model Code Language

Separation for Ground Floor Residential Units. The following standard applies to the ground floor wall area of dwelling units that are 10 feet or closer to a street lot line. The wall area must meet one of the two following standards at a minimum:

1. Front setback. The portions of the building with dwelling units on the ground floor must be set back at least 5 feet from the street lot line.
2. Raised ground floor. The portion of the building with dwelling units on the ground floor must have the finished floor of each residential unit at least 18 to 36 inches above the grade of the closest adjoining sidewalk.



DON'T

If individual entries to ground floor units are not required to provide transition elements, even if setback, detract from the public realm experience. Transition elements to more clearly define this space.

KEY CONSIDERATIONS

- While a change in grade can provide a sense of privacy for ground-floor units, it also raises concerns related to accessibility. Oregon's planning Goal 10 directs communities to ensure that all residents have access to needed housing options. CFA studies must include plans for how the city is striving to meet housing outcomes and increase housing choice within designated CFAs, including promoting the production of accessible dwelling units. Cities need to look closely at the options provided in Model Code standard 2.3 (D) and (E). Changes in grade should be one option in a menu of potential options to meet the goal of improving the design of ground floor units.
- If an applicant wants to provide accessible units, then cities can encourage them to consider the higher end of the maximum setback and potentially increase the amount or height of plant material to provide adequate privacy for ground-floor units.



DO

If ground floor units without individual entries directly to the street are permitted, require them to be set back provide transition elements. These transition elements are still important to create a more engaging building façade.

**DO**

Require transition elements for ground floor units. Main entrances can define a transition between the public and private realm by being set back 5 to 10 feet from the public right-of-way. Several design elements provide privacy for residents while defining this transition space and improving the sidewalk environment. These do not need to include a change in grade.

2.3 Ground Floor Design (Residential Buildings)

Model Code Language

Transitions to Residential Entrances. The following standard applies to the main entrances that provide direct access to dwelling units that are 10 feet or closer to a street lot line. The entrance must be set back at least 5 feet from the street lot line and have at least two of the following within the setback:

1. A wall or fence that is 18 to 36 inches high;
2. Landscaping that meets the [local planting standard];
3. One small canopy tree between 1.5 and less than 6 inches in diameter per entrance;
4. Individual private open space of at least 48 square feet designed so that a 4-foot by 6-foot dimension will fit entirely within it; or
5. A change of grade where the door to the dwelling unit is 18 to 36 inches above the grade of the right of way.

KEY CONSIDERATIONS

- Other design approaches to consider in a menu of options for defining ground-floor transitions include: raised landscape planters a minimum of 18 inches in height and a maximum of 30 inches in height with a minimum horizontal depth of 2 feet that contains landscaping; a change in grade offered by a ramp, rather than steps; or landscaping such as hedges, vines or other materials as long as they remain below the 36" maximum height.
- Also consider applying a standard for a minimum amount of transparency, e.g., at least 50% transparent, for any walls or fences to promote visibility while still retaining resident privacy.
- A setback of five feet or greater is comfortable enough to allow for a porch, patio, or landscaped area at grade (or elevated). However, buildings with a setback greater than 10 feet tend to lose the relationship between the sidewalk and the building.

2.4 Driveways and Garages

CLIMATE BENEFITS

Encourages walkability by reducing interruptions to sidewalks

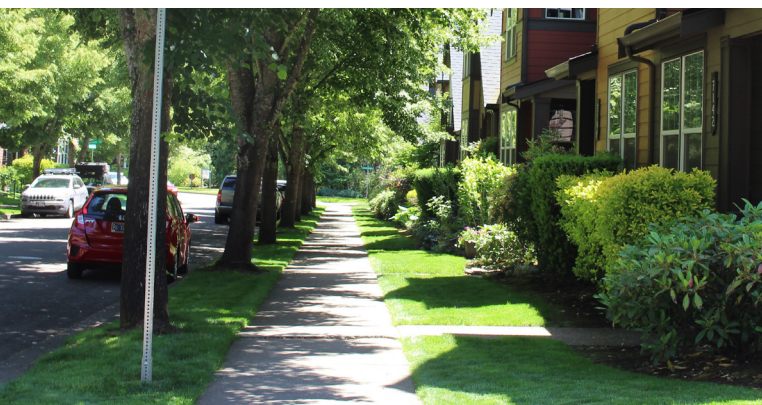
Reduces urban heat island effect by limiting paved surfaces

Supports green infrastructure by preserving space for trees, permeable surfaces, and green landscaping

Facilitates compact, energy-efficient design

INTENT

To encourage an attractive, comfortable, and safe public realm that supports pedestrian movement and social development patterns. The visual prominence of garages, parking, and vehicle circulation areas is minimized. Points of conflict between pedestrians and bicycles and vehicles are reduced. The planting strip along the street is maximized to buffer people using the sidewalk, increase the supply of on-street parking, and support planting street trees.



DO

Require larger planting strips to allow for planting street trees that provide cooling shade and a pleasant walking environment



DO

Require access via alleys to support comfortable and safe sidewalks with the main entrances of homes fronting the sidewalk.

**DON'T**

Limit the frequency of driveway spacing to address breaks in the pedestrian walking environment and points of conflict between cars pulling in or backing out and people walking on the sidewalk.

2.4 Driveways and Garages

Model Code Language

Driveway Location.

The driveway and garage standards apply to nonresidential or mixed-use developments and all residential developments.

1. For a site with frontage on an alley, driveway access is only permitted via the alley, if the alley is improved.
2. For sites with more than one frontage not on an alley, driveway access is permitted only from the street with the lowest classification. Lots with frontages on two streets are not permitted to have a driveway on more than one frontage.

KEY CONSIDERATIONS

- Taking access from alleys and the configuration and width of alleys will require coordination with the fire marshal. Common cross sections for alleys require 14 feet to 20 feet for access and emergency providers.
- Consider requiring alley-served garages to be slightly setback. This allows space for trash cans and other services or utility needs. An additional 2 to 5 feet of setback can improve the functionality of alleys.

**DO**

Require additional setbacks in alleys beyond the travel lanes to allow for adequate space to address service needs (garbage, utilities, etc.) and also provide space for residents to personalize and take ownership. This type of design facilitates social development patterns and frequent interactions.

2.4 Driveways and Garages

Model Code Language

Driveway Separation on Local Streets.

The following standards apply to driveways on local streets. Driveway separation from intersections and all driveway separations on [collector and arterial] streets are regulated by [public works/engineering standards]. Minimum spacing is measured from the end of the driving aprons.

1. A minimum [18 - 24 feet] full-height curb is required between driveways on the same lot.
2. A minimum [5 feet] full-height curb is required between driveways on separate lots. A driveway that is shared between two abutting lots is exempt from this separation standard.

KEY CONSIDERATIONS

- The minimum spacing standard must account for driveway aprons. These portions of a driveway represent a curb-cut and are areas of the curb that cannot be used as on-street parking, where allowed. Cities may want to measure the separation between driveways from the edge of the apron that is at the same height as the curb and limit the width of wings to slow turning movement and provide more curb space for on-street parking.
- Jurisdictions looking to go further can include permissions for shared driveways. A city can consider requiring any project with more than two attached units to provide shared driveways using a taper to reduce the maximum driveway width below 20 feet, reducing the impact of the curb cut on the pedestrian environment and on-street parking supply.
- City traffic engineers may require review and approval of multiple aspects of driveways, including width, location, spacing from intersections, and access points permitted on collector or arterial streets. Requirements should be coordinated with city engineering standards.



DON'T

If no minimums are adopted for curb cuts in between separate lots, planting strips will not be sufficient to be planted with street trees nor will they provide on-street parking spaces.



DON'T

If maximum driveway widths or separation between curb cuts on the same lot are not adopted, large breaks in the sidewalk detract from the safety and comfort of pedestrians and other users.



DO

Limit the maximum width of driveways and allow for shared driveways that are tapered to consolidate the number of curb cuts and reduce their impact on the pedestrian experience.



DO

Consider the full width of driveways, including aprons, as these portions of the planting strip along the right-of-way that cannot be used for surface parking and/or affect the total area for planting.

2.4 Driveways and Garages

Model Code Language

Driveway Width.

The following standards apply to the maximum width of driveways. Driveway width shall be measured lengthwise along the property line, and such measurement shall not include the width of wings connecting the top of the curb to the lowered curb or apron.

1. For a single-width vehicle parking area, the maximum driveway width is [10-12 feet].
2. For a double-width, or larger, vehicle parking area, the maximum driveway width is [20-24 feet].
3. For a double-width vehicle parking area that is shared by two detached units, the maximum driveway width is [10-16 feet]. For a double-width vehicle parking area that is shared by two attached units, driveways are required to be shared using a taper with a maximum driveway width of [14 feet]. There must be a recorded easement guaranteeing reciprocal access and maintenance for all affected properties.

Garage Width and Setback.

1. Garage Width.
 - a. The combined width of garage wall(s) facing the street must be less than [50%] of the width of the street-facing building façade. This standard applies only to the street-facing façade on which the main entrance is located.

KEY CONSIDERATIONS

- One of the key challenges in adopting standards related to driveway widths is how a standard applies to newly platted lots as opposed to existing lots. The intention of the Walkable Design Standards is to require new lots to provide adequate spacing between curb cuts and preserve on-street parking spaces to the extent possible. All land divisions must comply with driveway spacing standards when laying out lots and creating shared easements.
- Applying this standard in infill scenarios with existing curb cuts on abutting lots is more challenging and will require frequent exceptions. It remains important, however, to codify this important pedestrian-oriented design principle.

2.4 Driveways and Garages

Model Code Language

- a. Exception. If the width of the street-facing building façade is less than [30 feet], the width of garage wall(s) may exceed [50%] of the width of the street-facing building façade if the following standards are met:
 - i. The width of the garage wall does not exceed [75%] of the street-facing building façade.
 - ii. The garage wall is recessed a minimum of [2 feet] behind the front façade that encloses living area or a covered front porch with no horizontal dimension less than [3 - 5 feet].
2. Garage Setback.
 - a. The vehicle entrance must be either [1 feet] or closer to the street lot line, or [18-20 feet] or farther from the street lot line.
 - b. A garage entrance must not be closer to the street lot line than a façade that encloses living area along the same street frontage, except the garage entrance may extend up to [2 - 5 feet] in front of a façade that encloses living area if there is a covered front porch with no horizontal dimension less than [3 - 5] feet and the garage entrance does not extend beyond the roof of the porch.
 - c. Where three or more contiguous garage entrances face the same street, the garage opening closest to a side property line must be recessed at least [2 feet] behind the adjacent opening(s). Side-loaded garages are exempt from this requirement.

KEY CONSIDERATIONS

- Exceptions are important for homes on narrow lots, e.g., less than 30 feet wide. Given the minimum dimensions of garages, lots under 30 feet in width, will have garages that take up more than 50% of the front façade. Design standards address this unique condition. Cities can also consider requiring shared driveways for residential development on narrow lots with front loaded garages.
- For townhomes, if the garage has maximum setback of 5 feet, the portion of the building with dwelling units should not be counted toward the façade of the garage to meet the minimum 5 foot setback.



DON'T

Don't allow garages that are greater than 50% of the building façade and that project closer to the street than the main entrance. They detract from the pedestrian environment.



DO

Require garages to be less than 50% of the façade and not project in front of the main entrance or a porch to prioritize social development patterns.

2.5 Drive-Through Facilities

CLIMATE BENEFITS

Encourages a mix of transportation modes, lowering overall greenhouse gas emissions

Improves safety, supporting a more walkable environment

INTENT

To support pedestrian-oriented site design for drive-through facilities. Buildings are oriented to the sidewalk and offer points of entry and service that can be accessed on foot. Visible, safe, and clearly defined accessible routes are provided on-site.

KEY CONSIDERATIONS

- Key to limiting the impact of this vehicle-oriented use is to consider where to permit and where to prohibit this use. Cities should strongly consider disallowing drive through uses in downtown, main street, and residential zones and in CFA-designated areas. Disallowing drive-throughs is a recommendation to create a better pedestrian environment, but is not required in order to be consistent with rule 0330.
- It may be desirable to prohibit additional auto-oriented uses such as auto sales or rental, fleet storage, or self-storage in these same zones.
- Jurisdictions looking to more tightly regulate where drive-through uses may locate can choose to limit them within a certain distance of a lot line abutting a residential zone or within a certain distance from other drive-through uses.
- Certain food and beverage drive-through uses could be permitted on corners provided that they have adequate space from the intersection for entry driveways. Pedestrian service areas oriented to the corner could be required to create gathering spaces.
- Minimum queueing standards on-site are intended to address situations where traffic from busy drive-throughs impacts traffic flow on surrounding streets.



DO

Put pedestrians and bicyclists on equal footing in terms of access.

2.5 Drive-Through Facilities

Model Code Language

Pedestrian Service Areas

1. Drive-through facilities must provide at least one walk-up service area. Examples of a walk-up service area include an indoor service area directly accessible from a public street or an outdoor walk-up service window. Walk-up service areas must be accessible by customers arriving on foot, using a mobility device, or by bicycle. Customers using a walk-up service area must have the same or better access to goods and services as customers using the drive-through. [Vehicle-serving uses] are exempt from this standard.
2. If the walk-up service area is limited to an outdoor service window, it must meet the following standards:
 - a. The walk-up service area must not also be used by vehicles.
 - b. The service area must be abut or be connected to a pedestrian amenity space. The space must be hardscaped for pedestrian use, be a minimum of [100] square feet, and must include benches or seating that provide at least [5] linear feet of seats. The seating surface should be at least 15 inches deep and between 16 and 24 inches above the grade upon which the seating or bench sits.

KEY CONSIDERATIONS

- Consider going further by requiring pedestrian connections through the site to be elevated to curb height. This prioritizes safe passage to pedestrians from the sidewalk to the pedestrian service area.
- Consider adopting building orientation and frontage design standards (see the Walkable Design Standards 2.1 and 2.2) to require drive-throughs to site buildings close to the sidewalk and provide clearly defined, easily accessible entries off the sidewalk.



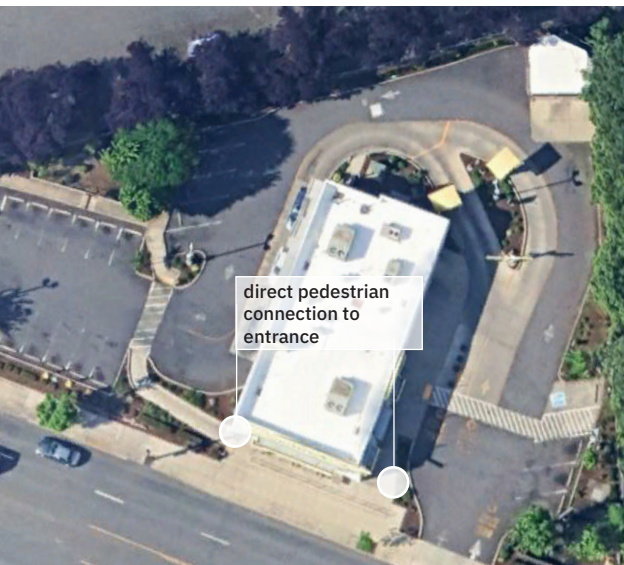
DON'T

Allow drive through lanes and stacking facilities between the building and street lot lines.



DO

Require some form of pedestrian access that is separate from use by vehicles and includes additional amenities to encourage use. This is not required for vehicle-serving uses such as gas stations, auto-serving uses, or car washes.

**DO**

Require direct pedestrian connections from sidewalks to entrances and pedestrian service areas and do not allow service areas and stacking lanes to be located between the building and street lot line to encourage walking.

2.5 Drive-Through Facilities

Model Code Language

3. Service access for pedestrians and bicyclists must be connected to the street by a direct and convenient walkway that meets the Pedestrian and Bicycle Circulation Standards (Section 3.2).

Vehicles Service Areas and Stacking Lanes

1. All driveway entrances, including stacking lane entrances, must be at least 50 feet from any street intersection. If a drive-through facility has frontage on two streets, the drive-through facilities must receive access from the street with the lower classification.
2. Service areas and stacking lanes must not be located between the building and a street lot line. [Vehicle-serving uses] are exempt from this standard.

KEY CONSIDERATIONS

- If a jurisdiction is seeking to balance the request for stacking lanes on-site to reduce traffic impacts while not creating more areas of impervious pavement, consider an approach that requires minimum queuing only for uses with a higher ITE daily trips ratio that would correspond to their intensity of use and its impact on surrounding streets.
- Consider removing or reducing on-site parking requirements for drive-through uses. Given their function of serving users in their vehicles, they likely are sufficiently different from general commercial/retail uses that a lower ratio may be in order. Parking requirements hinder walkability and should be removed or parking maximums considered.
- Minimum lengths for stacking lanes for EV charging may be reduced as charging stations become more efficient and cars are parked for less time.

2.5 Drive-Through Facilities

Model Code Language

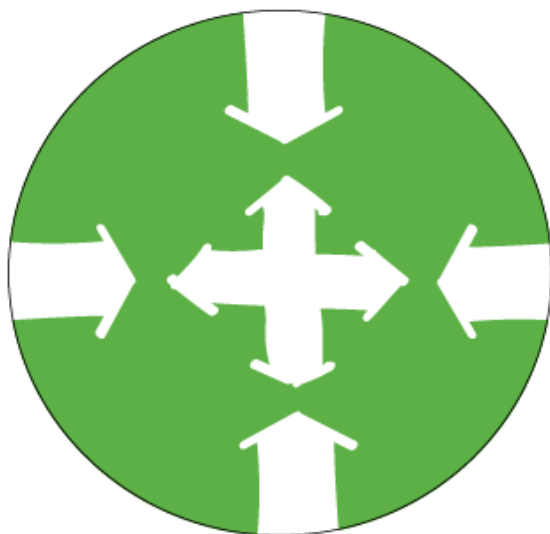
3. Stacking lanes must be designed so that they do not prevent access to parking stalls. The minimum length of stacking lanes must be follows:
 - a. Gasoline fuel pumps and electric vehicle chargers. A minimum of 30 feet of stacking lane is required between the stacking lane entrance and the nearest fuel pump or electric vehicle charger.
 - b. Other drive-through facilities. A minimum of [150 - 160] feet for a single stacking lane or [75 - 80] feet per lane when there is more than one stacking lane, is required for all other drive-through facilities. A stacking lane is measured between the lane entrance and the service area.



DO

Adopt limits on spacing from intersections and minimum stacking lanes to address negative impacts on surrounding streets and sidewalks from high-traffic drive through uses.

Chapter 3. Connectivity and Access



Destinations are accessible and linked by a safe and fine-mazed system of people-friendly connections allowing for more convenient movement and minimizing dependence on driving.

WHY CONNECTIVITY AND ACCESS MATTERS

Fundamental to the goals for the Climate-Friendly and Equitable Communities program is supporting and encouraging a shift in travel modes to reduce greenhouse gas emissions and promote equitable access. Key to this is improving connectivity both within existing city fabric and planning for new developments. Street networks and pedestrian and bike systems that are better linked make it easier and safer to travel between key destinations and support transit use.

To support this shift in travel modes, it must be not only safer but more enjoyable and more convenient for a person to get to places on foot, bike, or however else they choose that's not by personal vehicle. Connections are not just a means to reach a destination but a chance to stop, interact, and engage with the urban life of the city. This looks like students being able to walk safely to school, older residents walking to neighborhood activity centers comfortably, or families with children of all ages riding their bikes on a connected network of safe and enjoyable routes.

Improving connectivity fosters new ways of moving through a city's network of routes and also improves the efficiency of providing emergency services, reduces congestion as travel is distributed across a more complete network, and reduces the cost of infrastructure. A connected system of accessible, direct routes is cheaper to build and less costly to maintain. Narrow streets, alleys, pathways, or trails are less expensive to build than large arterials or collectors, and can reduce the costs of housing development.



CLIMATE FRIENDLY EQUITABLE DESIGN PRINCIPLES

Walkability First

Safe, comfortable, and frequent connections at the walking scale support and encourage accessing destinations by foot and mobility device.

Efficient and Enjoyable

Dense connectivity for people on foot or bike provides options for efficient but also enjoyable travel.

Balanced Network

Vehicle traffic is distributed across a connected street network, as opposed to a concentrated on collector and arterial streets.

Complete Streets

Pedestrian and bicyclist safety is prioritized over vehicle and access to minimize conflict and enable comfortable, safe use of the public right of way.

Seamless Connections

Large sites are oriented to the front of lots and provide clear connections that encourage people to access the site from the sidewalk or adjacent uses.

Robust Network

Existing neighborhoods that lack a fine-mazed network of connections are improved over time by a plan that prioritizes a robust, connected network.

3.1

Street Connectivity, Blocks, and Accessways

CLIMATE BENEFITS

Increase in direct routes for walking, biking, and transit encourages less reliance on driving, reducing greenhouse gas emissions

Decrease in traffic congestion and improvements to overall mobility reduces idling time and air pollution

INTENT

To increase the number of connections to and through neighborhoods and improve the directness of routes to and from destinations. More connected block networks encourage people to walk, roll, or bike to access key destinations and facilitates transit use, as users may take direct and convenient routes. Direct routes encourage movement between destinations and increase the convenience of traveling by foot, bicycle, or mobility device by providing safe and connected routes. Limited-access street designs with only one or two points of entry and exit that rely on arterial streets are discouraged. Smaller block sizes reduce walking distances and out-of-direction travel and promote route and mode choice. Alleys enhance the street network, providing mid-block connections, and provide an alternative for locating utilities outside of public easements in the front of lots.



DO

Allow pedestrian and bicycle accessways in-lieu of full street connections to link key destinations and promote walking, biking, and transit.

3.1 Street Connectivity, Blocks + Accessways

Model Code Language

Street Connections Required.

The street connectivity, blocks, and accessway standards apply to nonresidential or mixed-use developments and all residential developments that meet the thresholds for [site design review] where transportation improvements are required. The standards also apply to any land division application where transportation improvements are required.

1. Applicable development must provide a system of streets and accessways that meets the block length standards and provides access to the following:
 - a. Abutting residential developments;
 - b. Abutting undeveloped property;
 - c. Abutting transit station or major transit stop;
 - d. Abutting parks or schools; and
 - e. Abutting Neighborhood Activity Centers.

KEY CONSIDERATIONS

- While generally they should not be permitted, dead-end streets or cul-de-sacs may be permitted if necessary due to topographic or other barriers, or where the streets is planned to connect to a network in the future. Cities should consider allowing these exceptions by way of a discretionary design review to strongly discourage their use.
- When reviewing development applications, jurisdictions should take into account the following elements when assessing proposed network of connections: existing street grid; proposed streets, trails, or bicycle facilities; and existing and identified future transit routes.



DON'T

Don't focus solely on street network connections. Broken links in the sidewalk and trail network make walking or biking between key destinations untenable.



DO

Require connections, either as streets or pedestrian and bicycle accessways, that link where people live to key destinations to facilitate access.



DO
Facilitate connections to existing or planned trails and multi-use paths, requiring links throughout new larger projects to the surrounding areas..



DO
Plan for future connections to adjacent parcels by stubbing streets and accessways.

3.1 Street Connectivity, Blocks + Accessways

Model Code Language

Street Connectivity and Block Length Standards.

1. New internal streets within a development must connect to all existing or planned stubbed streets that abut the site. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the city engineer.
2. Where the locations of planned streets are shown on a local street network plan or within a Transportation Systems Plan, the development must implement the street connection(s) shown on the plan in addition to meeting the standards of this chapter.
3. Where local street connections are not shown on an adopted plan, or the adopted plan does not designate future streets with sufficient specificity, the development must provide for street connections as required by the standards of this chapter.
4. Maximum Block Length. On development sites [2 acres or greater], street connections or pedestrian/bicycle accessways must be spaced no further than the maximum block length standards stated in Table 3-1. The maximum block length standard may be met with a full street connection or a pedestrian/bicycle accessway that meets pedestrian and bicycle accessway standards. In all cases, where a block exceeds 350 feet in length, a mid-block pedestrian/bicycle accessway is required.

Table 3-1: Maximum Block Length Standards

| Site Area | Within [CFA and Downtown/Main Street Areas] | All Other Sites |
|---|---|-----------------------|
| Less than 5.5 acres | 500 feet ¹ | 500 feet ¹ |
| More than 5.5 acres | 350 feet | |
| ¹ If the block length exceeds 350 feet, a mid-block pedestrian/bicycle accessway is required | | |

3.1 Street Connectivity, Blocks + Accessways

KEY CONSIDERATIONS

- Street standards and cross-sections have a sizable impact on walkability of streets and spacing of the street network. While these Walkable Design Standards support a more connected and walkable network of streets, it is critical that planning staff work with public works and other transportation departments to align supporting engineering standards. These standards, such as intersection spacing and limitations on mid-block crossings, may make it challenging to meet maximum block length standards. Jurisdictions should seek to apply connectivity standards as possible, and plan for future connections.
- Public works standards are critical to support walkable design. Standards should be considered in tandem with land use code changes. Critical to consider are standards related to planter strips, street trees, public utility easements and locations, alley designs, curb radius, and pedestrian crossings. See Appendix 3 for more resources related to best practices.
- Private streets (if allowed by the jurisdiction) should count toward meeting these standards. It can be advantageous for alleys and streets serving a small number of residences to be private to lower the maintenance responsibilities of the local government. All new streets that are required must meet the standards in the Transportation Systems Plan including for sidewalk widths and tree planting strips.
- Plan for vehicle, pedestrian, and bicycle connections citywide by mapping out future desired links across networks in the TSP. By analyzing and documenting missing connections in existing networks, jurisdictions have a road map to improve conditions on a network-scale and coordinate future development and redevelopment with planned public improvements.
- A smaller scale version of this best practice is to adopt plans and supporting codes for specific areas and/or larger redevelopment sites (1 acre or larger) that note desired mid-block passages and connections that will be required of future development.



DO

Make pedestrian and bicycle-only connections, not just full street connections



DON'T

Allow long blocks along high-traffic streets with limited points of crossing that discourage use by people on foot and wheel.

**DO**

Require direct pedestrian connections from sidewalks to entrances and pedestrian service areas to encourage walking. Reasonably straight connections have end points that are visible from any point on the accessway. Straight lines are not always possible given topography.

**DONT**

Connections should feel safe and comfortable to encourage all users. Do not permit the use of fencing or landscaping to obscure views into accessways, as this raises security concerns.

3.1**Street Connectivity, Blocks, and Accessways****Model Code Language**

5. Unless precluded by barriers, blocks must include alleys to allow use of rear-loaded garages and accessory dwelling units and to provide access for utility and garbage services. An applicant may pursue a discretionary review option for an exemption to this standard.
6. The street grid system must be rectilinear and must avoid curves unless curved streets will avoid a designated natural resource, tree grove, natural hazard, existing building or public facility, or to connect to another street.
7. Cul-de-sac streets or local streets with a dead end are not permitted unless the street is planned to continue to a connected network in the future. An applicant may pursue a discretionary review option for an exemption to this standard.

Pedestrian and Bicycle Accessways. Pedestrian and bicycle accessways may be proposed in-lieu of full street connections if they meet the standards listed below.

1. Accessways must be created within public rights-of-way, public tracts, or private tracts with public access easements. Such rights-of-way, tracts, or easements must be at least [5-15 feet] wide.
2. Accessway entry points must align with pedestrian crossing points on abutting streets and with abutting street intersections.
3. Accessways must be sufficiently straight that both end points are visible from any point on the accessway.
4. Accessways must have no horizontal obstructions and a 9 foot, 6-inch high vertical clearance.
5. Accessway surface improvements must be at least [5-10 feet in width]. Improvements must be impervious pavement (asphalt or concrete), unless pervious pavement has been approved by the [city engineer] based on usage and site conditions.
6. Accessway surfaces must drain stormwater runoff to the side or sides. Paving materials, storm drainage, shoulder treatment, and landscaping for accessways are subject to approval by the [city engineer].

3.1 Street Connectivity, Blocks + Accessways

Model Code Language

7. Accessways must have a slope of 5% or less.
8. To prohibit access by motorized vehicles (except motorized mobility devices) accessways must be constructed with gates, removable lockable posts, bollards or barriers as approved by the [fire department]. Accessways connecting to sidewalks built with a full-height curb do not need to provide additional barriers.
9. If accessway is not dedicated as public right-of-way, to ensure accessway maintenance over time, a maintenance agreement must be recorded that specifically requires present and future property owners to provide for liability and maintenance of the accessways to City standards.



DO

If the accessway intersects with a right-of-way and there is concern about access by motorized vehicles, require the use of bollards or other barriers to prevent access.

KEY CONSIDERATIONS

- Minimum dimensions for public accessways are provided as a range. In certain situations, a 5 to 6 foot wide path without lighting is thoroughly adequate to provide connectivity through a block provided that this connection does not exceed 200 - 300 feet in length and is not framed by taller buildings that would block light. Where pedestrians and bicyclists share an accessway, the width of the path should be no less than 10 feet, and optimally 12 feet.
- Consider the impact fencing may have on the experience of walking along a pedestrian connection through a block. If feasible, consider limiting the height or opacity of fencing facing these connecting spaces.
- If there is a desire to ask for a higher standard of design for pedestrian walkways, consider going further by requiring lighting using the jurisdiction's existing lighting standards and shielding requirements. Jurisdictions could also adopt a menu approach requiring applicants pick several design treatments from lighting, to greater width, and/or sustainable features.



DO

Topography can be a barrier to making connections but they should still be required whenever possible.

3.2

Pedestrian and Bicycle Circulation

CLIMATE BENEFITS

Increase in direct routes for walking, biking, and transit encourages less reliance on driving, reducing greenhouse gas emissions

Decrease in traffic congestion and improvements to overall mobility reduces idling time and air pollution

INTENT

To enhance the safety and comfort of people on foot or using biking, rolling, or other non-driving modes of travel. Safe connections to and through sites reduce the scale of larger sites and provide convenient and comfortable access to key destinations.



DO

Require on-site pedestrian and bicycle circulation facilities to provide comfortable connections that minimize out-of-direction travel.

3.2 Pedestrian and Bicycle Circulation

Model Code Language

Connections to the Street

The pedestrian and bicycle circulation standards apply to nonresidential and mixed-use developments and all residential developments except single-unit dwellings, accessory dwelling units, middle housing dwellings, manufactured dwellings, and residential care homes. New development must provide pedestrian and bicycle connections between main entrances of buildings and the street as follows.

1. **Main Entrances.** All primary buildings located within 40 feet of a street lot line must have a connection between one main entrance and the adjacent street. The connection may not be more than 120 percent of the straight-line distance between the entrance and the street. For sites with frontage on a [transit street], the pedestrian connection requirement must be met on the [transit street].
2. **Tree Preservation.** If a tree that is at least 12 inches in diameter (as measured by the diameter at breast height (DBH)) is proposed for preservation, and the location of the tree or its root protection zone would prevent the standard of this paragraph from being met, the connection may be up to 200 percent of the straight-line distance.
3. **Large Parking Areas.** Off-street surface parking areas greater than 21,780 square feet in size or including [four or more] consecutive, parallel drive aisles must include pedestrian connections through the parking area to main building entrances, existing or planned pedestrian facilities in adjacent public rights-of-way, transit stops, and accessible parking spaces. Connections to the street must be provided no more than every [250-300] feet. Where these requirements result in a fractional number, any fractional number greater than 0.5 must be round up to require an additional pedestrian connection.



DO

Require connections from main entrances, even buildings set back from the public right-of-way, to provide a direct way to access buildings from the sidewalk. These connections can be used by people within the parking lot or accessing the use from the sidewalk.



DON'T

There should be ways for people to access large, typically auto-oriented developments not only by car but also by other modes.

**DO**

Plan for future potential connections through large existing super blocks (greater than the maximum block length) and require them with redevelopment if proportional.

**DO**

Require an internal system of walkways that connects all main entrances to other uses on site (for larger sites), through large parking areas, and to the surrounding area. Direct connections from sites to the public realm should be provided to prioritize pedestrians.

3.2 Pedestrian and Bicycle Circulation

Model Code Language

Connections to Adjacent Properties. This standard applies to multi-unit dwellings, commercial, office, or institutional uses that are adjacent to another site that is zoned or developed for commercial, office, or institutional uses. On-site walkways must connect or be stubbed to allow for an extension to the abutting property when there is an existing or planned walkway on the abutting property.

Internal Connections. The walkway system must connect all main entrances on the site that are more than 20 feet from the street, and provide connections to other areas of the site, including parking areas, bicycle parking, recreational areas, common outdoor areas, and any pedestrian amenities. Internal connections must conform with Walkway Design standards.

KEY CONSIDERATIONS

- While requiring connections to adjacent properties poses challenges in terms of sequencing, as some projects on adjacent lots may have already been developed or not yet developed, the intent is to require projects to attempt to consider and plan for linkages.
- Projects should seek to match existing development patterns and facilitate easy access to key destinations, but this may not be possible given constraints or may be incremental as parcels redevelop.

3.2 Pedestrian and Bicycle Circulation

Model Code Language

Walkway Design.

1. **Materials and Width.** Walkways must be hard surfaced (paved) and at least 6 feet in unobstructed width. Walkway width must be increased to 8 feet if the walkway abuts perpendicular or angled parking spaces unless the spaces are equipped with wheel stops.
2. **Crossings with Vehicle Areas.** Where the walkway crosses driveways, parking areas, and loading areas, the walkway must be clearly identifiable through the use of elevation changes, a different paving material, or other similar method. Striping does not meet this requirement. Elevation changes for crossings must be at least 4 inches high.
3. **Walkways Adjacent to Vehicle Areas.** Where the walkway is parallel and adjacent to an auto travel lane, the walkway must be a raised path or be separated from the auto travel lane by a raised curb, bollards, landscaping, or other physical barrier. If a raised path is used it must be at least 4 inches high. Bollard spacing must be no further apart than 5 feet on center



DONT

Allow narrow walkways for uses with high levels of pedestrian activity and/or that have users with shopping carts. These types of uses would be better served with wider walkway minimum widths for a more comfortable and safe experience.

KEY CONSIDERATIONS

- Jurisdictions can consider requiring pedestrian connections to be raised above the travel lane a minimum of 4 - 6 inches in height.
- While a minimum walkway width of five feet provides a protected connection for people accessing the front door of commercial spaces through a parking lot, it does not account for the use of shopping carts. A five-foot width path is not adequate for someone pushing a shopping cart to pass another on-coming pedestrian. Consider a wider minimum path for projects with higher-intensity uses that attract more pedestrians and/or customers using shopping carts.



DO

Requiring elevated walkways improves the safety of pedestrians and make drivers more aware of other users.



DO
Require more than just paint striping to demarcate pedestrian walkways.



DO
Define safe crossings for pedestrians with changes in grade, materials, speed bumps, signage, and other means to slow down vehicular traffic.

3.2 Pedestrian and Bicycle Circulation

Model Code Language

OPTIONAL

4. Lighting. The on-site pedestrian circulation system must be lighted as required in [local lighting standard]. Lighting must be shielded to minimize glare and unnecessary diffusion into the sky and onto neighboring properties, especially into significant natural resource areas.]
5. Sustainability. Walkway design must incorporate at least one of the following sustainability features:
 - a. At least 30 percent of paving material must be permeable pavement; or
 - b. At least 30 percent of the paving material must be made from recycled content; or
 - c. At least 50 percent of the pedestrian walkway pavement must have a solar reflective index rating of a least 29; or
 - d. Provide shading for at least 50 percent of the total walkway surfaces on the site. Shade can be provided by current or proposed buildings that shade the paving material at 3 p.m. June 21 and current or proposed trees, with the amount of shade included for each planted tree to be measured by the diameter of the mature crown cover stated for the species of the tree.

KEY CONSIDERATIONS

- If jurisdictions do not want to require lighting or sustainable design features for walkways, these can be made optional.
- Shading requirements will also be addressed within code amendments related to OAR 660-012-0405 related to shading of drive aisles, etc.

3.3

Transit Facilities

CLIMATE BENEFITS

Supports and encourages public transit use, lowering greenhouse gas emissions from driving

Decreases the number of cars on the road, lowering greenhouse gas emissions from congestion

Promotes compact, transit-oriented development that facilitates higher-density, walkable neighborhoods around transit hubs

INTENT

To encourage and support the use of transit and encourage connections and circulation between different modes of travel. Buildings and entries orient to transit routes. Safe and convenient pedestrian connections to transit stops and stations facilitate access. Transit-supportive amenities support the transit system even when the public realm is not adequately sized or the neighborhood is not yet fully developed.

KEY CONSIDERATIONS

- When requiring transit facilities, consider that a critical amenity for bus stops is shade. Especially in hotter locations, maintaining the quality of shade is important. Make sure to require arborist-approved trees that provide shade without growing too large to encumber buses accessing the stop.
- When determining if development sites along high-frequency transit streets should be required to increase the maximum setback, consider a minimum sidewalk depth that accounts for both the amount of space needed for transit facilities and for safe, accessible, and convenient pedestrian movement in a higher-activity area.
- If transit classification is not a term used in your jurisdiction, apply relevant standards to the street with the highest frequency of transit service.
- Building orientation and ground-floor design standards are related and include key provisions pertaining to uses along transit lines.
- If transit improvements are minimal, such as a signed stop and on-street parking restrictions, the thresholds in 3.3 should be reduced such that the improvements may be required with less extensive development.
- Consider how transit providers are involved early in the development review process. Collaborate with local transit providers to adopt standards that are pre-vetted and meet transit goals and requirements.



DO

Require safe and clear links between entrances of buildings and adjacent transit lines.

**DO**

Require developments to provide direct and convenient connectios to transit to facilitate use.

3.3 Transit Facilities

Model Code Language

Transit Facilities

Projects that meet the following thresholds will be reviewed to determine if transit facilities are required to be provided:

- a. Projects on development sites within [100 feet of an existing or planned transit stop] or [located on an existing or planned transit route].
 - b. Residential developments with more than [25] dwelling units.
 - c. Commercial, office, and institutional developments with more than [50,000] square feet of gross floor area.
 - d. Industrial developments with more than [100,000] square feet of gross floor area.
1. Applicable projects may be required to provide additional transit facilities where substantial evidence of projected transit ridership or other transit impacts is presented by the transit provider to conclude both that a nexus exists between the proposed development and public transit and that the degree of impact provides reasonable justification. The City may require the developer to grant a public easement or dedicate a portion of the lot for transit facilities.

3.3 Transit Facilities

Model Code Language

2. The transit provider must identify the type of facility required [within 30 days following the completion of the pre-application conference]. Requirements can include facilities that are existing but in disrepair and need replacement as determined by the transit provider. Transit facilities may include, but are not limited to the following and may include some combination of the following:
 - a. Transit stop
 - b. Bus shelters
 - c. Bus pullouts
 - d. Passenger landing pads
 - e. Lighting
 - f. Bicycle parking per OAR 0630(2)(d)
 - g. On-street parking restrictions
 - h. Optimum road geometrics
3. Development sites along [high-frequency transit streets] may be required to increase the maximum setback in order to accommodate a sidewalk width of a minimum of 12 feet to ensure adequate spacing for transit facilities and safe and convenient pedestrian movement. This determination will be made by the relevant City authority and the transit agency at the time of development review.



DO

Plan for an adequately sized public realm so that needs of both transit users and pedestrians can be met.

Chapter 4. Compact Development



Densely clustered, higher-intensity buildings in commercial and mixed-use districts encourage efficient land development and convenient walking, biking, and transit use.

WHY COMPACT DEVELOPMENT MATTERS

Compact development promotes efficient land use, reducing trip lengths, increasing transportation options, and fostering social equity. By enabling higher-density, mixed-use neighborhoods, compact development reduces car dependency, conserves resources, and makes public transit and amenities more accessible to all residents. It also supports local economies by clustering businesses, residents, and tourists in vibrant, walkable areas. Prioritizing compact development in zoning and planning decisions is crucial for creating livable, sustainable cities that benefit all residents.



COMPACT DEVELOPMENT DESIGN PRINCIPLES

Vibrant Neighborhoods

Compact development concentrates uses and people, adding vibrancy and interest to a neighborhood or block that encourages walking.

Efficient

More compact building forms use less energy, enable less driving, and are a more efficient use of land that preserves natural and working lands.

Effective Development

Development standards aligned with building codes and market needs result in more feasible projects and enable construction of more housing.

Lower Cost

Increased residential density increases the supply of housing, reduces the cost of housing, and lowers transportation costs.

Equitable Access

Compact neighborhoods provide uses and services in a smaller geographic area, promoting equitable access to opportunities and resources.

Diversity of Built Form

Different compact building types deliver the same density levels in different built forms to reflect different neighborhood contexts and character.

COMPACT DEVELOPMENT DESIRED OUTCOMES

This chapter provides planners with a quantified set of physical characteristics for five common building types that represent the compact forms aligned with rule 0330 goals. These building types illustrate the complex ways in which building code, zoning standards, and market factors interact with one another and shape real projects. As the pictures of real world buildings demonstrate, these building types are representative of recently completed buildings in communities where restrictive zoning standards have been eliminated.

Compact building types include:

- Major Center
- Corridor Mixed Use
- Main Street Mixed Use
- Modern Apartment
- Main Street Neighborhood

For each compact development building type built outcomes are provided as a reference for planners as they consider alternative zoning standards. Specifically, these building examples can be a useful reference to consider in Step 4 (Consider) of the process described in Chapter 1. By comparing the physical characteristics of these building types to a community's existing zoning standards, planners can critically assess which of their existing zoning standards are barriers to achieving the types of compact development desired in their community.

Multiple zoning standards influence how much building space can be developed on any given lot (i.e. - how compact a building can be). For example, the required setbacks, percent of landscaping, and any limitations on lot coverage establish the maximum footprint that a building can occupy on the site. Height and density limits, for instance, restrict the size of the building that can be constructed on that footprint. On-site parking requirements or market preferences further reduce the amount of building area that can be used for housing or commercial spaces. Careful calibration of the zoning standards that regulate building form will ensure compactness can be achieved within the allowances of your local zoning standards.

Tips for Calibrating Local Zoning Standards Related to Compactness

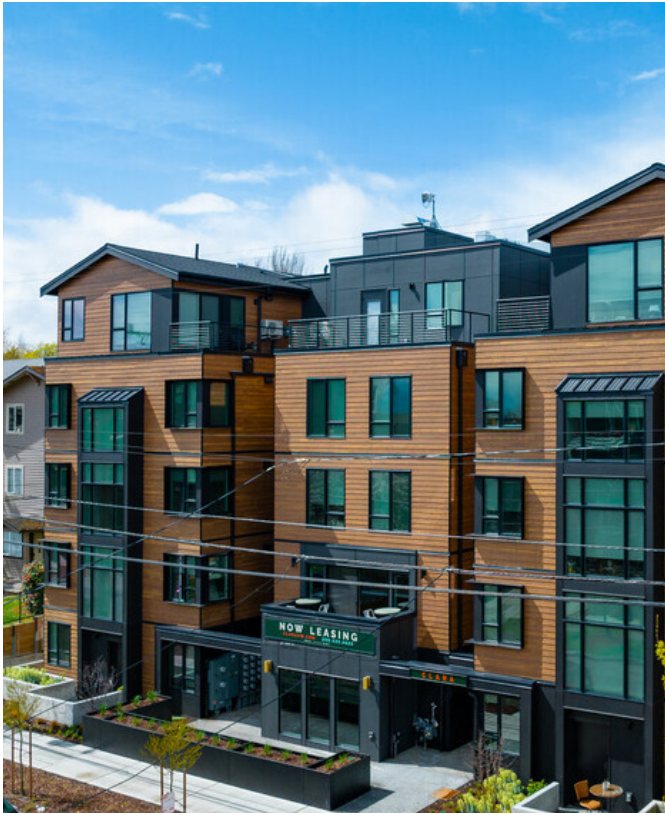
MANY STANDARDS INFLUENCE COMPACTNESS

A wide range of common development standards, taken together, regulate compactness. Standards such as setbacks and landscaping requirements limit how much of a site can be built on. Other standards, such as height and density, regulate the scale of buildings that can be built on the remaining buildable area.

ALIGN ZONING STANDARDS WITH MARKET REALITIES

Zoning standards are often misaligned with market needs, which can result in either a lack of financial feasibility and investment, or lower density development with higher rents. Understanding the local market, such as the types and sizes of homes in demand and the price tolerances of renters and buyers, is an important consideration for calibrating zoning standards. When demand for housing increases in an area, the only response the market can offer is by adding more, smaller units in that area. Compact development standards enable the market to respond to demand by adding supply where it is needed.





LESS CAN BE MORE

In many cases, a small number of key standards effectively govern compactness on a site. Common examples include maximum dwelling units per acre or lot area, minimum landscaping requirements, or maximum lot coverage limitations. In the process of evaluating zoning standards, it can be helpful to identify which have the greatest influence and look for opportunities to eliminate standards that are redundant or do not materially impact important development outcomes.



REVERSE ENGINEER STANDARDS TO ACHIEVE DESIRED OUTCOMES

Rather than evaluating what you can build with certain standards, consider identifying what kinds of main street, mixed-use, or housing types you and your community wants and set your standards to allow those types. This simple trick can lead to more predictable outcomes for a community.

Barriers to Compact Development

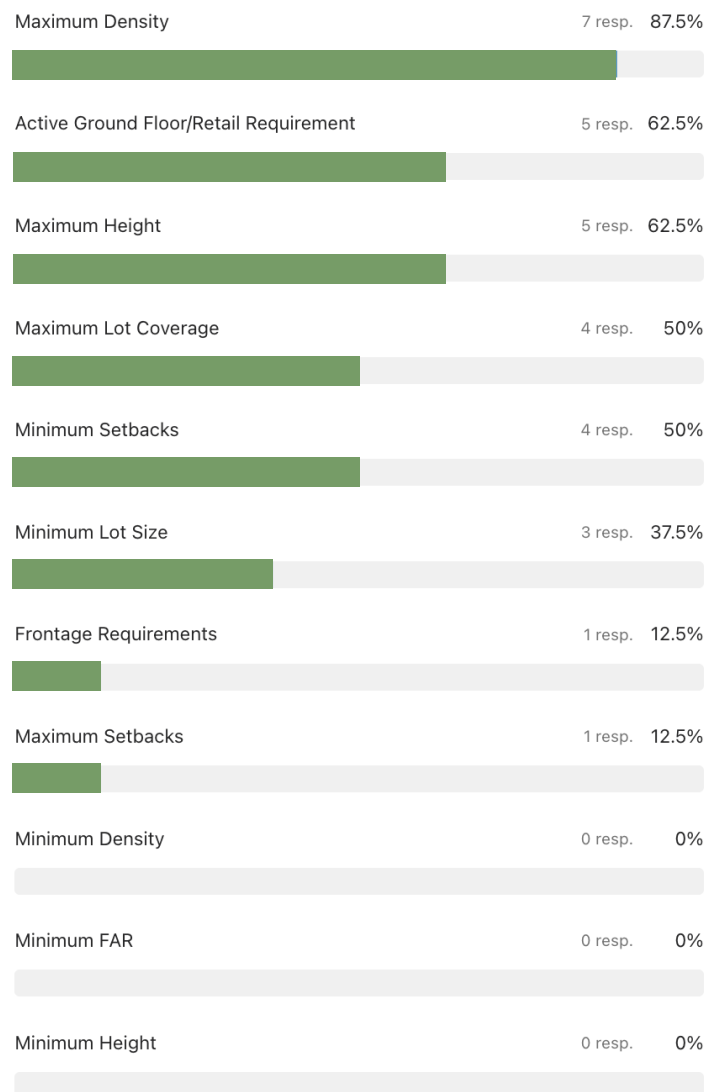
INDUSTRY SURVEY

A survey of practitioners across Oregon, including urban designers, developers, architects, and builders, identified the most common barriers to achieving compact, walkable development. The survey asked respondents to reflect on the regulatory approaches to frontage, connectivity, density, and landscaping discussed in this Guidebook. Their feedback provides valuable insights into which zoning standards present the greatest challenges from the perspective of the end uses of zoning code. These insights were used in the selection of the standards included in this chapter and provide cities with a valuable resource to help identify or mitigate those barriers.

As parking mandates have been dramatically scaled back in Oregon's metropolitan areas, these were not included in this survey. In other contexts across Oregon, parking requirements would likely be ranked high on this list of significant barriers.

The quantity, location and design of on and off-street parking is a major factor in urban form, and whether a community is walkable for its residents and visitors. The best practice for walkability is to not require any off-street parking, but to manage its design where the market provides it.

Which of these zoning standards are often the most significant barriers when you are trying to design or develop walkable, compact development?



Best Practice:

REGULATE BY FORM RATHER THAN UNITS



Focusing on unit counts rather than building form can result in shorter or smaller footprint buildings than would otherwise be allowed within the building envelope set by development standards.

Set a maximum built form based on desired outcomes for compact development. Allow the market flexibility to respond to the number of units that can be built for a project to be financially feasible.



A CLOSER LOOK

Compact, walkable forms of development should be promoted across all district types. There is a range of built forms appropriate based on the desired intent of the district types. **When seeking to require more compact, walkable forms of development, focus on setting a maximum built form as opposed to setting a ceiling on the number of units (density).**

- Cities can set either a maximum building envelope (using height and setbacks) or a more flexible building massing (using FAR). Either approach gives jurisdictions the opportunity to first study the scale of the existing – and planned – district context and then calibrate an acceptable building form.
- Removing any maximum on the number of units (dwelling units per acre) or minimum lot size per unit will allow a wide-ranging number of units to be achieved within a desirable form that is compatible with the area.
- To go further, cities can consider not requiring a minimum lot size or maximum lot coverage, particularly in district types envisioned with a more dense, urban fabric or with a high number of potential infill lots.
- Given the increase in building massing, jurisdictions need to support this change in approach with carefully considered design standards that address primary concerns, such as maximum building length, façade articulation, and step downs.
- Cities should think carefully about what to set as a maximum building envelope to make sure that, if desired, a bonus could also be applied if certain desired public benefits are provided.
- In district types where the market is likely to build lower-density forms – such as in residential zones with a strong market that can absorb high-cost single detached homes on larger lots, cities should consider establishing a minimum density or FAR to promote the desired intensity of compact forms.
- **Dig Deeper:** Vancouver BC applies this approach [in its mixed-use zones](#). The City of Portland also applies this approach [in its Commercial/Mixed Use Zones](#). The City of Portland [set FAR limits in residential zones](#) to allow greater building envelopes for middle housing residential types as opposed to single-detached dwellings.

Best Practice:

POINTS-BASED LANDSCAPE REQUIREMENT



Requiring a percentage of open space on a parcel does not translate into outcomes that emphasize usable open spaces that enhance the quality of urban areas and improve walkable outcomes.

A points-based landscape standard assigns different point values using a broad-ranging menu of clear and objective landscape treatments.

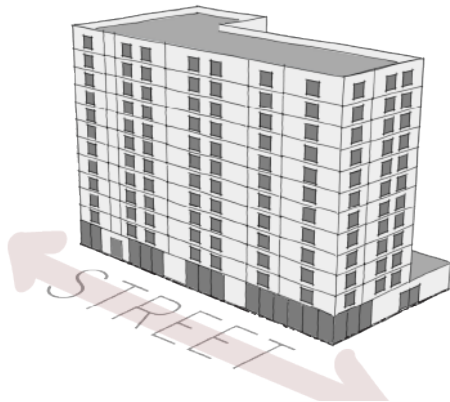


A CLOSER LOOK

Landscaping standards are a common zoning standard and appropriate in some residential contexts. When simple minimum landscaping standards are applied in dense areas, however, the outcomes can significantly reduce the buildable area of a lot without necessarily resulting in high-quality open spaces supporting walkable, compact urban places. Pockets of green and usable open space visible from the street define projects and enhance the public realm. Active spaces and functional landscapes improve the livability and the climate impacts of dense, urban projects. **When considering the most compact and urban district types that balance dense built form with pedestrian friendly streetscapes, consider a more flexible approach to landscape requirements.**

- Landscape requirements in the code for certain dense, mixed-use districts set a minimum amount of landscaping that is not a certain percentage of the lot or minimum amount (in square feet) but rather a total points value.
- A menu of landscape credits provides a flexible range of options to meet the minimum score required set for each base land use zone where the standard is applied.
- Points for different landscape treatments are weighted to reflect key desired values. For example, higher points may be assigned to trees with larger canopies, low water usage, layering of plant materials, native plants, and green walls or roofs.
- The score reflects both the aesthetic benefits of landscape treatments that improve the look and feel of a neighborhood *and* the performance aspects that target climate concerns (reducing stormwater run-off, cooling urban heat islands, providing habitat, etc.).
- If landscaping is provided along the sidewalk, bonus points are offered, emphasizing the more visible front-facing aspects of projects.
- **Dig Deeper:** Seattle uses a zoning tool called [Green Factor](#) that requires projects in certain designated zones to reach a minimum score correlated to the base zone.

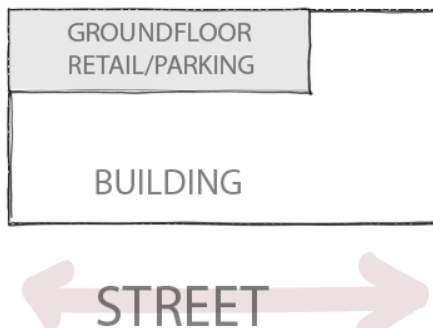
4.1 Major Center



Overview

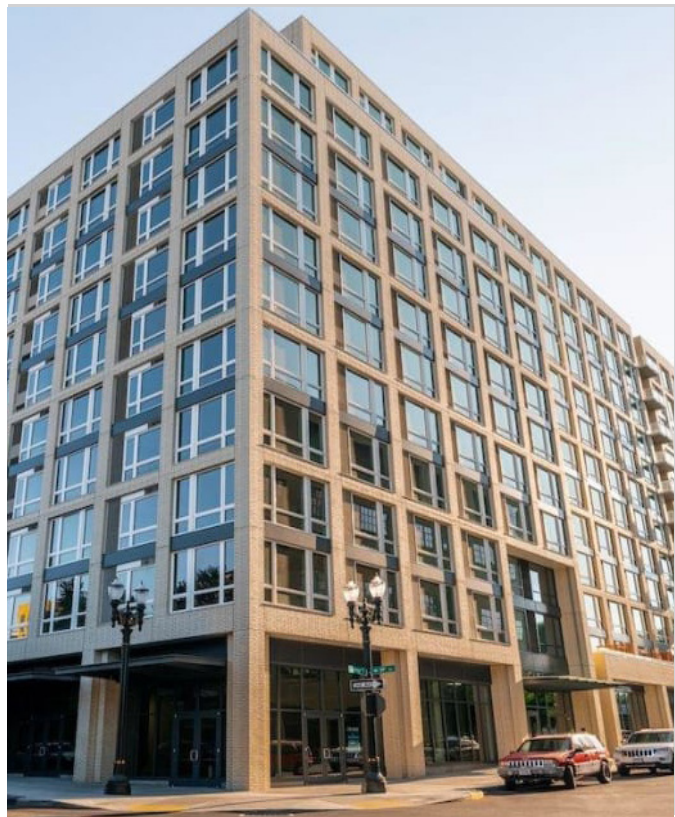
Residential above commercial buildings that are often located in downtown or mixed-use center zones. These are high-rise buildings constructed with concrete, steel, and/or mass timber. These buildings are primarily found along prominent streets well-served by transit near the city center and minimal to no parking is provided on-site.

- Height: 8 - 12 stories
- Lot Coverage: high
- Uses: Mixed use - residential and commercial
- Construction: concrete, steel, and/or mass timber
- District types: downtown center/CFA

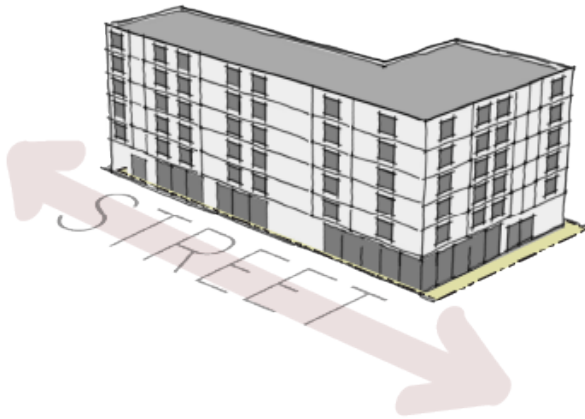


Building Characteristics

| | |
|---------------------------------------|--|
| Average Lot Size (square feet) | 20,000 feet |
| Unit Count | 100 - 150 |
| FAR | 6 - 8 |
| Density (dwelling units/acre) | 280 - 320 |
| Setbacks | 0 - 3 feet (front) 0 - 3 feet (side) 0 - 3 feet (rear) |
| Landscaping (percent of lot) | 0 - 5 % |
| Lot Coverage (percent of lot) | 95 - 100 % |
| Height (stories) | 10 - 12 |
| Ground Floor Height (feet) | 14.5 - 16.5 feet |
| Parking Ratio (per unit) | 0 - 0.20 |



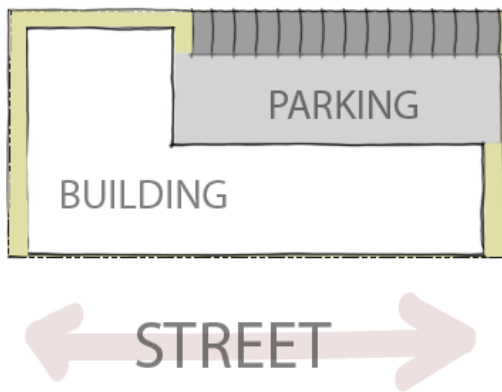
4.2 Corridor Mixed Use



Overview

Residential above commercial buildings that are often located in downtown or mixed-use center/corridor zones. These are often 1 or 2 podium floors that include some off-street parking provided, with wood frame floors above. These buildings are primarily found along prominent streets well-served by transit near the city center.

- Height: 5 - 6 stories
- Lot Coverage: high
- Uses: Mixed use - residential and commercial
- Construction: wood floors over concrete/steel podium
- District Types: downtown center/CFA, main street

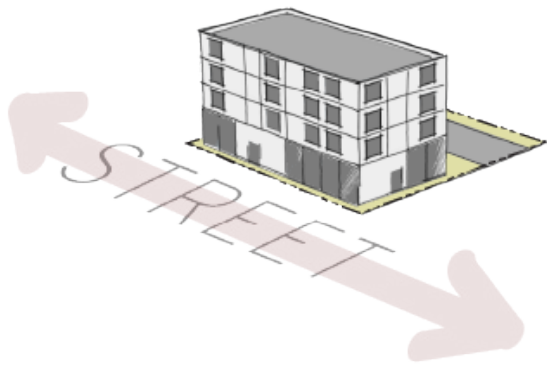


Building Characteristics

| | |
|---------------------------------------|--|
| Average Lot Size (square feet) | 20,000 feet |
| Unit Count | 65 - 80 |
| FAR | 4 - 6 |
| Density (dwelling units/acre) | 120 - 175 |
| Setbacks | 0 - 3 feet (front) 0 - 3 feet (side) 0 - 3 feet (rear) |
| Landscaping (percent of lot) | 0 - 5 % |
| Lot Coverage (percent of lot) | 70 - 100 % |
| Height (stories) | 6 - 7 |
| Ground Floor Height (feet) | 14.5 - 16.5 feet |
| Parking Ratio (per unit) | 0 - 0.5 |



4.3 Main Street Mixed Use



Overview

Mixed use building types often found in neighborhood commercial zones, along corridors or in downtowns within smaller cities. These buildings are side by side along other mixed use buildings with a mix of active ground floor uses and/or older, existing single story commercial uses. They may or may not provide off-street parking based on the lot size (width and depth) and access. Mixed-use building types may back into smaller scale residential uses.

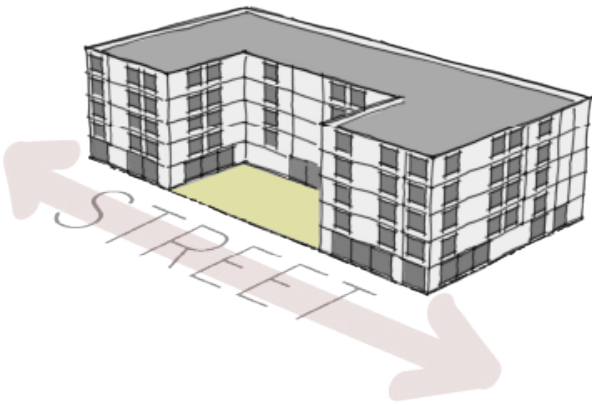
- Height: 3 - 5 stories
- Lot Coverage: medium to high
- Uses: Mixed-use - residential and commercial
- Construction: wood frame or podium
- District Types: downtown center/CFA, main street

Building Characteristics

| | |
|---------------------------------------|--|
| Average Lot Size (square feet) | 10,000 feet |
| Unit Count | 10 - 25 |
| FAR | 1.5 - 3 |
| Density (dwelling units/acre) | 40 - 100 |
| Setbacks | 0 - 5 feet (front) 0 - 5 feet (side) 0 - 5 feet (rear) |
| Landscaping (percent of lot) | 10 - 15 % |
| Lot Coverage (percent of lot) | 85 - 95 % |
| Height (stories) | 4 - 5 |
| Ground Floor Height (feet) | 14.5 - 16.5 feet |
| Parking Ratio (per unit) | 0 - 1 |



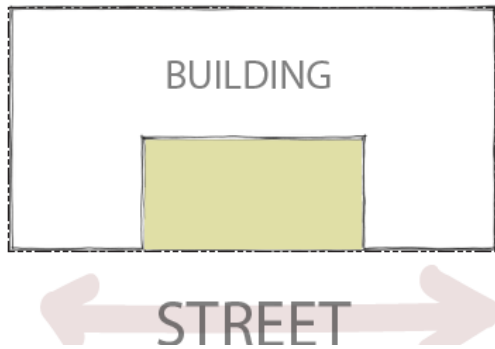
4.4 Modern Apartment



Overview

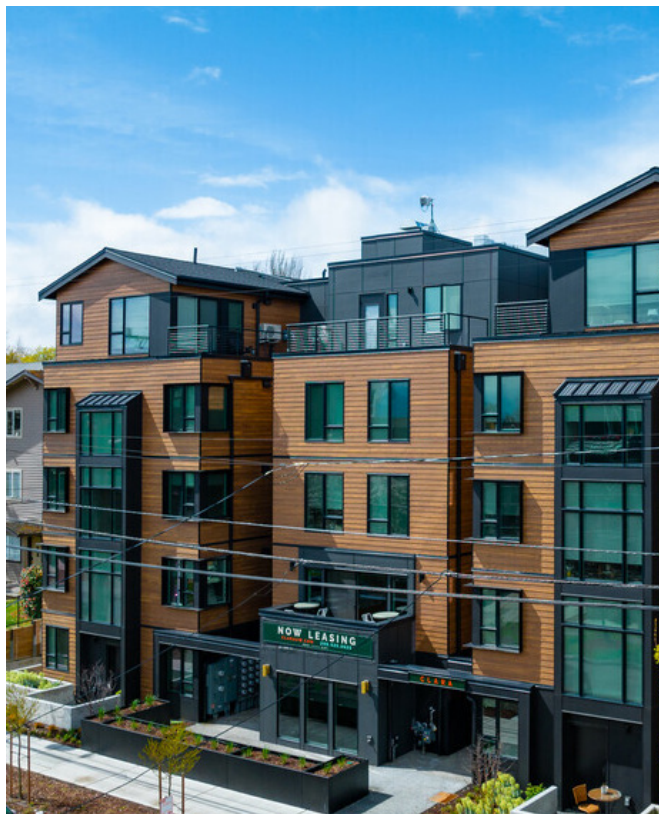
Stacked flats in a single building that are accessed via a shared entry and/or main lobby. Modern apartments are served by elevators. They can include ground-floor units with individual entries onto the street. Modern apartment buildings can be found in high-density residential or center/corridor commercial zones served by high-frequency transit. They may be similar in scale to surrounding uses or as a district or corridor transitions, they may be adjacent to buildings more of a house-scale. They are typically residential use only and do not include off-street parking.

- Height: 5 stories
- Lot Coverage: high
- Uses: Single use - residential
- Construction: wood frame
- District Types: downtown/CFA, main street



Building Characteristics

| | |
|---------------------------------------|--|
| Average Lot Size (square feet) | 20,000 feet |
| Unit Count | 60 - 84 |
| FAR | 2.5 - 4 |
| Density (dwelling units/acre) | 110 - 180 |
| Setbacks | 0 - 5 feet (front) 0 - 5 feet (side) 0 - 5 feet (rear) |
| Landscaping (percent of lot) | 15 - 25 % |
| Lot Coverage (percent of lot) | 75 - 85 % |
| Height (stories) | 4 - 5 |
| Ground Floor Height (feet) | 10.5 - 11.5 feet |
| Parking Ratio (per unit) | 0 - 0.5 |

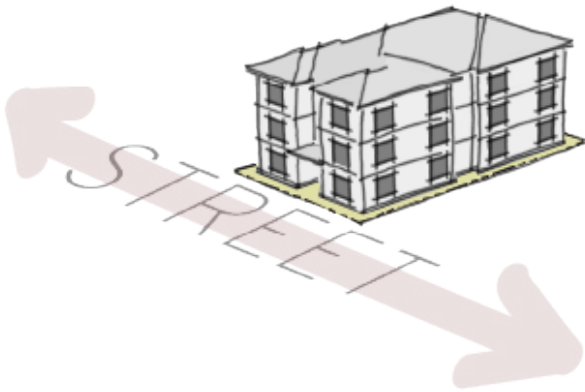


4.5 Main Street Neighborhood

Overview

Stacked flats in a single building or group of buildings that are typically accessed through a single, shared lobby or multiple shared stairways. These smaller-scale multi-unit buildings range from 3 - 5 stories and often do not provide off-street parking. While buildings may vary in size and design, they often are a step up in scale and intensity from house-scale buildings and are found in transition areas between low and medium density residential areas and along corridors served by transit.

- Height: 3 - 5 stories
- Lot Coverage: medium
- Uses: Single use - residential
- Construction: wood frame
- District Types: main street, residential neighborhood



Building Characteristics

| | |
|---------------------------------------|---|
| Average Lot Size (square feet) | 6,000 feet |
| Unit Count | 6 - 12 |
| FAR | 1.5 - 2 |
| Density (dwelling units/acre) | 40 - 85 |
| Setbacks | 0 - 5 feet (front) 0 - 5 feet (side) 5 - 20 feet (rear) |
| Landscaping (percent of lot) | 20 - 25 % |
| Lot Coverage (percent of lot) | 75 - 85 % |
| Height (stories) | 2 - 3 |
| Ground Floor Height (feet) | 10.5 - 11.5 feet |
| Parking Ratio (per unit) | 0 - 0.5 |



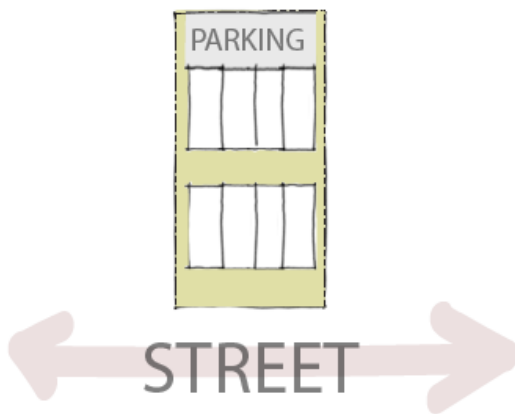
4.6 Compact Neighborhood



Overview

Compact buildings similar in size and height to single detached dwellings with multiple units (2 - 4). These smaller scale buildings typically range from 2 to 3 stories and may have detached units (accessory dwelling units) or multiple units within a single house-scale building. They may or may not provide off-street parking based on the lot size (width and depth) and access. These building types are often found within existing or new low and medium density residential neighborhoods and are interspersed with single detached dwellings on similar sized lots.

- Height: 2 - 3 stories
- Lot Coverage: low
- Uses: single use - residential
- Construction: wood frame
- District Types: residential neighborhoods



Building Characteristics

| | |
|---------------------------------------|--|
| Average Lot Size (square feet) | 5,000 feet |
| Unit Count | 3 - 4 |
| FAR | 0.5 - 1 |
| Density (dwelling units/acre) | 25 - 35 |
| Setbacks | 15 - 20 feet (front) 5 - 10 feet (side) 0 - 20 feet (rear) |
| Landscaping (percent of lot) | 15 - 20 % |
| Lot Coverage (percent of lot) | 20 - 35 % |
| Height (stories) | 2 - 3 |
| Ground Floor Height (feet) | 10.5 - 11.5 feet |
| Parking Ratio (per unit) | 1 - 1.5 |



APPENDIX 1

WALKABLE DESIGN STANDARDS MODEL CODE

Chapter I – General Provisions

Sections:

- I.1 Purpose
- I.2 Applicability
- I.3 Definitions

I.1. Purpose

The purpose of the regulations of this code is to create compact, pedestrian-friendly land use development patterns so people can meet their daily needs without needing to take long car trips. The code requires land use development patterns to support access by people using pedestrian, bicycle, and public transportation networks. The code serves this purpose by achieving the following specific objectives:

- Provide for pedestrian-friendly and connected neighborhoods.
- Provide for a compact development pattern.
- Support the ability to walk or use mobility devices via connected and convenient street and accessways linking pedestrian, bicycle, and public transportation networks with main entrances of uses and key destinations.
- Provide for neighborhood streets that encourage slow travel speeds that are comfortable for families, connect within the neighborhood and to adjacent districts, and enable efficient and sociable development patterns.
- Regulate the design of auto-oriented facilities to ensure compatibility with a community where it is easy to walk or use a mobility device.

I.2 Applicability

A. Applicability. This code applies to all new development and exterior modifications to existing development that meet the following thresholds.

1. New buildings. The standards of this chapter apply to all new primary buildings [greater than 200-500 square feet]. The standards do not apply to accessory buildings.
2. Expansions and alterations to existing primary buildings. The standards of this chapter apply to expansions and alterations to existing buildings as follows:

- a. Expansions or additions to buildings of over [200-500] square feet that are visible from a public street are required to be in conformance with the standards of this code. The standards only apply to the expansion or addition.
- b. Exterior alterations or remodels of existing buildings that do not conform to the standards Sections 2.1 Building Orientation and Frontage Design, 2.2 Ground Floor Design for Nonresidential and Mixed-Use Buildings, 2.3 Ground Floor Design for Residential Buildings, and 2.4 Driveways and Garages must improve compliance with these standards where practicable. For alterations or remodels of existing buildings that will include residential units, the requirement is solely to not increase nonconformance.

B. Adjustments. An applicant may request an adjustment to any quantitative standard in this code in accordance with the [local adjustments application/procedure].

C. Discretionary Review Option.

- I. Applicants may request a discretionary review option as an alternative to meeting one or more of the standards of this chapter. For each standard for which discretionary review is sought, the applicant must demonstrate that one of the following two criteria are met:
 - a. The physical conditions of the site or existing structures make compliance with the standard impractical. Conditions on a site include but are not limited to topography or natural features; railroads, highways, or other permanent barriers; lot or parcel size, orientation, or shape; available access; existing or nonconforming development; or to provide accessibility for people with disabilities.
 - b. The applicant is proposing an alternative design. The alternative design equally or better complies with the following:
 - i. The overall purpose of code as described in section I.1.
 - ii. The intent of each specific standard for which discretionary review is being sought.
- 2. Requests for a discretionary review are subject to [Type II/III] review in accordance with the procedures in [local procedures chapter]. The request may be considered as part of the development application.

I.3 Definitions

A. Accessway. Any off-street path or walkway designed and constructed for use by pedestrians and/or bicyclists where such routes are not otherwise provided by the street system.

- B. Alley.** A right-of-way through or partially through a block, intended for secondary vehicular access to the rear or side of properties. However, where vehicle access from the street is not permitted or not possible, an alley may provide primary vehicle access.
- C. Block Length.** The distance along a public or private street between the centerline of 2 intersecting streets, including “T” intersections but excluding cul-de-sacs.
- D. Courtyard.** An outdoor area, designed for use by pedestrians, surrounded on at least two sides by buildings and open on at least one side to an abutting right-of-way.
- E. Development.** All improvements on a site, including buildings, other structures, parking and loading areas, landscaping, paved or graveled areas, and areas devoted to exterior display, storage, or activities. Development includes improved open areas such as plazas and walkways, but does not include natural geologic forms or unimproved land.
- F. Drive-Through Facility.** A facility or structure that is designed to allow drivers to remain in their vehicles before and during an activity on the site. Drive-through facilities also include facilities designed for the rapid servicing of vehicles, where the drivers may or may not remain in their vehicles, but where the drivers usually either perform the service for themselves or wait on the site for the service to be rendered. Drive-through facilities may serve the primary use of the site or may serve accessory uses. Examples are drive-up windows; menu boards; order boards or boxes; gas pump and electric vehicle charging islands; car wash facilities; auto service facilities, such as air compressor, water, and windshield washing stations; quick-lube or quick-oil change facilities; and drive-in theaters. Parking spaces used for customer pick-up or loading of goods or products purchased on-site, on the phone, or on-line from the establishment are not a drive-through facility. Parking spaces that include electric vehicle chargers and equipment are not a drive-through facility.
- G. Driveway.** There are two types of driveways: 1) The area that provides vehicular access to a site. A driveway begins at the property line and extends into the site. A driveway does not include parking, maneuvering, or circulation areas in parking areas, such as aisles; and 2) The area that provides vehicular circulation between two or more noncontiguous parking areas. A driveway does not include maneuvering or circulation areas within the interior of a parking area. A driveway must be used exclusively for circulation, with no abutting parking spaces.
- H. Façade.** All the wall planes of a structure as seen from one side or view. For example, the front façade of a building would include all of the wall area that would be shown on the front elevation of the building plans.
- I. Frontage.** The length of the front lot line of a lot which abuts a public street, or platted private street, usually measured in feet. Lot frontage may be approximately equal to lot width on a regular lot but may differ on other shapes of lots.
- J. Garage.** Garages are defined as a covered structure that is accessory to a residential use and is designed to provide shelter for vehicles, is connected to a right-of-way by a driveway, and has an opening that is at least

8 feet wide. Carports are considered garages. Structured parking is not.

- K. Main Entrance.** A main entrance is the entrance to a building that is designed for access by the majority of building users. Generally, each building has one main entrance, but if design features do not make it possible to discern which entrance is the main entrance, all similar entrances shall be treated as main entrances. In multi-tenant buildings, main entrances open directly into the building's lobby or principal interior ground level circulation space. When a multi-tenant building does not have a lobby or common interior circulation space, each tenants' outside entrance is a main entrance. In single-tenant buildings, main entrances open directly into lobby, reception, or sales areas.
- L. Neighborhood Activity Center.** A land use which draws high levels of daily pedestrian usage, and which functions as a destination for pedestrian and vehicle trips. Examples of neighborhood activity centers include existing or planned parks and recreation facilities, schools, shopping areas, employment centers, theaters, and museums.
- M. Nonresidential or Mixed-Use Building.** A building that includes a non-residential use, such as a commercial, office, industrial, or institutional use, or a building that includes both a residential use and non-residential use.
- N. Nonresidential or Mixed-Use Development.** A development that includes a non-residential use, such as a commercial, office, industrial, institutional use, or a development that includes both a residential use and non-residential use.
- O. Pedestrian Amenity Space.** Publicly accessible space such as plaza, terrace, courtyard, or small park, which abuts or is connected to the street and is provided and maintained by a private party.
- P. Pedestrian Connection.** A route between two points intended and suitable for pedestrian use. Pedestrian connections include, but are not limited to, accessways, sidewalks, walkways, stairways and pedestrian bridges.
- Q. Practicable.** Capable of being put into practice, done, or accomplished given consideration of available technology and project economics.
- R. Residential Building.** A category of building that includes only residential uses. The category includes the following defined residential building types.
- **Accessory Dwelling Unit.** An additional dwelling unit created on a lot with a primary dwelling unit. The additional unit is smaller than the primary dwelling unit except when the accessory dwelling unit is in an existing basement. The accessory dwelling unit includes its own independent living facilities including provision for sleeping, cooking, and sanitation.
 - **Congregate Housing Facility.** A building, buildings, or portion of a building that includes separate bedrooms and individual or shared bathrooms but does not include a kitchen or if it does include a kitchen the number of kitchens is less than one kitchen per 12 bedrooms.

- **Manufactured Dwelling.** A dwelling unit constructed off of the site which can be moved on the public roadways.
 - **Middle Housing Dwelling.** A category of housing types that includes duplexes, triplexes, quadplexes, townhouses, and cottage clusters, as defined by OAR 660-046-0020.
 - **Multi-Unit Dwelling.** A residential structure containing 5 or more dwelling units sharing common walls, floors, or ceilings, built on a single lot. Multi-unit dwellings include apartments and condominiums without regard to ownership status.
 - **Residential Facility.** A residence for 6 to 15 physically or mentally disabled persons, and for staff persons. The facility may provide residential care alone, or in conjunction with training or treatment. This definition includes the State definition of Residential Facility.
 - **Residential Home.** A residence for 5 or fewer physically or mentally disabled persons, and for staff persons. The residence may provide residential care alone, or in conjunction with training or treatment. This definition includes the State definition of Residential Home.
 - **Single-Unit Dwelling.** A detached structure on a lot that is comprised of a single dwelling unit.
- S. Residential Development.** A development that includes one or more residential building types and does not include non-residential uses.
- T. Stacking Lane.** The space occupied by vehicles queueing for a service to be provided at a drive-through facility.
- U. Structured Parking.** A covered structure or portion of a covered structure that provides parking areas for motor vehicles. Parking on top of a structure—where there is gross building area below the parking, but nothing above it—is structured parking. The structure can be the primary structure for a Commercial Parking facility or be accessory to multi-unit, commercial, employment, industrial, institutional, or other structures.
- V. Street Lot Line.** A lot line, or segment of a lot line, that abuts a street. Street lot line does not include lot lines that abut an alley. On a corner lot or through lot, there are two (or more) street lot lines.
- W. Vehicle Areas.** All the area on a site where vehicles may circulate or park including parking areas, driveways, drive-through lanes, and loading areas.
- X. Vehicle Servicing.** Gas stations, unattended card key stations, car washes, commercial vehicle maintenance and/or oil and lubrication services, and similar uses.
- Y. Walkway.** A transportation facility built for use by pedestrians, usually located outside a street right-of-way or tract.

Chapter 2 – Pedestrian-Oriented Development

Sections:

- 2.1 Building Orientation and Frontage Design
- 2.2 Ground Floor Design for Nonresidential and Mixed-Use Buildings
- 2.3 Ground Floor Design for Residential Buildings.
- 2.4 Driveways and Garages
- 2.5 Drive-Through Facilities

2.1 Building Orientation and Frontage Design

A. Intent. The following requirements are intended to encourage walking, bicycling, and transit use by contributing to a pedestrian-oriented streetscape. The standards regulate the siting and orientation of buildings to ensure convenient access for pedestrians, promote buildings close to the sidewalk that reinforce a pedestrian orientation, and support a visually interesting and welcoming experience for pedestrians while limiting the negative impacts of vehicle areas adjacent to streets.

B. Maximum Setback. The maximum setback standard applies to nonresidential and mixed-use developments and all residential developments except accessory dwelling units. Unless otherwise specified, the maximum a building can be set back from a street lot line is indicated in Table 2-1. At least [50-75%] of the length of the ground-level, street-facing façade of the building must meet the maximum setback standard of the zone district.

1. Applying the standard.

- a. Projections such as eaves, chimneys, bay windows, overhangs, cornices, awnings, canopies, porches, decks, pergolas, and similar architectural features on the façade do not count toward meeting the maximum setback standard.
- b. Where there is more than one building on the site, the standards apply to the combined ground level, street-facing façades of all the buildings. See Figure 2.1
- c. Where an existing building is being altered, the standards apply to the ground level, street-facing façade of the entire building. See Figure 2.2. Expansions or additions to buildings in zones subject to the maximum setback standard must not increase the length of street-facing façade that does not conform to the standard and must reduce the area dedicated to parking and vehicular circulation between the building and the street.

2. Sites with multiple street frontages. Where the site is adjacent to two or more streets, these standards must be met on the frontage of the street with the [higher transit classification]. If both streets have the same classification, the applicant may choose on which street to meet the standard.

| Use Category | Neighborhood | Suburban Commercial | Main Street | Corridor /CFA | Downtown/ Center |
|---|--------------|---------------------|-------------|---------------|------------------|
| Residential Developments | [10-20]' | [10-15]' | [5-10]' | [5-10]' | [5-10]' |
| Nonresidential and Mixed-Use Developments | [5-10]' | [5-10]' | [0-5]' | [0-5]' | [0-5]' |

C. Frontage Design. The frontage design standards apply to nonresidential and mixed-use developments and all residential developments except single-unit dwellings, accessory dwelling units, middle housing dwellings, manufactured dwellings, and residential care homes.

I. Standards for all sites.

- a. No area between the portion of a building that meets the maximum setback standard and the street lot line can be used for vehicle parking or circulation. Vehicle access is allowed through the setback area if it accesses a parking area or structured parking that does not conflict with the maximum setback (2.1.B) or frontage design (2.1.C) standards.
- b. Vehicle parking and circulation areas within [20 feet] of the street lot line must be limited to no more than [50 percent] of the length of the street lot line.
- c. Any areas within [20 feet] of the street lot line that are not occupied by a building or vehicle area must be landscaped to the [local planting standard] or hardscaped for pedestrian use.

2. Additional standards for sites [adjacent to transit street or in a Main Street, Corridor/Climate-Friendly Area, or Downtown district].

- a. No area between the building and the street lot line may be used for vehicle parking or circulation.
- b. Any area between the portion of a building that does not meet the maximum setback and the street lot line must include at least one pedestrian amenity space. The pedestrian amenity space must meet the following standards:
 - i. The space must abut the sidewalk of a public street and must be hardscaped for pedestrian use.
 - ii. The minimum area of the space must be [5%] of the overall site area with a minimum dimension of [10-15 feet].

- iii. The space must include benches or seating that provide at least [5-10] linear feet of seats. The seating surface must be at least 15 inches deep and between 16 and 24 inches above the grade upon which the seating or bench sits.
 - iv. A minimum of [10-20%] of the pedestrian amenity space must be landscaped.
 - v. A minimum of one tree is required for each [500] square feet of pedestrian space.
 - c. All other areas between the building and the street lot line not in the pedestrian amenity space must be landscaped. Landscaping must meet the standards [local minimum planting requirements].
3. Screening of surface parking areas. Surface parking must be screened from view of the street at a minimum as follows:
- a. Evergreen shrubs that will grow to a minimum height of 30 inches within two years and form continuous screening. Areas within the vision clearance triangle must include plantings that do not exceed 3 feet; and
 - b. One tree for every 30 linear feet; and
 - c. Evergreen ground cover must cover the remaining landscape area.
 - d. A minimum 30 inch tall architecturally treated wall may be substituted for evergreen shrubs.
4. Sites with multiple street frontages. Where the site is adjacent to two or more streets, these standards must be met on the frontage of the street with the [higher transit classification]. If both streets have the same classification, the applicant may choose on which street to meet the standard.
5. Exceptions. Assisted living facilities, group care facilities, and similar institutional-residential or medical uses serving clients with disabilities may have one driveway located between the main entrance and an adjacent street as required to serve as a drop-off or loading zone, provided the main building entrance must connect to an adjacent street by a pedestrian walkway.

Figure 2-1: Calculating Maximum Building Setback When More Than One Building On Site

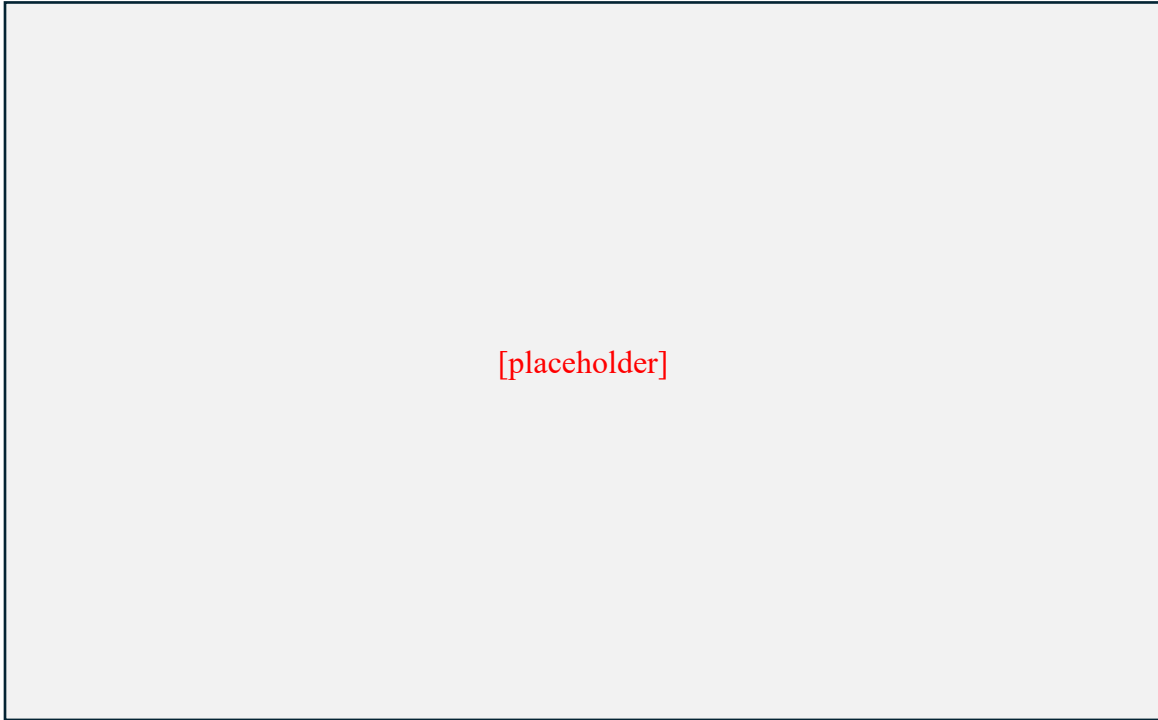
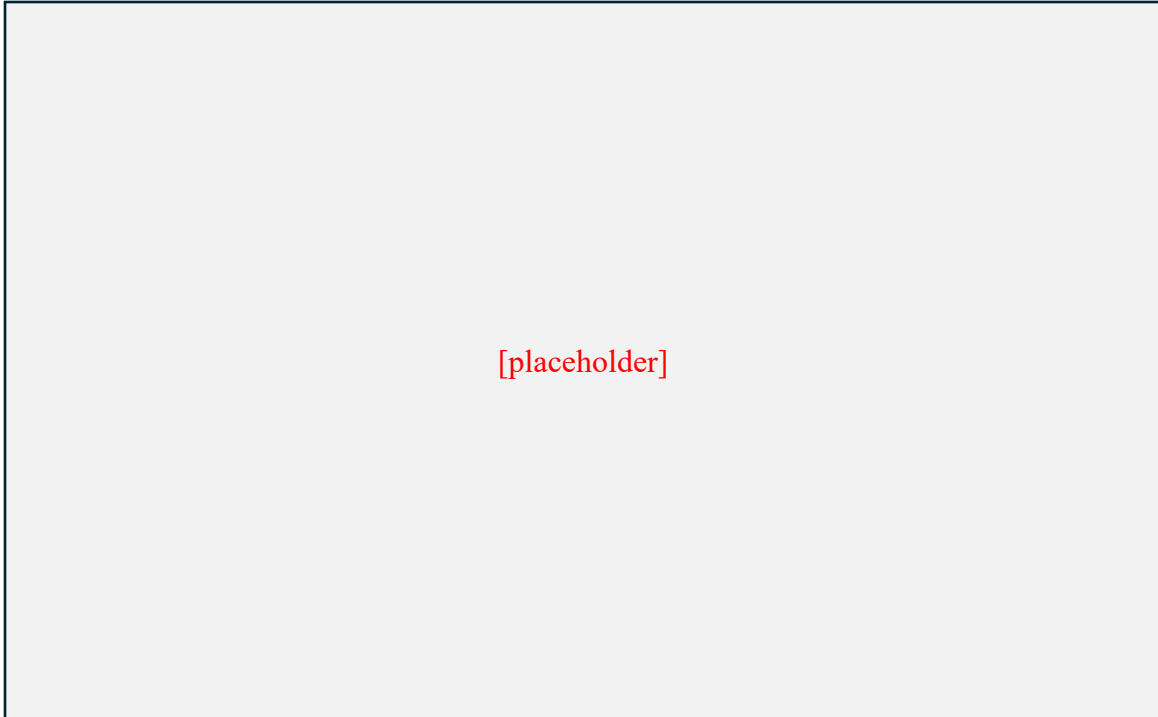


Figure 2-2: Building Orientation and Alterations to Existing Buildings



D. Building Entrances.

- I. Applicability. The building entrance standards apply to nonresidential and mixed-use developments and all residential developments except accessory dwelling units. The standards apply as follows:
 - a. Single-unit-dwellings, manufactured dwellings, and residential care homes. At least one main entrance for each building must meet the standards.
 - b. Middle housing dwelling.
 - i. At least one main entrance for each duplex, triplex, or quadplex building must meet the standard.
 - ii. At least one main entrance for each townhouse must meet the standard.
 - iii. The standard does not apply to cottage cluster housing. Cottage cluster housing must meet [local cottage cluster design standards].
 - c. Multi-unit dwelling.

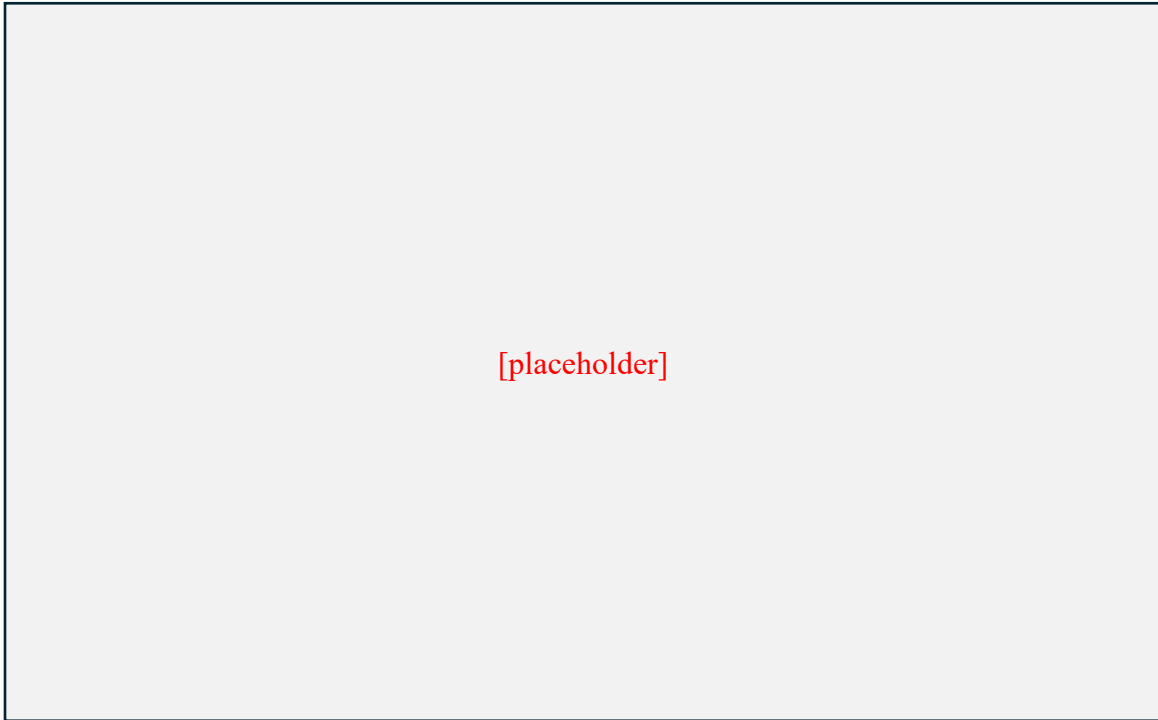
- i. At least one main entrance for each building must meet the standards.
 - ii. A minimum of [25-50%] of dwelling units on the ground floor of must have at least one main entrance that meets the standards.
 - d. Nonresidential or mixed-use building. At least one main entrance must meet the standards. For buildings with multiple tenant spaces or multiple entrances, only one entrance must meet the standard.
 - e. Sites with multiple street frontages. Where the site is adjacent to two or more streets, the standards must be met on the frontage of the street with the [higher transit classification].
2. Standards.
- a. Entry orientation. All buildings within 40 feet of a street lot line must have at least one main entrance that meets one of the following standards:
 - i. The entrance must be within 8 feet of the longest street-facing façade of the building and must either face the street; be at an angle of up to 45 degrees from the street; or open onto a covered porch that must be at least 25 square feet in area.
 - ii. The entrance must face a courtyard that abuts the street and must be no less than 15 feet in width.
 - b. Entry orientation on [higher transit classification] streets. In addition to the general standards of [2.1.D.2.a], nonresidential and mixed-use buildings and multi-dwelling buildings adjacent to [higher transit classification] streets must have at least one main entrance that is within [25] feet of the [higher transit classification] street.
 - c. Unlocked during business hours. Each main entrance to a nonresidential and mixed-use building that meets the standard must be unlocked during regular business hours.
 - d. Walkways. At least one main entrance and all dwelling unit entrances on the ground floor must be connected to the street by walkways, as required by section 3.2.

2.2 Ground Floor Design of Nonresidential and Mixed-Use Buildings.

A. Intent. The following requirements are intended to promote an engaging, comfortable, and interesting public realm that supports walking, bicycling, and transit use. The standards require features that make walking a more comfortable and interesting experience when adjacent to a nonresidential use on the ground floor, such as windows with views into commercial activity and protection from sun and rain.

- B. Applicability.** The following standards apply to nonresidential uses on the ground floor of a nonresidential or mixed-use building. The standards apply to ground-level, street-facing façades that are within 20 feet of a street lot line or a pedestrian amenity space.
- C. Transparency.** A minimum of [50-75%] of the area of the ground-level, street-facing façade between 2 and 8 feet above sidewalk grade must be transparent. The following standards must be met for an area to be considered transparent.
1. Windows and/or clear glass within doors may be used to meet this standard. Window area is the aggregate area of the glass within each window, including any interior grids, mullions, or transoms.
 2. Required windows must be clear glass and not mirrored, frosted, reflective, or treated in such a way to block visibility into the building.
 3. Windows into storage areas, vehicle parking areas, mechanical and utility areas, and garbage and recycling areas do not qualify.
- D. Weather Protection.** Weather protection (e.g., permanent awnings, canopies, overhangs, or architectural features providing protection from the rain or shade during periods of hot weather) must be provided along [50-75%] of the length of the ground level façade that is within [5] feet of a public right-of-way or the hardscaped area within a pedestrian amenity space.
1. The weather protection must project out at least 4 feet from the adjoining wall.
 2. The height of the weather protection must be between [9 feet and 15 feet] above the grade underneath it.

Figure 2-3: Ground Floor Design of Non-Residential and Mixed-Use Buildings



2.3 Ground Floor Design of Residential Buildings.

- A. Intent.** The following requirements are intended to promote an engaging, comfortable, and interesting public realm that supports walking, bicycling, and transit. The standards require features that make walking a more comfortable and interesting experience when adjacent to a residential use on the ground floor, such as such as porches, stoops, and other semi-public spaces that support social interaction, while preserving a sense of privacy for residents and a transition from public to private space.
- B. Applicability.** The ground floor design standards apply to residential uses on the ground floor of a mixed-use building and all residential buildings except accessory dwelling units and manufactured dwellings.
- C. Transparency.** The following standards apply to the wall area of the ground-level of any street-facing façades that are within 20 feet of a street lot line or a pedestrian amenity space. A minimum of [15-25%] of the area of the ground-level, street-facing façade between 2 and 8 feet above sidewalk grade must be transparent. The following standards must be met for an area to be considered transparent.

1. Windows and/or clear glass within doors may be used to meet this standard. Window area is the aggregate area of the glass within each window, including any interior grids, mullions, or transoms.
2. Required windows must be clear glass and not mirrored, frosted, reflective, or treated in such a way to block visibility into the building.
3. Windows into storage areas, mechanical and utility areas, and garbage and recycling areas do not qualify. Windows into garages do qualify.

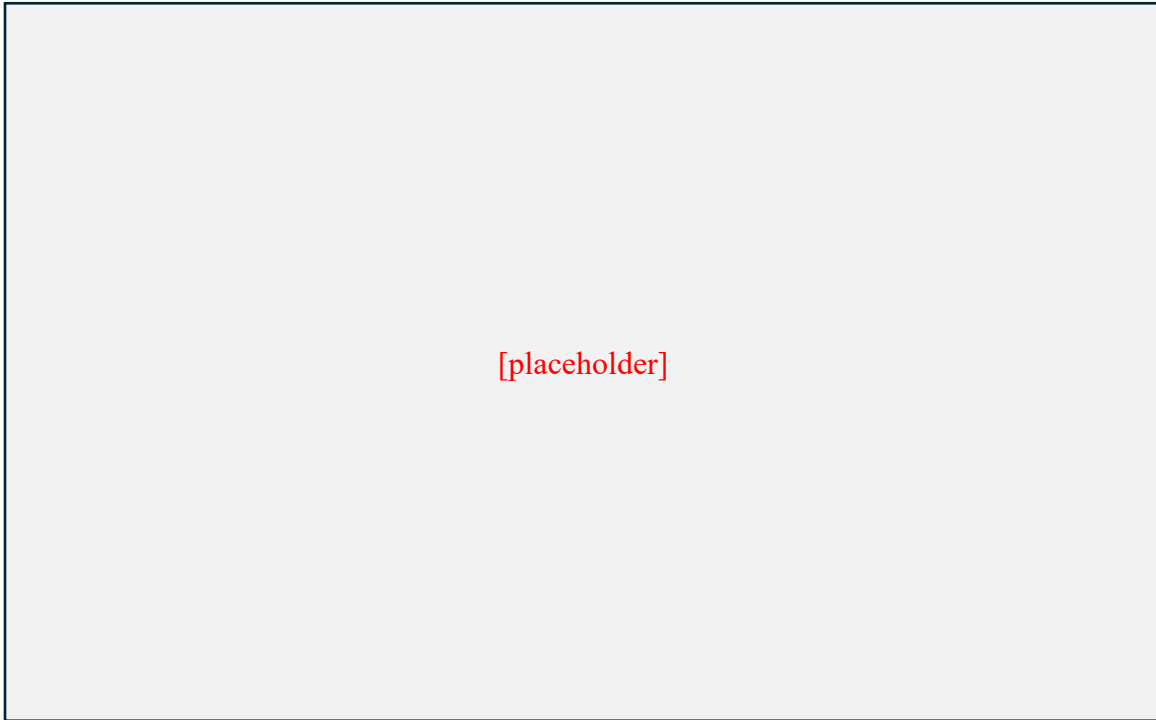
D. Separation for Ground Floor Residential Units. The following standard applies to the ground floor wall area of dwelling units that are 10 feet or closer to a street lot line. The wall area must meet one of the two following standards at a minimum:

1. Front setback. The portions of the building with dwelling units on the ground floor must be set back at least 5 feet from the street lot line.
2. Raised ground floor. The portion of the building with dwelling units on the ground floor must have the finished floor of each residential unit at least 18 to 36 inches above the grade of the closest adjoining sidewalk.

E. Transitions to Residential Entrances. The following standard applies to the main entrances that provide direct access to dwelling units that are 10 feet or closer to a street lot line. The entrance must be set back at least 5 feet from the street lot line and have at least two of the following within the setback:

1. A wall or fence that is 18 to 36 inches high;
2. Landscaping that meets the [local planting standard];
3. One small canopy tree per entrance between 1.5 and less than 6 inches in diameter per entrance;
4. Individual private open space of at least 48 square feet designed so that a 4-foot by 6-foot dimension will fit entirely within it; or
5. A change of grade where the door to the dwelling unit is 18 to 36 inches above the grade of the right of way.

Figure 2-4: Ground Floor Design of Residential Buildings



2.4 Driveways and Garages

A. Intent. The following requirements are intended to minimize the visual impacts of garages, driveways, and parking areas to support a pedestrian-oriented and sociable street environment. Limiting the width and prominence of garages minimizes their visual impact and makes entries for pedestrians more prominent. Regulating the frequency and width of driveways reduce points of conflict with vehicles and pedestrians, preserves curb space for on-street parking, and creates space in planting strips for street trees and landscaping.

B. Applicability. The driveway and garage standards apply to nonresidential or mixed-use developments and all residential developments.

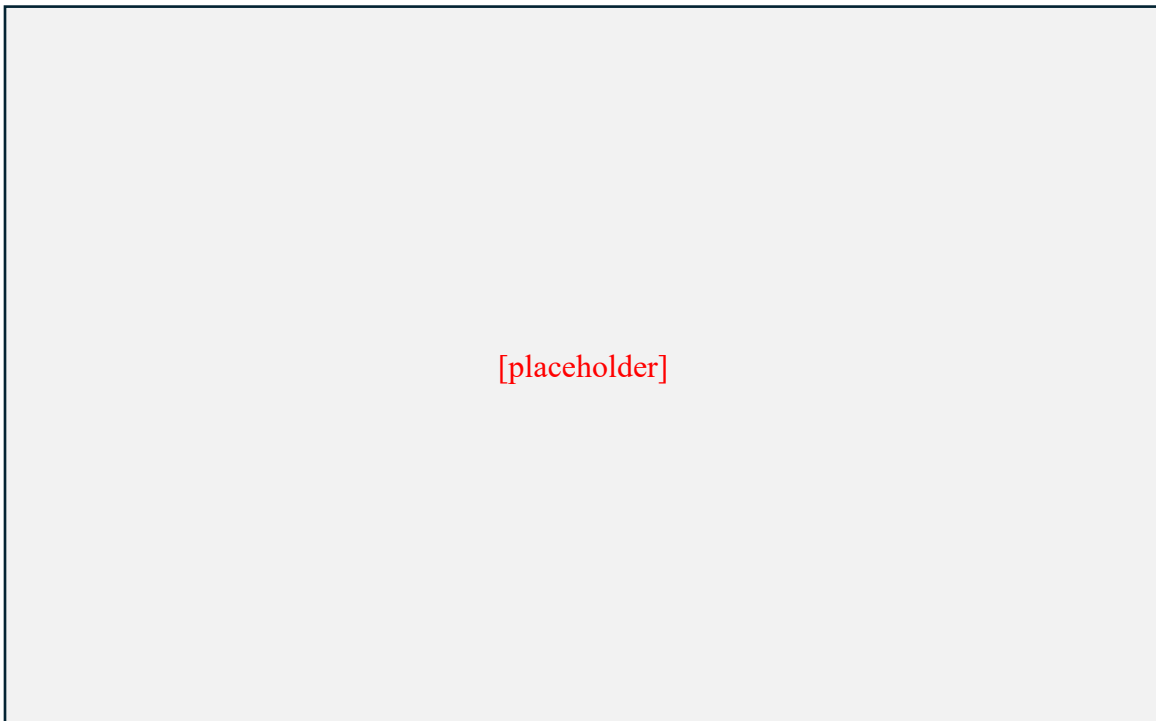
C. Driveway Location.

1. For sites with frontage on an alley, driveway access is only permitted via the alley, if the alley is improved.
2. For sites with more than one frontage not on an alley, driveway access is permitted only from the street with the lowest classification. Lots with frontages on two streets are not permitted to have a driveway on more than one frontage.

D. Driveway Separation on Local Streets. The following standards apply to driveways on local streets. Driveway separation from intersections and all driveway separations on [collector and arterial] streets are regulated by [public works/engineering standards]. Minimum spacing is measured from the end of the driving aprons. See Figure 2-5.

1. A minimum [18-24 feet] full-height curb is required between driveways on the same lot.
2. A minimum [5 feet] full-height curb is required between driveways on separate lots. A driveway that is shared between two abutting lots is exempt from this separation standard.

Figure 2-5: Driveway Separation



E. Driveway Width. The following standards apply to the maximum width of driveways. Driveway width shall be measured lengthwise along the property line, and such measurement shall not include the width of wings connecting the top of the curb to the lowered curb or apron.

1. For a single-width vehicle parking area, the maximum driveway width is [10-12 feet].
2. For a double-width, or larger, vehicle parking area, the maximum driveway width is [20-24 feet].
3. For a double-width vehicle parking area that is shared by two detached units, the maximum driveway width is [10-16 feet]. For a double-width vehicle parking area that is shared by two attached units, driveways are required to be shared using a taper with a maximum driveway

width of [14 feet]. There must be a recorded easement guaranteeing reciprocal access and maintenance for all affected properties.

F. Garage Width and Setback.

I. Garage Width.

- a. The combined width of garage wall(s) facing the street must be less than [50%] of the width of the street-facing building façade. This standard applies only to the street-facing façade on which the main entrance is located.
- b. Exception. If the width of the street-facing building façade is less than [30 feet], the width of garage wall(s) may exceed [50%] of the width of the street-facing building façade if the following standards are met:
 - i. The width of the garage wall does not exceed [75%] of the street-facing building façade.
 - ii. The garage wall is recessed a minimum of [2 feet] behind the front façade that encloses living area or a covered front porch with no horizontal dimension less than [3 - 5 feet].

2. Garage Setback.

- a. The vehicle entrance must be either [1- 5 feet] or closer to the street lot line, or [18-20 feet] or farther from the street lot line.
- b. A garage entrance must not be closer to the street lot line than a façade that encloses living area along the same street frontage, except the garage entrance may extend up to [2-5 feet] in front of a façade that encloses living area if there is a covered front porch with no horizontal dimension less than [3 – 5] feet and the garage entrance does not extend beyond the roof of the porch.
- c. Where three or more contiguous garage entrances face the same street, the garage opening closest to a side property line must be recessed at least [2 feet] behind the adjacent opening(s). Side-loaded garages are exempt from this requirement.

2.5 Drive-Through Facilities

A. Intent. The special regulations for drive-through facilities are intended to support pedestrian-oriented site design where drive-through facilities are proposed and limit the negative impact of facilities oriented to vehicles. The standards require buildings to be oriented to the sidewalk and offer points of entry and service that can be directly accessed on foot. They also require that visible, safe, and clearly defined routes are provided on-site for pedestrians and bicyclists. The standards ensure adequate vehicle queuing space and limit locations and spacing of these facilities.

B. Applicability. The following standards apply to new developments with drive-through facilities, the addition of drive-through facilities to existing developments, and the relocation of an existing drive-through facility.

C. Where Drive-Through Facilities are Prohibited.

1. New drive-through facilities are prohibited in the [downtown and main street] districts.
2. Existing facilities in these districts may be rebuilt, expanded, or relocated on the site but must meet the standards below.
3. If the use with the drive-through facility is discontinued for one year, reestablishment of the drive-through facility is prohibited. If the use ceases operation, even if the structure or materials related to the use remain, the use has been discontinued. This provision prevails over any allowance in the nonconforming use and development chapter regarding discontinuation and reestablishment of a nonconformity.

D. Pedestrian Service Areas

1. Drive-through facilities must provide at least one walk-up service area. Examples of a walk-up service area include an indoor service area directly accessible from a public street or an outdoor walk-up service window. Walk-up service areas must be accessible by customers arriving on foot, using a mobility device, or by bicycle. Customers using a walk-up service area must have the same or better access to goods and services as customers using the drive-through. [Vehicle-serving uses] are exempt from this standard.
2. If the walk-up service area is limited to an outdoor service window, it must meet the following standards:
 - a. The walk-up service area must not also be used by vehicles.
 - b. The walk-up service area must abut or be connected to a pedestrian amenity space. The space must be hardscaped for pedestrian use, be a minimum of [100] square feet, and must include benches or seating that provide at least [5] linear feet of seats. The seating surface must be at least 15 inches deep and between 16 and 24 inches above the grade upon which the seating or bench sits. This pedestrian amenity space may count toward the requirement to provide a pedestrian amenity space in 2.1.C(2)(b).
3. Service access for pedestrians and bicyclists must be connected to the street by a direct and convenient walkway that meets the standards of [pedestrian walkway standards 3.2].

E. Vehicle Service Areas and Stacking Lanes

1. All driveway entrances, including stacking lane entrances, must be at least 50 feet from any street intersection. If a drive-through facility has frontage on two streets, the drive-through facilities must receive access from the street with the lower classification.
2. Service areas and stacking lanes must not be located between the building and a street lot line. [Vehicle-serving uses] are exempt from this standard.
3. Stacking lanes must be designed so that they do not prevent access to parking stalls. The minimum length of stacking lanes must be follows:
 - a. Gasoline fuel pumps and electric vehicle chargers. A minimum of 30 feet of stacking lane is required between the stacking lane entrance and the nearest fuel pump or electric vehicle charger.
 - b. Other drive-through facilities. A minimum of [150-160] feet for a single stacking lane or [75 – 80] feet per lane when there is more than one stacking lane, is required for all other drive-through facilities. A stacking lane is measured between the lane entrance and the service area.

Chapter 3 – Connectivity and Access

Sections:

- 3.1 Street Connectivity, Blocks, and Accessways
- 3.2 Pedestrian and Bicycle Circulation
- 3.3 Transit Facilities

3.1 Street Connectivity, Blocks, and Accessways

A. Intent. The intent of these standards is to facilitate safe, convenient, and efficient movement of people that are walking, bicycling, using transit, or driving. The standards promote a complete and interconnected network of public and private streets and accessways that provide direct and convenient routes between destinations. The standards also encourage smaller block sizes that reduce walking distances, reduce out-of-direction travel, promote route and mode choice.

B. Applicability. The street connectivity, blocks, and accessway standards apply to nonresidential or mixed-use developments and all residential developments that meet the thresholds for [site design review] where transportation improvements are required. The standards also apply to any land division application where transportation improvements are required.

C. Street Connections Required.

1. Development must provide a system of streets and accessways that meets the block length standards in subsection D, as applicable, and provides access to the following:
 - a. Abutting residential developments;
 - b. Abutting undeveloped property;
 - c. Abutting transit station or major transit stop;
 - d. Abutting parks or schools; and
 - e. Abutting Neighborhood Activity Centers.
2. Intersection angles, grades, tangents and curves proposed for the internal street system must be consistent with the [public works/engineering standards].

D. Street Connectivity and Block Length Standards.

1. New internal streets within a development must connect to all existing or planned stubbed streets that abut the site. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the city engineer.
2. Where the locations of planned streets are shown on a local street network plan or within a Transportation Systems Plan, the development must implement the street connection(s) shown on the plan in addition to meeting the standards of this chapter.
3. Where local street connections are not shown on an adopted plan, or the adopted plan does not designate future streets with sufficient specificity, the development must provide for street connections as required by the standards of this chapter.
4. **Maximum Block Length.** On development sites [2 acres or greater], street connections or pedestrian/bicycle accessways must be spaced no further than the maximum block length standards stated in Table 3-1. The maximum block length standard may be met with a full street connection or a pedestrian/bicycle accessway that conforms with section 3.1.E. In all cases, where a block exceeds 350 feet in length, a mid-block pedestrian/bicycle accessway is required.

| Table 3-1: Maximum Block Length Standards | | |
|---|--|------------------------|
| Site Area | Within [CFA and Downtown/Main Street Areas] | All Other Sites |
| Less than 5.5 acres | 500 feet ¹ | 500 feet ¹ |
| More than 5.5 acres | 350 feet | |
| ¹ If the block length exceeds 350 feet, a mid-block pedestrian/bicycle accessway is required | | |

5. Unless precluded by barriers, blocks must include alleys to allow use of rear-loaded garages and accessory dwelling units and to provide access for utility and garbage services. An applicant may pursue a discretionary review option as detailed in Section 1.2.C for an exemption to this standard.
6. The street grid system must be rectilinear and must avoid curves unless curved streets will avoid a designated natural resource, tree grove, natural hazard, existing building or public facility, or to connect to another street.
7. Cul-de-sac streets or local streets with a dead end are not permitted unless the street is planned to continue to a connected network in the future. An applicant may pursue a discretionary review option as detailed in Section 1.2.C for an exemption to this standard.

E. Pedestrian and Bicycle Accessways. Pedestrian and bicycle accessways may be proposed in-lieu of full street connections. If so, they must meet the standards listed below.

1. Accessways must be created within public rights-of-way, public tracts, or private tracts with public access easements. Such rights-of-way, tracts, or easements must be at least [5-15 feet] wide.
2. Accessway entry points must align with pedestrian crossing points on abutting streets and with abutting street intersections.
3. Accessways must be sufficiently straight that both end points are visible from any point on the accessway.
4. Accessways must have no horizontal obstructions and a 9 foot, 6-inch high vertical clearance.
5. Accessway surface improvements must be at least [5-10 feet in width]. Improvements must be impervious pavement (asphalt or concrete), unless pervious pavement has been approved by the [city engineer] based on usage and site conditions.
6. Accessway surfaces must drain stormwater runoff to the side or sides. Paving materials, storm drainage, shoulder treatment, and landscaping for accessways are subject to approval by the [city engineer].
7. Accessways must have a slope of 5% or less.
8. To prohibit access by motorized vehicles (except motorized mobility devices) accessways must be constructed with gates, removable lockable posts, bollards or barriers as approved by the [fire department]. Accessways connecting to sidewalks built with a full-height curb do not need to provide additional barriers.
9. If accessway is not dedicated as public right-of-way, to ensure accessway maintenance over time, a maintenance agreement must be recorded that specifically requires present and future property owners to provide for liability and maintenance of the accessways to City standards.

3.2 Pedestrian and Bicycle Circulation

A. Intent. On-site pedestrian and bicycle circulation standards are intended to provide connections which minimize out-of-direction travel between buildings and existing public rights-of-way, pedestrian/bicycle accessways and other on-site pedestrian facilities.

B. Applicability. The pedestrian and bicycle circulation standards apply to nonresidential and mixed-use developments and all residential developments except single-unit dwellings, accessory dwelling units, middle housing dwellings, manufactured dwellings, and residential care homes.

C. Connections to the Street. New development must provide pedestrian and bicycle connections between main entrances of buildings and the street as follows.

1. **Main Entrances.** All primary buildings located within 40 feet of a street lot line must have a connection between one main entrance and the adjacent street. The connection may not be more than 120 percent of the straight-line distance between the entrance and the street. For sites with frontage on a [transit street], the pedestrian connection requirement must be met on the [transit street].
2. **Tree Preservation.** If a tree that is at least 12 inches in diameter (as measured by the diameter at breast height (DBH)) is proposed for preservation, and the location of the tree or its root protection zone would prevent the standard of this paragraph from being met, the connection may be up to 200 percent of the straight-line distance.
3. **Large Parking Areas.** Off-street surface parking areas greater than 21,780 square feet in size or including [four or more] consecutive, parallel drive aisles must include pedestrian connections through the parking area to main building entrances, existing or planned pedestrian facilities in adjacent public rights-of-way, transit stops, and accessible parking spaces. Connections to the street must be provided no more than every [250-300 feet]. Where these requirements result in a fractional number, any fractional number greater than 0.5 must be rounded up to require an additional pedestrian connection. See Figure 3-1.

D. Connections to Adjacent Properties. This standard applies to multi-unit dwellings, commercial, office, or institutional uses that are adjacent to another site that is zoned or developed for commercial, office, or institutional uses. On-site walkways must connect or be stubbed to allow for an extension to the abutting property when there is an existing or planned walkway on the abutting property.

E. Internal Connections. The walkway system must connect all main entrances on the site that are more than 20 feet from the street, and provide connections to other areas of the site, including parking areas, bicycle parking, recreational areas, common outdoor areas, and any pedestrian amenities and must conform with 3.2.F.

F. Walkway Design

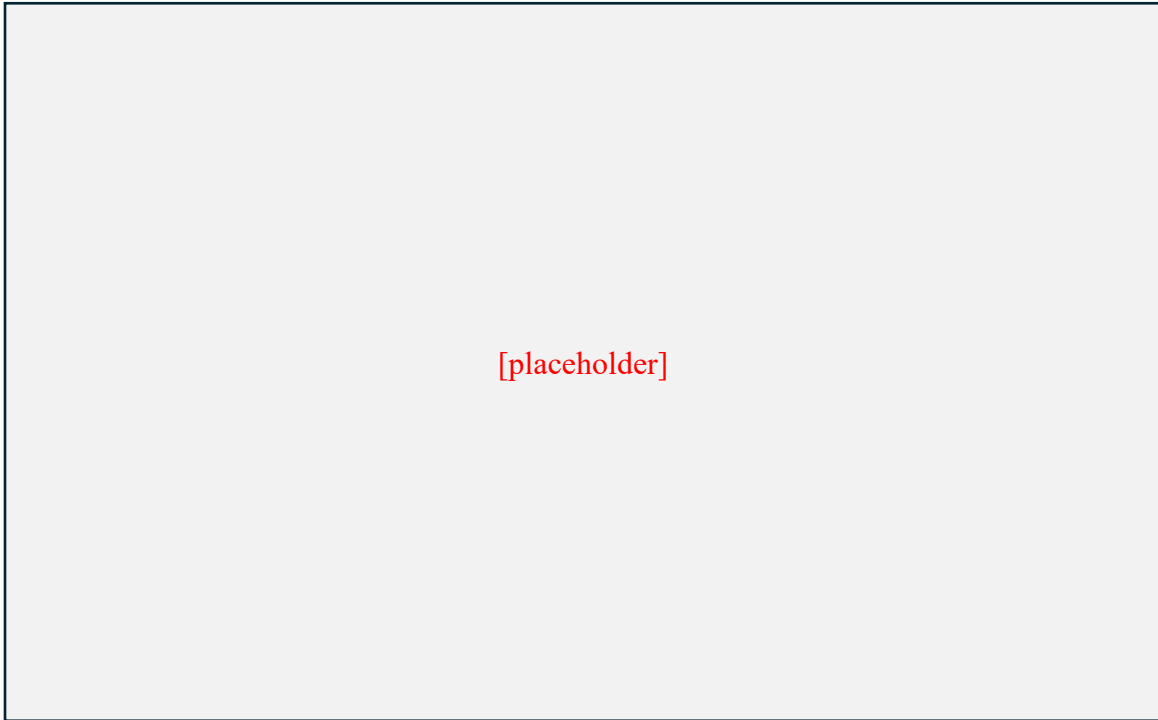
1. **Materials and Width.** Walkways must be hard surfaced (paved) and at least 6 feet in unobstructed width. Walkway width must be increased to 8 feet if the walkway abuts perpendicular or angled parking spaces unless the spaces are equipped with wheel stops.
2. **Crossings with Vehicle Areas.** Where the walkway crosses driveways, parking areas, and loading areas, the walkway must be clearly identifiable through the use of elevation changes, a different paving material, or other similar method. Striping does not meet this requirement. Elevation changes for crossings must be at least 4 inches high.

3. Walkways Adjacent to Vehicle Areas. Where the walkway is parallel and adjacent to an auto travel lane, the walkway must be a raised path or be separated from the auto travel lane by a raised curb, bollards, landscaping, or other physical barrier. If a raised path is used it must be at least 4 inches high. Bollard spacing must be no further apart than 5 feet on center.

OPTIONAL

4. [Lighting. The on-site pedestrian circulation system must be lighted as required in [local lighting standard]. Lighting must be shielded to minimize glare and unnecessary diffusion into the sky and onto neighboring properties, especially into significant natural resource areas.]
5. [Sustainability. Walkway design must incorporate at least one of the following sustainability features:]
 - a. At least 30 percent of paving material must be permeable pavement; or
 - b. At least 30 percent of the paving material must be made from recycled content; or
 - c. At least 50 percent of the pedestrian walkway pavement must have a solar reflective index rating of a least 29; or
 - d. Provide shading for at least 50 percent of the total walkway surfaces on the site. Shade can be provided by current or proposed buildings that shade the paving material at 3 p.m. June 21 and current or proposed trees, with the amount of shade included for each planted tree to be measured by the diameter of the mature crown cover stated for the species of the tree.

Figure 3-1: Connections to the Street through Parking Areas



3.3 Transit Facilities

A. Intent. The intent of the transit connectivity and facilities standards is to encourage the use of transit use and to ensure connections between different modes of travel. The standards require that applicable developments provide essential facilities and amenities that make using transit more convenient, safe, and comfortable.

B. Applicability. Projects that meet the following thresholds will be reviewed to determine if transit facilities are required to be provided:

- a. Projects on development sites within [100 feet of an existing or planned transit stop] or [located on an existing or planned transit route].
- b. Residential developments with more than [25] dwelling units.
- c. Commercial, office, and institutional developments with more than [50,000] square feet of gross floor area.
- d. Industrial developments with more than [100,000] square feet of gross floor area.

C. Transit Facilities.

1. Applicable projects may be required to provide additional transit facilities where substantial evidence of projected transit ridership or other transit impacts is presented by the transit provider to conclude both that a nexus exists between the proposed development and public transit and that the degree of impact provides reasonable justification. The City may require the developer to grant a public easement or dedicate a portion of the lot for transit facilities.
2. The transit provider must identify the type of facility required [within 30 days following the completion of the pre-application conference]. Requirements can include facilities that are existing but in disrepair and need replacement as determined by the transit provider. Transit facilities may include, but are not limited to the following and may include some combination of the following:
 - a. Transit stop
 - b. Bus shelters
 - c. Bus pullouts
 - d. Passenger landing pads
 - e. Lighting
 - f. Bicycle parking per OAR 0630(2)(d)
 - g. On-street parking restrictions
 - h. Optimum road geometrics
3. Development sites along [high-frequency transit streets] must get approval from relevant City authority to determine if an increase in the maximum setback may be required to accommodate a sidewalk width of a minimum of [12 feet] to ensure adequate spacing for transit facilities and safe and convenient pedestrian movement. This determination will be made by the relevant City authority and the transit agency at the time of development review.